

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Казань (843)206-01-48	Новокузнецк (3843)20-46-81	Смоленск (4812)29-41-54
Архангельск (8182)63-90-72	Калининград (4012)72-03-81	Новосибирск (383)227-86-73	Сочи (862)225-72-31
Астрахань (8512)99-46-04	Калуга (4842)92-23-67	Омск (3812)21-46-40	Ставрополь (8652)20-65-13
Барнаул (3852)73-04-60	Кемерово (3842)65-04-62	Орел (4862)44-53-42	Сургут (3462)77-98-35
Белгород (4722)40-23-64	Киров (8332)68-02-04	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Брянск (4832)59-03-52	Краснодар (861)203-40-90	Пенза (8412)22-31-16	Томск (3822)98-41-53
Владивосток (423)249-28-31	Красноярск (391)204-63-61	Пермь (342)205-81-47	Тула (4872)74-02-29
Волгоград (844)278-03-48	Курск (4712)77-13-04	Ростов-на-Дону (863)308-18-15	Тюмень (3452)66-21-18
Вологда (8172)26-41-59	Липецк (4742)52-20-81	Рязань (4912)46-61-64	Ульяновск (8422)24-23-59
Воронеж (473)204-51-73	Магнитогорск (3519)55-03-13	Самара (846)206-03-16	Уфа (347)229-48-12
Екатеринбург (343)384-55-89	Москва (495)268-04-70	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Иркутск (395)279-98-46	Нижний Новгород (831)429-08-12	Симферополь (3652)67-13-56	Ярославль (4852)69-52-93
Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	

Absorption

Tower

All dimensions for Tower and Tubes are nominal.

Tower

Glass, with ground 24/29 socket neck and 19/26 socket base tubulure. Overall height 310mm, diameter 45mm.

AB050-10 Tower

Tubes

Straight Form

Glass, with one bulb and tube for bending. Dimensions are length excluding narrow tube x external diameter.

	Dimensions
AB090-10	100 x 12mm
AB090-15	150 x 20mm
AB090-20	200 x 25mm

Plain U-Form

Glass, dimensions are overall length x diameter of the U.

	Dimensions
AB110-10	100 x 12mm
AB110-15	125 x 15mm
AB110-20	150 x 20mm

U-Form with Side Arms

Glass, dimensions are overall length x diameter of the U, side arms approx. 6mm diameter.

	Dimensions
AB130-10	100 x 12mm
AB130-15	125 x 15mm
AB130-20	150 x 20mm

Absorption Tubes, U, angled, straight – see *Quickfit* section.

Gas Washbottles – see *Gas Collection and Quickfit* sections.

Arnold

Borosilicate glass, two bulbs, overall height 125mm, diameter 26mm, side arms 6mm diameter.

AB180-10 Arnold



AB050



AB090



AB110

AB130



AB180

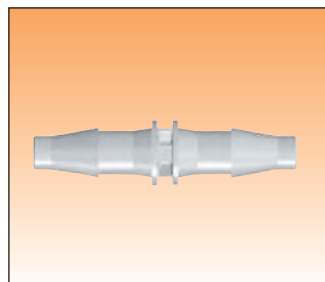
Adapters

Plastic, Micro

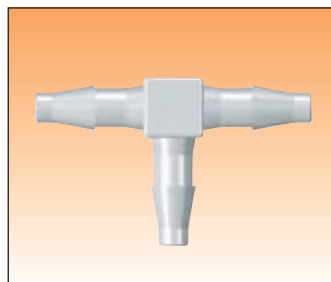
Micro tubing adapters. Natural polypropylene[†]. Precision moulded. For low pressure applications. Supplied in packs of 100.

	Limb size, to fit tubing i.d.
Straight	
AD062-05	1.6mm
AD062-10	2.4mm
AD062-15	3.2mm
AD062-20	4.0mm
AD062-25	4.8mm
Elbow, 90° bend	
AD064-05	1.6mm
AD064-10	2.4mm
AD064-15	3.2mm
AD064-20	4.0mm
AD064-25	4.8mm
T-shape	
AD066-05	1.6mm
AD066-10	2.4mm
AD066-15	3.2mm
AD066-20	4.0mm
AD066-25	4.8mm
Y-shape	
AD068-05	1.6mm
AD068-10	2.4mm
AD068-15	3.2mm
AD068-20	4.0mm
AD068-25	4.8mm
X-shape, 90° cross	
AD069-05	1.6mm
AD069-10	2.4mm
AD069-15	3.2mm

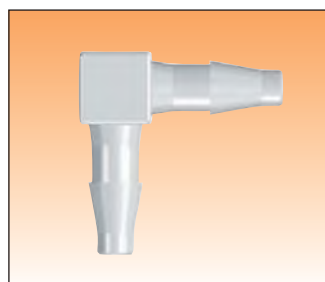
[†]Other materials, such as coloured nylon, clear or radiation-stable polycarbonate, or Kynar are available subject to minimum quantity requirements. Reduction/expansion adapters are also available - *details on request*.



AD062



AD066



AD064



AD068

Luer micro tubing connectors. Natural polypropylene[†]. Precision moulded. Allow secure, easy connection and disconnection of microtubing with different diameters. For low pressure applications. Supplied in packs of 100.

	Luer type*	Barb for tubing i.d.
AD085-05	Male	1.6mm
AD085-10	Male	2.4mm
AD085-15	Male	3.2mm
AD085-20	Male	4.0mm
AD085-25	Male	4.8mm
AD085-80	Female Luer plug closure with thread	
AD087-05	Female	1.6mm
AD087-10	Female	2.4mm
AD087-15	Female	3.2mm
AD087-20	Female	4.0mm
AD087-25	Female	4.8mm
AD087-80	Male Luer plug closure with locking collar	

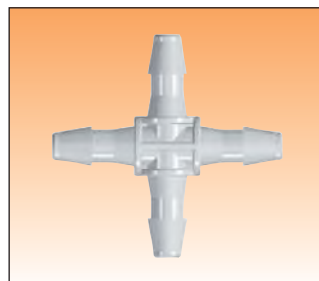
*With thread (female) or locking collar (Male).

Adapters, Luer

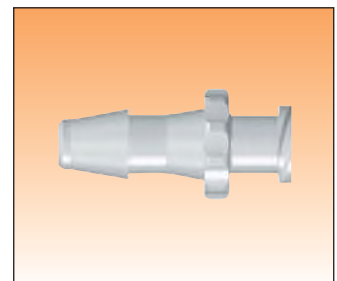
For low pressure applications. Straight pattern. Non-sterile. Natural nylon. With male luer-lock and 6mm o.d. ferrule. Supplied in packs of 100.

AD095-11 Adapters

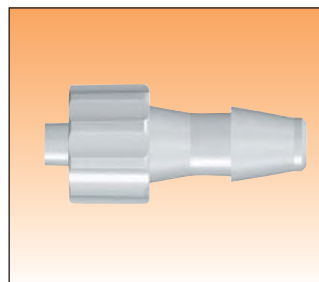
[†]Other materials, such as coloured nylon, clear or radiation-stable polycarbonate, or Kynar are available subject to minimum quantity requirements. Reduction/expansion adapters are also available - *details on request*.



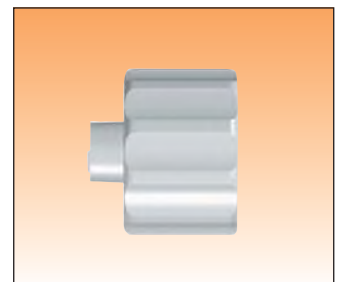
AD069



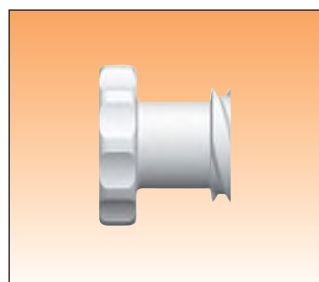
AD087-05 to AD087-25



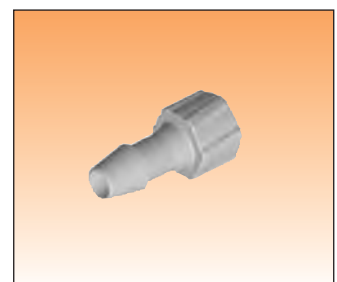
AD085-05 to AD085-25



AD087-80



AD085-80



AD095-09

Adapters

Plastic

Kartell

All dimensions are nominal. These adapters are for low pressure applications.

T-pattern

With rigid, tapered arms. Autoclavable polypropylene. Supplied singly.

	<i>o.d.</i> <i>mm</i>
AD100-12	4/5
AD100-17	6/7
AD100-22	8/9
AD100-27	10/11

Y-pattern

With rigid, tapered arms. Autoclavable polypropylene. Supplied singly.

	<i>o.d.</i> <i>mm</i>
AD105-12	4/5
AD105-17	6/7
AD105-22	8/9
AD105-27	10/11

Azlon

All dimensions are nominal. These adapters are for low pressure applications.

Straight pattern

With tapered stepped arms. Autoclavable polypropylene. Dimensions stated are the minimum and maximum for each end of the adapter. Supplied in packs of 10.

	<i>Ref.</i> <i>CW/H-</i>	<i>o.d.</i> <i>mm</i>
AD110-12	602	4/7 & 7/12
AD110-18	604	7/12 & 7/12
AD110-20	608	7/12 & 10/15
AD110-24	610	10/15 & 10/15

PORTEX

All dimensions are nominal. These adapters are for low pressure applications.

Straight pattern

With tapered and stepped ribbed arms. Dimensions given are the minimum external diameters for each arm, in mm. Autoclavable. Supplied singly.

Polypropylene

AD190-17	6/6
AD190-22	10.5/10.5

Standard Joint Adapters – see *Quickfit* section.



AD100



AD105



AD110



AD190-17 and -22

Adapters, Adhesives

Adapters, Plastic



Tubing Connectors

High quality polypropylene. Can be autoclaved. Supplied in packs of 10.

	For tubing bore mm
Straight	
AD220-10	3 to 5
AD220-13	5 to 7
AD220-16	7 to 9
AD220-19	9 to 11
AD220-22	11 to 13
AD220-25	13 to 15
T-shape	
AD220-40	3 to 5
AD220-43	5 to 7
AD220-46	7 to 9
AD220-49	9 to 11
AD220-52	11 to 13
AD220-55	13 to 15
Y-shape	
AD220-70	3 to 5
AD220-73	5 to 7
AD220-76	6 to 8
AD220-79	7 to 9
AD220-82	9 to 11
AD220-85	11 to 13
AD220-88	13 to 15



Screwthread Connectors

For use with 13mm GL13 screwthread outlets. Designed to reduce breakage and increase safety when fitting flexible tubing to side arms of suitably converted condensers etc. For 9mm bore flexible tubing. Polypropylene for use up to 140°C maximum or PTFE for enhanced chemical resistance and use up to 200°C maximum, as indicated.

AD255-10 Ref 4510/02, polypropylene
AD255-15 Ref 4510/04, PTFE

Spare Viton sleeve for AD255 connectors

AD256-06 Ref 4511/02

Screwthread holder for AD255 connectors

Facilitates connection and removal of AD255 adapters to, or from, tubing.

AD256-09 Ref 4512/02

Standard Joint Adapters – see *Quickfit* section.

Adhesives

The following adhesives can be exported by sea freight, deck cargo only.

Araldite – Rapid

Epoxy resin and hardener in pack containing tube of resin, tube of hardener and instructions.

AD700-10

Evo-Stick Impact adhesive

Neoprene/resin solution in an ester/hydrocarbon solvent. 32g tube.

AD710-10

Adhesive Labels, Plain – see *Labels* section.

Adhesive film for microplates – see *Microtitration* section.



AD220-10



AD220-70



AD220-40



AD255-10

AD255-15



AD700

AD710

Air Samplers, Aluminium

Portable Microbiological Air Samplers

Microflow

For sampling air biocontaminants within critical environments such as cleanrooms, food production areas, fermentation rooms, hospitals and treatment plants to quantify the presence of micro-organisms. Comply with ISO 14698-1 requirements. Comprise disinfectable, polyurethane pump housing/controller with push-on, autoclavable, anodised aluminium or stainless steel, perforated sampling head which holds either 60mm diameter contact plates or 90mm diameter petri dishes. The internal surfaces of the sampling chamber are coated with antibacterial silver ions. A rechargeable, battery-operated pump allows portability and operation for up to 4 hours. The controller allows manual, sequential and programmed (1 to 2000 litres) sampling, delayed start, preset sampling flow rates, memory storage of up to 99 sampling procedures, graphical display with a choice of languages, USB interface and low battery alarm. The housing design allows horizontal or vertical operation and the unit can be switched on or off remotely using an infra-red control.

<i>Model</i>		Microflow 60	Microflow 90/C	Microflow 60-90/C
<i>Head apertures, No. x diameter</i>		219 x 1mm	380 x 1mm	219 and 380 x 1mm
<i>For dish diameter</i>	<i>mm</i>	60, ±2	90, ±2	60 or 90, ±2
<i>Sampling flow rate, programmable</i>	<i>litres/minute</i>	30, 60, 90, 100, 120 — all models		
<i>Total sample, programmable</i>	<i>litres</i>	1 to 2000 — all models		
<i>Display languages</i>		English, Italian, French, German, Spanish		
<i>Overall W x D x H</i>	<i>mm</i>	310 x 130 x 170 — all models		
<i>Weight</i>	<i>kg</i>	1.9 — all models		

As described. Supplied as a kit with infra-red remote switch, battery charger for 100-240V 50/60Hz a.c. single phase supplies, mini gas torch for flaming the sampling head, instructions, calibration certificate and carrying case.

Aluminium sampling head

- AG103-10** Microflow 60
- AG103-20** Microflow 90/C
- AG103-30** Microflow 60-90/C

Stainless steel sampling head

- AG106-10** Microflow 60
- AG106-20** Microflow 90/C
- AG106-30** Microflow 60-90/C

Accessories

Nozzles for Coliform counting in 35mm diameter ducts.

- AG108-04** For 60mm diameter heads
- AG108-07** For 90mm diameter heads
- AG108-26** Interface cable and downloading software*

* Please note: The software can only be used with one sampler individually. If multiple samplers are ordered an equal number of accessory software packages must also be ordered.

Petri dishes - see PD100-30 to -48.

Culture Media - see CX900-/CX902-/CX904-series.

Hygiene monitoring products - see HT802-IHT808-IHT840-series.



AG103/AG106

Aluminium

Aluminium Foil

Suitable for a wide variety of laboratory applications including tube sealing, column wrapping, shaping into weighing boats, etc. In roll, dimensions are thickness x foil width x roll length.

- AL200-11** 0.018mm x 100mm x 75 metres
- AL200-13** 0.020mm x 450mm x 60 metres

Aluminium Foil

With one side polished and the other matt finished. In rolls or dispenser boxes and in widths and thicknesses as indicated.

	Thickness mm	Width m	Length m	Pack
AL202-05	0.013	300	20	roll
AL202-10	0.013	300	100	box
AL202-15	0.015	300	10	roll
AL202-20	0.015	450	10	roll
AL202-25	0.015	450	150	box
AL202-30	0.015	450	150	roll*
AL202-35	0.030	300	10	roll
AL202-40	0.030	500	100	box
AL202-45	0.050	500	200	roll

* Refill roll for AL202-25

Aluminium Basin - see BF550-15.

Aluminium Beakers - see BN170-series.

Aluminium Bottles - see BS980-series.

Aluminium Foil Dishes - see DH798-series.

Aluminium Racks and trays - see SM450/SM470.



AL200



AL202

Aquaria

Aquaria and accessories Aquarium pumps

Suitable for fresh or salt water. Dimensions and capacities are nominal.

Aquarium

Transparent plastic, 15 litres. 220 x 370 x 250mm H x W x D.

AQ100-11 Plastic tank

Diffuser Stone

With inlet tube.

AQ140-10 25 x 25 x 25mm

Tanks, glass

Rectangular. Suitable for use as aquaria or vivaria. Moulded, heavy wall, flint glass with smooth-ground rim.

	Capacity litres	W x D x H mm
TB350-15	2	100 x 150 x 150
TB350-20	3	130 x 180 x 180
TB350-25	6	180 x 250 x 220

Aeration Pump, diaphragm

Output approximately 1.5 litres/minute free air. With 5mm o.d. air delivery tubes. Suitable for continuous operation. Overall 90 x 50 x 65mm. For 200-240V a.c. single phase supplies, 3W.

AQ180-02 1.5 litres/minute

Liquid pumps – see *PX700/PX890*.

Continuous use pumps

Housed in robust splashproof metal cases (except PX330 and PX365) complete with carrying handle. Each unit has a built-in inlet filter, silencer and is supplied with a long IEC mains lead. They can be run continuously making them ideal for circulating systems and long term experiments.

Cat. No.	Vac mbar	Pressure Bar	Flow l/min	Inlet/Outlet
PX330*	550	2.0	7.5	8mm
PX332	280	2.0	8.0	8mm
PX365*	80	2.5	18	8mm
PX367	80	2.5	18	8mm
PX368	80	2.5	35	8mm

*These pumps are uncased for building into equipment.

For 230V 50Hz single phase supplies. Dimensions given are overall H x W x L.

PX330-10 Uncased, 40 x 88 x 158mm

PX332-20 Cased, 212 x 136 x 265mm

PX365-10 Uncased, 178 x 132 x 202mm

PX367-10 Cased, 216 x 210 x 283mm

PX368-10 Cased, 235 x 230 x 230mm



AQ100-11



AQ180-02



TB350



PX330

Aspirator Bottles

Pyrex® Glass



Dimensions given are nominal and maxima, including stopper if supplied.

Pyrex 1531 series

With unground neck and bottom side arm for connecting 10mm bore flexible tubing. Without stopper.

	Ref.	Capacity ml	Neck i.d. mm	Bottle dia. x h mm
AS100-06	1531/06	250	18	73 x 131
AS100-08	1531/08	500	23	89 x 163
AS100-10	1531/10	1000	28	111 x 200
AS100-12	1531/12	2000	28	138 x 248

Pyrex 1541 series

With unground neck and 29/32 bottom side socket. Without stopper or stopcock.

	Ref.	Capacity ml	Neck i.d. mm	Bottle dia. x h mm
AS110-16	1541/16	5000	44	181 x 318
AS110-18	1541/18	10000	59	227 x 398
AS110-22	1541/22	20000	59	288 x 492

Pyrex 1569 series

With glass stopper and 29/32 bottom side socket. Without stopcock.

	Ref.	Capacity ml	Neck size NS	Bottle dia. x h mm
AS120-16	1569/16	5000	45/40	181 x 333
AS120-18	1569/18	10000	60/46	227 x 414
AS120-22	1569/22	20000	60/46	288 x 508

Accessories

Stopcock 1571/02, cone 29/32, bore 4mm. For 1541 and 1569 aspirators.

AS135-06 1571/02

Stopcock, Rotaflo 1568/04, cone 29/32, bore 3mm. With PTFE key. For 1541 and 1569 aspirators.

AS135-10 1568/04

Rubber bung stoppers for 1531 and 1541 series aspirator – see *Stoppers section*.

Flexible tubing, 10mm bore for 1531 outlets – see *Tubing section*.

Joint clips for securing 1571/02 and 1568/04 stopcocks into aspirators – see *QKC29 in the Quickfit section*.



AS135-06



AS135-10



AS100



AS110



AS120

Aspirator Bottles

Plastic

Azlon

Aspirator bottles, Azlon wide neck

Polyethylene HDPE, with screw cap, two handles and removable stopcock. Neck i.d. 240mm.

- AS320-25** 30 litre, BGH 068
- AS320-30** 50 litre, BGH 070
- AS320-35** 100 litre, BWX 072

Aspirator bottles, Azlon autoclavable, heavy wall, medium neck

Polypropylene, octagonal shape, with offset screw cap for easy pouring, integral handle and removable, boss-fitting stopcock.

	Ref. BNP-	Capacity litres	Neck i.d. mm
AS340-15	05A	5	45
AS340-20	10A	10	90
AS340-25	20A	20	90

- AS340-75** Spare stopcock for AS340 series

Plastic

Aspirator bottles, narrow neck

Polyethylene HDPE, with screw cap and 12mm bore stopcock. Hexagonal shape, neck i.d. 49mm.

- AS300-15** 5 litre
- AS300-20** 10 litre

Aspirator bottles, narrow neck

Polyethylene. With screw cap, hinged handle at neck and 8mm bore stopcock.

- AS390-10** 2.5 litre
- AS390-15** 5 litre
- AS390-20** 10 litre
- AS390-50** Spare stopcock for AS390-series

Aspirator bottles, narrow neck

Polyethylene. With screw cap, neck bore 50mm, side lifting handles and 12mm air-vented stopcock.

- AS400-20** 20 litre
- AS400-25** 25 litre
- AS400-75** Spare stopcock for AS400 series

Large Capacity Plastic Bottles – see *Bottles* section.

Aspirator pump with trap flask – see *PX800-15*.

Plastic

NALGENE® 

Aspirator Bottles, Nalgene Lowboys™,

Polyethylene (HDPE). Low profile, with integral handgrip for safe, easy transport. Same size can be stacked three high. With polypropylene spigot tap and leakproof screw cap. Can be used with strong acids, bases, alcohols and ketones but not suitable for use with other organic solvents.

- AS500-15** Ref 2323-008. Capacity 8 litres. Overall 368 x 305 x 165mm W x D x H
- AS500-20** Ref 2323-015. Capacity 15 litres. Overall x 368 x 368 x 203mm W x D x H

bürkle

Aspirator bottle, Bürkle Flachmann

Polypropylene. Space saving design which is only 65mm wide. Stable, rigid structure with integral carrying handle and tamper-evident closure, neck i.d. 41mm. A 3/4" threaded connector at the base accepts an accessory stopcock which is rotatable about 180° to avoid dripping. Overall 65 x 335 x 335mm W x D x H. Accessory graduated scale and support stands are also available.

- AS530-15** Flachmann, 5 litre
- AS532-13** Support stand for 2 x AS530-15
- AS532-17** Support stand for 3 x AS530-15

Spare stopcock for AS530 - see *SV944-20*



AS300



AS320



AS340



AS390



AS400



AS500



AS530/AS532 in use

Bags

Disposal Bags

All dimensions are nominal.

Sterilin

Non-sterile.

Ref.	Size mm	Pack
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Polyethylene. Can withstand up to 121°C.

BA030-10	509	305 x 660	200
BA030-17	510	305 x 660	500
BA030-20	509L	406 x 610	200
BA030-27	510L	406 x 610	500
BA030-30	511	610 x 810	200

Polypropylene. Can withstand up to 135°C.

BA030-40	509HT	307 x 660	200
BA030-44	510HT	307 x 660	500
BA030-50	509LHT	406 x 610	200
BA030-54	510LHT	406 x 610	500
BA030-60	511HT	610 x 810	200

Holders For Sterilin bags

Wire type

BA032-06 For 509/510 bags

Box type

Cardboard. Self assembly. Supplied in pack of 10.

BA032-15 For 511 bags

Autoclave Bags, Elkay

Polyethylene. Non-sterile. Can be autoclaved at 121°C. Printed with biohazard symbol.

	Ref.	Size mm	Pack
BA045-20	1826	460 x 660	100
BA045-30	2430	610 x 760	100

Disposal Bags, Nylon

Withstands up to 170°C. Suitable for autoclaving surgical equipment, instruments, dressings etc. Dimensions stated are length x width in mm. Thickness 0.05mm.

	Size mm	Pack
BA064-20	300 x 100	100
BA064-30	300 x 150	100
BA064-60	460 x 300	100

Waste Sacks

Black plastic. Dimensions 450 x 725 x 975mm. Supplied in a pack of 100.

WD300-20 Waste sacks

"Hazardous Waste" Sacks

Yellow polyethylene bags with ties, printed with "Hazardous Waste" text and warning symbols. Dimensions stated are nominal flat width x depth. Supplied in packs as indicated.

WD315-10 460 x 900mm, pack of 100

WD315-20 600 x 1100mm, pack of 50



BA030 with BA032-06 in use



BA045



WD315



BA030 with BA032-15



BA064



WD300

Bags

Sample Bags

All dimensions are nominal.

Sample, plain

Polyethylene, lightweight. Supplied in packs of approximately 100.

	Size mm
BA055-20	100 x 150
BA055-34	150 x 200
BA055-47	200 x 350
BA055-52	250 x 375

Bag Ties

Plastic covered wire 150mm long for closing bags. Supplied in packs of 1000.

BA095-15 Bag ties

Sample, reseal

Polyethylene. With rim-channel closure, which can be opened and resealed repeatedly. Supplied in bags of 100.

	Size mm
Plain	
BA100-19	80 x 120
BA100-33	100 x 150
BA100-39	120 x 170
BA100-51	200 x 300
BA100-56	300 x 400

With writing panel

BA102-16	70 x 100
BA102-33	100 x 150
BA102-39	120 x 170
BA102-51	200 x 300

Biohazard Sample Bags

Clear polyethylene, with grip seal, rim-channel closure and printed with symbol. Supplied with dimensions as indicated and in packs of 1000.

BA103-10	140 x 150mm
BA103-15	225x 150mm



BA055 with BA095



BA100 in use

Sealing Film and Sealers

Nylon sealing film

- ◆ Resistant to bacterial contamination, heat, oils and greases
- ◆ Maintains sterility of wrapped item for long periods after autoclaving
- ◆ Non-toxic, odourless and tasteless

A non-toxic, elastic nylon film which is ideal for most packaging applications. Working temperature range -70 to +180°C. Permeable to steam allowing use as a wrapping for autoclaving. Available in a variety of layflat widths to accommodate various item shapes and sizes. Thickness 0.05mm (Gauge C). Supplied in a roll of 30 metres.

	Approx. layflat width, mm
SE162-13	25
SE162-16	50
SE162-19	75
SE162-21	100
SE162-24	125
SE162-27	150
SE162-30	200
SE162-33	250
SE162-36	300
SE162-42	500



BA102 in use



SE162



BA103



TS400-30, TS400-20 is similar

Impulse Heat Sealers

For heat sealing polyethylene film and other low melting point plastics, metallised film laminates etc. With hand operated hinged sealing bar and automatic control for adjusting the weld time. Will seal film up to 250 microns thick (1000 gauge). For 220-240V 50Hz single phase supplies.

Single timer model

TS400-20 Seal length 230mm

Dual timer model

Provides additional control of the cooling part of the weld cycle. Includes also a cutter for layflat tubing.

TS400-30 Seal length 300mm

Bags

Sample Bags



Polyethylene with tab and wire frame at top which allows bag to be opened wide. The bag is sealed by pulling the tabs and whirling the bag around the wire. Can be opened and closed as required. Ethylene oxide gas sterilised. Suitable for solids and liquids. Available with or without writing panel. Supplied in packs as indicated.

D x W, mm	Capacity, ml	Plain	Writing Panel	Writing panel, Self-standing	Pack qty.
125 x 65	29	—	BA105-11	—	500
125 x 75	58	BA104-13	BA105-13	—	500
185 x 75	118	BA104-15	BA105-15	BA107-15	500
185 x 75	118	—	BA106-15*	—	500
180 x 95	207	BA104-16	BA105-16	—	500
230 x 115	532	BA104-17	BA105-17	BA107-17	500
230 x 115	532	—	BA106-17*	—	500
230 x 150	710	BA104-19	BA105-19	BA107-19	500
230 x 150	710	BA104-21**	—	—	500
305 x 125	798	BA104-23	—	—	500
380 x 125	1065	BA104-25	—	BA107-25†	500
380 x 150	1242	BA104-27	—	BA107-27†	500
380 x 190	2041	BA104-29	BA105-29	BA107-29†	500
380 x 254	2721	—	BA105-31	—	250
508 x 254	3637	—	BA105-33	—	250
508 x 380	5441	—	BA105-36	—	100

*With flat wire band.

**With separate external pocket for holding sample paperwork.

†Supplied in a pack of 250.

Additional Whirl-Pak® bags:

Hygiene sampling bags - see *HT845-IHT850-series*.

Blender bags - see *MS865-series*.

Water sample test bags - see *WR290-series*.

Locking Pipe Closures, Nasco

Autoclavable plastic, locking tubes that allow temporary air- and water-tight closure of Whirl-Pak bags without whirling the bag and folding the tabs. The bag is wrapped around the inner core and clamped using the outer sleeve. Can also be used with other sample bags up to 190mm wide. Supplied in a pack of 50.

BA110-08 Locking pipe closures

Whirl-Pak® Wire racks, Nasco

For convenient storage or transportation of samples within Whirl-Pak® bags. Dimensions shown are number of apertures x dimensions and to hold bags with capacities as indicated.

- BA110-10** 21 x (40 x 50mm), up to 207ml bags
- BA110-20** 18 x (50 x 50mm), up to 207ml bags
- BA110-30** 20 x (64 x 64mm), 532-1065ml bags
- BA110-40** 6 x (114 x 114mm), 710-2041ml bags
- BA110-60** Carrying handle for BA110-racks

Whirl-Pak® Scoop bags, Nasco

Comprises 532ml Whirl-Pak® bag, 230 x 115mm, containing a sterile, polystyrene, 60ml scoop. Supplied in a pack of 50.

BA115-10 Scoop bags

Biohazard Specimen bags, Nasco

Whirl-Pak® Trans-Pak® clinical specimen transport bags, non-sterile. Bag dimensions 230 x 150mm. With external pouch 146 x 137mm and biohazard label. Accessory security tape is made of destructible material which cannot be removed in one piece and immediately tears if removal is attempted, indicating any tampering. Supplied in packs as indicated.

BA118-15 Biohazard specimen bags, pk.500

BA118-17 Security tape strips, pk.100

Soil Sample bags, Nasco

Used in sample submission for analytical assessment. Bleached paper with polyethylene liner and heat sealed base so that no sample sifting occurs. Capacity 769ml. With attached, folding tin strap tie. Supplied in a pack of 500.

BA120-25 Soil sample bags



BA105 in use, BA104 are similar



BA107-27 in use



BA115-08



BA115-10



BA110-40 in use with BA110-60



BA118-15



BA118-17



BA120-25 in use

Basins

Glass

All dimensions and capacities are nominal.

Evaporating

Pyrex 1450 series, flat bottom, curved sides, with spout.

	Ref. 1450	Cap. ml	Dia. x Ht. mm
BF500-10	/01	15	50 x 25
BF500-15	/03	45	60 x 30
BF500-20	/04	90	80 x 45
BF500-25	/06	170	95 x 55
BF500-30	/10	320	115 x 65
BF500-35	/14	600	140 x 80

Evaporating

Pyrex 1470 series, flat bottom, cylindrical, without spout.

	Ref. 1470	Cap. ml	Dia. x Ht. mm
BF505-10	/02	100	70 x 40
BF505-15	/04	150	80 x 45
BF505-20	/08	300	95 x 55
BF505-25	/10	500	115 x 65
BF505-30	/12	900	140 x 75
BF505-35	/16	2000	190 x 90



BF500



BF505

Metal

All dimensions and capacities are nominal.

Aluminium

Round bottom, with spout.

	Cap. ml	Dia. x Ht. mm
BF550-15	130	80 x 40

Nickel

Flat bottom, with drop-on cover with knob.

	Cap. ml	Dia. x Ht. mm
BF570-10	40	60 x 16
BF570-15	95	90 x 16

Platinum (97%) - Iridium (3%)

Flat bottom. Approximate weights are 50ml, 22g and 90ml, 32g.

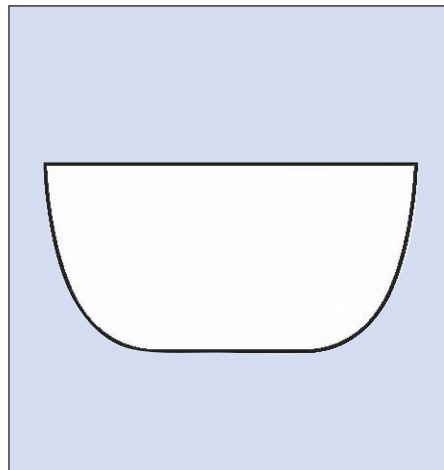
	Cap. ml	Dia. x Ht. mm
BF585-12	50	60 x 30
BF585-19	90	70 x 35

Dressing Containers, with lids

	Cap. ml	Dia. x depth, mm
MF325-26	700	100 x 100
MF325-42	2500	150 x 150



BF550/570



BF585

Instrument Boxes, with lid

	L x W x D, mm	Cap., ml
MF430-17	200 x 100 x 50	1000
MF430-27	220 x 120 x 50	1300
MF430-37	300 x 220 x 50	3300

Glass Dishes

Instrument – see *Boxes* section.

Metal Dishes

Foil – see *Dishes* section.

Instrument – see *Medical* section.

Kidney – see *Medical* section.

Trays – see *Trays* section.

Plastic Dishes

Petri – see *Petri dish* section.

Photographic – see *Dishes* section.



MF325



MF430

Basins

Porcelain Basins

All dimensions and capacities are nominal.
Maximum operating temperature 1000°C.

Evaporating

Round bottom, shallow form, with spout.

	Cap. ml	Dia. x Ht. mm
BF662-12	35	63 x 25
BF662-14	50	70 x 28
BF662-18	75	80 x 32
BF662-22	95	85 x 35
BF662-28	170	105 x 42
BF662-33	285	125 x 50
BF662-37	420	150 x 55
BF662-46	1000	200 x 80

Note:

BF662-12 to BF662-33 are glazed except rim.
BF662-37 to BF662-46 are glazed except outside base.

Evaporating

Round bottom, deep form, with spout.

	Cap. ml	Dia. x Ht. mm
BF667-12	50	70 x 34
BF667-17	150	97 x 50
BF667-19	250	110 x 52

Evaporating

Flat bottom, shallow form, with spout.

	Cap. ml	Dia. x Ht. mm
BF678-12	20	63 x 13
BF678-18	45	80 x 16
BF678-24	100	100 x 20
BF678-32	260	125 x 25
BF678-36	520	160 x 40

Ignition Capsule

Flat bottom, deep form, without spout. Capacity 20ml. Diameter 40mm. Height 20mm.

BF685-25 Capsule

Casserole

With handle and spout. Capacity 140ml. Diameter 80mm. Height 45mm.

BF690-30 Casserole

Silica Basins

All dimensions and capacities are nominal.
Maximum operating temperature 1050°C (1300°C for short periods).

Shallow form

Translucent, glazed with spout.

	Cap. ml	Dia. x Ht. mm
BF802-10	20	55 x 23
BF802-15	45	75 x 27
BF802-20	70	87 x 33
BF802-25	100	100 x 38

Deep form

Translucent, glazed, with spout. Capacity 90ml. Dia 80mm x Ht 45mm.

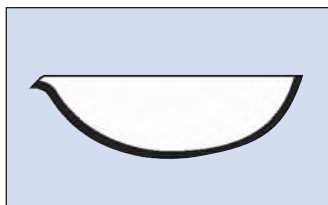
BF807-20 Deep

Flat form

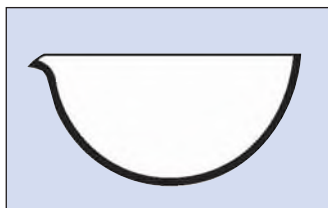
Translucent, glazed, with spout.

	Cap. ml	Dia. x Ht. mm
BF812-10	25	79 x 15

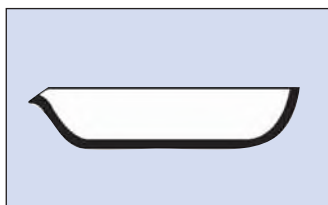
Silica trays – see Trays section.



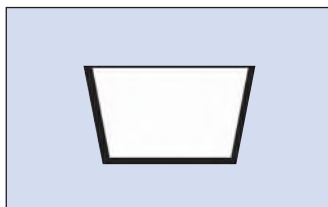
BF662



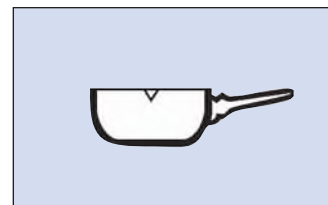
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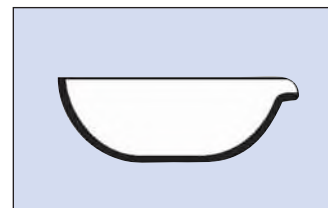
BF678



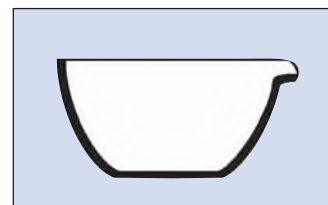
BF685



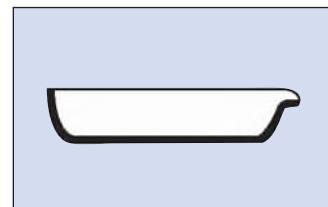
BF690



BF802



BF807



BF812

Baskets, Baths

Baskets

Rectangular. For holding a wide variety of small glassware and plasticware.

L x W x H

Nylon coated wire

BG225-12	100mm cube
BG225-17	125mm cube
BG225-22	150mm cube
BG225-32	200mm cube

Stainless steel wire

BG234-10	100mm cube
BG234-15	125mm cube
BG234-20	150mm cube
BG234-30	200mm cube

Polypropylene tapered for stacking

BG235-10	143 x 120 x 109mm
BG235-20	162 x 162 x 155mm
BG235-30	225 x 225 x 230mm

Boiling Water Baths

With concentric rings to support a wide range of flasks.

Bath, Circular

Stainless steel, with integral 1kW heating element, connector with cable, constant level and set of concentric rings. For 220-240V a.c. single phase supplies.

Dia. x depth

BH105-14	203 x 127mm
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Baths, Rectangular

Stainless steel, with integral heating element, connector with cable, constant level and set of concentric rings. All baths are 90mm deep. Maximum hole diameter 76mm except BH120-12 which is 108mm. For 220-240V a.c. single phase supplies; rating 1kW.

Places L x W

BH120-08	6	321 x 216mm
BH120-12	6	425 x 321mm
BH120-16	12	425 x 321mm

BH125-15 Spare element, 1kW, for BH105 and 120 series

BH125-40 Energy regulator for BH105 and 120 series. For 220-240V single phase supplies

Power Controllers For use with electrically heated baths to control energy input – see *EE500 series* in the *Electrical* section.

Fluidised Baths, for high temperature applications – see *BK502/512 series*.

Block Thermostats, for dry heating of Eppendorf and test tubes – see *BK205/340 series*.



BG225



BH105



BH120 series



BG234



BG235

Beakers

Pyrex® Borosilicate Glass

Pyrex® 1000 series, low form

With approximate graduations (except 10 litre size), marking spot, trace code to access a downloadable batch certificate and spout. To ISO 3819.

	Ref.	Capacity ml	Dia. x Ht. mm
BN100-10	1000/03	5	22 x 30
BN100-15	1000/05	10	26 x 35
BN100-20	1000/11	25	34 x 50
BN100-25	1000/02	50	42 x 60
BN100-30	1000/04	100	50 x 70
BN100-35	1000/06	150	60 x 80
BN100-40	1000/10	250	70 x 95
BN100-45	1000/14	400	80 x 110
BN100-50	1000/18	600	90 x 125
BN100-55	1000/20	800	100 x 135
BN100-60	1000/22	1000	105 x 145
BN100-65	1000/28	2000	130 x 185
BN100-70	1000/30	3000	150 x 210
BN100-75	1000/34	5000	170 x 270
BN100-80	1000/38*	10000	217 x 350

*Supplementary to ISO range.

Pyrex® 1015 series, tall form

With approximate graduations, marking spot and spout. To ISO 3819.

	Ref.	Capacity ml	Dia. x Ht. mm
BN120-25	1015/02	50	38 x 70
BN120-30	1015/04	100	48 x 80
BN120-35	1015/06	150	54 x 95
BN120-40	1015/10	250	60 x 120
BN120-45	1015/14	400	70 x 130
BN120-50	1015/18	600	80 x 150
BN120-60	1015/22	1000	95 x 180



BN100

Pyrex® 1020 series, conical

With spout. Top diameter is approximately 16mm less than the base diameter.

	Ref.	Capacity ml	Base Diameter x height mm
BN130-40	1020/06	250	68 x 105
BN130-47	1020/16	500	86 x 142

Pyrex® 1003 series, heavy duty, low form

Designed to provide high mechanical strength and increase the working life when used under harsh conditions. Have a reinforced rim plus a thicker wall and heavier base than the normal glass beaker. All capacities have a spout, marking spot and approximate graduations.

	Ref.	Capacity ml	Diameter x height mm
BN135-35	1003-150	150	57 x 89
BN135-40	1003-250	250	68 x 90
BN135-45	1003-400	400	77 x 110
BN135-50	1003-600	600	90 x 124
BN135-60	1003-1L	1000	108 x 156
BN135-65	1003-2L	2000	131 x 179
BN135-75	1003-4L	4000	160 x 250

All dimensions and capacities are nominal.



BN130

Pyrex® 1004 series, heavy duty, tall form

Designed to provide high mechanical strength and increase the working life when used under harsh conditions. Have a reinforced rim plus a thicker wall and heavier base than the normal glass beaker. All capacities have a spout, marking spot and approximate graduations.

	Ref.	Capacity ml	Diameter x height mm
BN137-35	1004-150	150	95 x 54
BN137-40	1004-250	250	120 x 60
BN137-50	1004-600	600	150 x 80

Pyrex® 1025 series, jacketed

For maintaining samples at a constant temperature, cooling or warming. With external jacket, through which a thermostatically controlled medium can be circulated via the inlet/outlet side arms, and approximate graduations.

	Ref.	Cap. ml	Overall diameter x height mm	Side-arm o.d. mm
BN140-40	1025/10SC	250	70 x 138	11
BN140-50	1025/18SC	600	95 x 180	11
BN140-60	1025/22SC	1000	110 x 235	14
BN140-65	1025/28SC	2000	130 x 280	14



BN137



BN120



BN135



BN140

Beakers

Rasotherm® Borosilicate Glass

Rasotherm®, low form

With approximate graduations, marking spot and spout. To ISO 3819.

	Ref.	Capacity ml	Dia. x Ht. mm
BN150-10	93206001	5	22 x 30
BN150-15	93206002	10	26 x 35
BN150-20	93206003	25	34 x 50
BN150-25	93206004	50	42 x 60
BN150-30	93206005	100	50 x 70
BN150-35	93206006	150	60 x 80
BN150-40	93206007	250	70 x 95
BN150-45	93206008	400	80 x 110
BN150-50	93206009	600	90 x 125
BN150-55	93206014	800	100 x 135
BN150-60	93206010	1000	105 x 145
BN150-65	93206011	2000	130 x 185
BN150-70	93206012	3000	150 x 210
BN150-75	93206013	5000	170 x 270

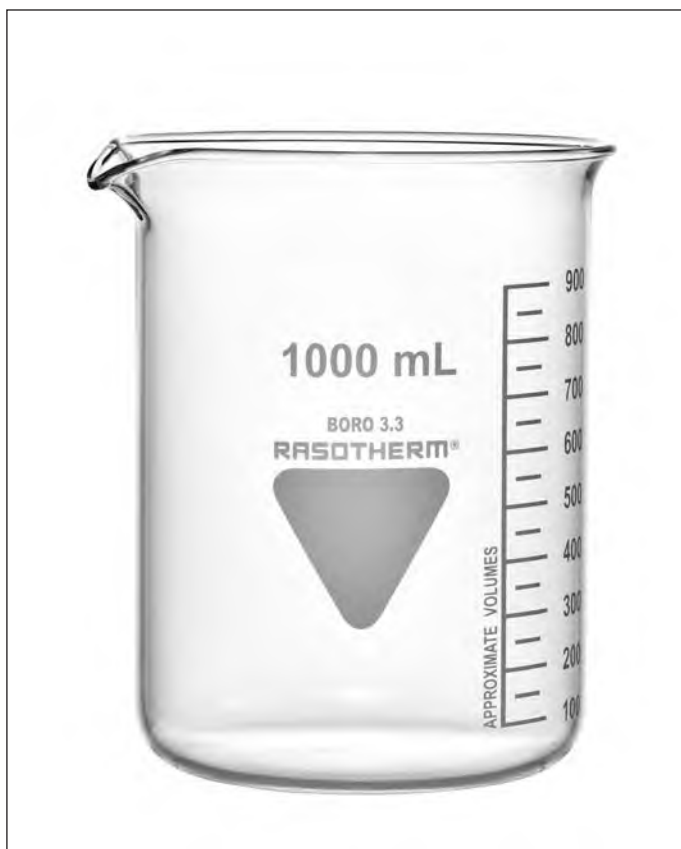
Rasotherm®, tall form

With approximate graduations, marking spot and spout. To ISO 3819.

	Ref.	Capacity ml	Dia. x Ht. mm
BN154-20	9336001	25*	30 x 55
BN154-25	9336002	50	38 x 70
BN154-30	9336003	100	48 x 80
BN154-35	9336004	150	54 x 95
BN154-40	9336005	250	60 x 120
BN154-45	9336006	400	70 x 130
BN154-50	9336007	600	80 x 150
BN154-55	9336008	800	90 x 175
BN154-60	9336009	1000	95 x 180
BN154-65	9336010	2000	120 x 240
BN154-70	9336011	3000	135 x 280

*Supplementary to ISO range.

All dimensions and capacities are nominal.



BN150



BN154

Beakers

Duran® Borosilicate Glass

Duran® 21 106 series, low form

With approximate graduations (except 10 litre size) marking spot and spout. To ISO 3819.

	Ref.	Capacity ml	Dia. x Ht. mm
BN160-10	21 106/07	5	22 x 30
BN160-15	21 106/08	10	26 x 35
BN160-20	21 106/14	25	32 x 48
BN160-25	21 106/17	50	42 x 60
BN160-30	21 106/24	100	50 x 70
BN160-35	21 106/29	150	55 x 81
BN160-40	21 106/36	250	69 x 95
BN160-45	21 106/41	400	82 x 100
BN160-50	21 106/48	600	90 x 125
BN160-55	21 106/53	800	98 x 136
BN160-60	21 106/54	1000	105 x 145
BN160-65	21 106/63	2000	132 x 185
BN160-70	21 106/68	3000	153 x 210
BN160-75	21 106/73	5000	170 x 270
BN160-80	21 106/86	10000	217 x 350

Duran® 21 116 series, tall form

With approximate graduations marking spot and spout. To ISO 3819.

	Ref.	Capacity ml	Dia. x Ht. mm
BN163-25	21 116/17	50	38 x 70
BN163-30	21 116/24	100	47 x 80
BN163-35	21 116/29	150	53 x 96
BN163-40	21 116/36	250	60 x 120
BN163-45	21 116/41	400	70 x 130
BN163-50	21 116/48	600	80 x 150
BN163-55	21 116/53	800	89 x 175
BN163-60	21 116/54	1000	95 x 180
BN163-65	21 116/63	2000	118 x 240
BN163-70	21 116/68	3000	135 x 280

Metal

Aluminium squat form

With spout.

	Capacity ml	Dia. x Ht. mm
BN170-40	250	69 x 76
BN170-47	500	84 x 103
BN170-60	1000	102 x 124

Stainless steel

With spout.

	Capacity ml	Dia. x Ht. mm
BN180-38	200	60 x 75
BN180-43	350	65 x 115
BN180-48	550	75 x 125
BN180-53	700	75 x 165
BN180-60	1000	110 x 125
BN180-63	1250	100 x 165
BN180-65	2000	125 x 180
BN180-68	2500	150 x 160
BN180-75	5000	185 x 220

Stainless Steel Storage Containers – see *Storage* section.

Graduated Measuring Jugs, Plastic and Metal, capacities up to 5000ml – see *Measures* section.

All dimensions and capacities are nominal.



BN160

BN163



BN180, BN170 is similar

Beakers

Plastic

Polystyrene, disposable, opaque

Without spout, but with pouring lip. Separate snap on lids are available in clear polystyrene. Supplied in packs of 1000.

- BN250-05** 100ml, 47mm high
- BN250-06** Lids for BN250-05

Tri-corner, polypropylene

With tri-cornered rim for ease of pouring. Can be autoclaved and used at temperatures up to 120°C. With approximate graduations. Supplied in packs of 25.

- BN260-28** 50ml
- BN260-33** 100ml
- BN260-43** 250ml
- BN260-48** 400ml
- BN260-58** 800ml
- BN260-63** 1000ml

Polypropylene, low form

A budget range of translucent polypropylene, low form beakers with spout and approximate graduations printed in blue. Can be autoclaved and used up to 121°C. To ISO 7056. Supplied singly.

- BN265-20** 25ml
- BN265-25** 50ml
- BN265-30** 100ml
- BN265-35** 150ml
- BN265-40** 250ml
- BN265-45** 400ml
- BN265-50** 600ml
- BN265-60** 1000ml
- BN265-65** 2000ml

Polypropylene, low form

A simple, budget range of translucent polypropylene, low form beakers with approximate, moulded-in graduations and spout. Can be autoclaved to 121°C. Supplied singly.

- BN267-20** 25ml
- BN267-25** 50ml
- BN267-30** 100ml
- BN267-40** 250ml
- BN267-47** 500ml
- BN267-60** 1000ml
- BN267-65** 2000ml

Polypropylene, low form, Kartell

Translucent (almost clear) with approximate, moulded-in graduations and spout. Can be autoclaved to 121°C. To ISO 7056. Supplied singly.

- BN270-19** 25ml
- BN270-24** 50ml
- BN270-29** 100ml
- BN270-39** 250ml
- BN270-49** 500ml
- BN270-60** 1000ml
- BN270-65** 2000ml
- BN270-70** 3000ml
- BN270-75** 5000ml

Polypropylene, low form, Azlon

Translucent, with spout and approximate printed graduations. Can be autoclaved to 121°C. To BS5404 Pt1 1976. Supplied singly.

- BN280-15** BDA208P 10ml
- BN280-20** BDA212P 25ml
- BN280-25** BDA218P 50ml
- BN280-30** BDA224P 100ml
- BN280-40** BDA230P 250ml
- BN280-45** BDA234P 400ml
- BN280-47** BDA236P 500ml
- BN280-50** BDA238P 600ml
- BN280-60** BDA240P 1000ml
- BN280-65** BDA242P 2000ml

Polypropylene, low form, sets, Azlon

Generally as individual BN280- series beakers but supplied in convenient sets of different sizes as indicated.

	Ref.	Sizes, ml
BN280-94	BDA1199	10, 25, 50, 100, 250



BN250



BN265



BN270



BN260



BN267



BN280

Beakers

Plastic continued

Polypropylene, Azlon

High clarity polypropylene beakers with spout and approximate moulded-in graduations, tapered sides and vertical ribs to allow easy stacking without "gripping", and non-slide, anti-suction bases. Can be autoclaved and used up to 121°C. To ISO7056. Supplied singly.

BN285-20	BPM0025P	25ml
BN285-25	BPM0050P	50ml
BN285-30	BPM0100P	100ml
BN285-40	BPM0250P	250ml
BN285-45	BPM0400P	400ml
BN285-47	BPM0500P	500ml
BN285-50	BPM0600P	600ml
BN285-60	BPM1000P	1000ml
BN285-65	BPM2000P	2000ml

PMP (TPX), low form, Azlon

"Griffin" pattern. Transparent with spout and approximate printed graduations. Autoclavable and suitable for use up to 150°C. To ISO7056 (400ml and 800ml sizes are supplementary to ISO7056). Supplied singly.

BN356-20	BDD312P	25ml
BN356-25	BDD318P	50ml
BN356-30	BDD324P	100ml
BN356-40	BDD330P	250ml
BN356-47	BDD336P	500ml
BN356-60	BDD340P	1000ml
BN356-65	BDD342P	2000ml

PTFE

Opaque with spout. Rigid and non-porous with smooth surfaces. Suitable for use up to 260°C or 300°C for short periods. With flat base.

BN400-15	10ml
BN400-20	25ml
BN400-25	50ml
BN400-30	100ml
BN400-35	150ml
BN400-40	250ml
BN400-47	500ml
BN400-60	1000ml

SAFETY WARNING

It is not advisable to use PTFE beakers on a hotplate as fluorine gas can be emitted at high temperatures.



BN285



BN356



BN400

Beaker Accessories

Watch Glasses

Clear glass with ground edges. Diameters are nominal.

	<i>Dia. mm</i>
WG100-10	30
WG100-15	40
WG100-20	50
WG100-25	60
WG100-30	70
WG100-35	80
WG100-40	90
WG100-45	100
WG100-50	130
WG100-55	150
WG100-60	200

Watch Glasses, Pyrex

Borosilicate glass. Diameters are nominal.

	<i>Ref.</i>	<i>Dia. mm</i>
WG130-13	1060/04	40
WG130-18	1060/06	50
WG130-23	1060/09	60
WG130-38	1060/10	80
WG130-48	1060/14	100
WG130-52	1060/18	125
WG130-58	1060/20	150
WG130-63	1060/21	200
WG130-70	1060/24	250

Watch glasses

Polypropylene. Transparent with stable ring base. Autoclavable at 121°C.

	<i>Dia. mm</i>
WG145-23	60
WG145-38	80
WG145-48	100
WG145-52	125



WG100

WG130



WG145

Bell jars, Bellows, Boats

Bell Jars

Bell Jars, 29/32 socket top

Glass. Without stopper or stopcock. Dimensions stated are approximate height to shoulder x inside flange diameter in mm.

BP100-10 200 x 150
BP100-20 300 x 200

For suitable stopper SB29 or stopcock MF11/4 – see *Quickfit* section.

Bell Jars, knob top

Glass. Dimensions stated are approximate height to shoulder x inside flange diameter in mm.

BP102-12 200 x 150
BP102-22 300 x 200

Note: Bell jars are not intended to be pressurised or evacuated.

Bellows

Bellows, hand

With non-return valve and outlet tubing. Approximate capacity given is for the bulb.

	Capacity
Single spray	
BP200-15	65ml
BP200-20	100ml
BP200-25	130ml
Double spray	
BP205-10	30ml
BP205-15	65ml
BP205-20	100ml
BP205-25	130ml

Bellows

With non-return valve and connectors for 6mm bore tubing. Suitable for use with the Orsat apparatus.

BP210-10 Bellows

Bench Taps – see *Furniture* section.

Boats, Combustion

For use in furnace combustion tubes. With handle. Dimensions stated are the length x width x height in mm.

	Size mm
Glazed porcelain	
BP300-58	85 x 12 x 8
BP300-66	102 x 13 x 10
BP300-72	130 x 19 x 12
Glazed silica	
BP327-10	50 x 15 x 9
BP327-25	78 x 17 x 11
BP327-40	103 x 20 x 12
Alumina	
BP344-10	50 x 12 x 20
BP344-17	86 x 15 x 13
BP344-25	108 x 20 x 17
BP344-35	119 x 30 x 19

Boats, Weighing

Weighing Boats

Polystyrene, disposable, can be shaped to form a pouring funnel. Available in white or black.

	Cap. ml	Pack qty.
White		
BD750-01	5	1000
BD750-02	30	500
BD750-04	100	250
Black		
BD750-61	5	1000
BD750-62	30	500
BD750-64	100	250

Weighing Boats

Polystyrene, disposable, square shape with flat bottom. Supplied in packs of 1000. White.

BD755-05 7ml, 44 x 44mm
BD755-10 100ml, 80 x 80mm
BD755-15 250ml, 140 x 140mm

Weighing Boats

Antistatic, square shape. Generally as BD755 series but manufactured to eliminate the problems caused by static when weighing fine powders. Supplied in packs of 1000. White.

BD757-05 7ml, 44 x 44mm
BD757-10 100ml, 80 x 80mm
BD757-15 250ml, 140 x 140mm

Weighing Boats

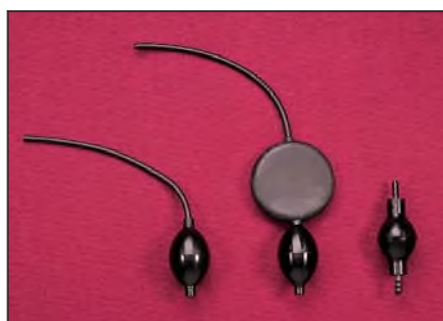
Paper. Ideal for weighing and transporting a variety of sample types, particularly pastes and creams. Nitrogen-free, parchment paper allows use in nitrogen or fat determination procedures and dissolves during Kjeldahl digestions. Overall 55 x 10 x 10mm L x W x H. Supplied in a pack of 100.

BD764-25 Weighing boats, paper



BP100

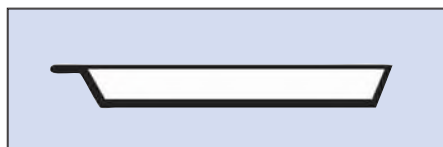
BP102



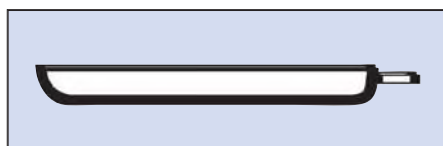
BP200

BP205

BP210



BP300



BP327, BP344 are similar



BD750

BD755/BD757



BD764-25

Distillation

Anti-Bumping Granules

Glass beads

Soda lime glass. Approximate diameters as indicated. Supplied in packs of 1kg.

DT984-02	2mm
DT984-03	3mm
DT984-04	4mm
DT984-05	5mm
DT984-06	6mm
DT984-08	8mm
DT984-10	10mm

Boiling stones

PTFE. Prevent chemical splashes and "bumping" when boiling solutions. Supplied in resealable packs of 500g. Granule sizes stated are approximate.

DT985-10	4mm granules
DT985-20	6mm granules

Glass Distillation Receiver BS658

Glass Distillation Receiver

Pyrex Glass. Class B. To BS658.

Type 1 Crow pattern

	Ref.	Cap. ml
CY750-10	Pyrex 3400/04	100

Glass Distillation Flasks

Flasks, Pyrex 1280/1290 series

Distillation. Side arm set at 75° to vertical axis and positioned to suit a 76mm partial immersion thermometer.

	Ref.	Cap. ml
General purpose		
FK525-35	1280/14	500
To ASTM E133		
FK527-24	1290/02	100
FK527-26	1290/04	125
FK527-30	1290/06	250

Distillation Assemblies for petroleum products – see *Petroleum* section.

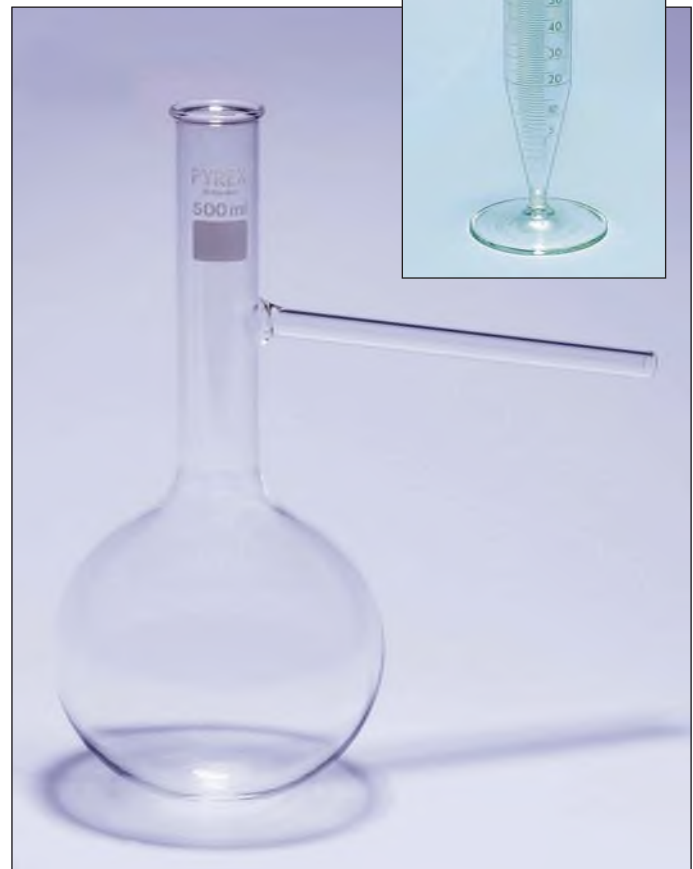
Distillation Thermometers to IP and ASTM – see *Thermometers* section.



DT984



DT985



FK525, FK527

CY750

Bottles, Glass, Uncapped

Flat

Bottles, flat

Sloping shoulder, without cap.

	Cap. ml	Neck	Pack qty.
Clear glass			
BR100-31	100	R3/24	90
BR100-46	300	R3/28	36

Safety Coating

The tough PVC safety coating can be applied to many bottles. If you need a particular type of bottle coated, please let us have details.

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**

Winchester

Bottles, Winchester pattern

Narrow mouth (except BR122-97 which is wide mouth), without cap.

	Cap. ml	Neck	Pack qty.
Clear glass			
BR120-17	30	R3/20	138
BR120-50	500	R6/31	24
BR120-80	1000	R6/31	12
Amber glass			
BR122-07	10	R3/20	163
BR122-10	15	R3/20	138
BR122-18	30	R3/20	130
BR122-30	100	R3/24	86
BR122-34	150	R3/24	68
BR122-50	500	R6/31	24
BR122-80	1000	R6/31	12
BR122-97	2500	45mm*	11
Amber glass, ribbed			
BR124-90	2000	R6/31	12

*Menshen-style neck.

Medical

Bottle, DIN for sterile fluids

Clear flint sulphated lightweight type II glass. Without stopper or cap.

	Cap. ml	Pack qty.
BR140-30	100	99

Stopper with pull ring, pk 1500.

BR142-06 Stopper

Stopper 31mm, infusion, rubber, pk 100.

BR142-08 Stopper

Snap cap 31mm, aluminium/polypropylene, pk 100.

BR142-12 Cap

Bottles, medical dispensing

Narrow mouth, without cap.

	Cap. ml	Neck	Pack qty.
Amber glass			
BR150-18	50	R3/22	99
BR150-28	100	R3/22	56
BR150-34	150	R3/22	49
BR150-50	500	R3/28	25



BR100



BR122-97



BR124



BR150



BR120

BR122-07 to -80



BR140 with BR142-06 and BR142-12

Bottles, Glass, Uncapped

Pharmaceutical

Bottles, Alpha Sirop

Narrow mouth, without cap.

	Cap. ml	Neck ROPP-*	Pack qty.
Clear glass			
BR154-30	100	28mm	80
BR154-45	300	28mm	48
BR154-50	500	28mm	32
Amber glass			
BR157-23	60	28mm	132
BR157-30	100	28mm	104
BR157-35	150	28mm	84
BR157-40	200	28mm	67
BR157-42	250	28mm	63
BR157-45	300	28mm	48
BR157-50	500	28mm	35

*For Roll-on aluminium, or plastic, Pilfer Proof (ROPP) caps. Will also accept R3/28 cap.

Powder

Bottles, powder

Wide mouth, without cap.

	Cap. ml	Neck	Pack qty.
Clear glass			
BR160-16	30	R3/33	80
BR160-18	30	R3/33	132
BR160-24	60	R3/38	72
BR160-33	4oz	R3/38	80
BR160-36	175	R3/48	53
BR160-41	250	R3/48	42
BR160-49	500	R3/58	33
Amber glass			
BR162-10	15	R3/28	140
BR162-17	30	R3/33	127
BR162-23	60	R3/38	72
BR162-31	100	R3/38	72
BR162-34	4oz	R3/38	68
BR162-37	175	R3/48	53
BR162-41	250	R3/48	42
BR162-50	500	R3/58	28

Ointment and Tablet

Bottles (Jars) ointment

Extra wide mouth without cap.

	Cap. ml	Neck	Pack qty.
Clear glass			
BR165-18	30	R3/38	110
BR165-24	60	R3/51	72
BR165-30	120	R3/58	54
BR165-42	250	R3/83	48

Bottles tablet

Wide mouth, cylindrical shape without cap.

	Cap.	Neck	Pack qty.
Amber glass			
BR174-14	3/4 oz/20ml	R3/24	126
BR174-30	3 oz/100ml	R3/33	64

Caps – see BR220 etc.

Plastic tablet bottles – see BR670.



BR154



BR160



BR165



BR157



BR162



BR174

Bottles, Glass, Capped

Accessory Caps for Glass Bottles

All caps are supplied in packs of 100.

For neck

Black Plastic with woodpulp faced PVDC liner

BR220-06	R3/20
BR220-09	R3/22
BR220-12	R3/24
BR220-15	R3/28

BR220-18	R3/33
BR220-21	R3/38
BR220-27	R3/48
BR220-30	R3/51

BR220-33	R3/58
BR220-36	R3/63
BR220-39	R3/83
BR220-42	R3/100

Black Plastic with polyethylene cone liner

BR222-06	R3/20
BR222-09	R3/22
BR222-12	R3/24
BR222-15	R3/28
BR222-51	R6/31

White Polypropylene, Wadless

Can be autoclaved to 121°C.

BR230-06	R3/20
BR230-09	R3/22
BR230-12	R3/24

BR230-15	R3/28
BR230-18	R3/33
BR230-21	R3/38

BR230-24	R3/48
BR230-51	R6/31

For neck

Enamelled Metal, Black, with waxed wood pulp liner

BR240-18	R3/33
BR240-36	R3/63

Aluminium with rubber liner

BR247-03	R3/18
BR247-06	R3/20
BR247-15	R3/28

Security Caps, Clic-Loc

Must be pressed down and turned to remove. Polyethylene with polypropylene inner (BR255-60 has an EPE inner).

For neck

BR255-06	R3/20
BR255-09	R3/22
BR255-12	R3/24

BR255-15	R3/28
BR255-18	R3/33
BR255-21	R3/38
BR255-60	PP28*

*To fit ROPP style 28mm neck.

Security Caps, tamper-evident

For ROPP style 28mm neck bottles only. White polypropylene with EPE liner and red tamper ring collar which separates from the cap when first opened. Pack of 100.

BR264-15 ROPP 28mm

For Menshen-style 45mm diameter neck bottles only. Black polypropylene with PTFE liner and red, tamper-evident ring collar which separates from the cap when first opened. Supplied singly.

BR264-26 Menshen 45mm

Glass Bottles with Caps

	Cap. ml	Neck/cap	Pack qty.
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Clear, sloping shoulder with aluminium cap and rubber liner

BR350-46	300	R3/28	36
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Clear sloping shoulder with black plastic cap and PVDC liner

BR352-42	200	R3/28	56
BR352-46	300	R3/28	36

Aluminium caps

For Bijou and Universal Bottles – see BR247.

Plug stoppers – see SW505 series.



BR264-15 in use



BR350



BR264-26 in use



BR352

Bottles, Glass, Capped

Glass Bottles with Caps continued

Amber winchester pattern

With black polyethylene cap and cone liner.

	Cap. ml	Neck/cap	Pack qty.
BR372-50	500	R6/31	24
BR372-80	1000	R6/31	12

Wide mouth powder

With black plastic cap and PVDC liner.

	Cap. ml	Neck/cap	Pack qty.
Clear glass			
BR400-16	30ml	R3/33	80
BR400-24	60ml	R3/38	72
BR400-33	4oz	R3/38	80
BR400-36	175ml	R3/48	53
BR400-41	250ml	R3/48	42
BR400-49	500ml	R3/58	33

Amber glass

BR402-17	30ml	R3/33	127
BR402-23	60ml	R3/38	72
BR402-34	4oz	R3/38	68
BR402-41	250ml	R3/48	42
BR402-50	500ml	R3/58	28

Wide mouth powder

With white polypropylene wadless cap.

	Cap. ml	Neck/cap	Pack qty.
Clear glass			
BR404-33	4oz	R3/38	80
BR404-41	250	R3/48	42
Amber glass			
BR406-34	4oz	R3/38	68
BR406-41	250ml	R3/48	42

Ointment jar

Extra wide mouth with black plastic cap.

	Cap. ml	Neck/cap	Pack qty.
Clear glass			
BR410-24	60	R3/51	72
BR410-30	120	R3/58	54
BR410-42	250	R3/83	48

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**

Alternative bottle/cap combinations are available – details on request.



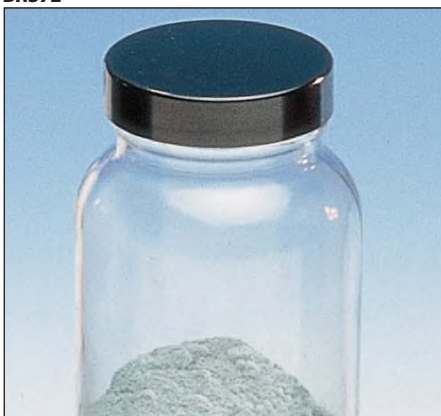
BR372



BR402



BR406



BR400



BR404



BR410

Bottles, Plastic

Plastic, Narrow Mouth with Screwcap

Bottles, polyethylene

Narrow mouth with polypropylene cap.

BR600-30	100ml
BR600-42	250ml
BR600-50	500ml
BR600-80	1000ml

Bottles, polyethylene, leakproof

High quality translucent bottles of sturdy construction designed for laboratory use at an economical price. Narrow mouth with sloping shoulders and leakproof cap.

	Cap. ml	Pack qty.
BR604-24	50	50
BR604-30	100	20
BR604-36	250	10
BR604-40	500	50
BR604-52	1000	4
BR604-62	2000	1

Bottles, Azlon LDPE

Narrow mouth low density polyethylene with polypropylene leakproof cap.

	Ref. BNL-	Cap. ml	Pack qty.
BR610-18	0030PN	30	10
BR610-24	0060PN	60	10
BR610-30	0100PN	100	10
BR610-32	0125PN	125	10
BR610-36	0150PN	150	10
BR610-43	0250P	250	10
BR610-52	0500P	500	10
BR610-82	1000P	1000	5
BR610-92	2000P	2000	5

Bottles Azlon HDPE

Narrow mouth, high density polyethylene. With polypropylene leakproof cap. Has a chemical resistance superior to ordinary low density polyethylene.

	Ref. BNH-	Cap. ml	Pack qty.
BR615-18	0030PN	30	10
BR615-24	0060PN	60	10
BR615-30	0100PN	100	10
BR615-31	0125PN	125	10
BR615-43	0250P	250	10
BR615-52	0500P	500	10
BR615-82	1000P	1000	5
BR615-92	2000P	2000	5

Bottles Nalgene HDPE

Narrow mouth, high density polyethylene. With polypropylene cap designed to be leakproof.

	Ref. 2002-	Cap. ml
BR618-06	9125	4
BR618-08	9025	8
BR618-10	9050	15
BR618-17	0001	30
BR618-23	0002	60
BR618-30	0004	125
BR618-36	0006	175
BR618-42	0008	250
BR618-50	0016	500
BR618-53	9016	500*
BR618-80	0032	1000*

*Bottles BR618-53 and BR618-80 have a longer neck and wider mouth to fit Eppendorf and Oxford bottle dispensers.

Bottles Nalgene polycarbonate

Narrow mouth. Transparent square shape with approximate permanent graduations. Can be autoclaved. With leakproof cap. The 2000ml size has moulded-in handgrips for easier pouring.

	Ref. 2015-	Cap. ml
BR626-17	0030	30
BR626-23	0060	60
BR626-30	0125	125
BR626-35	0250	250
BR626-50	0500	500
BR626-80	1000	1000
BR626-85	2000	2000

Bottles, Nalgene PET[†], Sterile

Square shape, transparent, narrow neck with high density, polyethylene leakproof screw closure. Inexpensive alternative to glass for storage of media. Bottles and closures are non-pyrogenic and supplied radiation sterilised. The 2000ml size has moulded-in handgrips for easier pouring. Packed in shrink-wrapped trays within an outer pack. Supplied in the pack quantity only.

	Ref. 2019-	Cap. ml	Neck mm	Pack qty.
BR632-17	0030	30	20	96
BR632-20	0060	60	24	96
BR632-23	0125	125	38	48
BR632-28	0250	250	38	48
BR632-34	0500	500	38	24
BR632-37	1000	1000	38	24
BR632-40	2000	2000	53	12

[†]PET = Polyethylene terephthalate copolyester.



BR600



BR610, BR615 is similar



BR626, 30 to 1000ml



BR626, 2000ml



BR604



BR618



BR632, 30 to 1000ml

Bottles, Plastic

Plastic with Screwcap continued

Bottles, polyethylene

White HDPE. With sloping shoulder and leakproof tamper-evident PP cap with PTFE cap seal. The 2500ml size has a carrying handle. Supplied in packs of 4.

	Cap. ml	Neck i.d. mm
BR642-41	500	29
BR642-51	1000	29
BR642-95	2500	29

Bottles, polypropylene, leakproof

High quality, sturdy, translucent bottles designed for laboratory use at an economical price. Narrow mouth with sloping shoulders and leakproof cap. Can be autoclaved to 132°C. Supplied in packs as indicated.

	Cap. ml	Pack qty.
BR644-08	10	100
BR644-12	20	100
BR644-17	30	100
BR644-24	50	1
BR644-30	100	1
BR644-34	250	50
BR644-42	500	1
BR644-52	1000	1
BR644-62	2000	1

PTFE bottles are available – details on request.



BR642



BR644

Bottles, Azlon polypropylene

Narrow mouth with leakproof cap. Translucent and can be autoclaved to 121°C. Supplied in packs as indicated.

	Ref. BNP-	Cap. ml	Pack qty.
BR650-18	0030PN	30	10
BR650-30	0100PN	100	10
BR650-36	0150PN	150	10
BR650-44	0250P	250	10
BR650-52	0500P	500	10
BR650-82	1000P	1000	5
BR650-92	2000P	2000	5

Bottles, Azlon polycarbonate.

Narrow mouth. Transparent, shatterproof polycarbonate with approximate graduations and leakproof polypropylene cap. Suitable as an alternative to glass for biological media, aqueous solutions and reagent storage. Square shape ensures economic use of storage space. Can be autoclaved at 121°C, up to 10 times. Supplied in packs as indicated.

	Cap. ml	H x W x D mm	Neck i.d. mm	Pack qty.
BR662-43	250	139 x 59 x 59	28	24
BR662-52	500	172 x 73 x 73	28	12
BR662-82	1000	213 x 92 x 92	28	12
BR662-92	2000	266 x 115 x 115	40	6



BR650



BR662

Plastic, Tablet/Vials

Bottles, tablet. Without Cap.

Amber polystyrene. Supplied in packs as indicated.

	Cap. ml	Neck	Pack qty.
BR670-12	16	R3/20	200
BR670-15	25	R3/22	200
BR670-18	32	R3/22	200
BR670-19	48	R3/24	200
BR670-24	66	R3/28	100
BR670-29	90	R3/28	100
BR670-31	112	R3/28	100
BR670-32	125	R3/28	100

Caps – see BR220 etc.

Vials

Amber polystyrene with polyethylene push-on closure. Supplied in packs as indicated.

	Cap. ml	Pack qty.
BR680-10	15	200
BR680-17	30	200
BR680-18	45	200
BR680-23	60	100
BR680-30	120	50

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BR670



BR680

Bottles, Plastic

Plastic, Wide Mouth

Bottles, Powder, Azlon HDPE

High density polyethylene. Wide mouth with black plastic cap. Ideal for containing powders or granules. Supplied singly.

	Ref. BGC-	Cap. ml
BR750-35	428P	150
BR750-42	430P	250
BR750-50	436P	500
BR750-80	440P	1000

Bottles, Azlon HDPE

High density polyethylene. Wide mouth with polypropylene leakproof cap.

	Ref.	Cap. ml	Pack qty.
BR752-18	BWH0030PN	30	10
BR752-24	BWH0060PN	60	10
BR752-30	BLH0100P	100	10
BR752-31	BWH0125P	125	10
BR752-36	BLH0150P	150	10
BR752-44	BWH0250PN	250	10
BR752-52	BWH0500PN	500	10
BR752-82	BWH1000PN	1000	5
BR752-92	BWH2000PN	2000	5

Bottles, polyethylene, leakproof

High quality, sturdy translucent bottles, designed for laboratory use at an economical price. Wide mouth with square shoulders and leakproof cap.

	Cap. ml	Pack qty.
BR756-24	50	50
BR756-30	100	20
BR756-36	250	10
BR756-42	500	10
BR756-52	1000	4
BR756-62	2000	1

Bottles, polyethylene

Wide mouth with polyethylene cap and sealing ring. Supplied singly.

BR760-10	300ml
BR760-20	700ml
BR760-30	1250ml

Bottles, Azlon amber polypropylene

Wide mouth with polypropylene leakproof cap. Autoclavable to 121°C.

	Ref. BWP-	Cap. ml	Pack qty.
BR764-24	0060AP	60	10
BR764-36	0150AP	150	10
BR764-44	0250AP	250	10
BR764-52	0500AP	500	10
BR764-82	1000AP	1000	5
BR764-92	2000AP	2000	5

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BR750



BR756



BR764



BR752



BR760

Bottles, Plastic

Plastic, Wide Mouth continued

Bottles, polypropylene, leakproof

High quality, sturdy translucent bottles designed for laboratory use at an economical price. Wide mouth with square shoulders and leakproof cap and blue printed graduations. Can be autoclaved to 121°C.

	Cap. ml	Pack qty.
BR767-80	100	50
BR767-85	250	25
BR767-90	500	25
BR767-95	1000	10

Bottles, Azlon polypropylene

Wide mouth with polypropylene leakproof cap. Autoclavable to 121°C.

	Ref.	Cap. ml	Pack qty.
BR770-18	BWVP0030PN	30	10
BR770-24	BWVP0060PN	60	10
BR770-30	BLP0100P	100	10
BR770-32	BLP0125P	125	10
BR770-36	BLP0150P	150	10
BR770-44	BWVP0250PN	250	10
BR770-52	BWVP0500PN	500	10
BR770-82	BWVP1000PN	1000	5
BR770-92	BWVP2000P	2000	5

Bottles, Nalgene HDPE

Wide mouth with leakproof polypropylene screw cap. Suitable for dry materials or liquids.

	Ref. 2104-	Cap. ml
BR775-17	0001	30
BR775-23	0002	60
BR775-32	0004	125
BR775-42	0008	250
BR775-50	0016	500
BR775-80	0032	1000

Bottles, Kartell HDPE

Wide mouth high density polyethylene with polypropylene cap, insert plug and tagging points. Square shape and with approximate graduations. Suitable for use with foodstuffs acc. EC regulation 10/2011. Supplied singly.

	Cap. ml
BR790-15	25
BR790-20	50
BR790-30	100
BR790-42	250
BR790-50	500
BR790-80	1000
BR790-90	2000

Bottles, HDPE

Wide mouth, square shape high density polyethylene bottles with polyethylene cap and push-in seal. Supplied singly.

	Cap. ml
BR792-50	500
BR792-80	1000
BR792-90	2000

Labelled plastic reagent bottles – see BS600.

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BR767



BR775



BR792



BR770



BR790

Bottles, Plastic

Plastic, Wide Mouth continued

Bottles, HDPE

Wide mouth with leakproof closures in HDPE having LDPE foam inlay wads. Designed for the storage of powders. Square shape. Supplied singly.

	Ref. BGE-	Cap. ml
BR800-23	—	60
BR800-42	—	250

Bottles, Nalgene HDPE

Wide mouth with leakproof polypropylene cap. Withstand freezer use down to -100°C.

	Ref. 2114-	Cap. ml
BR807-42	0008	250
BR807-50	0016	500
BR807-80	0032	1000

Bottles, Nalgene PPCO

Polypropylene co-polymer. Wide mouth with leakproof polypropylene screw cap. Can be autoclaved at 121°C.

	Ref. 2110-	Cap. ml
BR809-23	0002	60
BR809-34	0006	175
BR809-42	0008	250
BR809-50	0016	500
BR809-80	0032	1000

Bottles, HDPE

Wide mouth, square shaped, in natural or white high density polyethylene, with blue polypropylene tamper-evident cap with conical internal seal. UN-approved for the transport of solids (except 50ml sizes). Supplied singly.

	Cap. ml
Natural	
BR815-15	50*
BR815-25	100
BR815-37	250
BR815-45	500
BR815-75	100
BR815-81	1500
BR815-94	2500
White	
BR817-15	50*
BR817-25	100
BR817-37	250
BR817-45	500
BR817-75	1000
BR817-81	1500
BR817-94	2500

*Not UN-approved

Bottles, PVC

Transparent or amber PVC, extra-wide neck with leakproof black PP cap with PE-foam liner. Ideal for viewing contents, and easy to fill and clean. The amber versions are suitable for storing light-sensitive products. Supplied singly.

	Cap. ml	Neck i.d. mm
Transparent		
BR865-20	50	23
BR865-30	100	31
BR865-45	300	41
BR865-50	500	54
BR865-80	1000	69
BR865-92	2000	69
Amber		
BR867-20	50	23
BR867-30	100	31
BR867-45	300	41
BR867-50	500	54
BR867-80	1000	69
BR867-92	2000	69

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BR800



BR809



BR865

BR867



BR807



BR815, BR817 are similar

Bottles, Plastic

Plastic, Large Capacity, Cylindrical

Bottles, polyethylene

Robust medium wall with screw cap. All have one handle except the 50 litre which has two. The 5 and 10 litre are hexagonal. Supplied singly.

	Cap. litres
BR900-10	5
BR900-20	10
BR900-30	25
BR900-40	50

Bottles, Nalgene polypropylene

With integral carrying handles, leakproof polypropylene screw cap and approximate graduations. Can be autoclaved. Not recommended for use with hazardous materials. Supplied singly.

	Ref. 2250-	Cap. litres
BR914-20	0020	10
BR914-30	0050	20
BR914-40	0130	50

Bottles, Nalgene Clearboys™ polycarbonate

Transparent. With leakproof polypropylene screw cap and approximate graduations. Can be autoclaved. Not recommended for use with hazardous materials. Supplied singly.

	Ref. 2251-	Cap. litres
BR917-22	0020	10
BR917-32	0050	20

Bottles, Kartell HDPE

Robust, heavy walled, wide mouth, ideal for liquids or powders. With insert plug, tagging points and carrying handle. Supplied singly.

BR922-15	5 litres
BR922-25	10 litres

Carboys, Kartell HDPE

Strong, lightweight cylindrical carboys suitable for holding foodstuffs, with narrow mouth central filling/vent cap and handle in blue (25 litre and 50 litre sizes have 2 handles).

BR927-05	5 litre
BR927-12	10 litre
BR927-15	25 litre
BR927-25	50 litre

Kegs, HDPE

White. With extra-wide mouth for easy filling. Ideal for waste disposal or storage of liquids, powders or granules. With red, leakproof PE cap, suitable for tag sealing. UN-approved to schedule X cat. I, II and III. Supplied singly.

	Cap. litres	Dia. x ht. mm	Neck i.d. mm
BR928-30	10	270 x 240	200
BR928-35	26	316 x 424	204
BR928-43	33	338 x 450	295

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BR900



BR917-22/BR917-32



BR927



BR914



BR922



BR928 in use

Bottles, Plastic & Culture/Specimen

Plastic, Large Capacity, Square, Octagonal and Rectangular

Bottle, HDPE, square

Natural HDPE. Ideal for storage and transport of solid materials. Space saving square design with moulded-in handgrip for safe convenient carrying. Wide neck for easy filling and supplied with blue PP cap with internal conical seal and tamper-evident ring. Overall 135 x 135 x 195mm high, neck i.d. 69mm. Supplied singly.

BR931-05 2300ml

Bottles, Azlon polypropylene, octagonal

Heavy duty rigid construction with offset neck, leakproof screwcap, approximate graduations and integral carrying handle. Can be autoclaved.

	Ref.	Capacity litres
BR932-30	BNP05B	5
BR932-40	BNP10B	10
BR932-50	BNP20B	20

Jerrycans, Azlon rigid polyethylene, rectangular

Robust, lightweight with screw cap and integral handle.

BR935-30 5 litre
BR935-50 25 litre

Jerrycans, rigid polyethylene, UN certified

Robust, stackable, food grade polyethylene jerrycans with tamper-evident screw cap.

	Capacity litres	Cap type
BR937-30	5	DIN51
BR937-40	10	DIN51
BR937-50	20	DIN61
BR937-55	30	DIN61

Aspirator stopcocks to fit BR937 jerrycans - see SV942.

Glass, Culture and Specimen

Bottles, culture

Clear glass. All caps where specified have a rubber liner.

		Capacity	Pack qty.
With aluminium screw cap, plain			
BS150-10	Bijou	7ml (¼oz)	288
BS150-25	Universal	28ml (1oz)	144
Without cap			
BS152-10	Bijou	7ml (¼ oz)	255
BS152-25	Universal	28ml (1oz)	150

Caps for BS150/152

Aluminium with rubber liner. Supplied in packs of 100.

BR247-06 For 7ml and 14ml Bijou size R3/20
BR247-15 For 28ml Universal size R3/28

Caps, Sterilin, polypropylene

Wadless, non-sterile. Supplied in pack of 2850.

BS165-10 For 28ml Universal size R328

Culture vials, Universal, tubular glass

Tubular formed, Type III soda glass vials, capacity 30ml. With R3/24 neck and fitted white PP caps. Supplied in pack of 500.

BS170-25 Tubular vials, 30ml Universal size

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However **BEFORE AUTOCLAVING** (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BR931-05



BR935



BS150



BS170



BR932



BR937



BS152

Bottles, Culture/Specimen



Disposable Specimen Containers

◆ CE-marked in accordance with the in-vitro diagnostic (I.V.D.) medical devices directive (93/42/EC). ◆ Leak-free in accordance with EN14254 Annexe D.

The table below is coded as follows:

Ir = Gamma Irradiation **-L** = Leak proof cap **Me** = Metal **NS** = Non Sterile
Pe = Polyethylene **Pp** = Polypropylene **Ps** = Polystyrene **S** = Sterile aseptic production

	Ref.		Container/Description	Cap	Pack qty.
BS200-07	128A [†]	S	30ml Universal, no label	Ps/Pp-L	400
BS200-12	128B [†]	S	30ml Universal, printed label	Ps/Pp-L	400
BS200-17	128C [†]	S	30ml Universal, plain label	Ps/Pp-L	400
BS200-30	128SA	S	30ml Universal, Spoon, no label	Ps/Pe-L	400
BS200-35	128SB	S	30ml Universal, Spoon, printed label	Ps/Pe-L	400
BS200-40	128SC	S	30ml Universal, Spoon, plain label	Ps/Pe-L	400
BS200-47	128BBAC [†]	S	30ml Universal, Boric Acid, labelled	Ps/Pp-L	400
BS204-05	129B-BAC	S	7ml Bijou, Boric Acid, labelled	Ps/Pe	700
BS204-10	129A	S	7ml Bijou, no label	Ps/Pe	700
BS204-15	129B*	S	7ml Bijou, plain label	Ps/Pe	700
BS208-05	125AM [†]	S	60ml, no label,	Ps/Me-L	300
BS208-10	125BM* [†]	S	60ml, printed label	Ps/Me-L	300
BS208-15	125CM [†]	S	60ml, plain label	Ps/Me-L	300
BS208-20	125AP	S	60ml, no label	Ps/Pe	300
BS208-25	125BP	S	60ml, printed label	Ps/Pe	300
BS208-30	125CP	S	60ml, plain label	Ps/Pe	300
BS212-05	185AM	S	100ml, no label	Ps/Me-L	200
BS212-10	185BM*	S	100ml, printed label	Ps/Me-L	200
BS212-15	185CM	S	100ml, plain label	Ps/Me-L	200
BS212-17	185AP	S	100ml, no label	Ps/Pe	200
BS212-19	185BP	S	100ml, printed label	Ps/Pe	200
BS212-22	185CP	S	100ml, plain label	Ps/Pe	200
BS212-25	165A	S	150ml, no label	Ps/Me-L	120
BS212-30	165B*	S	150ml, printed label	Ps/Me-L	120
BS212-35	165C	S	150ml, plain label	Ps/Me-L	120
BS216-05	190A	S	250ml, unlabelled	Ps/Me-L	50
BS216-07	190A/1	S	250ml, unlabelled, tray packed, shrink wrapped	Ps/Me-L	50
BS216-10	190B*	S	250ml, printed label	Ps/Me-L	50
BS216-12	190B/1	S	250ml, printed label, tray packed, shrink wrapped	Ps/Me-L	50
BS216-15	190C	S	250ml, plain label	Ps/Me-L	50
BS216-35	191	Ir	30ml Dippa – sampler with integral handle	Ps/Pp-L	50
BS216-37	194I/W	Ir	100ml Dippa – sampler with integral handle	Ps/Me-L	100
BS216-40	192	Ir	250ml Dippa – sampler with integral handle	Ps/Me-L	50
BS240-62	Z5PE	NS	5ml, blood specimen, printed label, skirted base	Ps/Pp	1000
BS240-65	Z5PSNL	NS	5ml, blood specimen, no label	Ps/Pp	1000
BS240-70	Z10PS	NS	10ml, blood specimen, printed label	Ps/Pp	500
BS240-75	Z10PSNL	NS	10ml, blood specimen, no label	Ps/Pp	500

*Non-pyrogenic versions of these containers are available - *details on request*.

[†]Certified to remain leak-free at 95kPa pressure differential.

Double-bagged containers for sterile sampling of tissue and fluids - see *Clinical section*.



Bottles, Culture/Specimen

Disposable Specimen Containers

- ◆ CE-marked in accordance with EU 98/79/EC
- ◆ Leak-tested in accordance with BS-EN14254

The table below is coded as follows:

-L = Leak proof cap **Me** = Metal **Pe** = Polyethylene **Pp** = Polypropylene **Ps** = Polystyrene **S** = Sterile aseptic production

		Container/Description	Cap	Pack qty.
BS241-07	S	30ml Universal, no label	Ps/Pp-L	400
BS241-12	S	30ml Universal, printed label	Ps/Pp-L	400
BS241-17	S	30ml Universal, plain label	Ps/Pp-L	400
BS241-25	S	30ml Universal, no label	Pp/Pp-L	400
BS241-27	S	30ml Universal, printed label	Pp/Pp-L	400
BS241-29	S	30ml Universal, plain label	Ps/Pp-L	400
BS241-32	S	60ml, no label [†]	Pp/Me-L	300
BS241-34	S	60ml, printed label [†]	Pp/Me-L	300
BS241-36	S	60ml, plain label [†]	Pp/Me-L	300
BS241-40	S	60ml, no label	Pp/Pe	300
BS241-43	S	60ml, printed label	Pp/Pe	300
BS241-46	S	60ml, plain label	Pp/Pe	300
BS241-51	S	100ml, no label [†]	Ps/Me-L	160
BS241-54	S	100ml, printed label [†]	Ps/Me-L	160
BS241-57	S	100ml, plain label [†]	Ps/Me-L	160
BS241-59	S	150ml, no label [†]	Ps/Me-L	120
BS241-62	S	150ml, printed label [†]	Ps/Me-L	120
BS241-65	S	150ml, plain label [†]	Ps/Me-L	120
BS241-70	S	250ml, no label [†]	Ps/Me-L	48
BS241-74	S	250ml, printed label [†]	Ps/Me-L	48
BS241-78	S	250ml, plain label [†]	Ps/Me-L	48

[†]Certified to remain leak-free at 95kPa pressure differential.



Bottles, Culture/Specimen

Blood Specimen Containers

Disposable Blood Specimen Containers

Polystyrene or polypropylene specimen containers with wadless, leakproof polypropylene screw caps and printed label. Prefilled with anticoagulant as indicated. Non sterile.

	Description	Pack qty.
Polystyrene containers		
BS242-05	2.5ml EDTA	1000
BS242-15	4ml EDTA	1000
BS242-40	5ml Lithium Heparin	1000
BS242-50	10ml Lithium Heparin	500
BS242-80	2.5ml Fluoride Oxalate	1000
Polypropylene containers		
BS248-05	2.5ml EDTA	1000
BS248-15	4ml EDTA	1000
BS248-40	5ml Lithium Heparin	1000
BS248-50	10ml Lithium Heparin	500
BS248-80	2.5ml Fluoride Oxalate	1000

Plastic Specimen Tubes

Polystyrene Specimen Tubes, Azlon

Transparent. With snap-on polyethylene cap. Flat bottom. Dimensions are nominal height x diameter. Supplied in packs as indicated.

	Ref.	Size, mm	Pack qty.
TW225-20	BGG444P	33 x 36	10
TW225-50	BGG456P	87 x 65	5
TW225-55	BGG458P	100 x 100	5

Polyethylene Specimen Tubes, Azlon

With captive hinged cap. Flat bottom. Dimensions are nominal height x diameter. Supplied in packs of 10.

	Ref.	Size, mm
Squat form		
TW240-20	BGG308	32 x 29
TW240-25	BGG311	36 x 32
Tall form		
TW244-25	BGG304	40 x 12
TW244-30	BGG306	49 x 15
TW244-35	BGG312	78 x 25

Tissue Culture Roller Bottles - see *Tissue Culture* section.



BS242/BS248



TW225



TW240/TW244

Bottles, Glass Reagent

Glass Reagent, Plain Neck

Narrow Mouth

Bottles, reagent

Narrow mouth with stopper.

	Cap. ml	Stopper size
Clear glass, polypropylene stopper		
BS400-17	30	16/16
BS400-20	50	16/16
BS400-30	100	16/16
BS400-42	250	24/20
BS400-50	500	24/20
BS400-80	1000	29/32
Amber glass, polypropylene stopper		
BS404-23	50	16/16
BS404-30	100	16/16
BS404-42	250	24/20
BS404-50	500	24/20
BS404-80	1000	29/32

Accessory amber glass solid stoppers

For BS400/BS404 series, with sizes as indicated. Supplied singly.

BS406-92	Size 16/16
BS406-94	Size 24/20
BS406-96	Size 29/32



BS400



BS404



BS400 with glass stopper



BS404 with glass stopper

Narrow Mouth, Pyrex®

Bottles, reagent, Pyrex 1526 series, unstoppered

Narrow mouth with unground neck and without stopper. Comply with ISO4796.

	Ref.	Cap. ml
BS415-30	1526/04	100
BS415-42	1526/06	250
BS415-50	1526/08	500
BS415-80	1526/10	1000
BS415-90	1526/12	2000
BS415-93	1526/16	5000
BS415-95	1526/18	10000
BS415-96	1526/20	15000
BS415-97	1526/22	20000

Bottles, reagent, Pyrex 1521 series, glass stoppered

Narrow mouth with ground neck and glass stopper. Comply with ISO4796.

	Ref.	Cap. ml	Stopper size
BS420-30	1521/04	100	14/15
BS420-42	1521/06	250	19/26
BS420-50	1521/08	500	24/29
BS420-80	1521/10	1000	29/32
BS420-90	1521/12	2000	29/32
BS420-93	1521/16	5000	45/40
BS420-95	1521/18	10000	60/46
BS420-97	1521/22	20000	60/46



BS415

BS420

Bottles, Glass Reagent

Glass Reagent, Screw Neck, Pyrex®

Pyrex 1515 series, narrow mouth, round shape

With SVL black polybutylene terephthalate (PBT) screw cap and PTFE faced sealing disc. Can be dry heat or steam sterilised at 180°C. With approximate graduations.

	Ref.	Capacity ml	Cap size mm
BS430-15	1515/01	25	20
BS430-20	1515/02	50	25
BS430-30	1515/04	100	25
BS430-42	1515/06	250	30
BS430-50	1515/08	500	30
BS430-80	1515/10	1000	42
BS430-90	1515/12	2000	60
BS430-93	1515/16	5000	60
BS430-95	1515/18	10000	60

Spare SVL Screwcaps

SW460-20	Size 20
SW460-25	Size 25
SW460-30	Size 30
SW460-42	Size 42
SW460-60	Size 60

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However **BEFORE AUTOCLAVING** (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**

Glass Reagent, Screw Neck, Wide Mouth, Square Shape, Pyrex®

Pyrex 1520 series, wide mouth, square shape

With polypropylene screw cap and clear pouring ring which ensure smooth transfer of contents without drips. Square shape allows closer fitting in water baths or on shelves and offers up to 20% saving of space in comparison to similar round bottles. Can be used up to 140°C. With approximate graduations.

	Ref.	Capacity ml	Cap size mm
BS432-30	1520/04	100	32
BS432-42	1520/06	250	45
BS432-50	1520/08	500	45
BS432-80	1520/10	1000	45

Culture Bottles – see *Tissue Culture* section.

Dropper Bottles, Eye Dropper Bottles – see *Medical* section.

Reagent bottles, plastic – see *BR756*.

Safety Signs and Tapes – see *Safety* section.

Specimen Tubes – see *Tubes* section.

Spill mats and bench protection – see *Safety* section.

Trays – see *TT210*.

Washbottles – see *Washing* section.



BS430



BS432

Bottles, Glass Reagent

Glass Reagent, Screw Neck, Wide Mouth, Round shape

Bottles, Glass Reagent, Screw neck, Wide Mouth

Clear borosilicate (3.3) glass. Supplied with GL45 blue polypropylene screw cap and pouring ring for drip free pouring. Bottle, cap and pouring ring can be autoclaved up to 140°C. With approximate graduations, writing patch and retrace code with certificate available on request. In pack sizes as indicated.

Capacity ml	Cap size mm	Catalogue number	Pack quantity
100	45	BS431-30	10
250	45	BS431-42	10
500	45	BS431-50	10
1000	45	BS431-80	10
2000	45	BS431-90	1
5000	45	BS431-93	1
10000	45	BS431-95	1

Rasotherm®, capped. To ISO4796

Clear borosilicate (3.3) glass. Supplied with GL45 polypropylene screw cap and clear pouring ring which ensures smooth transfer of contents without drips. Can be used up to 110°C. With approximate graduations and writing patch. Supplied singly.

Capacity ml	Ref.	Catalogue number
100	95206001	BS434-30
250	95206002	BS434-42
500	95206003	BS434-50
1000	95206004	BS434-80
2000	95206005	BS434-90
5000	95206006	BS434-93
10000	95206007	BS434-95

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However **BEFORE AUTOCLAVING** (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BS431



BS434

Bottles, Glass Reagent

Glass Reagent, Screw Neck, Wide Mouth, Round Shape, Pyrex®

Pyrex 1516 series, capped. To ISO4796

Supplied with polypropylene screw cap and clear pouring ring (except 25ml size) which ensures smooth transfer of contents without drips. Can be used up to 140°C. With approximate graduations and trace code which allows a bottle to be traced to its point of production.

Pyrex 1517 series, uncapped

As 1516 series but supplied without cap and pouring ring.

Pyrex 1518 series, safety coated, uncapped

As 1517 series but with plastic coating to protect against mechanical damage. The coating remains transparent after repeated autoclaving up to 135°C and is UV absorbent to 380nm. This allows use in a similar way to amber bottles. Supplied without cap or pouring ring.

Pyrex 1519 series, amber, uncapped

As 1517 series but manufactured from amber borosilicate glass. UV absorbent to 500nm. Without cap and pouring ring.

Cap. ml	Cap size mm	Size Ref. (Series Code-)	Series Code 1516	Series Code 1517	Series Code 1518	Series Code 1519
25	25	/01	BS435-15	BS440-15	—	BS444-15
50	32	/02	BS435-20	BS440-20	—	BS444-20
100	45	/04	BS435-30	BS440-30	BS443-32	BS444-30
250	45	/06	BS435-42	BS440-42	BS443-44	BS444-42
500	45	/08	BS435-50	BS440-50	BS443-52	BS444-50
1000	45	/10	BS435-80	BS440-80	BS443-65	BS444-80
2000	45	/12	BS435-90	BS440-93	BS443-70	BS444-93
5000	45	/16	BS435-93	BS440-95	BS443-77	BS444-95
10000	45	/18	BS435-95	BS440-97	BS443-90	BS444-97
15000	45	/20	BS435-97	—	—	—
20000	45	/22	BS435-99	—	—	—

Standard Spares and Accessories

All items are polypropylene.

- [BS437-04](#) Screw cap size 25, blue
- [BS437-06](#) Screw cap size 32, blue
- [BS437-09](#) Screw cap size 45, blue
- [BS437-12](#) Pouring ring size 32
- [BS437-15](#) Pouring ring size 45

High Temperature Accessories

Enable bottles to be used up to 200°C.

- [BS437-17](#) PBTP screw cap size 25, red
- [BS437-18](#) PBTP screw cap size 32, red
- [BS437-21](#) PBTP screw cap size 45, red
- [BS437-24](#) ETFE pouring ring size 32
- [BS437-27](#) ETFE pouring ring size 45

PBTP - Polybutylene terephthalate

ETFE - Ethylenetetrafluoroethylene copolymer

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However BEFORE AUTOCLAVING (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BS435

BS440

BS443

BS444

Bottles, Glass Reagent

Glass Reagent, Screw Neck, Wide Mouth, Round shape, Duran®

Duran 21801 series, capped

Supplied with polypropylene screw cap and pouring ring (except 25ml size) for drip free pouring. Bottle, cap and pouring ring can be autoclaved up to 140°C. With approximate graduations.

Duran 21805 series, safety coated, uncapped

Similar to 21801 series but with plastic coating to protect against mechanical damage. The coating remains transparent after repeated autoclaving up to 135°C and is UV absorbent to 380nm. This allows use in a similar way to amber bottles. Without cap or pouring ring.

Cap. ml	Cap size mm	Plain	Ref.	Safety coated	Ref.
25	25	BS445-15	21801-145	—	—
50	32	BS445-18	21801-175	—	—
100	45	BS445-20	21801-245	BS445-60	21805-24
250	45	BS445-23	21801-365	BS445-63	21805-36
500	45	BS445-26	21801-445	BS445-66	21805-44
1000	45	BS445-30	21801-545	BS445-70	21805-54
2000	45	BS445-33	21801-635	BS445-73	21805-63
5000	45	BS445-36	21801-735	BS445-76	21805-73
10000	45	BS445-40	21801-865	—	—

Standard Spares and Accessories

All items are polypropylene. Vented caps are perforated, fitted with a 0.2µm filter membrane filter and are autoclavable up to 121°C.

- BS447-55** Screw cap size 25, blue
- BS447-56** Vented screw cap size 25, blue
- BS447-57** Screw cap size 32, blue
- BS447-58** Vented screw cap size 32, blue
- BS447-60** Screw cap size 45, blue
- BS447-61** Vented screw cap size 45 blue
- BS447-62** Pouring ring size 32
- BS447-63** Pouring ring size 45

High Temperature Accessories

Enable bottles to be used up to 200°C. Size 45 is also available with aperture that takes an accessory pierceable, bromobutyl rubber, self-sealing stopper.

- BS447-65** PBTP screw cap size 25, red
- BS447-67** PBTP screw cap size 32, red
- BS447-70** PBTP screw cap size 45, red
- BS447-72** ETFE pouring ring size 32
- BS447-73** ETFE pouring ring size 45
- BS447-80** PBTP screw cap with aperture, size 45, red
- BS447-85** Pierceable bromobutyl stopper*

*Note: the stopper is only autoclavable at 121°C

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However **BEFORE AUTOCLAVING** (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**

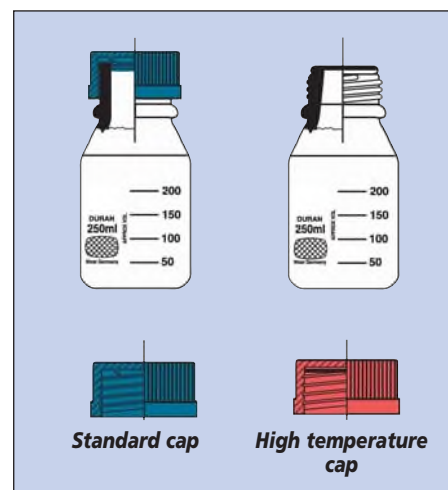
PBTP - Polybutylene terephthalate

ETFE - Ethenetetrafluoroethylene copolymer



BS445-23

BS445-60



BS445-23

BS445-63



BS447-56, -58, -61



BS447-80



BS447-85

Bottles, Glass Reagent

Glass Reagent, Plain Neck, Wide Mouth

Bottles, reagent, wide mouth

Clear glass with glass dustproof stopper.

	Capacity, ml
BS450-20	50
BS450-25	100
BS450-42	250
BS450-50	500
BS450-80	1000



BS450

Glass Reagent, Screw Neck, Extra Wide Mouth, Round Shape, Pyrex®

Pyrex 1523 series, extra wide mouth

Supplied with polypropylene screw cap and pouring ring which ensures smooth transfer of contents without drips. Can be used to 140°C. With approximate graduations and trace code which allows a bottle to be traced to its point of production.

	Ref. 1523/-	Capacity ml	Cap Size mm
BS465-42	06	250	80
BS465-50	08	500	80
BS465-80	10	1000	80
BS465-90	12	2000	80
BS465-93	16	5000	80
BS465-95	18	10000	80
BS465-99	22	20000	80

Spares

All items are polypropylene.

BS467-10 Screw cap size 80

Important Warning Sterilising Bottles

Some bottles where indicated can be sterilised by autoclaving. However **BEFORE AUTOCLAVING** (or sterilising by gas or dry heat) the cap or closure must either be removed or just set on top of the container **WITHOUT ENGAGING THE THREAD.**



BS465

Bottles, Glass and Plastic Reagent

Glass Reagent, Sandblast Labelled

With sandblasted letters within a border. BS520 series have a plain sandblast area, easily marked by the user with most types of pen or pencil.

Bottles, reagent, sandblast labelled

Clear glass with interchangeable polypropylene stopper except where otherwise stated.

Title	Capacity 250ml	Capacity 500ml
Plain sandblast area for marking	BS520-03	BS520-05
Acetic Acid Dil.	BS522-03	BS526-03
Acetic Acid, Glacial	BS522-05	BS526-05
Acetone	BS522-08	BS526-08
Alcohol	BS522-12	BS526-12
Ammonia Sol. Conc.	BS522-15	BS526-15
Ammonia Sol. Dil.	BS522-17	BS526-17
Ammonium Carbonate	BS522-22	BS526-22
Ammonium Chloride	BS522-25	BS526-25
Ammonium Hydroxide Conc.	BS522-28	BS526-28
Ammonium Hydroxide Dil.	BS522-30	BS526-30
Ammonium Sulphate	BS522-36	BS526-36
Barium Chloride	BS522-45	BS526-45
Calcium Hydroxide	BS522-59	BS526-59
Carbon Tetrachloride	BS522-65	BS526-65
Chloroform (A),(G)	BS522-68	BS526-68
Copper Sulphate	BS522-72	BS526-72
Ether (A),(G)	BS522-80	BS526-80
Ethyl Acetate	BS522-83	BS526-83
Fehlings Sol. No. 1	BS522-88	BS526-88
Fehlings Sol. No. 2	BS522-90	BS526-90
Ferric Chloride	BS523-04	BS527-04
Hydrochloric Acid Conc.	BS523-15	BS527-15
Hydrochloric Acid Dil.	BS523-17	BS527-17
Hydrogen Peroxide (A)	BS523-20	BS527-20
Lead Acetate	BS523-25	BS527-25
Lime Water	BS523-32	BS527-32
Nitric Acid Conc. (A),(G)	BS523-36	BS527-36
Nitric Acid Dil.	BS523-38	BS527-38
Potassium Hydroxide	BS523-52	BS527-52
Potassium Iodide	BS523-55	BS527-55
Potassium Permanganate	BS523-58	BS527-58
Silver Nitrate (A),(G)	BS523-65	BS527-65
Sodium Carbonate	BS523-68	BS527-68
Sodium Chloride	BS523-72	BS527-72
Sodium Hydroxide	BS523-75	BS527-75
Sodium Hydroxide Dil.	BS523-77	BS527-77
Sulphuric Acid Conc.	BS523-83	BS527-83
Sulphuric Acid Dil.	BS523-85	BS527-85

(A) Indicates amber glass bottles. (G) Indicates glass stopper.



BS522/BS523



BS526/BS527

Plastic Reagent, Labelled

Azlon

- ◆ Graduated in ml and fl.oz
- ◆ Leakproof wide mouth
- ◆ Autoclavable to 121°C
- ◆ Transparent — easy to view contents
- ◆ Large, white, plain writing area

Bottles, reagent, plastic, labelled

Transparent polypropylene. With dual graduations (ml and fl.oz), plain writing area and cap. Supplied in packs as indicated.

	Ref.	Cap. ml	Pk. qty.
BS600-24	BWP0060PGRAD	60	10
BS600-31	BLP0125PGRAD	125	10
BS600-43	BWP0250PGRAD	250	10
BS600-52	BWP0500PGRAD	500	10
BS600-82	BWP1000PGRAD	1000	5

Ink Markers, Laboratory

Ideal for marking polystyrene petri dishes, metal, glass and most plastics, cold (above 0°C) or moist surfaces. Water and alcohol resistant, autoclavable ink. Can be removed from non-porous surfaces by scrubbing with detergent. Colours as indicated. Supplied singly.

LA620-04	Black
LA620-08	Red
LA620-12	Blue
LA620-16	Green



BS600

Bottles, Glass, Dropping/Dispensing

Glass, Dropping and Dispensing

Bottles, dropper

Amber glass, round shape with plastic cap, rubber teat and glass pipette.

Cap. ml	Pack qty.
------------	--------------

Soda-lime amber glass

BS707-14	15	25
BS707-15	15	100
BS707-16	30	100

Bottles, dropping

Clear glass with plastic stopper, vinyl teat and glass pipette.

Cap. ml

BS722-17	30ml
BS722-24	50ml
BS722-30	100ml

Bottles, dropping TK Pattern

With ground-in slotted flat-head stopper.

Clear glass

BS740-20	50ml
BS740-30	100ml

Amber glass

BS742-20	50ml
BS742-30	100ml

Bottles, dispensing

Clear glass with plastic stopper, vinyl teat and graduated pipette.

Cap. ml	Pipette ml
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BS750-30	100	1 x 0.5
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Tilt Pipettes

Borosilicate glass. Kipps pattern, with 29/32 cone joint for attachment to 1 litre soda glass reservoir supplied.

	Capacity, ml
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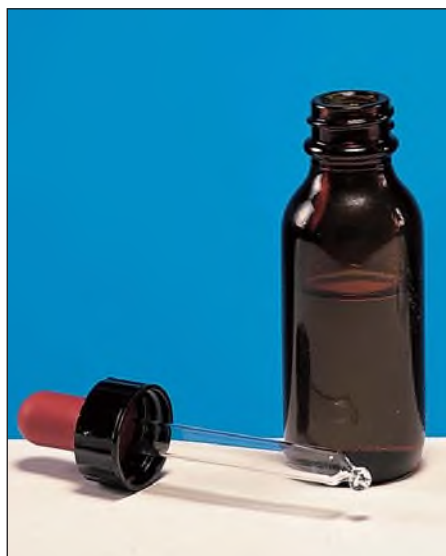
PP739-20	5
PP739-25	10
PP739-30	20
PP739-35	25
PP739-40	50
PP739-45	100

QKC29 Joint clip to secure head on bottle

Bottle mounting Dispensers – see *Dispensers section*.

Dispensing Measures – see *Measures section*.

Pipettors – see *Pipettes section*.



BS707



BS740

BS742



PP739



BS722



BS750

Bottles, Plastic, Dispensing, Special

Plastic, Dropping and Dispensing

Bottles, Azlon dropping

Polyethylene with bellows dropping pipette. Capacities are bottle volume/dispensed volume.

	Ref.	Cap. ml
BS805-35	BGE628P	150/4
BS805-42	BGE630P	250/4

Bottles, Azlon dispensing

Polyethylene with pivoting nozzle which can be raised to give a directable jet of liquid as the bottle is squeezed.

	Ref.	Cap. ml
Natural polyethylene		
BS815-17	BGE514P	30
BS815-24	BGE520P	60
BS815-35	BGE528P	150
BS815-42	BGE530P	250
BS815-50	BGE536P	500

Bottles, Azlon dispensing

LDPE with dropper nozzle and captive cap.

	Ref.	Cap. ml
BS820-17	BGE814PNC	30
BS820-24	BGE820PNC	60
BS820-32	BGE828PNC	150
BS820-42	BGE830PNC	250
BS820-50	BGE836PNC	500

Polyethylene bottle (except BS825-50 which is PVC) with polypropylene closure and pump. Capacities are bottle volume/dispensed volume.

	Cap. ml
BS825-32	125/0.5
BS825-42	250/4
BS825-50	500/4

Bottles, spray atomising

Polyethylene (except BS830-50 which is PVC). Produces fine spray when top is pumped.

	Cap. ml
BS830-17	30
BS830-24	60
BS830-32	125
BS830-42	250
BS830-50	500

Bottles, trigger-action, LaboPlast®, Bürkle

LDPE bottle and PP, trigger-action spray head with adjustable nozzle and stainless steel ball valve. Each stroke dispenses approximately 1.2ml. Supplied singly.

	Bottle Cap. ml	Overall height mm
BS835-42	250	220
BS835-50	500	240
BS835-82	1000	295

Special Purpose

Bottles, B.O.D.

Clear glass with hollow glass peg stopper with cone point. Used for the Biological Oxygen Demand test on water samples.

	Capacity
BS900-42	250ml
BS900-50	500ml

B.O.D testing – see *Dissolved oxygen* section.

Cooled Incubators for B.O.D. testing – see *Incubator* section.

Bottles, Kilner type

Clear glass with a lacquered metal plate with flowed-in plastic seal on the underside and separate metal screw collar.

BS910-40	500ml
BS910-75	1000ml

Bottles, Kilner type

Clear glass with flat glass top and rubber sealing ring. The flat top is held in place by a wire clamp.

BS910-85	1500ml
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Bottle, oil sample

Clear glass. Neck sealed by a cork.

BS920-10	225ml
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Eye-Wash Bottles – see *Safety* section.

Washbottles – see *Washing* section.

Safety signs and tapes – see *Safety* section.



BS805



BS820



BS830



BS900

BS920



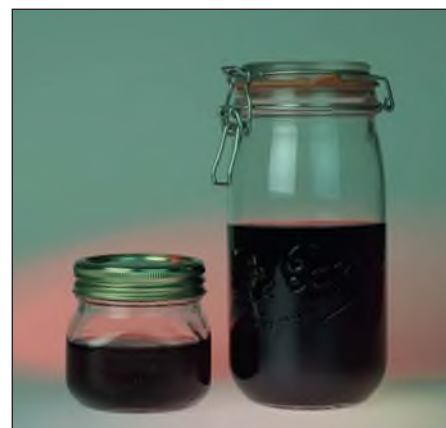
BS815



BS825



BS835



BS910-40 and BS910-75

BS910-85

Bottles, Bottle Accessories

Aluminium bottles

- ◆ Pure aluminium (Al 99.5)
- ◆ Seamless
- ◆ Lightweight

Ideal for transportation or storage of sensitive materials or reference samples that must remain contamination-free. Odourless, impermeable to light and corrosion resistant. Comply with the PCB regulations. With polypropylene, tamper-evident screw cap with internal aluminium sealing wad. Supplied singly.

	Cap. ml	Dia. x H, mm
BS980-15	38	35 x 70
BS980-25	60	40 x 88
BS980-35	120	57 x 97
BS980-45	300	57 x 160
BS980-55	600	74 x 192
BS980-65	1200	88 x 248

Aluminium foil - see AL200.

Aluminium basins - see BF550.

Bottle Carriers

Bottle carriers, wire, Azlon

Epoxy coated steel wire for carrying up to six bottles or washbottles.

	Ref.	For bottles max. diameter
BT512-10	BGS040	60mm
BT512-20	BGS042	74mm

Bottle carriers, wire

Nylon coated steel. Accept bottles with capacities and diameters as indicated. With handle.

BT520-20	4 x 1L, maximum 105mm diameter
BT520-30	2 x 2.5L, maximum 160mm diameter

Safety bottle carrier

Heavy-duty, chemically resistant HDPE, single bottle carrier comprising two interlocking shells that can hold 2.5 litre Winchester of traditional or 'Euro' patterns. A rugged carrying handle allows safe transport and enables pouring from the bottle without dismantling the carrier. Supplied singly.

BT540-25 Safety bottle carrier

Bottle store

Stove painted, heavy gauge steel with hinged lid, toggle catch and swivel castors for mobility. Contains a removable stainless steel spillage tray accommodating 8 x 2.5L winchester or 'Euro'-type bottles. Internal dimensions 620 x 320 x 360mm high.

BT550-37 Bottle store

Spill Containment

We offer a wide range of products for containing spillage safety.

- Absorbent Papers for protecting benches
- Highly Absorbent Powders and Pads for containing and binding spillage rapidly

For full details of these products - see SA200 to SA235 in the Safety Section.

Safety Stores for storing small quantities of acids and flammable liquids - see SB840 to SB875 in the Safety Section.

Spill trays

Tough deep trays in white polypropylene. Resistant to most common acids, alkalis and solvents. With polished surface which is easy to clean.

	Cap. litres	External L x W x D, mm
TT210-12	0.5	180 x 230 x 42
TT210-15	1.5	250 x 310 x 65
TT210-18	3	310 x 370 x 75
TT210-24	10	420 x 520 x 120
TT210-28	21	534 x 634 x 140
TT210-32	39	648 x 846 x 160



BS980



BT520-20 in use, BT520-30 is similar



BT550 in use



BT512 in use



BT540 in use



TT210

Bowls, Boxes

Bowls

Lotion Bowls, polypropylene

Blue. Autoclavable to 135°C. With internal, moulded-in graduations. Capacities and dimensions as indicated.

	Capacity ml	Diameter x height mm
BT800-10	900	150 x 70
BT800-20	2000	200 x 90
BT800-30	3000	250 x 150

Wash Bowl, polypropylene

Natural. Autoclavable to 135°C. For use as a temporary bath or pneumatic trough. With internal, moulded-in graduations. Capacities and dimensions as indicated.

BT810-25 5 litres, 350 x 120mm diameter x height

Boxes

All dimensions are nominal and are length x width x height in mm.

Boxes, glass, rectangular

	Dimensions
Without lid	
BU100-32	220 x 150 x 55
BU100-36	200 x 100 x 100
BU100-42	275 x 150 x 60
BU100-54	350 x 150 x 70

With stainless steel drop-on lid

BU104-32	220 x 150 x 55
BU104-36	200 x 100 x 100
BU104-42	275 x 150 x 60
BU104-54	350 x 150 x 70

Boxes, Azlon, polyethylene

With snap-on tight fitting lids.

	Ref.	Dimensions
BU120-10	BWY030	100 x 100 x 65
BU120-15	BWY032	100 x 100 x 125
BU120-20	BWY034	210 x 100 x 65
BU120-25	BWY036	210 x 100 x 90
BU120-30	BWY038	210 x 210 x 65
BU120-35	BWY039	210 x 210 x 90

Glass troughs - see *GE310*.

Instrument Boxes - see *Medical section*.

Microscope Slide Boxes - see *Microscopy section*.

Petri Dish Boxes - see *Petri Dish section*.

Pipette Boxes - see *Pipette section*.

Stainless steel lotion bowl - see *Medical section*.

Storage Containers 0.2 to 30 litres - see *Storage section*.

Tool roll - see *Tools section*.



BT800



BU104 in use



BT810



BU120

Brushes

Brushes

All dimensions are nominal.

Brushes, Beaker

Bristle head 70mm diameter x 150mm long, on wood handle. Overall length 400mm. Supplied in pack of 10.

BU400-12 Beaker brushes

Brushes, Bottle

Fibre or nylon head on wire handle. Supplied in packs of 10.

	Head dia. x length mm	Overall length mm	For bottle ml
Fibre			
BU410-12	45 x 65	300	125
BU410-22	50 x 75	350	250
BU410-32	65 x 100	400	500
BU410-42	75 x 150	460	1000
Nylon			
BU410-17	45 x 65	300	125
BU410-27	50 x 75	350	250
BU410-37	65 x 100	400	500
BU410-47	75 x 150	460	1000

Brushes, Burette

Bristle head on wire handle. Supplied in packs of 10.

	Head diameter mm	Overall length mm	For burette ml
BU425-12	13	500	10
BU425-17	16	600	25
BU425-22	19	750	50
BU425-27	25	900	100

Brushes, Cylinder

Nylon fan shaped end on wire handle. Supplied in packs of 5.

	Head dia. x length mm	Overall length mm
BU430-12	65 x 120	650
BU430-17	75 x 140	650



BU400

BU410

BU425

BU430

BU435

Brushes, Flask

Curved bristle head 50mm diameter x 100mm long. With hinged centre joint and rubber covered stem on a wooden handle. Overall length 380mm. Supplied in pack of 5.

BU435-12 Flask brush

Brushes, Test tube

Bristle or nylon fan shaped head on wire handle. Supplied in packs of 10.

	Head dia. mm	For tubes dia. mm
Bristle		
BU450-12	10	10 to 12
BU450-22	30	16 to 25
Nylon		
BU450-17	10	10 to 12
BU450-27	30	16 to 25

Brushes, Test tube

Bristle or nylon with cotton tip head on wire handle. Supplied in packs of 10.

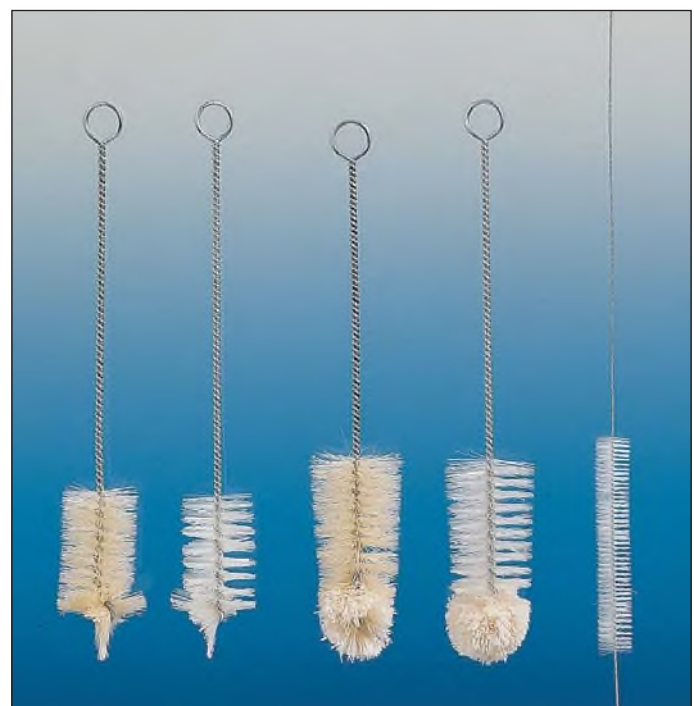
	Head dia. mm	For tubes dia. mm
Bristle		
BU455-12	16	12 to 16
BU455-22	30	19 to 25
Nylon		
BU455-17	16	12 to 16
BU455-27	30	19 to 25

Brushes, Tube

Nylon brush 70mm long set in the centre of wire handle. Supplied in packs of 10.

	Brush dia. mm	Overall length, mm
BU465-12	3	400
BU465-17	6	400
BU465-22	12	600

Cleaning materials – see *Cleaning section*.



BU450

BU455

BU465

Brushes, Buckets

Brushes continued

Brushes, Tube (pipe cleaner), small

Flexible cord approximately 3mm diameter for cleaning capillaries, stopcocks, etc. 15 metre length.

BU470-10 Pipe cleaner

Brushes, Tube (pipe cleaner), large

Flexible fluffy cord stem, 300mm long. Approximate diameter as stated. Supplied in packs of 50 lengths.

BU470-15 Pipe cleaner, 9mm

BU470-25 Pipe cleaner, 12mm

Brush, Tube (pipe cleaner), heavy duty

Cord/nylon filament stem, approximately 3mm diameter. 10 metre length.

BU470-65 Pipe cleaner, cord/nylon

Brush, Tube (pipe cleaner), double action

As BU470-10 but 150mm length divided half cord, half cord/nylon filament. Supplied in pack of 100 lengths.

BU470-85 Pipe cleaner, double action

Brush, Flat form

For general dusting. Hair bristles 25mm wide in metal mount on wood handle.

BU480-10 Flat brush

Brushes, Round form

For general dusting. Soft hair bristles in quill mount.

	Head dia. mm	Overall length, mm
BU485-10	4	60
BU485-20	8	80

Brushes, Pencil form

Soft hair bristles approximately 7mm long in metal mount on wood handle.

BU490-10 Pencil brush

Brushes, Dabber/Mop form

Soft hair bristles in metal mount on wood handle.

	Head dia. mm	Head length, mm
BU495-10	9	30
BU495-15	11	34
BU495-20	14	38



BU470-10 in use



BU470-25 BU470-65 BU470-85



BU480 BU485 BU490 BU495

Buckets

Buckets, Plastic

With handle and approximate graduations as indicated. With spout.

	Capacity	Material	Graduations
BU700-12	10 litres	White polyethylene, heavy duty with plastic coated steel handle	1 litre
BU700-14	10.5 litres	White polyethylene	0.5 litre
BU700-16	12 litres	Natural polypropylene	1 litre
BU700-17	15 litres	White polyethylene, heavy duty with plastic coated steel handle	1 litre
BU700-18	15 litres	Natural polypropylene	1 litre
BU700-22	17 litres	White polyethylene	0.5 litre

Buckets, stainless steel

With handle and approximate graduations at 1 litre intervals from the 5 litre mark.

BU715-10 10 litre

BU715-15 12.5 litre

BU715-20 15 litre

Lids

Stainless steel, for BU715 buckets.

BU717-10 10 litre

BU717-15 12.5 litre

BU717-20 15 litre

Kegs and drums – see **BR922, BR928**.

Large capacity jugs – see **MD758**.

Storage/Mixing containers – see **SX310**.



BU700-12I-17



BU700-14I-22



BU700-16I-18



BU715

Burettes

Burettes, Glass, Single Bore, MBL®

Glass Burettes

Unless otherwise stated single and double bore burettes:

- ◆ Conform to ISO385

Works Certified Burettes

- ◆ Each burette is supplied with a certificate stating the actual volume delivered at five points on the scale

Burettes, MBL, Class B

With PTFE key stopcock. Borosilicate glass. Blue enamel graduations.

	Ref. BRB-	Capacity x grads., ml
BW105-10	070P	10 x 0.02*
BW105-22	074P	25 x 0.10
BW105-23	075P	25 x 0.10*
BW105-26	076P	50 x 0.10
BW105-27	077P	50 x 0.10*

* With funnel top.

Burettes, MBL, Class B

With funnel top for easier and safer filling, PTFE stopcock connected to burette tube and jet, with self-locking nuts. Borosilicate glass burette tube and jet. Blue enamel graduations.

	Ref. BRB-	Capacity x grads., ml
BW112-22	264P	25 x 0.10
BW112-26	266P	50 x 0.10

Spare jets for BW112 series burettes

BW116-09 Borosilicate glass

Burettes, MBL, Class B

With interchangeable glass stopcock. Borosilicate glass. Blue enamel graduations.

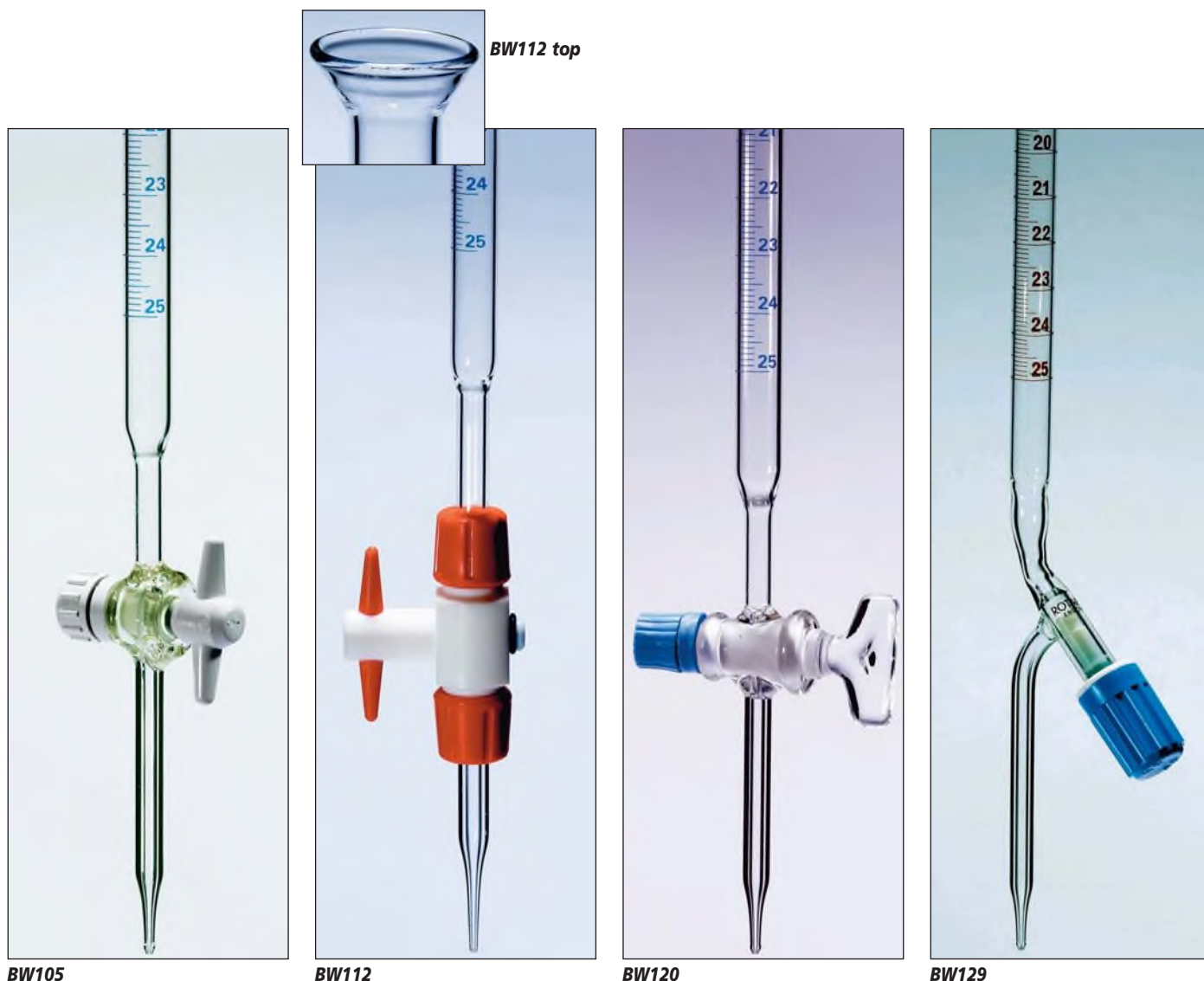
	Ref. BRB-	Capacity x grads., ml
BW120-10	050P	10 x 0.02
BW120-22	056P	25 x 0.10
BW120-26	058P	50 x 0.10
BW120-30	060P	100 x 0.20

Burettes, MBL, Class B

With GP Rotaflo PTFE key stopcock. Borosilicate glass. Amber stain graduations.

	Ref. BRB-	Capacity x grads., ml
BW129-14	402	10 x 0.10
BW129-22	404	25 x 0.10
BW129-26	406	50 x 0.10
BW129-30	408	100 x 0.20

Spare PTFE key - see QGP3K.



Burettes

Burettes, Glass, Single Bore, Pyrex

Burettes, Pyrex

With PTFE key stopcock. Borosilicate glass. Graduations in white enamel.

	Ref.	Capacity x grads, ml
Class B		
BW144-10	3295/02	10 x 0.02
BW144-12	3295/04	25 x 0.10
BW144-26	3295/06	50 x 0.10
BW144-30	3295/08	100 x 0.20
Class AS		
BW147-10	3295/12AS	10 x 0.02
BW147-12	3295/14AS	25 x 0.10
BW147-26	3295/16AS	50 x 0.10
BW147-30	3295/18AS	100 x 0.20
Works Certified		
BW151-10	3295/22ASWC	10 x 0.02
BW151-12	3295/24ASWC	25 x 0.10
BW151-26	3295/26ASWC	50 x 0.10
BW151-30	3295/28ASWC	100 x 0.20



BW144, BW147 and BW151 are similar

Burettes, Plastic, Single Bore

Azlon

Robust general purpose burettes suitable for use with most aqueous solutions. Advice must be requested if required to be used with organic materials.

Burettes, Azlon, Class B

Transparent acrylic with PTFE key single bore stopcock which requires no lubrication. Graduations are screen printed in black to ISO385 Class B accuracy. Not suitable for use with NH₃ and HF aqueous solutions or organic alcohols and solvents.

	Ref. BDH-	Capacity x grads. ml
BW510-22	112T	25 x 0.10
BW510-26	118T	50 x 0.10



BW510

Burettes

Automatic Zero Burettes

Automatic Zero Burettes, MBL

Sofnol pattern. For water testing. Class B. Borosilicate glass. Graduations in blue enamel. With pinchclip, rubber tube, jet and polyethylene reservoir bottle. The burette is filled by squeezing the bottle. Once the bottle is released, excess liquid can drain back into the bottle until the burette is set to zero. The 10ml has a 500ml bottle and the 20ml a 1000ml bottle.

	Ref. BRB-	Capacity x grads. ml
BW590-14	004	10 x 0.10
BW590-16	006	20 x 0.10

BW592-08 Spare pinchvalve and jet for BW590-series

Automatic Zero Burettes, Pyrex

Sofnol pattern. Class B. Borosilicate glass. With internal filling tube, automatic zero and single bore GP Rotaflo stopcock. Graduations in white enamel.

	Ref.	Capacity x grads. ml
BW595-14	3298/02	10 x 0.10
BW595-16	3298/03	20 x 0.10
BW595-24	3298/04	25 x 0.10

Reservoir bottles for BW595 series

Polyethylene with holed screw cap which accepts and seals to the burette extension tube. The burette is filled by squeezing the bottle.

	Ref.	Capacity ml
BW597-22	3299/04	500
BW597-34	3299/06	1000

Automatic Zero Burettes, Pyrex

For suction or low pressure filling. Class AS. Borosilicate glass. With PTFE stopcock and 29/32 cone joint to fit BW634 reservoir. Graduations in white enamel. Without reservoir.

	Ref.	Capacity x grads. ml	Joint size
BW630-12	3296/02AS	10 x 0.02	29/32
BW630-26	3296/04AS	25 x 0.05	29/32
BW630-30	3296/06AS	50 x 0.10	29/32

Reservoir bottle, for BW630 series. Soda-lime glass.

BW634-10 2000ml, 29/32 neck

Bellows - see BP200/BP205-series.

Automatic Zero Burettes

Dr Schilling pattern. Class B. Borosilicate glass (plastic-coated: BW660-36, -38 only) burette tube with Schellbach stripe, mounted on a low density polyethylene flexible bottle. With PVC discharge tube and HDPE support base. Screw adjustment and push button provide fine to coarse delivery of liquid. Rapid fill by squeezing the reservoir bottle.

	Burette Capacity x grads. ml	Reservoir Capacity ml
BW660-10	10 x 0.05	500
BW660-14	25 x 0.10	1000
BW660-18	50 x 0.10	1000

Glass

BW660-10	10 x 0.05	500
BW660-14	25 x 0.10	1000
BW660-18	50 x 0.10	1000

Plastic-coated glass

BW660-36	25 x 0.05	1000
BW660-38	50 x 0.10	1000

Dispensers, bottle mounted – see DK100 to DK282 in the Dispensers section.



BW590



BW595 with BW597



BW630 with BW634 and bellows



BW660

Burettes

Digital Burettes, Titrette®



- ◆ Capacities 25ml and 50ml
- ◆ High accuracy (within Class A limits)
- ◆ Precision gears allow drop-wise titration and 3 decimal place display available up to 20ml volume
- ◆ Pause button allows titration value to be retained during refilling
- ◆ Powered by standard alkaline 1.5V AAA batteries with Auto Power Off function, adjustable from 1 to 30 minutes use
- ◆ Telescopic FEP filling tubes and adjustable dispensing tube increase flexibility in use

Digital Burettes, Titrette®

As described. Resolution 0.001 up to 20ml, 0.01 rest of range (25ml model), 0.002 up to 20ml, 0.01ml rest of range (50ml model). Accuracy within Class A limits. Supplied with performance certificate. With GL45 standard neck thread, (170-330mm) filling recirculation tube, 2 x 1.5V AAA batteries, 3 x PP bottle adapters (GL45/32, GL45/S40, GL32/NS29/32), 2 each clear and amber inspection windows and instructions. RS232 models additionally incorporate an interface and are supplied with cable (9-pin sub-D plug) and Cd software disk for Windows™ OS computers. Without reservoir.

- BW900-46** Titrette, 25ml
- BW900-48** Titrette, 25ml, with RS232
- BW900-72** Titrette, 50ml
- BW900-74** Titrette, 50ml, with RS232

- ◆ Inspection windows allow easy monitoring of solution being dispensed (interchangeable amber windows supplied for light-sensitive solutions)
- ◆ User calibration and adjustment features allow incorporation into GLP protocols
- ◆ User-serviceable piston, cylinder and valve assemblies for easy cleaning or replacement
- ◆ Models available with RS232 interface and software to download data, ID, and calibration details to the users' PC (requires Windows™ OS)
- ◆ Built-in SafetyPrime™ recirculating valve on discharge tube channels back reagent into the reservoir during priming

Spares and Accessories for Titrette series

- BW902-21** Spare discharge tube, FEP, 165mm long. With fine drawn out tip
- BW902-24** Accessory telescopic filling tube, FEP, 170-330mm. With micro valve allowing dropless high precision titration
- BW902-25** Accessory telescopic filling tube, FEP, 250-480mm. With micro valve allowing dropless high precision titration
- BL610-08** 1.5V AAA battery (2 required)

Reservoir Bottles

Amber, soda-lime glass, square pattern (except DK114-32 which is cylindrical) with ethylene-acrylate plastic coating to reduce breakage hazards. With PP screw cap and pouring ring with GL screwthread as indicated. Maximum operating temperature +80°C.

	Capacity ml	Screw neck outside diameter, mm
DK114-22	500	GL32
DK114-27	1000	GL45
DK114-32	2500*	GL45

*2500ml size is cylindrical.



BW900 in use with reservoir



DK114 in use

Cells

Disposable



Disposable cells, UV-Cuvette micro

- ◆ Allow analysis from 220nm, suitable for DNA/RNA determination at 260 and 280nm
- ◆ 70µl minimum capacity, ideal for low volume sampling
- ◆ Optical path length 10mm
- ◆ Photometric accuracy: ±0.007A (220-260nm), ±0.002A (270-900nm)
- ◆ Choice of centre height, 8.5mm or 15mm
- ◆ Accessory, colour-coded, sealing caps available
- ◆ Suitable for sample freezing down to -20°C
- ◆ Individually wrapped versions are cleanroom packed, DNase-, DNA- and RNase-free
- ◆ Sorted into pack by mould cavity to maximise performance consistency

Chemical resistance comparison

Substance	Polystyrene	Cell material Acrylic	UV-Cuvette
Acetic acid 100%	—	—	✓
Acetone	—	—	✓
Ammonia	✓	✓	✓
Benzaldehyde	—	—	✓
Butanol	—	—	✓
Chloroform	—	—	—
Dioxane	—	—	✓
Dimethyl sulphoxide	—	—	✓
Ethyl acetate	—	—	✓
Hexane	—	✓	—
Hydrochloric acid 36%	✓	—	✓
Hydrofluoric acid 10%	✓	✓	✓
Isopropanol	✓	✓	✓
Nitric acid 65%	—	—	✓
Sodium hydroxide	✓	✓	✓

As described. UV-transparent, chemically resistant plastic. Supplied in packs as indicated.

	Inner pack	Outer pack
8.5mm centre height		
CA300-10	—	100
CA300-12	1	100
CA300-15	—	500
15mm centre height		
CA300-30	—	100
CA300-32	1	100
CA300-35	—	500

Accessory caps for CA300-series UV-Cuvette micro cells only

In colours as indicated. Supplied in packs of 100.

- CA302-04 Blue
- CA302-08 Yellow
- CA302-12 Green
- CA302-16 Orange

UV-Cuvette macro and semi-micro cells

Similar to the UV-Cuvette micro cells but in standard 4ml macro and 2ml semi-micro square formats with 10mm path length.

- CA305-20 Macro, 2 clear sides, pack of 100
- CA305-40 Semi-micro, pack of 100

Disposable cells

- ◆ Optical path length 10mm
- ◆ Polystyrene (PS) or acrylic (PMMA)

	Type	Pack qty.
CA400-05	Macro square, PS 4ml, 2-clear sides	100
CA406-10	Micro square, PS 2ml	500
CA407-25	Macro square, PMMA, 2-clear sides	100
CA407-30	Semi-micro square, PMMA	100
CA408-15	Lids, PP for 10mm square cells	1000

Colorimeters – see CS100/CT600 series.

Pipettors – see PR060/PR670 series.

Plastic test tubes – see TE600/TE738 series.

Spectrophotometers – see SJ220/SJ415 series.

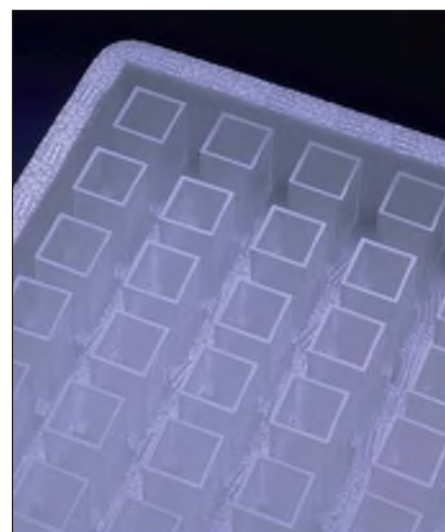
Spectrophotometer calibration cells – see SJ700.

continued on next page



CA300

CA305



CA400, CA406 and CA407 are similar

Cells

Hellma

	Path length, mm	Type	Working vol., l	Material	Transmission range, nm	Colour code	Ref.
Routine							
CA420-15	10	Semi micro	1400	silica	240 to 2500	blue	6040-uv
CA420-32	10	Macro	3500	silica	240 to 2500	blue	6030-uv
Precision							
CA429-14	10	Micro with stopper	400	silica	200 to 2500	blue	115-QG
CA430-14	10	Semi micro with lid	1400	optical glass	360 to 2500	yellow	104-TG
CA430-44	10	Semi micro with lid	1400	silica	200 to 2500	blue	104-QG
CA432-14	10	Micro with lid. Self masking with black frames	1400	silica	320 to 2500	blue	104B-OS
CA436-44	10	Micro with lid. Self masking with black frames	1400	silica	200 to 2500	blue	114B-QS
CA450-14	10	Macro with lid	3500	optical glass	360 to 2500	yellow	100-TG
CA450-44	10	Macro with lid	3500	silica	200 to 2500	blue	100-QG
CA450-48	40	Macro with lid	14000	silica	200 to 2500	blue	100-QG
CA450-54	10	Macro with lid	3500	Suprasil® silica	200 to 2500	blue	100-QS
CA452-44	10	Macro with stopper	3500	silica	200 to 2500	blue	110-QG
CA454-44	10	Macro fluorescence with lid	3500	silica	200 to 2500	blue	101-QG
CA458-44	10	Macro fluorescence with stopper	3500	silica	200 to 2500	blue	111-QG
Matched pairs							
CA470-44	10	Semi micro with lid	1400	silica	200 to 2500	blue	104-QG/M
CA490-44	10	Macro with lid	3500	silica	200 to 2500	blue	100-QG/M
CA492-44	10	Macro with stopper	3500	silica	200 to 2500	blue	110-QG/M
CA494-44	10	Macro fluorescence with lid	3500	silica	200 to 2500	blue	101-QG/M

Lovibond

Path length

Comparator cells W680 optical glass

CS215-14	5mm
CS215-18	10mm
CS215-22	13.5mm
CS215-28	25mm
CS215-36	40mm

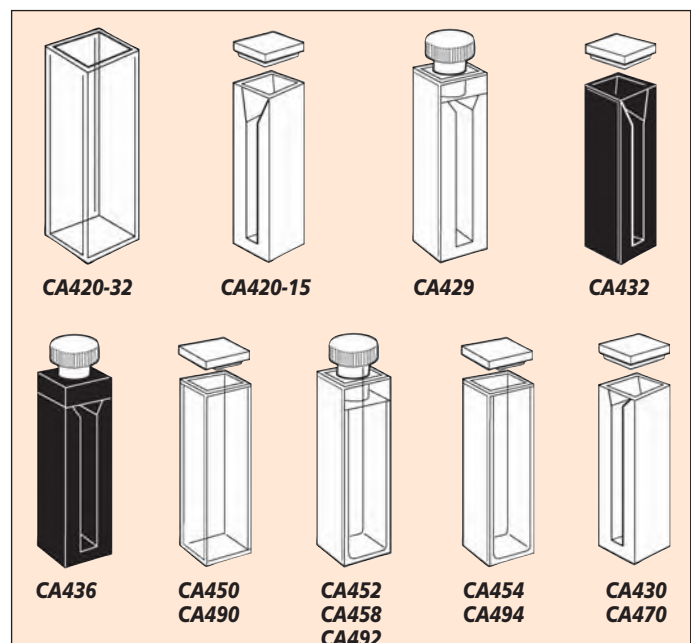
Tintometer cells W600 Optical glass

CS780-14	10mm
CS780-18	20mm
CS780-20	25mm
CS780-24	33mm
CS780-26	40mm
CS780-32	50mm
CS780-48	1in
CS780-58	5/4in

Tintometer cells W600/B Borosilicate glass

CS782-48	1in
CS782-58	5/4in

Routine cells for Lovibond comparator - see CS210.



Chromatography

Chromatography Papers

Whatman®

Sheets Plain

Grade	Box qty.	100 x 300mm	200 x 200mm	250 x 250mm	315 x 355mm	460 x 570mm	580 x 680mm
1Chr	100	CJ300-10	CJ300-20	CJ300-30	—	CJ300-40	—
3Chr	100	—	—	—	—	CJ308-40	—
3MMChr	100	—	CJ312-20	—	CJ312-34	CJ312-40	CJ312-50
4Chr	100	—	—	—	—	CJ316-40	—
17Chr	25	—	—	—	—	CJ320-40	—
SG81	25	—	—	—	—	CJ348-40	—

Reels

Grade	Length	Widths available 10mm	20mm	30mm	40mm	50mm
1Chr	100m	CJ500-12	CJ500-14	CJ500-16	CJ500-18	CJ500-22

Reels continued

Grade	Length	Widths available 100mm	150mm	190mm	230mm	270mm
1Chr	100m	CJ500-28	CJ500-34	—	—	—
3MMChr	100m	CJ504-28	CJ504-34	CJ504-36	CJ504-42	CJ504-44

Grade Comparison

Flow rates given are linear per 30 minutes.

Grade	Flow mm/30minutes	Thickness mm	Material
1Chr	130	0.18	Pure cellulose
3Chr	130	0.36	
3MMChr	130	0.34	
4Chr	180	0.21	Pure cellulose
17Chr	190	0.92	
SG81	110	0.27	Silica gel loaded cellulose



Chromatography

HPLC Columns



Nucleodur® C₁₈ Gravity Media

High purity silica phase for analytical HPLC. Suitable for LC/MS and HPLC at extreme pH (range pH 1 to 11) with superior base deactivation.

Packing: high-density octadecyl modification, pore size 110Å, particle size: 5µm. Carbon content: 18%.

Column i.d.: 4.6mm.

With compression screw HPLC fittings. Supplied singly.

	Particle size, µm	Column length, mm
CK318-02	5	100
CK318-05	5	250

Nucleodur® C₈ ec Media

EC standard columns with standard RP phase silica for routine analysis and upscaling for preparative HPLC. Offers pH stability (pH 1 to 9) and high lot-to-lot reproducibility.

Packing: medium-density octyl modification, pore size 110Å, particle size: 5µm. Carbon content: 10.5%.

Column i.d.: 4.6mm.

With compression screw HPLC fittings. Supplied singly.

	Particle size, µm	Column length, mm
CK318-31	5	125

Nucleodur® C₁₈ ec Media

Ideal, reliable, standard RP phase silica for routine analysis and upscaling for preparative HPLC. Offer pH stability (pH 1 to 9) and lot to lot reproducibility.

Packing: medium-density octadecyl modification, pore size 110Å, particle size: 5 or 10µm. Carbon content: 17.5%.

Column i.d.: 4.6mm.

With compression screw HPLC fittings. Supplied singly.

	Particle size, µm	Column length, mm
CK318-41	5	125
CK318-42	5	250
CK318-45	10	250

Nucleosil® SB Media

EC standard columns with quarternary ammonium modified silica HPLC phase with strongly basic anion exchanger (SAX). Offers pH stability of pH 2 to 8.

Packing: pore size 100Å, particle size: 5 or 10µm. Carbon content: 10%.

Column i.d.: 4.6mm

With compression screw HPLC fittings. Supplied singly.

	Particle size, µm	Column length, mm
CK318-52	5	125
CK318-55	10	250

Nucleosil® SA Media

EC standard columns with sulphonic acid modified silica phase for HPLC with strongly acidic cation exchanger (SCX). Offers pH stability of pH 2 to 8.

Packing: pore size 100Å, particle size: 10µm. Carbon content: 6.5%.

Column i.d.: 4.6mm

With compression screw HPLC fittings. Supplied singly.

	Particle size, µm	Column length, mm
CK318-65	10	250



CK318

Chromatography

Flexible TLC Plates

Whatman®

Silica Gel Plates

Layer 250µm. All plates are 20cm x 20cm and can be cut with scissors.

Ref.	Pack qty.
Polyester backed CJ600-25 PE Sil G/UV 254*	25

* With fluorescent indicator.

U.V. Viewing Cabinet for TLC plates – see LM400-10 in the Lamps section.

Glass TLC Plates

Whatman®

Reverse Phase Plates

Layer 200µm.

Ref.	Size cm	Pack qty.
CJ666-30 LKC ₁₈ F	5 x 20	75

Adsorption Plates K6 60Å

Layer 250µm except CJ700-60 which is 1000µm.

Ref.	Size cm	Pack qty.
CJ700-60 PK6F	20 x 20	20

Flexible TLC Plates



Silica Gel Plates, Polygram® and Alugram®

Layer 250µm. All plates are 20 x 20cm and can be cut with scissors. Silica 60, mean pore 60Å, specific surface (BET) approximately 500m²/g, specific pore volume of 75ml/g and a particle size of 5 to 17µm.

Ref.	Pack qty.
Polygram® polyester backed CK565-10 Sil G	25
CK565-25 Sil G/UV ₂₅₄ *	25

Alugram® aluminium backed

CK567-10 Sil G	25
CK567-25 Sil G/UV ₂₅₄ *	25

*With manganese activated, zinc silicate fluorescent indicator operating at 254nm.

Glass TLC Plates



Reverse Phase Plates

HPTLC plates with concentrating zone. Mean 60Å pore, silanized silica C₁₈ with mean particle size of 2 to 10µm.

Ref.	Size, cm	Layer thickness, µm	Pack qty.
CK572-60 Nano-Sil C ₁₈ -100	10 x 10	200	25
CK572-75 RP-18W/UV ₂₅₄ *	20 x 20	250	25

*With fluorescent indicator operating at 254nm.

Standard Plates

Layer thicknesses as indicated. Pre-coated with silica 60 with mean pore diameter of 60Å, specific surface (BET) approximately 500m²/g, specific pore volume of 0.75ml/g and a particle size of 5 to 17µm.

Ref.	Size, cm	Pack qty.
Layer 250µm CK580-30 Sil G-25	5 x 20	100
CK580-45 Sil G-25	10 x 20	50
CK580-60 Sil G-25	20 x 20	25
CK585-10 Sil G-25 UV ₂₅₄ *	2.5 x 7.5	100
CK585-20 Sil G-25 UV ₂₅₄ *	5 x 10	50
CK585-30 Sil G-25 UV ₂₅₄ *	5 x 20	100
CK585-50 Sil G-25 UV ₂₅₄ *	10 x 20	50
CK585-60 Sil G-25 UV ₂₅₄ *	20 x 20	25

Layer 1000µm

CK586-25 Sil G-100 UV ₂₅₄ *	20 x 20	15
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*With manganese activated, zinc silicate fluorescent indicator operating at 254nm.



Chromatography

TLC Separating Chambers

- ◆ Heavy, moulded glass construction
- ◆ Ground flange top and lid for tight seal

Standard Separating Chamber

For TLC plates 20 x 20cm. With broad grooved flange edge and lid.

CK610-12 Standard TLC Chamber

Batch Separating Chamber

With vertical moulded grooves to accommodate up to 5 TLC plates 20 x 20cm. With broad grooved flange edge and lid.

CK610-22 Batch TLC Chamber

HPTLC Separating Chamber

For HPTLC and TLC plates 10 x 10cm. With broad grooved flange edge and lid.

CK610-32 HPTLC Chamber



CK610-12, CK610-32 is similar



CK610-22

Chromatography Columns

Columns

With sintered disc porosity 0 and GP Rotaflo stopcock.

	Dia. mm	Effective length mm	Socket size	GP Rotaflo stopcock bore, mm
QCR10/10	10	100	14/23	3
QCR10/20	10	200	14/23	3
QCR10/30	10	300	14/23	3
QCR10/40	10	400	14/23	3
QCR20/20	20	200	19/26	3
QCR20/30	20	300	19/26	3
QCR20/40	20	400	19/26	3
QCR20/50	20	500	19/26	3
QCR30/40	25	400	24/29	3
QCR30/50	25	500	24/29	3
QCR40/40	30	400	29/32	6
QCR60/40	40	400	40/38	6
QCR60/50	40	500	40/38	6



QCR10:-60:

Chromatography

Autosampler Vials

High quality glass vials for use with autosamplers as indicated. All capacities quoted are based on water at ambient temperature.

Glass vials with standard screw thread neck

Large neck opening vials with 9mm screw neck finish. Borosilicate (type 1) glass, 1.8ml capacity, 12 x 32mm diameter x height. For use with screw closures. Supplied in packs of 1000.

- CK725-10** Clear glass
- CK725-15** Amber glass
- CK725-20** Clear glass with marking spot
- CK725-25** Amber glass with marking spot

9mm screw closures for CK725-series vials

Coloured polyethylene, with insert seal materials as indicated. Supplied in packs of 1000.

- CK727-03** Blue, with PTFE/synthetic rubber seal
- CK727-06** Black, with PTFE/synthetic rubber seal
- CK727-09** Blue, with PTFE/silicone rubber seal
- CK727-11** Black, with PTFE/silicone rubber seal
- CK727-13** Blue, with PTFE/silicone rubber seal and slit

Glass vials with standard crimp neck

Large neck opening vials with 11mm crimp neck finish. Borosilicate (type 1) glass, 1.8ml capacity, 12 x 32mm diameter x height. For use with aluminium crimp closures. Supplied in packs of 1000.

- CK730-10** Clear glass
- CK730-15** Amber glass
- CK730-20** Clear glass with marking spot
- CK730-25** Amber glass with marking spot

11mm crimp closures for CK730-series vials

Natural, or colour-anodised, aluminium, with insert seal materials as indicated. Supplied in packs of 1000.

- CK732-04** Natural, with PTFE/synthetic rubber seal
- CK732-07** Blue, with PTFE/synthetic rubber seal
- CK732-10** Natural, with PTFE/silicone rubber seal
- CK732-13** Blue, with PTFE/silicone rubber seal

- CK732-16** Hand crimper for 11mm closures
- CK732-19** Hand decapper for 11mm closures

Glass vials with standard snap/crimp neck

Large neck opening vials with 11mm snap/crimp neck finish. Borosilicate (type 1) glass, 1.8ml capacity, 12 x 32mm diameter x height. For use with aluminium crimp closures or polyethylene snap caps. Supplied in packs of 1000.

- CK734-11** Clear glass
- CK734-16** Amber glass
- CK734-21** Clear glass with marking spot
- CK734-26** Amber glass with marking spot

11mm snap-type closures for CK734-series vials

Coloured polyethylene, with insert seal materials as indicated. Supplied in packs of 1000.

- CK736-05** Natural, with PTFE/synthetic rubber seal
- CK736-08** Blue, with PTFE/silicone rubber seal and slit
- CK736-11** Natural, with PTFE/silicone rubber seal
- CK736-14** Blue, with PTFE/silicone rubber seal

Crimp closures - see *CK732-series*

Other closure/seal material combinations are available - *details on request*

Limited volume inserts for 1.8ml capacity vials

Supplied in packs as indicated.

- CK737-12** 250µl, 6 x 31mm dia. x ht. With bottom spring. Pack of 100.
- CK737-14** 250µl, 6 x 31mm dia. x ht. With flat bottom. Pack of 500.

Headspace vials

With 20mm crimp neck finish. Clear borosilicate (type 1) glass with capacities and sizes (diameter x height) as indicated. Supplied in packs as indicated.

	Cap. ml	Size., mm	Neck	Pack qty.
CK738-30	6	22 x 38	tapered	100
CK738-41	10	23 x 46	standard	180
CK738-50	20	23 x 75	standard	100

20mm crimp closures for CK738-series vials

Aluminium, with PTFE/silicone rubber insert seals. Supplied in a pack of 1000.

- CK738-65** 20mm, PTFE/silicone seals

Aluminium, scored to provide pressure release. Will open if pressure exceeds 3.0 ±0.5 bar. With insert seal. Supplied in packs of 1000.

- CK738-69** 20mm pressure release caps

- CK738-75** Hand crimper for 20mm closures
- CK738-77** Hand decapper for 20mm closures



CK725-20

CK730-20

CK734-21

CK734-26

CK730-10



CK727-09



CK732-07



CK732-16

Chromatography

Safety Caps



For safe closure and venting of supply reservoirs, particularly when handling solvents for HPLC.

- ◆ Replaceable air inlet filter stops solvent contamination from dust
- ◆ Halts solvent evaporation, reducing cost and contamination of the laboratory atmosphere by fumes
- ◆ Precision adapters allow insertion without crimping and fixed position of capillary tubing
- ◆ Easy reservoir exchange
- ◆ Manufactured in PTFE and HDPE for resistance to aggressive solvents
- ◆ Caps can be unscrewed without tubing removal
- ◆ Fire-resistant versions available

As described. Supplied singly, with one inlet filter (6-monthly replacement recommended) and capillary tubing connectors for tubing with outside diameters as indicated.

	Cap type	Connectors for tubing
Standard		
CK780-04	GL45	1 x 3.2mm o.d.
CK780-08	GL45	1 x 3.2mm o.d. with stopcock
CK780-12	GL45	2 x 3.2mm o.d.
CK780-16	GL45	3 x 3.2mm o.d.
CK780-20	GL45	4 x 3.2mm o.d.
CK780-28	GL45	6 x 3.2mm o.d.
Fire-resistant		
CK784-04	GL45	1 x 3.2mm o.d.
CK784-08	GL45	1 x 3.2mm o.d. with stopcock

Accessory inlet filters

- CK785-10** Standard, pack of 1
- CK785-20** Standard, pack of 10

Accessories continued on next page



CK780-04, CK784-04 is similar



CK780-16 in use on bottle



CK784-08, CK780-08 is similar



CK780-12



CK780-20, CK780-28 is similar



CK784-24

Chromatography

Safety Waste Caps



For safe closure and venting of liquid waste reservoirs.

- ◆ Manufactured in PTFE and HDPE for resistance to aggressive solvents, acids and bases
- ◆ Easy reservoir exchange
- ◆ Caps can be unscrewed without tubing removal
- ◆ Precision adapters allow insertion without crimping and fixed positioning of capillary tubing
- ◆ Accessory, activated charcoal, exhaust filters absorb up to 99% of volatiles and are available in 3 sizes to accommodate alternative sizes of reservoir

As described. Supplied singly with connectors for one exhaust filter, capillary tubing with outside diameters and tubing ferrule as indicated. Without exhaust filter.

	Cap type	Connectors for tubing
CK790-03	GL45	3 x 2.3/3.2mm o.d.
CK790-06	GL45	2 x 2.3/3.2mm o.d., 1 x L-ferrule 6.4mm i.d.
CK790-09	S51	2 x 2.3/3.2mm o.d., 1 x L-ferrule 6.4mm i.d.
CK790-15	S55	2 x 2.3/3.2mm o.d., 1 x L-ferrule 6.4mm i.d.
CK790-18	S60/61	3 x 2.3/3.2mm o.d.
CK790-19	S60/61	2 x 2.3/3.2mm o.d., 1 x L-ferrule 6.4mm i.d.
CK790-26	S90	4 x 2.3/3.2mm o.d., 1 x L-ferrule 6.4mm i.d.

*Fire-resistant

Accessory Exhaust Filters

With activated charcoal absorbent.

	Size	Filling, g	For vessels	Pack
CK794-05	S	24	<5L	1
CK794-07	S	24	<5L	4
CK794-12	M	48	<20L	1
CK794-16	M	48	>20L	3
CK794-24	L	100	>20L	1

*Fire-resistant

Multicollector Manifolds

Allow multiple waste streams to be routed through one inlet in the waste cap.

- CK796-10** 2 x 3.2mm o.d., 1 x 6.4mm i.d. side inlets
- CK796-20** 2 x 6.4mm i.d., side inlets
- CK796-25** 3 x 6.4mm i.d., side inlets
- CK796-55** 8 x 3.2mm o.d., top inlets

Fittings and Ferrules for Safety and Safety Waste Caps and Manifolds

- CK798-04** Fittings with ferrule, PTFE, for 1.6mm o.d. capillary tubing, pack of 10
- CK798-06** Fittings with ferrule, PTFE, for 2.3mm o.d. capillary tubing, pack of 10
- CK798-08** Fittings with ferrule, PTFE, for 3.2mm o.d. capillary tubing, pack of 10
- CK798-10** Fitting with ferrule, PTFE, for 4.76mm ($\frac{3}{16}$ " o.d. capillary tubing, pack of 1
- CK798-24** Plugs, PTFE, for 4.76mm ($\frac{3}{16}$ " fittings, pack of 10

Capillary Tubing

PTFE. In lengths of 3 x 3m.

- CK799-10** 1.6mm o.d., 1.0mm i.d.
- CK799-20** 2.3mm o.d., 1.7mm i.d.
- CK799-30** 3.2mm o.d., 1.6mm i.d.
- CK799-65** Inlet filters for HPLC solvents, PFA/PTFE to fit 3.2mm o.d. tubing, pack of 5



CK790-06, CK790-03 are similar



CK790-09, CK790-15 is similar



CK790-19 CK790-18 and CK790-26 are similar



CK794-24



CK796-10



CK796-20



CK796-25



CK798-04 to -10



CK798-24

Cleaning

Decon Cleaning Materials

Cleaner, Decon 90

A phosphate-free, biodegradable, water rinsable surfactant formulated specifically for laboratory and medical cleaning applications. A 2% aqueous solution has a pH of 10.7.

Recommended for use in ultrasonic cleaners and for cleaning glass, ceramics, plastics, glass fibre, rubber, stainless steel and ferrous metals and is used widely as a radioactive decontaminant. Being alkaline an aqueous solution will etch certain metals such as aluminium and zinc. In plastic container.

CL550-10 1 litre
CL550-15 5 litres
CL550-20 20 litres

Cleaner, Decomatic

A phosphate free, liquid surfactant which is free rinsing and foam-free, specially formulated for use in laboratory glassware washing machines. It is alkaline and is therefore unsuitable for cleaning non-ferrous metals such as aluminium, zinc and silver. In plastic container.

CL575-15 5 litres
CL575-20 10 litres

HEALTH AND SAFETY

All cleaning materials are likely to irritate the eyes and skin. Avoid contact with the eyes and skin and wear rubber gloves and goggles when handling.

Cleaner, Neutracon

A phosphate free, biodegradable, totally rinsable surfactant producing a near neutral solution in water. Is non-corrosive and has no adverse effect on aluminium, copper, brass, silver and silica glass. In plastic container.

CL590-10 1 litre
CL590-15 5 litres

Cleaner, Decon 75

A low foaming, non-corrosive and biodegradable phosphate surfactant with a pH of 10 in 2% aqueous solution. It is alkaline and is therefore unsuitable for cleaning non-ferrous metals such as aluminium, zinc and silver. In plastic container.

CL610-15 5 litres
CL610-20 20 litres

Acid Rinse, Decon

A non-foaming, free rinsing, biodegradable formulation for use in automatic washing machines either as a pre-wash where soiling is acid soluble, or final rinse where it neutralises the alkaline carry-over traces of the main wash, and inhibits deposition of salts from hard water supplies. It is acidic and therefore unsuitable for use on non-ferrous metals, notably aluminium and zinc. In plastic container.

CL615-08 5 litres

Cleaning brushes – see *Brushes* section.

Glassware washing machine – see *Washing* section.

Glassware draining and drying – see *Drying and Ovens* sections.

Ultrasonic cleaning baths – see *Ultrasonics* section.

Mucasol®

Cleaner, Mucasol®

A mildly alkaline, biodegradable concentrate with low phosphate content and which is free of chlorine and caustic alkali. Will remove rapidly stubborn residues such as oils, fats, waxes, stopcock greases, silicones, blood and proteins. It has a bacteriostatic action and can be used to decontaminate bench surfaces, shelves, tiles and floors. Can be used to clean glass, porcelain, plastics, rubber and most metals and has no corrosive effect. For normal cleaning a concentration of 0.7% aqueous solution (pH 11.5) is usually sufficient. In plastic container.

Please note: Mucasol is classed as hazardous material for export, requires packing as such and can only be shipped by surface transport.

CL635-12 2 litres
CL635-16 5 litres

Teepol

Cleaner, Teepol

A concentrated neutral biodegradable liquid detergent for general cleaning applications. In 5 litre container.

CL640-15 5 litres

Lipsol

Cleaner, Lipsol

A totally rinsable, phosphate- and enzyme-free, biodegradable surfactant with excellent cleaning performance on laboratory glassware, plasticware, rubber, ceramics and stainless steel. Mildly alkaline and therefore unsuitable for cleaning non-ferrous metals such as aluminium, zinc, or with polycarbonate plastics. Supplied in a pack of 2 x 5 litre plastic containers.

CL645-19 2 x 5 litres



CL645-19

CL635

Cleaning

Tissues, Wipes, Towels and Cloths

All dimensions and quantities are nominal.

Tissues (Medical Wipes) Kimcare

Soft absorbent 2-ply white tissues 186 x 108mm for those delicate wiping needs. Specially packed for the health care environment in dispensing cartons containing 80 tissues.

CL700-14 Wipes, medical, 7432

Tissues, Kleenex

Soft, 2-ply strong white tissues 200 x 210mm. In dispenser carton containing 100 wipes.

CL700-19 Tissues, 8835

Tissues, Kimtech Science

Strong 2-ply white wipes for delicate cleaning tasks, 200 x 213mm with low lint level. Suitable for ISO Class 4 or higher laboratory environments. In dispensing cartons containing sheets as indicated.

CL710-08 Tissues, 7557, carton of 100 sheets

CL710-18 Tissues, 7558, carton of 200 sheets

Wipes, Kimtech Science, Precision

Single-ply, for wiping delicate surfaces, White, in sizes and packs as indicated.

	Ref.	Wipe, mm	Pack qty.
CL712-10	7551	300 x 300mm	196
CL712-25	7552	114 x 213mm	280

Wipes, Scott Wypall, blue

Tough, single-ply, blue wipes with high wet strength and absorbency. In roll containing wipes as indicated. Dimensions given are width x length of each wipe.

CL720-09 Wipes, 7225, 240 x 460mm, roll of 165

CL720-22 Wipes, 7396, 510 x 380mm, roll of 200

Wipes, Kimberly Clark Scott Wypall

Highly absorbent, single-ply, "Airflex" fabric material, white wipes. 240 x 460mm with excellent wet-strength. In roll containing 115 wipes.

CL720-32 Wipes, 7236

Wipes, Wypall

Single-ply, blue wipes, supplied in rolls of sheets as indicated.

	Ref.	Wipe, mm	Colour	Pack qty.
CL720-77	7338	240 x 460	Blue	116
CL720-87	7399	510 x 460	Blue	116

Dispensers

White plastic, wall mounting for CL720 series.

CL722-15 For 240/250mm roll

CL722-20 For 500/510mm roll

Wipes, Wypall

2-ply, white wipes, 206 x 380mm. In barrel roll containing 300 wipes.

CL725-11 Wipes, 7303

CL725-60 Dispenser, plastic, wall mounting, for CL725-11, 7017

Kleenex, Kimcare, Kimtech, Scott, Wypall and Kimwipes are Registered Trademarks of the Kimberly-Clark Worldwide, Inc.



CL700-14



CL710-18



CL700-19



CL712



CL710-08



CL720-32



CL725-11, CL725-60



**CL730 with CL722-15
CL720 are similar**



CL720-77, CL720-87 is similar

Cleaning

Tissues, Wipes, Towels and Cloths continued

All dimensions and quantities are nominal.

Towels, Kleenex Ultra, folded

Highly absorbent, 3-ply "airflex" fabric which has excellent wet strength and softness. Towel size 215 x 315mm. Supplied in self-presenting packs of 96 towels.

CL730-28 Folded towels, 6710

CL732-10 Dispenser, plastic, wall mounting

Wipes, cleanroom, Kimtech

Precision wipes. Suitable for use in ISO cleanroom Class 7 environments and above. Strong, low-linting, absorbent and chemically inert. Resistant to solvents and most chemicals. Supplied in wipe sizes and packs as indicated.

	Ref.	Wipe, mm	Pack
CL734-15	7623	340 x 380mm	roll 600
CL734-25	7624	350 x 385mm	35

Duster, yellow

Soft with close texture. Dimensions 500 x 350mm. Supplied in pack of 10.

CL742-10 Dusters

Polishing Cloths, Selvyt®

The original soft texture polishing cloth which can be washed repeatedly. Supplied in packs of 10.

CL744-11 250 x 250mm

CL744-14 350 x 350mm

Wiping Cloths, J-type

Bonded cellulose fibre. Can be used for wet or dry cleaning. Dimensions 330 x 500mm. Supplied in pack of 50.

CL745-40 Wiping cloths

Glass Cloth, Linen

For drying of glassware and general equipment. Dimensions 750 x 500mm. Supplied in pack of 10.

CL745-60 Glass cloths



CL730-26 with CL732-10



CL734-25



CL734-15



Cleaning

Tissues, Wipes, Towels and Cloths continued

All dimensions and quantities are nominal.

Wipes, bactericidal, MediPal®

For disinfection of surfaces in clinical environments. Perforated roll of non-woven material saturated with 70% v/v isopropyl alcohol B.P. Wipe dimensions 195 x 190mm. Supplied in a dispenser tub of 200. **Please note:** these items are classed as hazardous material for export and require packing as such.

CL745-67 Wipes, bactericidal, MediPal®

Wipes, bactericidal, MediPal®, sterile

Ideal for disinfection of surfaces that are not sensitive to alcohol. Individually wrapped, sterile, low-linting material sachets saturated with 70% v/v isopropyl alcohol B.P. Wipe dimensions 200 x 125mm. Supplied in a pack of 100.

CL745-75 Wipes, bactericidal, individually wrapped, sterile

Wipes, bactericidal, Veriguard 1

For disinfection of surfaces in clinical and low-grade cleanroom environments. Perforated roll of non-woven material saturated with 70% w/v isopropyl alcohol. Wipe dimensions 200 x 200mm. Supplied in a dispenser tub of 200. **Please note:** these items are classed as hazardous material for export and require packing as such.

CL745-90 Wipes, bactericidal, Veriguard 1

Lens Cleaning Tissues

Tissues, Whatman 105

For lens cleaning.

	<i>Dimensions, mm</i>	<i>Pack qty.</i>
CL760-10	100 x 150	625
CL760-15	200 x 300	100
CL760-20	460 x 570	500



CL745-67



CL745-90



CL760



CL745-75

Cleaning

Virucidal Disinfectant

Virkon

Rely+On™ Virkon® is a wide spectrum disinfectant effective against all 18 virus families affecting man and animals, including HIV and Hepatitis B. Supplied in powder form.

- ◆ Bactericide and fungicide
- ◆ Odourless, non-irritant to skin and eyes
- ◆ No maximum exposure limit required under COSHH
- ◆ Dissolves easily
- ◆ Non-corrosive, non-bleaching, bio-degradable
- ◆ Supplied in packs as indicated

Any viral disease which is transmitted via surfaces or instruments contaminated with infected blood, body fluids, faeces or saliva can be controlled by the correct application of Virkon®. Virkon® may be applied directly onto blood or body fluid spillages. Diluted to 1% in water, Virkon® can be used to clean and disinfect equipment and surfaces. Supplied in packs as indicated.

- CL900-01** 20 x tubs of 10 x 5g tablets
- CL900-02** 12 x tubs of 50 x 5g tablets
- CL900-05** 50 x 50g sachets
- CL900-10** 6 x 500g squeeze 'puff' packs
- CL900-15** 1 x 5kg drum

Rely+On™ and Virkon® are trademarks of DuPont™.

Anti-Microbial Hand Soap

Labz GUARD™

A concentrated, coconut-based hand soap, formulated for repeated use without drying the skin.

- ◆ Contains 2% Nonoxynol 9 which is effective in inactivating the AIDS virus (HIV1) and Hepatitis Types 1 and 2
- ◆ Contains 0.5% p-Chloro-m-xyleneol (PCMX) an anti-bacterial and anti-fungal agent that is effective in destroying a broad spectrum of organisms
- ◆ Contains a blend of natural moisturisers and conditioners which act gently but effectively on the skin, to combat the effects of water, harsh solutions and other irritants found in the laboratory. Can be used as a shower soap

Supplied in packs as indicated.

- CL910-13** 6 x 1 litre pump-top dispensers
- CL910-18** 2 x 5 litre easy-pour containers

Barrier Hand Cream

Pro CARE™

An extra strength non greasy hand cream specially formulated to provide maximum protection from hazardous work environments in the laboratory which cause dry cracked hands and skin irritation.

- ◆ Contains Nonoxynol-9 which is effective in inactivating the AIDS virus (HIV1) and Hepatitis Types 1 and 2
- ◆ Contains lanolin to moisturise the skin and a silicone to seal in the moisture and seal out the environment
- ◆ Particularly effective at relieving the irritation caused by frequent wearing of rubber gloves
- ◆ Economical in use, only a small amount of cream is required at each application

Supplied in packs as indicated.

- CL910-70** 12 x 85g tubes
- CL910-75** 4 x 450g pump-top dispensers

Hand Sanitiser

Hand sanitiser liquid spray, WHO formulation, 75% isopropyl alcohol. Supplied in a 200ml pump-top bottle.

- CL985-10** Hand sanitiser, pack of 200ml



Inset: CL985-10



Cleaning

Virkon™ S Animal Health Disinfectant

Virkon S disinfectant formulation defines farm biosecurity and critical disinfection around animal health. With powerful, proven performance against over 500 strains of viruses, bacteria and fungi Virkon S is selected by governments worldwide for Emergency Disease Control.

- ◆ DEFRA approved
- ◆ Outstanding virucidal properties
- ◆ Suitable for organic farming
- ◆ Ideal foot dip disinfectant
- ◆ Non-corrosive, non-bleaching, bio-degradable
- ◆ Supplied in packs as indicated

Used to disinfect surfaces, equipment and water systems Virkon S is a powerful broad spectrum virucidal disinfectant. It is DEFRA approved to kill viruses including Bird Flu, Foot & Mouth, Swine Flu, Salmonella and Campylobacter. It's versatility and safety profile mean it can be used safely for the routine disinfection of wooden & hard surfaces, animal feeding equipment, stables and cowsheds, chicken coops, farm machinery, for disinfecting feet & wheel-dips and cleaning water systems. Probably the most versatile disinfectant on the market, it can be applied directly to the animal, its housing, or surroundings and will rapidly kill viruses, fungi and bacteria and at very low dosages. It is powerful, yet safe to use with animals and around the home. Diluted to 1% in water, Virkon® can be used to clean and disinfect equipment and surfaces. Supplied in packs as indicated.

- CL925-02** 12 x tubs of 50 x 5g tablets
- CL925-05** 50 x 50g sachets
- CL925-12** 4 x 1kg packs
- CL925-17** 2 x 5kg drums
- CL925-20** 1 x 10kg drum

Virkon® is a trademark of LANXESS.

Hand Sanitiser

Hand sanitiser liquid spray, WHO formulation, 75% isopropyl alcohol. Supplied in a 200ml pump-top bottle.

CL985-10 Hand sanitiser, pack of 200ml



Inset:: CL925-12



CL925-20



CL985-10

Clinical

Clinical Sundries

Lancets, disposable

Stainless steel. Individually wrapped and autoclaved. Supplied in pack of 200. For export only.

CM115-15 Lancets

SUPPLY OF CM115-15

We cannot supply these lancets for use in the UK. Please check before ordering that the end-use is outside the UK.

Haemocytometer Sets, BS748

For blood cell counting. With counting chamber, cover glasses and one each red and white cell pipettes with mouthpieces in fitted case. The metallized versions reduce glare and provide greater contact for easier and more accurate counting.

Improved Neubauer ruling

Cell depth 0.1mm.

CM175-10 Single

CM175-12 Single metallized

CM175-20 Double

CM175-22 Double metallized

Modified Fuchs-Rosenthal ruling

Cell depth 0.2mm.

CM180-20 Double metallized

Thoma ruling

Cell depth 0.1mm.

CM183-19 Double metallized

Cover glass

Spare for single or double chamber haemocytometer sets. 22 x 25mm L x W. Supplied in pack of 10.

CM185-08 Cover glasses

Counting chambers

Spare for haemocytometer sets. Supplied with cover glasses.

Improved Neubauer, 0.1mm.

CM187-05 Single

CM187-07 Single metallized

CM187-12 Double

CM187-14 Double metallized

Modified Fuchs-Rosenthal, 0.2mm

CM187-22 Double metallized

Thoma, 0.1mm

CM187-30 Double metallized

Pipettes, Haemocytometer

For blood diluting. Red cell type enables 1 in 100 dilution, white cell type 1 in 10 dilution. White enamel back glass. Amber markings. Length 225mm complete with rubber tubing and glass mouthpiece.

CM190-10 Red cell

CM190-12 White cell

Bacteria counting chamber, Helber

0.02mm deep circular cell, Thoma ruling. Slide thickness 1mm. With 2 cover glasses.

CM195-10 Helber chamber

Egg counting slide, McMaster

With two chambers each with 10 x 10mm grid. Volume under each 1mm² square is 0.15ml. With plastic buffers for protection during field use.

CM197-15 McMaster egg counting slide

Dilu-Vial®, Elkey

Polystyrene. For cell and particle counting. Capacity 32ml. Designed to eliminate hemolysis in cell counting. Is deionized and de-staticized following manufacture so that it is particle free and chemically clean prior to use. With optically clear, parallel sides for optimum light transmission and graduations at 10ml and 20ml to ensure correct sample dilution. A frosted write-on area provides convenient sample identification. The cap is polyethylene. Supplied in pack of 1000.

CM200-15 Dilu-Vial

Clinical, pathological and serological pipettes – see *Pipettes Section*.



CM115



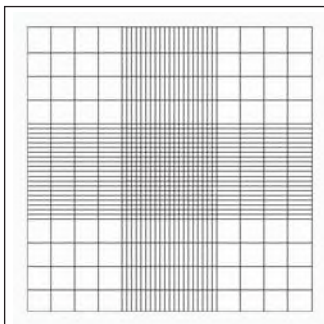
CM190



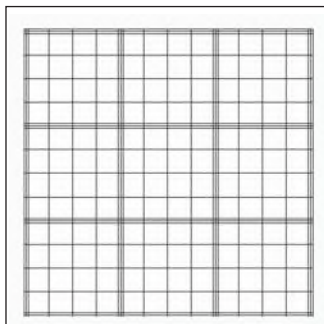
CM175, CM180



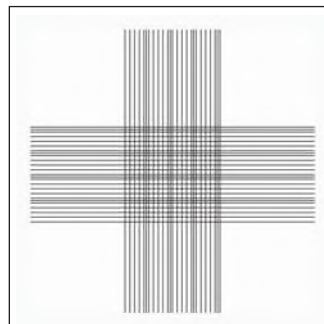
CM197-15



CM175 ruling



CM180 ruling



CM183

CM195 ruling



CM200

Clinical

Clinical Sundries continued

Stethoscopes, clinical

CM365-15 Dual head

Tongue Depressors, wood

145 x 20mm. With rounded ends. Pack of 100.

CM380-10 Depressors

Tube Rotators



Tube Rotator, fixed speed, SB2

Fixed speed 20rpm. With on/off switch and adjustable tilt angle with setting gauge. Overall 200 x 270 x 230mm W x D x H. Weight 3.2kg. For 230V 50Hz single phase supplies. Requires, but is not supplied with, tube carrier for operation.

CM470-20 SB2, fixed speed

Tube Rotator, variable speed, SB3

Variable speed 2 to 40rpm. Generally as CM470-20 but with digital speed control to 1rpm resolution and display, 1 to 999 minute timer with audible alarm at the end of the timed period. Overall 200 x 270 x 230mm W x D x H. Weight 3.2kg. For 230V 50Hz single phase supplies. Requires, but is not supplied with, tube carrier for operation.

CM470-35 SB3, variable speed

Accessory tube carriers for CM470 rotators

Tube holders

With radial sprung clips which secure tubes firmly but allow rapid loading and unloading. Hold maximum tubes as indicated.

CM473-03 40 x 1.5ml micro-centrifuge tubes

CM473-06 20 x 9 to 20mm diameter tubes

CM473-09 12 x 50ml centrifuge tubes

Tube racks

Axially perforated circular racks for gentler mixing of culture tubes. Hold maximum tube number x diameter as indicated.

CM473-12 63 x 12mm tubes

CM473-15 36 x 16mm tubes

CM473-19 30 x 26mm tubes

Adapter SB3/Dual

Allows a second tube holder or rack to be mounted, increasing capacity or allowing alternative tube sizes to be accommodated.

CM473-40 Adapter SB3/Dual



CM365



CM380



CM470-20 in use with CM473-06



CM470-35 with 2 x CM473-03 and CM473-40

Clinical

Applicators and Swabs

Applicators, wood

Approximately 150 x 2mm length x diameter. Supplied in pack of 1000.

CM600-10 Applicators

Applicator Swabs

Cotton wool tipped, packed as indicated.

	Tip	Shaft	Sterile	Inner pack	Pack qty.
CM610-12	Plain	Wood	Yes	100/bag	5000
CM610-16	Plain	Wood	Yes	1/pouch	1000

Culture Swabs

Cotton wool tipped. Individually packed with storage tube.

	Tip	Shaft	Sterile	Inner pack	Pack qty.
CM615-35	Plain	Wood	Yes	1/tube	250
CM615-48	Plain	Aluminium	Yes	1/tube	100

Probact™ Transport Swabs

Complete sampling kits for the collection, preservation and transport of microbiological specimens. Comply with European Medical Device Directive 93/42/EEC and CLSI M40-A compliant. Comprising cotton wool or viscose (rayon) tipped swab and separate tube of transport medium. Sterile.

	Medium	Tip	Shaft	Pack qty.
CM620-10	Amies clear	Cotton	Aluminium	100
CM620-15	Amies clear	Viscose	Plastic	100
CM620-30	Amies charcoal	Viscose	Aluminium	100
CM620-35	Amies charcoal	Viscose	Plastic	100

Note: Amies Swabs have a limited shelf life. Expiry date shown on product.



CM600



CM610



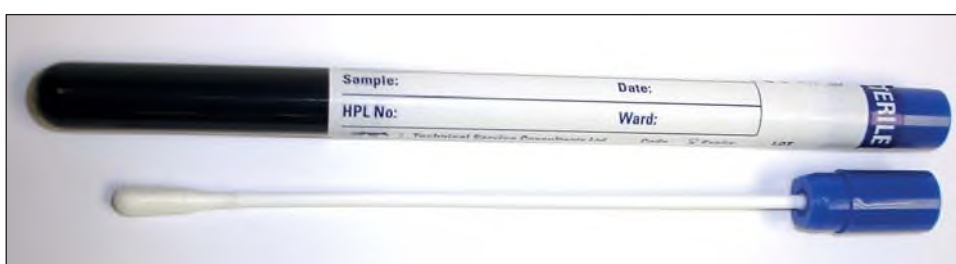
CM615-35



CM615-48



CM620-10



CM620-35

Applicators and Swabs continued



Culture Swabs, Copan

Cotton wool tipped. With shaft as indicated.

	Ref.	Type	Shaft	Cap colour	Pack qty.
Individual tube. Sterile. Colour coded cap.					
CM625-19	155C*	Plain	Plastic	White	100
CM625-24	160C*	Plain	Wire	Orange	100
CM625-33	451C	Vegetable protein	Plastic	Yellow	100
CM625-42	152C	Charcoal	Wooden	Black	100

* Rayon tip.

Transport Swabs, Copan

Individual tubes. Gamma irradiated. With rayon tip and shaft as indicated. CE-marked as class IIa medical devices.

	Ref.	Type	Shaft	Cap colour	Pack qty.
CM650-07	116C.USE*	Amies charcoal	Aluminium	Orange	500
CM650-11	108C.USE*	Amies clear	Plastic	Blue	500
CM650-14	114C.USE*	Amies charcoal	Plastic	Black	500
CM650-16	408C†	Amies clear	Plastic	Red	500
CM650-19	414C†	Amies charcoal	Plastic	Black	500

*Packed under a nitrogen atmosphere in sealed aluminium foil sleeves of 50 to enhance shelf life.

†Comply with NCCLS M40-A and DIN 58942-4 standards.

Swab Rinse Kits



For routine microbiological monitoring of bacteria and fungi contamination on equipment and surfaces. A valuable aid to hygiene control in critical areas within hospitals, pharmaceutical research and production, or food manufacturing.

- ◆ Choice of kits to suit different sampling protocols
- ◆ Suitable for sampling from smooth, rough, flexible, dry or wet surfaces. Dry surfaces are sampled using a swab pre-moistened in the rinse solution provided.

Kits comprise a 16 x 100mm tube with push-fit cap containing 10ml of rinse solution (a general purpose medium for the maintenance of bacteria or fungi and to neutralise disinfectants or sanitising agents) and standard or large size plastic applicator swab with either a rayon or alginate tip. The alginate tip can be dissolved in the rinse solution provided, releasing all of the bacteria taken up by the swab which allows accurate total viable counts to be performed. All kits are sterilised by gamma-irradiation.

	Ref.	Applicator/ Tip	Pack qty
HT840-10	902C	Standard/ Rayon	25
HT840-15	903C	Standard/ Alginate	25
HT840-20	904C	Large/Rayon	25
HT840-30	905C	Large + template/Rayon	10



HT840

Clinical

Sampling Swabs

Flocked Sampling Swabs, Sterilin

Innovative sample collection swabs incorporating unique nylon-flocked tip which enhances sample recovery and release. Particularly useful for small samples associated with forensic investigation. Certified DNase- and RNase-free (forensic swabs additionally certified free from Human DNA). Manufactured using inert components and available in individual paper peel pouch or empty dry tubes, gamma sterilised in outer cases as indicated.

	Ref.	Applicator type	Pack qty.
Paper peel pouch			
CM630-05	501CS01	Minitip plastic	100
CM630-10	502CS01	Standard plastic	100
CM630-15	503CS01	Pernasal plastic	100
CM630-20	511CS01	Endocervical plastic	50
CM630-25	516CS01	Neonatal minitip plastic	100
Plain tube			
CM630-40	551C	Minitip plastic	100
CM630-45	552C	Standard plastic	100
CM630-50	553C	Pernasal plastic	100
CM630-55	516C	Neonatal minitip plastic	100
Forensic*, paper peel pouch			
CM630-80	3520CS01	Standard with break point	100
CM630-85	3520CA	Standard with break point + 2ml tube	100

*Certified Human DNA-free.

Flocked Transport Swabs, E-Swab, Sterilin

With flocked tips and Amies liquid media, ensuring that the sample is rapidly eluted into a homogenous sample solution.

	Ref.	Colour code	Shaft/Applicator	Pack qty.
CM655-09	480CE	Pink	Plastic/regular	50
CM655-14	481CE	Orange	Plastic/mini	50
CM655-19	482CE	Blue	Plastic/pernasal	50
CM655-24	483CE	Orange	Plastic/urethral	50
CM655-29	484CE	Blue	Plastic/paediatric	50



CM630 in use



CM655

Clinical

Loops, Streakers and Scrapers

Inoculation loops, Sterilin disposable

Available in hard or soft versions manufactured in rigid or flexible polymers respectively. Gamma irradiated. Supplied in packs of 800.

- CM670-08 1µl, hard, SL1H
- CM670-16 1µl, soft, SL1S
- CM670-18 10µl, hard, SL10H
- CM670-26 10µl, soft, SL10S

Quadloops, Sterilin disposable

Polystyrene gamma irradiated. With sphere. Supplied in packs of 1000.

- CM670-25 1 l, QL1
- CM670-30 10 l, QL10

Culture Media Inoculators

Disposable, single-ended, sterile polystyrene loops, needles and L-shaped spreaders for culture media inoculation. Aseptically produced. Choice of inner sleeve quantity and supplied in outer packs as indicated.

	Description	Inner sleeve qty.	Outer pack qty.
CM676-10	10µl loop	20	1000
CM676-20	5µl loop	20	1000
CM676-30	1µl loop	20	1000
CM676-43	needle	20	1000
CM676-45	spreader	20	500
CM676-49	spreader	5	500

Microbiological Wire Loops, disposable

Accurately calibrated. 29swg 80/20 nickel chromium wire. Volume indicated can vary depending on vertical or horizontal immersion and the liquid or broth viscosity. Supplied in vials of 25, except the holder which is supplied singly.

	Volume µl	Loop i.d. approx. mm
CM683-05	1	1.6
CM683-10	2	2.3
CM683-15	3	2.6
CM683-20	4	3.0
CM683-25	5	3.6
CM683-30	10	5.1
CM683-60	Holder 200mm	

Cell rake/scrapers – see TP535.

Clinical thermometers - see TG730.

Liquid fuel burners – see BY400.

Wire loop steriliser, SteriMax

Wire loop steriliser, SteriMax

For the sterilisation of wire inoculation loops, needles or dissection instruments, where the use of gas or exposed flames are not allowed. The cylindrical silica tube is externally wound with heating elements allowing rapid heating up to 900°C. The heater tube assembly can be adjusted by up to 7 different angles and the all-stainless steel housing is easily cleaned. An integral spray protector for enhanced safety when handling pathogenic material. With visual "burner hot" indicator, inoculation loop holder and tray for 3 holders. Overall 175 x 129 x 139mm W x D x H. Weight 1100g. For 230V 50/60Hz single phase supplies. 120W.

CM705-10 SteriMax

AA Discs Whatman

AA Discs, Whatman

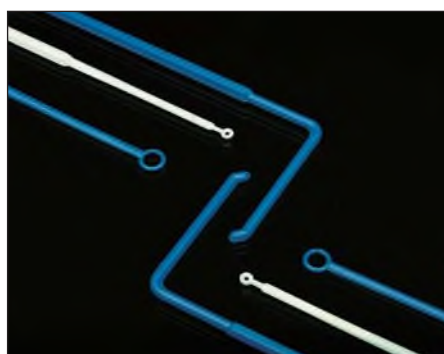
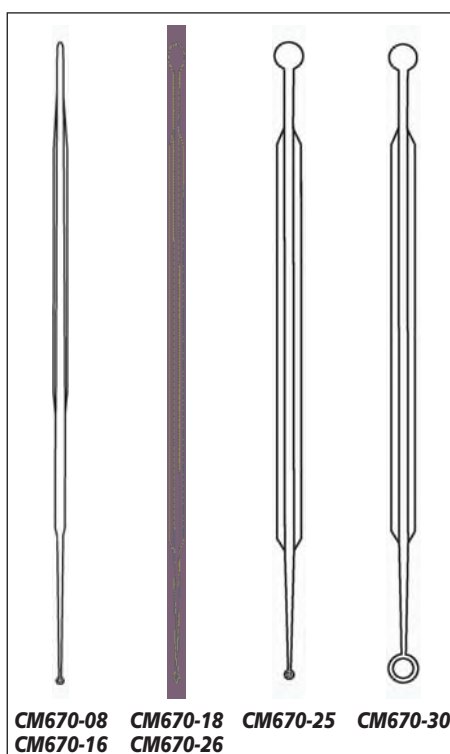
For antibiotic assay. Supplied in packs of 1000.

- CM760-10 6mm
- CM760-15 13mm

Protein Saver Cards Whatman

For collection and transport of blood and body fluid samples. Ideal for short-term specimen handling, protein or metabolite studies. Printed with five defined sample areas for application of up to 80µl of sample each, allowing separate processing if necessary. Supplied in a pack of 100.

CM780-20 1053108



CM676



CM683



CM705-10 in use



CM780

Clinical

Clinical Sundries

Urine Test Glasses, Conical

- CM825-10 100ml
- CM825-15 150ml
- CM825-17 175ml

Cylindrical

With conical inner base for sediment.

- CM825-40 100ml
- CM825-45 150ml

Urinometer set, glass

For measuring the specific gravity of urine. Range 1.000 to 1.060 calibrated at 60°F (15.5°C). Supplied complete in pack with glass test jar, capacity approximately 60ml.

Description
CM848-10 Urinometer/test jar

Spare parts

Urinometer only, glass. Range 1.000 to 1.060.

- CM850-10 Urinometer

Test jar glass, capacity approximately 60ml.

- CM852-06 Test jar

Other specimen and sample containers can be found in the Bottles section - see BS200/BS248.

Sterilisable disposal bags - see BA030/BA090.

Sterile spatulas - see TP493.

Clinical Thermometers

Gallium filled. Stubby bulb and lens front. Length 100mm. In plastic case. 35 to 42°C - see TG700.

Primary Urine Collection Tubes, Sterilin

Designed to fit into the racking of current automated urinalysis systems to improve and accelerate sample processing. Aseptically produced, clear plastic, 13ml capacity, round bottom tubes with label for patient details and to show fill level, leak-free screw cap (95kPa compliant and acc. to BS EN 14254) and individually lot numbered for traceability. Available with, or without Boric acid preservative and with, or without collection cup. Supplied in outer packs of 500 with inner sleeves as indicated.

	Ref., description	sleeve qty.
CM857-10	131B, plain	100
CM857-20	131BBAC, with boric acid	100
CM857-30	131B/C, plain, with collection cup	100
CM857-40	131BBAC/C, with boric acid and collection cup	100
CM857-50	131B/50, plain	50
CM857-60	131BBAC/50, with boric acid	50
CM857-70	131B/C50, plain, with collection cup	50
CM857-80	131BBAC/C50, with boric acid and collection cup	50

Secondary Urinalysis Tubes, Sterilin

16 x 100mm, 11ml capacity, polystyrene, non-sterile tubes. With round bottom for efficient mixing within automated urine analysers including Sysmex UF1200/UF1000i, Iris IQ200 and Menarini sediMax. Accessory polyethylene push-fit caps are available to re-cap the tube if required.

- CM860-25 Urinalysis tubes, 30932, pack of 750
- CM860-27 Push-fit caps, 13CAP, for CM860-25, pack of 5000

Double-bagged containers, Sterilin

Designed for use where complete sterility must be ensured, i.e. hospital theatres. Polystyrene, plain labelled, with cap as indicated. Each container is double-wrapped within two "easy-tear" bags. CE-marked in compliance with the in-vitro diagnostic (IVD) directive, and gamma-irradiated with irradiation dot to indicate sterility.

	Capacity ml	Cap material*	Pk qty.
CM870-10	30	PP	150
CM870-20	100	Me	80
CM870-30	250	Me	40

*PP = polypropylene. Me = metal.

Specimen Cups, Elkay

Polypropylene with quarter-turn polyethylene screw cap (except CM900-18 which has no cap). Capacity 120ml. Specimen volume can be checked visually using the moulded graduations. Frosted write-on areas on container and cap provide convenient sample identification. The sterile cups are individually wrapped. Supplied in packs as indicated.

Bulk packed

- CM900-13 Non-sterile, with white cap, pack of 450
- CM900-18 Non-sterile, without cap, pack of 500

Individually wrapped

- CM900-42 Sterile, with red cap, pack of 350

Digital Clinical Thermometer

Range 32 to 43.9°C with LCD temperature indication to 0.1°C. Symbols "L" (low) and "H" (high) indicate when the temperature is outside the normal limits and the °C symbol flashes until the temperature has stabilised. Accuracy ±0.1°C between 35 and 38°C and ±0.2°C outside this range. Powered by one 1.5V silver oxide battery type SR41 which has a life equivalent to about 4000 temperature measurements in normal use. Overall 110 x 14 x 8mm. Weight 7g. With battery.

- TG715-10 Digital clinical
- BL630-06 Spare battery, 1.5V



CM825-10 CM825-40 CM848-10



CM857



CM860



CM870 in use



CM900-13, CM900-18 and -42 are similar



TG715

Clinical

Clinical Sundries continued

Sharps Bins, to BS7320:1990

A comprehensive range of puncture resistant, rigid polypropylene bins with snap-tight lids for the safe containment and disposal of sharp objects. Manufactured to BS7320:1990, UN3291, AFNOR NFX 30-500 and follow the UK Department of Health 'Safe Management of Healthcare Waste' guidance colour coding system.

- ◆ Designed for incineration or other authorised process for European Waste Catalogue (EWC) codes 18-01-01, 18-01-03, 18-02-01 and 18-02-02[#] Sharps excluding those contaminated with medicinal products
- ◆ Simple, two-stage sliding shutter in lid allows temporary or permanent closure as required
- ◆ Brightly coloured case, clearly marked with relevant warnings, assembly and closure instructions and highly visible fill line

Supplied singly.

- CM915-16** Sharps Bin, 0.6 litres
- CM915-21** Sharps Bin, 1.0* litres
- CM915-26** Sharps Bin, 2.5 litres

- CM915-31** Sharps Bin, 5.0 litres
- CM915-36** Sharps Bin, 7.0 litres
- CM915-41** Sharps Bin ,22.0 litres

*Rectangular shape.

[#] Please note: Bins for processing other EWC code waste are also available - details on request.

Scalpel Blade Remover/Bin, Qlicksmart

A dedicated, disposable scalpel blade remover and storage/disposal bin allowing blade removal without endangering the free hand. Puncture-proof and can be disposed of safely once full. Suitable for all types of DS180-/DS185-series disposable scalpel blades. With built-in blade counter and shut-off mechanism which operates after 100 blades have been stored. An accessory wall/bench bracket holds the Qlicksmart firmly allowing one-handed operation. Overall W x D x H 130 x 90 x 148mm. Supplied singly.

CM924-10 Qlicksmart

CM924-12 Accessory wall/bench bracket for CM924-10

Glass Disposal Boxes

For safe disposal of glass and other non-combustible waste material. Made from liquid-proofed material and features large character warning. Packed flat in 25's for convenient storage. Easy assembly. Assembled size 510 x 295 x 295mm. Supplied in pack of 25.

CM926-10 Glass disposal boxes



CM915-16



CM915-31



CM924-10 in use with CM924-12



CM915-21



CM915-41



CM926

Clips

Apparatus/Tubing Clips and Clamps

Clips/Clamps

Providing shut-off or flow control for flexible tubing.

Type	Max. tubing dia. mm	Material
CP100-15 CP100-19	10 12	Nickel plated alloy
CP103-10	10	Polypropylene
CP106-08 CP106-10	8 10	Stainless steel and acetal
CP109-10 CP109-15 CP109-20	10 15 20	PVDF and zinc plated steel
CP114-25 CP114-30 CP114-40	25 30 40	Nickel plated brass
CP115-40	40	Nickel plated brass
CP120-14	14	Acetal
TY900-20 TY900-25 TY900-30 TY900-40	4.5 6 10 14	PBT*, Sterilisable up to 134°C

*Polybutylene terephthalate.

Clips

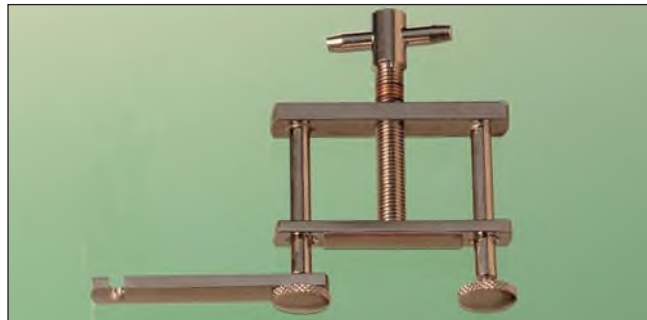
For securing flexible tubing on nozzles and pipes.

Type	Outside dia. of tubing accepted, mm	Material
CP130-16 CP130-20 CP130-25 CP130-30	11 to 16 13 to 20 18 to 25 22 to 30	Zinc coated mild steel
CP135-10 CP135-12 CP135-14 CP135-17 CP135-19	8 to 10 9 to 12 10 to 14 13 to 17 15 to 19	Stainless steel with brass screw
CP135-22 CP135-25 CP135-27 CP135-30	18 to 22 21 to 25 23 to 27 26 to 30	
CP135-33 CP135-35 CP135-38 CP135-41	29 to 33 31 to 35 34 to 38 37 to 41	

continued on next page



CP100



CP115



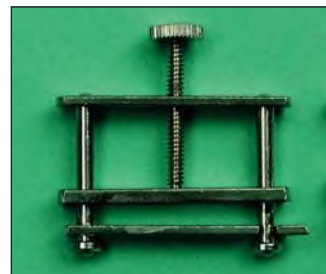
CP130



CP103



CP106



CP114



CP120



CP109



CP135



TY900 in use

Clips

Apparatus/Tubing Clips and Clamps continued

Clips

For holding glassware, rigid tubing, tools, etc. With screw fixing hole.

Type	Diameter to be held mm
CP145-09	9
CP145-12	12
CP145-19	19
CP145-25	25
CP145-32	32
CP145-38	38
CP147-09	9
CP147-12	12
CP147-25	25
CP147-32	32



Clips, Quickfit

For securing conical and spherical glass joints. QGC and QGS clips have PTFE-encapsulated steel springs, are highly resistant to chemical attack and can be used up to 250°C. QKC and QKS clips are Delrin® polyacetal, suitable for use up to 80°C and with most chemicals except halogen gases and acids.

Joint Size	Colour Code	PTFE	Delrin®
For conical glass joints			
10/19	Mint	QGC10	QKC10
12/21	Violet	QGC12	QKC12
14/23	Yellow	QGC14	QKC14
19/26	Blue	QGC19	QKC19
24/29	Green	QGC24	QKC24
29/32	Red	QGC29	QKC29
34/35	Orange	QGC34	QKC34
40/38	Ochre	QGC40	QKC40
45/40	Brown	QGC45	QKC45
For spherical glass joints			
S13	Violet	—	QKS13
S19	Blue	—	QKS19
S29	Red	—	QKS29
S35	Orange	—	QKS35

Delrin® is a registered trademark of DuPont Ltd.



CP145



QGC



QGS in use



CP147



QKC, QKS series

Cork Products, Cotton Wool

Cork

Corks, tapered

Dimension given is the small end diameter. Pack quantities are approximate.

	Dia. mm	Pack qty.
CW300-06	6	250
CW300-08	8	250
CW300-10	10	240
CW300-12	12	160
CW300-14	14	160
CW300-16	16	120
CW300-18	18	80
CW300-19	19	60
CW300-22	22	50
CW300-25	25	30
CW300-29	29	30
CW300-32	32	25
CW300-35	35	20
CW300-38	38	20
CW300-42	42	15
CW300-45	45	15
CW300-48	48	10
CW300-50	50	10
CW300-70	Assorted	150

Cork Rings, compressed

For supporting round bodied flasks. Depth as indicated. Supplied singly.

	o.d. x i.d. mm	For flasks ml
35mm deep		
CW308-08	80 x 30	25 to 150
CW308-12	110 x 60	250, 500
CW308-16	140 x 90	1000
CW308-20	170 x 120	2000, 3000
CW308-24	210 x 150	4000, 5000

45mm deep

CW309-30	240 x 200	4000 to 10000
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Cork Borer Sets

Nickel plated brass. Each set complete with push rod for cleaning.

	Sets of	i.d. mm
CW320-06	6	4.1 to 10.3
CW320-12	12	4.1 to 17.8
CW320-18	18	4.1 to 25.3

Cork Borer Sharpener

Suitable for all borers CW320 series.

CW325-10 Sharpener

Cotton Wool

For cleaning and plugging.

Non Absorbent

In rolls of 500g.

CW500-10 White

Absorbent

Hospital Quality in rolls of 500g.

CW505-10 White

Alternative Cleaning and Sealing Materials – see *Cleaning and Sealing sections.*

Rubber Stoppers

To BS2775. In Natural, Neoprene and Silicone Rubbers. Each stopper has a moulded-in number, corresponding to the measurement of the bottom diameter in millimetres. Sizes from 3 to 105mm. 1- and 2-hole versions available in natural rubber.

– see *SW600/SW684 series in the Stopper section.*

Stoppers, Steristoppers

Preformed cellulose plugs for sealing culture tubes and flasks. They are permeable to air and can be hot air sterilised up to 200°C. All stoppers are tapered and the cellulose material will depress slightly to ensure a tight fit into the tube or neck. Length varies from approximately 30 to 60mm according to size.

– see *SW536 series in the Stopper section.*



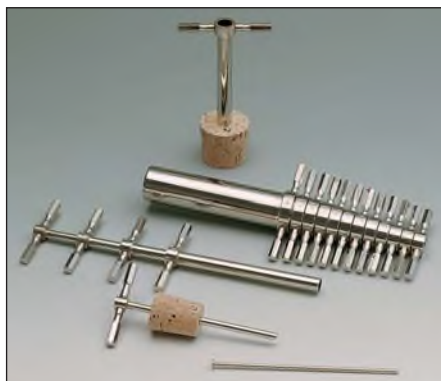
CW300



CW308/CW309



CW325



CW320



CW500, CW505 is similar

Counters

Tally/Totalising

Simple to use manually operated counters with a wide range of applications including:

- ◆ Bacteria colony counting
- ◆ Particle counting
- ◆ Biology population studies
- ◆ Gemstone counting
- ◆ Parts counting

Tally Counter, lever action

Hand held 4-digit counter up to 9999, push lever and manual reset in chrome case.

CW608-10 Tally counter, lever action

Tally Counters, push button action

4-digit counter up to 9999, thumb push button and manual reset. Available as either hand held with retaining cord or with bracket and clip for bench mounting.

CW610-10 Hand held

CW610-20 Bench mounting

Totalising Counters, multiple bank

Bench mounting. In anodised aluminium case with coloured keys. Each counter window shows three digits and above each window is provision for labelling. When any key is pressed its corresponding count increases by one and the overall total count increases by one. The counter locks at a total count of 100 so that each window displays percentage values. For counting beyond 100 a press button is provided to release the lock. Side knobs are provided to reset to zero.

6-unit counter (5 counting plus totaliser). Overall 225 x 70 x 30mm.

CW650-10 6-unit

9-unit counter (8 counting plus totaliser). Overall 300 x 70 x 30mm.

CW650-20 9-unit

Colony, Revolution

Colony Counters For counting bacterial colonies. Hand-held or bench mounting models – see *CR275/CR315 series in Colony Counter section.*

Blood cell counting chambers – see *CM175/CM180 in Clinical section.*

Counting slides for use with light microscopes – see *ML200/ML250 in Microscopy section.*

Parts counting balances and scales – see *Balance section.*

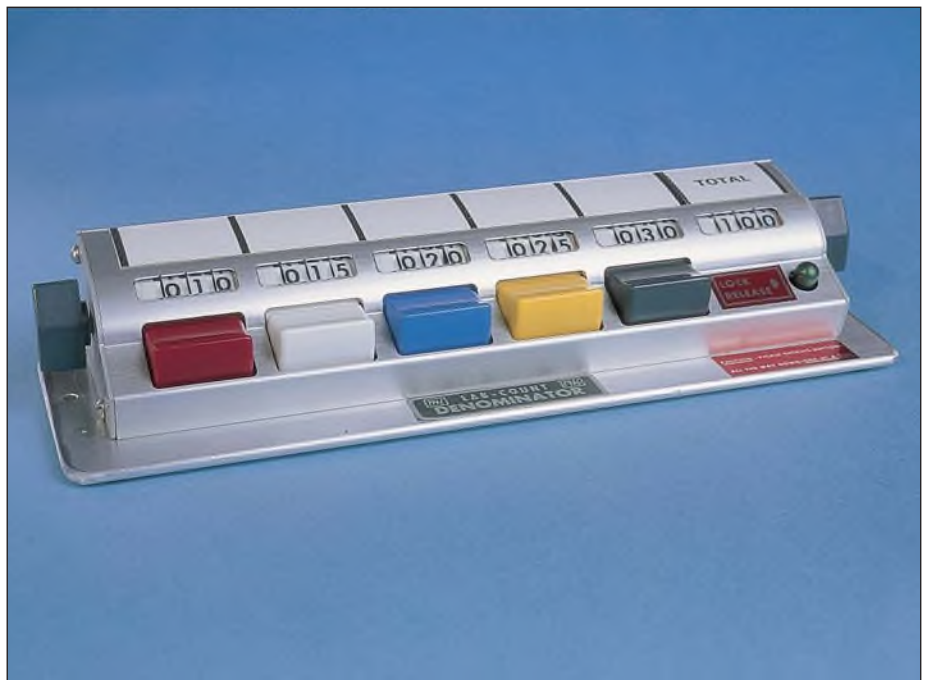
Revolution Counters for measuring speed of rotating equipment, digital reading, hand-held – see *TA870 in Tachometer section.*



CW608-10



CW610-10



CW650-10, CW650-20 is similar

Crucibles

Glass

All dimensions and capacities for crucibles are nominal.

Pyrex Glass

Gooch pattern with sintered disc for analytical work where precipitates have to be dried to constant mass at 110°C. The crucibles can be placed directly into an oven up to 150°C and then left to cool in a desiccator.

	Ref.	Porosity
30mm disc; height 53mm, capacity 30ml		
CX102-10	3660/02M	1
CX102-20	3660/04M	2
CX102-30	3660/06M	3
CX102-40	3660/08M	4
CX102-50	3660/10M	5

40mm disc; height 65mm, capacity 60ml

CX104-10	3680/02M	1
CX104-20	3680/04M	2
CX104-30	3680/06M	3
CX104-40	3680/08M	4
CX104-50	3680/10M	5

Adapter Funnels, Pyrex

For Gooch crucibles. Stem o.d. 9mm, length 75mm. Dimensions given are open end i.d. x height excluding stem. Require rubber adapter to mount the crucible.

	Ref.	For disc dia. mm	Dia. x ht. mm
CX120-20	3690/02M	20	30 x 60
CX120-30	3690/04M	30	40 x 68
CX120-40	3690/08M	40	47 x 78

Porosity Gradings for Sintered Glassware

Grade	ISO4793 Designation	Pore size index μm
0	P250	160 to 250
1	P160	100 to 160
2	P100	40 to 100
3	P40	16 to 40
4	P16	10 to 16
5	P10	4 to 10



CX104 with CX120 and CX125 in use

Rubber Cones

For filter crucibles. Dimensions given are large end x small end i.d.

	Dimensions mm
CX125-14	20 x 14
CX125-18	27 x 18
CX125-24	33 x 24
CX125-27	42 x 27

Rubber Cones, Guko

Natural rubber. For filter crucibles and funnels to seal into Buchner flasks. Supplied in a set of eight with dimensions in mm.

Top o.d.	Bottom o.d.	Height	Thickness
21	12	18	2.5
27	17	20	3
33	21	24	3
41	27.5	27	4
53	33	34	5
68	48	35	5.5
78	58	35	6
89	66	40	6.5

CX127-10 Guko set

Spare Guko Cones

Supplied singly.

	Top o.d. mm
CX127-14	21
CX127-16	27
CX127-18	33
CX127-20	41
CX127-22	53
CX127-24	68
CX127-26	78
CX127-28	89

Drying ovens - see Ovens section.

Quickfit filtration funnels - see Quickfit section.

Sintered discs - see Filtration section.



CX127-10

Crucibles

Metal

Nickel

Without lid.

	Dia. x ht. mm	Cap. ml
CX200-25	25 x 25	10
CX200-30	30 x 30	15
CX200-35	35 x 35	25
CX200-40	40 x 40	30
CX200-50	50 x 50	70
CX200-60	60 x 60	130

Accessory lids for CX200- crucibles

Nickel, peak form.

	For crucible
CX202-25	CX200-25
CX202-30	CX200-30
CX202-35	CX200-35
CX202-40	CX200-40
CX202-50	CX200-50
CX202-60	CX200-60

Platinum (97%) - Iridium (3%)

Without lid. Weight given is approximate.

	Dia. x ht. mm	Cap. ml	Weight g
CX240-27	35 x 37	25	21
CX240-32	35 x 40	30	25
CX240-43	40 x 45	40	30

Zirconium crucibles are also available – details on request.

Porcelain

All dimensions and capacities are nominal. Diameter given is at the rim. Maximum operating temperature 1000°C.

	Dia. x ht. mm	Cap. ml
Low Form without lid		
CX348-12	30 x 19	6
CX348-16	35 x 22	11
CX348-22	40 x 25	15
CX348-27	45 x 28	25
CX348-33	60 x 38	50
CX348-36	70 x 44	85
Medium Form without lid		
CX357-12	25 x 20	5
CX357-16	30 x 25	10
CX357-22	35 x 28	15
CX357-26	40 x 32	20
CX357-36	50 x 40	49
CX357-48	63 x 55	100
Gooch Form without lid		
CX400-48	35 x 40	25
CX400-60	41 x 43	35

Crucible Lids

	For crucibles		
	CX348	CX357	CX400
CX415-22	—	-12	—
CX415-28	-12	-16	—
CX415-34	-16	-22	-48
CX415-37	-22	-26	—
CX415-40	-27	—	-60
CX415-43	—	-36	—
CX415-52	-33	—	—
CX415-58	—	-48	—
CX415-64	-36	—	—



CX200 with CX202



CX240 in use



CX348/CX357

Crucibles

Alumina Ceramic Crucibles

99.7% Al₂O₃, density 3.922g/cm³, hardness 9 (Mohs scale). Can be used up to 1700°C, with excellent chemical resistance and mechanical strength. All dimensions and capacities are nominal. Without lid.

	<i>Dia. x ht.</i> <i>mm</i>	<i>Cap.</i> <i>ml</i>
Conical Form		
CX300-12	27 x 35	7
CX300-15	32 x 32	10
CX300-19	33 x 44	20
CX300-23	46 x 53	50
CX300-27	55 x 64	90
CX300-28	64 x 86	100
CX300-31	60 x 70	120
Tall Form		
CX304-15	30 x 31	10
CX304-19	40 x 35	20
CX304-26	60 x 62	100
CX304-40	96 x 116	500
Cylindrical Form		
CX308-10	23 x 22	5
CX308-14	28.5 x 15	5
CX308-19	31 x 40	20
CX308-23	42 x 58	50
CX308-25	40 x 92	80
CX308-28	46 x 82	100
CX308-32	64 x 80	225
CX308-47	90 x 150	750
CX308-50	100 x 172	1000

Notes on the care and use of Alumina Products

Alumina products are fragile, please avoid impacts during handling to prevent micro-cracks at the surface. Products with any micro-cracks should not be used.

Alumina should also be kept completely free of moisture and, if drying, please ensure that the temperature in the drying oven is increased slowly. Alumina is sensitive to thermal shock. Do not use alumina crucibles over naked flames, such as that from a bunsen burner - crucibles must be heated evenly using a furnace, oven etc.

Avoid overloading of crucibles to prevent uneven heating and ensure that the furnace chamber temperature increases gradually to prevent thermal shock (a rate of 150°C per hour for the first 1 to 1.5 hours is recommended, with maximum temperature achieved after 3 hours). When cooling, lower the temperature as gradually as possible. The cooling down rate is often half of the heating rate. If removing the crucibles from the furnace into room temperature to pour melted material, try to keep the process as short as possible. Once removed, avoid placing crucibles on any cold surfaces.



CX300/CX304/CX308

Crucibles

Silica

Silica Crucibles and Capsules

99.8% SiO₂. Can be used up to 1050°C continuously and 1300°C for short periods. Inert to most substances except alkalis and some metallic oxides. All products are glazed and translucent. All dimensions and capacities are nominal.

Low Form Crucibles without lid

	<i>Dia. x ht.</i> <i>mm</i>	<i>Cap.</i> <i>ml</i>
CX505-10	29 X 19	5
CX505-14	38 x 19	10
CX505-18	41 x 25	15
CX505-22	47 x 28	25
CX505-26	57 x 37	50
CX505-30	67 x 45	80
CX505-34	82 x 51	150

Lids for Low Form Crucibles CX505 only.

	<i>For crucibles</i>
CX507-10	CX505-10
CX507-14	CX505-14
CX507-18	CX505-18
CX507-22	CX505-22
CX507-26	CX505-26
CX507-30	CX505-30
CX507-34	CX505-34

Tall Form Crucibles without lid

	<i>Dia. x ht.</i> <i>mm</i>	<i>Cap.</i> <i>ml</i>
CX515-14	35 x 38	20
CX515-18	43 x 39	30
CX515-22	51 x 51	50
CX515-26	76 x 81	200

Lids for Tall Form Crucibles CX515 only

	<i>For crucibles</i>
CX517-14	CX515-14
CX517-18	CX515-18
CX517-22	CX515-22
CX517-26	CX515-26

	<i>Dia. x ht.</i> <i>mm</i>	<i>Cap.</i> <i>ml</i>
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Broad Base Crucibles without lid

CX522-18	41 x 24	15
CX522-22	48 x 27	25
CX522-26	57 x 37	40

Circular Capsules without lid

CX532-10	40 x 15	10
CX532-14	48 x 15	20
CX532-26	56 x 28	45
CX532-34	75 x 28	80

Rectangular Capsules, without lid

	<i>L x W x H</i> <i>mm</i>	<i>Cap.</i> <i>ml</i>
CX552-10	60 x 28 x 12	10
CX552-18	52 x 42 x 18	25

Crucibles, coking

CX582-10	25 x 38mm, with projections
CX582-15	25 x 38mm, plain
CX582-50	Lid for CX582- coking crucibles
CX582-55	Plunger for CX582- coking crucibles

Note

Fused silica/quartz is a metastable phase of silica and no crystallisation occurs at normal temperature. Prolonged heating above 1000°C leads to crystallisation and in the crystalline phase the formation of high cristobalites occur. The thermal expansion and specific volume of these high cristobalites will be the same as fused silica and no damage to material is observed at high temperature. However, during cooling at 800°C fine cracks appear due to the mismatch of thermal expansion and at around 200-275°C structural changes occur and the high cristobalites are converted to low cristobalites, leading to complete failure of the material. Alkali ions increase devitrification and cleaning with distilled water is recommended between uses if articles are to be regularly heated above 1000°C.



Cryogenic Storage

Portable Liquid Nitrogen Refrigerators

MVE SC/XC series

Designed for the storage of biological specimens in straws or ampoules, when charged with liquid nitrogen.

- ◆ Lightweight, toughened aluminium construction
- ◆ High efficiency insulated vacuum system
- ◆ Inner canisters provided to hold 0.5ml straws, or 1.2ml/2ml vials in canes

Model		SC11/7	SC20/20	SC33/26	SC36/32	XC MILL.20	XC22/5	XC43/28	XC47/11-6
Capacity	litres	11.0	20.5	33.0	36.5	20.5	22.4	42.2	47.4
	0.5ml straws (canes)	540	540	540	540	720	2520	1260	4500
	0.5ml straws (bulk)	732	780	780	780	1122	3666	1764	6216
	1.2/2ml vials	150	150	150	150	210	810	360	1320
Inner canisters supplied		6	6	6	6	6	6	6	6
Static evaporation rate, per day	litres	0.15	0.09	0.13	0.1	0.095	0.35	0.14	0.39
Normal working duration*	days	46	142	182	224	140	40	193	76
Neck diameter	mm	51	51	51	51	55.4	97	70	127
Overall height x diameter	mm	549 x 260	652 x 368	657 x 464	690 x 464	652 x 368	559 x 368	670 x 508	673 x 508
Weight, empty	kg	7.7	11.8	15.4	15.4	10.5	11.8	16.4	19

*Arbitrary reference, to estimate performance under normal operating conditions.

Portable Liquid Nitrogen Refrigerators

As described. Supplied with inner canisters as indicated.

CX802-08 SC11/7
CX802-14 SC20/20
CX802-17 SC33/26
CX802-22 SC36/32

CX802-26 XC Millennium 20
CX802-31 XC22/5
CX802-33 XC43/28
CX802-39 XC47/11-6

Other refrigerator sizes, filling tubes and accessories are available - details on request.

Vials – see TP445, TP453.

Canes – see TP453-60.

Cryogloves – see SA720.



CX802 with accessories

Cryogenic Storage

Bulk Storage Liquid Nitrogen Refrigerators

CryoSystem Series, MVE

For high capacity storage of biological specimens in 1.2ml or 2ml vials within accessory boxes.

- ◆ Aluminium construction with high-efficiency construction
- ◆ Capacity from 61 litres to 175 litres
- ◆ Large diameter neck for easy access
- ◆ Supplied with racks:

Model	CS2000	CS4000	CS6000
Capacity litres	61	121	175
Static evaporation rate, per day litres	0.85	0.99	0.99
Normal working duration days	38	70	104
Racks supplied x rack capacity, boxes*	4 x 5	4 x 10	6 x 10
Overall height x diameter mm	680 x 559	950 x 559	950 x 665
Weight, empty kg	23	43	48

*Box size: 133 x 133 x 52mm high.

Bulk Storage Liquid Nitrogen Refrigerators

As described. Supplied with racks but without nitrogen charge, boxes or vials.

CX818-20 CS2000
CX818-40 CS4000
CX818-60 CS6000

Cryogenic boxes - see TP453-45, TP458-02 to TP458-10.

Vials - see TP445, TP453.

Canes - see TP453-60.



Cryoware

CryoVials/CryoCanes/CryoBoxes and Racks



Cryovials

Polypropylene with polyethylene closure. Skirted and self-standing. With marking area and fill line. Sterilised by irradiation. Supplied in sleeves as indicated.

	Ref. 5000-	Cap. ml	Sleeve qty.
TP453-09	0012	1.2	25
TP453-12	0020	2	25
TP453-14	0050	5	10

Cryovials, System 100

Space saving design for use in system 100 CryoBox. Polypropylene with polyethylene closure. Skirted and self standing. With marking area and fill line. Sterilised by irradiation.

	Ref. 5000-	Cap. ml	Pack qty.
TP453-24	1012	1	500
TP453-27	1020	1.5	500

CryoBoxes™

Polycarbonate. For ultra-low temperature storage of vials. Identification numbers on box and lid are keyed so that grid numbers match.

	Ref.	Array
TP453-40	5025-0505	5 x 5
TP453-45	5026-0909	9 x 9
TP453-47	5027-0909	9 x 9

CryoBox™, System 100

Polycarbonate. For ultra-low temperature storage of up to 100 x TP453-24/-27 vials. With matching identification numbers on box and lid in 10 x 10 grid array. Supplied singly.

	Ref.	Array
TP453-50	5026-1010	10 x 10

CryoCane™

Aluminium. Holds five cryovials for storage in Dewar-type liquid nitrogen freezers.

	Ref.
TP453-60	5015-0001

CryoSleeve™

Transparent PVC. For enclosing cane.

	Ref.
TP453-65	5016-0001

CryoBox Racks

Stainless steel.

For CryoBox TP453-40

Cat. No.	TP455-50	TP455-53
Shelves	4	9
TP455-50	Ref. 5035-0004	
TP455-53	Ref. 5035-0009	

For CryoBox TP453-45

Cat. No.	TP455-60	TP455-63
Shelves	4	9
TP455-60	Ref. 5036-0004	
TP455-63	Ref. 5036-0009	

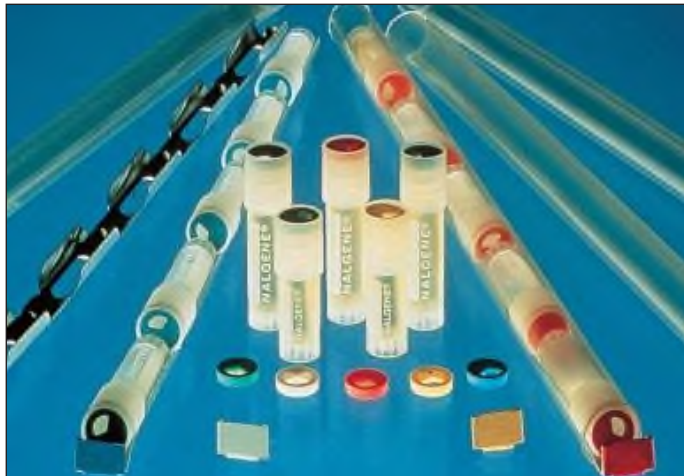
For CryoBox TP453-47

Cat. No.	TP455-70	-73	-76
Shelves	2	4	7
TP455-70	Ref. 5037-0002		
TP455-73	Ref. 5037-0004		
TP455-76	Ref. 5037-0007		

Ice and dry ice carriers, Igloo – see Ice section.

Ultra-low freezers – see RG410 series.

Full details of these products and a wide range of associated accessories will be found in the Tissue Culture Section of this catalogue.



Cryoware

Storage Boxes

Storage Boxes

Rigid cardboard, with drop on lid. Suitable for use at freezer temperatures down to -85°C. Overall 133mm x 133mm W x D. Choice of height and colour, as indicated. Accessory grid dividers are available to accommodate a variety of tube sizes. Supplied singly.

	Box height, mm	Colour
TP458-02	50	White
TP458-04	50	Blue
TP458-06	50	Red
TP458-08	50	Green
TP458-10	50	Yellow
TP458-22	75	White
TP458-24	75	Blue
TP458-26	75	Red
TP458-28	75	Green
TP458-30	75	Yellow
TP458-42	100	White
TP458-44	100	Blue
TP458-46	100	Red
TP458-48	100	Green
TP458-50	100	Yellow

Accessory Grid Dividers for TP458-02 to TP458-50 boxes only

Plain white card. With compartments to hold tube sizes and to fit box heights as indicated. Supplied singly.

	Grid array mm	To hold tubes,	For box height, mm
TP458-61	7 x 7	16	50
TP458-63	8 x 8	14	50
TP458-65	9 x 9	13	50
TP458-67	10 x 10	12	50
TP458-71	7 x 7	16	75
TP458-73	8 x 8	14	75
TP458-75	9 x 9	13	75
TP458-77	10 x 10	12	75
TP458-81	7 x 7	16	100
TP458-83	8 x 8	14	100
TP458-85	9 x 9	13	100
TP458-87	10 x 10	12	100

Labtop cooler

Comprises tube rack for 25 x 0.5ml or 36 x 1.5ml microtubes, mounted in a thermal case containing a cooling gel, and lid. In use the labtop cooler is placed in a -20°C freezer for two hours. Once removed the gel will maintain samples below 4°C on the bench for more than one hour. Supplied singly.

TP459-20 Labtop cooler

Microcentrifuge tubes - see CF300 to CF306 series.



TP458-08 with TP458-65 in use



TP458 boxes



TP459-20 in use

Tongs

Crucible Tongs

Crucible Tongs, Straight

Flat hinge. Dimension given is overall length.

Mild steel*

TR500-15 150mm
TR500-20 200mm

Stainless steel

TR504-15 150mm
TR504-20 200mm

Platinum (97%)-Iridium (3%) tipped

Chrome-nickel with solid Pt-Ir tips. Tip weight 6g.

TR510-25 200mm
TR510-40 400mm

Crucible Tongs, Bowed

Flat hinge. Dimension given is overall length.

Mild steel*

TR540-15 150mm
TR540-20 200mm

Stainless steel

TR544-15 150mm
TR544-20 200mm

* Mild steel tongs are supplied chemically blackened.

Fisher Tongs

Fisher Pattern Tongs

Stainless steel. With handles that extend into the palm of the hand for extra support and thumb and forefinger position for added grip and single hand operation. Dimension given is the overall length.

For Beakers 100 to 1500ml. With glass fibre fabric sleeved jaws.

TR600-20 325mm

For Conical Flasks 100 to 2000ml or necked bottles.

TR600-30 235mm

For Furnace use with crucibles from 30mm to 70mm diameter

TR600-50 460mm

Ward Tongs

Ward Pattern Tongs

Stainless steel. One handed operation using thumb action to open the jaws. Fitted with wooden handle and circular heat shield for the hand. Dimensions given are overall length x length to the heat shield.

TR620-10 590 x 410mm

TR620-25 740 x 560mm

Heat Resistant Gloves

Gloves, Leather

With heat resisting leather palm and fingers. Fleece lined. Overall length 290mm. Nominally sized 8/9. Supplied in single pairs.

SA700-25 Leather

Gloves, Autoclave

Heat resistant to 121°C. Soft, supple gloves made from washable terry cloth knit. White. Supplied in single pairs.

	Length, mm
SA704-10	320

Gloves, High Temperature

Heat resistant to 232°C. Heavyweight, soft, washable terry cloth knit construction with cotton lining. Brown. Supplied in single pairs.

	Length, mm	Cuff
SA706-14	270	Short
SA706-18	320	Gauntlet

Gloves, Clavies®

Heat resistant to 230°C. Soft, pliable, easy-to-wear gloves fabricated from washable terry cloth knit. Supplied in single pairs.

	Length, mm
SA710-12	330
SA710-15	470



Mills

Grinding Mill, A11 basic



Grinding Mill A11 basic

For small scale, high speed grinding of hard, brittle, or soft, fibrous materials. Comprises drive module with stainless steel beater and shroud which mounts onto a screw-fitting, plastic grinding chamber, volume 80ml. Grinding speed 28000rpm. Maximum running time 5 minutes. With electronic overload protection and overheat safety switch. Overall 85 x 85 x 240mm high. Weight 1.5kg. For 230V 50/60Hz single phase supplies. 160W.

MP300-20 A11 basic

Accessories and spares for MP300-20 only

MP305-09 Coated, hard steel beater for grinding hard, brittle materials with grain size 6 to 7mm

MP305-11 Cutter knife for grinding soft, fibrous materials

MP305-16 250ml grinding container, requires double beater MP305-48 for operation

MP305-47 Spare beater, stainless steel

MP305-48 Double beater, titanium for use with MP305-16 only

Mortar and Pestle Mill

Mortar and Pestle Mill RM200

For dry or wet grinding of a wide range of materials including ceramics, chemicals, cosmetics, pharmaceuticals, mineral paints, plastics etc. Depending on suitability, samples from 10ml to 190ml can be milled, pulverised and homogenised to an ultimate fineness of approximately 10µm. A choice of accessory porcelain or agate mortars and pestles are available. Sample can be fed into the mortar during operation, maximum feed size 8mm. Pestle pressure is adjustable and reproducible. With digital control. Includes automatic overload cut-out and "quick-stop" motor. Overall 400 x 370 x 450mm W x D x H. Weight 24kg. For 230V 50Hz single phase supplies. Supplied without mortar and pestle which are required for operation.

MX300-30 RM200

MX303-05 Mortar for RM200, porcelain

MX303-07 Mortar for RM200, agate

MX303-15 Pestle for RM200, porcelain

MX303-17 Pestle for RM200, agate



MP300-20 with MP305-16



MX300 in use

Mills

McCrone Mill

An effective means of reducing samples to sub-micron sizes suitable for x-ray diffraction/fluorescence, infra-red spectroscopy and atomic absorption analysis.

- ◆ Minimal sample damage and contamination
- ◆ Exceptionally homogeneous and reproducible sample distribution
- ◆ Choice of grinding element materials
- ◆ Wet and dry grinding capability

Operation

The unique grinding action (contact blows and planar shearing) ensures a short grinding time with virtually no sample loss and exceptionally even particle distribution. A choice of grinding elements (agate or corundum) allow wet and dry grinding of many materials, including carbides, nitrides, borides, cement, clay, shale and mica. In use, a 125ml polypropylene grinding jar is filled with an array of 48 cylindrical grinding elements and accepts up to 4ml of sample (2ml is optimal). A timed grinding period can be set between 3 and 30 minutes, depending on the sample, achieving an ultimate fineness of 4 to 5µm, based on the required initial particle size of 0.5mm. There is minimal damage to surfaces and internal structure of the grinding chamber. An accessory sample preparation kit reduces sample material to the required 0.5mm size.

McCrone Mill

As described. Overall 480 x 175 x 160mm L x W x H. Weight 9kg. For 220-240V 50Hz single phase supplies. Supplied as indicated.

MR075-05 Mill only (requires grinding set for operation)

MR075-30 Mill with 2 x sets agate elements, 2 x grinding jars, loading device and pouring cap

Accessories and spares

Sample preparation kit

For preparation of samples to the required 0.5mm particle size. With stainless steel percussion mortar, ten corundum cylinders, 0.5mm mesh sieve and sieve brush.

MR077-05 Sample preparation kit

Agate grinding set

With 50 x agate grinding elements, grinding jar and lid.

MR077-25 Agate grinding set

Corundum grinding set

With 48 x corundum grinding elements, grinding jar and lid.

MR077-35 Corundum grinding set

MR077-60 Spare grinding jar and lid



MR075

Ball Mill



For dry or wet grinding of a wide range of material including: ceramics, chemicals, cosmetics, powders, minerals, paints, printing inks, pharmaceuticals, plastics, etc.

Model No. 9

For grinding small quantities of material. Variable speed 0 to 350rpm. Accepts either 1 x 0.5 litre or 1 x 1 litre pots. The rubber covered rollers are 48mm diameter and have a usable length of 190mm. The rolling mechanism and ball pots are totally enclosed behind a transparent safety shield. Overall 210 x 250 x 400mm H x W x D. Weight 14kg. For 230V 50Hz single phase supplies. Without pot or ball charge.

MR102-10 No. 9 variable speed

Ball Pots

Acid resistant porcelain with flat covers and sealing gaskets. Capacity given is nominal. Without ball charge.

MR150-10 0.5 litre

MR150-15 1 litre

Ball Charges

Manufactured in acid resistant porcelain. Selection of different diameters most appropriate for efficient grinding.

MR153-12 For 0.5 litre pot

MR153-17 For 1 litre pot



MR102-10

Culture Media

Dehydrated Culture Media



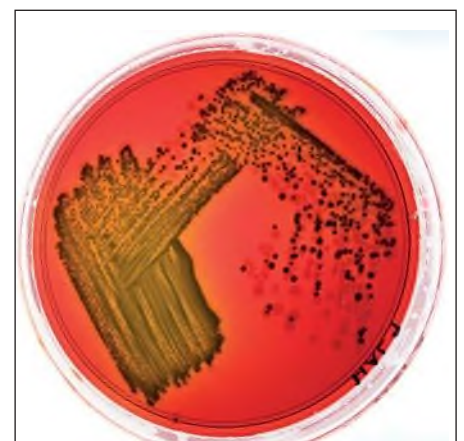
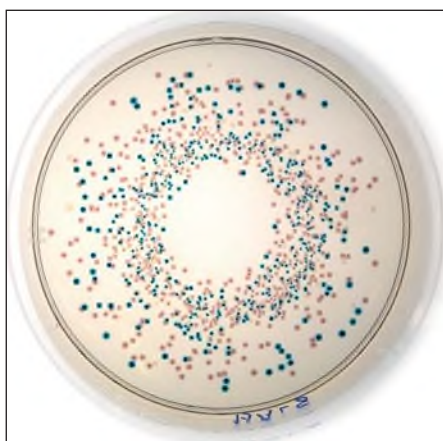
A comprehensive range of culture media for use in applications as indicated. Supplied in packs of 500g.

Type	Application(s)	Volume produced, litres
CX900-02 Agar Bacteriological No. 1	High clarity agar suitable for all bacteriological purposes	—*
CX900-06 Baird-Parker Agar Base	Isolation and enumeration of coagulase-positive <i>Staphylococci</i>	7.6
CX900-10 Blood Agar Base No. 2	Rich agar base, which when supplemented with blood will isolate delicate clinical pathogens	12.7
CX900-14 Brain Heart Infusion Agar	General purpose, nutritious agar base	10.2
CX900-18 Brain Heart Infusion Broth	A rich isotonic infusion providing a wide range of substrates	13.5
CX900-22 Brilliant Green Agar, Kauffmann	Selective medium for the isolation of <i>Salmonellae</i> (except <i>S. typhi</i>)	9.6
CX900-30 Buffered Listeria Broth	Selective enrichment of food and environmental samples for <i>Listeria</i> spp.	10.6
CX900-34 Buffered Peptone Water	Pre-enrichment broth for the recovery of <i>Salmonellae</i> in foods to BS EN ISO 6579:2002	25.0
CX900-38 Campylobacter Blood-Free Sel. Agar Base	Blood-free medium that will support the growth of most enteric <i>Campylobacter</i> spp.	11.1
CX900-42 Columbia Agar Base	General purpose nutritious agar base that can be enriched with blood	12.2
CX900-44 Columbia Blood Agar base	Modified Columbia agar base for use with defibrinated horse or sheep blood.	11.6
CX900-50 Dextrose Tryptone Agar	Enumeration of thermophilic spore bearers in foods	18.5
CX900-58 Endo Agar	Enumeration of coliforms in water and dairy products - APHA recommended	12.2
CX900-62 Eosin Methylene Blue Agar (Levine)	Differentiation of enteric organisms	14.5
CX900-64 Fluid Thioglycollate Medium	For cultivation of aerobic microaerophilic and anaerobic organisms.	16.8
CX900-66 Fraser Broth	Enrichment broth for the isolation of <i>Listeria</i> spp.	9.0
CX900-70 Hektoen Enteric Agar	Recovery of <i>Shigella</i> spp. from clinical specimens	6.6
CX900-78 Kliglers Iron Agar	Differential medium for enteric pathogens	10.2
CX900-82 Lactose Broth	For presumptive identification of coliforms in water and dairy products	38.5
CX900-86 Listeria Broth	For selective enrichment of food and environmental samples for <i>Listeria</i> spp.	13.9
CX902-03 M.R.S Agar	Cultivation and enumeration of <i>Lactobacillus</i> spp.	7.1
CX902-07 MacConkey Agar (Sorbitol)	Selective differential medium for the isolation of <i>Escherichia Coli</i> O157	10.3
CX902-11 MacConkey Agar (with salt)	Selective medium for the isolation of bile tolerant organisms	9.6
CX902-15 MacConkey Agar (without salt)	Differential medium for enteric bacteria	10.3
CX902-19 MacConkey Agar No. 3	For isolation of <i>Enterobacteriaceae</i> from water and sewage	9.7
CX902-23 MacConkey Broth Purple	For detection and enumeration of faecal coliforms	14.3
CX902-27 Malt Extract Agar	An acidic medium for the isolation of moulds and yeasts	10.0
CX902-35 Mannitol Salt Agar	Isolation of salt tolerant <i>Staphylococci</i>	4.6
CX902-39 Membrane Lauryl Sulphate Broth	Enumeration of coliform organisms in water	6.6
CX902-47 Modified T.S.B.. (for <i>E. coli</i> O157)	Selective enrichment medium for VTEC <i>Escherichia coli</i>	15.1
CX902-51 Mueller Hinton Agar II	Adopted by the NCCLS as the definitive method for susceptibility testing	13.2

*Depends on formulation required.

Additional media formulations are available - details on request.

continued on next page



Culture Media

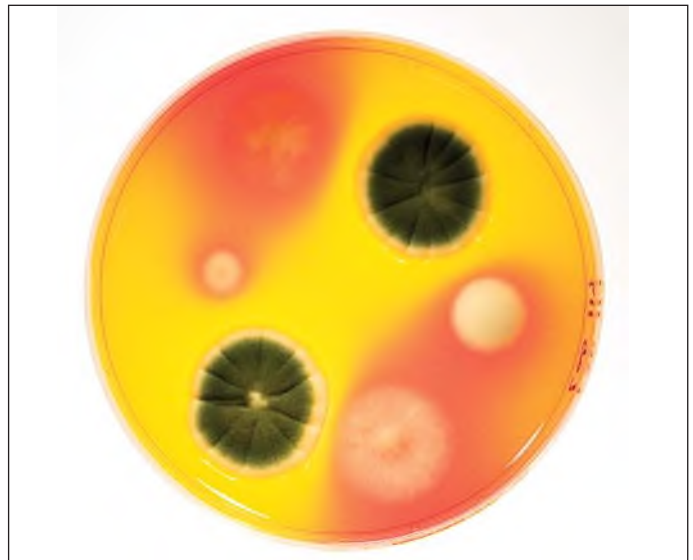
Dehydrated Culture Media continued



Supplied in packs of 500g.

Type	Application(s)	Volume produced, litres
CX902-59 Nutrient Agar	General purpose agar for the cultivation of micro-organisms	17.9
CX902-63 Nutrient Agar No. 2 BP	General purpose broth for the cultivation of micro-organisms	20.0
CX902-65 Peptone water	For cultivation of non-fastidious micro-organisms and base medium for carbohydrate fermentation studies	33.3
CX902-67 Peptone water, buffered	Pre-enrichment broth for the recovery of <i>Salmonellae</i> in foods	25.0
CX902-71 Plate Count Agar	For use with pour plate and surface inoculation techniques	24.4
CX902-75 Potato Dextrose Agar	Recommended by APHA for the enumeration of yeasts and moulds in foodstuffs	12.8
CX902-83 Pseudomonas CFC Agar	<i>Burkholderia cepacia</i> isolation medium	10.3
CX902-87 R2A Agar	Enumeration of heterotrophic bacteria in water	27.7
CX902-95 Reinforced Clostridial Agar	Enumeration of <i>Clostridium</i> spp. by the pour plate method	10.2
CX904-09 Rose Bengal Chloramphenicol Selective Media	Selective media for the enumeration of yeasts and moulds	17.5
CX904-13 Sabouraud Dextrose Agar	Selective medium for fungi and yeasts	8.1
CX904-23 Salmonella Shigella (SS) Agar	Modification of the Leifson Desoxycholate Citrate formula for isolation of <i>Salmonella</i> spp. and <i>Shigella</i> spp.	8.3
CX904-29 Simmons Citrate Agar	Differentiation of enteric bacteria	20.7
CX904-41 Standard Plate Count Agar APHA	For use with both pour plate and surface inoculation techniques - formulated to APHA specifications	21.2
CX904-45 TCBS Cholera Medium	Selective isolation of <i>Vibrio</i> spp.	5.7
CX904-49 Tetrathionate Broth Base	Selective enrichment broth for the growth of <i>Salmonellae</i>	10.9
CX904-57 Triple Sugar Iron Agar	Differentiation of <i>Enterobacteriaceae</i>	7.7
CX904-61 Tryptone Soy Agar EP/USP/JP/BP	General purpose media that will support the growth of a wide range of organisms	13.5
CX904-65 Tryptone Soy Broth EP/USP/JP/BP	General purpose media that will support the growth of a wide range of organisms	18.2
CX904-73 Urea Agar Base	Detection of urease-producing micro-organisms (Christensen's Urea Base)	23.8
CX904-77 Violet Red Bile (Glucose) Agar	Enumeration of <i>Enterobacteriaceae</i> in food and dairy products	13.0
CX904-81 Violet Red Bile (Lactose) Agar	Enumeration of <i>coliforms</i> in food and dairy products	13.0
CX904-85 W.L. Nutrient Agar	Enumeration of micro-organisms in the brewing process	6.7
CX904-89 Wort Agar	Enumeration of yeasts and moulds - can be modified for osmophilic conditions	10.0
CX904-93 XLD Agar	Selective isolation of <i>Shigella</i> spp. and <i>Salmonella</i> spp.	9.3
CX904-95 Yeast and Mould Agar	For the isolation and maintenance of yeasts and moulds, also the detection of wild yeasts in beer	12.2
CX904-97 Yeast Extract Agar	Enumeration of micro-organisms in water and dairy products	21.7
CX904-99 Yersinia Selective Agar	Isolation and enumeration of <i>Yersinia</i> spp.	8.6

Additional media formulations are available - *details on request.*



Culture Media

Microorganism Preservation System, Protect

Bead storage system for long-term maintenance of stock and quality control of microorganisms during cryopreservation.

- ◆ Frozen storage of fastidious and non-fastidious organisms
- ◆ Enables frequent uses to guarantee consistent and reliable performance control
- ◆ Each vial provides 20 subcultures, dramatically reducing cost per test against traditional methods
- ◆ CE marked and FDA approved for assured quality and traceability
- ◆ Gamma irradiated sterile to SAL10⁻⁶ for total product confidence

In use, a suspension of the organism is created using liquid included in the vial, which is then reintroduced into the vial and shaken with the beads to coat them. The liquid is then withdrawn with an accessory fine tip pasteur pipette and discarded. The coated beads can then be cryopreserved. Recovery is undertaken by aseptically removing a bead and rolling onto plated medium using an inoculating needle or placing in broth and incubating.

Microorganism Preservation System, Protect

As described, in packs of vials as indicated with mixed, matching, colour-coded beads and caps in blue, green, red, white and yellow.

CX925-10 Freezer box of 80 vials

CX925-15 Polypropylene box of 100 vials

Culture Media Sundries

Culture Media Inoculators

Disposable, single-ended, sterile polystyrene loops, needles and L-shaped spreaders for culture media inoculation. Gamma irradiated for sterility. Choice of inner sleeve quantity and supplied in outer packs as indicated.

	Description	Inner sleeve qty.	Outer pack qty.
CM676-10	10µl loop	20	1000
CM676-20	5µl loop	20	1000
CM676-30	1µl loop	20	1000
CM676-43	needle	20	1000
CM676-45	spreader	20	500
CM676-49	spreader	5	500

Polystyrene Disposable, Circular, Sterilin

Produced under sterile aseptic conditions. The 90mm dishes comply with BS611 Part 2 and are CE-marked in compliance with the In-vitro Directive 97/79/EC. Supplied in sleeves within partitioned cases as indicated for added protection during transit.

	Ref.	Dia. x depth mm		Pack qty.
PD100-10	121V	30 x 10	Triple vent	800
PD100-15	122	50 x 10	Single vent	700
PD100-20	124	50 x 18	Single vent	500
PD100-23	PF55	55 x 14	No vent	1620
PD100-27	PF55V	55 x 14	Four vents	1620
PD100-30	123	60 x 13	Single vent	540
PD100-40	101 R20	90 x 12	Single vent	500

Pasteur Pipettes, Sterile

PP474-41 Fine tip, 20 l drop size, 3ml capacity, pack of 1000

Bottles, Glass, Culture - see *BS150-BS152-series*

Culture swabs - see *CM610-ICM615-ICM620-series*.

Culture tubes - see *TP250-series*.

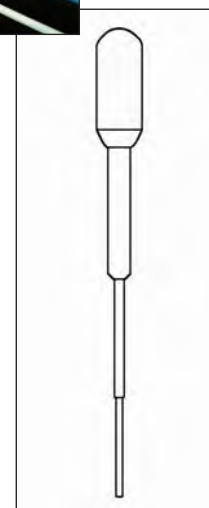


CX925-10, CX925-15 is similar

CM676



PD100



PP474

Desiccators

Duran® Glass

Borosilicate glass to DIN12491.

Knob lid

Ground flange. Without disc. Dimensions as indicated.

	Flange i.d. mm	Approx. volume litres
DE200-12	119	0.7
DE200-17	172	2.4
DE200-22	224	5.8
DE200-27	274	10.5

Vacuum

With 24/29 stopcock and ground flange. Without disc.

	Flange i.d. mm	Approx. volume litres
DE202-12	119	0.7
DE202-17	172	2.4
DE202-22	224	5.8
DE202-27	274	10.5

DE202-38 Spare stopcock 24/29

Desiccator Discs

	Diameter, mm	To fit desiccator flange i.d. mm
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Perforated metal.

DE220-10	90	119
DE220-15	140	172
DE220-20	190	224
DE220-24	235	274

Perforated porcelain

DE225-10	90	119
DE225-15	140	172
DE225-20	190	224
DE225-24	235	274

Silicone free lubricant, Glisseal

For desiccator flanges. In 60g tube.

LT160-12 Glisseal

Plastic

Desiccators, Bel-Art, Vacuum

Tough transparent polycarbonate top with O-ring seal, polypropylene base desiccant tray and perforated plate. With stopcock which accepts 6mm bore flexible vacuum tubing and PTFE plug in the top which turns to allow controlled admission of air. Dimension given is the top internal diameter.

DE400-15	149mm
DE400-20	197mm
DE400-25	240mm

Desiccant

Colour change silica gel beads in a cartridge designed to fit DE400 series desiccators but can be used also in other desiccators of suitable diameter. The silica gel can be regenerated repeatedly without degradation at 150°C. Supplied in moisture proof pouch.

DE404-10	114mm diameter
DE404-13	197mm diameter
DE404-16	238mm diameter

Desiccators, Kartell, Vacuum

Tough transparent polycarbonate top with O-ring seal, polycarbonate vacuum connection valve and polyethylene plug which allows controlled admission of air. The base is polypropylene and has a removable pan to hold desiccant. Dimension given is the top internal diameter.

DE408-15	150mm
DE408-20	200mm
DE408-25	250mm

Silica Gel

Self indicating. Supplied in packs as indicated.

GG150-95	Silica gel, 500g
GG150-97	Silica gel, 25kg



DE200



DE202



DE400 with DE404



DE408

Desiccators

Desiccator Cabinets

Desiccator Cabinet

Transparent polycarbonate construction with wide-angled, hinged door and stacking flanges. Supplied with a sachet of desiccant silica gel and convenient jar with perforated lid to hold desiccant in use. Internal dimensions 212 x 180 x 162mm W x D x H. Overall 221 x 214 x 183mm W x D x H.

DE425-12 Desiccator cabinet

Desiccator Cabinet

Rigid aluminium frame with acrylic panels, hinged door with magnetic latches and mounted hygrometer, desiccant and tray, with four removable shelves which are adjustable for height. Up to 22 additional accessory shelves can be added if required. Internal dimensions (useable) 260 x 320 x 480mm W x D x H. Overall 304 x 375 x 520mm W x D x H.

DE425-20 Desiccator cabinet

DE425-22 Spare/accessory shelf

GG150-95 Silica gel, self-indicating, pack of 500g

Desiccator Cabinets

- ◆ Rigid aluminium frame with non-slip rubber feet (DE425-30) or castors (DE425-35) and borosilicate glass panels offering chemical resistance to most acids and organic substances
- ◆ Stainless steel shelves allow storage of hot products up to +300°C (if placed at the centre of the shelf)
- ◆ Built-in thermohygrometer
- ◆ Rounded edges and gasket-lined door(s) with magnetic strip closure

Model	DE425-30	DE425-35
Capacity litres	42	140
No. of compartments (doors)	1	2
Number of shelves per compartment	4	2
Internal dimensions		
W mm	260	495
D mm	330	540
H mm	480	500
External dimensions		
W mm	310	560
D mm	375	580
H mm	525	1150
Weight, kg	14	42

As described. Rigid aluminium frame with rounded edges, borosilicate glass panels, gasket-lined door(s) with magnetic strip closure and mounted thermohygrometer, desiccant tray, and four removable stainless steel shelves which are adjustable for height.

DE425-30 Desiccator cabinet, 42 litre

DE425-35 Desiccator cabinet, 140 litre

Transport Boxes, DuraPorter™

Transparent, fully autoclavable, polycarbonate carrying boxes in a choice of colours with silicone lid gasket and clamps to provide a water-tight secure closure. Applications include moving biological and clinical samples, protection of instruments and tools in the field or within challenging environmental conditions and as portable desiccator cabinets.

- ◆ Choice of three colours allows coding or individual identification
- ◆ Contents readily visible without opening box
- ◆ Carry handle folds neatly into the body to enable boxes to be stacked
- ◆ lid opens fully, allowing easy access and cleaning

As described. Overall 380 x 196 x 160mm W x D x H.

SX235-20 DuraPorter™, clear with blue handles

SX235-40 DuraPorter™, red with red handles

SX235-60 DuraPorter™, yellow with yellow handles



DE425-12



DE425-20



DE425-30



DE425-35



SX235

Dispensers

Bottle Top Dispensers, Dispensette® S



Conformity certified to DE-M, with performance certificate

- ◆ Choice of
 - Fixed volume: 2 sizes* 5ml or 10ml
 - Variable volume: 7 sizes from 0.05ml to 100ml. Continuous volume adjustment by pointer which moves along a ridged track
 - Variable digital: 4 sizes* from 0.5 to 50ml. Easy to read digital volume display and calibration adjustment
 - Organic: 4 sizes of adjustable volume from 0.5 to 50ml. Ideal for organic solvents including chlorinated and fluorinated hydrocarbons, concentrated acids, TFA (trifluoroacetic acid), THF (tetrahydrofuran) and peroxides
 - TA (Trace Analysis): Adjustable volume 1ml to 10ml, for the dispensing of high-purity media for trace analysis. With sapphire ball valves and platinum-iridium** valve springs suitable for use with acids, including hydrofluoric acid (HF), bases and hydrogen peroxide. The dispensed liquid will have a trace metal content generally in the low ppb or ppt range

* Other sizes are available - details on request

** Versions with Tantalum valve spring also available - details on request

Built-in features

- ◆ Calibration adjustment on all models to comply with ISO9001 and GLP requirements
- ◆ DE-M marked (German Measurement and Calibration Regulation, replacing former H mark)
- ◆ Reagents in contact with chemically inert materials only
- ◆ TPX® protective sleeve around the glass cylinder (except model TA) to reduce breakage hazards
- ◆ Safety discharge valve restricts reagent flow when the discharge tube is not secured properly
- ◆ Optional recirculation valve on the discharge tube allows reagent to be channelled back into the reservoir during priming to avoid 'spitting'
- ◆ Multi-layered PFA plunger coating for smoother operation and better chemical resistance
- ◆ Locking sleeve supports full length of discharge tube for stability during dispensing and screwthread safety cap reduces risk of reagent splashing
- ◆ Telescopic, FEP filling tube self-adjusts to the depth of the reservoir bottle
- ◆ Valve block rotatable 360° to allow the reservoir label to be viewed comfortably by facing the user and dispenser fascia and discharge tube can be independently rotated on the reservoir neck for maximum convenience in use
- ◆ All models (except model TA) can be steam sterilised at 121°C (2 bar for 20 minutes)
- ◆ Maximum operating limits: 600mbar pressure, 500mm²/sec. viscosity, 40°C temperature and 2.2g/cm³ dispensed media density



DK101 on a bottle



DK104 on a bottle, DK103 and DK107 are similar



DK106 on a bottle



DK109 on a bottle

Dispensers



Bottle Top Dispensers Dispensette® S continued

The figures given for accuracy and reproducibility are final test values referred to maximum volume and distilled water at 20°C.

Dispensette S, Fixed Volume

Accuracy (A) < ±0.5%, reproducibility (V) < 0.1%. Adjustable calibration. A45 standard neck thread. Supplied with FEP discharge tube and valve as indicated, performance certificate, operating manual, mounting tool, FEP telescopic filling tube and PP bottle adapters as specified in the separate table. Without reservoir bottle.

Volume ml	With standard valve	With recirculation valve
5	DK101-30	DK101-60
10	DK101-40	DK101-65

Dispensette S, Variable Volume

Accuracy (A) < ±0.5% (for 0.1 to 1ml < 0.6%) reproducibility (V) < 0.1% (for 0.1 to 1ml < 0.2%). Continuous pointer adjustment of volume along a ridged track. Adjustable calibration. A45 standard neck thread. Supplied with FEP discharge tube and valve as indicated, performance certificate, operating manual, mounting tool, FEP telescopic filling tube and PP bottle adapters as specified in the separate table. Without reservoir bottle.

Volume ml	Subdiv. ml	With standard valve	With recirculation valve
0.1 to 1	0.02	DK103-10	DK104-10
0.2 to 2	0.05	DK103-15	DK104-15
0.5 to 5	0.1	DK103-20	DK104-20
1 to 10	0.2	DK103-25	DK104-25
2.5 to 25	0.5	DK103-30	DK104-30
5 to 50	1.0	DK103-35	DK104-35
10 to 100	1.0	DK103-40	DK104-40

Dispensette S, Digital Variable Volume, Easy Calibration

Accuracy (A) < ±0.5% reproducibility (V) < 0.1%. Digital display of volume setting. Easily adjustable calibration with display flag indicating user re-calibration from factory setting. A45 standard neck thread. Supplied with FEP discharge tube and valve as indicated, performance certificate, operating manual, mounting tool, FEP telescopic filling tube and PP bottle adapters as specified in the separate table. Without reservoir bottle.

Volume ml	Subdiv. ml	With standard valve	With recirculation valve
0.5 to 5	0.02	DK106-20	DK106-50
1 to 10	0.05	DK106-25	DK106-55
2.5 to 25	0.1	DK106-30	DK106-60
5 to 50	0.2	DK106-35	DK106-65

Dispensette S, Organic Dispenser, Variable Volume

Accuracy (A) < ±0.5% reproducibility (V) < 0.1%. Continuous pointer adjustment of volume. Adjustable calibration. A45 standard neck thread. Supplied with FEP discharge tube and valve as indicated, performance certificate, operating manual, mounting tool, FEP telescopic filling tube and PP bottle adapters as specified in the separate table. Without reservoir bottle.

Volume ml	Subdiv. ml	With standard valve	With recirculation valve
0.5 to 5	0.1	DK107-41	DK107-70
1 to 10	0.2	DK107-45	DK107-75
2.5 to 25	0.5	DK107-50	DK107-80
5 to 50	1.0	DK107-55	DK107-85

Dispensette S, TA Dispenser, Variable Volume

Accuracy (A) < ±0.5% reproducibility (V) < 0.1%. Continuous pointer adjustment of volume. Adjustable calibration. A45 standard neck thread. Supplied with FEP discharge tube and valve as indicated, performance certificate, operating manual, mounting tool, FEP telescopic filling tube and PP bottle adapters as specified in the separate table. Without reservoir bottle.

Volume ml	Subdiv. ml	With standard valve	With recirculation valve
1 to 10	0.2	DK109-25	DK109-55

Dispensette max. volume, ml	Bottle adapters supplied	Telescopic filling tube supplied, mm
1, 2, 5, 10	GL24-25, GL28/S28 GL32-33, GL38, S40	125 to 240
10 (TA only)	GL28/S28, GL32 (in ETFE), S40 (in PTFE)	67 to 140
25, 50, 100	GL32-33, GL38, S40	170 to 330

Accessory Reservoir Bottles

Amber, soda-lime glass, square pattern (except DK114-32 which is cylindrical) with plastic coating to reduce breakage hazards, PP screw cap and pouring ring. Maximum operating temperature +80°C. Not suitable for TA dispenser.

	Capacity ml	Screw neck mm	Bottle width x height, mm
DK114-17	250	GL32	65 x 160
DK114-22	500	GL32	80 x 195
DK114-27	1000	GL45	95 x 230
DK114-32	2500	GL45	140 x 300

Accessory reservoir bottle for TA dispenser – see BR770-52.

Note: Dispensette S spares and accessories are not compatible with previous models and vice versa, except reservoir bottles.



DK103-10 to -40 on bottle

Dispensers

Bottle Top Dispensers, Pressmatic PD series

Bibby Scientific

- ◆ Ceramic piston ensures
 - no surface abrasion
 - no thermal expansion
 - no sticking with alkalis
- ◆ Recirculation valve allows safe priming without wasting reagent

- ◆ Self-locking volume selection
- ◆ Accuracy within 0.7%
- ◆ Can be autoclaved at 121°C
- ◆ Works calibrated volume certificate
- ◆ Valves easily removed for cleaning

Variable setting with precision borosilicate glass cylinder and tough ceramic piston. The outer sleeve is a tough, chemically resistant plastic. The liquid pathway is PTFE, glass and ceramic. The unit can be rotated 360° on the bottle for easy positioning. Inlet and outlet valves are both easily removed for cleaning or replacement using the spanner provided. A fully supported delivery jet prevents 'side fling' of reagent and ensures accurate dispensing into small vials. Suitable for mounting on a bottle with a 45mm screw neck and supplied with one each A32, A38 and S40 adapters to fit most types of reagent bottle. Without reservoir bottle.

Pressmatic Dispensers

As described. With valve spanner and adapters but without reservoir bottle.

	Ref.	Range ml
DK152-10	PD1R	0.2 to 1
DK152-15	PD2R	0.4 to 2
DK152-20	PD5R	1 to 5
DK152-25	PD10R	2 to 10
DK152-45	PD30R	5 to 30
DK152-55	PD60R	10 to 60

Accessory Bottles

- DK154-10** Amber 500ml, A32
- DK154-15** Amber 1000ml, GL45
- DK154-20** Clear 500ml, A32
- DK154-25** Clear 1000ml, GL45



DK152

Bottle Top Dispensers, Pressmatic PP series

Bibby Scientific

Low cost dispensers for operation in less demanding applications.

- ◆ Borosilicate glass piston
- ◆ Polypropylene valve block
- ◆ Accuracy within 0.7%
- ◆ Can be autoclaved at 121°C
- ◆ Valves easily removed for cleaning
- ◆ Works calibrated volume certificate

Suitable for use with most aqueous solutions, dilute acids, alkalis and polar solvents. Not suitable for Halogenated solvents, oxidising or concentrated acids.

Pressmatic PP Dispensers

As described. Suitable for mounting directly on a bottle with a 32mm screw neck and supplied with one each A28, A45 and S40 adapters to fit most types of reagent bottle. Without reservoir bottle.

	Ref.	Range ml
DK157-25	PP10P	2 to 10
DK157-55	PP60P	10 to 60

Accessory Bottles

- DK154-10** Amber 500ml, A32
- DK154-15** Amber 1000ml, GL45
- DK154-20** Clear 500ml, A32
- DK154-25** Clear 1000ml, GL45



DK157

Dispensers

Bottle Top Dispensers, Calibrex 520 series



- ◆ Rapid, precise volume setting by twist-setting collar with large display window and easy-to-read scale
- ◆ Autoclavable at 121°C maximum, fully assembled
- ◆ Solid cam provides factory calibrated step for each volume increment
- ◆ Dispensing tube rotates 360° giving a comfortable working position
- ◆ Borosilicate plunger with PFA coating
- ◆ Accuracy $<\pm 0.7\%$.
- ◆ Precision $<0.1\%$ CV

Dispensers, Socorex Calibrex 520 series

With calibrated stop volume selector. Suitable for mounting on bottles with 32/33mm screw necks and supplied with one each polypropylene adapters for screw neck diameters as indicated. Without reservoir bottle.

	Range ml	Adapters supplied mm diameter
DK282-11	0.25 to 2.00	28, 40, 45
DK282-14	1.00 to 5.00	28, 40, 45
DK282-17	1.00 to 10.00	28, 40, 45

Reservoirs

	Capacity ml	Screw thread mm
Glass, amber		
DK154-10	500	32
DK154-15	1000	45
Glass, clear		
DK154-20	500	45
DK154-25	1000	45

Bottle Top Dispensers, Solutae 530 series



- ◆ Volume adjustment by smooth, sliding pointer with alternative screw clamp button supplied
- ◆ Autoclavable at 121°C maximum, fully assembled
- ◆ Choice of models with, or without, Flow Control which allows priming without loss, or contamination, of reagent dispensed
- ◆ Dispensing tube rotates 360°
- ◆ Borosilicate plunger with PFA coating
- ◆ Accuracy: $<\pm 1.5\%$ (minimum volume), $<\pm 0.6\%$ (maximum volume)
- ◆ Precision: $<\pm 0.5\%$ CV (minimum volume), $<\pm 0.1\%$ CV (maximum volume)

Dispensers, Socorex Solutae 530 series

Suitable for mounting on bottles with 45mm screw necks and supplied with one each polypropylene adapters for screw neck diameters of 32, 38 and 40mm. Without reservoir bottle.

	Range, ml	With Flow Control stopcock?
DK282-19	2.5 to 25	No
DK282-23	5 to 50	No
DK282-27	10 to 100	No
DK282-49	2.5 to 25	Yes
DK282-53	5 to 50	Yes
DK282-57	10 to 100	Yes

Reservoirs

	Capacity ml	Screw thread mm
Glass, amber		
DK154-10	500	32
DK154-15	1000	45
Glass, clear		
DK154-20	500	45
DK154-25	1000	45



DK282-11 to -17 on reservoirs



DK282-19 to -27 in use, -49 to -57 are similar

Gas Collection/Distribution

Gas Collection

Gas Jars

Heavy glass. Ground flange. Nominal dimensions are height x internal diameter in mm. Without cover.

GE300-10	150 x 50
GE300-20	200 x 50
GE300-40	250 x 50
GE300-50	300 x 60
GE300-60	300 x 80

Gas Jar Covers

GE302-08	for 50mm diameter jars
GE302-12	for 60mm diameter jars
GE302-16	for 80mm diameter jars

Pneumatic Troughs

Cylindrical. Nominal dimensions stated are diameter x height in mm.

Heavy glass

GE310-15	200 x 100
GE310-25	250 x 125

Polyethylene

BT810-25	350 x 120
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Delivery tubes, Azlon

Ideal for "Rate of Reaction" experiments in educational science. Rigid polypropylene tubing 4 x 6mm i.d. x o.d. Choice of shape design to suit a variety of apparatus set-ups. Supplied in packs of 5.

GE320-12	DT001, 90° right-angle bend
GE320-14	DT002, double bend, bung top
GE320-18	DT004, straight, delivery tube

Beehive Shelves

Earthenware. Cylindrical. Nominal diameter stated.

GE335-10	75mm
GE335-20	100mm

Wood Splints

Bundles of approximately 1000.

GE350-10	Splints
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Deflagrating Spoon

Steel with flange cap. Overall length 400mm. Flange diameter 90mm.

GE360-15	Spoon
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Gas Washbottle, Wouff

Glass. With 2 x 19/26 socket necks.

GE515-36	500ml
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Gas Washbottle

Glass. With integral inlet and outlet tubes. Height x diameter. 125 x 25mm.

GE520-20	40ml
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Absorption Tower – see *Absorption section*.

Filter Sticks with sintered glass flat plate – see *Filtration section*.

Gas Lighters, Flint and Piezo models – see *Burners section*.

Whatman In-Line filters for pipelines – see *Filtration section*.



GE300 with GE302



GE350



GE310



BT810-25



GE335



GE515



GE360 in use



from left: **GE320-12, -18, -14**



GE520

Diluters, Discs, Dishes

Compudil 3 Diluter

Easy to use, digitally controlled diluter for routine dilution and dispensing.

- ◆ Ranges 1 l to 5ml sample 50 l to 25ml diluent using accessory syringes and valve blocks
- ◆ Simple keypad programming for all mainstream liquid handling procedures.
Standard protocols include:
 - 4 types of conventional diluting
 - 6 types of conventional dispensing
 - liquid transfer and wash
 - serial dilution mode
- ◆ Precise, C.V. better than $\pm 0.1\%$ of full syringe volume
- ◆ 45 programme memory
- ◆ RS232 interface allows bi-directional programme and procedural information exchange with the users' PC for GLP accreditation requirements and remote programming
- ◆ Inert liquid pathway
- ◆ Easily manipulated handset to minimise fatigue
- ◆ Low dead volume (1ml: 95% recoverable)
- ◆ Operating speeds 2 to 15 seconds for full syringe stroke depending on syringe and tubing size used
- ◆ Optional footswitch allows hands-free operation

Syringes

A total of 10 different sizes of syringe fit the Compudil '3' allowing one diluter to be used for sample volumes between 1 l and 5ml, and diluent volumes up to 25ml (using relevant valve blocks). Threaded connectors allow quick and easy exchange of syringes and once the relevant syringe volumes are keyed in the details are retained on the diluters memory. Digital control allows a full syringe to be dispensed in up to 5000 steps with the volumes dispensed or retained available to be displayed if required.

Valve Blocks

Accessory valve blocks allow the use of alternative tubing bores and sample/diluent syringes as indicated.

Compudil 3 Diluter

As specified. With tubing kit, handset and valve block. The valve block supplied depends on the sample and diluent syringes ordered separately with the instrument. Materials in contact with liquids are glass and PTFE based. Overall 300 x 200 x 215mm. Weight 9.5kg. For 100-120V and 210-240V 50/60Hz single phase supplies. Requires, but is not supplied with, accessory syringes for operation.

DH210-25 Compudil 3

Accessory and spare syringes for DH210-25

Type	Cap.
DH214-24 Sample	50 l
DH214-27 Sample	100 l
DH214-30 Sample	250 l
DH214-32 Sample	500 l
DH214-33 Sample	1000 l
DH214-34 Sample/Diluent	1ml
DH214-37 Sample/Diluent	2.5ml
DH214-40 Sample/Diluent	5ml
DH214-43 Diluent	10ml
DH214-46 Diluent	25ml
DH214-55 Footswitch	
DH215-60 Handset for 2.5ml and 5ml sample syringes	

Accessory Valve Blocks

	For syringes sample	diluent
DH215-70	1ml	5ml
DH215-72	1ml	10 to 25ml
DH215-75	1ml	all



DH210-25

Discs, Dishes

Discs, aluminium foil

Disposable, interleaved with tissue paper. Thickness 0.03mm. Diameters as indicated. Supplied in packs of 1000.

	Diameter, mm
DH640-10	80
DH640-20	100
DH640-30	120
DH640-40	130
DH640-50	150

Dishes, aluminium foil

Disposable, circular and slightly tapered, with smooth, 0.2mm thick walls and flanged rims for easy handling. Supplied in packs as indicated.

	Top dia. x depth mm	Pack qty.
DH798-40	42 x 5	500
DH798-50	57 x 10	250

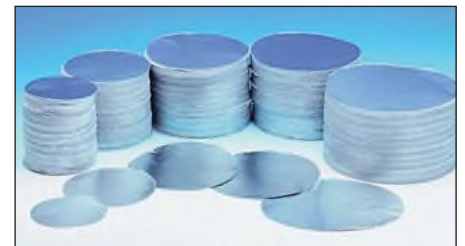
Dishes, white PVC, Azlon

For general purpose and photographic use. With pouring lip. Dimensions as indicated.

	L x W x D, mm
DH800-10	185 x 127 x 50
DH800-20	260 x 200 x 65

Trays, multipurpose

White polypropylene, deep, tough trays which resist flexing – see *TT210 series*.



DH640



DH798



DH800

Dissecting

Dissecting Boards

Dissecting Boards

Dimensions are length x width.

	<i>Dimensions, mm</i>
Wood	
DS100-15	560 x 380
Polypropylene	
DS110-10	300 x 210

Dissecting Dishes

Stainless steel, shallow and deep form, sizes up to 650 x 275mm – see *Instrument Trays in the Medical section*.

Awl

Stainless steel spike in aluminium handle. Spike length 28mm.

DS115-10 Awl

Scalpels and Razors

Post-Mortem Blade, Swann-Morton

Heavy duty carbon steel. Fixes to accessory handle with screw fitting. Individually wrapped in pack of 10.

DS250-15 PM Blade

Handle, metal with screw fixing

DS252-08 PM Handle

Scalpel/Tool Set, Swann-Morton

Comprising slotted plastic handle with clamping screw and one each No. 1 straight edge and No. 2 convex curved edge blades.

DS260-10 Tool Set

Blades. Supplied in packs of 50.

DS262-12 No. 1 straight

DS262-14 No. 2 convex curved

DS262-16 No. 3 concave curved

Scalpels

Solid forged, stainless steel with handle and polished blade as indicated. Dimension given is the blade length.

	<i>Blade, mm</i>
DS330-30	30
DS330-35	35
DS330-45	45
DS330-50	50

Section Razor

Stainless steel blade housed in a black handle.

DS350-10 Razor

Razor Blades, single edge

Light duty. Single edge carbon steel, aluminium backed with no notches. For industrial and laboratory use only. Overall dimensions 39 x 19mm. Supplied in pack of 100.

DS360-10 Single edge

Razor Blades, double edge

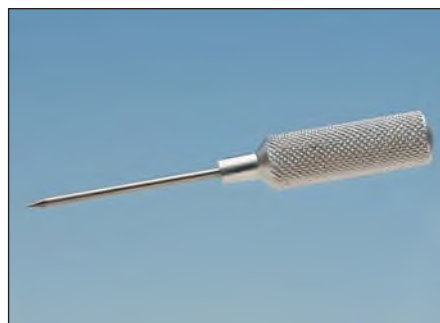
Light duty. Double edge stainless steel. For industrial and laboratory use only. Overall dimensions 39 x 19mm. Supplied in pack of 100.

DS360-20 Double edge

Swann-Morton scalpel blades and handles – see *following page*.



DS100



DS115



DS350

**DS360-10
DS360-20**






















DS110



Dissecting

Swann Morton Scalpels, Blades and Handles

Sterile and non-sterile carbon steel and stainless steel disposable blades with permanently fitted plastic handle or for use with a choice of reusable metal handles. Sterilisation is by gamma irradiation (except DS165-series which are ethylene oxide sterilised).

Blade illustration (not to scale)	Blade No.	Disposable Scalpels				Disposable Blades (Without handle)	
		Stainless steel blade, with plastic handle.		Retractable blade.		Carbon steel. To BS2982, EN27740.	
		Non-sterile		Sterile		Non-sterile	Sterile
		Fixed blade. Length 80mm. Supplied singly.	Retractable blade. Length 135mm. Packs of 500.	Fixed blade. Length 135mm. Individually wrapped. Packs of 10.	Retractable blade. Length 135mm. Individually wrapped. Packs of 25.	5 blades in a foil wrap. Packs of 100.	Individually foil wrapped. Packs of 100.
	6	—	—	—	—	DS180-06	DS185-06
	9	—	—	—	—	DS180-08	DS185-08
	10	DS150-10	DS155-10	DS160-10	DS165-10	DS180-10	DS185-10
	10a	—	DS155-15	DS160-15	—	DS180-15	DS185-15
	11	DS150-20	DS155-20	DS160-20	DS165-20	DS180-20	DS185-20
	12	—	—	DS160-25	—	DS180-25	DS185-25
	14	—	—	—	—	DS180-27	DS185-27
	15	DS150-30	DS155-30	DS160-30	DS165-30	DS180-30	DS185-30
	15a	—	—	—	—	DS180-32	DS185-32
	16	—	—	—	—	DS180-34	DS185-34
	20	—	—	DS160-40	—	DS180-40	DS185-40
	21	—	—	DS160-45	—	DS180-45	DS185-45
	22	—	—	DS160-50	—	DS180-50	DS185-50
	22a	—	—	DS160-55	—	DS180-55	DS185-55
	23	—	—	DS160-60	—	DS180-60	DS185-60
	24	—	—	DS160-65	—	DS180-65	DS185-65
	25	—	—	—	—	DS180-70	DS185-70
	26	—	—	—	—	DS180-75	DS185-75
	27	—	—	—	—	DS180-80	DS185-80

Note: Blade Nos 6 to 16 require handle 3, 3L, 7 or 9. Blade Nos 20 to 27 require handle 4 or 4L.



Handles

Stainless steel. For use with DS180 and DS185 blades as specified. Supplied in packs of 10.

Handles

DS197-11	No. 3
DS197-17	No. 3L
DS197-22	No. 4
DS197-27	No. 4L
DS197-32	No. 7
DS197-37	No. 9

Surgical Blade Removers

For the safe removal and disposal of blades from handles. Accommodates all Swann Morton blades and handle fitments. Available in sterile or non-sterile packs as indicated.

DS205-10	Non sterile, pack of 100
DS205-20	Sterile, pack of 50

Swann-Morton Post-Mortem blades and handle – see *previous page*.



DS155/DS165

DS205

Dissecting

Scissors

Scissors, Fine point

Stainless steel. Supplied singly.

Overall length,
mm

Straight open shanks

DS450-15 112

DS450-20 125

DS450-25 150

Straight closed shanks

DS455-10 105

Curved open shanks

DS460-15 112

DS460-20 125

DS460-25 150

Scissors, blunt

Stainless steel. Straight, closed shanks.

DS480-20 125

Scissors, general purpose

Stainless steel. Straight, closed shanks.

DS500-20 125

DS500-25 150

DS500-30 175

Bone Cutter

Carbon steel. Sprung. Blade length 20mm. Overall 120mm.

Description

DS520-10 Bone cutter

Oilstone

Fine grade. For honing scalpels and razors. Approximately 200 x 50 x 25mm thick.

DS525-10 Oilstone

Scissors, heavy duty - see TS285-12.

Chains and Needles

Chains and Hooks

Three on one ring. Nickel plated.

DS580-10 Chains & hooks

Section Lifter

Stainless steel. Blade length 55mm.

DS590-20 Lifter

Seekers

Stainless steel bent, blunt probe in handle. Supplied singly.

Handle type

DS605-15 Plastic

DS605-20 Stainless steel

Needles

Stainless steel, straight in handle. Supplied singly.

Handle type

DS620-10 Wood

DS620-20 Stainless steel

Needle, Borradaile

Stainless steel single edge blade in aluminium handle. Blade length 30mm.

DS625-15 Borradaile



DS450

DS455

DS460

DS480



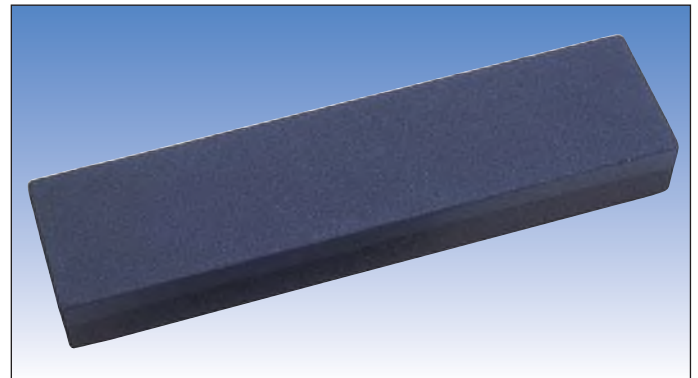
DS500



DS520

DS580

DS590



DS525-10



DS605

DS620-10

DS620-20

DS625

Dissecting

Forceps

Dimension given is overall length.

Forceps, PMP

With fine tooth grips

Sharp ends

DS700-10 115mm

DS700-20 145mm

DS702-25 180mm

Blunt ends

DS702-30 250mm

Forceps, fine point

Stainless steel sprung flutes with guide pin.

Straight

DS710-10 115mm

DS710-15 125mm

DS710-20 150mm

Curved

DS712-10 115mm

DS712-15 125mm

Forceps, blunt

Stainless steel sprung, straight flutes. No guide pin.

DS725-10 115mm

DS725-15 125mm

DS725-20 150mm

Forceps, polypropylene, Nalgene

Autoclavable to 121°C. With double hinge for extra leverage, blunt tips with interlocking teeth and ratchet handles to lock tips shut. Overall 120mm. Supplied in packs of 12.

Ref.
6320-

DS727-15 -0010

Forceps, disposable, sterile

Polypropylene, sterile. With fine tooth, sharp ends and interlocking spines that ensure the tips meet precisely. Overall 130mm. Supplied individually bagged in an outer pack of 400.

DS729-10 Disposable forceps

Forceps, entomological

Stainless steel sprung curved flutes with broad ends and guide pin.

DS730-15 120mm

Forceps, watchmakers

Very fine points. Stainless steel sprung flutes, length approximately 120mm.

DS740-10 No. 3

DS740-15 No. 4

DS740-20 No. 5

DS740-25 No. 7

Forceps with spatulate ends for handling microscope slides – see *Microscopy* section.

Folding Magnifiers for specimen examining – see *Magnifiers* section.

Dissecting Sets

Dissecting Set

Comprising items as below in a canvas roll wallet with tape ties. All instruments stainless steel unless otherwise stated.

2 only solid scalpels

1 only needle (wood handle)

1 only seeker (plastic handle)

1 pair forceps, blunt, 125mm

1 pair forceps, sharp, 115mm

1 pair scissors, fine, 115mm

1 pair scissors, blunt, 125mm

1 only section lifter (stainless steel)

1 only section razor (stainless steel)

1 only fine brush

DS840-15 Set

Dissecting Set

As DS840-15 but with one each scalpel handles Nos. 3 and 4 and 20 blades to fit in place of the solid scalpels.

DS840-30 Set

DS840-75 Spare canvas roll wallet

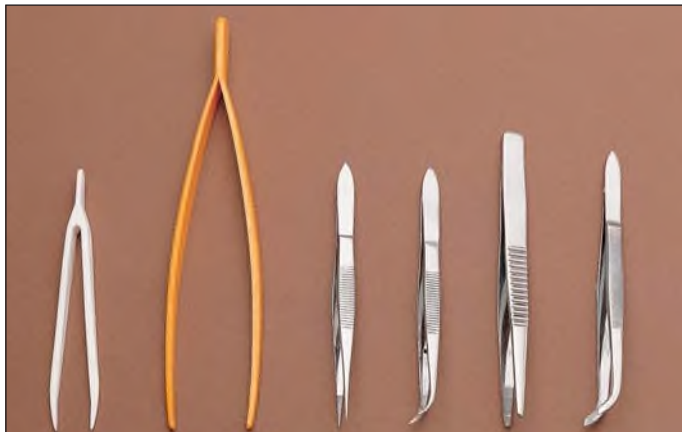
Specimen Examination

Other items of interest can be found in other sections of this catalogue – see:-

Mixers section for *Homogenisers*.

Microscope section for *high magnification examination*.

Histology, Microscopy sections for *staining, section mounting and wax embedding facilities*.



DS700

DS702

DS710

DS712

DS725

DS730

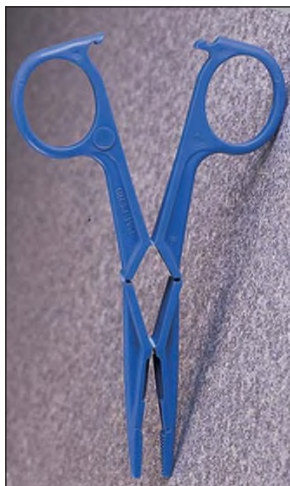


DS740-10

DS740-15

DS740-20

DS740-25



DS727-15



DS729-10



DS840-15, DS840-30 is similar

Draining and Drying

Draining Racks

Draining Rack, Azlon

Wall mounting. Epoxy coated steel with 8 pegs 110mm long and 24 pegs 80mm long for holding flasks, cylinders, etc. Overall 410 x 300mm.

DY110-10 Rack only

DY110-27 Rack with integral free standing support

Draining Racks, Bürkle

Wall mounting. Rigid PVC backboard drilled with holes to take interchangeable clip-in pegs in a variety of lengths as indicated. Available in a choice of sizes with, or without, draining trough with nozzle for attaching 4mm i.d.tubing. Supplied with pegs, screws and dowels for fitting.

	Rack W x H, mm	Pegs supplied		
		60mm	100mm	150mm
With draining trough				
DY116-40	400 x 400	5	26	2
DY116-50	500 x 500	10	39	4
DY116-60	600 x 600	15	56	6
Without draining trough				
DY119-40	400 x 400	5	26	2
DY119-50	500 x 500	10	39	4
DY119-60	600 x 600	15	56	6

Spare pegs are available separately – details on request.

Dryer, Drying Cabinets

Dryer, Nelldorn

Bench, or wall mounting. For drying flasks, cylinders etc. Compact metal frame with base mounted heater and fan which blows hot, filtered air through 60 stepped plastic nozzles of varying length. With heat controls, 120 minute timer and overheat cut-out. Overall including tubes 490 x 190 x 430mm W x D x H. For 220-240V 50Hz single phase supplies; 2.1kW.

DY150-20 Nelldorn Dryer

Drying Cabinets

For general warming and drying purposes, including drying of drained glassware. OV100-11 and OV100-21 are additionally fitted with fibre insulation which reduces energy requirements giving a performance saving of more than 30% against the non insulated models.

◆ Maximum temperature is approximately ambient +50°C

OV100-11 100 litres, sliding door, insulated

OV100-14 125 litres, sliding door

Catalogue No.		OV100-11	OV100-14	OV100-21	OV100-25
Capacity	litres	100	125	200	250
Internal	H, mm	400	430	490	520
	W, mm	670	720	930	980
	D, mm	370	400	450	480
Overall	H, mm	600	600	660	660
	W, mm	750	740	1000	1000
	D, mm	420	420	500	500
Weight		45	40	60	55
Shelves		3	3	3	3
Power rating	W	500	1000	1000	1000
Voltage		For 220-240V 50Hz single phase supplies.			

OV100-21 200 litres, sliding door, insulated

OV100-25 250 litres, sliding door

Glassware Washing

Automatic washers – see *Washing* section.

Detergents etc – see *Cleaning and Brushes* sections.

Ultrasonic baths – see *Ultrasonics* section.



DY110 in use



DY116 in use



DY150 in use



OV100

Electrical

Electrical Sundries

Crocodile Clips

For low voltage use. Spring loaded serrated jaws. With screw lead connection. Length approximately 40mm. Supplied in a pack of 10.

EE100-17 Clips

Wire, bare

For low voltage use. In reels. All data below is nominal.

	s.w.g.	Diameter mm	Reel weight, g
Copper			
EE140-20	20	0.90	250
EE140-22	22	0.71	250
Constantan (Eureka)			
EE147-20	20	0.90	125
EE147-22	22	0.71	125
Nickel Chromium (80%/20%)			
EE151-20	20	0.90	125
EE151-22	22	0.71	125
EE151-24	24	0.56	125
EE151-26	26	0.45	125
EE151-28	28	0.37	125

Plug, UK 13A

Moulded plastic body with 3-pins, cable restrainer and 13A fuse. To BS1363.

EE300-10 Plug

Adapter plugs

Enable instruments with UK 13A 3-pin plugs to be operated from international supply sockets as indicated*. Maximum current 7.5A. Supplied singly.

EE305-06 2 round pin Schuko, for use in most continental European countries

EE305-08 2 flat pin with angle adjustment, for use in USA*, Canada*, Japan*, Australia and New Zealand

* The instrument itself must have built-in voltage adjustment to enable operation on the local supply.

Multiple Socket Outlet

4-position, UK 13A sockets to BS1363. With indicator lamp and 13A fuse.

EE330-10 Multi-socket

Digital Multi Meter 33XR

Pocket sized multi meter with LCD readout including analogue bar graph of reading position within range, rotary click-stop range selection switch, fuse protection, input alarm when test leads are incorrectly fitted and a continuity test buzzer for short circuit testing.

Model	33XR		
Ranges	Voltage	d.c.	400mV, 4V, 40V, 400V, 1000V
	Voltage	a.c.	400mV, 4V, 440V, 400V, 750V
	Current	a.c.	400 A, 4mA, 40mA, 300mA, 10A
	Resistance		400, 40k, 4M
	Capacitance		4 F, 40 F, 400 F, 4000 F
	Temperature		-20 to +1000°C (-40 to +1832°F)
	Frequency		4kHz, 40MHz, 400MHz
Continuity indication		<35	
Overall H x W x D	mm	196 x 92 x 60	
Weight	g	400	

As described. Supplied with test leads, threaded crocodile clips, Type K thermocouple probe and lead for temperature measurement and 9V PP3 battery.

EE390-50 33XR

BL610-25 Spare battery, 9V

Other Electrical Sundries

Batteries – see **BL610**.

Hot air blower – see **HE775**.

Soldering kit – see **TS480**.

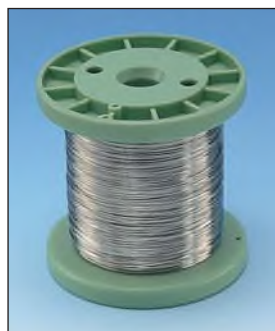
Pliers – see **TS200**.

Screwdrivers – see **TS350**.

Warning labels – see **SC300/SC304**.



EE100



EE140/151

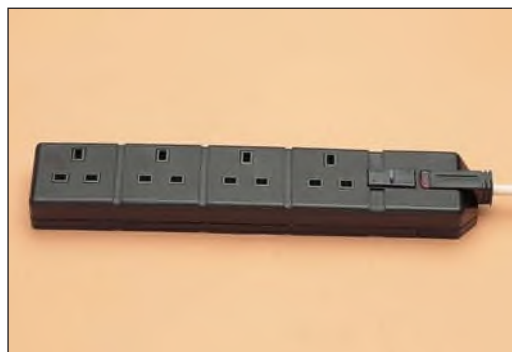


EE300



EE305-06

EE305-08



EE330



EE390

Electrical

Electrothermal Power Controllers

Controller, MC227

Bimetallic, non-linear controller for controlling up to 1200W load, maximum current 5A. With arbitrary scaled controls and an amber neon on the output circuit. Supplied with flying leads for input and output connection. The case has a wing screw fitting for mounting the controller on a 12.7mm diameter retort/scaffolding rod. Overall 240 x 140 x 90mm W x D x H. For 200-250V 50/60Hz a.c. single phase supplies.

EE500-20 MC227

Controller, MC242

A single circuit percentage on/off controller for circuit loads up to 2000W. With arbitrary scaled control, 'power on' and 'power output' indicator lamps. For 230V 50/60Hz a.c. single phase supplies.

EE500-60 MC242

Digital Temperature Controller

For accurate temperature control. Membrane switch setting with 3 digit LED display. Range -10 to $+800^{\circ}\text{C}$ x 1°C resolution. In addition an hysteresis range can be set to govern temperature variation. Memory retains control parameters even if power disconnected. Supplied with PTFE covered platinum resistance thermometer for measurement and control up to $+270^{\circ}\text{C}$. Accessory probes extend range up to $+800^{\circ}\text{C}$. Input connection by IEC socket and 2m cable. Output by fixed IEC socket. Overall dimensions L x W x H 120 x 100 x 80mm. The case has a wing screw fitting for mounting the controller on a 12.7mm diameter retort/scaffolding rod. For 200-240V 50/60 Hz single phase supplies.

EE500-75 MC810

Accessories and spares

EE502-10 270°C probe AZ6705, spare

EE502-15 400°C probe AZ6706

EE502-20 800°C probe AZ6741

Time Switches – see *TM850*



EE500-20



EE500-75



EE500-60

Extraction

Soxhlet Extractors

Compact extraction systems comprising stand, heating module with variable controller and aluminium block, glassware and cooling manifold (multi-operation units only) for use with mains water or open cooling circulator circuit.

- ◆ Convenient stopcock on the soxhlet body allows solvent to be drained into a storage reservoir after the extraction is complete
- ◆ Rigid metal stand holds glassware securely and is powder-coated to resist corrosion
- ◆ Cooling manifold ensures even distribution of cooling liquid to all condensers

Single extractors

Model	MXT30S	MXT100S	MXT250S
Extractors x capacity ml	1 x 30	1 x 100	1 x 250
Overall, W x D x H mm	230 x 330 x 715	230 x 330 x 805	230 x 330 x 805
Weight, net kg	9	10.5	10.5
Supply requirement	230V 50/60Hz a.c., 450W — all models		

4-place extractors

Model	SXT304ECS	SXT104ECS	SX254ECS
Extractors x capacity ml	4 x 30	4 x 100	4 x 250
Overall, W x D x H mm	530 x 320 x 740	530 x 320 x 740	530 x 320 x 740
Weight, net kg	17	18.5	19
Supply requirement	230V 50/60Hz a.c., 450W — all models		

6-place extractors

Model	SXT306ECS	SXT106ECS	SX256ECS
Extractors x capacity ml	6 x 30	6 x 100	6 x 250
Overall, W x D x H mm	760 x 320 x 720	760 x 320 x 720	760 x 320 x 720
Weight, net kg	20	21	23
Supply requirement	230V 50/60Hz a.c., 450W — all models		

As described. Supplied with stand, heater, and glassware with capacity as indicated. Without extraction thimbles.

EX200-10 MXT30S
EX200-15 MXT100S
EX200-20 MXT250S

EX200-30 SXT304ECS
EX200-35 SXT104ECS
EX200-40 SXT254ECS

EX200-45 SXT306ECS
EX200-50 SXT106ECS
EX200-55 SXT256ECS

Spare Extractors

With solvent drain stopcock.

EX200-85 30ml
EX200-87 100ml
EX200-89 250ml

Soxhlet thimbles

EX100-22 22 x 80mm, for 30ml extractor
EX100-52 33 x 94mm, for 100ml extractor

Soxhlet thimbles for 250ml and extractors - details on request.



EX200-15



EX200-35

Extraction

Thimbles

Extraction Thimbles, Whatman

Cellulose. Supplied in boxes of 25. Dimensions given are nominal internal diameter x external length.

	<i>l.d. x length mm</i>		<i>l.d. x length mm</i>
Single thickness			
EX100-10	10 x 50	EX100-43	30 x 80
EX100-13	18 x 55	EX100-46	30 x 100
EX100-16	19 x 90	EX100-49	33 x 80
EX100-22	22 x 80	EX100-52	33 x 94
EX100-25	25 x 80	EX100-55	33 x 100
EX100-28	25 x 100	EX100-58	33 x 118
EX100-31	26 x 60	EX100-60	37 x 130
EX100-36	28 x 80	EX100-61	41 x 123
EX100-37	28 x 100	EX100-64	43 x 123
EX100-40	28 x 120	EX100-67	60 x 180
Double thickness			
EX105-22	22 x 80	EX105-49	33 x 80

Extraction Thimbles, Whatman

Glass microfibre, high purity grade HP-GF. Can be used up to 550°C. Supplied in boxes of 25.

	<i>l.d. x length mm</i>		<i>l.d. x length mm</i>
EX110-16	19 x 90	EX110-25	43 x 123

Soxhlet Extraction Glassware. Capacities up to 2000ml – see *Quickfit* section.



EX100 with glassware

Soxhlet Mantles, Electrothermal

- ◆ Solid state electronic heat control on each recess – spark free in normal operation
- ◆ Heater cartridge includes a safety earth (ground) screen for additional operator safety
- ◆ PTFE coated external surfaces
- ◆ Choice of 3 or 6 recesses
- ◆ Choice of stirred or unstirred positions

Electrothermal Soxhlet Heating Mantles

With brackets and 12.7mm diameter support rods. For 230V 50/60Hz single phase supplies.

With the stirred models a single control changes the stirring speed of 3 recesses. The 6 bank units therefore have two controls. Speed is continuously variable from 50 to 1000rpm.

<i>Recesses x capacity ml</i>	<i>Rating W</i>	<i>Unstirred models EME series</i>	<i>Stirred models EMEA series</i>
3 x 100	180	EX300-10	EX300-50
3 x 250	450	EX300-15	EX300-55
3 x 500	600	EX300-20	EX300-60
3 x 1000	900	EX300-25	EX300-65
6 x 100	360	EX305-10	EX305-50
6 x 250	900	EX305-15	EX305-55
6 x 500	1200	EX305-20	EX305-60
6 x 1000	1800	EX305-25	EX305-65

Replacement elements

For EX300/EX305 mantles manufactured from July 1999*. One element is required for each recess. For 230V 50/60Hz single phase supplies.

- EX307-10** 60W, 100ml for EX300-10 or EX305-10 mantles
- EX307-15** 150W, 250ml for EX300-15 or EX305-15 mantles
- EX307-20** 200W, 500ml for EX300-20 or EX305-20 mantles
- EX307-25** 300W, 1000ml for EX300-25 or EX305-25 mantles

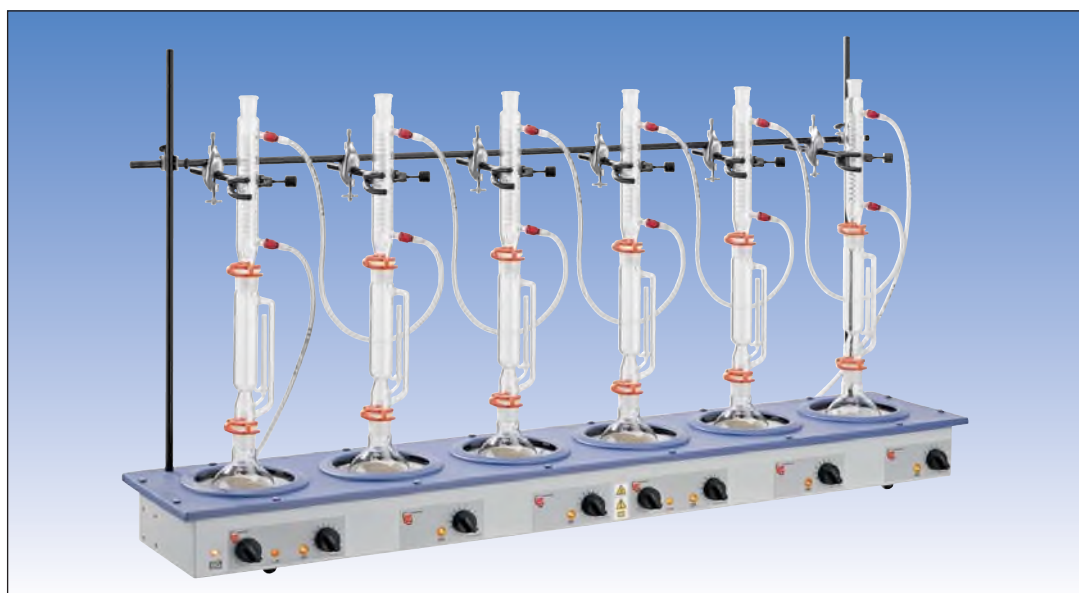
- EX309-10** 60W, 100ml for EX300-50 or EX305-50 mantles
- EX309-15** 150W, 250ml for EX300-55 or EX305-55 mantles
- EX309-20** 200W, 500ml for EX300-60 or EX305-60 mantles
- EX309-25** 300W, 1000ml for EX300-65 or EX305-65 mantles

*Elements for mantles manufactured before July 1999 - see HE220.

Accessory

Flow monitor for protecting Soxhlet system against loss of water flow through condensers. For full details see entry in the Flow Section.

- FR300-10** Flow monitor



EX305 in use, EX300 is similar

Filtration

Filter Papers, Qualitative Grades

Grade No.		Flowrate	Retention microns	Wet strength	Thickness mm	Ash %
Student*	General purpose schools grade, smooth	M/F	11 - 25	H	0.15	—
91*	General purpose schools grade, creped	M/F	10	H	0.23	—
1	The most widely used general purpose paper	M/F	11	L	0.18	0.06
2	Slightly thicker and more retentive than No. 1	M/F	8	L	0.19	0.06
2V	As No. 2 but supplied prepleated	M/F	8	L	0.19	0.06
3	Double the thickness of No. 1	M	6	M	0.39	0.06
3MM	Filtration grade of chromatography paper 3MM Chr	M	11	M	0.34	—
4	Excellent retention of coarse and gelatinous precipitates	F	20 - 25	L	0.21	0.06
5	Will retain fine precipitates, grained surface	S	2.5	L	0.20	0.06
6	Faster than No. 5 but almost as high retention	S	3	L	0.18	0.20
113	Excellent retention of coarse and gelatinous precipitates, creped	F	30	H	0.42	0.06
113V	As No. 113 but supplied prepleated	F	30	H	0.42	0.06
114	Similar to No. 113 but thinner and very strong. Smooth surface	F	25	H	0.19	0.06
114V	As No. 114 but supplied prepleated	F	25	H	0.19	0.06

*These schools grade papers are manufactured and packed to less critical standards than other Whatman filters. Approximate values only.

Whatman®

Filter Papers, Quantitative Grades

Very high quality papers for use in critical gravimetric analysis.

Grade No.		Flowrate	Retention microns	Wet strength	Thickness mm	Ash %
Ashless						
40	General purpose gravimetric paper	M	8	L	0.20	0.01
41	For filtration of coarse and gelatinous precipitates	F	20 - 25	L	0.21	0.01
42	Highly retentive for fine precipitates	S	2.5	L	0.20	0.01
43	Intermediate retention and flow rate between Nos. 40 and 41	M/F	16	L	0.21	0.01
44	Thin version of No. 42	S	3	L	0.17	0.01
Hardened						
50	For retention of finest crystalline precipitates. Highly glazed surface	S	2.7	H	0.12	0.025
52	General purpose hardened grade	M	7	H	0.17	0.025
54	For filtration of coarse and gelatinous precipitates	F	20 - 25	H	0.18	0.025
Hardened ashless						
540	General purpose hardened ashless paper	M	8	H	0.15	0.008
541	For filtration of coarse and gelatinous precipitates	F	20 - 25	H	0.16	0.008
542	Highly retentive for fine precipitates	S	2.7	H	0.15	0.008

Flowrate

M – Medium

F – Fast

S – Slow

Wet Strength

L – Suitable for gravity or low suction filtration. Care must be taken to prevent rupture of the paper.

M – Will withstand all normal use on Buchner funnels or other devices under suction or moderate pressure.

H – High wet strength and high chemical resistance.

Filtration

Filter Paper, Circles and Sheets, Qualitative Grades

Whatman®

Student Grade

General purpose, supplied in outer packs as indicated, containing inner bags of 100 circles.

	<i>Dia., cm</i>	<i>Pack qty.</i>
FB100-35	15	1000

Grade 91

General purpose, creped. Supplied in outer packs as indicated containing inner bags of 100 circles.

	<i>Dia., cm.</i>	<i>Pack qty.</i>
FB102-32	12.5	4000
FB102-34	15.0	1000
FB102-36	18.5	1000

Grade No. 1

Qualitative general purpose. Supplied in boxes of circles or sheets as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
Circles		
FB105-12	2	400
FB105-16	2.5	400
FB105-18	3	400
FB105-22	4.25	100
FB105-24	5.5	100
FB105-26	7	100
FB105-27	8.5	100
FB105-28	9	100
FB105-30	11	100
FB105-32	12.5	100
FB105-34	15	100
FB105-36	18.5	100
FB105-38	24	100
FB105-40	27	100
FB105-42	32	100
FB105-44	40	100
FB105-46	50	100
	<i>W x L, cm</i>	<i>Box qty.</i>
Sheets		
FB105-65	2.6 x 3.1	1000
FB105-75	46 x 57	100
FB105-80	58 x 68	100

Grade No. 2

Qualitative. Supplied in boxes of circles or sheets as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
Circles		
FB110-22	4.25	100
FB110-24	5.5	100
FB110-26	7	100
FB110-28	9	100
FB110-30	11	100
FB110-32	12.5	100
FB110-34	15	100
FB110-36	18.5	100
FB110-38	24	100
FB110-42	32	100
	<i>W x L, cm</i>	<i>Box qty.</i>
FB110-75	46 x 57	100

Grade No. 2V

Qualitative. Prepleated. Supplied in boxes of circles as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
FB115-32	12.5	100
FB115-34	15	100
FB115-36	18.5	100
FB115-38	24	100
FB115-40	27	100
FB115-42	32	100

Grade No. 3

Qualitative. Thick. Supplied in boxes of circles or sheets as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
Circles		
FB120-24	5.5	100
FB120-26	7	100
FB120-28	9	100
FB120-30	11	100
FB120-32	12.5	100
FB120-34	15	100
FB120-36	18.5	100
FB120-38	24	100
	<i>W x L, cm</i>	<i>Box qty.</i>
FB120-75	46 x 57	100



Filtration

Filter Paper, Circles, Qualitative Grades continued

Whatman®

All grades supplied in boxes of circles as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
Grade 3MM Circles		
Qualitative.		
FB125-18	2.5	100
Grade No. 4 Circles		
Qualitative. Fast flow.		
FB130-22	4.25	100
FB130-24	5.5	100
FB130-26	7	100
FB130-28	9	100
FB130-30	11	100
FB130-32	12.5	100
FB130-34	15	100
FB130-36	18.5	100
FB130-38	24	100
FB130-42	32	100
Grade No. 5 Circles		
Qualitative. Slow flow.		
FB135-24	5.5	100
FB135-26	7	100
FB135-28	9	100
FB135-30	11	100
FB135-32	12.5	100
FB135-34	15	100
FB135-36	18.5	100
FB135-38	24	100
Grade No. 6 Circles		
Qualitative. Slow.		
FB140-26	7	100
FB140-28	9	100
FB140-30	11	100
FB140-32	12.5	100
FB140-34	15	100
FB140-36	18.5	100
FB140-38	24	100

	<i>Dia., cm</i>	<i>Box qty.</i>
Grade No. 113 Circles		
Qualitative. Fast flow.		
FB150-28	9	100
FB150-32	12.5	100
FB150-34	15	100
FB150-36	18.5	100
FB150-38	24	100
Grade No. 113V Circles		
Qualitative. Prepleated.		
FB155-32	12.5	100
FB155-34	15	100
FB155-36	18.5	100
FB155-38	24	100
FB155-40	27	100
FB155-42	32	100
FB155-46	50	100
Grade No. 114 Circles		
Qualitative.		
FB160-34	15	100
Grade No. 114V Circles		
Qualitative. Prepleated.		
FB165-32	12.5	100
FB165-34	15	100
FB165-38	24	100



Filtration

Filter Paper Circles, Quantitative Grades

Whatman®

All grades supplied in boxes of circles as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
Grade No. 40 Circles		
Quantitative ashless.		
FB200-18	3.2	100
FB200-24	5.5	100
FB200-26	7	100
FB200-28	9	100
FB200-30	11	100
FB200-32	12.5	100
FB200-34	15	100
FB200-36	18.5	100
FB200-38	24	100
Grade No. 41 Circles		
Quantitative ashless.		
FB205-24	5.5	100
FB205-25	6	100
FB205-26	7	100
FB205-28	9	100
FB205-30	11	100
FB205-32	12.5	100
FB205-34	15	100
FB205-36	18.5	100
FB205-38	24	100
Grade No. 42 Circles		
Quantitative ashless.		
FB210-22	4.25	100
FB210-24	5.5	100
FB210-26	7	100
FB210-28	9	100
FB210-30	11	100
FB210-32	12.5	100
FB210-34	15	100
FB210-36	18.5	100
FB210-38	24	100
Grade No. 43 Circles		
Quantitative ashless.		
FB215-30	11	100
FB215-32	12.5	100
FB215-34	15	100
FB215-36	18.5	100
Grade No. 44 Circles		
Quantitative ashless.		
FB220-30	11	100
FB220-32	12.5	100
FB220-34	15	100
FB220-36	18.5	100

	<i>Dia., cm</i>	<i>Box qty.</i>
Grade No. 50 Circles		
Quantitative hardened.		
FB250-24	5.5	100
FB250-28	9	100
FB250-30	11	100
FB250-32	12.5	100
FB250-34	15	100
FB250-36	18.5	100
FB250-38	24	100
Grade No. 52 Circles		
Quantitative hardened.		
FB255-34	15	100
Grade No. 54 Circles		
Quantitative hardened.		
FB260-24	5.5	100
FB260-26	7	100
FB260-28	9	100
FB260-30	11	100
FB260-32	12.5	100
FB260-34	15	100
FB260-36	18.5	100
FB260-38	24	100
FB260-42	32	100

	<i>Dia., cm</i>	<i>Box qty.</i>
Grade No. 540 Circles		
Quantitative hardened ashless.		
FB300-28	9	100
FB300-30	11	100
FB300-32	12.5	100
FB300-34	15	100
FB300-36	18.5	100
Grade No. 541 Circles		
Quantitative hardened ashless.		
FB305-24	5.5	100
FB305-26	7	100
FB305-28	9	100
FB305-30	11	100
FB305-32	12.5	100
FB305-34	15	100
FB305-36	18.5	100
FB305-38	24	100
Grade No. 542 Circles		
Quantitative hardened ashless.		
FB310-24	5.5	100
FB310-26	7	100
FB310-28	9	100
FB310-30	11	100
FB310-32	12.5	100
FB310-34	15	100
FB310-36	18.5	100
FB310-38	24	100



Filtration

Special Papers

Whatman®

Phase Separators, 1PS

A silicone impregnated, water repellent paper which can be used to separate aqueous solutions from immiscible solvents. The aqueous phase is retained and the organic phase passes through. Will retain solid particles. Can be used either flat under suction not exceeding 70mm Hg or quadrant folded in a conical glass funnel. Supplied in boxes of 100 circles.

Note: This paper contains a small quantity of a tin complex catalyst. It is therefore not recommended for use when this complex may cause interference, e.g. with the use of dithizone (diphenylthiocarbazone) reagent.

	<i>Dia., cm</i>	<i>Box qty.</i>
FB380-26	7	100
FB380-28	9	100
FB380-30	11	100
FB380-32	12.5	100
FB380-34	15	100
FB380-36	18.5	100
FB380-40	27	100

FB380

Filter Aid

Cellulose materials used to coagulate precipitates and as a prefilter layer in funnels. Ashless. Supplied in a box of 500g.

FB405-40 Clippings

Seed Test Papers

For use in most commonly applied seed germination methods. Supplied in boxes of 100 circles.

FB420-10 No. 181, 9cm diameter

Grade EPM2000

For use in high volume air samplers. Sheet size 8 x 10in. Supplied in a box of 100 sheets.

FB800-10 EPM2000

	<i>Diameter, cm</i>	<i>Box qty.</i>
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Grade QM-A Circles

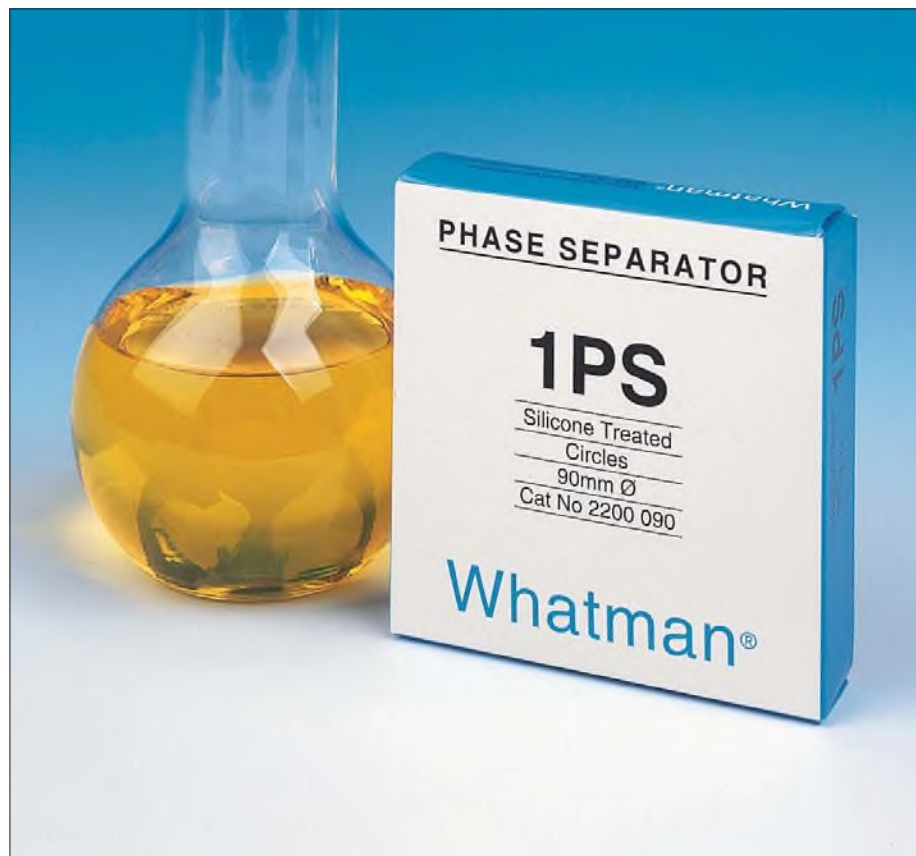
Quartz microfibre. Will operate to 500°C.

FB820-16	2.5	100
FB820-22	3.7	100
FB820-28	4.7	100

Lens Tissues, Whatman 105

For lens cleaning.

	<i>Dimensions, mm</i>	<i>Pack qty.</i>
CL760-10	100 x 150	625
CL760-15	200 x 300	100
CL760-20	460 x 570	500



FB405



CL760

Filtration

Glass Microfibre Filters

Whatman®

All Whatman Glass Microfibre filters have a fast filtration and a high loading capacity and particle retention rate.

- ◆ Manufactured without chemical binder from high grade borosilicate glass
- ◆ They are suitable for gravity or low suction filtration
- ◆ Filtration speeds generally very much higher than conventional cellulose papers
- ◆ Efficient retention of micron size particles
- ◆ Must be used flat. Ideal for use in flat perforated plate Buchner type funnels (not sintered glass models)
- ◆ Can be used up to 550°C
- ◆ Wide range of applications including:
 - retention of fine analytical precipitates
 - retention of biochemical gelatinous precipitates
 - water/air pollution analyses
 - as prefilters for membranes
 - scintillation counting
 - radioimmunoassay

Grades

GF/A The general purpose high efficiency glass micro-fibre filter. Particle retention to 1.6µm.

GF/B Three times thicker and with greater wet strength than GF/A. Particle retention to 1µm.

GF/C Extremely efficient filter made to retain fine particles and micro-organisms. Particle retention to 1.2µm.

GF/D Thick filter made from less fine fibres and retaining 2.7µm size particles with a very high loading capacity. Extremely high speed.

GF/F This ultra-fine filter has a 98% retention efficiency for particles down to 0.7µm in liquids.

934-AH High retention at high flow rates. Widely used in water pollution monitoring techniques for suspended solids, and is specified in US Method 934-AH. Particle retention to 1.5µm.

EPM2000 Specially manufactured for use in air samplers with a high throughput of air.

QM-A Quartz Manufactured from quartz microfibre to withstand high temperatures.

All grades supplied in boxes of circles or sheets as indicated.

	<i>Dia., cm</i>	<i>Box qty.</i>
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Grade GF/A Circles

FB600-10	2.1	100
FB600-13	2.4	100
FB600-16	2.5	100
FB600-22	3.7	100
FB600-25	4.25	100
FB600-28	4.7	100
FB600-33	5.0	100
FB600-36	5.5	100
FB600-39	6.0	100
FB600-42	7.0	100
FB600-45	9.0	100
FB600-48	11.0	100
FB600-52	12.5	100
FB600-55	15.0	100

	<i>W x L, cm</i>	<i>Box qty.</i>
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Grade GF/A Sheets

FB602-25	20.3 x 25.4	100
FB602-35	46 x 57	25

	<i>Dia., cm</i>	<i>Box qty.</i>
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Grade GF/B Circles

FB610-13	2.4	100
FB610-16	2.5	100
FB610-22	3.7	100
FB610-25	4.25	100
FB610-28	4.7	100
FB610-36	5.5	100
FB610-42	7.0	100
FB610-45	9.0	25
FB610-48	11.0	25
FB610-52	12.5	25
FB610-55	15.0	25
FB610-57	18.5	25

	<i>W x L, cm</i>	<i>Box qty.</i>
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Grade GF/B Sheets

FB612-35	46 x 57	25
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Filtration

Glass Microfibre Filters continued

Whatman®

All grades supplied in boxes of circles or sheets as indicated.

	Dia., cm	Box qty.
Grade GF/C Circles		
FB620-10	2.1	100
FB620-13	2.4	100
FB620-16	2.5	100
FB620-25	4.25	100
FB620-28	4.7	100
FB620-33	5.0	100
FB620-36	5.5	100
FB620-42	7.0	100
FB620-45	9.0	100
FB620-48	11.0	100
FB620-52	12.5	100
FB620-55	15.0	100

	W x L, cm	Box qty.
Grade GF/C Sheets		
FB622-20	10.2 x 25.4	50
FB622-30	46 x 57	25

	Dia, cm.	Box qty.
Grade GF/D Circles		
FB630-16	2.5	100
FB630-28	4.7	100
FB630-42	7.0	100
FB630-45	9.0	25
FB630-48	11.0	25
FB630-52	12.5	25
FB630-55	15.0	25
FB630-60	25.7	25

Grade GF/F Circles		
FB640-14	2.4	100
FB640-16	2.5	100
FB640-25	4.25	100
FB640-28	4.7	100
FB640-36	5.5	100
FB640-42	7.0	100
FB640-45	9.0	25
FB640-48	11.0	25
FB640-52	12.5	25
FB640-55	15.0	25
FB640-60	25.7	25

	W x L, cm	Box qty.
Grade GF/F Sheets		
FB642-35	46 x 57	25

Special Grades

Whatman®

	Dia., cm	Box qty.
Grade 934-AH Circles		
FB655-14	2.4	100
FB655-28	4.7	100
FB655-36	5.5	100
FB655-42	7.0	100
FB655-45	9.0	100
FB655-48	11.0	100
FB655-52	12.5	100

Grade EPM2000

For use in high volume air samplers. Sheet size 8 x 10in. Supplied in a box of 100 sheets.

FB800-10 EPM2000

	Dia., cm	Box qty.
Grade QM-A Circles		
Quartz microfibre. Will operate to 500°C.		
FB820-16	2.5	100
FB820-22	3.7	100
FB820-28	4.7	100

	W x L inches	Box qty.
Grade QM-A Sheets		
FB822-25	8 x 10	25



FB620, FB622 are similar



FB655



FB820, FB822 are similar

Filtration

Membrane Filters

Whatman®

Cellulose Nitrate Membrane Circles, WCN

Supplied in box quantities as indicated. Plain White.

	Pore size, μm	Dia. mm	Box qty.
FC150-12	0.1	25	100
FC150-19	0.1	47	100
FC152-08	0.2	13	100
FC152-12	0.2	25	100
FC152-19	0.2	47	100
FC152-32	0.2	90	25
FC152-40	0.2	142	25
FC156-08	0.45	13	100
FC156-12	0.45	25	100
FC156-19	0.45	47	100
FC156-21	0.45	50	100
FC156-32	0.45	90	25
FC156-40	0.45	142	25
FC158-19	0.65	47	100
FC160-12	0.8	25	100
FC160-16	0.8	37	100
FC160-19	0.8	47	100
FC162-12	1.0	25	100
FC162-19	1.0	47	100
FC163-21	1.2	50	100
FC163-40	1.2	142	25
FC165-12	3.0	25	100
FC165-19	3.0	47	100
FC168-12	5.0	25	100
FC168-19	5.0	47	100
FC168-32	5.0	90	25

Pre-filter for use with membrane filters – see FB610 series (Grade GFIB fine), FB630 series (Grade GFID coarse).

Cellulose Mixed Ester WME Membrane Circles

Supplied in box quantities as indicated. White gridded.

	Pore size, μm	Dia. mm	Box qty.
FC182-19	0.45	47	100
FC188-12	0.8	25	100

Cellulose Mixed Ester WME Membrane Circles

Sterilised by ethylene oxide

Individually packed with absorbent pad in sealed polyester envelope (except FC200-60). All pore size 0.45 μm (except FC198-60 which is 0.2 μm) and diameter 47mm. Supplied in boxes of 100.

FC198-60	White gridded
FC200-15	White plain
FC200-25	White gridded
FC200-30	Black gridded
FC200-60	White gridded (without pad)

Autoclave Pack

Ready for autoclaving. In pack of ten membranes and ten absorbent pads in a resealable envelope. With indicator which changes colour when autoclaved. Pore size 0.45 μm , diameter 47mm. Box quantity 100 membranes with pads.

FC204-25	White gridded
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PTFE Membrane Circles, WTP

With polypropylene backing. Supplied in box quantities as indicated. Plain White.

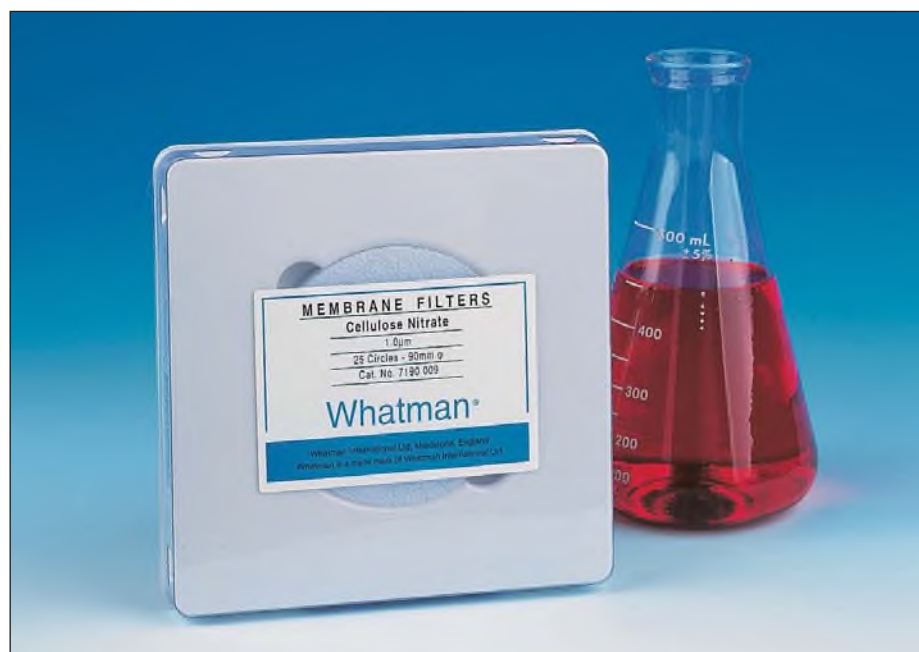
	Pore size, μm	Dia. mm	Box qty.
FC240-12	0.2	25	100
FC240-19	0.2	47	100
FC242-19	0.5	47	100
FC244-19	1.0	47	100

Inorganic Membrane Circles, Anodisc

Bonded to Polypropylene support ring (except 13mm). Supplied in box quantities as indicated. Plain White.

	Pore size, μm	Dia. mm	Box qty.
FC250-06	0.02	13	100
FC250-08	0.02	25	50
FC250-12	0.02	47	50
FC252-06	0.1	13	100
FC252-08	0.1	25	50
FC252-12	0.1	47	50
FC254-06	0.2	13	100
FC254-08	0.2	25	50
FC254-12	0.2	47	50

continued on next page



Filtration

Membrane Filters continued

Whatman[®]

Nylon Membrane Circles

Naturally hydrophilic, durable and compatible with a wide range of aqueous solutions, organic solvents and for filtration of biological preparations and media. Autoclavable at 121°C. Supplied in box quantities as indicated.

	Pore size, μm	Dia. mm	Box qty.
FC270-08	0.2	13	100
FC270-19	0.2	47	100
FC270-32	0.2	90	50
FC273-08	0.45	13	100
FC273-12	0.45	25	100
FC273-19	0.45	47	100
FC273-32	0.45	90	50
FC276-19	0.8	47	100

Polycarbonate Membrane Circles, Cyclopore

Naturally hydrophilic, with a smooth, flat surface and geometrically perfect cylindrical pores, made using a patented process. Supplied in box quantities as indicated.

	Pore size, μm	Dia. mm	Box qty.
FC280-10	0.2	47	100
FC280-16	1	47	100
FC280-22	5	47	100
FC280-30	12	47	100

Polycarbonate Membrane Circles, Nuclepore

Ultra-thin (6 to 11 μm thick), with a smooth flat surface and sharply defined pore sizes, made using a patented process. Low protein binding and low extractables. Supplied in box quantities as indicated.

	Pore size, μm	Dia. mm	Box qty.
FC281-10	0.8	13	100
FC282-02	0.015	25	100
FC282-03	0.03	25	100
FC282-04	0.1	25	100
FC282-05	0.2 [†]	25	100
FC282-06	0.2	25	100
FC282-07	0.4	25	100
FC282-08	0.4 [*]	25	100
FC282-18	3.0	25	100
FC284-06	0.2	47	100
FC284-07	0.4	47	100
FC284-20	5.0	47	100
FC284-22	8.0	47	100

[†]Black dyed membrane for epifluorescence microscopy applications.

^{*}Suitable for AOX (Adsorbable Organic) halogens analysis.

Membrane Forceps

Stainless steel. Smooth flat tips with bevelled edges. For handling membranes without damaging them.

FC289-10 Forceps



FC289-10



Filtration

Membrane Filter Holders and Filtration Systems

Choice of models:

- ◆ Vacuum
- ◆ Syringe

Filter Holders, Vacuum, Whatman

Borosilicate glass with metal clamp. Choice of sintered glass or stainless steel membrane support. Can be mounted on an accessory filter flask or manifold using the appropriate size rubber stopper. Without stopper or prefilter. Supplied singly.

Support	Reservoir ml	Pre-filter mm
25mm diameter		
FC300-10 Sintered glass	25	16
FC300-15 Sintered glass	50	13
FC300-25 Stainless steel screen	25	16
47mm diameter		
FC302-30 Sintered glass	300	35
FC302-40 Stainless steel screen	300	35

Filter Flasks, Buchner type – see *Flasks* section.

Filter Manifolds - see *FC338-series*

Stoppers – see *SW602-36*.

Filter Holders, Syringe, Whatman

Stainless steel with PTFE gasket and O-ring. With female luer lock inlet and male luer nozzle outlet. Supplied singly.

- FC330-13** 13mm diameter
- FC330-25** 25mm diameter

Filter Holders, Vacuum, Pyrex®

Comprising separate funnel, base and clip components. The funnel and base are Pyrex® borosilicate glass, the base having a sintered glass membrane support disc for use with membranes of diameter as indicated. Funnel and base are clamped together using the metal retaining clip.

	Ref.	Description	Funnel capacity ml
For membranes, 25mm diameter			
FC350-20	5808/2	Funnel	15
FC350-30	5808/3	Base	—
FC350-40	9830/29M	Clip	—
For membranes, 47mm diameter			
FC355-15	5809/2	Funnel	300
FC355-25	5809/3	Base	—
FC355-35	5810/5	Clip	—

Filtration System, Pyrex®

Pyrex® borosilicate glass filtration system for use with 47mm diameter membranes. Four separate components make up the complete system, a 300ml capacity funnel, support base with sintered disc membrane support and vacuum connection, metal retaining clip and heavy wall 1 litre conical flask with ground glass connection for vacuum seal.

	Ref.	Description
FC355-15	5809/2	Funnel
FC355-35	5810/5	Clip
FC357-06	5810/3	Base
FC357-09	5810/4	Flask

FC357-95 Complete filtration assembly, comprising 1 of each funnel, clip, base and flask



FC302, FC300 are similar



FC350-20 to FC350-40



FC355-15 with FC355-35



Filtration System

Filtration

Membrane Filter Holders and Filtration Systems

Whatman®

Vacuum Filtration Systems

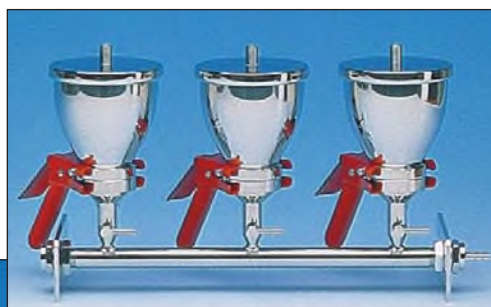
Stainless steel with metal, standard or rapid-fix clamp as indicated. Maximum working temperature 200°C. Autoclavable and can be dry-heat sterilised at up to 180°C. With stainless steel screen membrane support for 47/50mm diameter membranes. Can be mounted on an accessory filter flask using an appropriate size stopper.

	Clamp	Reservoir, ml	Pre-filter size, mm
FC304-09	Standard	500	40
FC304-14	Rapid-fix	500	40

Manifold Filtration Systems

For use with vacuum filter holders, as indicated. Stainless steel. With 9mm i.d. tubing connection ferrule.

- FC316-10** 3-place manifold, empty
- FC316-14** 3-place manifold, with 3 x FC304-09
- FC316-16** 3-place manifold, with 3 x FC304-14
- FC316-30** 6-place manifold, empty
- FC316-34** 6-place manifold, with 6 x FC304-09
- FC316-36** 6-place manifold, with 6 x FC304-14



FC316-14



FC304-09



FC304-14

Filtration

Inorganic Membrane Syringe Filters - Anotop

Whatman®

Disposable syringe filters designed for use in a wide range of sample filtration applications. Incorporates Anopore inorganic membranes with a precise non-deformable, even honeycomb pore structure. The membrane is sealed within a hexagonal shaped polypropylene body with luer lock fittings. These filters are compatible with most organic solvents and aqueous solutions. All versions are available in a gamma-irradiated sterile form and with glass microfibre pre-filter enabling larger volumes of difficult solutions to be filtered.

	Anotop 10	Anotop 10 Plus	Anotop 25	Anotop 25 Plus
Membrane diameter mm	10	10	25	25
Membrane type	Anopore — all models			
Pre-filter type	—	Glass Microfibre	—	Glass Microfibre
Housing material	Polypropylene — all models			
Construction process:	Thermal weld — all models			
Extractable materials	Low	Low	Low	Low
Operating pressure maximum (psi)	100	100	100	100
Average membrane thickness μm	60	60	60	60
Device width mm	14	14	31	32
Device length mm	18	18	25	25
Inlet connection	Female luer lock — all models			
Outlet connection	Male luer		Male luer slip	
Hold-up volume μl	<20	<30	<150	<200

Supplied in packs as indicated.

Anotop 10

	Pore size μm	Ref.	Pack qty.
FC365-10	0.02	6809 1002	50
FC365-14	0.1	6809 1012	50
FC365-18	0.2	6809 1022	50
FC365-26	0.1	6809 1112	50 sterile
FC365-32	0.2	6809 1122	50 sterile

Anotop 10 Plus with prefilter

	Pore size μm	Ref.	Pack qty.
FC365-39	0.02	6809 3002	50
FC365-47	0.2	6809 3022	50

Anotop 25

	Pore size μm	Ref.	Pack qty.
FC367-15	0.02	6809 2002	50
FC367-20	0.1	6809 2012	50
FC367-25	0.2	6809 2022	50
FC367-30	0.2	6809 2024	200
FC367-40	0.1	6809 2112	50 sterile
FC367-45	0.2	6809 2122	50 sterile

Anotop 25 Plus with prefilter

	Pore size μm	Ref.	Pack qty.
FC367-52	0.02	6809 4002	50
FC367-54	0.1	6809 4012	50
FC367-60	0.2	6809 4022	50
FC367-65	0.2	6809 4024	200

Anotop LC™ Syringe Filters

Designed for simple and effective sample preparation prior to HPLC, removing particulates which may damage and reduce the operating life of chromatography columns. An Anopore inorganic membrane is housed within a hexagonal shaped, pigment-free polypropylene body. Membrane pore sizes and filter pack sizes are as indicated. With luer slip female inlet and male outlet fittings.

μm	Pore size mm	Dia.	Ref.	Pack qty.
FC369-12	0.2	10	2001 0100	100
FC369-15	0.2	10	2001 0200	200



Filtration

Puradisc™ Syringe Disc Filters, 4mm, 13mm and 25mm

Whatman®

- ◆ For sample preparation and small volume filtration
- ◆ Full range of membrane and glass microfibre media
- ◆ Special outlet designed for use with microvials
- ◆ Ideal for HPLC sample preparation
- ◆ Very low hold-up volumes, <7.5µl
- ◆ Available individually sterile packed, where indicated

Media/Description	Pore size µm	4mm Disc			13mm Disc		
		Cat. No.	Ref.	Pack qty.	Cat. No.	Ref.	Pack qty.
PVDF w/t	0.2	—	—	—	FC376-11	6778 1302	50 sterile
	0.2	FC370-12	6777 0402	50	FC376-13	6777 1302	50
	0.45	FC370-18	6777 0404	50	FC376-19	6777 1304	50
PVDF	0.2	FC370-32	6779 0402	100	FC376-33	6779 1302	100
	0.45	—	—	—	FC376-39	6791 1304	50 sterile
	0.45	FC370-40	6779 0404	100	FC376-41	6779 1304	100
Polysulphone	0.2	—	—	—	FC376-55	6780 1302	50 sterile
	0.2	—	—	—	FC376-57	6782 1302	100
	0.45	—	—	—	FC376-65	6782 1304	100
Polypropylene	0.2	—	—	—	FC376-81	6788 1302	100
	0.45	FC370-86	6788 0404	100	FC376-86	6788 1304	100
PTFE w/t	0.2	—	—	—	FC378-06	6775 1302	50
	0.45	—	—	—	FC378-08	6775 1304	50
PTFE	0.1	—	—	—	FC378-14	6784 1301	100
	0.2	FC372-15	6784 0402	100	FC378-16	6784 1302	100
	0.45	FC372-19	6784 0404	100	FC378-20	6784 1304	100
	1.0	—	—	—	FC378-25	6784 1310	100
	5.0	—	—	—	FC378-30	6784-1350	100
Nylon 66	0.2	—	—	—	FC378-35	6789 1302	100
	0.45	—	—	—	FC378-39	6789 1304	100
Glass Microfibre Media	GF/A 1.6	—	—	—	FC378-85	6820 1316	100
	GF/C 1.2	—	—	—	FC378-89	6822 1312	100
	GF/D 2.7	—	—	—	FC378-91	6823 1327	100
	GF/F 0.7	—	—	—	FC378-93	6825 1307	100

w/t: with tube tip for direct filtration into microvials.



Media/Description	Pore size µm	25mm Disc		
		Cat. No.	Ref.	Pack qty.
Polysulphone	0.2	FC388-15	6780 2502	50 sterile
	0.2	FC388-18	6781 2502	200
	0.45	FC388-23	6780 2504	50 sterile
	0.45	FC388-26	6781 2504	200
Nylon	0.2	FC388-43	6750 2502	50
	0.2	FC388-46	6751 2502	200
	0.45	FC388-49	6750 2504	50
	0.45	FC388-52	6751 2504	200
PTFE	0.2	FC388-66	6784 2502	50
	0.2	FC388-68	6785 2502	200
	0.45	FC388-75	6784 2504	50
	0.45	FC388-77	6785 2504	200
	1.0	FC388-84	6784 2510	50
Polypropylene	0.2	FC390-14	6786 2502	50
	0.2	FC390-17	6788 2502	200
	0.45	FC390-22	6786 2504	50
	0.45	FC390-25	6788 2504	200

Filtration

Filter microplates, Unifilter®

Whatman®

Convenient, ready to use filtration devices in 96-well microplate format. Available in a choice of well capacities, 350µl, 800µl and 2000µl. Each well has a filter individually sealed into the base, below which runs a unique drip director to accurately deliver the filtrate into the receiving well of an accessory microplate positioned underneath, with no splashing or cross contamination. A wide range of filter media are offered to allow compatibility with a variety of sample types. Plates are manufactured in polystyrene (PS) for general use with biological samples or glass-filled polypropylene (GPP) for long term organic solvent exposure. The 350µl plates are mainly used for high throughput biological assay screening applications, protein kinase assays, receptor binding assays and cell immobilisation. 800µl and 2000µl filtration plates are used for high throughput screening sample preparation and clean up. Typical applications include cell-based immunoassay, nucleic acid isolation, sterile filtration of biological samples and compound library generation using parallel synthesis procedures. Supplied in pack quantities as indicated.

Cat. No.	Ref. 7700-	Plate material* -colour	Media*	Drip director type	Pack qty
Unifilter 350, well volume: 350µl					
FC410-44	3301	PS-white	GF/C (hydrophobic)	Short	50
Unifilter 800, well volume: 800µl					
FC411-03	2803	PS-clear	GF/B	Long	25
FC411-06	2801	PS-clear	GF/C	Long	25
FC411-15	2810	PS-clear	GF/F	Long	25
FC411-19	2808	PS-clear	CA 0.45µm	Long	25

*Material/media key:

CA: Cellulose acetate

GF/: Glass microfibre

Accessory Vacuum manifold, UniVac 3®

Specially designed for use with Whatman Unifilter microplates for transferring liquid from the filter microplate to the corresponding well of an accessory collection plate for further analysis. Constructed in PTFE-coated aluminium for resistance to most aggressive solutions allowing cleaning/sterilisation by common laboratory methods. With stopcock and gauge for precise and repeatable control of vacuum from an accessory vacuum pump (not supplied) and Vacuum Assist Frame ensuring complete and homogeneous evacuation of all wells.

FC414-60 UniVac 3 Aluminium



FC410



FC414-60 in use

Filtration

Syringeless Filters

Whatman[®]

Provide a single disposable, manual pressure filtration system which is fast and easy to use in sample preparation.

- ◆ Built-in pre-filter for 'difficult' samples
- ◆ Minimal waste
- ◆ Ideal for hazardous samples

Syringeless Filters, Autovial™

Comprise a graduated, medical grade polypropylene barrel, maximum capacity 12ml, with 3cm² filter at the base, luer slip outlet and plunger. Filter membrane material as specified. Non-sterile. Supplied in packs of 50.

Filter membrane material	Pore size, µm	Catalogue number	Ref.
PVDF	0.2	FC415-08	AV125EAQU
	0.45	FC415-12	AV125UAQU
Nylon	0.45	FC415-16	AV125UNAO
PTFE	0.2	FC415-24	AV125EORG
	0.45	FC415-27	AV125UORG
Glass microfibre	0.45	FC415-33	AV125UGMF

Syringeless Filters, UniPrep™

Comprise a 5ml capacity medical grade polypropylene test tube which initially holds the sample, and hollow plunger incorporating a filter at the tip. In use the sample is manually pressure filtered into the plunger which then acts as a storage vial for the filtered sample. The plunger has a removable cap. Non-sterile. Supplied in packs of 50.

Filter membrane material	Pore size, µm	Catalogue number	Ref.
Glass microfibre	0.45	FC417-09	UN113UGMF
Nylon	0.45	FC417-16	UN113UNYL
PTFE	0.2	FC417-24	UN113EORG
	0.45	FC417-27	UN113UORG

Syringeless Filters, Mini-UniPrep™

A small-scale version (up to 500µl sample volume) of the UniPrep™ filter designed to fit into any HPLC autosampler which accommodates 12 x 32mm vials. Alternatively the lid septum can be pierced with a needle and the filtered sample drawn off for manual injection into an analyser. Overall height x diameter 33.2 x 11.7mm. Medical grade polypropylene chamber and plunger with aluminium cap and pierceable PTFE-faced silicone seal to the plunger. Filtration area: 0.3cm². Non-sterile, but autoclavable. Supplied in packs as indicated.

Filter membrane material	Pore size, µm	Catalogue number	Ref.	Pack qty.
Polypropylene	0.45	FC420-10	UN203NPUPP	100
	0.45	FC420-12	UN503NPUPP	1000
	0.45	FC420-14	UN203APUPP*	100
PTFE	0.45	FC420-18	UN203NPUORG	100
	0.45	FC420-20	UN503NPUORG	1000
	0.45	FC420-22	UN203APUORG*	100
PVDF	0.45	FC420-26	UN203NPUAQU	100
	0.45	FC420-28	UN503NPUAQU	1000
	0.45	FC420-30	UN203APUAQU*	100
Glass microfibre	0.45	FC420-34	UN203NPUGMF	100
	0.45	FC420-36	UN503NPUGMF	1000
	0.45	FC420-38	UN203APUGMF*	100
Nylon	0.45	FC420-42	UN203NPUNYL	100
	0.45	FC420-44	UN503NPUNYL	1000
	0.45	FC420-46	UN203APUNYL*	100
Polyether-sulphone	0.45	FC420-50	UN203NPUPES	100
	0.45	FC420-52	UN503NPUPES	1000
	0.45	FC420-54	UN203APUPES*	100

* With amber polypropylene body for use with light-sensitive samples.

Accessory compressor for FC420-series

Multi-sample (up to 6) compressor to reduce sample processing time and hand fatigue.

[FC422-06](#) 6-sample compressor



FC415



FC417



FC420 with FC422-06 in use

Filtration

Encapsulated Filters

Whatman®

A wide range of encapsulated disc and capsule filters, incorporating a variety of high performance glass microfibre and membrane media for the filtration and sterilisation of both liquids and gases.

Product Summary

Product	Porosity μm	Media Type	Filter area cm^2	Typical uses	
Disposable membrane filter discs					
POLYDISC TF	0.2	PTFE	16	Rapid filtration of aggressive solutions	
POLYDISC TF	0.45	PTFE	16		
POLYDISC TF	1.0	PP/PTFE	16		
POLYDISC HD	5.0	PP	16		
POLYDISC HD	10.0	PP	16		
POLYDISC AS	0.2	AMEC	16	Rapid filtration of aqueous solutions	
POLYVENT	0.2	PTFE	4	Environmental protection, venting	
POLYVENT	0.2	PTFE	16		
VACUGUARD	—	PTFE	16	Vacuum pump exhaust	
HEPA-VENT	—	GMF	16	Filtration air/gases	
Disposable Filtration capsules					
HEPA-CAP 36	—	GMF	560	Sterilising air	
HEPA-CAP 75	—	GMF	1300		
POLYCAP 36 HD	1.0	MAPP	260	Prefiltering up to 60°C. Can be used in either direction	
POLYCAP 36 HD	5.0	MAPP	260		
POLYCAP 36 HD	10.0	MAPP	260		
POLYCAP 36 HD	20.0	MAPP	260		
POLYCAP 75 HD	1.0	MAPP	650		
POLYCAP 75 HD	5.0	MAPP	650		
POLYCAP 75 HD	10.0	MAPP	650		
POLYCAP 75 HD	20.0	MAPP	650		
POLYCAP 36 TF	0.2	PTFE	260		Aggressive chemical filtration
POLYCAP 36 TF	1.0	PP/PTFE	260		
POLYCAP 75 TF	0.2	PTFE	650		
POLYCAP 75 TF	1.0	PP/PTFE	650		
POLYCAP 36 AS	0.2	Nylon	300	Filtering aqueous solutions	
POLYCAP 36 AS	1.0	Nylon	300		
POLYCAP 75 AS	0.2	Nylon	650		
POLYCAP 75 AS	0.45	Nylon	650		
CARBON CAP 75	—	Activated carbon	22,000m ²	Removing organics from gases/water	
VACUGUARD 150	—	PTFE and Chemical trap		Vacuum pump protection	

AMEC Asymmetric Mixed Ester of Cellulose

GMF Glass Microfibre Filter

MAPP Mono filament Anisotropic Polypropylene

PP Polypropylene

PTFE Polytetrafluoroethylene



Disposable Filter Discs

Whatman®

Mounted in a rugged polypropylene housing. All have a low hold-up volume. Dimensions: 53 x 46mm diameter x length. Connections: For 6 to 10mm bore tubing. Also accept male luer slip.

Polydisc TF

- ◆ Hydrophobic PTFE membrane
- ◆ Pore sizes 0.2, 0.45 and 1 μm
- ◆ 1 μm pore size device has polypropylene pre-filter
- ◆ Autoclavable at 131°C for 20 minutes
- ◆ Max. operating pressure 4.1 bar

Ideal for the rapid filtration of chemically aggressive solutions as the PTFE membrane and polypropylene housing are resistant to a wide variety of solvents.

Manufactured in clean room conditions, the filter is very low in extractables and is biosafe. Accordingly the discs may be used for the filtration of aqueous buffers of cell culture media, if pre-wetted with methanol. Non sterile.

	Porosity, μm	Pack qty.
FC430-15	0.2	10
FC430-20	0.45	10
FC430-30	1.0	10

Polydisc AS

- ◆ 0.2 μm asymmetric cellulose mixed ester membrane
- ◆ Maximum operating pressure 4.1 bar
- ◆ Glass microfibre prefilter with all pore sizes
- ◆ Supplied radiation sterilised with cap on outlet
- ◆ Can be autoclaved once at 131°C for 20 minutes

Designed principally for the filtration of aqueous solutions. Typical applications include the filtration of tissue culture media, reagent preparation, pharmaceutical preparations, enzymes, biologicals and particle counting solutions.

	Porosity, μm	Pack qty.
FC435-17	0.2	10



FC430, FC435

Filtration

Disposable Filter Discs continued

Whatman®

Mounted in a rugged polypropylene housing. All have a low hold-up volume. Dimensions 53 x 46mm diameter x length and with connections for 6 to 10mm bore tubing unless otherwise stated.

Polydisc HD

- ◆ Polypropylene housing and membrane
- ◆ Pore sizes 5µm or 10µm
- ◆ Filtration area 16cm², able to filter up to 5 litres fluid before replacement
- ◆ Autoclavable at 131°C for 20 minutes
- ◆ Hold-up volume less than 0.1ml
- ◆ Maximum operating pressure 4.1 bar

Extremely versatile filter for aqueous samples and solvents. A high loading capacity and flowrate enable effective filtration for large volume sample preparation up to the 10µm level. Supplied in packs of 10.

FC436-35 Polydisc HD, 5µm

FC436-38 Polydisc HD, 10µm

PolyVENT

Encapsulated filters for in-line gas/air filtration or venting/isolation applications where a vessel contents require protecting from airborne contaminants, the environment requires protecting from the vessel contents, or sterility of the contents must be maintained during venting. Supplied in packs as indicated.

		PolyVENT 4	PolyVENT 16
Membrane size	mm	25 dia.	50 dia.
Material		0.2µm PTFE	0.2µm PTFE
Air flow rates	litres/minute	10	50
Device W x L	mm	28 dia. x 23	58 x 49
Inlet connection		Female luer lok tubing barb	6-10mm i.d. tubing barb
Outlet connection		Male luer slip tubing barb	6-10mm i.d. tubing barb

As described. Supplied in packs as indicated.

FC437-15 PolyVENT 4, pack of 50

FC437-18 PolyVENT 16, pack of 10

VacuGuard

- ◆ Hydrophobic PTFE membrane
- ◆ Maximum operating pressure 0.9 bar
- ◆ 99.97% of particles of 0.3 microns or larger are retained
- ◆ Reduces risk of cross contamination and aqueous aerosol contamination of vacuum pumps and aspiration systems
- ◆ Eliminates harmful bacterial exhaust fumes

A protection device for vacuum pumps and personnel. Harmful bacterial exhaust fumes are removed because of the particle size retention, and aqueous aerosols removed because of the hydrophobic membrane. Supplied in pack of 10.

FC440-10 VacuGuard

Hepa-Vent

- ◆ Laminated hydrophobic glass microfibre filter
- ◆ Wide range of chemical compatibility
- ◆ High loading capacity and high throughput filtration media
- ◆ Particle retention ≥ 0.3 micron
- ◆ Autoclavable up to 132°C
- ◆ Maximum operating pressure 4.1 bar

Ideal for rapid filtration of air or gases for sterile applications. The device is small and compact and yet able to filter large volumes of air at low pressures up to 4.1 bar, and has a high loading capacity. Non sterile. Supplied in pack of 10.

FC445-10 Hepa-Vent



FC436



FC437



FC440



FC445

Filtration

Disposable Filtration Capsules

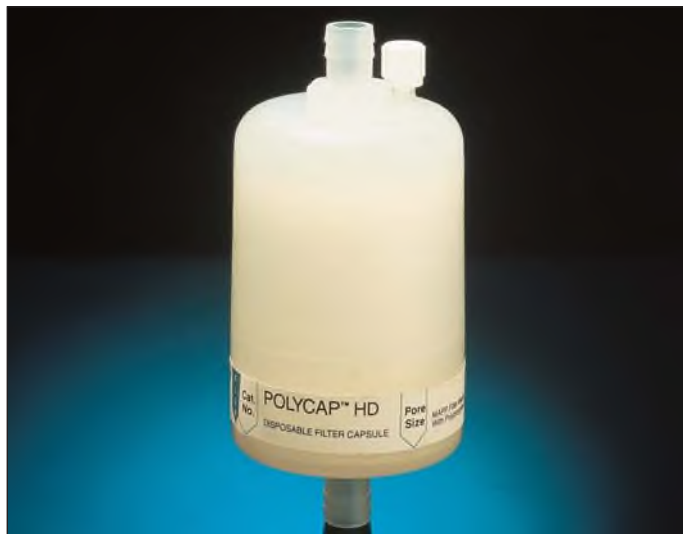
Whatman®

Mounted in a rugged polypropylene housing.

Technical Data

	Filtration area cm ²	Housing volume ml	Tubing connections mm	Dimensions dia. x length mm
Hepa-Cap 36	560	—	6-10	66 x 48
Hepa-Cap 75	1300	—	12	66 x 96
Polycap 36 HD	260	70	6-10	66 x 48
Polycap 75 HD	650	125	12	66 x 96
Polycap 36 TF	260	70	6-10	66 x 48
Polycap 75 TF	650	125	12	66 x 96
Polycap 36 AS	300	70	6-10	66 x 48
Polycap 75 AS	650	125	6-10*	66 x 96
PolyVent 500	500	70	9-13	66 x 48
PolyVent 1000	1000	125	9-13	66 x 96
Carbon Cap 75	22,000m ²	—	12	66 x 96
Carbon Cap 150	70,000m ²	—	12	66 x 183
VacuGuard 150	82,000m ² †	—	12	66 x 183

*The Polycap 75 AS 1µm porosity has connections for 12mm bore tubing.
†Activated carbon version only.



Hepa-Cap

- ◆ Laminated hydrophobic glass microfibre filter
- ◆ Choice of filtration areas
- ◆ Maximum operating pressure 4.1 bar
- ◆ Wide range of chemical compatibility
- ◆ High loading capacity and high throughput filtration media
- ◆ 99.97% of particles of 0.3 microns or larger are retained
- ◆ Autoclavable at up to 132°C

Ideal for the sterilisation of large volumes of air at low pressure, and is autoclavable. It is available in two sizes, depending upon the volume of air or gas to be filtered. Non sterile. Supplied singly.

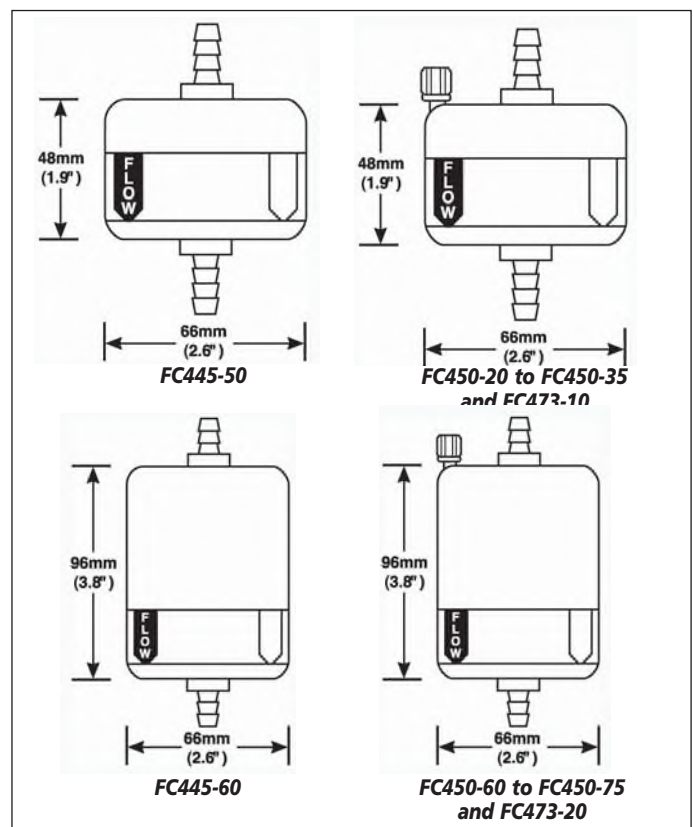
FC445-50 Hepa-Cap 36
FC445-60 Hepa-Cap 75

Polycap HD

- ◆ Polypropylene monofilament depth filter
- ◆ Choice of filtration areas and porosities
- ◆ Maximum operating pressures 4.1 bar forward, 3.0 bar reverse
- ◆ Capsules may be used in either direction
- ◆ Low hold-up volume with air purge
- ◆ Operating temperature 60°C maximum

Ideal for use as prefilters. The capsule and filtration media are both polypropylene and are thus resistant to chemical attack. Supplied singly.

	Porosity µm		Porosity µm
Polycap 36 HD Non Sterile		Polycap 75 HD Non Sterile	
FC450-20	1	FC450-60	1
FC450-25	5	FC450-65	5
FC450-30	10	FC450-70	10
FC450-35	20	FC450-75	20



Filtration

Disposable Filtration Capsules continued

Whatman®

Polycap TF

- ◆ Hydrophobic PTFE membrane
- ◆ Choice of filtration areas and porosities
- ◆ 1µm capsules incorporate a polypropylene prefilter
- ◆ Maximum operating pressure 4.1 bar
- ◆ Autoclavable up to 132°C

Provide the means of rapid filtration using a membrane of large filtration area. This capsule is ideal for filtering a wide range of chemicals through a well defined pore size membrane that is low in extractables and is totally non-fibre releasing. Supplied singly.

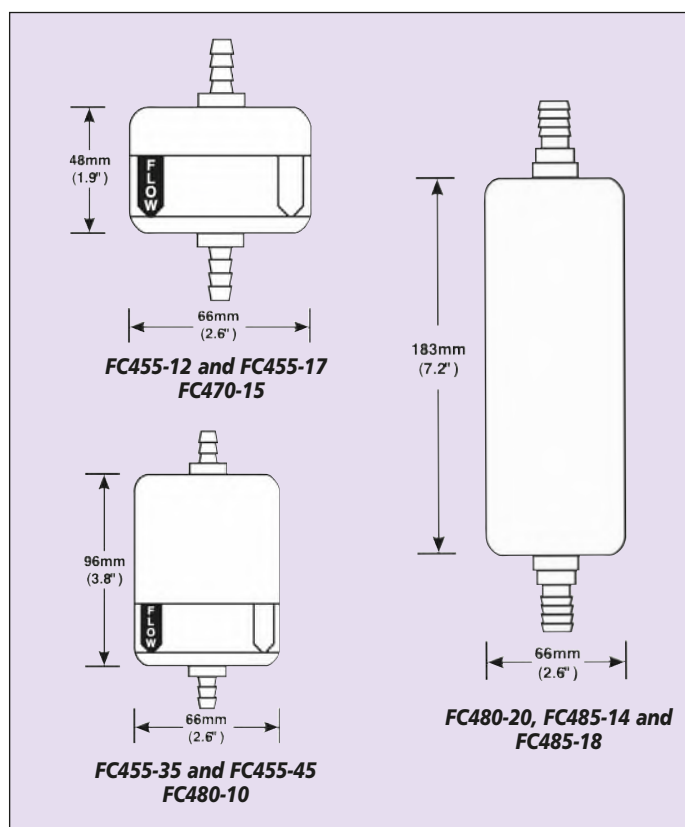
	Porosity µm	Porosity µm	
Polycap 36 TF Non sterile		Polycap 75 TF Non sterile	
FC455-12	0.2	FC455-35	0.2
FC455-17	1.0	FC455-45	1.0

Polycap AS

- ◆ Nylon membrane with glass microfibre prefilter
- ◆ Maximum operating pressure 4.1 bar
- ◆ Non pyrogenic and radiation sterilised

The nylon membrane is low in extractables and offers high flow rates. Typical applications include the filtration of water for laboratory use, salt solutions, cleaning/rinsing solutions, immunologicals, virus suspensions, buffers and nutrients. Supplied singly.

	Porosity µm
Polycap 36 AS	
FC470-15	0.2



PolyVENT

- ◆ Hydrophobic PTFE membrane
- ◆ Choice of filtration areas
- ◆ Rugged polypropylene capsule housing
- ◆ Low hold-up volume with air purge
- ◆ Autoclavable up to 132°C

Dedicated filter capsules for venting of vessels. Maximum pressure 1bar. With end connectors for 9 to 13mm bore tubing. Supplied singly.

	Type	Porosity, µm	Filtration area, cm ²
FC473-10	PolyVENT 500	0.2	500
FC473-20	PolyVENT 1000	0.2	1000

Carbon Cap

- ◆ Activated carbon filtration media
- ◆ Maximum operating pressure 4.1 bar
- ◆ Large surface area of carbon
- ◆ Autoclavable at 131°C for 20 minutes

The activated carbon filtration media is ideal for removing organic vapours from air or gases, or organics from water. With end connectors for 12mm bore tubing. Supplied singly.

- FC480-10** Carbon Cap 75. Overall 96 x 66mm
- FC480-20** Carbon Cap 150. Overall 183 x 66mm

VacuGuard 150

- ◆ Hydrophobic PTFE membrane and choice of chemical trap:
 - Activated carbon with 82000m² filter area removes organic vapours and radioactive particles
 - Desiccant removes water from acidic air streams
- ◆ 99.99% of particulates, 0.1µm or larger are retained
- ◆ Maximum operating pressures 1 bar (wet gas), 4.2 bar (dry gas)

For vacuum pump protection from corrosive vapours and contaminants. With end connectors for 12mm bore tubing. Supplied singly.

- FC485-14** VacuGuard 150, Activated carbon
- FC485-18** VacuGuard 150, Desiccant



FC470 in use



FC473



FC480-20



FC485-14



FC485-18

Filtration

Membrane Filters and Holders



Cellulose Acetate Membrane Circles

Low protein binding membranes for filtration of aqueous solutions.

	Pore size μm	Dia. mm	Box qty.
Plain white			
FC500-12	0.2	25	100
FC500-19	0.2	47	100
FC506-12	0.45	25	100
FC506-19	0.45	47	100
FC513-12	1.2	25	100
FC513-19	1.2	47	100

Cellulose Nitrate Membrane Circles

For sample analysis, particle testing and removal.

	Pore size μm	Dia. mm	Box qty.
Plain white			
FC532-12	0.45	25	100
FC532-19	0.45	47	100
FC532-25	0.45	85	100
FC540-12	1.2	25	100
FC540-19	1.2	47	100

White with black grid

FC542-19	0.45	47	100
FC542-21	0.45*	47	100
FC542-50	0.8	25	100

White with green grid

FC542-70	0.45	47	100
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*Sterile

PTFE Membrane Circles

For filtration of air, gases and aggressive chemicals.

	Pore size μm	Dia. mm	Box qty.
FC575-10	0.2	25	100
FC575-15	0.2	47	100
FC575-30	0.45	25	100
FC575-35	0.45	47	100



FC652

Forceps

Stainless steel with smooth flat tips. For handling membranes.

FC590-10 Forceps

Filter Holders, Vacuum

Borosilicate glass with metal clamp. Sintered glass membrane support and PTFE gasket. Can be autoclaved with membrane in position.

	Dia. mm	Reservoir, ml
FC650-10	25	30
FC650-30	47/50	250
FC652-25	47/50*	250

*Supplied complete with 1 litre capacity filter flask and polypropylene side-arm for safe connection to flexible vacuum tubing.

Filter Holders, Vacuum

Transparent polycarbonate. Can be autoclaved to 121°C. 250ml reservoir.

FC660-30 Filter dia. 47mm

Filter Holders, Syringe

Transparent polycarbonate. Can be autoclaved. Filters in either direction. Luer lock end fittings. Supplied in packs of 12.

FC690-10 Filter dia. 13mm

FC690-15 Filter dia. 25mm

Filter Holder, In-Line

Transparent polycarbonate. Can be autoclaved. With end fittings for 9 to 13mm flexible tubing. Supplied in pack of 5.

FC700-30 Filter dia. 47mm

Biosart 100 Filtration Units

For microbiological analysis. Disposable polystyrene, 100ml funnel with lid and membrane holder with fitted cellulose pad and 47mm diameter, black gridded, white cellulose nitrate membrane filter. In use, the unit is placed on an accessory vacuum manifold and once a filtration is completed the funnel is removed, allowing the membrane holder and funnel lid to be used as a petri dish. Supplied individually packed and sterile within an outer pack of 48.

FC740-10 0.2 μm

FC740-15 0.45 μm

FC740-85 Accessory filtration manifold, 3-position



FC700-30



FC740 in use with FC740-85



FC740-85 in use

Filtration

Disposable Filters



Syringe Filter, Minisart

With membrane sealed into a low adsorption plastic housing. With luer lock fittings on inlet and outlet. Will filter in either direction. Large filter area 5.3cm². High burst pressure (6 bar) for safe filtration. Supplied individually sterile. Supplied in packs of 50, except FC800-17 and -60 which are supplied in a pack of 500.

Cellulose acetate

Low protein binding

- FC800-15** 0.2µm pore size
- FC800-17** 0.2µm pore size
- FC800-40** 0.8µm pore size
- FC800-45** 1.2µm pore size

With additional glassfibre prefilter

- FC800-52** 0.2µm pore size

Surfactant-free cellulose acetate, with luer lock inlet and luer slip outlet.

- FC800-55** 0.2µm pore size

Polyethersulphone

High flow rate and capacity.

Non-sterile

- FC800-60** 0.2µm pore size

Sterile

- FC800-65** 0.45µm pore size

Syringe Filter, Minisart High-Flow

With asymmetric, single-layer, high flow polyethersulphone (PESU) membrane giving exceptional chemical stability. Large filter area, 5.3cm² and low hold-up volume, 0.1ml. Luer lock fittings on inlet and outlet. Supplied individually sterile. Supplied in pack of 50.

- FC800-74** 0.2µm pore size

Prefilter, Minisart

Glassfibre filter sealed into plastic housing with luer lock inlet and outlet. For prefiltration of highly loaded solutions. Supplied in pack of 50.

- FC802-95** Prefilter

Syringe filter, Minisart RC

For ultracleaning of aqueous or organic solvents. Hydrophilic cellulose membrane sealed into a polypropylene housing with female luer lock inlet and luer slip outlet. Autoclavable. Supplied in packs of 50.

4mm diameter filter

- FC840-10** 0.2µm pore size
- FC840-20** 0.45µm pore size

15mm diameter filter

- FC840-35** 0.2µm pore size
- FC840-45** 0.45µm pore size

25mm diameter filter

- FC840-65** 0.2µm pore size
- FC840-75** 0.45µm pore size

Syringe filter, Minisart SRP

Generally as FC840 but for use with aggressive liquids. Hydrophobic, polypropylene reinforced PTFE membrane sealed into a polypropylene housing with female luer lock inlet and luer slip outlet. Autoclavable. Supplied in packs of 50.

4mm diameter filter

- FC842-15** 0.45µm pore size

15mm diameter filter

- FC842-25** 0.2µm pore size
- FC842-30** 0.45µm pore size

25mm diameter filter

- FC842-42** 0.2µm pore size
- FC842-48** 0.45µm pore size

Syringe filter, Minisart NY25

With 25mm diameter, nylon membrane sealed into a polypropylene housing. With female luer lock fitting in the inlet and luer slip on the outlet. Filter area 4.8cm². High burst pressure (6 bar). Supplied in packs of 50.

- FC884-45** 0.45µm pore size, sterile

- FC884-47** 0.45µm pore size, with glass-fibre prefilter, non-sterile



FC800/FC802



FC840/FC842



FC884



FC800-55, FC800-60 is similar



FC800-65

Filtration

Centrifugal Concentrators, Vivaspin



Provide a single-step procedure for sample preparation, providing rapid sample filtration and concentration. Comprise centrifuge tube filtrate container with insert containing patented vertical membrane and thin channel filtration chamber. A wide choice of membrane materials is available for compatibility with most sample solutions, and low hold-up and dead-stop volumes ensure recoveries from small samples.

Specifications

Type	Vivaspin 500	Vivaspin 2
Capacity	ml 0.1 to 0.6	0.4 to 2*
Max. rcf	xg 15000	8000
Hold-up volume	µl <5	<10
Dead-stop volume	µl 5	8
Membrane area	cm ² 0.5	1.2
Material		
filtrate container	Polypropylene	Polycarbonate
insert	Polycarbonate	Polycarbonate
Overall L x dia.	mm 50 x 12.5	126 x 17

Type	Vivaspin 6	Vivaspin 15
Capacity	ml 2 to 6	2 to 15
Max. rcf	xg 10000	3000
Hold-up volume	µl <10	<20
Dead-stop volume	µl 30	50
Membrane area	cm ² 2.5	4.0
Material		
filtrate container	Polypropylene	Polypropylene
insert	Polycarbonate	Polycarbonate
Overall L x dia.	mm 122 x 16	76 x 25.5

*Using fixed angle rotor, maximum 3ml with swing-out rotor.

Additional features of Vivaspin 2

Unique to the Vivaspin 2, is the choice of directly pipetting the concentrate from the dead stop pocket built into the bottom of the concentrator, or alternatively reverse spinning into the concentrate recovery cap which can be sealed for storage. Both methods result in near total concentrate recoveries.



FC860 in use, FC869 to FC874 are similar

Vivaspin Concentrators

As described. Supplied in packs of 25 (except FC890-05 which is supplied in a pack of 40, and FC890-32 which is supplied in a pack of 12). Packs of 100 are also available – details on request.

	Membrane material#	Pore size MWCO x 1000
Vivaspin 500		
FC860-05	PES	5
FC860-10	PES	10
FC860-30	PES	30
FC860-50	PES	50
FC860-70	PES	100
Vivaspin 500 Starter Pack		
Comprising 5 each of each size, 5K, 10K, 30K, 50K, 100K MWCO.		
FC860-95	Vivaspin 500 starter pack	
Vivaspin 2		
FC869-05	PES	5
FC869-10	PES	10
FC869-30	PES	30
FC869-50	PES	50
FC869-70	PES	100
FC869-72	PES	300
FC874-05	CA	5
FC874-10	CA	10
FC874-20	CA	20
Vivaspin 6		
FC877-05	PES	5
FC877-10	PES	10
FC877-30	PES	30
FC877-50	PES	50
FC877-70	PES	100
FC877-90	PES	0.2µm
Vivaspin 15		
FC890-32	Hydrosart*	30

*Modified regenerated cellulose membrane offering high recovery and low absorption for desalting and concentration of Ig fractions.

#Material key:

CA — Cellulose triacetate PES — Polyethersulphone



FC869, FC876, FC890-series

Filtration

Disposable Filters

CORNING

Corning "Tube Top" filtration system

Low-volume media filtration unit, comprising sterile filter funnel with integral 42 x 42mm membrane filter coupled to 50ml graduated sterile centrifuge tube receiver, separate reusable stand (2 supplied per pack) and plug seal cap. Individually wrapped, sterile and non-pyrogenic. Supplied in packs as indicated.

	Receiver capacity ml	Pore size μm	Membrane Material*	Pack qty.
FD190-10	5-50	0.22	CA	12
FD190-15	5-50	0.45	CA	12

*CA=Cellulose Acetate.

Corning Bottle Top Filters

Disposable T.C. grade polystyrene filter funnel with heat-sealed membrane filter, mounted on screwthread bottle cap and vacuum connection. Supplied in packs as indicated.

	Receiver Capacity ml	Pore Size μm	Membrane Material*, size mm	Pack qty.
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Screwthread Neck Diameter 33mm

FD210-10	150	0.22	CA, 42 x 42	48
FD210-12	150	0.45	CA, 42 x 42	48
FD210-16	500	0.22	CA, 63 x 63	12
FD210-17	500	0.22	PES, 63 x 63	12
FD210-18	500	0.45	CA, 63 x 63	12

Screwthread Neck Diameter 45mm

FD210-40	150	0.22	CA, 42 x 42	48
FD210-42	150	0.45	CA, 42 x 42	48
FD210-46	500	0.22	CA, 63 x 63	12
FD210-47	500	0.22	PES, 63 x 63	12
FD210-48	500	0.45	CA, 63 x 63	12

*CA=Cellulose Acetate. *PES=Polyethersulphone.

Suitable bottles – see *Bottles section BS435-series*.

Corning Disposable Membrane Vacuum Filter/Storage Systems

Manufactured in sterile T.C. grade polystyrene. Units comprise filter funnel with integral heat-sealed membrane filter and push-over cap, screw fitted to a receiver bottle. With side arm and tubing adapter for connecting flexible tubing and spare receiver bottle plug seal cap. Individually wrapped, sterile and non-pyrogenic. Supplied in packs as indicated.

	Receiver capacity ml	Pore size μm	Membrane Material*, size mm	Pack qty.
FD200-10	250	0.22	CA, 49 x 49	12
FD200-12	250	0.20	NYL, 49 x 49	12
FD200-14	250	0.20	CN, 49 x 49	12
FD200-16	250	0.22	PES, 49 x 49	12
FD200-20	250	0.45	CA, 49 x 49	12
FD200-40	500	0.22	CA, 63 x 63	12
FD200-42	500	0.20	NYL, 63 x 63	12
FD200-44	500	0.20	CN, 63 x 63	12
FD200-46	500	0.22	PES, 63 x 63	12
FD200-50	500	0.45	CA, 63 x 63	12
FD200-70	1000	0.22	CA, 79 x 79	12
FD200-72	1000	0.20	NYL, 79 x 79	12
FD200-74	1000	0.20	CN, 79 x 79	12
FD200-76	1000	0.22	PES, 79 x 79	12
FD200-80	1000	0.45	CA, 79 x 79	12

*CA=Cellulose Acetate.

*NYL=Nylon.

*CN=Cellulose Nitrate.

*PES=Polyethersulphone.

Spares

Disposable, T.C. grade polystyrene, sterile receiver bottles with 45mm neck, hand grips and plug seal cap. Supplied in packs of 24.

FD204-15	250ml
FD204-20	500ml
FD204-25	1000ml



FD190



FD200/FD210 series

Filtration

Sterilising Filter Units



Sterilising Filter Units

Pre-sterilised disposable single use units for laboratory use in cold sterilisation, clarification and ultra-cleaning of buffers, aqueous solutions and microbiological media.

- ◆ Transparent polystyrene upper and lower chambers with approximate graduations
- ◆ Colour coded green collar
- ◆ White cellulose nitrate 50mm diameter membrane
 - 0.2µm ungridded
 - 0.45µm gridded black
 - 0.8µm ungridded

	Pore size µm	Receiver ml	Pack qty.
FD240-24	0.2	150	12
FD240-27	0.45	150	12
FD240-30	0.8	150	12
FD240-37	0.2	250	12
FD240-40	0.45	250	12
FD240-43	0.8	250	12
FD240-50	0.2	500	12
FD240-53	0.45	500	12
FD240-56	0.8	500	12
FD240-64	0.2	1000*	12
FD240-67	0.45	1000*	12
FD240-70	0.8	1000*	12

* Upper chamber is 500ml.

Tissue Culture Units



Tissue Culture Units

Pre-sterilised disposable single use units designed to satisfy the exacting requirements of cell and tissue culture procedures using clean, non-toxic materials. Ideal for filtering proteinaceous solutions.

- ◆ Colour coded yellow collar
- ◆ Tissue culture grade white ungridded cellulose acetate membranes with low protein binding and minimal clogging
- ◆ Transparent polystyrene upper and lower chambers with approximate graduations
- ◆ Padless membrane support plate on the 50mm membranes minimises foaming of proteinaceous solutions

	Pore size µm	Membrane dia. mm	Receiver ml	Pack qty.
FD244-20	0.2	50	150	12
FD244-23	0.45	50	150	12
FD244-28	0.2	50	250	12
FD244-32	0.45	50	250	12
FD244-36	0.2	75	500	12
FD244-39	0.45	75	500	12
FD244-44	0.2	75	1000*	12
FD244-47	0.45	75	1000*	12

* Upper chamber is 500ml.

Cell Strainers

Cell Strainers

For quick, efficient, isolation of primary cells to provide a consistent "single cell" suspension from tissue samples. Remove debris and cell agglomerations prior to analysis, or in preparation of stocks for freezing.

- ◆ For use with 50ml centrifuge tubes
- ◆ Choice of mesh sizes: 40µm, 70µm or 100µm
- ◆ Improved cell suspension uniformity
- ◆ DNase- and RNase-free, non-pyrogenic, plastic construction with nylon mesh
- ◆ Gamma irradiated sterile and individually wrapped
- ◆ Extended peak on strainer rim allows easy, aseptic handling, using forceps

As described. Colour-coded and with mesh sizes, as indicated. Supplied individually wrapped in packs of 50.

- FD248-15** Blue, 40µm mesh
- FD248-25** Natural, 70µm mesh
- FD248-35** Yellow, 100µm mesh



FD248



FD240



FD244

Filtration

Analytical Filter Units



Pre-sterilised disposable single-use units with integral membrane. Ideal for microbial analysis, sterility testing, water quality or environmental analysis applications.

- ◆ Membrane easily removed for culturing or analysis
- ◆ 47mm diameter cellulose nitrate (CN) membrane which provides superior recovery and growth of micro-organisms
- ◆ Transparent polystyrene 150ml receiver with vacuum connection and approximate graduation at 100ml

	Pore μm	Pack qty.
FD250-10	0.2	12
FD250-13	0.45	12



FD250

Syringe Filters



Disposable Syringe Filters

For laboratory use. Accepts standard slip-fit and luer lock syringes. Autoclavable polypropylene housing and 25mm surfactant-free, cellulose acetate (SFCA) membrane. Certified pyrogen free.

	Pore size μm	Pack qty.
Non-Sterile		
FD260-31	0.2	100
FD260-34	0.45	100

Disposable Syringe Filters

Generally as FD260 but with nylon membrane. The membrane is inherently hydrophilic, contains no plasticisers or wetting agents and has a low level of extractables. Can be autoclaved.

	Pore size μm	Pack qty.
Sterile		
FD262-14	0.2	50
FD262-17	0.45	50
Non-Sterile		
FD262-32	0.2	100
FD262-35	0.45	100



FD260/FD262

Reusable Filter Holders



- ◆ For use with 47mm membrane (not supplied)
- ◆ Alternatives with either integral receiver or funnel
- ◆ Major components are transparent polysulphone
- ◆ Can be autoclaved
- ◆ Supplied with both sterilisation and analytical membrane support plates

	Capacities, ml	
	Upper	Receiver
FD270-10	250	250
FD270-13	500	500
FD272-10	250	Funnel
FD272-13	500	Funnel

Vacuum pumps – see PX240 to PX443.

Vacuum tubing – see TY230-22.



FD270/FD272

Flasks, Glass

Boiling/Extraction

Flasks, Pyrex 1070 series

Flat bottom. Narrow neck. Comply with ISO 1773 (BS 2734).

	Ref.	Cap. ml	Neck i.d. mm	B.S. stopper No. required
FK100-22	1070/02	50	18	17
FK100-24	1070/04	100	18	17
FK100-30	1070/12	250	30	29
FK100-35	1070/18	500	30	29
FK100-40	1070/24	1000	36	35
FK100-45	1070/28	2000	45	43
FK100-50	1070/32	4000	45	43
FK100-55	1070/36	6000	57	53
FK100-60	1070/38	10000	57	53
FK100-70	1070/42*	20000	60	57

*Supplementary to ISO range.

Flasks, Pyrex 1080 series

Flat bottom. Wide neck. For extraction applications.

	Ref.	Cap. ml	Neck i.d. mm	B.S. stopper No. required
FK105-22	1080/02	50	32	31
FK105-30	1080/08	250	47	45
FK105-35	1080/10	500	47	45
FK105-40	1080/12	1000	47	45
FK105-45	1080/14	2000	76	71

Flasks, Pyrex 1100 series

Round bottom. Narrow neck. Comply with ISO 1773 (BS 2734).

	Ref.	Cap. ml	Neck i.d. mm	B.S. stopper No. required
FK120-22	1100/02	50	18	17
FK120-24	1100/04	100	18	17
FK120-30	1100/12	250	30	29
FK120-35	1100/18	500	30	29
FK120-40	1100/24	1000	36	35
FK120-45	1100/28	2000	45	43
FK120-50	1100/32	4000	45	43
FK120-55	1100/35	6000	57	53
FK120-60	1100/36	10000	57	53
FK120-70	1100/38*	20000	67	62

*Supplementary to ISO range.

Flasks, Pyrex 1120 series

Round bottom. Wide neck. Capacities 1000 to 6000ml have a tooled rim neck.

	Ref.	Cap. ml	Neck i.d. mm	B.S. stopper No. required
FK125-30	1120/08	250	46	45
FK125-35	1120/14	500	46	45
FK125-45	1120/22	2000	70	67
FK125-55	1120/29	6000	80	79

Corks – see CW300.

Flask clamps – see SL710/SL726.

Stoppers – see SW600/SW684.



FK100

FK105



FK120

FK125

Flasks, Glass

Flask Supports

Cork Rings, compressed

For supporting round bodied flasks. Depth as indicated. Supplied singly.

	<i>o.d. x i.d. mm</i>	<i>For flasks ml</i>
35mm deep		
CW308-08	80 x 30	25 to 150
CW308-12	110 x 60	250, 500
CW308-16	140 x 90	1000
CW308-20	170 x 120	2000, 3000
CW308-24	210 x 150	4000, 5000
45mm deep		
CW309-30	240 x 200	4000 to 10000

Flask Support Stand

Polypropylene. For round bottom flasks. Top diameter 145mm.

FK180-15 Flask support stand

Flask Support Rings

Blue silicone rubber. Operating range -60 to +200°C. Double sided. Sit firmly on the bench and with bowl either side to hold different size flasks. Hold flask firmly but gently, irrespective of the angle.

Size	Bowl diameters	
	Wide	Narrow
1	76mm	44mm
2	121mm	80mm
3	165mm	118mm

Supplied as a set of 3 (one of each size)

FK180-60 Support rings set

Spare support rings for FK180-60

Supplied singly.

FK180-62 Support ring 76/44mm

FK180-64 Support ring 121/80mm

FK180-66 Support ring 165/118mm

Flask Stabilising Rings

Vinyl-coated lead. Wrap around flasks up to 4000ml to provide stability whilst on a bench or immersed in a water bath. Choice of closed, or open ring format which allows slight adjustment of the ring opening and position. An accessory holder is available to hold up to 8 lead rings. For flask sizes as indicated. Supplied singly.

	<i>Flask sizes, ml</i>	<i>i.d. mm</i>	<i>o.d. mm</i>	<i>Weight, g</i>
Closed Ring				
FK190-10	125 to 500	48	77	277
FK190-12	250 to 1000	51	90	508
FK190-14	500 to 2000	57	98	635
FK190-16	1000 to 4000	70	115	970
Open Ring				
FK192-10	125 to 500	42	75	227
FK192-12	250 to 1000	51	90	472
FK192-14	500 to 2000	54	98	599
FK192-16	1000 to 4000	60	113	907



CW308/CW309



FK180-15



FK190/FK192 in use



FK180-60 in use

Flasks, Glass

Conical, Narrow Neck

Flasks, Pyrex 1130 series

Erlenmeyer (conical). Narrow neck. With approximate graduations and trace code to access a downloadable batch certificate. Comply with ISO 1773 and DIN12380.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK200-14	1130/03*	5	12	11
FK200-16	1130/05*	10	12	11
FK200-20	1130/11	25	18	17
FK200-22	1130/02	50	18	17
FK200-24	1130/06	100	18	17
FK200-26	1130/12*	200	34	33
FK200-30	1130/14	250	30	29
FK200-32	1130/16*	300	34	33
FK200-35	1130/20	500	30	29
FK200-40	1130/26	1000	36	35
FK200-45	1130/30	2000	45	43
FK200-47	1130/32	3000	45	43
FK200-52	1130/36†	5000	46	45

*Supplementary to ISO and DIN ranges. †Supplementary to DIN range.

Flasks, Pyrex 4980 series. Heavy duty

Erlenmeyer (conical). Narrow neck with reinforced rims to protect from accidental impact damage. With approximate graduations. Neck accepts a rubber stopper, size as specified.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK203-16	4980-10	10	10	9
FK203-20	4980-25	25	13	11
FK203-22	4980-50	50	14	13
FK203-26	4980-125	125	23	21
FK203-30	4980-250	250	27	25
FK203-35	4980-500	500	31	29
FK203-40	4980-1L	1000	37	35
FK203-45	4980-2L	2000	43	41
FK203-50	4980-4L	4000	43	41
FK203-55	4980-6L	6000	43	41

Flasks, Pyrex 1137 series

Erlenmeyer (conical). SVL polybutylene terephthalate (PBT) screwcap PTFE faced with rubber disc. With approximate graduations. Can be dry heat or steam sterilised to 180°C. Suitable for storage of culture specimens and media.

	Ref.	Capacity ml	Cap size
FK205-14	1137/11	5	15
FK205-16	1137/12	10	15
FK205-20	1137/13	25	22
FK205-22	1137/02	50	22
FK205-24	1137/03	100	30
FK205-30	1137/06	250	42
FK205-35	1137/08	500	42
FK205-40	1137/10	1000	42
FK205-45	1137/14	2000	42
FK205-47	1137/18	3000	42

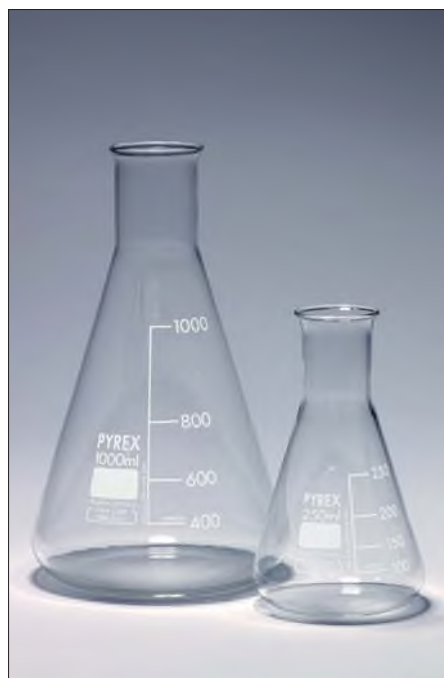
Spare SVL screwcaps – see *Stoppers* section.

Flasks, Duran

Erlenmeyer (conical). Narrow neck. With approximate graduations. Comply with ISO 1773.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK215-14	21216-14	25	18	17
FK215-17	21216-17	50	18	17
FK215-24	21216-24	100	18	17
FK215-32	21216-32	200	34	33
FK215-36	21216-36	250	30	29
FK215-39	21216-39	300	34	33
FK215-44	21216-44	500	30	29
FK215-54	21216-54	1000	36	35
FK215-63	21216-63	2000	45	43
FK215-68	21216-68	3000	46	45
FK215-73	21216-73	5000	46	45

FK203, reinforced rim



FK200



FK203

FK205



FK215

Flasks, Glass

Conical, Narrow Neck

Flasks, Rasotherm®

Borosilicate glass. Erlenmeyer (conical). Narrow neck. With approximate graduations. Comply with ISO 1773.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK216-20	94206001	25	18	17
FK216-22	94206002	50	18	17
FK216-24	94206003	100	18	17
FK216-26	94206004	200*	30	29
FK216-30	94206005	250	30	29
FK216-32	94206006	300*	30	29
FK216-35	94206007	500	30	29
FK216-40	94206008	1000	36	35
FK216-45	94206009	2000	45	43
FK216-47	94206010	3000	45	43
FK216-52	94206011	5000	45	43

*Supplementary to ISO range.

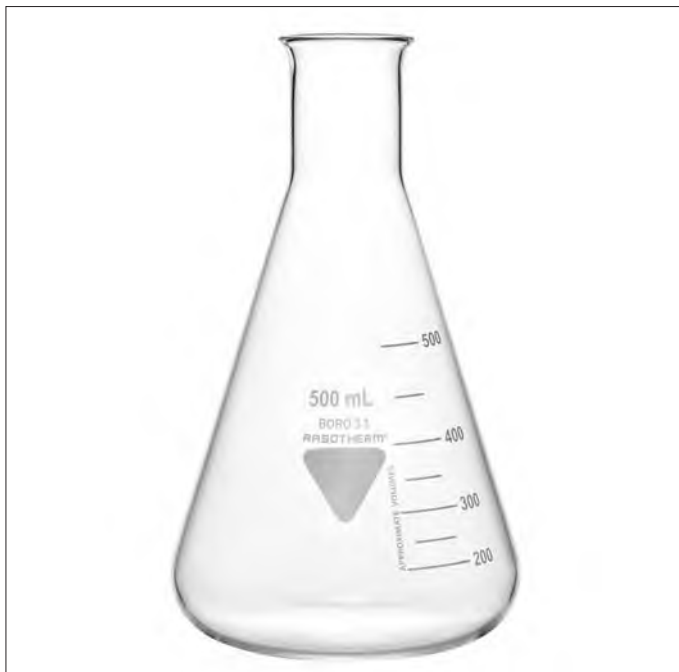
Conical, Wide Neck

Flasks, Rasotherm®

Borosilicate glass. Erlenmeyer (conical). Wide neck. With approximate graduations. Comply with ISO 24450.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK218-20	94306001	25*	31	29
FK218-22	94306002	50	35	33
FK218-24	94306003	100	35	33
FK218-26	94306004	200*	50	49
FK218-30	94306005	250	50	49
FK218-32	94306006	300*	50	49
FK218-35	94306007	500	50	49
FK218-40	94306008	1000	50	49
FK218-45	94306009	2000	69	67
FK218-47	94306010	3000	69	67

*Supplementary to ISO range.



FK216



FK218

Flasks, Glass

Conical, Wide Neck

Flasks, Pyrex 1140 series

Erlenmeyer (conical). Wide neck. With approximate graduations. Comply with DIN12385.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK220-22	1140/02	50	30	29
FK220-24	1140/04	100	30	29
FK220-30	1140/08	250	46	45
FK220-35	1140/10	500	46	45
FK220-40	1140/14	1000	46	45
FK220-45	1140/18*	2000	66	62

*Supplementary to DIN range.

Flasks, Pyrex 5100 series. Heavy duty

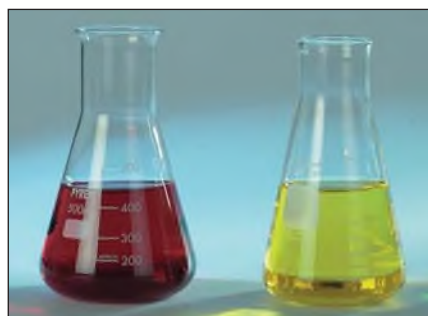
Erlenmeyer (conical). Wide neck with reinforced rims to protect from accidental impact damage. With approximate graduations. Neck accepts rubber stopper size as specified.

	Ref.	Capacity ml	Neck i.d. size	B.S. stopper No. required
FK223-26	5100-125	125	27	25
FK223-30	5100-250	250	33	31
FK223-35	5100-500	500	43	41
FK223-40	5100-1L	1000	48	45
FK223-45	5100-2L	2000	58	57

Flasks, Duran

Erlenmeyer (conical). Wide neck. With approximate graduations.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK227-14	21226-14	25	27	25
FK227-17	21226-17	50	30	29
FK227-24	21226-24	100	30	29
FK227-32	21226-32	200	46	45
FK227-36	21226-36	250	46	45
FK227-39	21226-39	300	46	45
FK227-44	21226-44	500	46	45
FK227-54	21226-54	1000	46	45
FK227-63	21226-63	2000	66	62

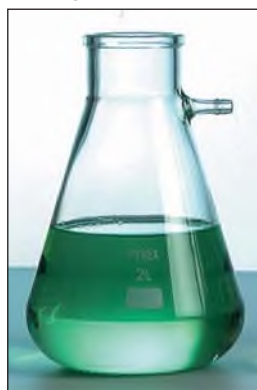


FK220

FK223



FK227



FK350



FK352



FK360-24 to -45



FK360-65 to -90

Filter

Flasks, Pyrex 1170 series

Buchner. Heavy wall. With studded base to minimise surface abrasion. Comply with ISO 6556.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
Integral side arm for 9mm bore flexible vacuum tubing				
FK350-24	1170/02	100	24	23
FK350-30	1170/04	250	35	33
FK350-35	1170/06	500	35	33
FK350-40	1170/08	1000	45	43
FK350-45	1170/10	2000	60	57
FK350-48	1170/12	3000	68	67
FK350-52	1170/14	5000	68	67

Screwthread side arm and removable polypropylene tubing adapter for 9mm bore flexible tubing

FK352-24	1170/02SC	100	24	23
FK352-30	1170/04SC	250	35	33
FK352-35	1170/06SC	500	35	33
FK352-40	1170/08SC	1000	45	43
FK352-45	1170/10SC	2000	60	57
FK352-52	1170/14SC	5000	68	67

Flasks, Filter, Duran

Heavy wall. Supplied with interchangeable, polypropylene push-in and ruffled hose connection assemblies.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
Conical shape				
FK360-24	21204-245	100	24	23
FK360-30	21204-365	250	35	33
FK360-35	21204-445	500	35	33
FK360-40	21204-545	1000	45	43
FK360-45	21204-635	2000	60	57
Bottle shape				
FK360-65	21194-685	3000	70	67
FK360-70	21194-735	5000	80	79
FK360-75	21194-865	10000	82	79
FK360-90	21194-915	20000	85	79
FK363-08	Spare hose connection assembly set for FK360 flasks			

Tissue Culture Flasks - see TP585-series.

Flasks, Glass

Buchner Flask Seals

Vacuum Ring Seal

A neoprene rubber disc with a tapered raised boss and central hole which accepts the stem of a Buchner or similar filter funnel. The disc seals when placed over the neck of a filter flask and vacuum is applied. Ring disc diameter 75mm.

FK364-10 Vacuum ring seal

Buchner Rings

Long-lasting, heavy-duty, profiled natural compound (60 shore) rubber rings which provide a vacuum-tight seal and excellent support for Buchner funnels, incorporating a wide flange and large surface contact. Available individually or in a set of all sizes, as indicated.

	To fit flask neck i.d.
FK364-25	24mm
FK364-35	35mm
FK364-45	45mm
FK364-55	60mm
FK364-75	68mm

FK364-80 Set of 5 Buchner rings for flask with neck diameters: 24mm, 35mm, 45mm, 60mm and 68mm

Buchner funnels in porcelain, glass and plastic are available – see FT650/FT660, FT804 and FT815 series.



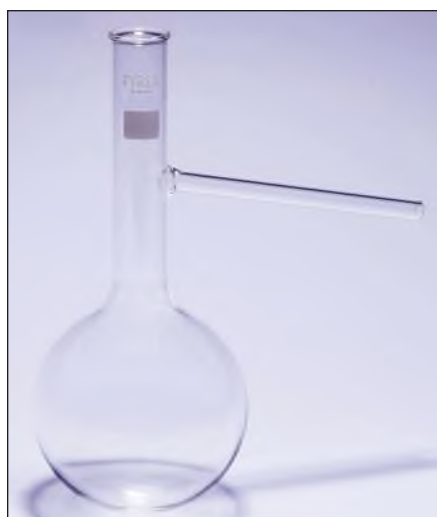
FK364-10 in use



FK502



FK364-25 to -75 in use



FK527-26

Roux, Distillation, Kjeldahl

Flasks, Pyrex 1350 series

Roux culture. With fire polished, offset neck.

	Ref.	Capacity ml	Neck	Neck i.d. mm	B.S. stopper No. required
FK502-37	1350/04	600	Offset	28	27
FK502-42	1350/06	1200	Offset	33	31

Tissue Culture Flasks and Roller Culture Flasks – see *Tissue Culture* section.

Culture Vessels, flat flange – see *Quickfit* section.

Flask, Pyrex 1290/04

Distillation. Side arm set at 75° to vertical axis and positioned to suit a 76mm partial immersion thermometer.

	Ref.	Capacity ml
To ASTM E133 and IP 123		
FK527-26	1290/04	125

Flasks, Pyrex 1200 series

Kjeldahl. Long neck.

	Ref.	Capacity ml	Neck i.d. mm	B.S. stopper No. required
FK540-24	1200/04	100	17	15
FK540-32	1200/10	300	24	23
FK540-35	1200/12	500	30	29
FK540-38	1200/16	800	30	29



FK540

Flasks, Plastic

Conical

All capacities are nominal.

Flasks, Azlon, Screw Capped

Wide neck. With polypropylene screw cap and approximate graduations. Will also accept accessory conical stoppers as indicated. Autoclavable at 121°C. Supplied singly.

	Ref.	Capacity ml	Cap size mm	Stopper accepted
Polypropylene, translucent				
FK765-22	FDE542	50	40	34/35
FK765-25	FDE544	100	40	34/35
FK765-30	FDE546	250	52	45/40
FK765-35	FDE548	500	52	45/40
FK765-40	FDE550	1000	52	45/40
PMP (TPX), transparent				
FK767-25	FDE444	100	40	34/35
FK767-30	FDE446	250	52	45/40
FK767-35	FDE448	500	52	45/40
FK767-40	FDE450	1000	52	45/40

Accessory stoppers – see SW432/SW446 series

Tissue Culture

Erlenmeyer Flasks, Corning

Polycarbonate with polypropylene screw cap which can be adjusted to provide gassing or a leak-proof seal. Transparent and graduated. Sterilised by gamma irradiation. Sealed individually in a sterile sleeve within outer packs as indicated.

	Ref.	Capacity ml	Cap size	Pack qty.
TP550-15	430421	125	26	50
TP550-20	430183	250	31	50
TP550-25	430422	500	43	25

Culture Flasks, baffled, Nalgene

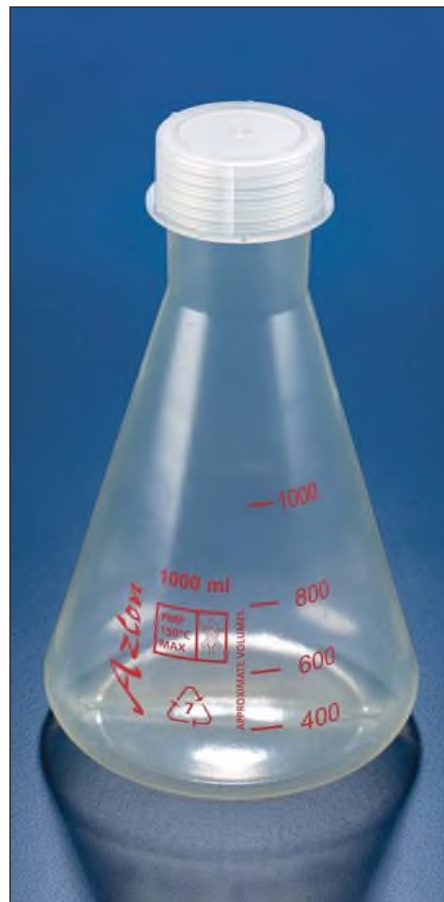
Tough polycarbonate flasks with indented baffles which increase mixing when trypsinizing and aerating in a variety of processes such as cell culture growth and fermentation. Supplied in packs as indicated.

	Ref.	Capacity ml	Pack qty.
TP575-13	4110-0250	250	4
TP575-16	4110-0500	500	4
TP575-19	4110-1000	1000	2

Further ranges of these flasks can be found in the Tissue Culture section.



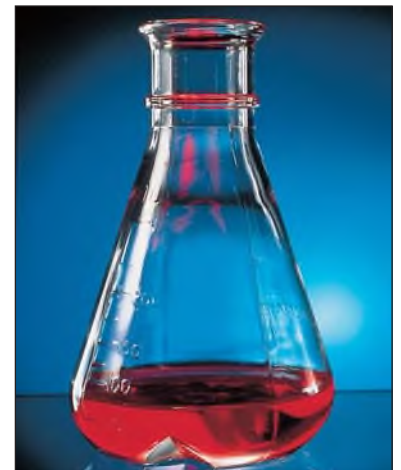
FK765



FK767



TP550



TP575

Flasks, Volumetric

Glass, MBL®

Volumetric Flasks, MBL

Class B. Borosilicate with polyethylene stopper. Blue enamel graduation and inscriptions.

	Ref.	Capacity ml	Stopper
Class B. Uncertified			
FL310-14	FRD022P	5	10/19 [†]
FL310-16	FRD024P	10	10/19 [†]
FL310-18	FRD025P	20*	10/19
FL310-20	FRD026P	25	10/19
FL310-22	FRD028P	50	12/21
FL310-24	FRD030P	100	14/23 [†]
FL310-28	FRD032P	200	14/23
FL310-30	FRD034P	250	14/23
FL310-35	FRD036P	500	19/26
FL310-40	FRD038P	1000	24/29
FL310-45	FRD040P	2000	29/32
FL310-52	FRD042P	5000*	34/35

* Supplementary to DIN 12664. † Stopper size not to DIN 12664.

Volumetric Flasks, MBL

Class A. Borosilicate with polyethylene stopper. Blue enamel graduation and inscriptions.

	Ref.	Capacity ml	Stopper
Class A. Conformity Certified			
FL345-14	FRD164	5	10/19 [†]
FL345-16	FRD166	10	10/19 [†]
FL345-18	FRD167	20*	10/19
FL345-20	FRD168	25	10/19
FL345-22	FRD170	50	12/21
FL345-24	FRD172	100	14/23 [†]
FL345-28	FRD174	200	14/23
FL345-30	FRD176	250	14/23
FL345-35	FRD178	500	19/26
FL345-40	FRD180	1000	24/29
FL345-45	FRD182	2000	29/32
FL345-52	FRD184	5000*	34/35

* Supplementary to DIN 12664. † Stopper size not to DIN 12664.

Volumetric Flasks

To ISO1042, DIN12664 and clear glass unless otherwise stated.

Tolerances

Cap. ml	USP ±ml	Class A ±ml	Class B ±ml	Cap. ml	USP ±ml	Class A ±ml	Class B ±ml
1	0.02	—	0.03	100	0.08	0.10	0.20
2	0.02	—	0.03	200	0.10	0.15	0.30
5	0.02	0.025	0.05	250	0.12	0.15	0.30
10	0.02	0.025	0.05	500	0.20	0.25	0.50
20	0.03	0.04	0.08	1000	0.30	0.40	0.80
25	0.03	0.04	0.08	2000	0.50	0.60	1.20
50	0.05	0.06	0.12	5000	1.00	1.20	2.00

Amber Staining of Borosilicate Glassware

We will be pleased to quote against your specific enquiry.

Spare Stoppers and Screwcaps – see *Stoppers* section.

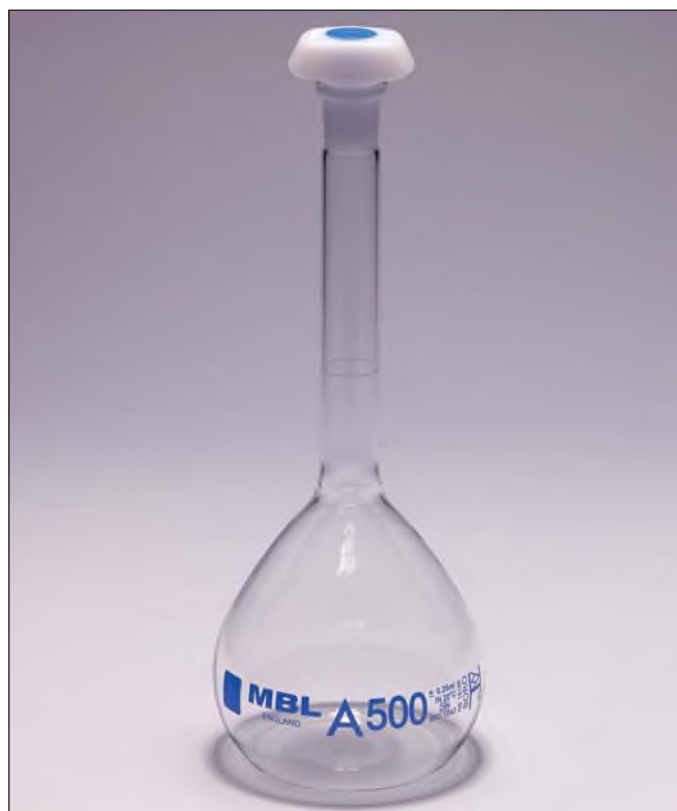
Conformity Certified

Indicated by the symbol **H** shows that the product has been manufactured under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions the manufacturer certifies conformity with annex 12 of the Eichordnung.



FL310



FL345

Flasks, Volumetric

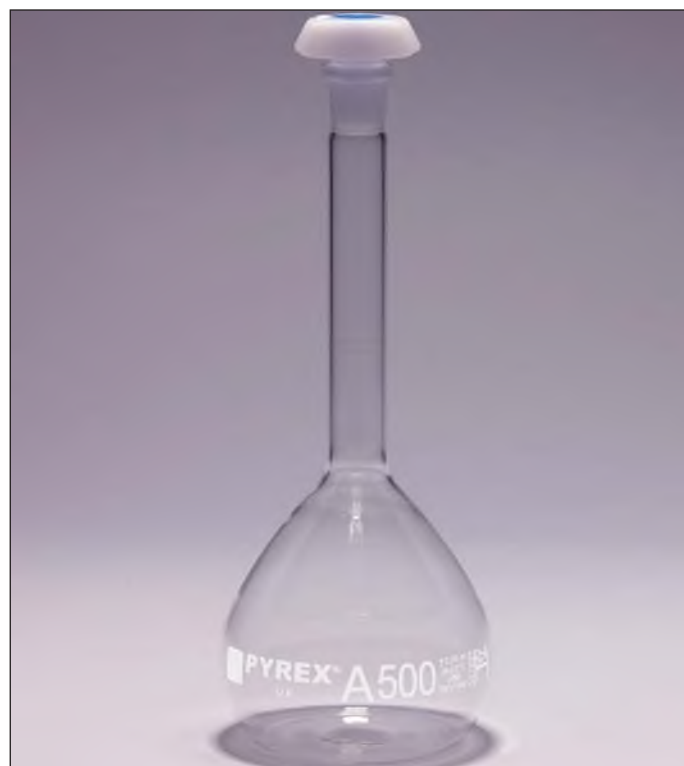
Glass, Pyrex®

Volumetric Flasks, Pyrex

Class A. USP tolerance. Borosilicate glass with polyethylene stopper. White enamel graduation and inscriptions.

	Ref.	Capacity ml	Stopper
Class A. USP tolerance. Conformity Certified			
FL505-06	3151/01	1	7/16 [†]
FL505-08	3151/02	2	7/16 [†]
FL505-14	3151/04	5	10/19 [†]
FL505-16	3151/06	10	10/19 [†]
FL505-18	3151/08	20*	10/19
FL505-20	3151/10	25	10/19
FL505-22	3151/12	50	12/21
FL505-24	3151/14	100	14/23
FL505-28	3151/16	200	14/23
FL505-30	3151/18	250	14/23
FL505-35	3151/20	500	19/26
FL505-40	3151/22	1000	24/29
FL505-45	3151/24	2000*	29/32
FL505-52	3151/26	5000*	34/35
Class A. USP tolerance. Conformity Certified and Works Certified			
FL509-06	3151/01WC	1	7/16 [†]
FL509-08	3151/02WC	2	7/16 [†]
FL509-14	3151/04WC	5	10/19 [†]
FL509-16	3151/06WC	10	10/19 [†]
FL509-18	3151/08WC	20*	10/19
FL509-20	3151/10WC	25	10/19
FL509-22	3151/12WC	50	12/21
FL509-24	3151/14WC	100	14/23
FL509-28	3151/16WC	200	14/23
FL509-30	3151/18WC	250	14/23
FL509-35	3151/20WC	500	19/26
FL509-40	3151/22WC	1000	24/29
FL509-45	3151/24WC	2000*	29/32
FL509-52	3151/26WC	5000*	34/35

* Supplementary to DIN 12664. † Stopper size not to DIN 12664.



FL505, FL509 are similar

Volumetric Flasks, Pyrex

Class A. USP tolerance. Borosilicate glass with polyethylene stopper. White enamel graduation and inscriptions.

	Ref.	Capacity ml	Stopper
Class A. USP tolerance. Amber glass. Conformity Certified			
FL513-14	3152/04A	5	10/19 [†]
FL513-16	3152/06A	10	10/19 [†]
FL513-18	3152/08A	25	10/19
FL513-20	3152/10A	50	12/21
FL513-22	3152/12A	100	14/23
FL513-24	3152/14A	200	14/23
FL513-28	3152/16A	250	14/23
FL513-30	3152/18A	500	19/26
FL513-35	3152/20A	1000	24/29
FL513-40	3152/22A	2000	29/32
Class A. USP tolerance. Amber glass. Conformity and Works Certified			
FL516-14	3152/04AWC	5	10/19 [†]
FL516-16	3152/06AWC	10	10/19 [†]
FL516-20	3152/08AWC	25	10/19
FL516-22	3152/10AWC	50	12/21
FL516-24	3152/12AWC	100	14/23
FL516-28	3152/14AWC	200	14/23
FL516-30	3152/16AWC	250	14/23
FL516-35	3152/18AWC	500	19/26
FL516-40	3152/20AWC	1000	24/29
FL516-45	3152/22AWC	2000	29/32

† Stopper size not to DIN 12664.

Conformity Certified

Indicated by the symbol **H** shows that the product has been manufactured under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions the manufacturer certifies conformity with annex 12 of the Eichordnung.



FL513, FL516 are similar

Flasks, Volumetric

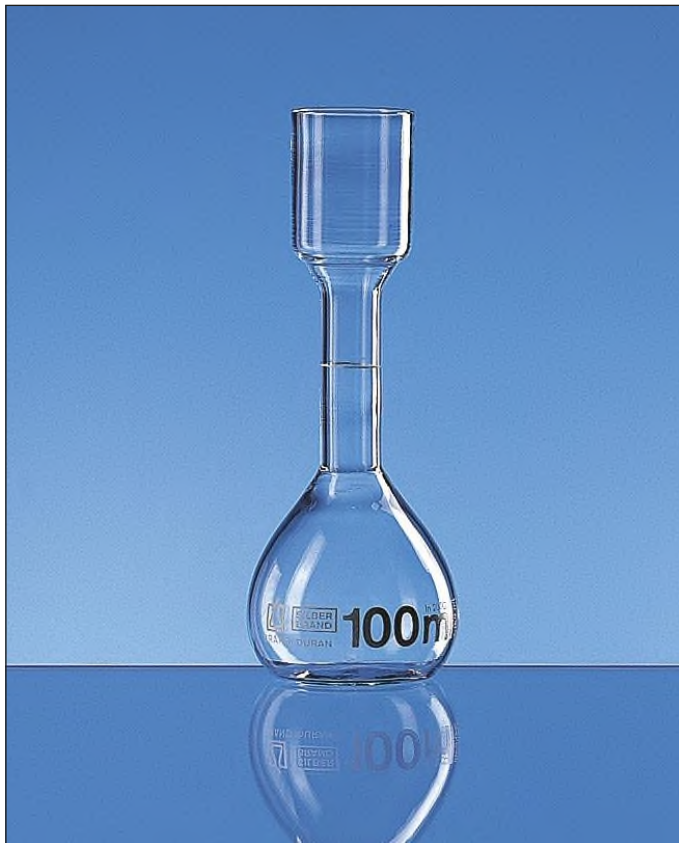
Kohlrusch

Kohlrusch Flasks, Class B

Borosilicate glass. For sugar and viscosity tests. White enamel graduation and inscriptions.

	Capacity ml	Tolerance \pm ml
FL613-60	100	0.20
FL613-70	200	0.30

Florentine & Iodine Flasks – see *Quickfit* section.



FL613

Flasks, Volumetric

Glass Blaubrand®

Volumetric Flasks, Blaubrand® Conformity Certified

To DIN EN ISO 1042. Class A. Duran® borosilicate glass. With square grip, polyethylene stopper. Calibrated "to contain". Ring mark and inscriptions in highly contrasting blue enamel. PURprotect versions are safety-coated in blue polyurethane to retain glass fragments in the event of breakage.

	Capacity ml	Tolerance ±ml	Stopper
Class A. Conventional shape			
FL560-20	10	0.04	10/19
FL560-25	20	0.04	10/19
FL560-30	25	0.04	10/19
FL560-35	50	0.06	12/21
FL560-38	50 [†]	0.08	14/23
FL560-43	100	0.1	12/21
FL560-46	100	0.12	14/23
FL560-50	200	0.15	14/23
FL560-55	250	0.15	14/23
FL560-60	500	0.25	19/26
FL560-65	1000	0.4	24/29
FL560-70	2000	0.6	29/32
FL560-75	5000	1.2	34/35
Class A. Conventional shape, PURprotect safety-coated			
FL561-38	50 [†]	0.08	14/23
FL561-43	100	0.1	14/23
FL561-50	200	0.15	14/23
FL561-55	250	0.15	14/23
FL561-60	500	0.25	19/26
FL561-65	1000	0.4	24/29
Class A. Trapezoidal shape, with wide, flat bottom for extra stability.			
FL564-05	1	0.025	7/16
FL564-10	2	0.025	7/16
FL564-15	5	0.025	7/16
FL564-20	10 [†]	0.04	10/19
FL564-25	20	0.04	10/19
FL564-30	25	0.04	10/19
FL564-35	50	0.06	12/21

† Has wide neck.

Plastic

Azlon

Volumetric Flasks, Azlon

Class B. With stopper.

	Ref.	Capacity ml	Neck
Polypropylene (translucent)			
FL800-20	FDFO12N	25	10/19
FL800-22	FDFO18N	50	14/23
FL800-24	FDFO24N	100	14/23
FL800-30	FDFO30N	250	19/26
FL800-35	FDFO36N	500	19/26
PMP (TPX) (transparent)			
FL810-20	FDFO112N	25	10/19
FL810-22	FDFO118N	50	14/23
FL810-24	FDFO124N	100	14/23
FL810-30	FDFO130N	250	19/26
FL810-35	FDFO136N	500	19/26

Florentine & Iodine Flasks – see *Quickfit* section.

Conformity Certified

Indicated by the symbol P shows that the product has been manufactured by Brand under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions, Brand certify conformity with annex 12 of the Eichordnung.



FL560/FL564



FL561



FL800



FL810

Flow

Flow Indicators

Flow Indicators

Simple to install indicators which give you a visual guide of either gas or liquid in-line flow continuity.

◆ Choice of materials

- Styrene acrylonitrile (SAN)
Maximum operating temperature +30°C
- Polymethylpentene (PMP)
Maximum operating temperature +60°C

Comprising paddle wheel in a transparent plastic housing. Rotation of the vanes gives a visual indication of either gas or liquid flow. Can accommodate flow rates down to approximately 150ml/minute. With stepped side arms for 6 to 11mm bore flexible tubing. Overall 88 x 40 x 15mm.

FR200-12 Styrene acrylonitrile

FR200-15 Polymethylpentene

Falling ball Viscometer – see VC840.

Liquid Flow Consistometer – see VC845.



FR200

Flow Cups

Simple to use flow cups for the approximate measurement of apparent viscosity in a wide range of materials including paints, varnishes, lacquers, inks and other viscous products.

BS-ISO Flow Cups, Seta

To BS3900; ASTM D5125; EN535 - ISO2431; DIN 53224. Aluminium with stainless steel jet. The cup number is the orifice diameter in mm.

VC100-15 No. 3

VC100-20 No. 4

VC100-25 No. 5

VC100-30 No. 6

VC100-40 No. 8*

*Note: This cup is not in the current BS-ISO series but is offered for use with high viscosity samples.

B-Type Flow Cups, Seta

Brass. As specified in former BS3900 Section A6. Viscosity range stated is approximate.

	Jet	Orifice diameter inches	Viscosity range stokes
VC120-10	B2	0.093	0 to 0.5
VC120-15	B3	0.125	0.4 to 1.2
VC120-20	B4	0.156	0.8 to 2.5
VC120-25	B5	0.187	1.5 to 10
VC120-30	B6	0.281	10 to 50

For alternative flow cups and details, please refer to the main listing.



VC100 with stand, spirit level and beaker
Flow cups VC120 and VC140 are similar

Funnels

Conical, Glass

All dimensions are nominal.

Funnels

Conical. Dimension given is the top diameter. Supplied singly.

	Top dia. mm
Plain, soda-lime	
FT140-10	25
FT140-15	40
Plain, borosilicate	
FT140-20	50
FT140-30	75
FT140-35	100
FT140-45	150
FT140-50	200
FT140-60	250

Choice of Filter Paper

for use in conical funnels.

The following is an approximate guide to the filter paper diameter required for some of the common sizes of conical filter funnel.

Funnel mm	Filter paper cm	Funnel mm	Filter paper cm
35	5.5	100	18.5
45	7.0	150	24.0
55	9.0	180	32.0
65	11.0	200	40.0
75	12.5		

– see FB100 to FB380 in the Filtration section.

Funnels, Pyrex

Conical. Supplied singly.

	Ref.	Top dia. mm	Stem length mm
Plain, short stem			
FT160-10	2140/01	35	35
FT160-15	2140/02	45	45
FT160-20	2140/03	70	71
FT160-30	2140/06	80	82
FT160-35	2140/10	105	106
FT160-40	2140/11	125	122
FT160-45	2140/12	150	154
FT160-50	2140/14	200	193
Plain, long stem			
FT165-20	2145/03	70	150
FT165-30	2145/06	80	150
FT165-35	2145/10	105	150
Fluted, long stem			
FT170-25	2150/03	65	150
FT170-30	2150/06	80	150
FT170-40	2150/10	110	150

Filter Tubes, Pyrex

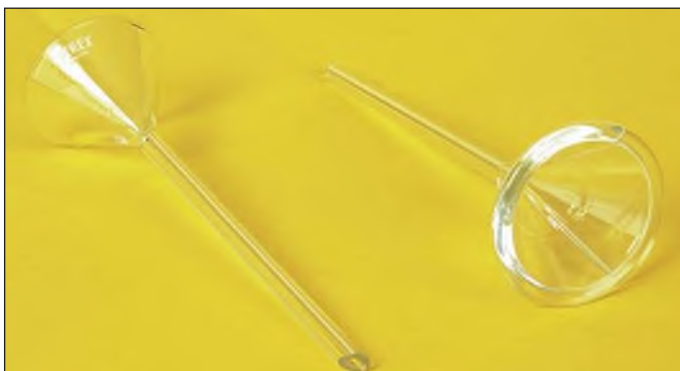
With 6mm diameter side arm. For small scale filtration applications. Can be used with short stem funnels as FT160 series. Dimensions stated are tube length x diameter. Supplied singly.

	Ref.	Size mm
FT200-20	2110/06	150 x 18
FT200-25	2110/08	150 x 24



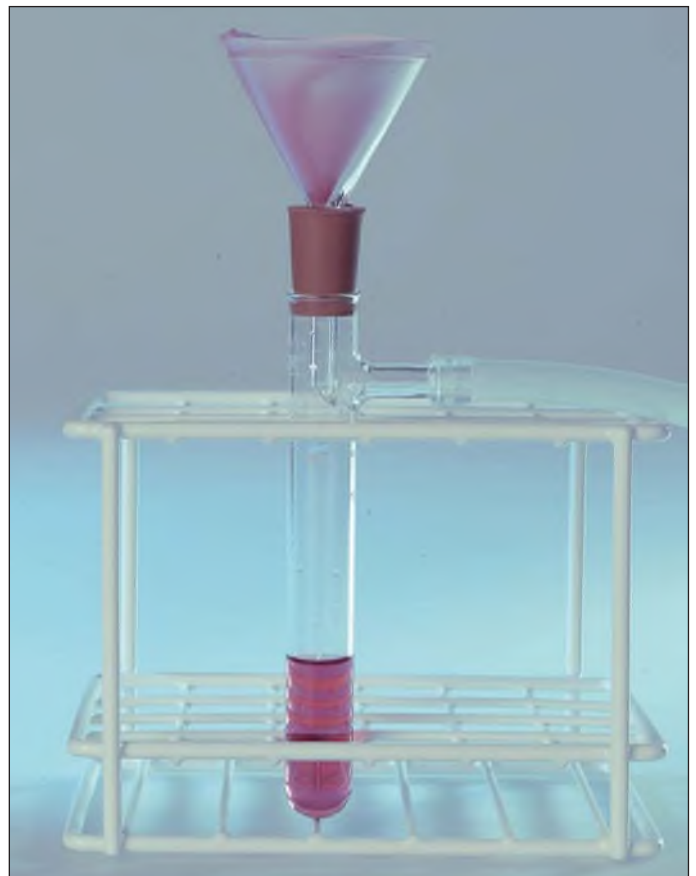
FT140

FT160



FT165

FT170



FT200 in use

Funnels

Conical, Plastic

All dimensions are nominal.

Funnels, polypropylene

General purpose, conical. Dimension given is the top diameter. Supplied singly.

	Dia. mm
FT254-12	38
FT252-12	40
FT252-25	58
FT252-30	70
FT252-35	82
FT252-40	110
FT252-45	150

Funnels, Azlon

Conical. Dimension given is the top diameter. Supplied singly.

	Ref.	Dia. mm
Polypropylene lightweight		
FT260-15	FWC056	40
FT260-20	FWC058	50
FT260-30	FWC060	75
FT260-35	FWC062	100
FT260-40	FWC064	120
FT260-45	FWC066	150
Polyethylene rigid		
FT280-30	FWC102	80
FT280-35	FWC104	100
FT280-40	FWC106	120
FT280-45	FWC108	140
FT280-50	FWC110	180
FT280-55	FWC112	230
FT280-60	FWC114	245
FT280-65	FWC116	290
FT280-70	FWC118	360

Funnels

Conical. Half round. Suitable for filling multi-neck flasks. Groove in stem to prevent airlock. Supplied singly.

	Height. mm	Taper
Polypropylene		
FT320-35	100	19/26
FT320-45	140	29/32

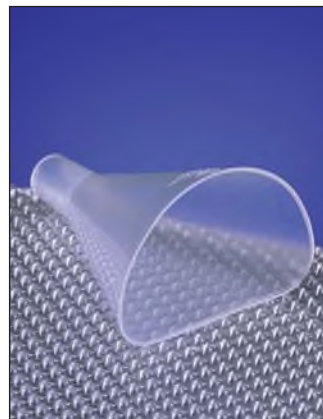
All dimensions are nominal.



FT252/FT254



FT254/FT260/FT280



FT320



FT380



FT450

FT460

Stainless and Powder

Funnels, stainless steel

Conical. Dimension given is the top diameter. Incorporating an internal, perforated strainer, permanently fixed at the neck of the funnel stem. Supplied singly.

FT380-45	120mm with strainer
FT380-60	245mm with strainer

Powder Funnels

Conical. Short wide parallel stem minimises bridging and aids transfer of powder. Supplied singly.

	Ref.	Top dia. mm	Stem dia. mm
Pyrex glass			
FT450-30	2130/02	80	18
Polypropylene			
FT460-25	—	65	16
FT460-30	—	80	22
FT460-35	—	100	26
FT460-40	—	120	30
FT460-45	—	150	36
FT460-65	FWC212	290	35

Funnel Stands and Rings – see SL202/SL760/SL800/SL804 in the Stands section.

Funnel to flask adapter – see FK364.

Powder Funnels with cone on stem – see Quickfit section.

Funnels

Sintered Glass

All capacities and dimensions are nominal. All funnels are supplied singly.

Buchner Funnels, Pyrex

With flat sintered glass filter disc unless otherwise stated.

	Ref.	Capacity ml	Porosity grade
30mm disc			
FT650-11	3620/02	35	1
FT650-12	3620/04	35	2
FT650-13	3620/06	35	3
FT650-14	3620/08	35	4
FT650-15	3620/10	35	5
40mm disc			
FT652-10	3630/01	80	0
FT652-11	3630/02	80	1
FT652-12	3630/04	80	2
FT652-13	3630/06	80	3
FT652-14	3630/08	80	4
FT652-15	3630/10	80	5
60mm disc			
FT654-10	3700/01	125	0
FT654-11	3700/02	125	1
FT654-12	3700/04	125	2
FT654-13	3700/06	125	3
FT654-14	3700/08	125	4
FT654-15	3700/10	125	5
95mm disc			
FT656-10	3710/01	500	0
FT656-12	3710/04	500	2
FT656-13	3710/06	500	3
FT656-14	3710/08	500	4
120mm disc domed			
FT658-11	3720/02	1000	1
FT658-12	3720/04	1000	2
FT658-13	3720/06	1000	3
FT658-14	3720/08	1000	4
175mm disc domed			
FT660-11	3722/02	3000	1
FT660-12	3722/04	3000	2
FT660-13	3722/06	3000	3
FT660-14	3722/08	3000	4

Conical Funnels, Pyrex

With flat 20mm diameter sintered glass disc.

	Ref.	Capacity ml	Porosity grade
FT670-13	3730/06	20	3
FT670-14	3730/08	20	4

Cylindrical Funnels, Pyrex

With flat sintered glass disc.

	Ref.	Capacity ml	Porosity grade
15mm disc			
FT690-11	3780/02	8	1
FT690-12	3780/04	8	2
FT690-13	3780/06	8	3
FT690-14	3780/08	8	4



FT690



FT656/FT660, FT650/FT654 are similar



FT670

Funnels

Buchner and Hirsch Type

All capacities and dimensions are nominal. All funnels are supplied singly.

Buchner Funnels

Porcelain, with perforated support plate. Dimension given is the nominal filter paper size.

	Cap. ml	Paper cm
FT804-12	25	4.0
FT804-18	85	5.5
FT804-26	150	7.0
FT804-34	265	9.0
FT804-40	510	11.0
FT804-45	700	12.5

Buchner Funnels

Polypropylene. Robust, two-piece construction for easy cleaning. Autoclavable. Dimension given is the nominal filter paper size.

	Cap. ml	Paper cm
FT815-12	40	4.25
FT815-18	70	5.5
FT815-26	180	7.0
FT815-34	390	9.0
FT815-40	810	11.0
FT815-48	2100	15.0
FT815-56	6000	24.0

Vacuum Ring Seal

A neoprene rubber disc with a tapered raised boss and central hole which accepts the stem of a Buchner or similar filter funnel. Ring disc diameter 75mm.

FK364-10 Vacuum ring seal

Buchner Rings – see FK364-25 to -75 series

Three-piece Funnel, Whatman

Borosilicate glass with acrylic support plate for filter paper. Can be dismantled quickly for cleaning. Dimension given is the filter paper size required.

	Cap. ml	Paper cm
FT850-10	16	2.5
FT850-15	36	4.7
FT850-20	115	7.0
FT850-22	210	7.0
FT850-24	400	7.0
FT850-30	200	9.0
FT850-35	530	12.5

Hirsch Funnels

Porcelain, with perforated support plate.

	Top dia. mm	Plate dia. mm	Perforated dia. mm
FT880-54	50	30	25
FT880-58	78	47	33



FK364-10 in use

Thistle

Thistle Funnels

Glass with plain stem. Stem 6mm diameter.

	Stem length mm
FT922-20	200
FT922-25	250
FT922-30	300

Thistle Funnel, Azlon

Polypropylene. With stub stem. Includes stem tubing 250mm long to fit inside stub. Top diameter 34mm.

FT930-10 FWC220

Tissue Culture bottle top filters – see FD210 series.



FT930



FT804



FT850



FT815



FT880



FT922

Funnels, Separating

Dropping and Separating, Cylindrical Shape

To ISO 4800 where appropriate. Pyrex borosilicate glass with interchangeable glass or PTFE stopcock and stopper. All capacities and graduations are nominal. All funnels are supplied singly.

Dropping Funnels, Cylindrical, Pyrex

Stoppered. Borosilicate glass.

Ref.	Capacity ml	Stopper	
Glass key, graduated			
FU204-15	3590/01	50	19/26
FU204-20	3590/02	100	19/26
FU204-25	3590/04	250	24/29
FU204-30	3590/06	500	24/29
FU204-35	3590/08	1000	29/32

Dropping Funnels with outlet inside cone, Cylindrical, Pyrex

For easy connection with jointed glassware. Borosilicate glass.

Ref.	Capacity ml	Stopper	
PTFE key, graduated			
FU238-15	443333	50	19/26
FU238-20	443340	100	19/26
FU238-25	443347	250	29/32
FU238-30	443354	500	29/32
FU238-35	443360	1000	29/32

Spare Stopcocks and Stoppers for Dropping and Separating Funnels – see *Stopcock and Stoppers sections*.

Separating, Conical and Pear Shape

Separating Funnels, Conical, Pyrex

Stoppered. Borosilicate glass.

Ref.	Capacity ml	Stopper	
Glass key, plain			
FU400-20	2190/02	100	19/26
FU400-25	2190/04	250	24/29
FU400-30	2190/06	500	24/29
FU400-35	2190/08	1000	29/32
FU400-40	2190/10	2000	34/35

Separating Funnels, Conical, Brand

Polypropylene. With PTFE stopcock and polypropylene screw cap. Autoclavable at 121°C for 15 minutes. Ungraduated.

Capacity, ml	
FU502-15	125
FU502-25	250
FU502-35	500
FU502-45	1000

Separating Funnels, Pear, Pyrex

Stoppered. Borosilicate glass.

Ref.	Capacity ml	Stopper	
Glass key, plain			
FU590-15	2180/02	50	19/26
FU590-20	2180/04	100	19/26
FU590-25	2180/06	250	24/29
FU590-30	2180/08	500	24/29
FU590-35	2180/10	1000	29/32
FU590-40	2180/12	2000	34/35
FU590-55	2180/14	5000	34/35

An additional range of separating funnels with capacities from 25 to 1000ml and choice of glass or Rotaflo stopcocks is also available – see *Quickfit Section*.



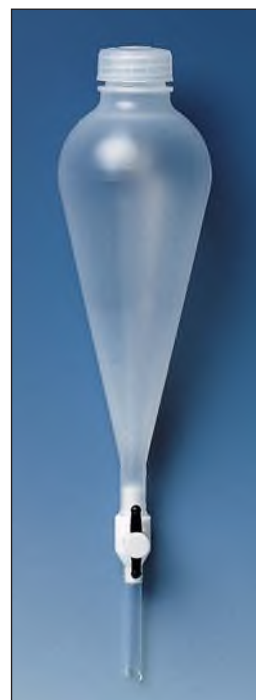
FU204



FU238



FU400



FU502



FU590

Gauges, Gauzes, Glasscutting, Glass Wool

Gauges

Caliper Gauge, vernier

With thumb lock, stainless steel. Range 140mm (5.5in), vernier scale 0.02mm (0.001in). For internal and external depth and step measurements.

GK150-08 Vernier calipers

Micrometer Screw Gauge

Graduated to read 0 to 25mm in 0.01mm, with ratchet and lock nut. Tungsten carbide tipped measuring faces.

GK160-10 Micrometer

Rainfall gauges – see MD730.

Vacuum Gauges – see Pumps section.

Gauzes

Gauzes, iron wire, square

W x D,
cm

Open mesh

GK600-12 12.5 x 12.5

GK600-15 15 x 15

With ceramic centre

GK605-10 10 x 10

GK605-12 12.5 x 12.5

GK605-15 15 x 15

Tripod Stands – see Stands section.

Glasscutting

Tungsten Carbide Knife

- ◆ Moulded plastic handle
- ◆ For cutting soda-lime, borosilicate and silica glass tubing and rods
- ◆ Long lasting tough reversible blade which can be sharpened on a silicon carbide stone

GM222-10 Blade length 40mm

GM222-14 Spare blade

Glass Cutting Diamond

Mounted in wood handle.

GM230-10 Diamond

Glass Marking

- Chinagraph pencils
 - Diamonds and scribes
 - Ink markers
- see LA520 to LA610 in the Labelling section.

Glass Wool

Glass Wool, Pyrex

Used for plugging tubes, and filtering. Made from Pyrex 9989 glass with fibres approximately 8 microns diameter. Supplied in the form of roving approximately 50mm diameter x 6.7 metres long. Packed weight approximately 460g.

GM390-10 Pyrex wool

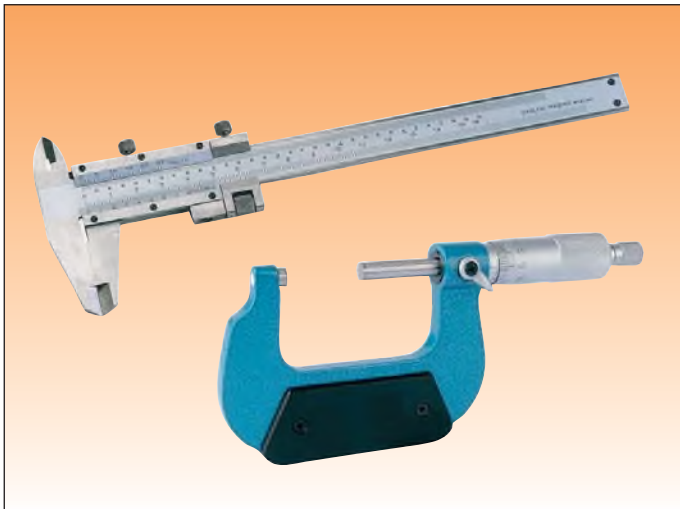
Glass Wool, silica

Used for plugging tubes, filtering acids and as a thermal insulation. Fibres approximately 5 to 30 microns diameter. Supplied in pack of 10g.

GM400-25 Silica wool

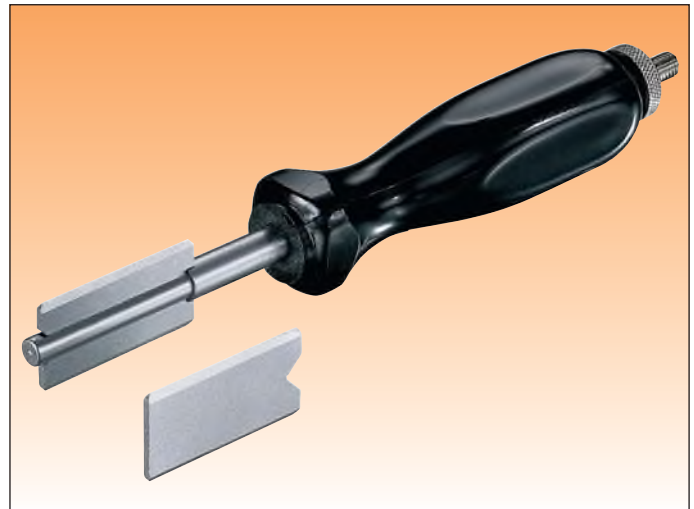
Cotton Wool – see CW500/505.

Filter media – see FB405.

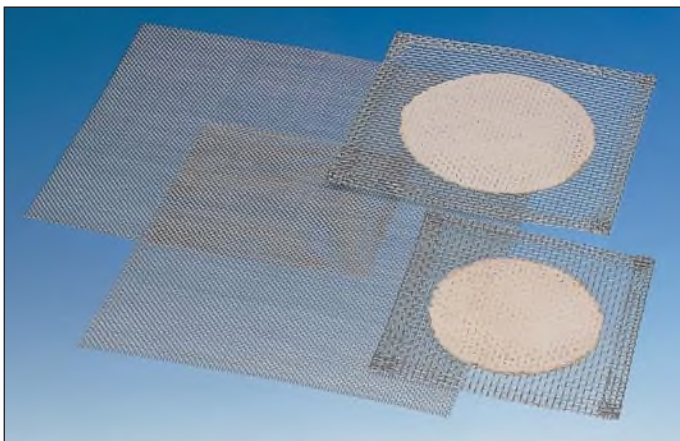


GK150

GK160



GM222-10 and GM222-14



GK600

GK605



GM230



GM390, GM400 is similar

Adapters

	Socket size	Cone size
Reduction		
QDA01	10/19	14/23
QDA12	14/23	19/26
QDA13	14/23	24/29
QDA14	14/23	29/32
QDA23	19/26	24/29
QDA24	19/26	29/32
QDA25	19/26	34/35
QDA34	24/29	29/32
QDA35	24/29	34/35
QDA36	24/29	40/38
QDA38	24/29	50/42
QDA45	29/32	34/35
QDA58	34/35	50/42
Expansion		
QXA10	14/23	10/19
QXA21	19/26	14/23
QXA31	24/29	14/23
QXA32	24/29	19/26
QXA41	29/32	14/23
QXA42	29/32	19/26
QXA43	29/32	24/29
QXA52	34/35	19/26
QXA53	34/35	24/29
QXA54	34/35	29/32

PTFE reduction adapters - see QZZ35-series

	Socket size	Cone size
Multiple, two necks		
Parallel.		
QMA1/11	14/23	14/23
QMA1/2	19/26	19/26
QMA1/3	19/26	24/29
QMA1/33	24/29	24/29
Multiple, two necks		
One vertical and one at 45°.		
QMA2/2	19/26	19/26
QMA2/3	19/26	24/29
Multiple, three necks		
Two parallel and one at 45°.		
QMA4/23	19/26	24/29
Swan neck		
For use with thermometer or air leak tube. Thread size 13mm.		
QMA6/22	19/26	19/26
QMA6/33	24/29	24/29

Spare screwcaps – see QQC series.

Clips for joints – see QKC series.

Cone/flexible tubing

Right angle connection. With screwthread tubing connector which has a 9mm o.d. nozzle.

	Cone size
Screwthread connector	
QMF10/1B/SC	14/23
QMF10/2B/SC	19/26
QMF10/3B/SC	24/29
QMF10/4B/SC	29/32
QMF10/5B/SC	34/35

Socket/flexible tubing

Straight connection. With screwthread tubing connector which has a 9mm o.d. nozzle.

	Socket size
Screwthread connector	
QMF13/2/SC	19/26
QMF13/3/SC	24/29

Socket/cone

'T' connection. With screwthread tubing connector which has a 9mm o.d. nozzle.

	Socket size	Cone size
Screwthread connector		
QMF17/1/SC	14/23	14/23
QMF17/3/SC	14/23	24/29
QMF18/2/SC	19/26	19/26
QMF18/3/SC	19/26	24/29
QMF18/33/SC	24/29	24/29
QMF18/44/SC	29/32	29/32

Spare screwthread tubing connector 4510/02 for above.

AD255-10 Spare

Spare Viton sleeve 4511/02

AD256-06 Spare



QMF10B/SC



QDA



QMA1



QMA4/23



QMF13/SC



QXA



QMA2



QMA6



QMF17/SC

Cone/Screwthread Adapters

Straight. Suitable for locating plain stem thermometers.

	Thread size	Cone size	Acceptable dia. through screwcap, mm
QST51/13	13	14/23	6.0 to 7.0
QST52/13	13	19/26	6.0 to 7.0
QST53/13	13	24/29	6.0 to 7.0
QST51/18	18	14/23	7.0 to 8.5
QST52/18	18	19/26	7.0 to 8.5
QST53/18	18	24/29	7.0 to 8.5
QST54/18	18	29/32	7.0 to 8.5
QST52/24	24	19/26	10.5 to 11.5
QST53/24	24	24/29	10.5 to 11.5
QST54/24	24	29/32	10.5 to 11.5

This range may also be used as simple stirrer guides provided the silicone ring seal within the screwcap is lubricated.

Stopcock Adapters

Cone/flexible tubing

GP Rotaflo key, bore 3mm. Supplied complete with screwthread connector which has a 9mm o.d. nozzle for tubing attachment.

	Cone size
Screwthread connector	
QMF11/1/ISC	14/23
QMF11/2/ISC	19/26
QMF11/3/ISC	24/29
QMF11/4/ISC	29/32
Right angle screwthread connector	
QMF11/1B/ISC	14/23
QMF11/2B/ISC	19/26
QMF11/3B/ISC	24/29

AD255-10 Spare screwthread tubing connector, polypropylene, 4510/02

AD256-06 Spare silicone sleeve, 4511/02

Socket/flexible tubing

GP Rotaflo key, bore 3mm. Supplied complete with screwthread connector which has a 9mm o.d. nozzle for tubing attachment.

	Socket size
Straight screwthread connector	
QMF14/1/ISC	14/23
QMF14/2/ISC	19/26

Spare keys and safety locks – see QGP series.



QMF11: BISC



QST51, QST52, QST53



QMF11: ISC



QMF14: ISC

Receiver Adapters

Plain bends, short

	Socket size	Approx. length, 'a' mm
QRA1/01	14/23	65
QRA1/02	19/26	65
QRA1/03	24/29	65
QRA1/04	29/32	65

Plain bends, long

	Socket size	Approx. length, 'b' mm
QRA1/11	14/23	190
QRA1/12	19/26	200
QRA1/13	24/29	200
QRA1/14	29/32	200

Straight delivery

	Socket size	Approx. length, mm
QRA1/22	19/26	180
QRA1/23	24/29	180

Bends

	Socket size	Cone size	Approx. overall height, mm
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With vent

QRA2/11	14/23	14/23	80
QRA2/22	19/26	19/26	100
QRA2/23	19/26	24/29	120

With screwthread vent vacuum connection

Supplied complete with screwthread connector which has a nozzle for tubing attachment.

QRA3/11/SC	14/23	14/23	110
QRA3/22/SC	19/26	19/26	140
QRA3/23/SC	19/26	24/29	140
QRA3/33/SC	24/29	24/29	150
QRA3/44/SC	29/32	29/32	165

With screwthread vent vacuum connection and delivery stem in cone

Supplied complete with screwthread connector which has a nozzle for tubing attachment.

QRA13/33/SC	24/29	24/29	140
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Bends, socket to cone

With vertical socket.

	Socket size	Cone size	Approx. overall height, mm
QRA4/11	14/23	14/23	120

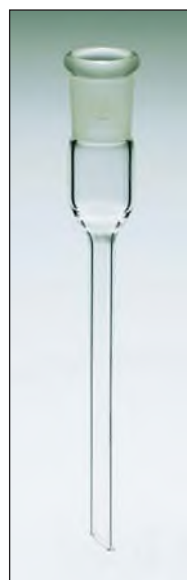
Bends, socket to cone

With multiple connection (pig) and screwthread vent connection. Supplied complete with screwthread connector which has a nozzle for tubing attachment.

	Socket size	Cone size	Approx. overall height, mm
QRA5/11/SC	14/23	14/23	110

Plain bends, socket to cone

	Socket size	Cone size	Approx. overall height, mm
QRA9/11	14/23	14/23	90
QRA9/22	19/26	19/26	100
QRA9/33	24/29	24/29	125
QRA9/44	29/32	29/32	140



QRA1/2



QRA1/0



QRA1/1



QRA2



QRA4



QRA3



QRA9



QRA13



QRA5

Analytical Apparatus

Arsenic determination

For the estimation of arsenic by the method which uses the formation of a complex between arsine and silver diethyldithiocarbamate with subsequent measurement at 538 nanometers. Also suitable for the estimation of antimony.

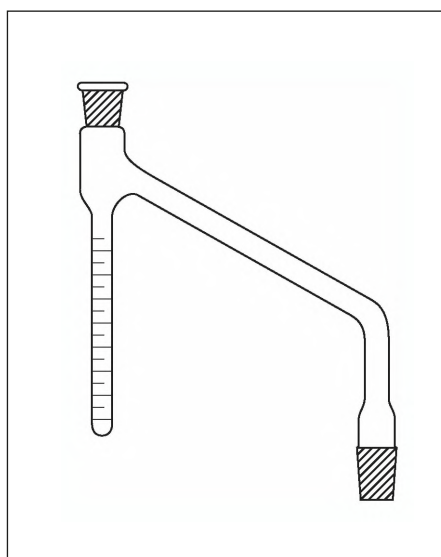
Reference: Elliot, S. C. and Loper, B. R. Analytical Chemistry, 1974, 46, 2256.

	Socket size	Cone size
Complete assembly. Q1AD/1	—	—
Absorption tube. QAD3	—	24/29
Erlenmeyer flask*. QFE100/3	24/29	—

* Nominal capacity 100ml.



Q1AD/1



QWE6



QWE7



QWE6/23/10T

Water Estimation

Dean and Stark apparatus.

Receivers for light entrainers

Complies with BS 756. Receivers have 19/26 socket and 24/29 cone.

	Cap. ml	Grad. ml
QWE6/23/2	2.0	0.05
QWE6/23/7	7.5	0.10
QWE6/23/10T	10.0*	0.10
QWE6/23/25	25.0	0.20

* With GP Rotaflo stopcock.

Receivers for heavy entrainers

Complies with BS 756. Receivers have a 19/26 socket and 24/29 cone.

	Cap. ml	Grad. ml
QWE7/23/3	3.0	0.05
QWE7/23/12	12.5	0.1

Boiling flasks – see *QFR series*.

Liebig condensers – see *QC1 series*.

Heating mantles for heating the boiling flasks – see *Heating section*.

Bottles

Dreschel bottle head, adjustable

With 7mm diameter side arms.

	Cone size	Thread size	To fit bottle
QMF27/3/13	24/29	13	MF 29/3/125 MF 29/3/250

Dreschel bottle heads, plain

Comply with BS 2461. With screwthread tubing ferrules.

	Cone size	Approx. stem length* mm	To fit bottle
QMF28/3/125/SC	24/29	130	MF 29/3/125
QMF28/3/250/SC	24/29	175	MF 29/3/250
QMF28/3/500/SC	24/29	215	MF 29/3/500

* Stem length is measured from the wide end of the cone.

Dreschel bottle heads, sintered

Comply with BS 2461. Cone 24/29. With 8mm diameter side arms.

	Porosity	Stem length* mm	To fit bottle
QMF48/03/125	0	132	MF 29/3/125
QMF48/03/250	0	165	MF 29/3/250
QMF48/03/500	0	217	MF 29/3/500
QMF48/13/125	1	132	MF 29/3/125
QMF48/13/250	1	165	MF 29/3/250
QMF48/13/500	1	215	MF 29/3/500
QMF48/23/250	2	165	MF 29/3/250

* Stem length is measured from the wide end of the cone.

Dreschel gas washing bottles

	Capacity ml	Socket size	Overall height mm
QMF29/3/125	125	24/29	155
QMF29/3/250	250	24/29	190
QMF29/3/500	500	24/29	245



QMF29/3



QMF29/3



QMF29/3

Chromatography

Columns

With sintered disc porosity 0 and GP Rotaflo stopcock.

	<i>Dia. mm</i>	<i>Effective length mm</i>	<i>Socket size</i>	<i>GP Rotaflo stopcock bore, mm</i>
QCR10/20	10	200	14/23	3
QCR10/40	10	400	14/23	3
QCR20/30	20	300	19/26	3
QCR20/50	20	500	19/26	3
QCR30/50	25	500	24/29	3
QCR40/40	30	400	29/32	6
QCR60/50	40	500	40/38	6

Spare Rotaflo keys – see QGP series.



QCR10:-60:

Condensers

With screwthread connections (except air condensers).

All condensers with the screwthread connections are supplied complete with screwthread connectors (4510/02).

Liebig

A condenser designed to give turbulent flow in the water jacket with a comparatively slow rate of flow of coolant water by use of a small annular space.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QC1/00	0.15	10/19	10/19	60 x 135
QC1/11/SC	0.60	14/23	14/23	155 x 260
QC1/12/SC	1.00	19/26	19/26	208 x 340
QC1/12/25/SC	1.30	19/26	19/26	250 x 380
QC1/13/SC	1.00	24/29	24/29	250 x 390
QC1/14/25/SC	1.30	29/32	29/32	250 x 400
QC1/22/SC	2.00	19/26	19/26	398 x 530
QC1/23/SC	2.00	24/29	24/29	395 x 535
QC1/44/SC	2.90	29/32	29/32	400 x 550

AD255-10 Spare screwthread tubing connector 4510/02 for above

AD256-06 Spare Viton sleeve 4511/02

Air

Condensation of materials with boiling points above 150°C can be carried out with this type of simple condenser.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QC2/11	1.0	14/23	14/23	200 x 260
QC2/12	1.0	19/26	19/26	150 x 210
QFC7/23	2.0	24/29	24/29	250 x 365
QC2/22	2.5	19/26	19/26	400 x 470
QFC7/43	4.0	24/29	24/29	500 x 615

Coil, Graham

The surface area is considerably greater than the corresponding Liebig condenser of similar dimensions. The coil condenser is extremely efficient in the reflux mode where counter-current cooling is possible.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QC3/12/SC	2.0	19/26	19/26	165 x 305
QC3/13/SC	2.0	24/29	24/29	165 x 310
QC3/14/SC	2.0	29/32	29/32	165 x 315
QC3/22/SC	4.0	19/26	19/26	320 x 460
QC3/23/SC	4.0	24/29	24/29	320 x 465
QC3/24/SC	4.0	29/32	29/32	320 x 470
QCX3/05/SC	2.0	—	34/35	160 x 320
QCX3/06/SC	3.5	—	40/38	207 x 380

continued on next page



QC1:



QC2



QFC



QC3:



QCX3/0:

Condensers continued

Multi-coil

A condenser having very large surface area over a relatively short effective length by employing two coils which are independent of each other. If desired they can be fed from separate water supplies.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QC4/13/SC	5.5	24/29	24/29	207 x 390

Double surface, Davies

With increased surface area and effectiveness compared with a corresponding Liebig condenser.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QC5/11/SC	1.7	14/23	14/23	160 x 275
QC5/12/SC	1.7	19/26	19/26	160 x 295
QC5/13/SC	2.3	24/29	24/29	160 x 300
QC5/22/SC	2.3	19/26	19/26	205 x 340
QC5/23/SC	3.0	24/29	24/29	205 x 345
QC5/24/SC	3.0	29/32	29/32	205 x 365



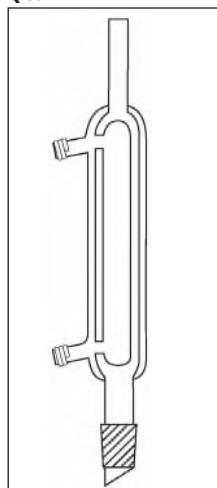
QC4:



QC5:



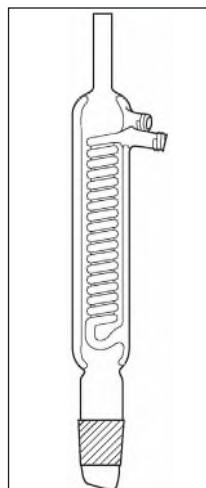
QC6:



QC5:



QCX6:



QCX6/05



QCX7/02



QCX7/33

Inland Revenue

Used for standard Inland Revenue test and control methods by brewers etc, the Inland Revenue condenser employs the use of coolant flow outside the coil. This condenser is very efficient but must not be used for fast rates of distillation. It is particularly useful for removing condensable vapours from non-condensable gases.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QC6/13/SC	2.5	24/29	24/29	205 x 340

Jacketed coil

A double surface condenser having a coil as an inner cooling surface. This type has approximately twice the surface of a plain double surface condenser of the same effective length.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QCX6/22/SC	4.0	19/26	19/26	160 x 360
QCX6/33/SC	4.0	24/29	24/29	160 x 365

Allihn

An inexpensive condenser, giving greater surface area than the corresponding Liebig type due to the bulb sections. This type is normally used under reflux.

	Approx. surface area $\times 10^{-2}m^2$	Socket size	Cone size	Approx. effective \times overall lengths, mm
QCX7/02/SC	1.3	—	19/26	250 x 400
QCX7/03/SC	1.3	—	24/29	250 x 405
QCX7/04/SC	1.3	—	29/32	250 x 415
QCX7/05/SC	1.3	—	34/35	250 x 335
QCX7/06/SC	1.3	—	40/38	250 x 365
QCX7/08/SC	1.5	—	50/42	250 x 365
QCX7/33/SC	1.8	24/29	24/29	400 x 545

Condensers

Ether

Suitable for condensing very volatile liquids such as ether.

	Approx. surface area x 10 ⁻² m ²	Socket size	Cone size	Approx. effective x overall lengths mm	Approx. length of side tube mm
QC11/23/SC	6.5	19/26	24/29	165 x 315	205

Immersion

A general purpose cold finger condenser which can also be used as a dephlegmator to control reflux ratios in a rough fractional distillation.

	Approx. surface area x 10 ⁻² m ²	Cone size	Approx. effective x overall lengths, mm
QFC14/00/SC	0.35	19/26	100 x 185

Distillation Apparatus

1-piece apparatus incorporating plain stillhead, liebig condenser and receiver adapter with vent. Reduces set-up time, air leakage, joint seizure, use of clips or clamps and grease contamination.

	Cone sizes	Socket size	Approx. eff. condenser length, mm	Dimensions L x W x D, mm
QDA1/22	19/26	14/23	155	330 x 210 x 30



QDA1/22



QFC14/00/SC



QC11/23/SC

Extraction Liquid-Solid

Soxhlet extractors

To BS2071 where applicable. Designed primarily for use with proprietary makes of paper thimble and suitable sizes are listed on the next page. Large samples may be placed directly in the extractor body.

	Nominal capacity (siphoning volume) ml	Socket or flange size	Cone size	Approx overall height* mm
QEX5/32	20	24/29	19/26	175
QEX5/43	40	29/32	24/29	200
QEX5/53	60	34/35	24/29	205
QEX5/55/100	100	34/35	34/35	240
QEX5/63	100	40/38	24/29	220
QEX5/83	200	50/42	24/29	250
QEX5/105	2000	100mm [†]	34/35	535

*Approximate height is measured from the wide end of the cone.

[†]Adapters and clips below.

Adapter and clip

QEX5/105 is designed to accommodate large samples and utilises a 100mm flat flange joint requiring the flat flange/ socket adapter and clip listed below.

	Description	To fit	Socket size	Flange size mm
QDA5/100	Adapter	QEX 5/105	34/35	100
QJC100F	Clip	QEX 5/105	—	100

Extraction Thimbles and Mantles – see *Extraction* section.

continued on next page



QEX5/105

Extraction Liquid-Solid continued

Complete standard assemblies

	Nom. cap. ml	Extractor etc.	Components Flask	Condenser
Q100RASX	100	EX5/63	FR250/3S	CX7/06/SC
Q200RASX	200	EX5/83	FR500/3S	CX7/08/SC
Q600RDSX	600	EX5/75 DA5/75 JC75F	FR2L/5S	CX5/25/SC
Q2LRCSX	2000	EX5/105 DA5/100 JC100F	FR5L/5US	C13/55

Pressure equalising funnels

These funnels may be used with Soxhlets to facilitate recovery at the end of an extraction. Fitted between the extractor and the condenser the funnel stopcock is left open until extraction is completed. The stopcock is then closed so as to collect the solvent for future use. Full details see QDE series.

Paper thimbles

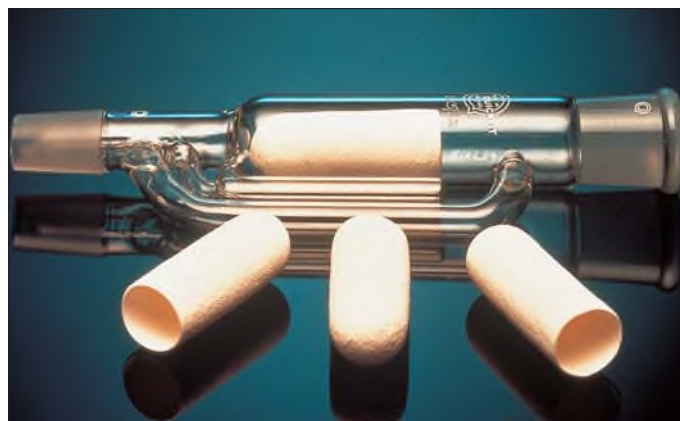
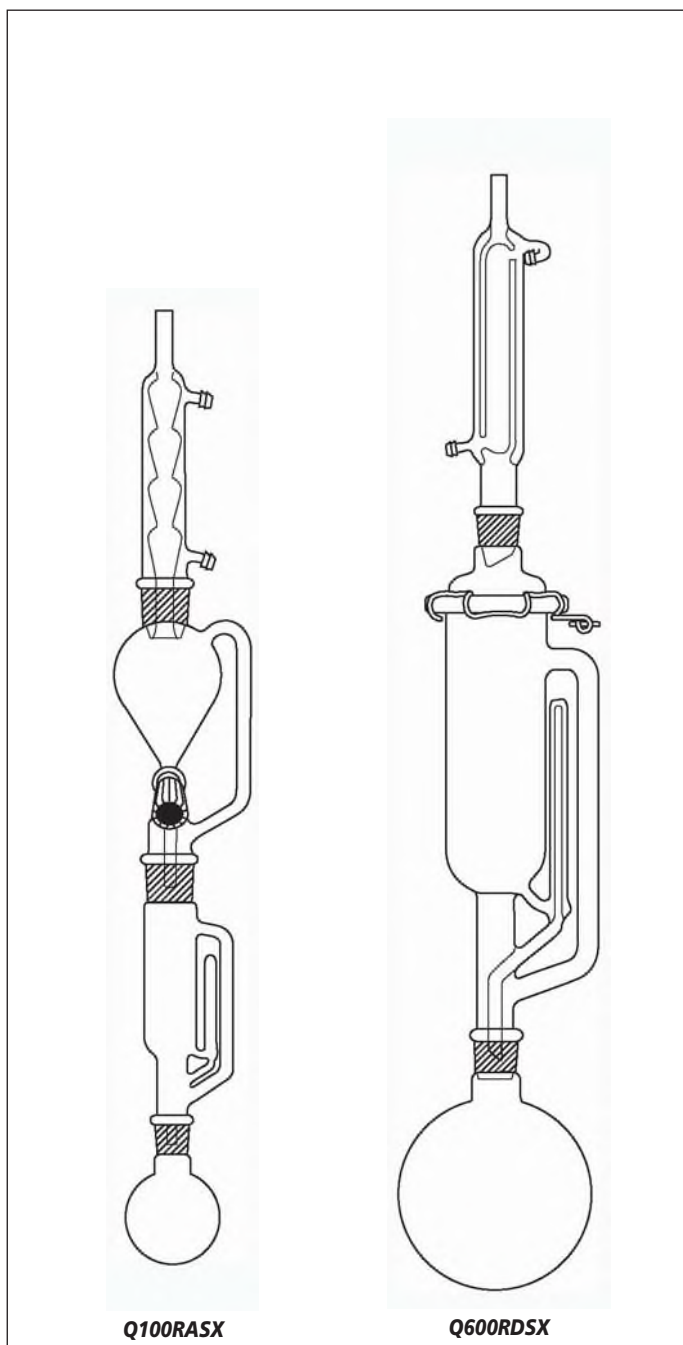
Recommended sizes for use with Quickfit extractors.

Extractor number	Recommended thimble size mm	Extractor number	Recommended thimble size mm
EX5/21	10 x 50	EX5/55/100	28 x 120
EX5/32	18 x 65	EX5/63	33 x 100
EX5/43	22 x 80	EX5/83	41 x 123
EX5/53	28 x 80	—	—
EX5/55	28 x 80	—	—

Note: The dimensions are internal and are given for single thickness thimbles only. If double thickness thimbles are used, the internal diameter should be 2mm less to allow for greater wall thickness.

Paper thimbles – see EX100/EX110.

Heating mantles – see EX200/EX300.



Extraction Liquid-Liquid

Downward Displacement. The heavy phase solvent is discharged from a condenser into the top of the solution to be extracted. The solvent in this instance sinks through the solution and both solvent and extract then returned to the flask via a tube from the bottom of the extractor body.

		Nom. cap. ml	Socket size	Cone size	Approx. overall height mm
QEX10/23	Extractor	60	34/35	24/29	250



QEX10/23 in use

Funnels

Conical filter funnels

With sintered disc porosity 3. Semi-micro. Small scale for use with receivers with vents MD60 or MD61.

	Cone size	Disc dia. mm	Funnel dia. mm
QSF4T31	14/23	10	30

Jointed receivers. With vent

	Capacity ml	Socket size	Height mm
QMD60	5	10/19	95

Büchner filter funnels

With sintered disc porosity 3.

	Cone size	Disc dia. mm	Funnel dia. mm
QSF3A32	19/26	55	71
QSF3A33	24/29	55	71
QSF3A34	29/32	55	71
QSF3B33	24/29	95	106

Powder funnels

Approximate funnel diameter: 105mm.

	Cone size
QCF5/1	14/23
QCF5/2	19/26
QCF5/3	24/29
QCF5/4	29/32
QCF5/5	34/35



QSF4T



QMD60



QMD61



QSF3



QCF5

Flasks

Round bottom, short neck

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QFR5/0S	5	10/19	50	5
QFR5/1S	5	14/23	65	15
QFR10/0S	10	10/19	65	15
QFR10/1S	10	14/23	68	15
QFR25/1S	25	14/23	74	10
QFR25/2S	25	19/26	80	15
QFR25/3S	25	24/29	80	15
QFR50/1S	50	14/23	89	15
QFR50/2S	50	19/26	90	15
QFR50/3S	50	24/29	95	15
QFR50/5S	50	34/35	95	15
QFR100/1S	100	14/23	105	15
QFR100/2S	100	19/26	108	15
QFR100/3S	100	24/29	110	15
QFR100/4S	100	29/32	114	15
QFR100/5S	100	34/35	112	10
QFR150/2S	150	19/26	114	10
QFR150/3S	150	24/29	115	15
QFR150/4S	150	29/32	120	10
QFR150/5S	150	34/35	118	10
QFR250/1S	250	14/23	126	15
QFR250/2S	250	19/26	129	15
QFR250/3S	250	24/29	130	15
QFR250/4S	250	29/32	135	15
QFR250/5S	250	34/35	138	15
QFR500/2S	500	19/26	147	15
QFR500/3S	500	24/29	150	15
QFR500/4S	500	29/32	153	15
QFR500/5S	500	34/35	166	25
QFR1L/3S	1000	24/29	180	15
QFR1L/4S	1000	29/32	183	10
QFR1L/5S	1000	34/35	196	20

Round bottom, short neck, continued

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QFR2L/3S	2000	24/29	215	20
QFR2L/4S	2000	29/32	220	15
QFR5L/4S	5000	29/32	270	15
QFR5L/5S	5000	34/35	280	20

Round bottom, medium neck

QFR50/3M	50	24/29	130	45
QFR100/3M	100	24/29	145	45
QFR250/3M	250	24/29	165	45
QFR500/3M	500	24/29	180	45
QFR500/3U	500	24/29	205	70
QFR1L/3UM	1000	24/29	205	40

Round bottom, uniform overall height

These flasks are suitable where interchangeability of stirring equipment, gas inlet tubes etc. is required in flasks of differing capacities.

QFR500/3U	500	24/29	205	70
QFR1L/3UM	1000	24/29	205	40
QFR2L/3US	2000	24/29	205	10
QFR5L/5US	5000	34/35	275	20



QFR:S



QFR:M



QFR:U

Flasks

Flat bottom, short neck

These flasks are not suitable for use under vacuum or pressure.

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QFF50/2S	50	19/26	80	10
QFF50/3S	50	24/29	85	10
QFF100/2S	100	19/26	95	10
QFF100/3S	100	24/29	100	15
QFF100/4S	100	29/32	100	15
QFF100/5S	100	34/35	105	15
QFF150/2S	150	19/26	105	10
QFF150/3S	150	24/29	110	15
QFF150/5S	150	34/35	115	10
QFF250/2S	250	19/26	115	10
QFF250/3S	250	24/29	120	10
QFF250/4S	250	29/32	125	10
QFF250/5S	250	34/35	125	10
QFF500/2S	500	19/26	135	15
QFF500/3S	500	24/29	140	15
QFF500/4S	500	29/32	145	15
QFF1L/3US	1000	24/29	170	25
QFF1L/4S	1000	29/32	165	20
QFF1L/5S	1000	34/35	175	20
QFF2L/4S	2000	29/32	210	25
QFF2L/5S	2000	34/35	215	20

Flat bottom, medium neck

These flasks are not suitable for use under vacuum or pressure.

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QFF250/3M	250	24/29	150	35

Round bottom, two necks

Centre neck and one angled side neck. The axis of the side neck meets the axis of the centre neck at the bottom of the flask. The 'septum' side necks have a parallel o.d. of 19mm and i.d. of 15.4mm and are designed for use with SW505-40 allowing safe liquid introduction by syringe.

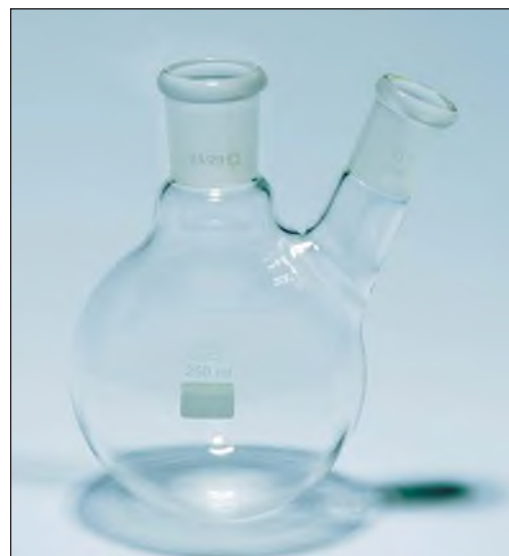
	Nom. cap. ml	Centre socket	Side socket	Approx. overall height mm
QFR25/1S/1A	25	14/23	14/23	77
QFR50/1S/1A	50	14/23	14/23	89
QFR100/3S/1A	100	24/29	14/23	110
QFR100/3S/2A	100	24/29	19/26	110
QFR250/3S/1A	250	24/29	14/23	130
QFR250/3S/2A	250	24/29	19/26	130
QFR500/3S/1A	500	24/29	14/23	150
QFR500/3S/2A	500	24/29	19/26	150
QFR2L/5S/2A	2000	34/35	19/26	225



QFF:S



QFF:M



QFR:1A

Flasks

Round bottom, three necks

Centre neck and two angled side necks. The axes of the side necks meet the axis of the centre neck at the bottom of the flask.

	Nom. cap. ml	Centre x side sockets	Approx. overall height mm
QFR25/1S/11A	25	14/23 x 14/23	77
QFR50/1S/11A	50	14/23 x 14/23	89
QFR50/2S/11A	50	19/26 x 14/23	92
QFR100/2S/11A	100	19/26 x 14/23	108
QFR100/3S/11A	100	24/29 x 14/23	110
QFR100/3S/22A	100	24/29 x 19/26	110
QFR250/2S/22A	250	19/26 x 19/26	128
QFR250/3S/11A	250	24/29 x 14/23	130
QFR250/3S/22A	250	24/29 x 19/26	130
QFR250/4S/22A	250	29/32 x 19/26	135
QFR500/3S/11A	500	24/29 x 14/23	150
QFR500/3S/22A	500	24/29 x 19/26	150
QFR500/4S/22A	500	29/32 x 19/26	153
QFR1L/3S/22A	1000	24/29 x 19/26	180
QFR1L/4S/22A	1000	29/32 x 19/26	183
QFR2L/5S/22A	2000	34/35 x 19/26	228

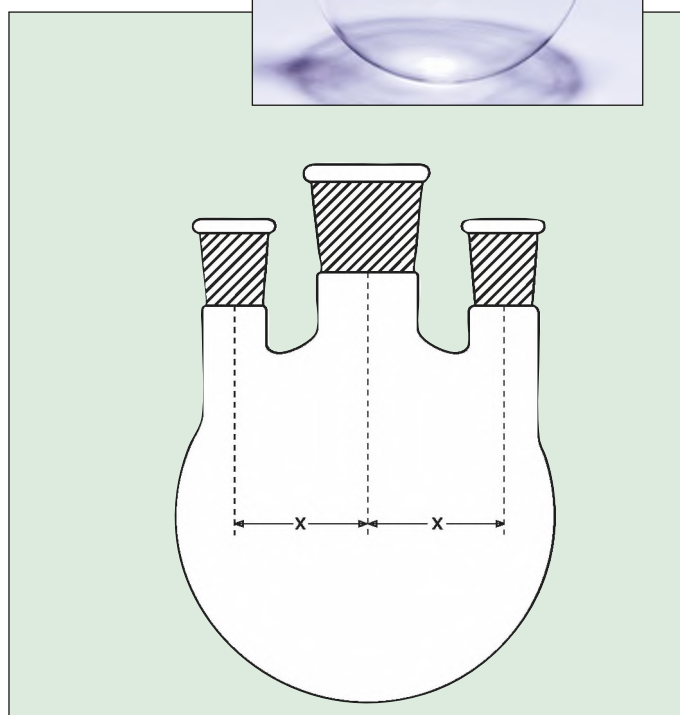
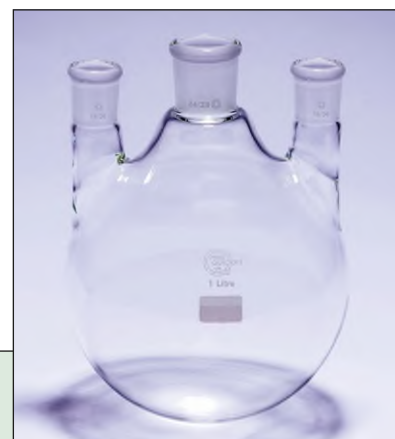
Round bottom, three necks

All parallel.

	Nom. cap. ml	Centre x side sockets	Approx. overall height mm	Nom. dist. 'x' mm
QFR250/3S/22P	250	24/29 x 19/26	130	35
QFR2L/5S/22P	2000	34/35 x 19/26	228	56
QFR5L/5S/33P	5000	34/35 x 24/29	275	75



QFR:A



QFR:22P

Flasks

Pear shape, single neck

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QFP5/1	5	14/23	67	23
QFP10/1	10	14/23	85	28
QFP25/1	25	14/23	100	38
QFP50/1	50	14/23	115	48
QFP50/2	50	19/26	125	48
QFP100/1	100	14/23	135	58
QFP100/2	100	19/26	140	58
QFP100/3	100	24/29	150	58

Pear shape, two necks

Centre neck and one angled side neck.

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QFP50/1/1A	50	14/23	14/23	115

Pear shape, distillation

	Nom. cap. ml	Socket size	Approx. overall height mm	Approx. neck length mm
QMD2/50	50	14/23	14/23	147

Pear shape, Claisen-Vigreux

	Nom. cap. ml	Socket size	Cone size
QMD4/50	50	14/23	14/23



QFP50/1/1A



QMD2:



QMD4:



QFP:

Flasks

Florentine

For use with rotary evaporators.

	Nominal capacity ml	Socket size	Overall height mm
QFD50/4RE	50	29/32	94
QFD100/3	100	24/29	108
QFD100/4RE	100	29/32	107
QFD250/4RE	250	29/32	151
QFD500/4RE	500	29/32	160
QFD1L/4RE	1000	29/32	198
QFD1L/4REP	1000*	29/32	198
QFD2L/4RE	2000	29/32	245

*Plastic coated.

Kjeldahl

	Nominal capacity ml	Socket size	Overall height mm
QFK300/3L	300	24/29	295
QFK500/3L	500	24/29	305

Iodine

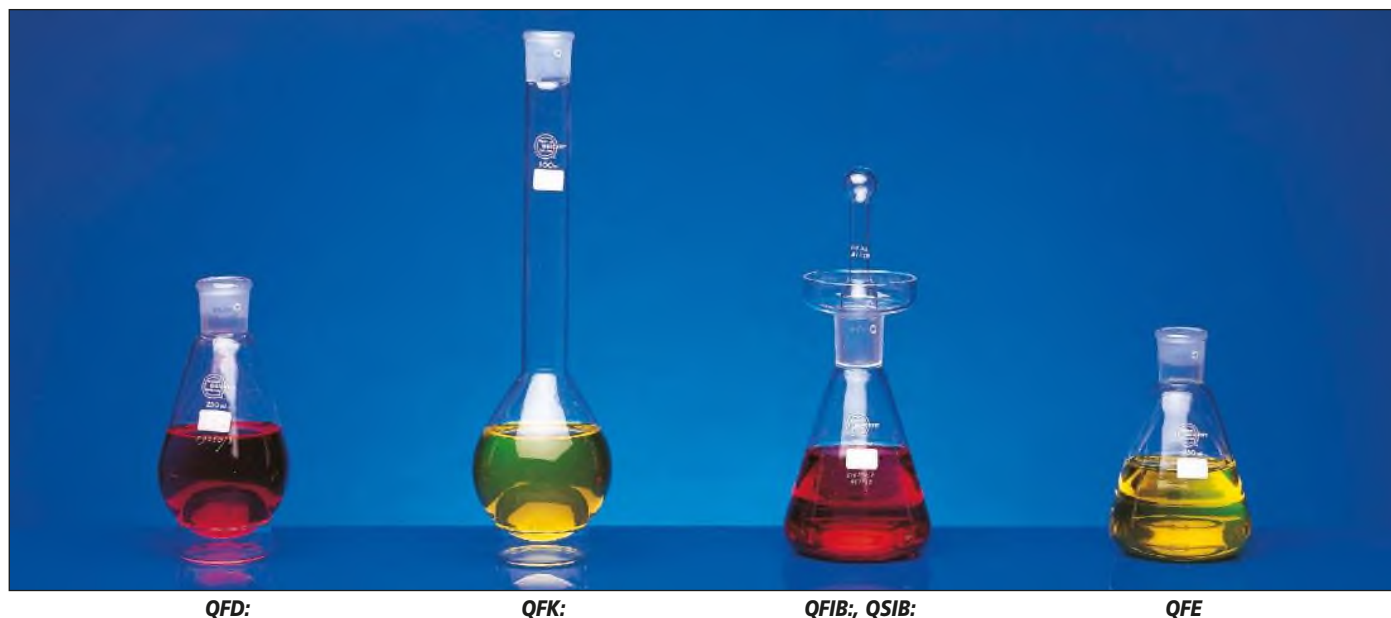
Items FIB 250/3 and FIB 500/3 comply with BS 2735. Stoppers supplied separately.

	Nominal capacity ml	Joint size	Min. cup capacity ml
QFIB250/3 Flask	250	24/29	20
QSIB24 Stopper	—	24/29	—
QFIB500/3 Flask	500	24/29	20
QSIB24 Stopper	—	24/29	—
QFIB500/4 Flask	500	29/32	20
QSIB29 Stopper	—	29/32	—

Conical, Erlenmeyer

Standard wall. These flasks are intended for general purpose use. A heavier wall flask (FEH) suitable for vacuum work is detailed below.

	Nominal capacity ml	Socket size	Overall height mm	Approx. dia. mm
QFE10/1	10	14/23	60	34
QFE25/1	25	14/23	72	42
QFE25/2	25	19/26	77	42
QFE50/1	50	14/23	85	51
QFE50/2	50	19/26	85	51
QFE50/3	50	24/29	90	51
QFE100/1	100	14/23	107	64
QFE100/2	100	19/26	103	64
QFE100/3	100	24/29	107	64
QFE100/4	100	29/32	110	64
QFE150/2	150	19/26	118	74
QFE150/3	150	24/29	118	74
QFE150/4	150	29/32	116	74
QFE250/2	250	19/26	134	85
QFE250/3	250	24/29	130	85
QFE250/4	250	29/32	128	85
QFE250/5	250	34/35	130	85
QFE500/3	500	24/29	167	101
QFE500/4	500	29/32	167	101
QFE1L/3	1000	24/29	213	130



QFD:

QFK:

QFIB:, QSIB:

QFE

Reaction Flasks and Lids

Wide neck reaction flasks

A range of spherical* flasks from semi-micro to pilot plant scale fitted with large diameter flat flange joints. This design has several advantages over conventional conical jointed flasks.

- ◆ Lids can be easily detached
- ◆ Large stirrers can be accommodated
- ◆ Vessels can be easily cleaned
- ◆ Quick and easy addition and removal of solids or resinous material
- ◆ Flasks and lids using the same size joints are fully interchangeable

	Nom. cap. ml	Flange bore mm	Overall height mm
QFR250F	250	75	90
QFR500F	500	75	115
QFR1LF	1000	100	155
QFR2LF	2000	100	185
QFR3LF	3000	100	210
QFR5LF	5000	100	245
QFR10LF	10000	100	320
QFR20LF	20000	100	400

Multi-socket/flat flange lids

A series of multi-socket lids for use with the Quickfit range of wide neck reaction flasks and culture vessels. They allow introduction of a great variety of standard Quickfit equipment for stirring, temperature measurement, aeration and general distillation procedures. The parallel side neck can be fitted with a multiple adapter so that larger dropping funnels can be used. Lids with a single socket neck are of use where simple extraction, refluxing or mixing only are required.

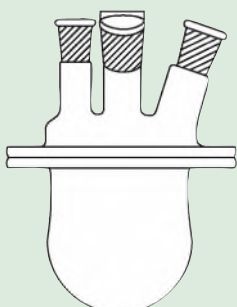
	Flange bore mm	Centre socket	Parallel socket	5°	Side sockets 10°	15°
QMAF1/75	75	19/26	14/23	19/26	19/26	19/26
QDA5/75	75	34/35	—	—	—	—
QMAF2/2	100	19/26	19/26	2 x 19/26	19/26	—
QMAF2/32	100	19/26	19/26	24/29	19/26	—
QMAF2/52	100	19/26	19/26	19/26	19/26	34/35
QMAF3/52	100	24/29	19/26	19/26	19/26	34/35
QDA4/100	100	29/32	—	—	—	—
QMAF4/41	100	29/32	14/23	14/23	14/23	29/32
QDA5/100	100	34/35	—	—	—	—
QMAF5/2	100	34/35	19/26	—	2 x 19/26	—

Clips for flanged flasks and lids

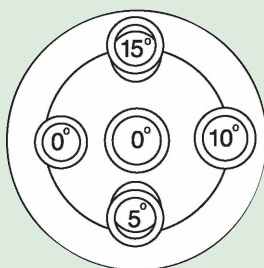
To fit vessels with flange bores as indicated.

- QJC75F** For 75mm bore flanges
- QJC100F** For 100mm bore flanges

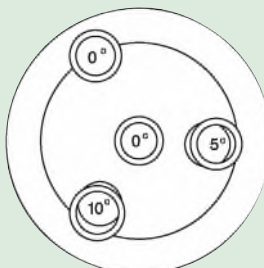
QFR:LF with QMAF: and QJC100F



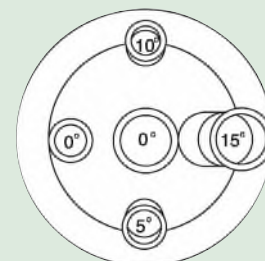
QFR250F



QMAF1/75



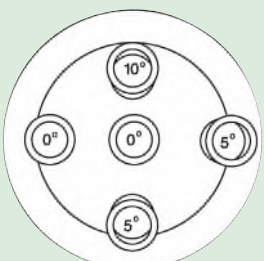
QMAF2/32



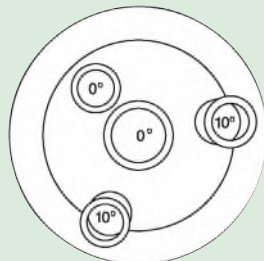
**QMAF2/52, QMAF3/52
QMAF4/41**



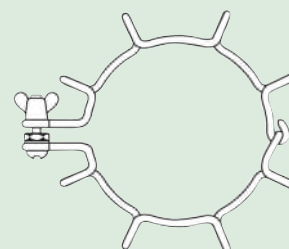
QFR:LF



QMAF2/2



QMAF5/2



QJC:F

Cylindrical Culture Flasks

Culture vessels

A range of cylindrical, flat bottom vessels suitable for fermentation and certain culture work. When fitted with flat flange/multi-socket lids they will accommodate large stirrers and thermometers. The lids also permit the addition of solutions and gases and facilitate sampling. Culture vessels are not suitable for use under vacuum or pressure.

	Nom. cap. ml	Flange bore mm	Approx. overall height mm	Approx. dia. of body mm
QFV1L	1000	100	160	105
QFV2L	2000	100	225	133
QFV5L	5000	100	290	181

Flat flange lids and flange clips – see QMAF- and QJC- series.

Pyrex Büchner Flasks – see FK350/FK352.

Filter Flasks

Büchner Filter Flasks

With choice of side arm connection, either a traditional all-glass ferrule or screwthread tubing connection with chemically resistant PTFE ferrule which can be used up to 100°C for added safety when attaching flexible tubing.

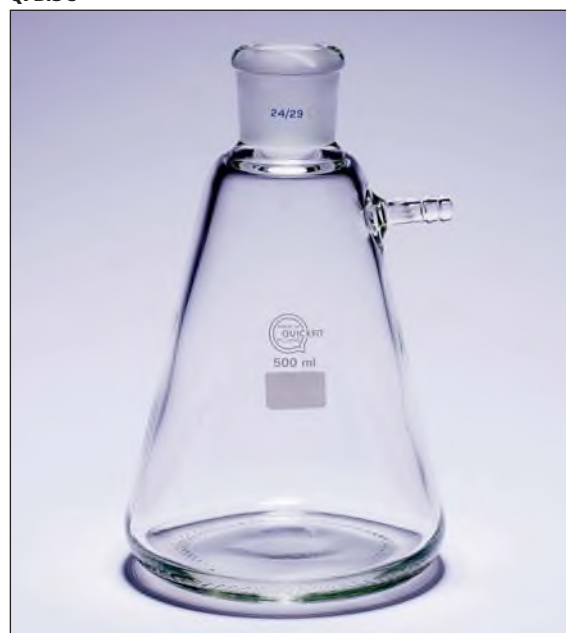
	Nom. cap. ml	Socket size	Approx. height mm	Approx. dia. mm
Screwthread side-arm connector				
QFB250/3/SC	250	24/29	140	85
QFB250/4/SC	250	29/32	145	85
QFB500/3/SC	500	24/29	172	105
QFB500/4/SC	500	29/32	172	105
QFB1L/3/SC	1000	24/29	220	135
Glass side-arm				
QFB250/3	250	24/29	145	85
QFB250/4	250	29/32	145	85
QFB500/3	500	24/29	172	105
QFB500/4	500	29/32	172	105
QFB1L/3	1000	24/29	227	136



QFV:



QFB:SC



QFB

Fractionation

Dufton columns

These columns have an accurately fitted Dufton glass spiral which can be removed for cleaning purposes etc. This type of column has proved exceedingly successful in gas analysis.

	Socket size	Cone size	Approx. effective length mm	Approx. overall height mm
QFC1/12	19/26	19/26	150	270
QFC1/22	19/26	19/26	300	425

Plain columns

Designed for use with the various types of column packing which are available.

	Socket size	Cone size	Approx. effective length mm	Approx. overall height mm
QFC7/23	24/29	24/29	250	365
QFC7/43	24/29	24/29	500	615

Raschig ring packing for plain columns

Raschig rings are short lengths of glass tubing, usually having the same length as the diameter. Supplied in minimum quantities of 1 litre.

	Approx. diameter mm	Approx. length mm
Raschig rings		
QFC8/09	9	9

Packing support

These packing supports will hold the smallest column packing normally used.

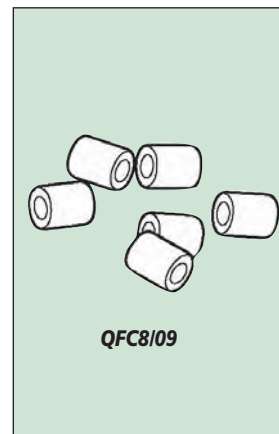
	To fit socket size	Diameter mm
QEX13/23	24/29	21
QEX13/25	34/35	29
QEX13/26	40/38	35



QFC1; QFC2:



QFC7; QFC8:



QFC8/09



QEX13:

Cold Finger

Cold finger

Used in conjunction with a QMA1: or QMA2: multiple adapter, this cold finger forms a simple type of stillhead to regulate reflux by water or air flow. Suitable for fractionations not requiring strict control of the reflux ratio. With screwthread outlets and supplied with polypropylene safety tubing connectors.

	<i>Cone size</i>	<i>Approx. effective length mm</i>	<i>Approx. overall length mm</i>	<i>Approx. finger dia. mm</i>
QFC14/00/ISC	19/26	100	185	12

AD255-10 Spare screwthread tubing connector, polypropylene, 4510/02

AD256-06 Spare Viton 'O'-ring 4511/02

Cold Trap

Cold trap/absorption trap

A general purpose trap which can function as a cold trap by immersing it in a Dewar flask or similar vessel containing refrigerant. The unit may also be used as an absorption trap during Kjeldahl digestions.

	<i>Description</i>	<i>Socket size</i>	<i>Cone size</i>
QMF24/5	Trap body, 250mm overall length	34/35	—
QMF28/52	Trap head	19/26	34/35 & 19/26



QFC14/00/ISC



QMF24/5 fitted with QMF28/52

Cone Joints

	Cone size	Min. shank length mm	Max. shank o.d. mm	Min. bore mm	Min. wall thickness mm
Plain end, single, Quickfit badged					
QCNB50	50/42	100	49.0	39.0	2.0
Plain end, single, unbadged					
QCNB7UB	7/16	100	7.0	2.5	1.0
QCNB10UB	10/19	100	9.0	5.0	1.0
QCNB12UB	12/21	100	12.0	6.5	1.25
QCNB14UB	14/23	100	14.0	8.5	1.25
QCNB19UB	19/26	100	18.0	12.0	1.5
QCNB24UB	24/29	100	23.0	16.5	1.75
QCNB29UB	29/32	100	28.0	21.0	1.75
QCNB34UB	34/35	100	33.5	26.0	1.75
QCNB40UB	40/38	100	39.0	29.5	2.5
QCNB45UB	45/40	100	43.0	35.0	2.0

	Cone size	Min. shank length mm	Max. shank o.d. mm	Min. bore mm	Min. wall thickness mm
With long tip, double					
QCBD12/60	19/26	60	18.0	8.0	1.5
QCBD3/95	24/29	95	23.0	14.0	1.75
QCBD4/125	29/32	125	28.0	19.0	1.75
With stem, reduced shank, single					
Stem length 150mm.					
QMF15/1	14/23	45	7.4	4.4	0.9
QMF15/2	19/26	60	10.4	6.2	1.3
QMF15/3	24/29	70	9.6	6.2	1.3

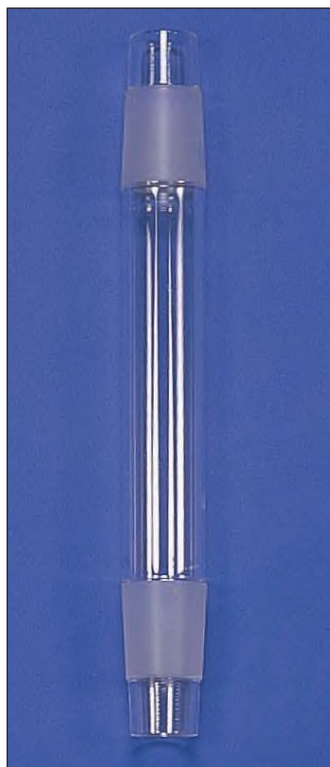
PTFE Sleeves, Azlon

For fitting over ground glass cones to provide greaseless lubrication. Wall thickness 0.07mm, taper 1:10. Supplied in packs of 10.

	Ref.	For cone
QZZ20/14	SWN961	14/23
QZZ20/19	SWN962	19/26
QZZ20/24	SWN963	24/29
QZZ20/29	SWN964	29/32
QZZ20/34	SWN965	34/35
QZZ20/40	SWN966	40/38
QZZ20/55	SWN969	55/44



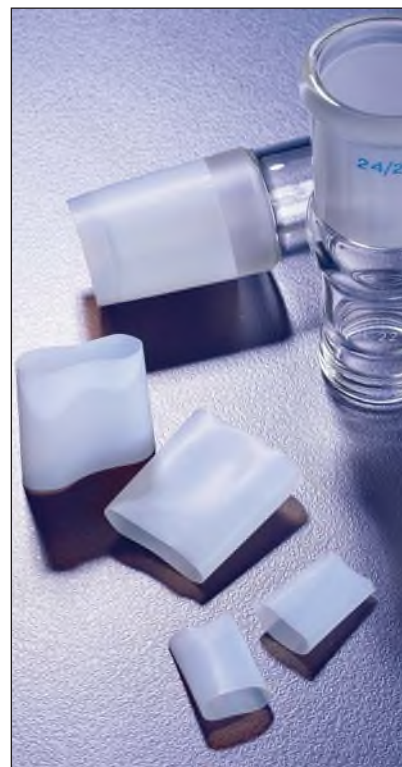
QCNB



QCBD



QMF15



QZZ20

Socket Joints

Rolled shoulder, single

	Socket size	Min. shank length mm	Max. shank o.d. mm	Min. bore mm	Min. wall thickness mm
Unbadged					
QSRB10UB	10/19	100	14.0	8.0	1.25
QSRB14UB	14/23	100	18.4	12.0	1.6
QSRB19UB	19/26	100	23.0	16.0	1.75
QSRB24UB	24/29	100	28.5	21.0	1.8
QSRB29UB	29/32	100	33.5	26.0	1.75
QSRB34UB	34/35	100	40.0	31.0	1.75
QSRB40UB	40/38	100	46.0	36.0	2.0
QSRB45UB	45/40	100	53.0	41.0	2.2

Rotulex Joints

Rotulex glass/PTFE spherical

A grease-free alternative to conventional ground glass spherical joints. Maximum working temperature 200°C and may be used under vacuum. The pathway is glass and PTFE. The complete connection is made up of one each male and female joints, PTFE 'O'-ring on the male joint and clip all of equivalent sizes.

	Joint size	Min. shank length mm	Max. shank o.d. mm	Approx. bore mm	Spherical dia. mm
Male joint					
QRM13	13/5	150	8.3	5	13
QRM19	19/9	150	12.4	9	19
QRM29	29/15	150	18.4	15	29
QRM35	35/20	150	24.5	20	35
QRM64	64/40	150	45	40	64
Female joint					
QRF13	13/5	150	8.3	5	13
QRF19	19/9	150	12.4	9	19
QRF29	29/15	150	18.4	15	29
QRF35	35/20	150	24.5	20	35
QRF64	64/40	150	45	40	64

Accessories

For joint size

Clips for Rotulex joints

QRC13	13/5
QRC19	19/9
QRC29	29/15
QRC35	35/20
QRC41	41/25
QRC64	64/40*

'O'-rings for Rotulex joints

QRO13	13/5
QRO19	19/9
QRO29	29/15
QRO35	35/20
QRO41	41/25
QRO64	64/40

* QRC64 clip has 3 equidistant fasteners to provide uniform clamping.



QSRB



QRM, QRF, QRO, QRC

Flat Flange Joints

Flat flange Joints

Can be used at high temperatures without risk of seizure. The mating surfaces of the flanges are fine ground.

	Nom. bore mm	Min. shank length mm	Max. shank o.d. mm	Flange o.d. mm	Min. wall thickness mm
QFG50	50	110	57.0	85	2.2
QFG75	75	110	86.8	120	4.4
QFG100	100	110	116.0	150	4.0

Clips for flat flange joints

To fit joints with bore diameters as indicated. Supplied singly.

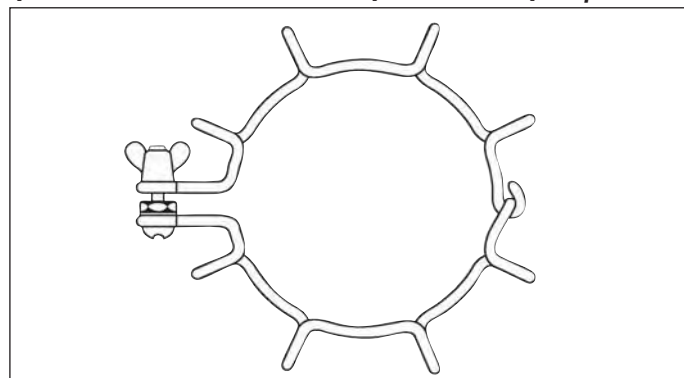
	For joint bore, mm
QJC29	10
QJC41	25
QJC51	35
QJC75F	75
QJC100F	100



QFG



QFG fitted with QJC clip



QJC:F

Spherical Joints

Spherical, ball and cup

Spherical joints are intended to give flexibility to complicated assemblies of glassware and facilitate erection of such glassware. In vacuum systems, they relieve stress which may otherwise cause leakage at joints.

	Joint size	Min. shank length mm	Max. shank o.d. mm	Approx. bore mm	Spherical dia. mm
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Ball joint (male), unbadged

QMS13UB	S13	100	8.3	5	12.700
QMS19UB	S19	100	13.0	9	19.050
QMS29UB	S29	100	20.5	15	28.575
QMS35UB	S35	100	24.5	19	34.925

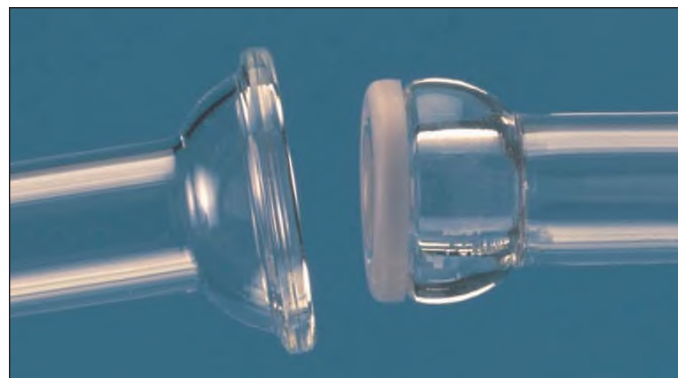
Cup joint (female), unbadged

QFS13UB	S13	100	8.3	5	12.700
QFS19UB	S19	100	13.0	9	19.050
QFS29UB	S29	100	20.5	15	28.575
QFS35UB	S35	100	24.5	19	34.925
QFS41UB	S41	100	32.8	27	41.275

Clips for spherical joints

To fit joint sizes as indicated. Supplied singly.

	For joint size
QJC13	S13
QJC19	S19
QJC29	S29
QJC35	S35
QJC41	S41
QJC51	S51



QFS

QMS

Screwthread Joints

A versatile system of couplings with standard glass screwthreads to which heat and chemically resistant melamine caps are fitted. An aperture in the top of each cap allows the fitting to pass through and be held in position by compression of a silicone rubber ring inside the cap. A PTFE washer protects the rubber ring and plastic cap from contact with the contents of the glass apparatus. All fittings are readily adjustable and depth of immersion can be altered quickly by slackening the screwcap.

Use under vacuum

Quickfit screwthread joints give excellent results under vacuum with no appreciable variation in performance between the available cap sizes. However, vacuum holding does tend to vary slightly, relative to the diameter of the insert, but the range 10^{-3} to 10^{-4} torr is typical of performance.

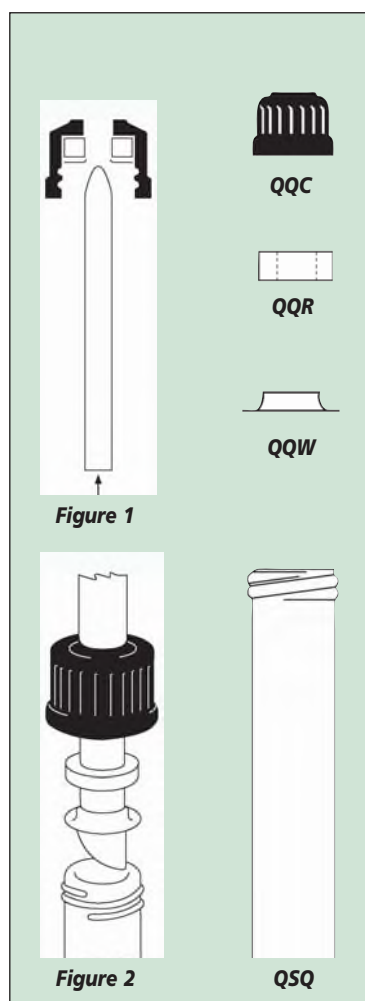
Use at temperature

Quickfit screwcaps, rings and washers can be safely used with apparatus operating up to 300°C providing excessive heat is not applied directly to the screwthread union. Direct heat application above 140°C will result in some discolouration and shrinkage of the screwcap although the rings and washers will be unaffected at this temperature.

Screwcap assembly

When using apparatus which incorporates screwthreads it is important that the PTFE washer is fitted carefully and correctly. This is best achieved by opening out the washer to the correct diameter using a tapered former. This should be carried out with the silicone rubber ring and PTFE washer in position in the plastic cap as shown in figure 1.

Withdraw the tapered former and remove the rubber ring and washer from the cap. Fit each component separately to the fitting which is to be held, as shown in figure 2, and screw the cap on to the thread. It is advisable that the ends of all fittings should be slightly tapered or fired in a Bunsen flame to remove sharp edges and produce a slight taper.



Glass screwthreads

	Thread size	Min. shank length mm	Shank o.d. mm	Min. bore mm
Unbadged				
QSQ13UB	13	160	11.1	7.5
QSQ18UB	18	160	15.4	10.5
QSQ24UB	24	140	22.5	15.5
QSQ28UB	28	110	24.5	19.7

Plastic screwcaps, silicone rubber rings and PTFE washers

To fit the QSQ range of screwthread joints.

	Thread size	Acceptable diameter through screwcap, mm
Plastic screwcap		
QQC13/7	13	6.0 to 7.0
QQC18/11	18	7.0 to 8.5
QQC24/12	24*	6.0 to 7.0
	24*	8.5 to 9.5
	24*	10.5 to 11.5
QQC28/13	28*	10.5 to 11.5

Rings and washers for screwcaps

	For cap thread size	To accept tube diameters, mm
Rubber ring		
QQR13/6	13	6.0 to 7.0
QQR18/7	18	7.0 to 8.5
QQR24/6	24*	6.0 to 7.0
QQR24/9	24*	8.5 to 9.5
QQR24/11	24*	10.5 to 11.5
QQR28/6	28*	6.0 to 7.0
QQR28/11	28*	10.5 to 11.5
QQR28/18	28*	18.0 to 19.0
PTFE washer		
QQW13/6	13	6.0 to 7.0
QQW18/7	18	7.0 to 8.5
QQW24/6	24*	6.0 to 7.0
QQW24/9	24*	8.5 to 9.5
QQW24/11	24*	10.5 to 11.5
QQW28/6	28*	6.0 to 7.0
QQW28/11	28*	10.5 to 11.5
QQW28/18	28*	18.0 to 19.0

*Size 24 screwcaps allow different tube sizes to be inserted by using the appropriate rubber rings and PTFE washers. Size 28 screwcaps also accept different tube diameters but screwcaps must be changed to fit each size together with rings and washers.

Nitrogen (Kjeldahl)

Macro Kjeldahl distillation assembly

This assembly uses the same flask for distillation as for the digestion stage and conversion from one stage to the other can be done very quickly.

		Socket size	Cone size
Q280MC	Complete assembly	—	—
Components:			
QC1/12/SC	Condenser	19/26	19/26
QD3/12	Dropping funnel, 50ml	10/19	19/26
QFK500/3L	Kjeldahl flask, 500ml	24/29	—
QMA1/3	Multiple adapter	19/26	24/29
QRA1/22	Delivery adapter	19/26	—
QSH7/12	Splash head	19/26	19/26

Kjeldahl heaters – see *KJ300/KJ305*.

Dropping Funnels

Cylindrical

Stem in line with cone, glass stopcock.

	Nominal capacity ml	Socket size	Cone size
QD1/11	50	14/23	14/23
QD1/21	100	14/23	14/23
QD1/22	100	19/26	19/26
QD1/42	500	24/29	19/26
QD1/62	1000	29/32	19/26

Cylindrical

Stem in line with cone, GP Rotaflo stopcock.

	Nominal capacity ml	Socket size	Cone size
QD1/11GP	50	14/23	14/23
QD1/21GP	100	14/23	14/23
QD1/22GP	100	19/26	19/26
QD1/32GP	250	24/29	19/26
QD1/42GP	500	24/29	19/26
QD1/62GP	1000	29/32	19/26

Dropping and separating funnels, MBL and Pyrex – see *FU204/FU590*.



Q280MC



QD1



QD1-GP

Separating and Dropping Funnels

Separating

Pear shape, with glass stopcock.

	Nominal capacity ml	Socket size	Cone size
QD2/11	50	14/23	14/23
QD2/21	100	14/23	14/23
QD2/22	100	19/26	19/26
QD2/32	250	24/29	19/26
QD2/42	500	24/29	19/26
QD2/43	500	24/29	19/26

Pressure Equalising Funnels

Pressure equalising

Pear shape, with GP Rotaflo stopcock, for use when liquids have to be introduced into vessels under vacuum or slight positive pressure. This range is recommended for use with obnoxious or corrosive liquids. The funnels can also be used with Soxhlets as solvent traps to facilitate recovery at the end of an extraction.

	Nominal capacity ml	Socket size	Cone size
QDE100/22	100	19/26	19/26
QDE250/32	250	24/29	19/26
QDE250/33	250	24/29	24/29

Spare keys and safety locks – see *QGP* and *QSL* series.



QD2



QDE

One-Joint Sets

One-Joint Sets 29BU/M and 27BU

A comprehensive range of Quickfit jointed glassware sets and extension kits covering the practical chemistry requirements of teachers and students. Joint size 14/23. For quantities up to 30g.

- ◆ Suitable for both inorganic and organic chemistry
- ◆ Semi-micro scale with flask capacities from 5ml to 250ml
- ◆ Most sets are supplied in boxes which fit into a normal laboratory bench drawer and have compartments to both safely protect the contents and to utilise the least amount of storage space

Components:

Ref. No.	Item No.	Components	29BU/M	Sets 27BU
FP50/1	1	Pear shaped flask, 50ml	1	1
SH4/1	2	Stillhead	1	1
C1/11/SC	3	Liebig condenser	1	1
ST51/13	4	Screwcap adapter	1	1
RA1/11	5	Receiver adapter	1	1
MF5	6	Air leak/steam inlet tube	—	1
D31/1/50	7	Dropping funnel, 50ml with GP Rotaflo tap	—	1
SB14	8	Glass stopper	—	—
TRF593	8	Plastic stopper	—	1
—	9	Thermometer	—	1
FR25/15	10	Round bottom flask, 25ml	—	—
C2/11	11	Air condenser/drying tube	—	—
3730/04	12	Sintered glass funnel	—	—
MF23/1	13	Drying tube	—	—
FP50/1/1A	14	Pear shaped flask, 50ml, with angled side neck	—	—
MF5	15	Air leak/steam inlet tube	—	—
MF17/1/SC	16	Adapter with 'T' connection	—	—
ST51/18	17	Screwcap adapter	—	—

Set 29BU/M

A 5-part introductory set to the principle techniques of preparative organic chemistry. An ideal set for students. Supplied in a box with instruction booklet which contains notes on practical techniques and details of various experiments and preparations.

Q29BU/M Set 29BU/M

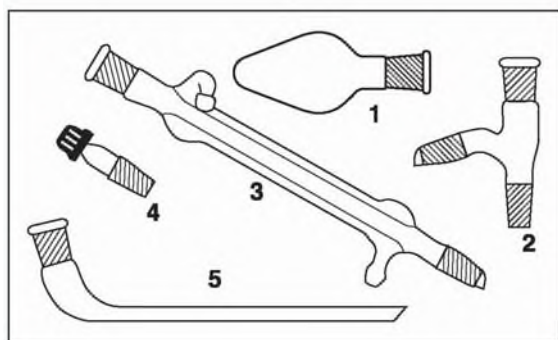
Set 27BU

A 9-part set of great versatility and purposely designed to cover the essential requirements for the teaching of organic chemistry. A highly popular set for use in schools, colleges and universities. Supplied in box with storage tray and instructions which include practical details of a student's course of experiments and preparations.

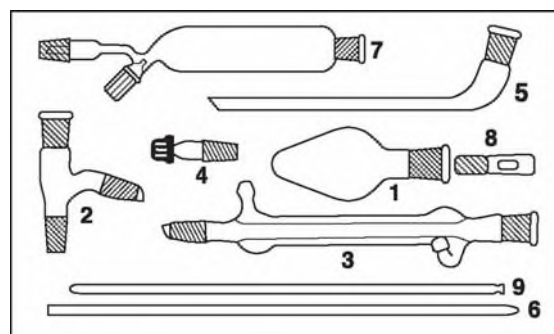
Q27BU Set 27BU



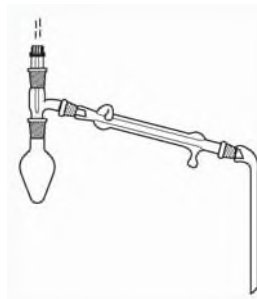
Q27BU



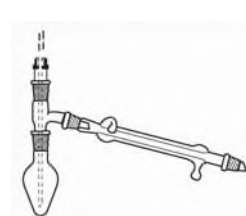
Q29BU/M



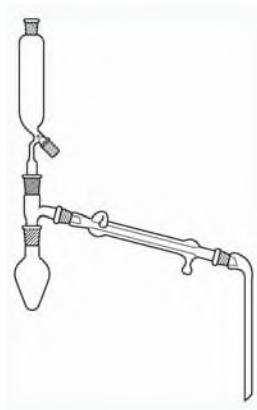
Q27BU



Preparation



Steam distillation



Recovery



Reflux



Reflux with addition

Stillheads

	Flask	Cone size	Condenser
Recovery bends, sloping			
QSH1/11	14/23		14/23
QSH1/22	19/26		19/26
QSH1/23	24/29		19/26
QSH1/33	24/29		24/29
QSH1/44	29/32		29/32
Recovery bends, vertical			
QSH2/22	19/26		19/26
QSH2/33	24/29		24/29

Plain

With thermometer sockets.

	Flask	Cone size	Condenser	Socket size
QSH4/1	14/23		14/23	14/23
QSH4/22	19/26		19/26	14/23
QSH4/2	19/26		19/26	19/26
QSH4/23	24/29		19/26	14/23
QSH4/33	24/29		24/29	14/23
QSH4/44	29/32		29/32	14/23

Claisen head, sloping

QSH6/44	29/32		29/32	14/23
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Splash head adapter

	Socket size	Cone size
QSH17/23	19/26	24/29

Splash heads, vertical

	Flask	Cone size	Condenser
QSH7/12	19/26		19/26
QSH7/13	24/29		19/26
QSH7/53	24/29		24/29

Splash head adapters, rotary evaporator

For use with rotary evaporators to prevent "bumping" or foaming solvents from climbing to the condenser. Available with, or without, sintered glass (porosity 1) filter.

	Flask	Cone size	Condenser
Without filter			
QSH15/19	19/26		29/32
QSH15/24	24/29		29/32
QSH15/29	29/32		29/32
With filter			
QSH16/19	19/26		29/32
QSH16/29	29/32		29/32



QSH1



QSH4



QSH17/23



QSH15



QSH2



QSH6/44



QSH7/12, QSH7/13



QSH16

Stirring Accessories

PTFE blade

		Approx. shaft dia. x length, mm	Smallest neck through which stirrer will pass	Blade width mm
QST7/2	Blade	—	19/26 Socket	52

Air-powered stirrers – see SR940.

Alternative stirrer bearings – see SR946.

Simple screwcap glands

Screwcap adapters may be used as simple glands for basic stirring operations providing they are not used at high speeds or under vacuum. The silicone rubber ring inside the cap should be suitably lubricated. Size 13 thread adapters are suitable for 6mm stirrer shafts and size 24 for 11mm shafts.

See QST51 to QST55

Ground sleeve glands

With lubricant reservoir. For use up to 700rpm and at pressures down to 0.1 torr (13.3 Pa). Rotation of the stirrer is achieved by coupling to a geared motor.

		To fit stirrer shaft mm	Cone size	Thread size
QST20/2	Screwcap sleeve	6	19/26	13
QST20/3	Screwcap sleeve	11	24/29	24



QST7 on shaft



QST51/52/53/54/55



QST2/2/SC



QST20/2

Rotaflor® Stopcocks

With safety locking device which prevents complete unscrewing of the key.

- ◆ All glass/PTFE pathway
- ◆ No lubrication required
- ◆ Excellent flow control
- ◆ Interchangeable keys

Choice of two ranges:

General purpose (GP) fitted with blue control cap for easy identification.

- ◆ Vacuum operation to 10^{-4} torr
- ◆ Temperature range -20 to 200°C
- ◆ Bore sizes 3, 6 and 10mm
- ◆ Straight, right angle, burette configurations

High performance (HP) fitted with red control cap for easy identification.

- ◆ Vacuum operation to 10^{-6} torr
- ◆ Temperature range -20 to 200°C
- ◆ Keys can be degassed at 130°C for high vacuum work
- ◆ Each stopcock mass spectrometer tested with individual performance certificate supplied
- ◆ Self lubricating silicone vacuum seal

Rotaflor is a registered trade mark. Barloworld Scientific - registered user.

General Purpose Rotaflor Stopcocks

Borosilicate glass with PTFE screw-in key and safety locking ring.

	Bore mm	Type	Approx. overall length mm	Side arms bore mm
QGP3STI/5	3	Straight	210	5
QGP3RAI/5	3	Right angle	150	5
QGP6STI/7	6	Straight	210	7
QGP6RAI/7	6	Right angle	165	7
QGP10STI/10	10	Straight	225	10
QGP10RAI/10	10	Right angle	175	10

High Performance Rotaflor Stopcocks

Borosilicate glass with PTFE screw-in key, safety locking ring, and individual performance test certificate.

	Bore mm	Type	Approx. overall length mm	Side arms bore mm
QHP3STI/5	3	Straight	210	5
QHP3RAI/5	3	Right angle	165	5
QHP3TWI/5	3	3-way	215	5
QHP3STI/7	3	Straight	210	7
QHP3RAI/7	3	Right angle	165	7
QHP6RAI/7	6	Right angle	165	7
QHP6STI/10	6	Straight	210	10
QHP6RAI/10	6	Right angle	165	10
QHP10STI/10	10	Straight	210	10
QHP10RAI/10	10	Right angle	175	10

Spare keys

	Bore, mm
For GP Rotaflor stopcocks	
QGP3K	3
QGP6K	6
QGP10K	10
For HP Rotaflor stopcocks	
QHP3K	3
QHP6K	6
QHP10K	10

Spare safety locks

For GP and HP Rotaflor stopcocks.

	Bore, mm
QLR3	3
QLR6	6
QLR10	10

Spare glass bodies

For GP and HP Rotaflor stopcocks are available and can be ordered by adding prefix RB to the appropriate Quickfit number eg, RB3STI/5, RB3RAI/5, RB10RAI/15.



QGP:STI-



QGP:RAI-



QGP-K



QHP3STIC



QLR-



QHP:TWI-



QHP:STI-



QHP:RAI-



QHP-K

Stoppers and Thermometers

Stoppers

Hollow blown to reduce weight and closed at the lower end.

	Cone size
QSB10	10/19
QSB12	12/21
QSB14	14/23
QSB19	19/26
QSB24	24/29
QSB29	29/32
QSB34	34/35

Long Handle Stoppers

For iodine flasks

	Cone size
QSB24	24/29
QSB29	29/32

Enclosed scale thermometers

With integral cone. Spirit filled in colour as indicated.

	Cone size	Range, °C	Spirit colour
QMF31/2S	14/23	-10 to 250	Blue
QMF31/3S	14/23	-10 to 360	Green

Fixed immersion thermometer pocket

Closed end, made to fit Quickfit stillheads. It will take a normal unjointed laboratory thermometer.

	Cone size	Approx. stem length, mm
QSH4A	14/23	45

Thermometer adapters – see QST51 to QST53 series.

Tubes

Air/steam inlet, plain

Plain air/steam inlet tube for use with size 13 screwcap adapter. Because the adapter allows variation in depth of immersion, the tube can be used with flasks of various capacities. This item has a jet drawn on one end and is included in the range for the benefit of customers who do not have the correct size of tubing available.

	Approx. dia. mm	Approx. length mm
QMF5	6.5	325

Air/steam inlet

Straight with cone.

	Cone size	Approx. stem length mm
QMF15/1	14/23	150
QMF15/2	19/26	150
QMF15/3	24/29	150

Air/steam inlet

Bent with cone and screwthread safety connector.

	Cone size	Approx. stem length mm
QMF15/2B/SC	19/26	150
QMF15/3B/SC	24/29	150



QSB series



QMF31



QSH4A



QMF5



QMF15



QMF15-B

Tubes

All dimensions and capacities are approximate.

Test Tubes

	Socket size	Overall mm	Dia. mm	Cap. ml
QMF24/0/4	10/19	100	14	5
QMF24/12/4	12/21	100	17	10
QMF24/1	14/23	100	19	11
QMF24/1/15	14/23	125	19	15
QMF24/1/16	14/23	150	19	19
QMF24/2	19/26	100	23	19
QMF24/2/6	19/26	150	23	31
QMF24/3	24/29	150	29	54
QMF24/3/8	24/29	200	29	75
QMF24/5	34/35	250	41	195

Stoppers – see QSB- on previous page.

Centrifuge Tubes

Each tube is marked with its weight to the nearest 0.1g to enable tubes of similar weight to be selected from any batch.

	Socket size	Overall mm	Dia. mm	Cap. ml
QBC24/C14T	14/15	17 to 17.3	115	10

Stoppers – see QSC.

Tubes

Cone size

Drying, angled

QMF23/1	14/23
QMF23/2	19/26
QMF23/3	24/29

Digestion Tubes

	Cap. ml	Dia. mm	Overall mm	Joint size
With joint				
QTJ15/16/1	15	16	145	14/23
QTJ75/26/3	75	26	255	24/29
QTJ100/26/3	100	26	300	24/29
QTJ250/42/6	250	42	300	40/38



QMF24/3



QBC24/C24R



QMF23



QTJ

Ancillary Items for use with Quickfit Glassware

PTFE Sleeves, Azlon disposable

For fitting over ground glass cones to provide greaseless lubrication. Wall thickness 0.07mm, taper 1:10. Supplied in packs of 10.

	Ref.	For cone
QZZ20/14	SWN961	14/23
QZZ20/19	SWN962	19/26
QZZ20/24	SWN963	24/29
QZZ20/29	SWN964	29/32
QZZ20/34	SWN965	34/35
QZZ20/40	SWN966	40/38
QZZ20/55	SWN969	55/44

PTFE Sleeves, reusable

With knurled shoulder for ease of handling. Supplied singly.

	For cone
QZZ25/14	14/23
QZZ25/19	19/26
QZZ25/24	24/29
QZZ25/29	29/32

PTFE Sealing rings, reusable

Fine (0.7mm wide, 0.07mm thick) PTFE sealing rings for ground glass cones. In use the ring is carefully stretched onto the cone, becoming elastic and producing a tighter seal than conventional full sized sleeves (solvent leak rate <0.2mg/day). Operating temperature range -20 to +300°C. Supplied in packs of 50, mounted on an applicator tube.

	Ref.	For cone
QZZ27/14	N14	14/23
QZZ27/19	N19	19/26
QZZ27/24	N24	24/29
QZZ27/29	N29	29/32
QZZ27/34	N34	34/35
QZZ27/45	N45	45/25

Reduction adapters, PTFE, Azlon

Supplied singly.

	Ref.	Socket	Cone
QZZ35-02	SWN902	10/19	14/23
QZZ35-04	SWN904	14/23	19/26
QZZ35-07	SWN907	19/26	29/32
QZZ35-08	SWN908	19/26	34/35
QZZ35-09	SWN909	24/29	29/32
QZZ35-10	SWN910	24/29	34/35
QZZ35-11	SWN911	29/32	34/35



QZZ20 in use



QZZ25



QZZ27 in use

QZZ35

Ancillary items for use with Quickfit Glassware continued

Powder Funnels

Approximate funnel top diameter 105mm.

	Cone size
QCF511	14/23
QCF512	19/26
QCF513	24/29
QCF514	29/32
QCF515	34/35

Joint Clips

For securing conical and spherical glass joints. QGC clips have PTFE-encapsulated steel springs, are highly resistant to chemical attack and can be used up to 250°C. QKC and QKS clips are Delrin® polyacetal, colour-coded, suitable for use up to 80°C and with most chemicals except halogen gases and acids.

Joint size	PTFE	Delrin®	Colour code
For conical glass joints			
10/19	QGC10	QKC10	Mint
12/21	QGC12	QKC12	Violet
14/23	QGC14	QKC14	Yellow
19/26	QGC19	QKC19	Blue
24/29	QGC24	QKC24	Green
29/32	QGC29	QKC29	Red
34/35	QGC34	QKC34	Orange
40/38	QGC40	QKC40	Ochre
45/40	QGC45	QKC45	Brown
For spherical glass joints			
S13	—	QKS13	Violet
S19	—	QKS19	Blue
S29	—	QKS29	Red
S35	—	QKS35	Orange

Delrin® is a registered trademark of DuPont Ltd.



QCF5



QGC



QKC



QKS in use

Greaseless, Screw Threaded, Interchangeable Jointed System

- ◆ Made with Pyrex® borosilicate glassware
- ◆ SVL can be used at temperatures up to 200°C and under vacuum to a maximum of 10⁻⁴ torr

- QZ295-00** PTFE stem
QZ296-90 Sealing ring
- QZ588-00** Glass body for stirrer
QZ588-32 Stirrer shaft
QZ588-34 Stirrer shaft
- QZ588-92** Gland set (complete)
QZ588-95 Anchor paddle, small
- QZ701-01** Sealing ring for butt joint, SVL15
QZ701-02 Sealing ring for butt joint, SVL22
QZ701-04 Sealing ring for butt joint, SVL42

- QZ701-11** Coupling for butt joint, SVL15
QZ701-12 Coupling for butt joint, SVL22
QZ701-14 Coupling for butt joint, SVL42

- QZ701-19** Sealing ring for sliding joint
QZ701-20 Sealing ring for sliding joint
QZ701-21 Sealing ring for sliding joint
QZ701-22 Sealing ring for sliding joint

- QZ701-23** Sealing ring for sliding joint
QZ701-24 Sealing ring for sliding joint
QZ701-25 Sealing ring for sliding joint
QZ701-26 Sealing ring for sliding joint

- QZ701-27** Sealing ring for sliding joint
QZ701-28 Sealing ring for sliding joint
QZ701-29 Sealing ring for sliding joint

- QZ701-31** Sealing ring, flexible, for sliding joint
QZ701-32 Sealing ring, flexible, for sliding joint
QZ701-33 Sealing ring, flexible, for sliding joint

- ◆ Allows the forming of rigid, flexible and rotating joints
- ◆ Allows glass of dissimilar or equal diameters to be joined together to form leak-free, pressure-tight and vacuum-tight assemblies

- QZ701-41** Screw cap with hole SVL15
QZ701-42 Screw cap with hole SVL22
QZ701-43 Screw cap with hole SVL30
QZ701-44 Screw cap with hole SVL42
- QZ701-51** Sealing ring for screwcap SVL22
QZ701-52 Sealing ring for screwcap SVL22
QZ701-56 Sealing ring for screwcap SVL30
- QZ703-01** Junction tube SVL15
QZ703-04 Junction tube SVL42

SVL screwcap stoppers

A black phenolic cap with an ethylene propylene sealing disc faced with PTFE. Can be dry heat and steam sterilised to 121°C.

	Ref.	SVL cap size mm	External dia. x height mm
SW460-13	4503/13	13	17 x 16
SW460-15	4503/15	15	20 x 21
SW460-18	4503/18	18	23 x 21
SW460-20	4503/20	20	25 x 21
SW460-22	4503/22	22	27 x 21
SW460-25	4503/25	25	31 x 26
SW460-30	4503/30	30	36 x 26
SW460-42	4503/42	42	52 x 30
SW460-60	4503/60	60	70 x 42



QZ588-32 to -34



QZ703



QZ588-95



QZ701-41-44 with QZ701-19-56

Histology

Tissue-Wax

Tissue Embedding Wax, Tissue-Wax

A highly purified, filtered, white paraffin wax blended with synthetic polymers and suitable for routine embedding and sectioning applications. Offers very little shrinkage on cooling and high performance when sectioning, ease of cutting and ribbon continuity. Melting point 56-58°C, congealing point 54-57°C. Supplied in pelletised form within packs of 1kg.

HG385-15 Tissue-Wax

Tissue Embedding Wax, Tissue-Wax*

Similar to HG385-15 but with a small amount of Dimethyl Sulphoxide added to enhance tissue penetration, giving a shorter infiltration time. Also recommended for larger or harder tissue samples as it reduces brittleness of sections, enabling more flexible ribbons. Supplied in pelletised form within packs of 1kg.

HG385-25 Tissue-Wax*

Larger pack sizes are available - *details on request.*

Embedding Cassettes

Embedding Cassettes, Standard

Solvent-resistant polyoxymethylene (POM). Made to fit most commonly-used microtome chucks. Circular base perforations enhance adhesion of paraffin wax blocks to the cassette. Without cover, but with moulded lugs to accept accessory stainless steel covers. A 45° angled labelling area provides a comfortable writing surface and is suitable for most models of cassette labeller. Supplied in packs of 1000 (2 x bags of 500), in colours as indicated.

HG420-02 Light blue
HG420-04 Yellow
HG420-06 Light green
HG420-08 Grey
HG420-10 White
HG420-12 Pink
HG420-14 Beige
HG420-16 Orange

Embedding Cassettes, Universal

Generally as HG420 but with slotted perforations on base and fitted, hinged lid. Supplied in packs of 500, in colours as indicated.

HG424-03 Light blue
HG424-05 Yellow
HG424-07 Light green
HG424-09 Grey
HG424-11 White
HG424-13 Pink
HG424-15 Beige
HG424-17 Orange

Biopsy Cassettes

Biopsy Cassettes

Polyoxymethylene (POM). With finely perforated (1mm x 1mm aperture) base and fitted hinged lid. Supplied in packs of 500, in colours as indicated.

HG429-04 Light blue
HG429-07 Yellow
HG429-10 Light green
HG429-13 Grey
HG429-16 White
HG429-19 Pink
HG429-22 Beige
HG429-25 Orange

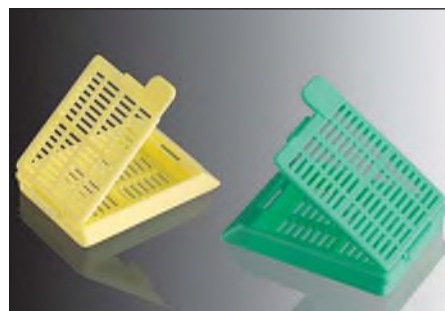
Marker pens for biopsy cassettes - see *LA620-series.*



HG385-15, HG385-25 is similar



HG420



HG424



HG429

Hydrometers

General Purpose

Relative Density (Specific Gravity) Hydrometers Calibrated at 60/60°F

Wide range (200° range)

Length 300mm. Subdivision 0.002.

HT100-10	0.600 to 0.800
HT100-12	0.800 to 1.000
HT100-14	1.000 to 1.200
HT100-16	1.200 to 1.400

HT100-18	1.400 to 1.600
HT100-20	1.600 to 1.800
HT100-22	1.800 to 2.000

Extra wide range

Length 300mm. Subdivision 0.005.

HT110-13	0.700 to 1.000
HT110-15	1.000 to 1.300
HT110-17	1.000 to 1.500
HT110-19	1.300 to 1.600
HT110-21	1.500 to 2.000

Universal

Length 400mm. Subdivision 0.010.

HT120-25	0.700 to 2.000
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Battery Hydrometer – see *BL710-08*.

Density Meter – see *DC380*.

Milk Hydrometer – see *DA210* in the Dairy section.

Soil Hydrometer – see *SG640* in the Soil Testing section.

Special IP/ASTM/API Petroleum Hydrometers – Details on request.

Urine Hydrometer – see *CM850* in the Clinical section.

BS718 Series

Density g/ml at 20°C

Ranges 0.6 to 1.0 are adjusted for liquids of low surface tension. Ranges 1.0 to 2.0 are adjusted for liquids of medium surface tension.

Series S50 (50° range)

Length 190mm. Subdivision 0.002.

HT250-10	0.600 to 0.650
HT250-12	0.650 to 0.700
HT250-14	0.700 to 0.750
HT250-16	0.750 to 0.800

HT250-18	0.800 to 0.850
HT250-20	0.850 to 0.900
HT250-22	0.900 to 0.950
HT250-24	0.950 to 1.000

HT250-26	1.000 to 1.050
HT250-28	1.050 to 1.100
HT250-30	1.100 to 1.150
HT250-32	1.150 to 1.200

HT250-34	1.200 to 1.250
HT250-36	1.250 to 1.300
HT250-38	1.300 to 1.350
HT250-40	1.350 to 1.400

HT250-42	1.400 to 1.450
HT250-44	1.450 to 1.500
HT250-46	1.500 to 1.550
HT250-48	1.550 to 1.600

HT250-50	1.600 to 1.650
HT250-52	1.650 to 1.700
HT250-54	1.700 to 1.750
HT250-56	1.750 to 1.800

HT250-58	1.800 to 1.850
HT250-60	1.850 to 1.900
HT250-62	1.900 to 1.950
HT250-64	1.950 to 2.000

Series M50 (50° range)

Length 270mm. Subdivision 0.001.

HT254-10	0.600 to 0.650
HT254-12	0.650 to 0.700
HT254-14	0.700 to 0.750
HT254-16	0.750 to 0.800

HT254-18	0.800 to 0.850
HT254-20	0.850 to 0.900
HT254-22	0.900 to 0.950
HT254-24	0.950 to 1.000

HT254-26	1.000 to 1.050
HT254-28	1.050 to 1.100
HT254-30	1.100 to 1.150
HT254-32	1.150 to 1.200

HT254-34	1.200 to 1.250
HT254-36	1.250 to 1.300
HT254-38	1.300 to 1.350
HT254-40	1.350 to 1.400

HT254-42	1.400 to 1.450
HT254-44	1.450 to 1.500

Series M100 (100° range)

Length 250mm. Subdivision 0.002.

HT260-11	0.600 to 0.700
HT260-13	0.700 to 0.800
HT260-15	0.800 to 0.900
HT260-17	0.900 to 1.000

HT260-19	1.000 to 1.100
HT260-21	1.100 to 1.200
HT260-23	1.200 to 1.300
HT260-25	1.300 to 1.400

HT260-27	1.400 to 1.500
HT260-29	1.500 to 1.600
HT260-31	1.600 to 1.700
HT260-33	1.700 to 1.800

HT260-35	1.800 to 1.900
HT260-37	1.900 to 2.000



HT100

HT110

HT120

HT250, HT254 are similar

HT260



DC380

Hydrometers

Petroleum

Petroleum Hydrometers to BS718-ISO649

Density g/ml at 15°C for liquids of low surface tension.

Series L50SP. Subdivision 5. 335mm long

HT285-10	0.600 to 0.650
HT285-12	0.650 to 0.700
HT285-14	0.700 to 0.750
HT285-16	0.750 to 0.800
HT285-18	0.800 to 0.850

HT285-20	0.850 to 0.900
HT285-22	0.900 to 0.950
HT285-24	0.950 to 1.000
HT285-26	1.000 to 1.050
HT285-28	1.050 to 1.100

Series M50SP. Subdivision 1. 270mm long

HT290-10	0.600 to 0.650
HT290-12	0.650 to 0.700
HT290-14	0.700 to 0.750
HT290-16	0.750 to 0.800
HT290-18	0.800 to 0.850

HT290-20	0.850 to 0.900
HT290-22	0.900 to 0.950
HT290-24	0.950 to 1.000
HT290-26	1.000 to 1.050
HT290-28	1.050 to 1.100

Density

Density Hydrometers calibrated at 15.6°C (60°F)

Twaddels

For liquids heavier than water. Subdivision 1.0° Tw.

Length 170mm

HT300-10	No. 1, 0 to 24° Tw
HT300-14	No. 2, 24 to 48° Tw
HT300-18	No. 3, 48 to 74° Tw

HT300-22	No. 4, 74 to 102° Tw
HT300-26	No. 5, 102 to 138° Tw
HT300-30	No. 6, 138 to 170° Tw

Length 280mm

HT310-11	No. 1, 0 to 24° Tw
HT310-15	No. 2, 24 to 48° Tw
HT310-19	No. 3, 48 to 74° Tw

HT310-23	No. 4, 74 to 102° Tw
HT310-27	No. 5, 102 to 138° Tw
HT310-31	No. 6, 138 to 170° Tw

Baumé, heavy

For liquids heavier than water. With lengths as indicated.

HT330-10	0 to 10 x 0.1° Bé, 295mm
HT330-32	0 to 30 x 0.5° Bé, 280mm
HT330-50	0 to 50 x 1.0° Bé, 230mm
HT330-70	0 to 70 x 1.0° Bé, 230mm

Latexometer

For determination of the dry rubber content of latex. Calibration temperature 28.9°C. Range 50 to 250 grams per litre. Length 260mm.

HT370-08	Latexometer
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Plastic

NALGENE® 

Hydrometers, Nalgene 3630-series

Plain form, break-resistant polycarbonate. Excellent alternative to glass, particularly in safety-critical areas such as food or beverage testing.

Specific Gravity

Subdivision 2. For liquids heavier than water.

	Range, s.g.
HT374-16	1.200 to 1.420
HT374-18	1.400 to 1.620

Hydrometer Jars

Glass, with spout and base

	Ht. x dia. mm
HT400-20	150 x 38
HT404-20	200 x 38
HT404-25	200 x 50
HT404-30	200 x 63
HT406-20	250 x 38
HT406-25	250 x 50
HT408-25	300 x 50
HT408-30	300 x 63
HT408-35	300 x 75
HT410-30	350 x 63
HT412-25	400 x 50
HT412-30	400 x 63



HT300 HT310, HT285/290 are similar HT330



HT370



HT374



HT400/412 with Hydrometer in use

Jars

Specimen/Sample Jars

Jars, cylindrical, glass

Without lid. Dimensions are diameter x height in mm.

	Dimensions, mm
JA300-20	100 x 100
JA300-23	100 x 150
JA300-40	150 x 150
JA300-43	150 x 200
JA300-50	200 x 200
JA300-56	200 x 300

Accessory Lids

Loose outside fitting. For JA300 series.

	For jars dia. mm
Glass	
JA304-20	100
JA304-40	150
Stainless steel	
JA306-20	100
JA306-40	150
JA306-50	200

Jars, Azlon, cylindrical

Autoclavable polypropylene, Straight-sided wide neck jars with wadless screw cap. Supplied in packs as indicated.

	Ref. JWP-	O.d. x ht. mm	Pack qty.
JA322-25	0030P	43 x 43	72
JA322-32	0060P	53 x 47	48
JA322-42	0125P	70 x 60	36
JA322-49	0250P	89 x 66	36
JA322-54	0500P	89 x 97	24
JA322-56	0950P	120 x 100	24
JA322-59	1200P	120 x 132	24

"Sweetie" Jars

For storage of powders and semi-solids, or non-liquid waste disposal. With screw cap. Approximate volume as indicated. Supplied singly.

JA345-10	2.5 litres
JA345-20	4.5 litres



JA300 with JA306



JA322



JA345

Jars, Jugs

Specimen/Sample Jars continued

Jars, Specimen, wide neck

Transparent polystyrene, wide neck jars with white screw caps with internal wad seal, leak tested to BS EN 14254. Available sterile or non-sterile and with, or without, patient specimen labelling. CE marked in accordance with EU Directive 98/79/EC. Supplied in packs as indicated.

	Cap. ml	Label?	Sterile?	Pack qty.
JA330-02	30	—	—	200
JA330-03	30	✓	—	200
JA330-04	30	—	✓	200
JA330-05	30	✓	✓	200
JA330-12	60	—	—	200
JA330-13	60	✓	—	200
JA330-14	60	—	✓	200
JA330-15	60	✓	✓	200
JA330-22	120	—	—	100
JA330-23	120	✓	—	100
JA330-24	120	—	✓	100
JA330-25	120	✓	✓	100
JA330-32	230	—	—	100
JA330-33	230	✓	—	100
JA330-34	230	—	✓	100
JA330-35	230	✓	✓	100
JA330-42	350	—	—	100
JA330-43	350	✓	—	100
JA330-44	350	—	✓	100
JA330-45	350	✓	✓	100



JA330

Jugs

Jugs, Azlon

Clear polypropylene. Tall form, beaker shape with handle. High clarity rigid polypropylene with choice of moulded or blue printed graduations, non-slide anti-suction bases and precision pouring spouts. Autoclavable to 121°C. Supplied singly.

	Ref.	Capacity ml
Moulded Graduations		
MD749-08	JPM0050P	50
MD749-10	JPM0100P	100
MD749-15	JPM0250P	250
MD749-20	JPM0500P	500
MD749-25	JPM1000P	1000
MD749-30	JPM2000P	2000
MD749-40	JPM3000P	3000
MD749-45	JPM5000P	5000
Printed Graduations		
MD758-08	JBP0050P	50
MD758-10	JBP0100P	100
MD758-15	JBP0250P	250
MD758-20	JBP0500P	500
MD758-25	JBP1000P	1000
MD758-30	JBP2000P	2000
MD758-40	JBP3000P	3000
MD758-45	JBP5000P	5000

Jugs- see Measures and Medical sections.

Hydrometer Jars – see Hydrometer section.

Ointment Jars, Wide Mouth Jars, Specimen Jars – see Bottles section.

Specimen tubes – see Tubes section.



MD749



MD758

Measures

Dispensing Measures, Graduated, Glass

COPE

- ◆ Government Stamped to BS1922
- ◆ Permanent markings and graduations
- ◆ Conical and Cup Shapes
- ◆ Metric and Imperial graduations
- ◆ Special graduations available

BS1922 Government Stamped

Additionally, all measures are individually engraved with a traceable batch test number.

	Cap. ml	No. of grads.
Conical Shape		
MD100-10	5	5
MD100-15	10	6
MD100-17	10	10
MD100-22	20*	8
MD100-25	25	5
MD100-27	25	9
MD100-32	50	6
MD100-34	50	10
MD100-36	50	18
MD100-42	100	6
MD100-44	100	10
MD100-50	200*	10
MD100-55	250	6
MD100-57	250	10
MD100-62	500	6
MD100-66	500	10
Cup Shape		
MD300-62	500	6
MD300-67	500	10
MD300-75	1000	10
MD300-80	2000*	8

* Supplementary to BS1922 Government Stamped.

Unstamped

	Cap. ml	No. of grads.
Conical Shape		
MD140-10	5	5
MD140-15	10	10
MD140-22	20	8
MD140-25	25	5
MD140-27	25	9
MD140-32	50	10
MD140-34	50	18
MD140-42	100	10
MD140-50	200	10
MD140-55	250	10
MD140-62	500	10
Cup Shape		
MD340-62	500	10
MD340-75	1000	10
MD340-80	2000	8

Double Scale, Imperial/Metric Unstamped

	Capacity
Conical Shape	
MD160-25	1oz/25ml
MD160-32	2oz/50ml
MD160-42	4oz/100ml
MD160-55	10oz/250ml
MD160-62	20oz/500ml
Cup Shape	
MD360-67	40oz/1000ml

Specials

Measures with capacities and graduations other than those above, including Unstamped Imperial Measures are available to order.

Standard Measures can be produced for left-handed use - *details on request.*

Please request a quotation giving full details of your requirements including the quantity.



MD100/140

MD300/340

Measures/Jugs

Measures

Conical Measures

Polypropylene. Graduated.

	Capacity x grads, ml
MD700-10	100 x 2
MD700-15	250 x 2
MD700-20	500 x 10
MD700-25	1000 x 20

Medicine Measures – see ME810.

Rain Measures

For 5 inch funnels. Glass with flat base. Graduated directly in inches or millimetres of rainfall as specified. Subdivisions are 0.01 inches for inch sizes and 0.2mm for millimetre sizes.

	Reading scale
MD730-20	0.5 inch/12mm dual
MD730-30	10mm

Jugs

Jugs, Azlon

Clear polypropylene. Tall form, beaker shape with handle. High clarity rigid polypropylene with choice of moulded or blue printed graduations, non-slide anti-suction bases and precision pouring spouts. Autoclavable to 121°C.

	Ref.	Cap. ml
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Moulded graduations

MD749-10	JPM0100P	100
MD749-15	JPM0250P	250
MD749-20	JPM0500P	500

MD749-25	JPM1000P	1000
MD749-30	JPM2000P	2000
MD749-40	JPM3000P	3000
MD749-45	JPM5000P	5000

Printed graduations

MD758-08	JPB0050P	50
MD758-10	JPB0100P	100
MD758-15	JPB0250P	250
MD758-20	JPB0500P	500

MD758-25	JPB1000P	1000
MD758-30	JPB2000P	2000
MD758-40	JPB3000P	3000
MD758-45	JPB5000P	5000

Jugs, stainless steel

Graduated.

	Capacity litres
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Tapered shape

MD900-20	0.5
MD900-25	1
MD900-30	2

Straight sided

MD902-18	0.5
MD902-23	1
MD902-32	2



MD700



MD730-30



MD749



MD758



MD900

MD902

Tools

Files

Needle File Set

Set of 12. Profile shapes are flat head, flat taper, joint, taper round, half round, square, three square, oval, crossing, crochet, barrette and knife. Length 140mm. In plastic wallet.

TS150-20 File set

Knives

Trimming Knife

With retractable blade. The blade can be used in three positions and is fully retractable by using a slide button. Supplied with five standard blades stored inside the body.

TS170-10 Trimming knife

Spare blades

TS174-08 Standard, pk of 10

TS174-12 Hooked, pk of 5

Scalpel/Tool Set, Swann-Morton

Comprising slotted plastic handle with clamping screw and one each No. 1 straight edge and No. 2 convex curved edge blades.

DS260-10 Tool Set

Glass Cutting

Tungsten Carbide Knife

- ◆ For cutting soda-lime, borosilicate and silica glass tubing and rod
- ◆ Long lasting tough reversible blade which can be sharpened on a silicon carbide stone

Moulded plastic handle.

GM222-10 Blade length 40mm

GM222-14 Spare blade

Glass Cutting Diamond

Mounted in wood handle.

GM230-10 Diamond

Pliers

Combination Pliers

Tool steel with cushion grip handles. Length 160mm.

TS200-10 With slip guards

TS200-12 Without slip guards

Note: These pliers are not suitable for use on live power circuits.

Watchmakers Pliers

Chrome vanadium hardened steel with cushion grip handles. The flat-wide jaws have smooth gripping surfaces. Overall length 125mm.

TS215-10 Flat-wide

Scissors

Scissors, heavy duty

Side bent with polished steel blades. Blade length 125mm. Overall 225mm.

TS285-12 Scissors

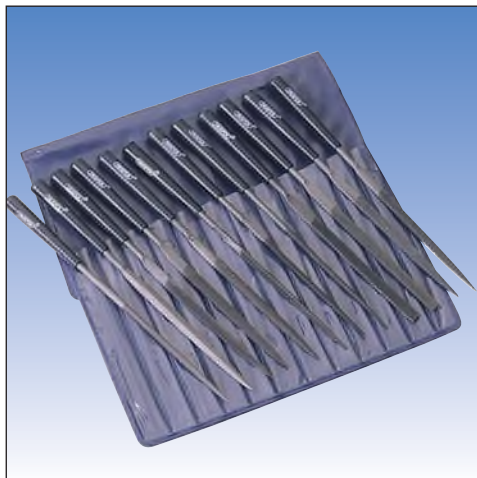
Scissors, general purpose

Stainless steel. Straight, closed shanks. Dimension given is overall length.

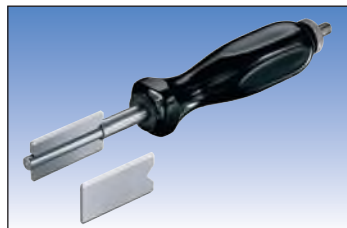
DS500-20 125mm

DS500-25 150mm

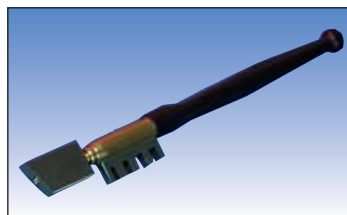
DS500-30 175mm



TS150



GM222-10 and GM222-14



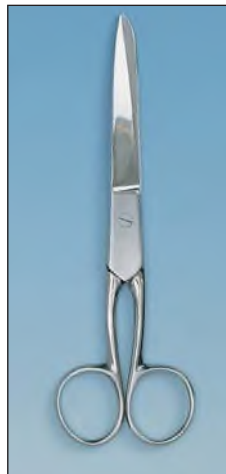
GM230-10



TS200



TS170



DS500



TS215



TS285

Tools

Screwdrivers

Screwdrivers

Chrome vanadium steel blade and transparent plastic handle. For plain slot screws except where stated.

Blade

Electricians

TS350-14 150 x 6.5mm

Instrument

TS350-25 75 x 3mm

Chubby

TS350-30 38 x 6mm

Engineers

TS350-40 150 x 8mm

Engineers Cross Slot

TS350-50 100 x 6mm
(Tip No. 2)

TS350-55 250 x 6mm
(Tip No. 2)

Chubby Cross Slot

TS350-60 38 x 6mm
(Tip No. 2)

Watchmakers/Jewellers Screwdriver Set

Comprising six screwdrivers with hardened steel blades and plated brass bodies in a plastic wallet. Blade widths from 1 to 3.8mm.

TS370-10 Screwdriver set

Sealers

Impulse Heat Sealers

For heat sealing polyethylene film and other low melting point plastics, metallised film laminates etc. With hand operated hinged sealing bar and automatic control for adjusting the weld time. Will seal film up to 250 microns thick (1000 gauge). For 220-240V 50Hz single phase supplies.

Single timer model

TS400-20 Seal length 230mm

Dual timer model

Provides additional control of the cooling part of the weld cycle. Includes also a cutter for layflat tubing.

TS400-30 Seal length 300mm

Hot Air Blower – see *HE775*.

Safety Equipment – see *Safety section*.

Sealing film – see *SE165/SE175*.

Sealing Labels – see *LA290*.



TS350



TS400-30, TS400-20 is similar



TS370

Tools

Soldering to Storage

Soldering Kit

Comprising 30W iron and 100W soldering gun, both with 1.2 metre cable and UK plug, soldering tip, tube of solder, flux, solder sucker, tweezers, wire holder/pointer and workpiece clamp with magnifier. For 230V 50/60Hz single phase supplies. Supplied in a rigid carrying case.

TS480-15 Soldering kit

Tool Roll

Heavy duty PVC with fabric bound edges and securing tapes. With eight pockets. Overall length when opened 390mm.

TS550-10 Tool roll

Storage Containers

Transparent acrylic. Designed to provide visible storage of small laboratory items. Hinged lids provide rapid filling and dispensing. These bench-mounting units provide simple, convenient and visible storage for small items such as pipette tips, septa etc. Dimensions stated are H x W x D.

SX200-15 2-compartment unit
365 x 140 x 160mm

SX200-18 3-compartment unit
210 x 210 x 160mm

SX200-20 4-compartment unit
210 x 290 x 160mm

Storage Rack

Polypropylene open tiered rack, bench mounting, for storing small laboratory items such as corks, bungs, pipettor tips, small bottles etc. Stops prevent the bins falling off the ends and to improve visibility the bins can be angled down by approximately 7°. Overall dimensions of each assembly 380 x 500 x 305mm H x W x D.

	Tiers	Bins of H x W x D, mm
SX210-14	4	8 of 50 x 125 x 130 4 of 75 x 125 x 170 4 of 100 x 125 x 225

Storage Cabinets

With transparent tough plastic drawers mounted in a strong steel frame. Allow clean storage of small laboratory items, components, spares etc. Units can be wall or bench mounted. A retaining lip at the rear prevents the drawers from falling out of the cabinet. Overall dimensions of each cabinet 420 x 307 x 150mm H x W x D.

	Drawers of H x W x D, mm
SX225-10	36 of 35 x 64 x 135
SX225-14	18 of 57 x 87 x 135
SX225-18	6 of 57 x 275 x 135
SX225-22	24 of 35 x 64 x 135 3 of 57 x 87 x 135 1 of 57 x 275 x 135

Storage Cabinet, large depth

General construction and uses as SX225 series but with transparent, tough plastic drawers 240mm deep. Overall 440 x 360 x 250mm. Can be wall or bench mounted. With 8 drawers each 85 x 160 x 240mm H x W x D.

SX230-10 Cabinet, large depth

Wall mounting Storage Bin panels – see SX215.



TS480-15



SX200-18, SX200-15 and SX200-20 are similar



SX210



TS550



SX225-22



SX230

Labelling and Documentation

Blank labels

Blank Labels

Self adhesive, white. Supplied in dispenser packs. All sizes and pack quantities are approximate.

	Label size, mm	Labels/pack
Rectangles		
LA200-44	19 x 25	1200
LA200-57	24 x 37	640
LA200-61	25 x 50	400
Circles		
LA204-34	19 dia.	1400

Tubees

Tubees Hi-Low Strips

Self-adhesive, smear-resistant labels for use on natural polypropylene products, particularly microtubes and cryogenic tubes. Withstand temperatures from -85°C to +100°C. Supplied in dispenser packs of 1000 labels.

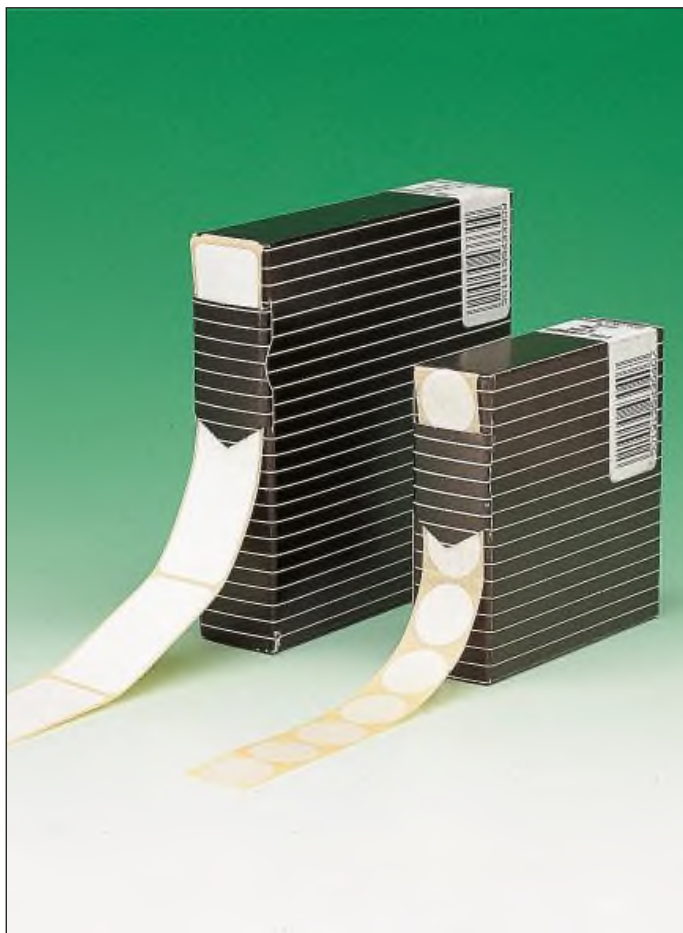
	Label size, mm	Colour
LA220-15	32.5 x 13	Yellow
LA220-35	20 x 6	Pink

Tubees Micryo Dots and Strips

Self-adhesive, smear-resistant labels for use on natural polypropylene products, with a strong, permanent adhesive backing which enables use down to -196°C, if applied at +5°C or above. Supplied in dispenser packs as indicated, or in a pack of 20 x A4 sheets for use with thermal transfer or laser printers. White.

	Label size, mm	Labels/pack
LA225-10	33 x 13	1000
LA225-20	20 x 6	1000
LA225-30	9.5 dia.	1000
LA225-40	9.5 dia.	5000
LA225-50	19 dia.	1000
LA225-60	19 dia.	5000
LA227-45	19 dia.	2160*

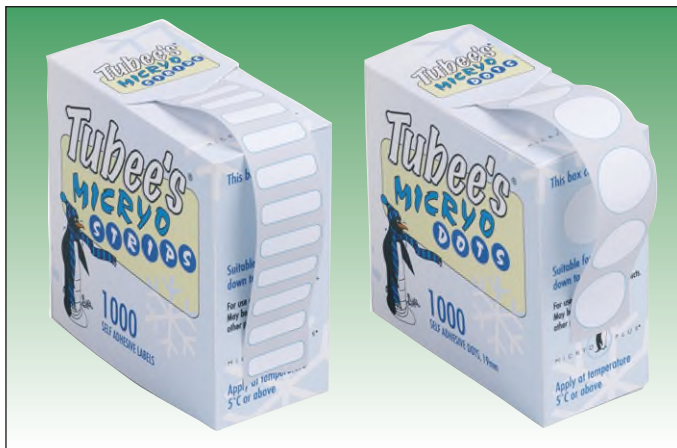
*20 x A4 sheets, each holding 108 labels.



LA200/LA204



LA220



LA225

Labelling and Documentation

Close-it®, Seal-it

Control Seal Labels, Close-it®, Bürkle

Quality control seal labels with aluminium backing allowing hermetic sealing of sacks pierced for sampling. Strong adhesive will adhere even to surfaces coated with powder (plaster, flour etc.). Supplied in colours, sizes and packs as indicated. Printed with ruled writing area for labelling by pen.

	Colour
95 x 95mm, roll of 500	
LA290-04	Red
LA290-08	Green
LA290-12	Yellow
LA290-16	Blue
LA290-20	Black
150 x 150mm, roll of 250	
LA290-50	Red
LA290-54	Green
LA290-58	Yellow
LA290-62	Blue
LA290-66	Black

Security Seals, Seal-it, Bürkle

Sealing labels for tamper-evident closure of conventional containers. Highly visible, red background with large white marking area and sequential, 7-digit, numerical identification. A secondary, identically numbered, label strip can be used for archive documentation of the sample. Labels are aluminium foil-backed for enhanced conformity to most container/sack profiles and a very strong adhesive surface ensures that once applied, the label is permanently affixed. Cross-perforations through the label immediately tear should an attempt be made to remove the cap or seal. Overall label size 178 x 30mm L x W. Supplied in a roll of 500.

LA295-10 Seal-it labels

Safety Tapes

Manufactured in hard wearing, self-adhesive vinyl. Most common titles are available, including OXIDISING AGENT, CORROSIVE, IRRITANT, TOXIC, HARMFUL, HIGHLY FLAMMABLE and POISON. Supplied in a continuous roll, 66 metres long. For full details – see SC250 series in the Safety section.



LA290 in use



LA302



LA310



LA295-10



Safety tapes

Identi-Tape™

Self adhesive. Colour coded labelling tape, width 19mm. Supplied in a roll as indicated. All dimensions are approximate.

12 metre roll

LA302-10 Blue
LA302-15 Green
LA302-20 Orange

LA302-25 Red
LA302-30 White
LA302-35 Yellow

55 metre roll

LA302-12 Blue
LA302-17 Green
LA302-22 Orange

LA302-27 Red
LA302-32 White
LA302-37 Yellow

Write-On™ Tape

Self adhesive. Colour coded labelling tape which can be marked with most types of pen. Temperature resistant from -73°C to +121°C, with excellent adhesion to glass, metal and most plastics, including PTFE. Steam and solvent resistant. Width 13mm. Supplied in roll of 36.5 metres on a 75mm core. All dimensions are approximate. In colours as indicated.

LA310-05 White
LA310-10 Red
LA310-15 Yellow

LA310-20 Green
LA310-25 Blue
LA310-30 Orange

Labelling and Documentation

Label Printers

Portable Label Printer, BMP™21-PLUS

Hand-held, tape label printer specifically designed for universal applications. Printing facilities include, date/time stamp, serialisation with advanced (shift serialisation) mode, pre-programmed labelling sizes and Greek symbol characters included. Battery operated (mains operation available using accessory a.c. adapter). Accessory labels are printed in a non-smear, non-fading ink which is chemical and solvent resistant and cover a variety of applications from -196°C LN₂ storage to autoclaving at 121°C. An exposed tape backing edge ensures easy peeling when wearing gloves. Printing is available in 5 font sizes with multi-line and banner printing functions. A built-in tape cutter is also provided. Overall 229 x 115 x 64mm. Weight 750g. Supplied with one 9.6mm wide label tape cartridge but without batteries (6 x 1.5V AA required).

- LA475-35** BMP™21-PLUS
- LA475-47** a.c. adapter for LA475-35
- BL610-15** Accessory battery, 1.5V (6 required)

Accessory tapes

Supplied in drop-in cartridges containing a continuous 6.4metre length (except nylon cloth - 4.8 metres long), in widths as indicated.

White gloss polyester

Suitable for vial, microplate and general identification. For use in freezers (to -70°C), liquid nitrogen (must be wrapped onto itself around vials), autoclavable (121°C maximum) and can be used in water baths up to 100°C.

- LA476-04** 9.53mm wide
- LA476-11** 12.7mm wide
- LA476-16** 19.05mm wide

White matt polyester

Suitable for microscope slides, microplate and general identification. Xylene resistant. For use in freezers (to -70°C), and autoclavable (121°C maximum).

- LA476-29** 9.53mm wide
- LA476-36** 12.7mm wide
- LA476-42** 19.05mm wide

White nylon cloth

Heavy duty material for vial, microplate and general identification within freezers (to -70°C), liquid nitrogen and autoclavable (121°C maximum).

- LA476-53** 9.53mm wide
- LA476-57** 12.7mm wide
- LA476-62** 19.05mm wide

Label Printer, BMP™51

Portable, thermal transfer label printer for labelling samples in accordance with GLP (Good Laboratory Practice) protocols. Maximum label width printable 38.1mm. Print functions include text, bar-coding, serialisation, banner printing and multiple material configuration. Uses accessory drop-in cartridges containing a continuous reel of labels or tape up to 7.6m long. With dot matrix LCD, alphanumeric keyboard, label cartridge recognition system, USB connection/output port and type cutter. Overall 365 x 460 x 150mm. Weight 5.2kg. Supplied with hard carrying case, rechargeable Li-ion battery, USB cable, control software, instructions, tape cartridge with black on white tape reel of 38.1mm width and a.c. adapter/charger requiring a 230V 50Hz single phase supply.

LA477-45 BMP™51

NOTE:

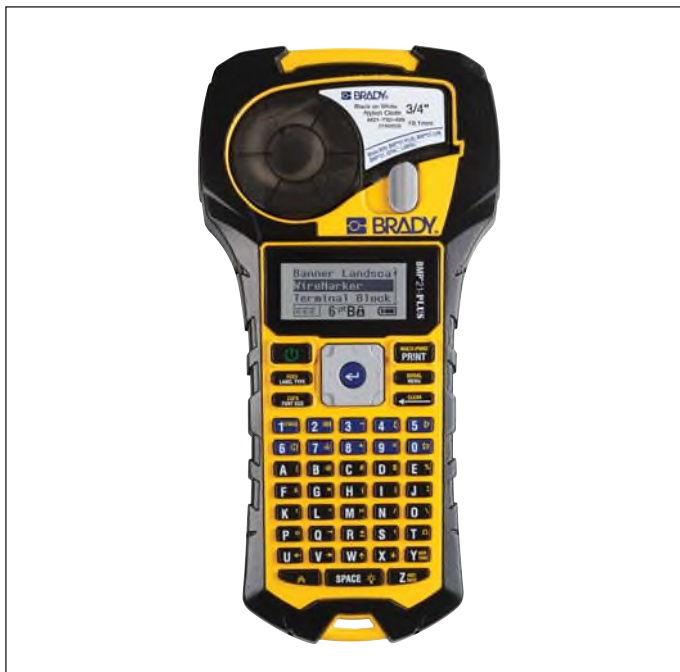
This printer is supplied with a battery that is considered hazardous for export shipment and requires export packing and shipment as such.

Accessory tapes

Supplied in drop-in cartridges containing reels of labels as indicated. All print black text on white background.

	Label size, mm	Material	Temp. range °C	For Labelling	Labels per cartridge
LA478-04	9.53 dia.	Polyester	-196 to +121*	0.5 to 1.5ml microtubes	240
LA478-08	25.4 x 9.53 / 9.53 dia	Nylon	-196 to +121	1.0 to 2.0ml microtubes	240
LA478-12	12.7 dia.	Nylon	-196 to +121	1.5 to 2.0ml microtubes	240
LA478-16	38.1 x 98.42	Polyester	-196 to +121	50ml tubes	80
LA478-20	25.4 x 48.26	Polyester	-196 to +121	12 to 24ml tubes	100
LA478-24	25.4 x 48.26	Polyester	-196 to +121*	50ml tubes	100
LA478-28	38.1 x 31.75	Polyester	-196 to +121*	12 to 24ml tubes	160
LA478-32	6.35 x 48.26	Polyester	-80 to +121	Microplates	160
LA478-36	19.08 x 12.70	Vinyl	-80 to ambient	Tissue cassettes	220
LA478-40	22.86 x 22.86	Polyester	-80 to +121	Microscope slides	280

*Not recommended for use in boiling water baths over medium to long periods.



LA475-35



LA477-45

Labelling and Documentation

Tape Label Printer

brother.

Portable, thermal transfer tape label printer for simple, clear and efficient operation in marking, identification and inventory applications using accessory tape cartridges.

Desktop Tape Label Printer PT3600

Stand-alone, desktop labeller with easy-to-use functions and enhanced features. With WYSIWYG semi-graphical display allowing the user to view label components before printing, 360dpi resolution, QWERTY keyboard, USB PC interface, rotate and print function, multi-function cutter, choice of 10 fonts up to 27mm high (depending on tape width selected), built-in symbols and graphics, 18 styles, 24 print sizes, vertical, mirror and rotate printing, 9 barcode types, 20mm/second print speed and tape end sensor. Accommodates 6, 9, 12, 18, 24 and 36mm width tapes. Overall 237 x 302 x 104mm W x D x H. Weight 200g. Supplied with user guide, one each 24mm wide black on white and 36mm black on yellow tapes, USB cable, CD-Rom software for label editing via the users' PC and a.c. adapter for 230V 50Hz single phase supplies.

LA488-25 PT3600

Accessory tapes for LA488-25

Gloss-laminated tapes with self-adhesive backing. Withstand scratching, sunlight, moisture, oil and weathering. Colour and widths as indicated. Supplied in a cassette containing an 8 metre length. All tapes print text in black.

Tape width mm	Tape colour white	Tape colour clear	Tape colour Red	Tape colour Yellow
6	LA495-02	—	—	LA495-38
9	LA495-04	LA495-16	LA495-25	LA495-40
12	LA495-06	LA495-18	LA495-30	LA495-42
18	LA495-08	LA495-20	—	LA495-44
24	LA495-10	LA495-22	—	LA495-46
36	LA495-12	—	—	LA495-48

Laboratory Notebooks

For use as a primary record of research and experimentation, procedural steps and design concepts. Choice of gridded or lined, numbered A4 pages in acid-free paper. Gridded pages feature areas for title, project and book numbers, date and witness signature. Lined notebooks have college ruled pages for easy report writing. All covers are waterproof and chemical-resistant and the notebooks include periodic and conversion tables.

- LA500-10** Lab notebook, 100 pages, gridded, black cover
- LA500-20** Lab notebook, 200 pages, gridded, blue cover
- LA500-40** Lab notebook, 200 pages, lined, red cover

Ink markers - see LA540- to LA625-series.

LA500



LA488-25

Labelling and Documentation

Pencils/Markers

Chinagraph Pencils

For writing on polished surfaces including glass. Supplied in packs of 12.

- LA520-10 Black
- LA520-30 Red
- LA520-35 White
- LA520-40 Yellow

Glass Writing Diamonds

- LA530-10 Retractable point and pocket clip
- LA534-12 Mounted on wooden handle

Ink Markers

With ultrafine point fibre tip, with non-blurring ink. Will not bleed through paper. Line width approximately 0.4mm. Supplied in packs of 12.

- LA540-14 Black
- LA540-24 Blue

Ink Markers

Fine point fibre tip. Waterproof ink for permanent marking on most surfaces. Line width approximately 0.8mm. Supplied in a pack of 12.

- LA542-15 Black

Ink Markers, Pentel

With tough bullet tip. Waterproof ink for permanent marking on most surfaces. Supplied in packs of 12.

- LA545-10 Black
- LA545-13 Blue
- LA545-16 Green
- LA545-19 Red

Ink Markers, CD/DVD, Staedtler Lumocolor

Permanent, quick drying, smudge-proof, water-based ink.

- LA585-12 Black, pack of 10
- LA585-62 Assorted colours, pack of 4 (1 each black, blue, red, green)

Ink Markers, Laboratory

Ideal for marking polystyrene petri dishes, metal, glass and most plastics, cold (above 0°C) or moist surfaces. Water and alcohol resistant, autoclavable ink. Can be removed from non-porous surfaces by scrubbing with detergent. Colours as indicated. Supplied singly.

- LA620-04 Black
- LA620-08 Red
- LA620-12 Blue
- LA620-16 Green



LA520



LA530

LA534



LA540



LA542



LA545



LA585



LA620

Lubricants

Greases/Waxes/Oil

Silicone Grease

Resistant to a wide range of chemicals and stable from approximately -40 to +200°C.

Normal — for general lubricating of stopcocks. Should not be used with volumetric glassware.

High vacuum — for use at system pressures better than 10^{-6} mbar

LT150-10 Normal/stopcock, 50g tube

LT150-15 High vacuum, 50g tube

glisseal® Greases

Silicone-free for lubricating ground glass joints, stopcocks etc.

- ◆ Excellent thermal stability
- ◆ No dripping point
- ◆ Chemically stable against most acids, alkalis and gases
- ◆ Insoluble in water and low molecular mono- and polyhydric alcohols such as ethanol, ethylene glycol, glycerine, etc.
- ◆ Can be dispersed in low molecular ketones, esters, amines, hydrocarbons, benzene derivatives, higher fatty acids, fatty acid esters and ethers
- ◆ Can be removed with Borer, or any laboratory detergents
- ◆ Only a very thin layer of glisseal® is required for excellent lubrication

Catalogue No		LT160-12	LT160-17
Grade		Normal	High vacuum
Working temperature range	normal °C	-40 to 200	-40 to 220
	air excluded °C	-40 to 300	-40 to 320
	short term °C	350	400
Dripping point	°C	none	none
Vapour pressure	at 21°C Torr	2×10^{-5}	2×10^{-6}

glisseal® Grease N, normal. As specified. For general purpose and low vacuum applications. In 60g tube.

LT160-12 Normal grade

glisseal® Grease HV, high vacuum. As specified. For high vacuum applications. In 60g tube.

LT160-17 High vacuum grade

Important Note

glisseal® MUST NOT be used to lubricate oxygen cylinder valves.



LT150, LT200/205 series



LT160-12 and LT160-17

Apiezon Greases

A wide range of silicone-free, organic based non-toxic materials widely used for sealing and lubricating moving parts in vacuum systems but suitable also for general lubricating applications.

	Grade	Vapour Pressure at 20°C	Melt. point	Tube qty.
LT200-15	L	$<10^{-10}$ mbar	47°C	50g
LT200-20	M	$<10^{-8}$ mbar	44°C	100g
LT200-25	N	$<10^{-9}$ mbar	43°C	25g
LT200-30	T	$<10^{-8}$ mbar	125°C	25g
LT200-40	AP100	$<10^{-10}$ mbar	47°C	50g
LT200-50	AP101	$<10^{-5}$ mbar	*	50g

*AP101 has a softening point of 180°C and is widely used as a general purpose stopcock lubricant.

Apiezon Wax

Mineral based. For sealing joints in high vacuum systems.

	Grade	Vapour Pressure at 20°C	Soft Point	Pack qty.
LT205-12	W	$<10^{-6}$ mbar	80°C	500g

Machine Oil

A light grade mineral oil containing a corrosion inhibitor. Useful for general lubricating and in helping free seized parts. In sputted can containing approximately 100ml.

LT240-10 Machine oil

Note: This item can be exported only as sea freight - deck cargo.

Vacuum Pump Oils – see *Pumps* section.

PTFE Sleeves and rings for fitting over ground glass cones to provide greaseless lubrication – see *QZZ20/QZZ27 series in the Quickfit* section.



LT240-10

BAR MAGNETS ALU./NI. RECTANGULAR 50X12X6MM PAIR WITH KEEPERS

Product Code: MA208-12



BAR MAGNETS ALU./NI. RECTANGULAR 75X12X6MM PAIR WITH KEEPERS

Product Code: MA208-17



PLOTTING COMPASS IN PLASTIC CASE 19MM DIA

Product Code: MA250-20



Magnifiers

Magnifiers, Watchmakers, Folding and Reading

Watchmaker's Eyeglasses

Single bi-convex lens approximately 20mm diameter, in plastic mount. Magnification and focal length as indicated.

	Magnification	Focal length, mm
MB100-17	x4	83
MB100-21	x5	62
MB100-26	x7	42
MB100-29	x9	31

Folding Magnifiers

Hand held. Lightweight aspherical lens, 35mm diameter, which hinges into the outer housing for protection and convenience when storing. Magnification and optical power as indicated.

	Magnification	Optical power, dioptres
MB115-22	x4	16.0
MB115-24	x7	28.0
MB115-26	x10	38.0

Magnification

Unless otherwise stated all magnifications quoted are linear and may be approximately converted to area by squaring, i.e. x2 linear equates approximately to x4 area taken at the point where optimum definition is obtained.

Watchmaker's Forceps – see *Dissecting* section.

Watchmaker's Screwdrivers – see *Tools* section.



MB100



MB115



MB135

Folding Magnifiers

Bench mounting. Bi-convex glass lens in a chrome-plated brass frame. With lens diameter, magnification, optical power and aperture dimensions as indicated.

	Lens dia. mm	Magnification	Optical power, dioptres	Aperture, mm
MB135-14	15	x8	32.0	20 x 20
MB135-16	11	x12	48.0	10 x 10

Reading Magnifiers

Magnification approximately x2. Dimension given is lens diameter.

Acrylic lens. Acrylic frame and handle.

MB150-10 40mm

MB150-15 80mm

Glass lens. Metal mount, plastic handle.

MB155-10 50mm

MB155-12 63mm

MB155-15 75mm

MB155-20 100mm

Hand Magnifier

For general examination work. Acrylic lens, frame and handle. Magnification approximately x3.4. Dimension given is lens diameter.

MB160-20 48mm



MB150

MB155



MB160-20

Magnifiers

Examination

Nature Viewer (Bug Jar)

Ideal for examination of specimens in the field or classroom. Comprises clear acrylic sample pot 41mm diameter x 60mm high with push-in lid containing x4.8 magnification clear acrylic lens.

MB164-10 Viewer

Stand Magnifier

Designed for comfortable, hands-free, benchtop viewing particularly in close-work applications or for colony counting/examination. Rectangular acrylic 140 x 100mm lens, x1.7 magnification, with angle adjustment, mounted on coated metal wire stand. Overall 170 x 110 x 130mm W x D x H.

MB165-30 Stand magnifier

Pocket Illuminated Magnifiers

Compact lightweight magnifiers which can be comfortably carried in a pocket or briefcase. With low-distortion, 48mm diameter bi-aspheric lenses in acrylic with abrasion-resistant coating, and pre-focussed tungsten bulb providing an even pool of light. Powered by 2 x 1.5V AA batteries. Overall 130 x 55 x 30mm L x W x D. Magnifications as indicated. Supplied without batteries.

MB210-08 x5 Magnification, 16.0 Dioptres

MB210-12 x7 Magnification, 24.0 Dioptres

MB210-16 x9 Magnification, 32.0 Dioptres

BL610-15 1.5V AA battery (2 required)

Hand-held Illuminated Magnifiers

Professional level, hand-held illuminated magnifiers with low-distortion aspheric lenses in abrasion-resistant coated acrylic, and pre-focussed, LED illumination. Power by 2 x 1.5V C batteries. Overall 200 x 75 x 45mm L x W x D. Supplied without batteries.

	Magnification	Dioptres	Lens dia., mm
MB215-12	x8.7	31.0	41.4
MB215-22	x10.1	36.4	36.0
MB215-32	x12	44.0	30.8
MB215-42	x14.7	54.9	30.8

BL610-20 1.5V C battery (2 required)

Magnification

Unless otherwise stated all magnifications quoted are linear and may be approximately converted to area by squaring, i.e. x2 linear equates approximately to x4 area taken at the point where optimum definition is obtained.



MB164-10



MB210



MB165-30



MB215

Magnifiers

Compact Illuminated Magnifier, Halo

Light, portable, illuminated magnifier with dimmable LED illumination (maximum 4000 lux at 15cm distance), 90mm diameter 2.25X magnification lens with secondary inset 4.0X magnification lens for closer work which can be rotated away when not required, folding arm allowing 360mm maximum reach, lens cover which protects the lens and allows the magnifier to be used as a desk lamp and desk standing base. With power adapter for 230V 50/60Hz a.c. power consumption 6W. Overall W x D x H: 150 x 330 x 150mm, weight: 0.7kg.

MB228-25 Halo magnifier

Illuminated Magnifier, Ultra Slim

With 175mm diameter 1.75X (3 dioptre) lens set in a slimline shade frame housing a circular, high output 28W daylight fluorescent tube and diffuser mounted on a concealed spring-balanced arm with maximum reach 950mm. Supplied with table clamp bracket for fixing to horizontal surfaces up to 55mm thick. For 220-240V 50Hz single phase supplies.

MB235-15 Magnifier, ultra slim

MB237-04 Table base for MB235-15, 14kg

MB237-08 Swing-arm lens, 4X, fits above standard lens for close work magnification

Illuminated Magnifier, Omega 7, Ultra Slim

imilar to MB235-15 but with illumination by 60 x daylight LED's with two brightness levels, enabling a slimmer head and excellent illumination. Supplied with table clamp and power adapter for 230V 50/60Hz a.c. Power consumption: 12W.

MB235-80 Omega 7 magnifier

MB244-09 Wall bracket

MB244-12 Bench bracket

Illuminated Magnifier, Routine, Omega 5

Ideal for a wide range of inspection and assembly applications which require high quality illumination with magnification. With 130mm diameter, 1.75X high powered lens and LED illumination offering lower heat production and energy consumption (7.2W total wattage) housed in a lightweight ABS polymer head with diffuser and mounted on a concealed spring-balanced arm with maximum reach 1060mm. A separate 2.25X lens is also supplied for interchanging with the fitted lens for close work. Supplied with table clamp bracket for fixing to horizontal surfaces up to 55mm thick. For 220-240V 50Hz single phase supplies.

MB242-70 Magnifier

Accessory base for MB242-70

MB237-04 Table base, 12kg

Magnification

Unless otherwise stated all magnifications quoted are linear and may be approximately converted to area by squaring, i.e. x2 linear equates approximately to x4 area taken at the point where optimum definition is obtained.



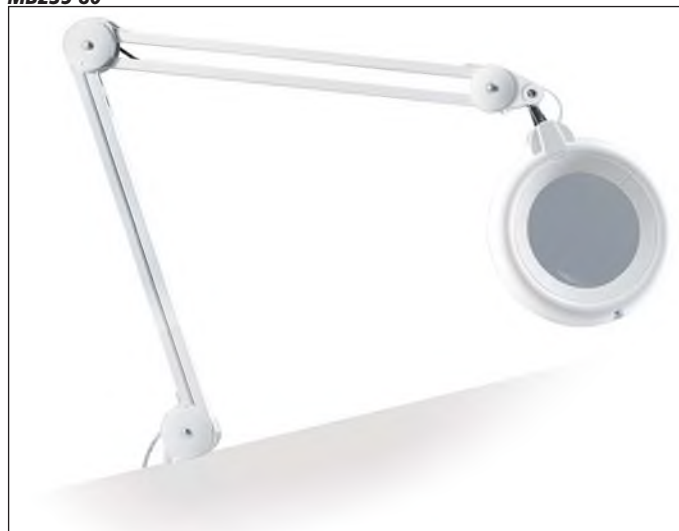
MB228-25



MB235-80



MB235-15



MB242-70

Mats

Mats

Mats, ceramic fibre

Provide heat protection to benches. An alternative to asbestos bench mats. Approximately 5mm thick. Maximum operating temperature 80°C. Supplied singly.

	Size, mm
MB800-15	150 x 150
MB800-22	225 x 225
MB800-30	300 x 300

Mats, PTFE

5mm thick, white PTFE. Operating temperature range -200°C to +250°C. Note: DO NOT EXPOSE TO DIRECT HEAT. Supplied singly.

	Size, mm
MB810-25	150 x 150

Mats, Ceran®

Ceran® is a highly resistant, glass ceramic material. Operating temperature range -200 to +700°C, allowing the mat to be used as a heating surface in place of a wire gauze or fireclay triangle. Care should be taken to ensure that the maximum operating temperature is not exceeded when using with a Bunsen burner. Supplied in packs of 10.

	Size, mm
MB820-10	135 x 135
MB820-20	155 x 155
MB820-30	175 x 175

Benchkote, Whatman

Used for protecting laboratory benches and drawers. The smooth, highly absorbent paper top surface is laminated to a strong layer of impermeable polyethylene. A contaminated sheet can be discarded easily and incinerated if necessary.

SA200-20	Pack of 50 sheets, 46 x 57cm
SA200-30	Pad of 50 sheets, 46 x 57cm
SA204-15	Reel 50 metres x 46cm wide
SA204-25	Reel 50 metres x 92cm wide

Benchkote Plus, Whatman

Similar to the standard Benchkote SA200/204 series but with a greater thickness and more open structure to provide greater absorbency. With impermeable polyethylene backing.

SA205-12	Pack of 50 sheets. 50 x 60cm
SA205-18	Reel 50 metres x 60cm wide

Ceran® is a registered trade mark of Schott Glaswerk.

Bench Protection Sheets – see *Safety* section.



MB800



MB820 in use



SA200 in use



MB810



SA204 in use

Cylinders

Glass with Spout, Class B

All cylinders comply with BS604, ISO4788 (and DIN 12680 where indicated).

Capacity ml	Sub- divisions, ml
5	0.1
10	0.2
25	0.5
50	1
100	1
250	2
500	5
1000	10
2000	20

Cylinders, MBL borosilicate

To DIN 12680, BS604, ISO4788. With spout and hexagonal glass foot. Blue enamel graduations and inscriptions. Class B.

Ref.	Cap. ml
CY105-10	CRC201 5
CY105-14	CRC202 10
CY105-18	CRC204 25
CY105-22	CRC206 50
CY105-26	CRC209 100
CY105-30	CRC211 250
CY105-34	CRC213 500
CY105-38	CRC214 1000
CY105-42	CRC216 2000

Cylinders, Pyrex borosilicate

With detachable plastic foot. White enamel graduations and inscriptions. Class B.

Ref.	Cap. ml
CY140-14	3205/04 10
CY140-18	3205/06 25
CY140-22	3205/08 50
CY140-26	3205/10 100
CY140-30	3205/12 250

Spare feet for CY140-series

Ref.	For cylinder ml
CY144-14	4500/00 10
CY144-18	4500/01 25
CY144-22	4500/02 50
CY144-26	4500/04 100
CY144-30	4500/06 250

Cylinders, Pyrex borosilicate

To DIN 12680. With spout and hexagonal glass foot. White enamel graduations and inscriptions. Class B.

Ref.	Cap. ml
CY160-14	3200/04 10
CY160-18	3200/06 25
CY160-22	3200/08 50
CY160-26	3200/10 100
CY160-30	3200/12 250
CY160-34	3200/14 500
CY160-38	3200/16 1000
CY160-42	3200/18 2000

Cylinders, Heavy Duty, Pyrex borosilicate

To DIN 12680. Heavy duty, with spout, reinforced rim, thick wall and robust hexagonal foot. Blue enamel graduations and inscriptions. Class B.

Ref.	Cap. ml
CY164-22	3280-50 50
CY164-26	3280-100 100
CY164-30	3280-250 250
CY164-34	3280-500 500
CY164-38	3280-1L 1000

Class A cylinders with spout – see next page.



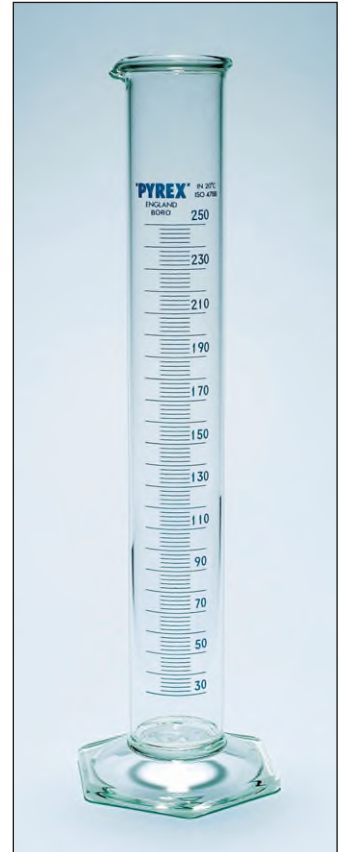
CY105



CY140



CY160



CY164

Cylinders

Glass with Spout, Class A

All cylinders comply with BS604, ISO4788 (and DIN 12680 where indicated).

Cylinders, Pyrex borosilicate

To DIN 12680. With spout and hexagonal glass foot. White enamel graduations and inscriptions. Class A Conformity Certified.

	Ref.	Cap. ml
CY165-10	3201/02	5
CY165-14	3201/04	10
CY165-18	3201/06	25
CY165-22	3201/08	50
CY165-26	3201/10	100
CY165-30	3201/12	250
CY165-34	3201/14	500
CY165-38	3201/16	1000
CY165-42	3201/18	2000

Cylinders, Pyrex borosilicate

To DIN 12680, BS604, ISO4788. With spout and hexagonal glass foot. White enamel graduations and inscriptions. Class A Conformity Certified and individually engraved with a serial number and supplied with works certificate..

	Ref.	Cap. ml
CY167-10	3201/02WC	5
CY167-14	3201/04WC	10
CY167-18	3201/06WC	25
CY167-22	3201/08WC	50
CY167-26	3201/10WC	100
CY167-30	3201/12WC	250
CY167-34	3201/14WC	500
CY167-38	3201/16WC	1000
CY167-42	3201/18WC	2000

Cylinders, Blaubrand®

To DIN EN ISO 4788. With spout and hexagonal foot. Graduations and inscriptions in highly contrasting blue enamel. Ring marked at the main points. Class A Conformity Certified.

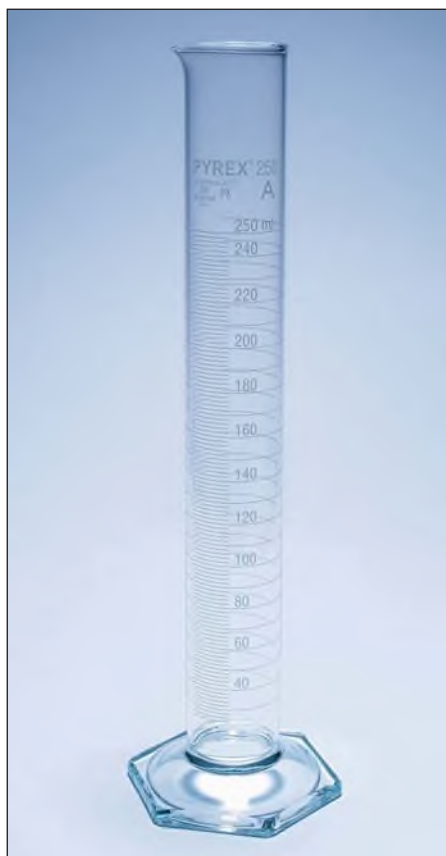
	Cap. ml
Duran® borosilicate glass	
CY235-10	5
CY235-14	10
CY235-18	25
CY235-22	50
CY235-26	100
CY235-30	250
CY235-34	500
CY235-38	1000
CY235-42	2000*

* With circular foot.

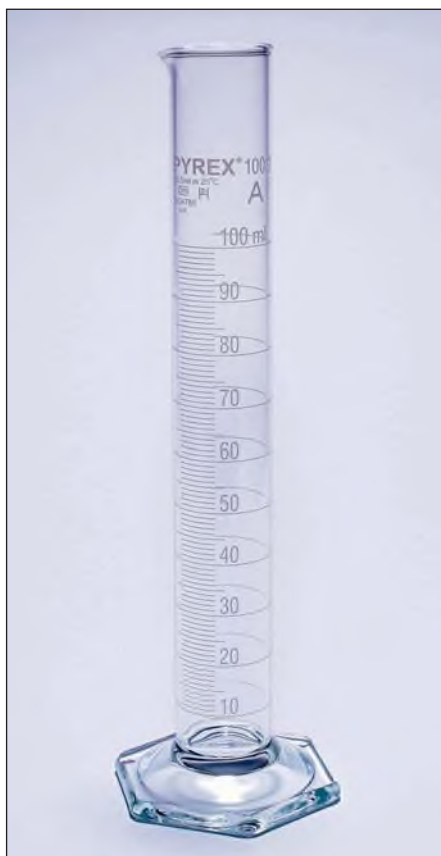
Conformity Certified

Indicated by the symbol H shows that the product has been manufactured under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions the manufacturer certifies conformity with annex 12 of the Eichordnung.



CY165



CY167



CY235

Cylinders

Glass with Stopper, Class B

All cylinders comply with BS604, ISO4788 (and DIN 12685 where indicated).

Cylinders, MBL borosilicate

To DIN 12685. With interchangeable polyethylene stopper and hexagonal glass foot. Blue enamel graduations and inscriptions. Class B.

	Ref.	Cap. ml	Stopper
CY257-18	CRC304	25	14/23
CY257-22	CRC306	50	19/26
CY257-26	CRC308	100	24/29

Cylinders, Pyrex borosilicate

With interchangeable polyethylene stopper and detachable plastic foot. White enamel graduations and inscriptions. Class B.

	Ref.	Cap. ml	Stopper
CY260-18	3215/06	25	14/23
CY260-22	3215/08	50	19/26
CY260-26	3215/10	100	24/29
CY260-30	3215/12	250	29/32

Cylinders, Pyrex borosilicate

To DIN 12685. With interchangeable polyethylene stopper and hexagonal glass foot. White enamel graduations and inscriptions. Class B.

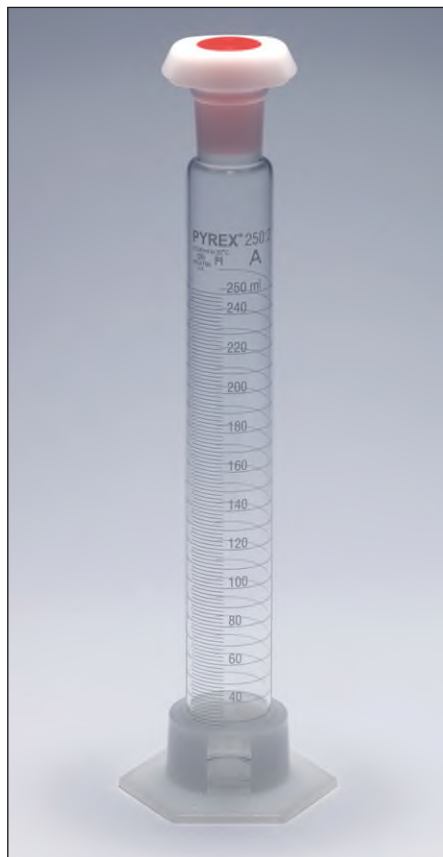
	Ref.	Cap. ml	Stopper
CY280-14	3211/04	10	10/19
CY280-22	3211/08	50	19/26
CY280-24	3211/10	100	24/29

Spare feet for CY260-series

	Ref.	For cylinder ml
CY144-18	4500/01	25
CY144-22	4500/02	50
CY144-26	4500/04	100
CY144-30	4500/06	250



CY257



CY260



CY280

Cylinders

Glass with Stopper, Class A

All cylinders comply with BS604, ISO4788 (and DIN 12680 or 12685 where indicated).

Cylinders, Pyrex borosilicate

To DIN 12685. With interchangeable polyethylene stopper and hexagonal glass foot. White enamel graduations and inscriptions. Class A conformity certified with batch code enabling on-line viewing and download of the manufacturing batch certificate.

	Ref.	Cap. ml	Stopper
CY292-14	3212/04	10	10/19
CY292-22	3212/08	50	19/26
CY292-26	3212/10	100	24/29
CY292-42	3212/18	2000	45/40

Cylinders, Pyrex borosilicate

To DIN 12685. With interchangeable polyethylene stopper and hexagonal glass foot. White enamel graduations and inscriptions. Class A Conformity Certified and individually engraved with a serial number and supplied with works certificate.

	Ref.	Cap. ml	Stopper
CY294-14	3212/04WC	10	10/19
CY294-18	3212/06WC	25	14/23
CY294-22	3212/08WC	50	19/26
CY294-26	3212/10WC	100	24/29
CY294-30	3212/12WC	250	29/32
CY294-34	3212/14WC	500	34/35
CY294-38	3212/16WC	1000	45/40
CY294-42	3212/18WC	2000	45/40

Cylinders, Blaubrand®

To DIN EN ISO 4788 and DIN 12685. With hexagonal base and square grip polypropylene stopper (except -34 and -38 which are polyethylene). Duran glass. Graduations and inscriptions in highly contrasting blue enamel. Ring marked at the main points. Class A Conformity Certified.

	Cap. ml	Stopper
Duran® borosilicate glass		
CY334-14	10	10/19
CY334-18	25	14/23
CY334-22	50	19/26
CY334-26	100	24/29
CY334-30	250	29/32
CY334-34	500*	34/35
CY334-38	1000*	45/40

* Have octagonal stopper.

Spare stoppers – see *Stoppers* section.

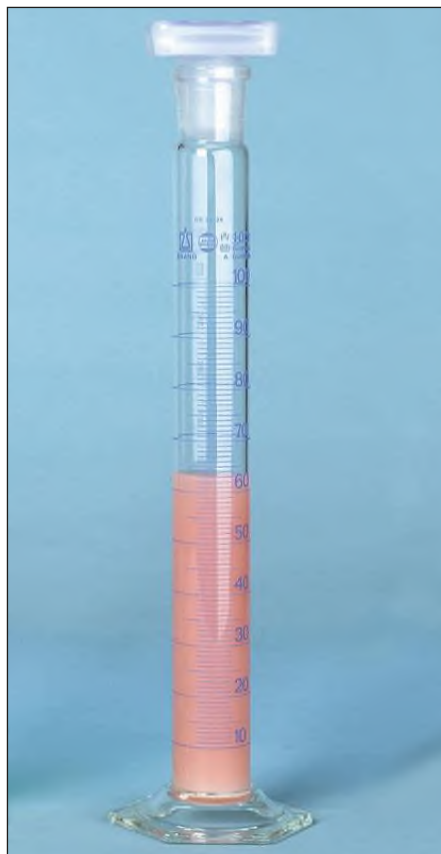
Conformity Certified

Indicated by the symbol **H** shows that the product has been manufactured under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions the manufacturer certifies conformity with annex 12 of the Eichordnung.



CY292, CY294 are similar



CY334

Cylinders

Plastic with Spout, Class B

Azlon

Cylinders, P.M.P. (TPX)

To ISO6706:1981. Class B. Transparent, strong and lightweight. Can be used up to 121°C. Date stamped for traceability. With spout, hexagonal fixed base and a choice of moulded or blue printed graduations.

	Ref.	Cap. ml	Subdiv. ml
Moulded graduations			
CY600-14	CT0010P	10	0.2
CY600-18	CT0025P	25	0.5
CY600-22	CT0050P	50	1
CY600-26	CT0100P	100	1
CY600-30	CT0250P	250	2
CY600-34	CT0500P	500	5
CY600-38	CT1000P	1000	10
CY600-42	CT2000P	2000	20
Printed graduations			
CY605-14	CTB0010P	10	0.2
CY605-18	CTB0025P	25	0.5
CY605-22	CTB0050P	50	1
CY605-26	CTB0100P	100	1
CY605-38	CTB1000P	1000	10

Cylinders, polypropylene

To ISO6706:1981. Class B. Clear polypropylene, autoclavable to 121°C repeatedly, without loss of tolerance. Date stamped for traceability. With spout, hexagonal fixed base and a choice of moulded or blue printed graduations.

	Ref.	Cap. ml	Subdiv. ml
Moulded graduations			
CY614-14	CP0010P	10	0.2
CY614-18	CP0025P	25	0.5
CY614-22	CP0050P	50	1
CY614-26	CP0100P	100	1
CY614-30	CP0250P	250	2
CY614-34	CP0500P	500	5
CY614-38	CP1000P	1000	10
CY614-42	CP2000P	2000	20
Printed graduations			
CY618-14	CPB0010P	10	0.2
CY618-18	CPB0025P	25	0.5
CY618-22	CPB0050P	50	1
CY618-26	CPB0100P	100	1
CY618-30	CPB0250P	250	2
CY618-34	CPB0500P	500	5
CY618-38	CPB1000P	1000	10
CY618-42	CPB2000P	2000	20

Plastic measuring cylinders with spout, Class A – see next page.



CY600, CY614 are similar



CY618, CY605 are similar

Cylinders

Plastic with Spout, Class A

Azlon

- ◆ To DIN 12681 Class A tolerances
- ◆ Transparent PMP (TPX) with printed blue graduations
- ◆ Supplied with batch conformity certificate and individually serial numbered
- ◆ Remain in tolerance after repeated wash and autoclave (121°C) cycles
- ◆ Stable, hexagonal, fixed base with anti-suction feature

As described. With spout, hexagonal base and blue printed graduations. Supplied with batch conformity certificate in packs as indicated.

	Ref.	Cap. ml	Sub-div. ml	Pack qty.
CY625-14	CTA0010P	10	0.2	2
CY625-18	CTA0025P	25	0.5	2
CY625-22	CTA0050P	50	1	2
CY625-26	CTA0100P	100	1	2
CY625-30	CTA0250P	250	2	2
CY625-34	CTA0500P	500	5	2
CY625-38	CTA1000P	1000	10	2

Squat Cylinders, Azlon

Unclassified tolerances. Transparent polypropylene. With blue overprint moulded graduations. Typically 35% shorter and 20% wider than standard cylinders, giving increased stability on the bench and ease of handling in restricted places. Anti-suction base with drain hole to eliminate waste residue after machine washing. Supplied in packs as indicated.

	Ref. CPS-	Ht. mm	Cap. ml	Sub-div. ml	Pack qty.
CY640-26	0100P	160	100	2	5
CY640-30	0250P	190	250	5	1
CY640-34	0500P	215	500	10	1
CY640-38	1000P	282	1000	20	1

Glass Distillation Receiver BS658

Glass Distillation Receiver

Type 1 Crow pattern. Pyrex glass. Class B. 100ml capacity. To BS658.

	Ref.
CY750-10	3400/04



CY625



CY640



CY750

Medical Sundries

Ampoule Breakers to Ointment Slab

Ampoule Breakers, Azlon

Disposable polyethylene. Supplied in pack of 1000.

	For ampoules, ml
ME300-10	1 to 4
ME300-15	5 to 10

Capsule and Tablet Counters

Manual capsule and tablet counters. The capsule counter is manufactured in stainless steel with grooves that allow 10 rows of capsules to be counted together. Size 175 x 88mm. The triangular tablet counters (for round tablets) are supplied in two sizes in materials as indicated and have a scale printed or etched onto the surface.

ME380-10	Capsule counter
ME380-35	Tablet counter, 7" (180mm) aluminium
ME380-40	Tablet counter, 7" (180mm) stainless steel
ME380-45	Tablet counter, 10" (250mm) stainless steel

Eye Droppers, glass

With bent end and fitted teat. Supplied in a resealable bag of 10.

	Description
ME520-25	Eye droppers

Eye Ointment Rod, glass

Single ball end. Length 80mm. Supplied singly.

ME530-10 Eye rod

Dropping Pipettes, Plain

Glass. Length approximately 75mm. Supplied in packs of 10.

	Ref.
PP765-15	Droppers
PP765-20	Droppers with teats
PP767-08	Spare teats

Dropping Pipettes, bent, ball ended

Graduated 1ml x 0.2ml. Supplied in pack of 10.

	Description
ME770-40	Droppers, bent

Kidney Dish

Blue polypropylene, autoclavable to 135°C. Capacity 750ml with internal, moulded-in graduations to 600ml. Capacity and dimensions as indicated. Supplied singly.

ME785-10 250 x 55mm length x diameter

Medicine Measures, Polypropylene

Graduated. Supplied in packs as indicated.

	Cap. x grads. ml	Pack qty.
ME810-25	30 x 1	80
ME810-40	60 x 5	50

Dispensing Measure rack

Polished stainless steel. Accommodates up to five conical measures and five spatulas. Overall 145 x 138 x 27mm W x D x H. Supplied with wall fixings.

ME820-15 Dispensing measure rack

Nelson Inhalers

Earthenware with glass mouthpiece and fitted silicone stopper. The 500ml capacity is the NHS pattern.

ME860-10	250ml (1/2 pint)
ME860-13	500ml (1 pint)
ME860-16	1000ml (2 pint)
ME862-05	Spare mouthpiece with silicone stopper for ME860 inhalers, pack of 1.

Ointment Slab

For mixing ointments, creams and pastes. Plate glass 350 x 350mm W x D and 6mm thick. With bevelled edges and rounded, bevelled corners.

ME865-20 Ointment slab



ME300 in use



ME380-10



ME380-45

ME380-35/40



ME520

ME530



ME785



PP765-20, top

ME770-40, bottom



ME810



ME820 in use



ME860

ME865

Medical Sundries

Stainless Steel Holloware

All dimensions and capacities are nominal.

Dressing Containers, with lids

	Cap. ml	Dia. x depth, mm
MF325-26	700	100 x 100
MF325-42	2500	150 x 150

Instrument Boxes, with lid

	L x W x D, mm	Cap. ml
MF430-17	200 x 100 x 50	1000
MF430-27	220 x 120 x 50	1300
MF430-37	300 x 220 x 50	3300

Instrument Trays

With lip and radiused corners. Dimensions stated are nominal and do not include the lip.

	L x W x D, mm
Shallow	
MF445-15	220 x 150 x 12
MF445-26	300 x 200 x 15
MF445-33	360 x 240 x 15
MF445-40	400 x 270 x 15
MF445-47	460 x 300 x 30

Deep

MF450-18	220 x 120 x 50
MF450-36	400 x 300 x 50
MF450-52	450 x 350 x 50

Jugs, stainless steel

Graduated.

	Capacity litres
Tapered shape	
MD900-20	0.5
MD900-25	1
MD900-30	2
Straight sided	
MD902-18	0.5
MD902-23	1
MD902-32	2

Kidney Dish, without lid

	L x W x D, mm
MF500-27	250 x 112 x 40

Lotion Bowl

	Dia. x depth, mm	Cap. ml
MF540-18	160 x 70	750

Additional Medical Sundries

Will be found in other sections.

	Section
Small autoclaves	AUTOCLAVES
Sterilising pouches	
Dispensing bottles	BOTTLES
Powder Bottles	
Tablet Bottles	
Spirit Burners	BURNERS
Medical Wipes	CLEANING
Lancets	CLINICAL
Stethoscope	
Swabs	
Scalpels	DISSECTING
Conical/Cup Measures	MEASURES
Disposable Gloves	SAFETY
Spatulas	SPATULAS



MF325

MF430



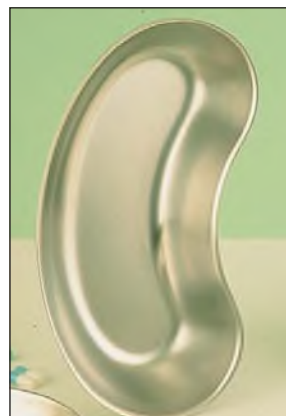
MF450

MF445



MD900

MD902



MF500

Mortars and Pestles

Mortars and Pestles

Glass Mortars and Pestles

Mortars are glazed internally, pestles have frosted grinding surface at the tip. Dimension given is mortar outside diameter and is nominal.

	Dia. mm
MX100-15	85
MX100-25	100
MX100-40	150

Spare Mortars for MX100-series

	Dia. mm
MX103-07	85
MX103-17	100
MX103-32	150

Spare Pestles for MX100-series

	For mortar dia. mm
MX104-06	85
MX104-16	100
MX104-30	150

Porcelain Mortars and Pestles

Unglazed. Dimension given is mortar outside diameter and is nominal.

	Dia. mm	Size No.	Cap. ml
MX150-30	115	1	199
MX150-35	135	2	284
MX150-40	150	3	426

Porcelain Mortars and Pestles

Glazed but unglazed grinding surfaces. Dimension given is mortar outside diameter and is nominal.

	Dia. mm
MX160-15	80
MX160-20	90
MX160-30	100
MX160-35	125
MX160-40	160
MX160-50	180
MX160-55	200

Mortar and Pestle, Smash

Novel design offering rapid, efficient grinding with easy operation and reduced effort. In use, the heavy porcelain, grooved pestle sits snugly into the porcelain mortar and is rolled over the sample by rotating the hand whilst applying pressure to the handle head with the palm. The pestle grooves keep the sample under the pestle and the grinding action ensures a finely divided product. Mortar capacity 33ml, 90mm diameter. Glazed with unglazed grinding surfaces and PE palm rest. Machine washable. Overall 98 x 98 x 195mm W x D x H. Weight 695g.

MX165-20 Smash Mortar & Pestle

Agate Mortars and Pestles

Polished natural stone with working surfaces as free as possible from blemishes. Dimension given is mortar outside diameter and is nominal.

MX200-12 50mm

MX200-19 75mm

MX200-26 90mm

Mortar and Pestle Mill RM200

For dry or wet grinding of a wide range of materials including ceramics, chemicals, cosmetics, pharmaceuticals, mineral paints, plastics etc. Depending on suitability, samples from 10ml to 190ml can be milled, pulverised and homogenised to an ultimate fineness of approximately 10µm. A choice of accessory porcelain or agate mortars and pestles are available. Sample can be fed into the mortar during operation, maximum feed size 8mm. Pestle pressure is adjustable and reproducible. With digital control. Includes automatic overload cut-out and "quick-stop" motor. Overall 400 x 370 x 450mm W x D x H. Weight 24kg. For 230V 50Hz single phase supplies. Supplied without mortar and pestle which are required for operation.

MX300-30 RM200

MX303-05 Mortar for RM200, porcelain

MX303-07 Mortar for RM200, agate

MX303-15 Pestle for RM200, porcelain

MX303-17 Pestle for RM200, agate

MX165 pestle



MX165-20



MX300 in use

Pumps, Filter

Water Jet Filter Pump

Single pump providing a rough vacuum suitable for many filtration, distillation and aeration applications. With integral non-return valve to prevent suck-back and flooding.

Catalogue No.	PX180-10
Material	Polypropylene
Approx. vacuum	mbar 16
Water inlet connection:	
1) Flexible tubing	10 to 12mm bore
2) Other supplied	Sleeve nut R $\frac{3}{4}$ " Reduction adapter R $\frac{1}{2}$ "
Vacuum connection:	
flexible tubing	6 to 9mm bore can be unscrewed
Recommended water pressure	bar 3 to 6
Approx. water consumption	l/h 200

Water Jet Filter Pump

As described. Without connecting tubing.

PX180-10 Brand water jet pump

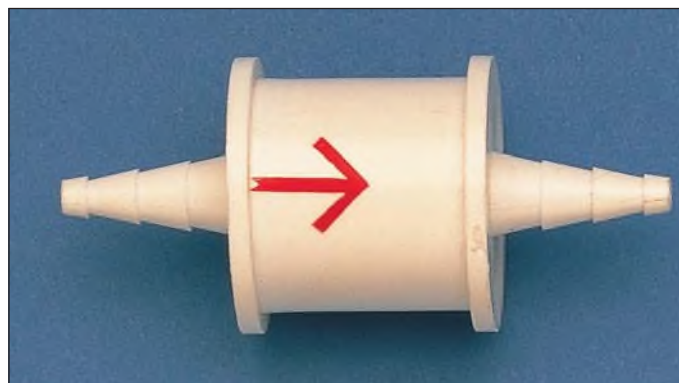


PX180

Non Return Valves, Azlon

Polypropylene with neoprene disc. For insertion in vacuum lines and fluid handling systems. Useful for preventing back pressure in filter flasks. With tapered ridged side-arm to take a range of flexible tubing sizes. Can be dismantled for cleaning. An arrow printed on the body indicates direction of flow.

	Ref.	Arms o.d. mm
PX185-10	NWH902P	4 to 7
PX185-17	NWH905P	8 to 10
PX185-20	NWH906P	11 to 15



PX185

Petri Dishes

Plastic

Polystyrene Disposable, Eco

Manufactured in sterile aseptic conditions. 90 x 12mm diameter x depth. Supplied in packs of 700.

- PD050-40** Single vent
PD050-45 Triple vent

Polystyrene Disposable, Sterilin

Produced under sterile aseptic conditions. The 90mm dishes comply with BS611 Part 2 and are CE-marked in compliance with the In-vitro Directive 97/79/EC. Supplied in sleeves within partitioned cases as indicated for added protection during transit.

	Ref.	Dia. x depth mm		Pack qty.
Circular				
PD100-10	121V	30 x 10	Triple vent	800
PD100-15	122	50 x 10	Single vent	700
PD100-20	124	50 x 18	Single vent	500
PD100-23	PF55	55 x 14	No vent	1620
PD100-27	PF55V	55 x 14	Triple vent	1620
PD100-30	123	60 x 13	Single vent	540
PD100-40	101 R20	90 x 12	Single vent	500
PD100-45	101V R20	90 x 12	Triple vent	500
PD100-48	101V AMB	90 x 12	Triple vent, amber	500
PD100-80	501V	140 x 17	Triple vent	80
PD100-90	504	55 dia.	Contact plate with alphanumeric grid	300
Square				
PD105-20	109	100 x 18	No vent	120
PD105-40	103	100 x 18	Repli-dish with 25 compartments 18 x 18mm	120

Glass

Resistance glass

Base and cover dimensions stated are diameter x depth.

	Base, mm	Cover, mm
PD250-05	44 x 12	50 x 8
PD250-10	54 x 12	60 x 12
PD250-20	74 x 15	80 x 12
PD250-40	94 x 15	100 x 12
PD250-45	94 x 20	100 x 15

Pyrex glass. 1480 series

Base and cover dimensions stated are diameter x depth.

	Ref. 1480-	Size, mm	Base, mm	Cover, mm
PD270-20	/02	60 x 20	54.5 x 20	55 x 15
PD270-30	/06	80 x 20	74 x 20	75 x 15
PD270-40	/08	100 x 20	94 x 20	95 x 15
PD270-50	/10	120 x 20	114 x 20	115 x 15
PD270-60	/12	150 x 30	143 x 30	145 x 18

Petri dish shakers – see SE420/SE630.

Tissue culture dishes – see TP475/TP477.



PD100, PD050 are similar



PD105



PD250



PD270

Petri Dish Accessories

Petri Dish Accessories

Petri Dish Stands, Azlon

Epoxy coated steel. Capacity 6 dishes, 90mm diameter.

	Ref.	Colour
PD428-15	SWP062	White

Petri Dish Holder, Kingston Pattern

With three compartments each holding 10 disposable Petri dishes 90 to 100mm diameter. Folding handle allows units to be stacked. Overall 325 x 110 x 170mm W x D x H.

PD430-10 Holder

Sterilising Boxes

For Petri dishes up to 100mm diameter. With close fitting removable lid. Overall 255 x 115mm height x diameter.

PD440-10 Aluminium box
PD440-15 Stainless steel box

Manual Petri dish Turntable

Manually operated petri dish turntable aids uniform inoculation of media. With high mass for long running. Ingenious design allows use with either 100mm or 150mm diameter petri dishes simply by inverting. Overall 160 mm diameter x 45mm high. Weight 2.3kg.

PD475-10 Manual turntable

Electrically Driven Petri Dish Turntable

For continuous use or intermittent operation using the built-in, infra-red, hand sensor or an accessory footswitch. With adjustable speed range 10 to 100rpm and timer from 3 seconds to 2 minutes, or continuous setting. Accommodates 90/100mm diameter petri dishes (150mm dishes using an accessory adapter). Overall 170mm diameter x 75mm high. Weight 1kg. For 230V 50/60Hz single phase supplies.

PD475-42 Electrical turntable
PD475-48 Footswitch accessory for PD475-42
PD475-49 Adapter for 150mm dia. petri dishes



PD428 in use



PD430-10



PD475-10 in use



PD440



PD475-42

Pipettes, One-Mark

Glass, One- and Two-Mark to ISO648 & DIN12690

- ◆ Colour coded to BS3996
- ◆ Calibrated for delivery
- ◆ Class AS pipettes only require a 5 second waiting time
- ◆ 1ml and 2ml sizes are straight pattern without bulb
- ◆ 15ml sizes are supplementary to the DIN12690 and ISO648 ranges

Colour code					
1ml	Blue	10ml	Red	25ml	Blue
2ml	Orange	15ml	Green	50ml	Red
5ml	White	20ml	Yellow	100ml	Yellow

Tolerances		
Cap. ml	Class B $\pm ml$	Class AS $\pm ml$
1	0.015	0.008
2	0.020	0.010
5	0.030	0.015
10	0.040	0.020
15	0.050	0.025
20	0.060	0.030
25	0.060	0.030
50	0.100	0.050
100	0.150	0.080

MBL®

One-Mark Pipettes, MBL

Soda-lime glass. Amber stain graduations and inscriptions.

	Ref.	Cap. ml
Class B		
PM102-10	PRA700B	1
PM102-13	PRA702B	2
PM102-22	PRA704B	5
PM102-25	PRA706B	10
PM102-30	PRA708B	15
PM102-35	PRA710B	20
PM102-40	PRA712B	25
PM102-45	PRA714B	50
PM102-50	PRA716B	100
Class AS		
PM107-10	PRA720AS	1
PM107-13	PRA722AS	2
PM107-22	PRA724AS	5
PM107-25	PRA726AS	10
PM107-30	PRA728AS	15
PM107-35	PRA730AS	20
PM107-40	PRA732AS	25
PM107-45	PRA734AS	50
PM107-50	PRA736AS	100
Class AS Works Certified		
PM108-10	PRA740ASWC	1
PM108-13	PRA742ASWC	2
PM108-22	PRA744ASWC	5
PM108-25	PRA746ASWC	10
PM108-30	PRA748ASWC	15
PM108-35	PRA750ASWC	20
PM108-40	PRA752ASWC	25
PM108-45	PRA754ASWC	50
PM108-50	PRA756ASWC	100

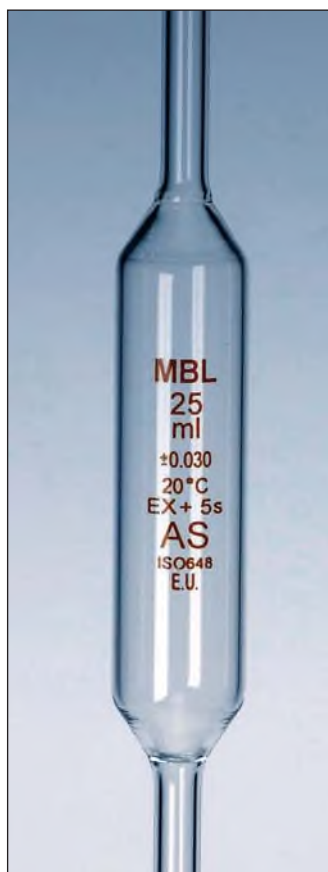
Two-Mark Pipettes, MBL

Soda-lime glass. Amber stain graduations and inscriptions.

	Ref.	Cap. ml
Class AS		
PM115-10	PRA620AS	1
PM115-13	PRA622AS	2
PM115-22	PRA624AS	5
PM115-25	PRA626AS	10
PM115-35	PRA630AS	20
PM115-40	PRA632AS	25
PM115-45	PRA634AS	50
PM115-50	PRA636AS	100



PM102



PM107, PM108/PM115 are similar

Pipettes, One-Mark

Blaubrand® Class AS


- ◆ Colour coded to DIN 12691
- ◆ Conformity Certified
- ◆ Calibrated for delivery with a waiting time of 15 seconds
- ◆ Manufactured from AR-Glas® soda-lime glass
- ◆ Pipettes up to 2ml capacity are straight pattern without bulb

Available as:

- ◆ **Blaubrand®** where the graduation and inscriptions are in a highly contrasting blue enamel
- ◆ **Blaubrand® ETERNA** where the graduation and inscriptions are in an amber diffusion stain which forms an integral part of the glass surface. This form of marking is particularly suited to pipettes which have to be subjected to aggressive cleaning solutions

Capacity ml	Colour coded	Tolerances ±ml
0.5	2 x Black	0.005
1	Blue	0.007
2	Orange	0.010
2.5	—	0.015
3	Black	0.015
4	2 x Red	0.015
5	White	0.015
6	2 x Orange	0.020
7	2 x Green	0.020
8	Blue	0.020
9	Black	0.020
10	Red	0.020
15	Green	0.030
20	Yellow	0.030
25	Blue	0.030
30	Black	0.050
40	White	0.050
50	Red	0.050
100	Yellow	0.080

Conformity Certified

Indicated by the symbol  shows that the product has been manufactured by Brand under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations. Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions, Brand certify conformity with annex 12 of the Eichordnung.

One-Mark Pipettes

Soda-lime glass. Ring mark and inscriptions in highly contrasting blue enamel. Class AS where the S signifies "fast delivery".

Ref.	Cap. ml
------	---------

Blaubrand® Class AS

Blue enamel graduation.

PM170-07	297 01	0.5
PM170-10	297 02	1
PM170-13	297 03	2
PM170-15	297 04	2.5*

PM170-18	297 05	3*
PM170-20	297 06	4*
PM170-23	297 07	5
PM170-26	297 08	6*

PM170-29	297 09	7*
PM170-32	297 10	8*
PM170-35	297 11	9*
PM170-40	297 12	10

PM170-43	297 13	15*
PM170-46	297 14	20
PM170-50	297 15	25
PM170-53	297 16	30*

PM170-56	297 17	40*
PM170-60	297 18	50
PM170-65	297 19	100

Blaubrand® Eterna Class AS

Amber stain graduation.

PM174-10	305 02	1
PM174-13	305 03	2
PM174-23	305 07	5
PM174-40	305 12	10

PM174-46	305 14	20
PM174-50	305 15	25
PM174-60	305 18	50

* Supplementary to DIN 12691 range.



PM170-60

Plastic

One-Mark Pipettes

Polypropylene. Bulb. With blue-printed graduation and inscriptions.

	Cap. ml
PM230-10	1
PM230-13	2
PM230-22	5
PM230-25	10
PM230-40	25
PM230-45	50



PM230

Pipettes, Graduated

Glass, Graduated to BS700, ISO835

- ◆ **Type 1** is calibrated for delivery (EX) from zero at top to any graduation line down to the shoulder
- ◆ **Type 2** is calibrated for delivery (EX) from any graduation line down to zero at the jet
- ◆ **Type 3** is calibrated for delivery (EX) from zero at the top to any graduation line down to the jet
- ◆ **Type 4** is calibrated to deliver from any graduation line down to zero at the jet with the last drop expelled by blowing

Tolerances and Colour code

Cap. ml	Grad. ml	Tol. ±ml	Colour Code
Class B			
1	0.01	0.01	Yellow
2	0.02	0.02	Black
5	0.05	0.05	Red
10	0.10	0.10	Orange
25	0.10	0.20	Green
Class AS			
1	0.01	0.007	Yellow
2	0.02	0.010	Black
5	0.05	0.030	Red
10	0.10	0.050	Orange
25	0.10	0.100	Green

MBL® Type 1

Graduated Pipettes, MBL

Soda-lime glass. Type 1. Amber stain graduations and inscriptions.

	Ref.	Cap. ml	Grad. ml
Class B			
PM402-10	PRA760B	1	0.01
PM402-15	PRA762B	2	0.02
PM402-22	PRA764B	5	0.05
PM402-30	PRA766B	10	0.10
PM402-35	PRA768B	25	0.10
Class AS			
PM407-10	PRA770AS	1	0.01
PM407-15	PRA772AS	2	0.02
PM407-22	PRA774AS	5	0.05
PM407-30	PRA776AS	10	0.10
PM407-35	PRA778AS	25	0.10
Class AS Works Certified			
PM412-10	PRA780ASWC	1	0.01
PM412-15	PRA782ASWC	2	0.02
PM412-22	PRA784ASWC	5	0.05
PM412-30	PRA786ASWC	10	0.10
PM412-35	PRA788ASWC	25	0.10

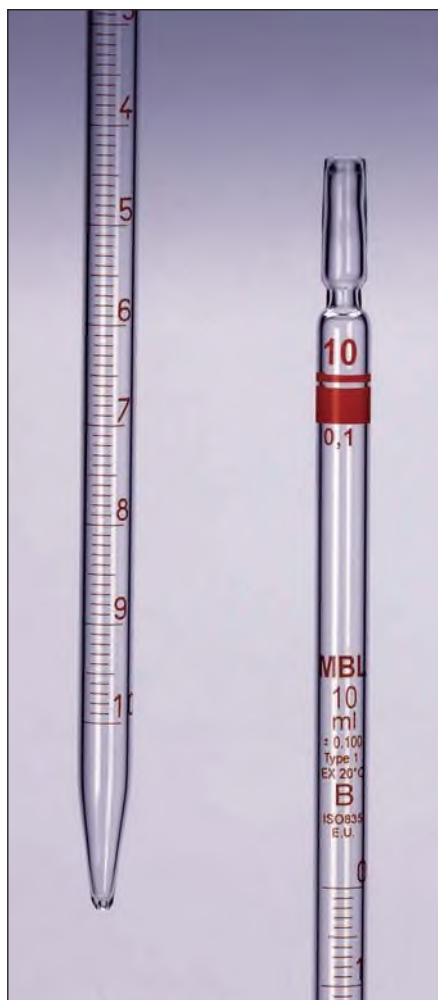
MBL® Type 2

Graduated Pipettes, MBL

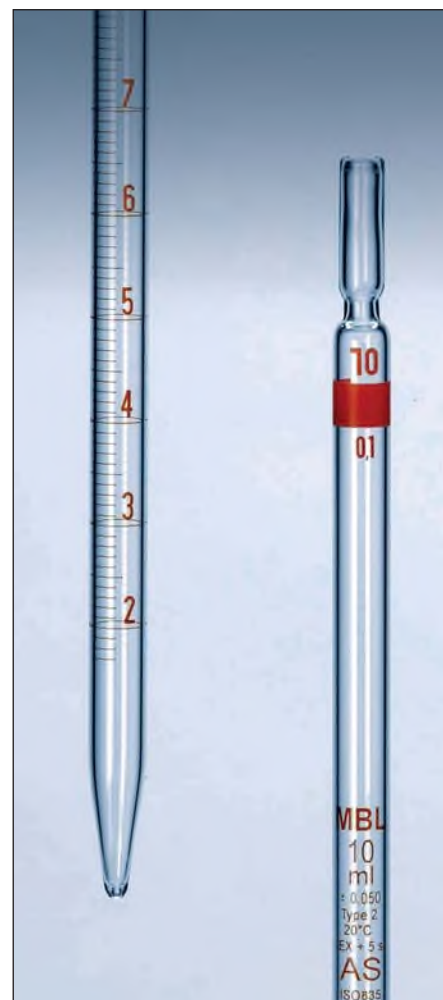
Soda-lime glass. Type 2. Amber stain graduations and inscriptions.

	Ref.	Cap. ml	Grad. ml
Class B			
PM415-10	PRA800B	1	0.01
PM415-15	PRA802B	2	0.02
PM415-22	PRA804B	5	0.05
PM415-30	PRA806B	10	0.10
PM415-35	PRA808B	25	0.10
Class AS			
PM418-10	PRA810AS	1	0.01
PM418-15	PRA812AS	2	0.02
PM418-22	PRA814AS	5	0.05
PM418-30	PRA816AS	10	0.10
PM418-35	PRA818AS	25	0.10
Class AS Works Certified			
PM423-10	PRA820ASWC	1	0.01
PM423-15	PRA822ASWC	2	0.02
PM423-22	PRA824ASWC	5	0.05
PM423-30	PRA826ASWC	10	0.10
PM423-35	PRA828ASWC	25	0.10

continued on next page



PM402, PM407 and PM412 are similar



PM423, PM415 and PM418 are similar

Pipettes, Graduated

MBL® Types 3 and 4

Graduated Pipettes, MBL

Soda-lime glass. Type 3. Amber stain graduations and inscriptions.

	Ref.	Cap. ml	Grad. ml
Class B			
PM433-10	PRA830B	1	0.01
PM433-15	PRA832B	2	0.02
PM433-22	PRA834B	5	0.05
PM433-30	PRA836B	10	0.10
PM433-35	PRA838B	25	0.10

Graduated Pipettes, MBL

Soda-lime glass. Type 4 serological. Amber stain graduations and inscriptions.

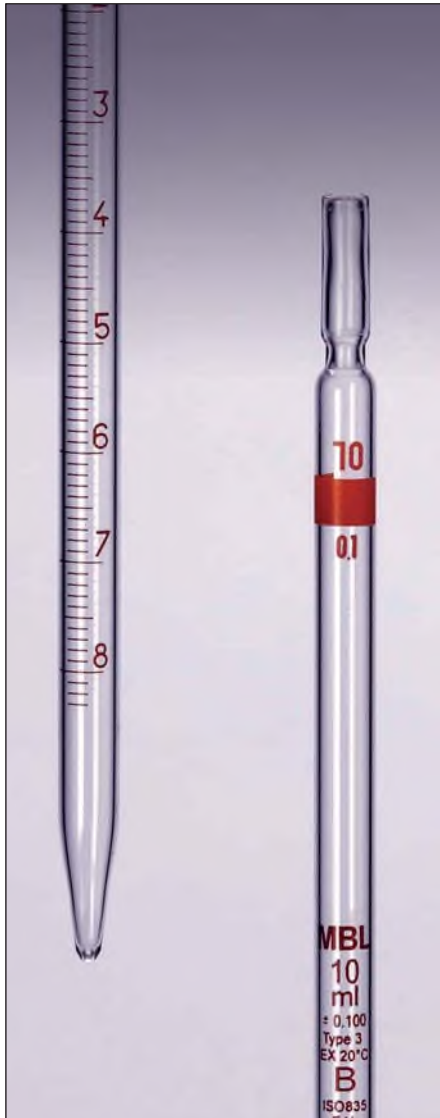
	Ref.	Cap. ml	Grad. ml
Class B			
PM437-10	PRA840S	1	0.01
PM437-15	PRA842S	2	0.02
PM437-22	PRA844S	5	0.05
PM437-30	PRA846S	10	0.10
PM437-35	PRA848S	25	0.10

Plastic

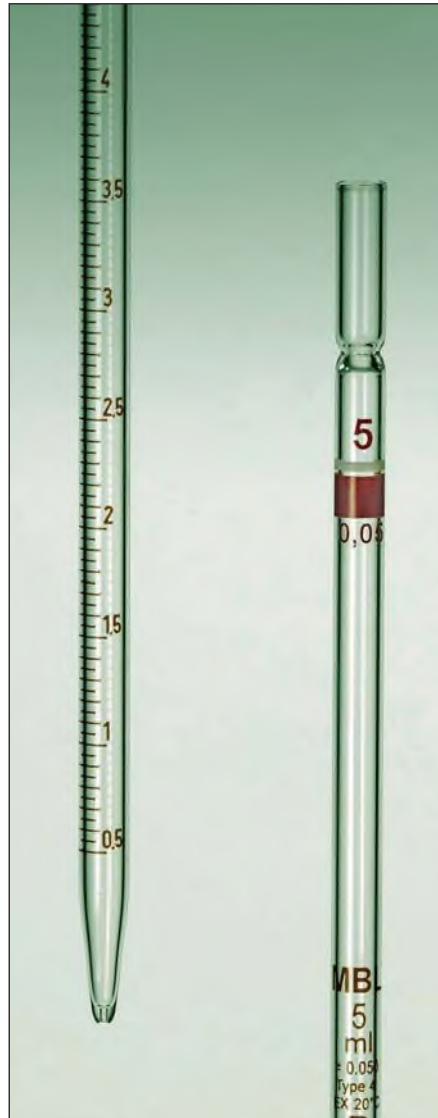
Graduated Pipettes

Polypropylene. With blue-printed graduations and inscriptions.

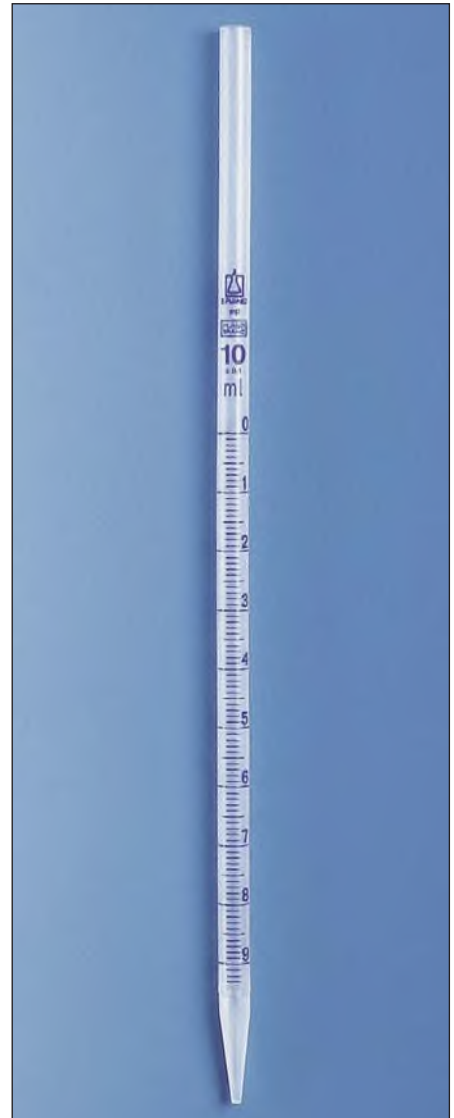
	Cap. ml	Grad. ml
Class B		
PM750-10	1	0.1
PM750-15	2	0.1
PM750-20	5	0.1
PM750-25	10	0.1



PM433



PM437



PM750

Pipettes, Graduated

Blaubrand® Class AS

- ◆ To DIN 12697
- ◆ Conformity Certified
- ◆ Calibrated to jet
- ◆ Colour coded
- ◆ Manufactured from AR-Glas® soda-lime glass

Available as:

- ◆ **Blaubrand®** where the graduations and inscriptions are in a highly contrasting blue enamel
- ◆ **Blaubrand® ETERNA** where the graduations and inscriptions are in an amber diffusion stain which forms an integral part of the glass surface. This form of marking is particularly suited to pipettes which have to be subjected to aggressive cleaning solutions

Cap. ml	Grad. ml	Colour coded	Calibration to	Tol. ±ml
0.1	0.001	2 x Green	Contain	0.001
0.5	0.01	2 x Yellow	Deliver	0.005
1	0.01	Yellow	Deliver	0.007
1	0.1	Red	Deliver	0.007
2	0.01	2 x White	Deliver	0.01
2	0.02	Black	Deliver	0.01
2	0.1	Green	Deliver	0.01
5	0.05	Red	Deliver	0.03
5	0.1	Blue	Deliver	0.03
10	0.1	Orange	Deliver	0.05
20	0.1	2 x Yellow	Deliver	0.1
25	0.1	White	Deliver	0.1
50	0.5	—	Deliver	0.2

Graduated Pipettes, Blaubrand®

Soda-lime glass. Calibrated to jet. Graduations and inscriptions in highly contrasting blue enamel. Calibrated to deliver (EX) except 0.1 and 0.2ml capacities which are calibrated to contain (In).

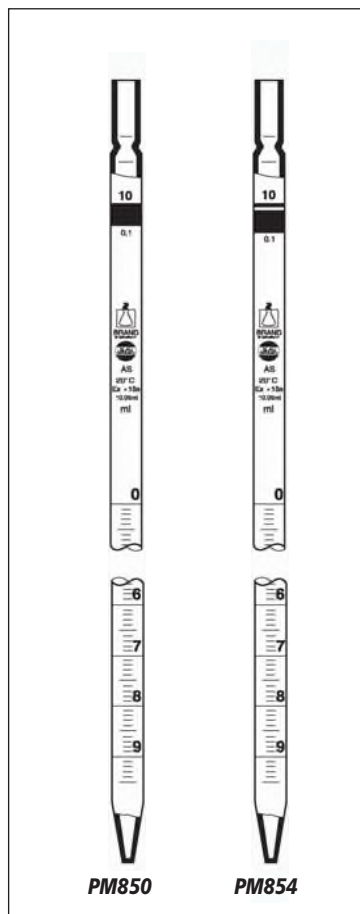
	Ref. 277-	Cap. ml	Grad. ml
Class AS			
PM850-05	02	0.1	0.001
PM850-09	04	0.2	0.002
PM850-14	05	0.5	0.01
PM850-17	06	1	0.01
PM850-20	07	1	0.1
PM850-24	08	2†	0.01
PM850-27	09	2	0.02
PM850-30	10	2	0.1
PM850-35	11	5	0.05
PM850-38	12	5	0.1
PM850-45	13	10	0.1
PM850-50	14	20	0.1
PM850-55	15	25	0.1
PM850-60	16	50	0.5

†Not conformity certified.


Graduated Pipettes, Blaubrand® Eterna

As PM850 but graduations and inscriptions in resistant amber stain. Calibrated to deliver (EX).

	Ref. 284-	Cap. ml	Grad. ml
Class AS			
PM854-14	05	0.5	0.01
PM854-17	06	1	0.01
PM854-27	09	2	0.02
PM854-35	11	5	0.05
PM854-45	13	10	0.1
PM854-55	15	25	0.1



Conformity Certified

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Pipettes, Serological

Disposable Glass, Serological

CORNING

Disposable Serological Pipettes, Corning

Borosilicate glass. Calibrated to 'deliver'.

	Cap. x grad. ml	Length mm	Pack qty.
Sterile, plugged and individually wrapped			
7077 Series			
PP200-25	1 x 0.01	290	800
PP200-30	2 x 0.01	290	720
PP200-35	5 x 0.1	290	720
PP200-40	10 x 0.1	290	600
Sterile, plugged and bulk wrapped			
7078 Series			
PP204-25	1 x 0.01	290	1000
PP204-30	2 x 0.01	290	700
PP204-35	5 x 0.1	290	960
PP204-40	10 x 0.1	290	720
Non-Sterile, non-plugged, bulk wrapped			
7079 Series			
PP208-25	1 x 0.01	290	1000
PP208-30	2 x 0.01	290	700
PP208-35	5 x 0.1	290	960
PP208-40	10 x 0.1	290	720

Reusable Glass, Serological

Graduated Pipettes, MBL

Soda-lime glass. Type 3. Amber stain graduations and inscriptions.

	Ref.	Cap. ml	Grad. ml
Class B			
PM433-10	PRA830B	1	0.01
PM433-15	PRA832B	2	0.02
PM433-22	PRA834B	5	0.05
PM433-30	PRA836B	10	0.10
PM433-35	PRA838B	25	0.10

Cotton wool – see *CW500 Series in the Cotton Wool section.*

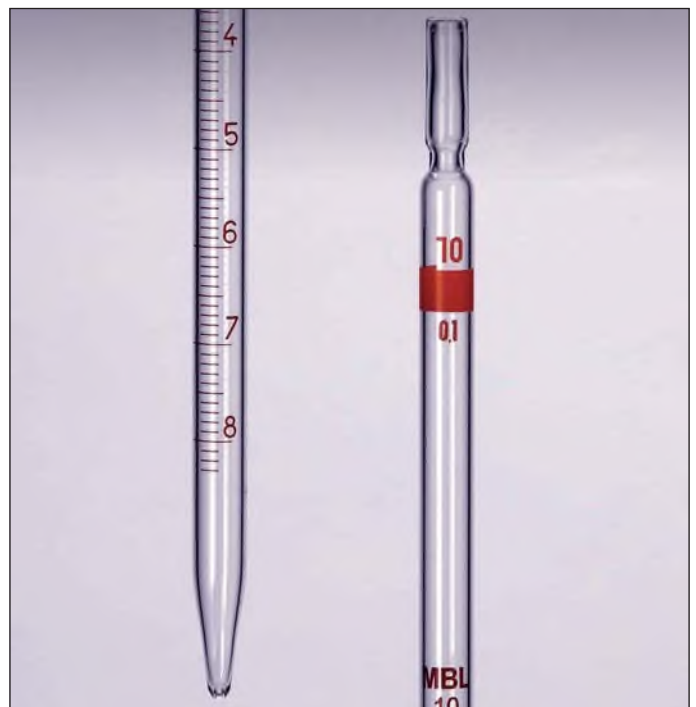
Pasteur pipettes – see *PP450/PP520.*

Pi-pumps – see *PP880.*

Pipette fillers – see *PP850/PP895.*



PP200/PP208



PM433

Pipettes

Pipettes, Disposable, Plastic

Polystyrene, non-sterile pipettes. With printed graduations and cotton plug. Supplied within packs as indicated.

	Description	Pack qty.
PP245-11	1ml x 0.01ml	800
PP245-31	2ml x 0.02ml	600
PP245-41	5ml x 0.1ml	200
PP245-61	25ml x 0.2ml	200
PP245-71	50ml x 0.5ml	90

Pipette Controller, Bibbyjet pro

- ◆ Ergonomic, lightweight design for fatigue-free use
- ◆ Suitable for pipettes from 0.1 to 100ml
- ◆ Continuously adjustable power with simple, two-button, fingertip control
- ◆ Cordless operation with rechargeable NiCd battery
- ◆ Rapid battery recharging within 4 hours
- ◆ Alternative battery compartment cover enables the controller to be stood upside-down on the bench, avoiding contamination of the pipette connector
- ◆ Pipetted media fumes vented at front of pipettor reducing the possibility of internal corrosion
- ◆ Choice of pipettor/charger sets available to suit most international power supply configurations

As described. With fully autoclavable pipette connector, disposable 0.2µm membrane filter and one way safety valve. The standard 0.2µm or accessory 3µm membrane filters allow class B or class A volume tolerances respectively to be achieved when used with suitable pipettes. Supplied with wall support, two spare 0.2µm membrane filters and charger for the rechargeable battery. Weight 205g. Charger power supply requirements as specified.

PP895-55 Ref. PC2000. Bibbyjet with charger for U.K./Ireland, 230V 50Hz single phase supplies

PP895-65 Ref. PC2001. Bibbyjet with charger for continental Europe 230V 50Hz single phase supplies

Accessories and Spares for PP895 series

PP897-05 Ref. PC1011. Silicone pipette adapter with non return valve, supplied singly

PP897-09 Ref. PC1012. 0.2µm membrane filter. sterile, supplied singly

PP897-10 Ref. PC1013. 0.2µm membrane filter. non-sterile, pack of 10

PP897-14 Ref. PC1014. 3µm membrane filter. sterile, supplied singly

PP897-16 Ref. PC1015. 3µm membrane filter. non-sterile, pack of 10

PP897-24 Ref. PC2000/1. Charger for U.K./Ireland. 230V 50Hz single phase supplies

PP897-32 Ref. PC2001/1. Charger for continental Europe. 230V 50Hz single phase supplies

PP897-52 Ref. PC1016. Wall support



PP245



PP895

Pipettes, Disposable

Disposable Plastic, Serological



- ◆ Manufactured in an ISO class 8 clean room using USP class VI-compliant polystyrene
- ◆ Non-cytotoxic and non-pyrogenic to <0.1 EU/ml
- ◆ Sterility assurance level of SAL 10⁶
- ◆ RNase and DNase-free
- ◆ Calibrated to deliver (TD) to ±2%
- ◆ Bidirectional and negative graduations provided to increase versatility
- ◆ Colour coded
- ◆ Packaging options:
 - Individually wrapped, in a paper/plastic peel-apart envelope
 - Multipack, with inner packs enclosed in a plastic sleeve
 - Canister pack, with inner packs enclosed in a cardboard dispenser canister with tear perforations for ease of opening/closing

Ref.	Description	Colour code	Inner sleeve	Pack qty.
Individually wrapped				
PP247-04	56900-1110 1ml x 0.1ml	Red	200	1000
PP247-08	56900-11100 1 x 0.01ml	Yellow	200	1000
PP247-12	56900-21100 2 x 0.01ml	White	125	500
PP247-17	56900-5110 5 x 0.1ml	Blue	50	200
PP247-20	56900-10110 10 x 0.1ml	Orange	50	200
PP247-25	56900-25210 25 x 0.2ml	Green	50	200
PP247-28	56900-50510 50 x 0.5ml	Purple	25	100
Multipack				
PP247-32	56800-1110 1 x 0.1ml	Red	25	1000
PP247-36	56800-11100 1 x 0.01ml	Yellow	25	1000
PP247-40	56800-21100 2 x 0.01ml	White	25	500
PP247-44	56800-5110 5 x 0.1ml	Blue	25	200
PP247-48	56800-10110 10 x 0.1ml	Orange	25	200
PP247-52	56825-10110 10 x 0.1ml wide tip*	Orange	25	200
PP247-56	56800-25210 25 x 0.2ml	Green	10	200
PP247-60	56800-50510 50 x 0.5ml	Purple	10	100
Canister pack				
PP247-64	56700-11100 1 x 0.01ml	Yellow	50	500
PP247-68	56700-21100 2 x 0.01ml	White	50	500
PP247-72	56700-5110 5 x 0.1ml	Blue	50	500
PP247-76	56700-10110 10 x 0.1ml	Orange	50	500

*Wide tip, open-ended pipette for use with viscous solutions.



PP247

Disposable Plastic

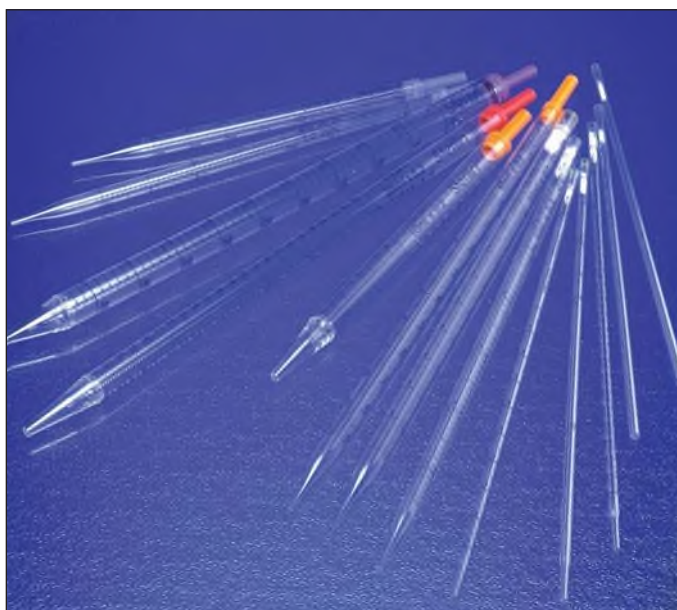


Disposable Plastic Pipettes, Sterilin

Polystyrene. Non-pyrogenic. Accuracy ±1%. Gamma irradiated sterile. Issued with batch certificate indicating lot number, expiry date, sterility method and radiation indicator spot.

Ref.	Description	Inner sleeve	Pack qty.
PP280-11	40301K 1ml	50	1000
PP280-14	40101K 1ml single wrap	1/100	1000
PP280-17	41301K 1ml with open end	50	1000
PP280-21	40302K 2ml	50	1000
PP280-24	40102K 2ml single wrap	1/100	1000
PP280-27	41302K 2ml with open end	50	1000
PP280-30	40305 5ml	25	200
PP280-33	40105 5ml single wrap	1	200
PP280-40	47105 5ml with suction adapter single wrap	1	200
PP280-46	42505 5ml short-form with suction adapter, single wrap	1	200
PP280-56	47310 10ml with suction adapter	25	500
PP280-60	47110 10ml with suction adapter single wrap	1/50	500
PP280-66	42510 10ml short-form, with suction adapter, single wrap	1	200
PP280-70	40125 25ml with suction adapter single wrap	1	200
PP280-76	47150 50ml with suction adapter single wrap	1	50

Pipette controller, Bibbyjet – see PP895.



PP280

Pipettes, Capillary

Disposable Plastic, Straws

Disposable Plastic Simplettes, Seward

Polypropylene, ungraduated. Length 177mm, bore 3mm. Approximate capacity 1ml. Supplied in gamma irradiated sleeve of 50 within an outer pack of 2000.

PP313-10 Simplettes

Dairy testing – see *Dairy Testing* section.

Pipette controllers – see *PP820/PP895*.

Sample containers – see *BS224/BS235*.

Sampling equipment – see *Sampling* section.

Stomacher blenders – see *MS800*.

Disposable Micropipettes, Blaubrand® intraMARK®

- ◆ Calibrated to contain (in)
- ◆ Accuracy $\pm 0.25\%$ (size: $5\mu\text{l}$ $\pm 0.3\%$)
- ◆ Precision 0.5% (size: $5\mu\text{l}$ 0.6%)
- ◆ Conformity-certified from $5\mu\text{l}$ upwards
- ◆ Length: 125mm
- ◆ Colour code according to DIN/ISO
- ◆ Supplied in packs of 250 pipettes (except PP420-61 is in a pack of 200)

	Ref. 7087-	Marks at μl	Colour code
PP420-10	07	1, 2, 3, 4 and 5	White
PP420-16	09	10	Orange
PP420-20	18	20	Black
PP420-23	22	25	2 x White
PP420-27	28	20, 40	2 x Red
PP420-50	33	50	Green
PP420-53	45	50, 100	Blue
PP420-56	44	100	Blue
PP420-61	57	200	Red

PP425-40 Accessory pipetting aids, pack of 10

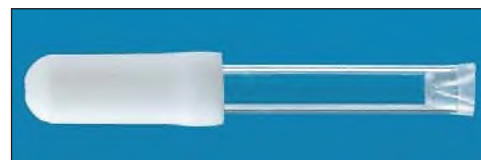
Suitable micropipette controller for use with above – see *PP815-10*.



PP313



PP420 series



PP425-40

Pipettes, Pasteur

Plastic Pasteur Pipettes

Pasteur Pipettes

Polyethylene. Disposable. With integral bulb. Graduated sizes are subdivided every 0.5ml. Capacity as indicated.

	Capacity ml	Length mm	Feature	Pack qty.
Non-sterile				
PP440-22	1	155	graduated	500
PP440-27	3	155	graduated	500
Sterile, bulk wrapped, in sleeves of 10				
PP444-20	1	155	graduated	500
PP444-25	3	155	graduated	500
Sterile, individually wrapped				
PP448-22	1	155	graduated	500
PP448-27	3	155	graduated	500

Pasteur Pipettes, Sterilin

Polyethylene. Disposable. With integral bulb. Graduated sizes are subdivided every 0.5ml.

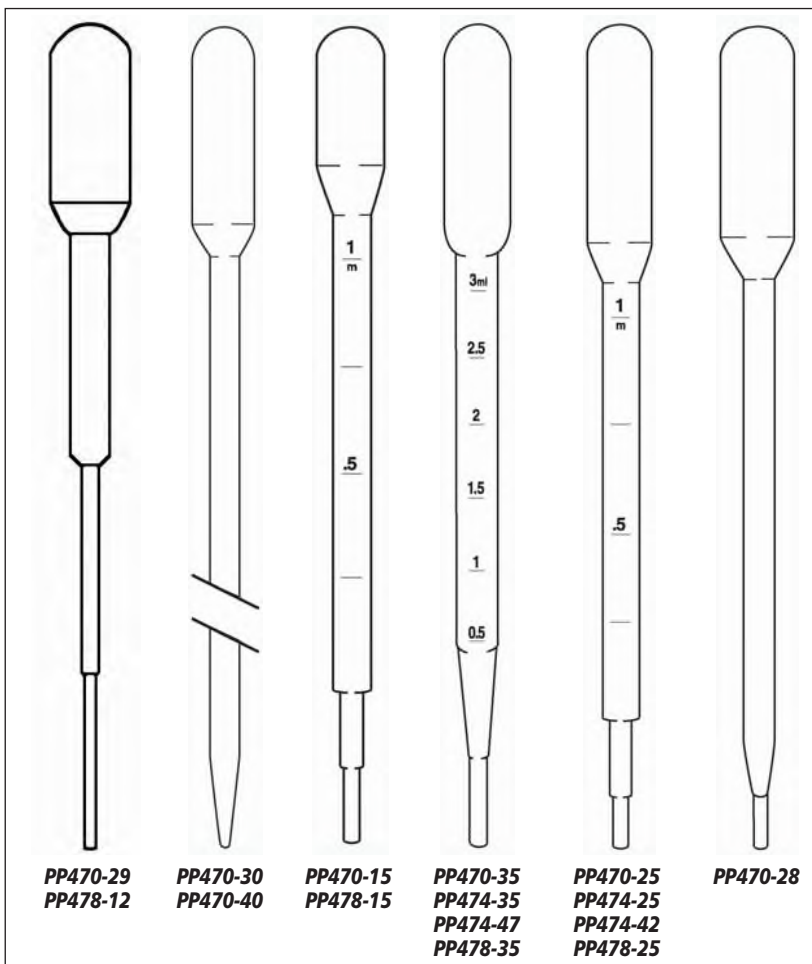
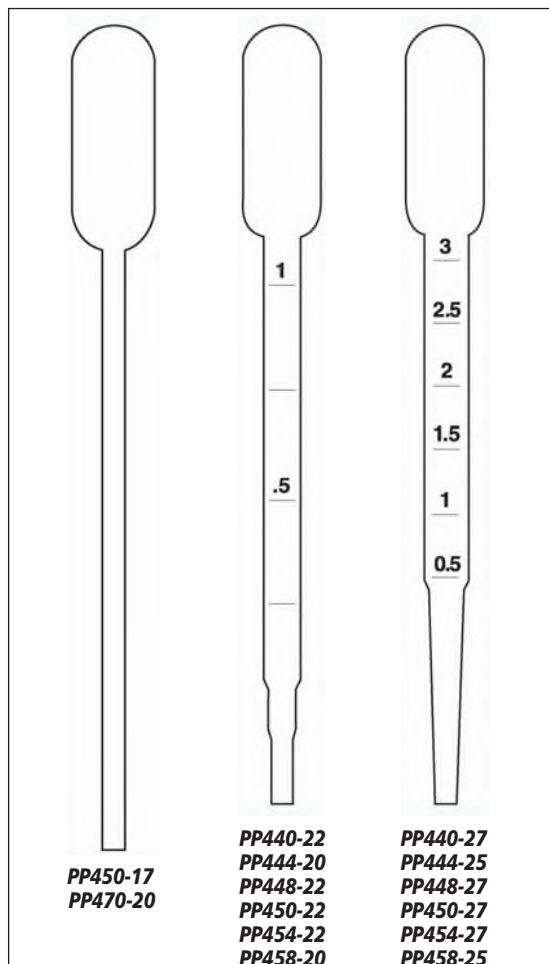
	Ref.	Length mm	Feature	Pack qty.
Non-sterile				
PP450-17	202C	155	Ungraduated	3000
PP450-22	201C	155	1ml graduated	3000
PP450-27	200C	155	3ml graduated	3000
Sterile, bulk wrapped, in sleeves of 10				
PP454-22	PP88SA	155	1ml graduated	500
PP454-27	PP89SA	155	3ml graduated	500
Sterile, individually wrapped				
PP458-20	PP88SB	155	1ml graduated	500
PP458-25	PP89SB	155	3ml graduated	500

Liquipettes™

Pasteur Liquipettes, Elkay

Polyethylene. Disposable. With integral bulb which can be used to withdraw up to 3.5ml in one squeeze (except PP470-15 and PP478-15 which have a withdraw volume of 1.5ml and PP470-40 which has a withdraw volume of 10ml). Graduated sizes are subdivided every 0.5ml.

	Length mm	Drop size, l	Drops per ml	Feature	Pack qty.
Non-Sterile, bulk wrapped					
PP470-15	140	40	25	1ml graduated	500
PP470-20	152	40	25	Thin stem	500
PP470-25	152	40	25	1ml graduated	500
PP470-28	152	20	50	Microtip	500
PP470-29	152	20	50	Extended fine tip	400
PP470-30	229	40	25	Plain	500
PP470-35	152	45	22	3ml graduated	500
PP470-40	300	40	25	Plain	100
Sterile, sachets of 10					
PP474-25	152	40	25	1ml graduated	1000
PP474-35	152	45	22	3ml graduated	1000
Sterile, sachets of 20					
PP474-42	152	40	25	1ml graduated	1000
PP474-47	152	45	22	3ml graduated	1000
Sterile, individually wrapped					
PP478-12	150	20	50	Extended fine tip	250
PP478-15	140	40	25	1ml graduated	250
PP478-25	152	40	25	1ml graduated	250
PP478-35	152	45	22	3ml graduated	250



Pipettes, Pasteur

Glass Pasteur Pipettes

Comet

Pasteur Pipettes, Comet

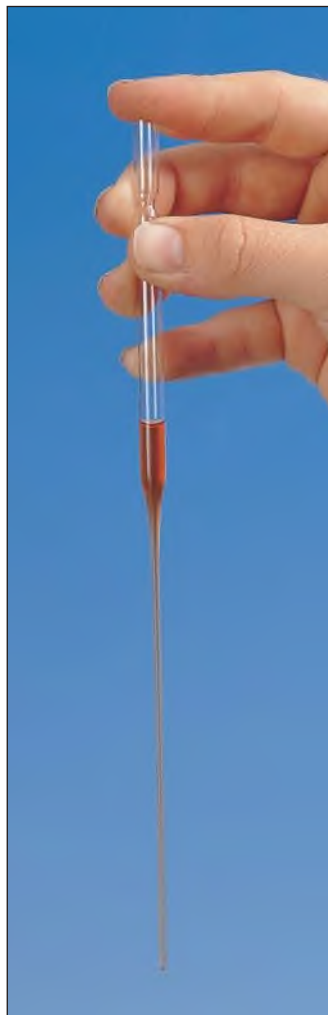
Glass. Non-sterile. Unplugged but with constriction to accept a cotton plug. Without teat. Supplied in shelf packs of 250 within the outer pack as indicated.

	Length mm	Pack qty.
Soda-lime unplugged		
PP490-13	146	1000
PP490-33	230	1000
Borosilicate unplugged		
PP490-53	146	1000
PP490-73	230	1000

Pasteur Pipettes, Comet

Glass. Non-sterile. Cotton plugged. Without teat.

	Length mm	Pack qty.
Soda-lime plugged		
PP493-14	146	1000
PP493-17	230	1000



PP490/PP493

NSL

Pasteur Pipettes, NSL

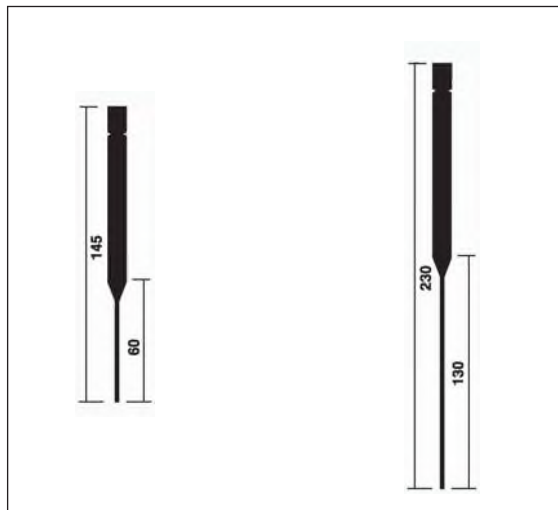
Glass. Supplied in shelf packs of 250 within the outer pack as indicated (except PP520 series which are in sleeves of 25 within the outer pack as indicated).

	Ref. NS-	Length mm	Pack qty.
Non-sterile			
PP502-20	150S	150	1000
PP502-30	230S	230	1000
Non-sterile, cotton plugged			
PP506-20	150SPP	150	1000
PP506-30	230SPP	230	1000
Sterile, cotton plugged			
Inner sleeve of 25. Without teats.			
PP522-23	150ST	150	250
PP522-33	230ST	230	250

Accessory Teats

Teats, ribbed PVC. For use with Pasteur pipettes. Supplied in pack of 100.

PP530-10 Teats



PP502/PP506/PP522 series

Micro-Haematocrit Tubes

Micro-Haematocrit Tubes

Length 75mm, o.d. 1.5 to 1.6mm, 75 l capacity. Supplied in dispenser tube packs of 100.

PP670-20 Plain
PP670-25 Heparinised



PP670

Pipettes

Dispensing

Tilt Pipettes

Borosilicate glass. Kipps pattern, with 29/32 cone joint for attachment to 1 litre soda glass reservoir supplied.

	Capacity, ml
PP739-20	5
PP739-25	10
PP739-30	20
PP739-35	25
PP739-40	50
PP739-45	100

QKC29 Joint clip to secure head on bottle

Dropping

Dropping Pipettes, Plain

Glass. Length approximately 75mm. Supplied in packs of 10.

	Ref.
PP765-15	Droppers
PP765-20	Droppers with teats
PP767-08	Spare teats



PP739



PP765

Pipette Fillers

Micropipette Controller



For disposable micropipettes with ring mark and other small glass pipettes including:

blood, Folin, Crecelius-Seifert, Sahli, blood-sugar and constriction pipettes within the volume range of 1 l to 1ml

When used correctly the liquid comes into contact only with the glass pipette. Vapours may penetrate into the suction bellows where they could contact silicone rubber and Noryl.

- ◆ Lightweight plastic case designed for comfortable one-handed operation
- ◆ Thumbwheel controlled silicone rubber bellows to fill and discharge
- ◆ Bellows visible through observation window
- ◆ Push button to eject micropipettes up to 100 l without handling
- ◆ Air admittance button for discharging "To deliver (EX)" pipettes
- ◆ Complete controller can be steam sterilised at 121°C for 20 minutes without dismantling

Micropipette Controller, Brand

As described. For use with disposable micropipettes with ring mark and most other small pipettes within the volume range 1 l to 1ml.

PP815-10 Micropipette controller

Blaubrand® intraMARK® disposable micropipettes – see PP420 series.



PP815 in use

Macropipette Controllers

Azlon

A simple to use, hand held controller for one-mark and graduated pipettes from 0.1 to 200ml.

- ◆ The single operating lever controls:
 - filling
 - adjustment of volume
 - precise setting of the meniscus
 - discharging
- ◆ Suction bellows sufficient to draw in 50ml with one squeeze
- ◆ An integral pipette adapter has a built-in hydrophobic membrane filter to stop penetration of liquid into the controller body
- ◆ The adapter filter unit can be unscrewed for cleaning and steam sterilising at 121°C for 20 minutes
- ◆ The centrally positioned rubber blowball is used to discharge the last drop from blow-out pipettes
- ◆ Vapours from the liquids being pipetted may come into contact with polyethylene, PTFE, silicone rubber and polystyrene
- ◆ Available in a choice of colours

Macropipette Controllers, Scilabware

As described. For use with one-mark and graduated pipettes from 0.1 to 200ml. Includes filter adapter and membrane filter unit. Available in a choice of colours as indicated.

PP820-17 Plain

PP820-19 Blue

Spares

PP820-30 Membrane filters, pack of 10



PP820

Pipette Fillers

Safety Pipette Fillers and Controllers

Pipette Bulbs

Small capacity, chemically resistant rubber bulbs for rapid and easy pipetting.

	Capacity ml	Colour
PP845-09	2	Grey
PP845-14	5	Grey

Pipette Fillers

Chemically resistant rubber with valves for suction, emptying and air release controlled by thumb and finger pressure.

Standard model

For bulb and graduated pipettes up to 10ml.

PP850-10 Standard

Universal model

With extended cone which accommodates all sizes of bulb and graduated pipettes.

PP852-10 Universal

Automatic venting model

For bulb and graduated pipettes up to 100ml capacity. Reservoir bulb incorporates one-way valve which allows it to vent when squeezed and reseal when released. The valve is removable, allowing easy internal cleaning should accidental contamination occur.

PP854-12 Automatic venting

Safety Bulb Pipette Filler

For bulb and graduated pipettes up to 25ml capacity, and is particularly suitable as an aspirator for Westergren and Wintrobe sedimentation pipettes. The tapered silicone rubber seal prevents loss of suction. Easily cleaned and can be autoclaved.

PP860-25 Pipette filler

Pipette Fillers, Pi-Pump

With thumb-wheel filling and emptying control, release valve lever for rapid emptying (except model PP880-10) and cone shape elastic pipette holder. Colour coded for identification.

	For pipettes up to	Colour code
PP880-10	0.2ml	Yellow
PP880-20	2.0ml	Blue
PP880-30	10.0ml	Green
PP880-40	25.0ml	Red

PP882-05 Spare elastic pipette holders for PP880-series, pack of 10

Rubber Teats

For dropper pipettes.

	Size	Cap. ml	Neck bore, mm
BU810-10	0	1.5	4
BU810-15	1	2	5
BU810-20	3	2.75	6
BU810-25	5	5	6

Bulbs, pear shape – see BU800 series.

PP845

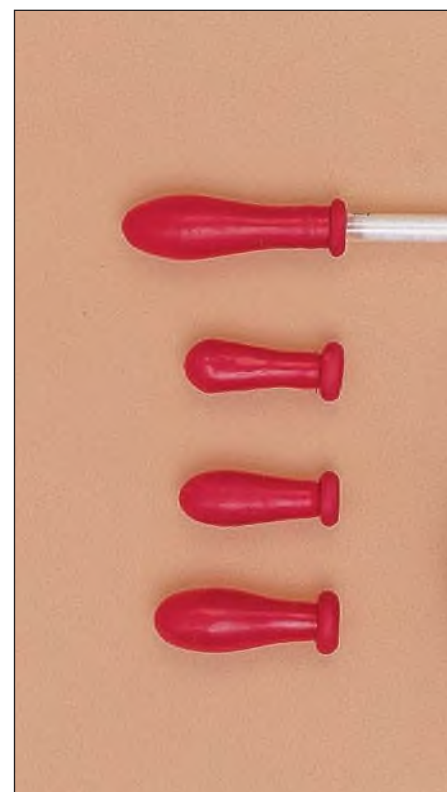


PP850/PP852

PP854

PP860

PP880



Rubber Teats

Pipette Fillers/Pipette Accessories

Pipette Controller, Bibbyjet pro

Bibby Scientific

- ◆ Ergonomic, lightweight design for fatigue-free use
- ◆ Suitable for pipettes from 0.1 to 100ml
- ◆ Continuously adjustable power with simple, two-button, fingertip control
- ◆ Cordless operation with rechargeable NiCd battery
- ◆ Rapid battery recharging within 4 hours
- ◆ Alternative battery compartment cover enables the controller to be stood upside-down on the bench, avoiding contamination of the pipette connector
- ◆ Pipetted media fumes vented at front of pipettor reducing the possibility of internal corrosion
- ◆ Choice of pipettor/charger sets available to suit most international power supply configurations

As described. With fully autoclavable pipette connector, disposable 0.2 µm membrane filter and one way safety valve. The standard 0.2µm or accessory 3µm membrane filters allow class B or class A volume tolerances respectively to be achieved when used with suitable pipettes. Supplied with wall support, two spare 0.2µm membrane filters and charger for the rechargeable battery. Weight 205g. Charger power supply requirements as specified.

PP895-55 Ref. PC2000. Bibbyjet with charger for U.K./Ireland, 230V 50Hz single phase supplies

PP895-65 Ref. PC2001. Bibbyjet with charger for continental Europe 230V 50Hz single phase supplies

Accessories and Spares for PP895 series

PP897-05 Ref. PC1011. Silicone pipette adapter with non return valve, supplied singly

PP897-09 Ref. PC1012. 0.2µm membrane filter. sterile, supplied singly

PP897-10 Ref. PC1013. 0.2µm membrane filter. non-sterile, pack of 10

PP897-14 Ref. PC1014. 3µm membrane filter. sterile, supplied singly

PP897-16 Ref. PC1015. 3µm membrane filter. non-sterile, pack of 10

PP897-24 Ref. PC2000/1. Charger for U.K./Ireland. 230V 50Hz single phase supplies

PP897-32 Charger for continental Europe. 230V 50Hz single phase supplies

PP897-52 Ref. PC1016. Wall support



PP895

Pipette Boxes

For holding pipettes for autoclaving or dry heat sterilising up to 180°C. With lid.

Cylindrical pattern

	Length x dia. mm	Material
PP970-30	407 x 64	Aluminium
PP970-35	407 x 64	Stainless steel
PP970-50	457 x 64	Aluminium
PP970-55	457 x 64	Stainless steel

*The polypropylene box has a thread closure which enables length to vary from 280 to 500mm and is autoclavable at maximum 121°C.

Square section pattern

The lid and base have a built-in silicone pad. The square section is 70 x 70mm.

	Length, mm Int. x Ext.	Material
PP975-14	175 x 210	Stainless steel
PP975-15	180 x 215	Aluminium
PP975-18	250 x 290	Stainless steel
PP975-20	255 x 295	Aluminium
PP975-22	300 x 340	Stainless steel
PP975-25	305 x 345	Aluminium
PP975-27	390 x 430	Stainless steel
PP975-30	410 x 450	Aluminium
PP975-32	450 x 490	Stainless steel
PP975-35	458 x 495	Aluminium

Pipette rinser – see WB610.

Pipette stands – see SM200/SM254.



PP970-30 to -55, PP975 plus Petri dish holder

Pipettors

Repeating Pipettor, HandyStep® S



Positive displacement, stepping pipettor system comprising separate hand-held control unit and series of accessory reservoir tips allowing single volumes from 2µl to 50000µl to be repeatedly and accurately dispensed up to 49 times.

- ◆ Ergonomic design gives comfortable handling
- ◆ Nine separate volume settings
- ◆ Smooth action dispensing lever
- ◆ Single lever for locking the piston and filling the PD-Tip II
- ◆ Piston lock ensures only complete step volumes are dispensed
- ◆ Tip ejection button allows contaminated tips to be disposed of without handling
- ◆ Greatly reduced risk of pipettor contamination, or sample carry-over
- ◆ Factory calibrated
- ◆ Maintenance free

HandyStep® S Control Unit

As described. Supplied with wall support and instructions. Requires, but is not supplied with, PD-tips II for operation.

PR060-85 HandyStep® S

PD-Tips II

According to ISO 8655. Precision moulded, PP barrels with HDPE piston plungers. Additive and lubricant free.

Control Unit setting	Max. no. of steps	Dispensing volume per step, µl									
		0.1ml PD-Tip	0.5ml PD-Tip	1ml PD-Tip	1.25ml PD-Tip	2.5ml PD-Tip	5ml PD-Tip	10ml PD-Tip	12.5ml PD-Tip	25ml PD-Tip	50ml PD-Tip
1	49	2	10	20	25	50	100	200	200	500	1000
1.5	32	3	15	30	37.5	75	150	300	375	750	1500
2	23	4	20	40	50	100	200	400	500	1000	2000
2.5	19	5	25	50	62.5	125	250	500	625	1250	2500
3	15	6	30	60	75	150	300	600	750	1500	3000
3.5	13	7	35	70	87.5	175	350	700	875	1750	3500
4	11	8	40	80	100	200	400	800	1000	2000	4000
4.5	10	9	45	90	112.5	225	450	900	1125	2250	4500
5	9	10	50	100	125	250	500	1000	1250	2500	5000
Accuracy (A) %		±1.6	±0.8	±0.8	±0.8	±0.7	±0.5	±0.4	±0.3	±0.3	±0.3
Variance (V) %		5.0 to 2.0	1.4 to 0.6	1.0 to 0.4	0.8 to 0.3	0.8 to 0.2	0.6 to 0.2	0.3 to 0.2	0.4 to 0.2	0.4 to 0.2	0.4 to 0.15

PD-Tips II, non sterile

As described. Supplied loose in packs as indicated. The 25ml and 50ml sizes require, and are supplied with, an autoclavable adapter.

	Size ml	Pack qty.
PR064-08	0.1	100
PR064-10	0.5	100
PR064-12	1	100
PR064-14	1.25	100
PR064-18	2.5	100
PR064-22	5	100
PR064-24	10	100
PR064-26	12.5	100
PR064-30	25	50
PR064-34	50	25

PD-Tips II, Bio-Cert® sterile

As described. Bio-Cert® sterile, endotoxin, DNA/RNase and ATP-free, polypropylene bodied tips with HDPE piston and individually wrapped within outer packs as indicated. The 25ml and 50ml sizes require, and are supplied with, an autoclavable adapter.

	Size ml	Pack qty.
PR067-38	0.1	100
PR067-42	0.5	100
PR067-50	1.25	100
PR067-54	2.5	100
PR067-58	5	100
PR067-66	12.5	100
PR067-70	25	25
PR067-74	50	25

Spare adapters

For use with 25ml and 50ml tips only.

PR068-50 Non-sterile, pack of 10

PR068-90 Sterile, pack of 5



PR060-85



PR064|PR067

Pipettors

Repeating Pipettors, HandyStep® touch/touch S



Repeating Pipettors, HandyStep® touch

Microprocessor controlled, motor driven, positive displacement, stepping pipettor system. Comprising hand-held pump unit with built-in rechargeable battery, touchscreen operation with menu navigation in English, German, Spanish, French or Chinese and a series of accessory reservoir tips allowing single volumes from 1µl to 50ml (depending on the tip selected) to be repeatedly and accurately dispensed.

- ◆ Choice of models:
 - HandyStep® touch: multidispensing, autodispensing or pipetting modes
 - HandyStep® touch S: additionally features sequential dispensing, multi-aspiration and titration modes
- ◆ Automatic tip recognition of PD-Tips II stepper tips
- ◆ Compatibility with other common stepper pipette tips (but without tip recognition, tip volume must be manually entered)
- ◆ Factory calibrated
- ◆ Clear LCD menu readout shows function, step volume and number, speed and battery status, or tip details
- ◆ The rechargeable NiMH battery is quickly charged using the charger supplied, alternatively an accessory inductive charging stand is available

Performance data: HandyStep® touch with PD-Tips II

PD-Tip Size	Volume range	A* (±%) at indicated % of nominal capacity				CV* (±%) at indicated % of nominal capacity			
		100%	50%	10%	1%	100%	50%	10%	1%
0.10ml	1.0µl to 100µl	1.0	1.2	1.6	16	0.50	1.00	2.00	12.00
0.50ml	5.0µl to 500µl	0.9	0.9	0.9	9	0.25	0.50	1.00	6.00
1.25ml	12.5 µl to 1250µl	0.6	0.9	0.9	8	0.15	0.30	0.60	3.50
2.50ml	25.0µl to 2500µl	0.5	0.8	0.8	8	0.10	0.20	0.40	2.50
5.00ml	50.0µl to 5000µl	0.5	0.8	0.8	8	0.08	0.15	0.30	1.50
12.5ml	125µl to 12.5ml	0.4	0.5	0.5	5	0.08	0.15	0.25	1.25
25.0ml	250µl to 25ml	0.3	0.3	0.3	3	0.08	0.15	0.25	1.25
50.0ml	500µl to 50ml	0.3	0.3	0.3	3	0.08	0.15	0.25	1.25

*A = Accuracy, CV = Coefficient of variation. Tolerances are within ISO 8655 requirements.

HandyStep® touch Control units

As described. Supplied with universal a.c. adapter requiring a 100-240V a.c. supply and shelf/rack mount.

- PR072-15** HandyStep® touch
- PR072-25** HandyStep® touch S

PD-Tips II

According to ISO 8655. Precision moulded, polypropylene barrels with HDPE piston plungers. Additive and lubricant free. Provide automatic size recognition when used with HandyStep touch and other manufacturers' step pipettors which have this facility.

PD-Tips II, non sterile

As described. Supplied loose in packs as indicated. The 25ml and 50ml sizes require, and are supplied with, an autoclavable adapter.

	Size ml	Pack qty.
PR064-08	0.1	100
PR064-10	0.5	100
PR064-12	1	100
PR064-14	1.25	100
PR064-18	2.5	100
PR064-22	5	100
PR064-24	10	100
PR064-26	12.5	100
PR064-30	25	50
PR064-34	50	25

PD-Tips II, Bio-Cert® sterile

As described. Bio-Cert® sterile, endotoxin, DNA/RNase and ATP-free, polypropylene bodied tips with HDPE piston and individually wrapped within outer packs as indicated. The 25ml and 50ml sizes require, and are supplied with, an autoclavable adapter.

	Size ml	Pack qty.
PR067-38	0.1	100
PR067-42	0.5	100
PR067-50	1.25	100
PR067-54	2.5	100
PR067-58	5	100
PR067-66	12.5	100
PR067-70	25	25
PR067-74	50	25

Spare adapters

For use with 25ml and 50ml tips only.

- PR068-50** Non-sterile, pack of 10
- PR068-90** Sterile, pack of 5
- PR072-45** Spare NiMH rechargeable battery
- PR072-55** Inductive charging stand for single PR072-models



PR072



PR064/PR067

Pipettors

Positive Displacement Transferpettor



- ◆ Choice of models
 - digital adjustable volumes 2.5µl to 10ml
 - fixed volumes 1µl to 200µl

- ◆ Colour coded pipette and caps/tips for easy identification
- ◆ Caps and tips can be re-used repeatedly

Transferpettor, variable volume models. Digital reading

	Range µl	Steps µl	A%±	V%	Colour code
PR100-15	2.5 to 10	0.01	1.0	0.8	Orange
PR100-20	5 to 25	0.1	0.5	0.5	2 x white
PR100-25	10 to 50	0.1	0.5	0.4	Green
PR100-30	20 to 100	0.1	0.5	0.4	Blue
PR100-35	100 to 500	1.0	0.5	0.2	Green
PR100-40	200 to 1000	1.0	0.5	0.2	Yellow
PR100-45	1 to 5ml	0.01ml	0.5	0.2	Red
PR100-50	2 to 10ml	0.01ml	0.5	0.2	Orange

Accessories/Spares*

Caps/ Tips	Seal	Piston rod	Maintenance kit
PR109-15	—	PR110-16	PR112-07
PR109-22	PR109-60	PR110-19	PR112-10
PR109-25	PR109-63	PR110-22	PR112-13
PR109-28	PR109-66	PR110-25	PR112-16
PR109-40	PR109-69	—	—
PR109-43	PR109-72	—	—
PR109-46	PR109-75	—	—
PR109-50	PR109-78	—	—

Transferpettor, fixed volume models

	Volume µl	A%±	V%	Colour code
PR104-10	1	4.0	3.0	White
PR104-13	2	2.5	2.0	White
PR104-22	5	1.0	0.8	White
PR104-25	10	1.0	0.8	Orange
PR104-32	25	0.5	0.4	2 x white
PR104-35	50	0.6	0.4	Green
PR104-38	100	0.6	0.4	Blue
PR104-42	200	0.5	0.2	Red

Accessories/Spares*

Caps/ Tips	Seal	Piston rod	Maintenance kit
PR109-12	—	PR110-13	PR112-04
PR109-12	—	PR110-13	PR112-04
PR109-12	—	PR110-13	PR112-04
PR109-15	—	PR110-16	PR112-07
PR109-22	PR109-60	PR110-19	PR112-10
PR109-25	PR109-63	PR110-22	PR112-13
PR109-28	PR109-66	PR110-25	PR112-16
PR109-28	PR109-66	PR110-28	PR112-16

A% = Accuracy
V% = Reproducibility

} Figures quoted are based on the maximum volume and distilled water at 20°C.

*Full listings of accessories and spares can be found on the next page.

continued on next page



PR100, PR104 is similar

Pipettors

Positive Displacement Transferpettor continued

With a positive displacement pipette the piston draws in the liquid directly, and displaces it directly. Consequently the piston and the sample are in direct contact – there is no air interface. The piston wipes the walls of the capillaries and tips thoroughly clean.

The minimal liquid remaining is normally negligible as regards the result. If, however, no carry-over is permitted, we recommend to use the air displacement pipette with disposable tips as shown on the next page. Equally suited for liquids of any density, vapour pressure, or viscosity. There is no need to replace the piston when capillaries or tips are replaced.

Transferpettor caps

Glass capillaries which can be re-used. Suitable for use with Transferpettor capacities as indicated in the table on the previous page. Conformity Certified.


	For Transferpettors	Colour code	Pack qty.
PR109-12	PR104-10, -13, -16, -22	White	100
PR109-15	PR100-15, PR104-25	Orange	100
PR109-22	PR100-20, PR104-32	2 x white	100
PR109-25	PR100-25, PR104-35	Green	100
PR109-28	PR100-30, PR104-38, -42	Blue/red	50

Transferpettor tips

Polypropylene. Can be re-used. Suitable for use with Transferpettor capacities as indicated in the table on the previous page. Conformity Certified.

	For Transferpettors	Colour code	Pack qty.
PR109-40	PR100-35	Green	10
PR109-43	PR100-40	Yellow	10
PR109-46	PR100-45	Red	10
PR109-50	PR100-50	Orange	10

Conformity Certified

Indicated by the symbol  shows that the product has been manufactured by Brand under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions, Brand certify conformity with annex 12 of the Eichordnung.



PR112-50, PR112-55 with instruments

Transferpettor seals

Suitable for use with Transferpettor capacities as indicated in the table on the previous page. Conformity Certified.

	For Transferpettors	Material	Pack qty.
PR109-60	PR100-20, PR104-32	PTFE	3
PR109-63	PR100-25, PR104-35	PTFE	3
PR109-66	PR100-30, PR104-38, -42	PTFE	3
PR109-69	PR100-35	PE	10
PR109-72	PR100-40	PE	10
PR109-75	PR100-45	PE	10
PR109-78	PR100-50	PE	10

Piston rods

Stainless steel. Suitable for use with Transferpettor capacities as indicated in the table on the previous page. Conformity Certified. PR110-19 to PR110-28 are supplied complete with PTFE seal.

	For Transferpettors	Pack qty.
PR110-13	PR104-10, -13, -16, -22	3
PR110-16	PR100-15, PR104-25	3
PR110-19	PR100-20, PR104-32	3
PR110-22	PR100-25, PR104-35	3
PR110-25	PR100-30, PR104-38	3
PR110-28	PR104-42	3

Maintenance Kits

Suitable for use with Transferpettor capacities as indicated in the table on the previous page. Conformity Certified. Each kit comprises:

1 allen key, 1 piston rod with fitted PTFE Transferpettor-seal (from instrument sizes 20 µl upward), 1 calibrating gauge, 1 screw driver, 3 clamping discs, 1 screw, 3 PTFE Transferpettor seals, and 1 mounting block (from sizes of 20 µl upward).

	For Transferpettors
PR112-04	PR104-10, -13, -16, -22
PR112-07	PR100-15, PR104-25
PR112-10	PR100-20, PR104-32
PR112-13	PR100-25, PR104-35
PR112-16	PR100-30, PR104-38, -42

Transferpettor stations

For storing instruments and accessories.

	Instruments, capacity
PR112-50	4, up to 200 µl
PR112-55	2, of 0.5 to 10ml

Pipettors

Microlitre Transferpette® S



- ◆ Conformity certified
- ◆ Fully autoclavable (at 121°C for 20 minutes)
- ◆ Choice of models:
 - digital variable volumes 0.1 to 10,000µl
 - fixed volume 10 to 1000µl
- ◆ Variable volume models have one-handed adjustment and 4-digit display with prismatic lens window for easy viewing
- ◆ Central pipetting and independent tip ejector buttons are ergonomically positioned for operation in either hand and when wearing gloves

Microlitre Transferpette® S, variable volume models

Digital reading. Supplied complete with a performance certificate and shelf/rack hanger.

	Ref.	Range µl	Subdiv. µl	A%±	V%
PR170-04	D-1	0.1 to 1	0.001	2	1.2
PR170-07	D-10	0.5 to 10	0.01	1	0.5
PR170-10	D-20	2 to 20	0.02	0.8	0.4
PR170-13	D-100	10 to 100	0.1	0.6	0.2
PR170-16	D-200	20 to 200	0.2	0.6	0.2
PR170-19	D-1000	100 to 1000	1.0	0.6	0.2
PR170-22	D-5000	500 to 5000	10.0	0.6	0.2
PR170-25	D-10000	1000 to 10000	10.0	0.6	0.2

Conformity Certified

Indicated by the symbol shows that the product has been manufactured by Brand under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions, Brand certify conformity with annex 12 of the Eichordnung.



PR170, PR173 are similar

Microlitre Transferpette® S, fixed volume models

Digital reading. Supplied complete with a performance certificate and shelf/rack hanger.

	Ref.	Volume µl	A%±	V%
PR173-09	F-10	10	1	0.5
PR173-11	F-20	20	0.8	0.4
PR173-14	F-25	25	0.8	0.4
PR173-17	F-50	50	0.8	0.4
PR173-20	F-100	100	0.6	0.2
PR173-23	F-200	200	0.6	0.2
PR173-26	F-500	500	0.6	0.2
PR173-29	F-1000	1000	0.6	0.2

A% = Accuracy, V% = Reproducibility.

Figures quoted are based on the maximum volume and distilled water at 20%.

Accessory Racks

PR173-95 Bench mounting for up to 6 x PR170/173 models only

PR173-98 Shelf/rack hanger for 1 x PR170/173 models only

Disposable Pipette Tips, Brand

High quality polypropylene tips which are Conformity Certified when used with Transferpette® pipettors. Cadmium free. Also suitable for use with Eppendorf and Gilson pipettors.

TipBox Set

Supplied as a steam sterilisable plastic box with hinged transparent cover containing a filled tip rack, plus additional tip racks as indicated.

TipRacks

Refill packs for TipBox Sets, comprising racks for tips to be dropped into empty TipBoxes as required.

Loose Packs

Supplied loose in a bag or carton in the quantities indicated.

Nano-Cap™, for volumes 0.1 to 20µl

PR140-05 TipBox set, 5 racks x 96 tips

PR140-08 TipRacks for PR140-05, 10 racks x 96 tips

PR140-10 Loose pack of 2000 tips

Crystal, for volumes 0.5 to 20µl

PR140-12 TipBox set, 5 racks x 96 tips

PR140-14 TipRacks for PR140-12, 10 racks x 96 tips

PR140-16 Loose pack of 2000 tips

Yellow, for volumes 2 to 200µl

PR140-24 TipBox set, 5 racks x 96 tips

PR140-26 TipRacks for PR140-24, 10 racks x 96 tips

PR140-28 Loose pack of 1000 tips

Natural*, for volumes 50 to 1000µl

PR140-45 TipBox set, 5 racks x 96 tips

PR140-48 TipRacks for PR140-45, 10 racks x 96 tips

PR140-52 Loose pack of 1000 tips

*Except for PR140-52 which are blue coloured tips.

Natural, for volumes 500 to 5000µl

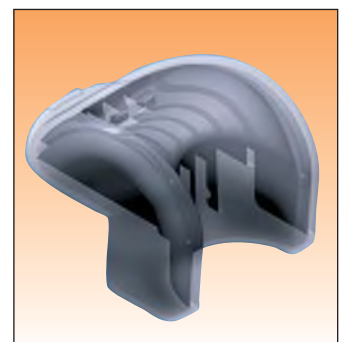
PR140-80 Loose pack of 200 tips

Natural, for volumes 1000 to 10000µl

PR140-95 Loose pack of 200 tips



PR173-95 in use



PR173-98

Pipettors

Multichannel Transferpette® S - 8/ -12



- ◆ Conformity certified
- ◆ For pipetting either 8 or 12 identical volumes into titration plates
- ◆ Designed for operator comfort over long term repetitive pipetting
- ◆ Viton ring sealing provides tight fitting of tips
- ◆ One-handed adjustment and 4-digit display with prismatic lens window for easy viewing

Transferpette® S – 8

8-channel pipettor. Supplied complete with performance certificate, a pack of pipette tips in a rack, a shelf/wall rack hanger, a set of Viton shaft seals and a reagent reservoir.

	Range μl	Subdiv. μl	A% \pm	V%	Tips reqd.
PR174-35	0.5 to 10	0.05	1.6	1.0	Crystal
PR174-45	5 to 50	0.1	0.8	0.4	Yellow
PR174-55	10 to 100	0.1	0.8	0.3	Yellow/Natural
PR174-60	20 to 200	1.0	0.8	0.3	Yellow/Natural
PR174-65	30 to 300	1.0	0.6	0.3	Yellow

Transferpette® S – 12

12-channel pipettor. Supplied complete with performance certificate, a pack of pipette tips in a rack, a shelf/wall rack hanger, a set of Viton shaft seals and reagent reservoir.

	Range μl	Subdiv. μl	A% \pm	V%	Tips reqd.
PR174-75	0.5 to 10	0.05	1.6	1.0	Crystal
PR174-80	5 to 50	0.1	0.8	0.4	Yellow
PR174-85	10 to 100	0.1	0.8	0.3	Yellow/Natural
PR174-90	20 to 200	1.0	0.8	0.3	Yellow/Natural
PR174-95	30 to 300	1.0	0.6	0.3	Yellow

A% = Accuracy, V% = Reproducibility.

Figures quoted are based on the maximum volume and distilled water at 20%.

- ◆ Central pipetting and independent tip ejector buttons are ergonomically positioned for operation in either hand and when wearing gloves
- ◆ All controls clearly separated to avoid errors
- ◆ Fully autoclavable (at 121° for 20 minutes)
- ◆ Manifold can be rotated for ease of use when pipetting a titration plate
- ◆ Easy calibration without tools

Disposable Pipette Tips, Brand

High quality polypropylene tips which are Conformity Certified when used with Transferpette® pipettors. Cadmium free. Also suitable for use with Eppendorf and Gilson pipettors.

TipBox Set

Supplied as a steam sterilisable plastic box with hinged transparent cover containing a filled tip rack, plus additional tip racks as indicated.

TipRacks

Refill packs for TipBox Sets, comprising racks for tips to be dropped into empty TipBoxes as required.

Loose Packs

Supplied loose in a bag or carton in the quantities indicated.

Crystal, for volumes 0.5 to 20 μl

PR140-12 TipBox set, 5 racks x 96 tips

PR140-14 TipRacks for PR140-12, 10 racks x 96 tips

PR140-16 Loose pack of 2000 tips

Yellow, for volumes 2 to 200 μl

PR140-24 TipBox set, 5 racks x 96 tips

PR140-26 TipRacks for PR140-24, 10 racks x 96 tips

PR140-28 Loose pack of 1000 tips

Natural*, for volumes 50 to 1000 μl

PR140-45 TipBox set, 5 racks x 96 tips

PR140-48 TipRacks for PR140-45, 10 racks x 96 tips

PR140-52 Loose pack of 1000 tips

*Except for PR140-52 which are blue coloured tips.

Natural, for volumes 500 to 5000 μl

PR140-80 Loose pack of 200 tips

Natural, for volumes 1000 to 10000 μl

PR140-95 Loose pack of 200 tips



PR174-35 to PR174-65



PR174-75 to PR174-95

Conformity Certified

Indicated by the symbol H shows that the product has been manufactured by Brand under quality control procedures according to Eichordnung the German Federal Weights and Measures Regulations.

Provided the instrument is used with the recommended accessories and in accordance with the supplied instructions, Brand certify conformity with annex 12 of the Eichordnung.

Pipettors

Transferpette® Electronic



Ergonomically designed, high performance, electronic pipettors especially suited for undertaking repetitive liquid handling operations over long periods.

- ◆ Conformity certified
- ◆ Choice of models with capacities up to 5000µl
- ◆ Four operating modes for maximum convenience:
 - standard pipetting
 - reverse pipetting
 - mixing
 - gel loading, for electrophoresis
- ◆ Adjustable pipetting speed

Range µl	Subdiv. µl	A%±		V% ±	
		Max. vol.	Min. vol.	Max. vol.	Min. vol.
0.5 to 10	0.01	1.0	5.0	0.4	2.0
2 to 20	0.02	1.0	5.0	0.4	2.5
20 to 200	0.2	0.8	4.0	0.2	0.6
100 to 1000	1.0	0.6	3.0	0.2	0.6
500 to 5000	5.0	0.6	3.0	0.2	0.6

A% = Accuracy } Figures quoted are based on pipetting distilled
 V% = Reproducibility } water at 20°C.

As described. Available supplied with or without a.c. adapter/charger, as indicated. The adapter requires a 230V 50Hz (240V 50Hz - Australia) supply.

With a.c. adapter and UK plug

- PR175-05** 0.5 to 10µl
- PR175-10** 2 to 20µl
- PR175-20** 20 to 200µl
- PR175-30** 100 to 1000µl
- PR175-34** 500 to 5000µl

With a.c. adapter and European plug

- PR175-38** 0.5 to 10µl
- PR175-40** 2 to 20µl
- PR175-50** 20 to 200µl
- PR175-60** 100 to 1000µl
- PR175-62** 500 to 5000µl

With a.c. adapter and Australian plug

- PR175-63** 0.5 to 10µl
- PR175-66** 20 to 200µl
- PR175-68** 100 to 1000µl
- PR175-69** 500 to 5000µl

Without a.c. adapter*

- PR175-72** 0.5 to 10µl
- PR175-75** 2 to 20µl
- PR175-80** 20 to 200µl
- PR175-90** 100 to 1000µl
- PR175-96** 500 to 5000µl

*An a.c. adapter/charger is required.

- ◆ Fully autoclavable pipette tip manifold
- ◆ Innovative, 2-component tip cone and 3 alternative ejector clips allow use with most commonly available tips
- ◆ Adjustable finger rest allows optional hand positioning for comfortable operation
- ◆ Fully charged, the rechargeable battery provides approximately 8 hours use

Accessory tips

- PR140-12** Crystal, for volumes 0.5 to 20µl, TipBox set 5 racks x 96 tips
- PR140-16** Crystal, for volumes 0.5 to 20µl, loose pack of 2000 tips
- PR140-24** Yellow, for volumes 2 to 200µl, TipBox set of 5 racks x 96 tips
- PR140-28** Yellow, for volumes 2 to 200µl, loose pack of 1000 tips
- PR140-45** Natural for volumes 50 to 1000µl, TipBox set 5 racks x 96 tips
- PR140-52** Blue, for volumes 50 to 1000µl, loose pack of 1000 tips
- PR140-80** Natural, for volumes 500 to 5000µl, loose pack of 200 tips

Accessory rack

Holds three PR175-series pipettors. Supplied with a.c. adapter/charger for 230V 50Hz (240V 50Hz - Australia) single phase supplies with plug as indicated.

- PR176-02** Charger/rack, with UK plug
- PR176-04** Charger/rack, with continental European plug



PR175

Pipettors

Transferpette® Electronic Multichannel Pipettors



Generally as PR175-series but with choice of 8- or 12-channel pipetting heads.

- ◆ Conformity certified
- ◆ Three ranges available:
 - 1 to 20µl
 - 5 to 100µl
 - 15 to 300µl
- ◆ Four operating modes for maximum convenience:
 - standard pipetting
 - reverse pipetting
 - mixing
 - gel loading, for electrophoresis
- ◆ Adjustable pipetting speed
- ◆ Fully autoclavable pipette tip manifold
- ◆ Innovative, 2-component tip cone, stepped tip ejector and manifold stabiliser reduce ejection forces
- ◆ Adjustable finger rest allows optional hand positioning for comfortable operation
- ◆ Fully charged, the rechargeable battery provides approximately 8 hours use

Range µl	Subdiv. µl	A% ≤ ± Max. vol.	V% ≤ ± Max. vol.
1 to 20	0.02	1.0	0.5
5 to 100	0.1	0.8	0.25
15 to 300	0.5	0.6	0.25

A% = Accuracy
V% = Reproducibility

} Figures quoted are based on pipetting distilled water at 20°C.



PR177, PR178 are similar

As described. With stand, a pack of pipette tips in racks and an a.c. adapter/charger with plug as indicated. The adapter requires a 230V 50Hz supply (or 240V 50Hz - Australia only).

8-channel with UK plug

- PR177-05** 1 to 20µl x 0.02µl subdivision
- PR177-15** 5 to 100µl x 0.1µl subdivision
- PR177-25** 15 to 300µl x 0.5µl subdivision

8-channel with European plug

- PR177-30** 1 to 20µl x 0.02µl subdivision
- PR177-35** 5 to 100µl x 0.1µl subdivision
- PR177-40** 15 to 300µl x 0.5µl subdivision

8-channel with Australian plug

- PR177-55** 5 to 100µl x 0.1µl subdivision
- PR177-60** 15 to 300µl x 0.5µl subdivision

12-channel with UK plug

- PR178-65** 1 to 20µl x 0.02µl subdivision
- PR178-69** 5 to 100µl x 0.1µl subdivision
- PR178-72** 15 to 300µl x 0.5µl subdivision

12-channel with European plug

- PR178-76** 1 to 20µl x 0.02µl subdivision
- PR178-81** 5 to 100µl x 0.1µl subdivision

12-channel with Australian plug

- PR178-88** 1 to 20µl x 0.02µl subdivision
- PR178-93** 5 to 100µl x 0.1µl subdivision

Disposable pipette tips, supplied as indicated

Nano-Cap™, 0.1 to 20µl, for 1 to 20µl pipettors only

- PR140-05** TipBox set, 5 racks x 96 tips
- PR140-08** TipRacks for PR140-05, 10 racks x 96 tips
- PR140-10** Loose pack of 2000 tips

Crystal, 0.5 to 20µl, for 1 to 20µl pipettors only

- PR140-12** TipBox set, 5 racks x 96 tips
- PR140-14** TipRacks for PR140-12, 10 racks x 96 tips
- PR140-16** Loose pack of 2000 tips

Yellow, 2 to 200µl, for 5 to 100µl and 15 to 300µl pipettors only

- PR140-24** TipBox set, 5 racks x 96 tips
- PR140-26** TipRacks for PR140-24, 10 racks x 96 tips
- PR140-28** Loose pack of 1000 tips

Natural, 5 to 300µl, for 5 to 100µl and 15 to 300µl pipettors only








- PR140-30** TipBox set, 5 racks x 96 tips
- PR140-32** TipRacks for PR140-30, 10 racks x 96 tips
- PR140-34** Loose pack of 1000 tips

Pipettors

Disposable Pipette Tips



Selection chart

Capacity, μ l	Type	
0.1 to 20	Nano-cap™	
0.5 to 20	Crystal	
2 to 200	Yellow	
5 to 300	Natural	
50 to 1000	Natural/Blue	
500 to 5000	Natural	
1000 to 10000	Natural	

High quality polypropylene tips which are Conformity Certified when used with Transferpette® pipettors. Cadmium free. Also suitable for use with Eppendorf and Gilson pipettors.

TipBox Set

Supplied as a steam sterilisable polypropylene box with hinged transparent cover containing a filled tip rack, plus additional TipRacks as indicated.

TipRacks

Refill packs for TipBox Sets, comprising racks for tips to be dropped into empty TipBoxes as required.

Loose Packs

Supplied loose in a bag or carton in the quantities indicated.

Nano-Cap™, for volumes 0.1 to 20 μ l

- PR140-05** TipBox set, 5 racks x 96 tips
- PR140-08** TipRacks for PR140-05, 10 racks x 96 tips
- PR140-10** Loose pack of 2000 tips

Crystal, for volumes 0.5 to 20 μ l

- PR140-12** TipBox set, 5 racks x 96 tips
- PR140-14** TipRacks for PR140-12, 10 racks x 96 tips
- PR140-16** Loose pack of 2000 tips

Yellow, for volumes 2 to 200 μ l

- PR140-24** TipBox set, 5 racks x 96 tips
- PR140-26** TipRacks for PR140-24, 10 racks x 96 tips
- PR140-28** Loose pack of 1000 tips

Natural, for volumes 5 to 300 μ l

- PR140-30** TipBox set, 5 racks x 96 tips
- PR140-32** TipRacks for PR140-30, 10 racks x 96 tips
- PR140-34** Loose pack of 1000 tips

Natural*, for volumes 50 to 1000 μ l

- PR140-45** TipBox set, 5 racks x 96 tips
- PR140-48** TipRacks for PR140-45, 10 racks x 96 tips
- PR140-52** Loose pack of 1000 tips

*Except for PR140-52 which are blue coloured tips.

Natural, for volumes 500 to 5000 μ l

- PR140-80** Loose pack of 200 tips

Natural, for volumes 1000 to 10000 μ l

- PR140-95** Loose pack of 200 tips

Filter tips - see PR844.

Sterile, Bio-Cert®, endotoxin-, DNA/RNAse- and ATP-free tips are available - details on request.



TipBox Set



TipRacks



Loose Packs

Pipettors

LLG-proMLP Series Micropipettors

High performance, single channel, variable volume micropipettors for budget-conscious laboratories.

- ◆ Give reliable, accurate operations over many years of use
- ◆ Individual calibration certificate supplied
- ◆ Locking volume control ensures reproducible performance
- ◆ Steam sterilisable at 121°C
- ◆ Optional left- or right-handed tip ejector operation
- ◆ Novel, ergonomic design maximises comfort during use

	Range x resolution μl	Colour code	Accuracy $\leq\pm\%$	Precision $\leq\pm\%$
PR188-10	0.2 to 2 x 0.002	Dark orange	1.65	0.75
PR188-20	0.5 to 10 x 0.02	Red	1.10	0.44
PR188-25	2 to 20 x 0.02	Pale yellow	1.00	0.33
PR188-40	10 to 100 x 0.2	Pale orange	0.80	0.17
PR188-50	20 to 200 x 0.2	Dark yellow	0.80	0.17
PR188-70	100 to 1000 x 2.0	Dark blue	0.80	0.17
PR188-80	500 to 5000 x 2.0	Purple	0.66	0.18
PR188-90	100 to 10000 x 20.0	Pale blue	0.60	0.18

Pipette tips

Polypropylene, non-sterile, DNase- and RNase-free. Autoclavable. In bulk packs as indicated.

	Range μl	Colour	Pack qty.
PR189-05	0.1 to 10	Clear	1000
PR189-10	1 to 200	Yellow	1000
PR189-30	100 to 1000	Blue	1000 (2 x 500)
PR189-50	100 to 5000	Natural	250
PR189-58	100 to 10000	Natural	100



PR188

Pipettors

Micropipettors, Newton Science

A budget range of variable and fixed volume, air-displacement micropipettors for use in a wide variety of applications.

- ◆ Fully autoclavable (at 121°C and 15psi for 10-15 minutes)
- ◆ Choice of models:
 - digital variable volumes 0.2 to 10000µl
 - fixed volume models 10 to 1000µl

- ◆ Streamlined tip ejector for smooth tip ejection
- ◆ Large handgrip for comfortable operation
- ◆ Variable volume models have a 4-digit display with high contrast figures for easy viewing

Supplied with calibration certificate, shelf/rack hanger and calibration tool.

Variable volume models

	Range x resolution µl	Accuracy ≤±%	Precision ≤±%
PR243-10	0.2 to 2 x 0.002	2.00	1.20
PR243-20	0.5 to 10 x 0.02	1.00	0.50
PR243-25	2 to 20 x 0.02	0.80	0.40
PR243-30	5 to 50 x 0.1	0.80	0.40
PR243-40	10 to 100 x 0.1	0.60	0.20
PR243-50	20 to 200 x 0.2	0.60	0.20
PR243-70	100 to 1000 x 10	0.60	0.20
PR243-80	500 to 5000 x 10.0	0.60	0.20
PR243-90	1000 to 10000 x 20.0	0.60	0.20

Fixed volume models

	Volume µl	Accuracy ≤±%	Precision ≤±%
PR247-01	1	2.00	1.00
PR247-02	2	2.00	1.00
PR247-05	5	2.00	1.00
PR247-08	10	1.00	0.50
PR247-12	20	0.80	0.40
PR247-16	25	0.80	0.40
PR247-20	50	0.80	0.40
PR247-28	100	0.60	0.20
PR247-32	200	0.60	0.20
PR247-36	250	0.60	0.20
PR247-40	500	0.60	0.20
PR247-48	1000	0.60	0.20
PR247-50	2000	0.60	0.20
PR247-55	5000	0.60	0.20
PR247-60	10000	0.40	0.20

Accessory rack

PR247-95 Carousel for up to 6 x PR243- or PR247-series pipettors

Pipette tips

Polypropylene, non-sterile. Autoclavable. With volumes and in bulk packs as indicated.

	Range µl	Colour	Pack qty.
PR255-11	1 to 200	Yellow	1000
PR255-31	100 to 1000	Blue	1000
PR255-53	500 to 5000	Natural	250
PR255-59	1000 to 10000	Blue	200



PR243



PR247

Pipettors

Stepper Pipette Model 416



Easy to use, adjustable repeater pipette comprising hand-held control unit and accessory Ecostep™ dispensing syringe tips.

- ◆ Volume range 10µl to 5000µl
- ◆ 53 different sample volume settings
- ◆ Unique finger tip trigger action gives fast pipetting with minimal effort and without using the thumb
- ◆ Comfortable, ergonomic design
- ◆ Three syringe tip step ranges 10 to 100µl, 50 to 500µl and 500 to 5000µl
- ◆ Interchangeable steps x volume selector dials, colour-coded to relevant syringe tip
- ◆ Self-locking mechanism halts dispensing at last full step volume

Performance

Range µl	Syringe ml	Colour code	Accuracy ±%	Precision ±%
10 to 100	0.75	Yellow	2.0 to 1.0	<2.0 to <1.0
50 to 500	3.75	Blue	1.0 to 0.7	<1.0 to <0.8
500 to 5000	37.5	Red	0.7 to 0.5	<0.8 to <0.5

Stepper Pipette Model 416

As described. Supplied with one each yellow, blue and red code steps x volume selector dials, two each Ecostep™ syringe tips 0.75ml, 3.75ml, 37.5ml, and syringe adapter to hold 37.5ml tip.

- PR490-10** Model 416
PR490-80 Workstation, PVC, for holding one PR490-10 pipettor

Step volumes (aliquots)

	Tip code (capacity)	Yellow (0.75ml)	Blue (3.75ml)	Red (37.5ml)
No. of steps				
73		10µl	50 µ	500µl
49		15µl	75µl	750µl
36		20µl	100µl	1000µl
29		25µl	125µl	1250µl
24		30µl	150µl	1500µl
20		35µl	175µl	1750µl
18		40µl	200µl	2000µl
15		45µl	225µl	2250µl
14		50µl	250µl	2500µl
12		55µl	275µl	2750µl
11		60µl	300µl	3000µl
10		65µl	325µl	3250µl
9		70µl	350µl	3500µl
8		75µl	375µl	3750µl
8		80µl	400µl	4000µl
7		85µl	425µl	4250µl
7		90µl	450µl	4500µl
7		95µl	475µl	4750µl
6		100µl	500µl	5000µl

Ecostep™ Syringe Tips

Polypropylene with HDPE plunger. Available non-sterile loose-packed, or sterile individually-wrapped. Supplied in boxes as indicated.

	Step range µl	Capacity ml	Colour code	Box qty.
Non-sterile				
PR493-06	10 to 100	0.75	Yellow	100
PR493-09	50 to 500	3.75	Blue	100
PR493-12	500 to 5000	37.5	Red	100
Sterile, "Bioproof"				
PR496-05	10 to 100	0.75	Yellow	50
PR496-08	50 to 500	3.75	Blue	50
PR496-11	500 to 5000	37.5	Red	50



PR490-10 with PR490-80

Pipettors

Dilution Pipettor, Acura 810



A purpose designed, two-volume pipettor for performing serial 1:10 dilutions in bacteriology.

- ◆ Two pre-calibrated, fixed volumes of 1ml and 0.1ml in a two-step stroke allows subsequent pipetting of these volumes using the same liquid sample
- ◆ Rigid metal nozzle with replaceable filter accepts accessory, long "straw" tips to aspirate narrow or deep vessels or blender bags (such as Stomacher® bags)
- ◆ Both volumes are calibrated independently
- ◆ Fully autoclavable at 121°C maximum for 20 minutes and easily disassembled for maintenance and cleaning
- ◆ Justip™ tip ejector adjustment and smooth operation enhance operator comfort

Dilution Pipettor, Acura 810

	Volume, ml	Accuracy %
PR540-10	1 (+0.1)	<±0.4 (<±2.5)

Accessories

- PR543-09** "Straw" tips, polypropylene, sterile, 190 x 4mm length x diameter, supplied in inner sleeves of 25 within a pack of 1000
- PR543-15** Nozzle filters, pack of 100
- PR672-12** Workstation to hold up to 3 pipettors

Micropipettors, Acura 826XS Series



- ◆ Lightweight, ergonomic design
- ◆ Digital reading with easy adjustment
- ◆ Minimal plunger and ejector forces required for enhanced comfort in use
- ◆ Short, narrow design allows use in gloveboxes and easy access to microtubes
- ◆ Fully autoclavable at 121°C
- ◆ Adjustable tip ejector length accommodates various tip positions

Acura 826XS Series

As described. Each pipettor is numbered, supplied with calibration certificate and CE marked in accordance with IVD 98/79 EEC directives. Supplied singly.

	Range µl	Divisions µl	Accuracy %
PR578-02	0.1 to 2	0.002	<±6.0
PR578-03	0.5 to 10	0.01	<±2.5
PR578-05	1 to 10	0.01	<±2.5
PR578-08	2 to 20	0.02	<±2.5
PR578-10	5 to 50	0.1	<±1.5
PR578-15	10 to 100	0.1	<±1.5
PR578-20	20 to 200	0.2	<±1.5
PR578-25	100 to 1000	1	<±1.5

TwixS Packs

Comprise two 826XS micropipettors with capacities as indicated. One shelf pipettor holder, certificates and instructions.

- PR578-92** 0.1 to 2µl, 2 to 20µl
- PR578-94** 0.5 to 10µl, 10 to 100µl
- PR578-96** 5 to 50µl, 20 to 200µl
- PR578-98** 10 to 100µl, 100 to 1000µl

Tips, Polypropylene

	Max. cap.	For Socorex Models	Colour	Pack qty.
PR580-09	10µl	825, 826	Natural	1000
PR580-17	200µl	815, 822, 825, 826	Yellow	500
PR580-22	1000µl	815, 822, 825, 826	Blue	250

Pipettor Racks

Easily assembled, polyacrylamide, bench-mounting racks for holding up to 7 single-channel micropipettors, Socorex series 815, 825, 826, 832, and 835. Available in a choice of pastel colours as indicated.

- PR640-40** Pipettor rack, light grey
- PR640-42** Pipettor rack, vanilla yellow
- PR640-44** Pipettor rack, ice blue
- PR640-46** Pipettor rack, mint green

Twister Universal Pipettor Stands, Socorex

Easily assembled, bench-mounting, 360° rotating, carousel racks for holding up to 6 Acura- and Calibra-series manual single channel micropipettors, along with most other leading brands. Available in a choice of translucent colours as indicated. Not recommended for use with electronic pipettors.

- PR642-10** Pipettor stand, sapphire blue
- PR642-12** Pipettor stand, emerald green
- PR642-14** Pipettor stand, topaz orange
- PR642-16** Pipettor stand, quartz grey
- PR642-18** Pipettor stand, rubine red
- PR642-20** Pipettor stand, diamond white
- PR642-22** Pipettor stand, citrine yellow



PR540-10 in use with PR543-09



PR578



PR640-40 in use with PR578-series



PR642-series

Pipettors

Calibra Model 822

- ◆ Digital reading
- ◆ No re-calibration necessary
- ◆ Fully autoclavable at 121°C maximum for 20 minutes
- ◆ Solid cam provides factory calibrated step for each volume increment
- ◆ Each pipette is numbered and supplied with calibration certificate

Accuracy at:

2µl ±2% 10, 20µl ±1% 100µl ±0.8% 1000µl ±0.6%

Digital adjustable volume 822 series

	Range µl	Divisions, µl
PR530-18	2 to 20.0	0.1
PR530-25	20 to 200	1
PR530-30	100 to 1000	5

*Fits 200µl tip PR580-17.

Tips, polypropylene

	Max. cap.	For Socorex Models	Colour	Pack qty.
PR580-09	10µl	825, 826	Natural	1000
PR580-18	200µl	815, 825, 826	Yellow	1000
PR580-23	1000µl	815, 825, 826	Blue	1000
PR672-34	1000µl	815, 825, 826	Blue	6 x 96*
PR587-40	5ml	815, 835	Natural	250
PR587-55	10ml	815, 835	Natural	100

*Supplied in autoclavable rack.

Acura Models 815/825/835

- ◆ Comfortable ergonomic design
- ◆ Digital reading (adjustable volume models)
- ◆ Fully autoclavable at 121°C maximum for 20 minutes
- ◆ Adjustable tip ejector length accommodates various tip positions
- ◆ Each pipette is numbered and supplied with a calibration certificate
- ◆ Smooth plunger action

	Volume µl	Accuracy %
Fixed volume 815 series		
PR556-10	100	<±0.6
PR556-50	500	<±0.7
PR559-10	1000	<±0.6
Fixed volume 835 series		
PR559-50	5000	<±0.7
PR559-90	10000	<±0.5

Other volumes are available – details on request.

	Range, µl	Divisions, µl	Accuracy, %
Digital adjustable volume 825 series			
PR577-02	0.1 to 2	0.002	<±6.0
PR577-03	0.5 to 10	0.01	<±2.5
PR577-05	1 to 10	0.01	<±2.5
PR577-08	2 to 20	0.02	<±2.5
PR577-10	5 to 50	0.1	<±1.5
PR577-15	10 to 100	0.1	<±1.5
PR577-20	20 to 200	0.2	<±1.5
PR577-25	100 to 1000	1.0	<±1.5
Digital adjustable volume 835 series*			
PR585-40	500 to 5000	10.0	<±1.5
PR585-50	1000 to 10000	10.0	<±1.5

* With integral nozzle protection filters. Accepts polypropylene macrotips or glass pasteur pipettes (5ml model using adapter).

PR587-09 Adapter, pasteur pipette, for PR585-40 only



PR530



PR552 to PR559



PR577



PR585

Pipettors

SOCOREX SWISS Micropipettors continued

Calibra Model 832

- ◆ Digital reading
- ◆ Fully autoclavable at 121°C maximum for 20 minutes
- ◆ Solid cam provides factory calibrated step for each volume increment
- ◆ No re-calibration necessary
- ◆ Integral tip ejector
- ◆ Each pipette is numbered and supplied with calibration certificate
- ◆ PR600-25 will accept Pasteur pipettes

Adjustable volume 832 series

Two models are available. The first covers range 0.2 to 2ml accepting polypropylene tips or pasteur pipettes (using adapter included). The second covers range 1 to 10ml using polypropylene tips only.

	Range ml	Steps ml
PR600-25	0.2 to 2	0.01
PR600-30	1 to 10	0.1

Pipette Tips

Polypropylene, autoclavable.

- PR605-22 Tips, 2ml, pack of 500
- PR587-55 Tips, 10ml, pack of 100

Pipettor Racks

Easily assembled, polyacrylamide, bench-mounting racks for holding up to 7 single-channel micropipettors, Socorex series 815, 825, 832, 835 and 826. Available in a choice of pastel colours as indicated.

- PR640-40 Pipettor rack, light grey
- PR640-42 Pipettor rack, vanilla yellow
- PR640-44 Pipettor rack, ice blue
- PR640-46 Pipettor rack, mint green



PR600-30

PR600-25



PR640-44 in use

Acura 8-Channel Model 855

- ◆ For use with 96-well plates
- ◆ Fully autoclavable
- ◆ 360° pipette manifold rotation
- ◆ Digital readout
- ◆ Easy sequential tip ejection

	Range μ l	Divisions μ l	Accuracy	
			Min. vol.	Max. vol.
PR670-17	5 to 50	0.1	< \pm 1.0	< \pm 0.8
PR670-19	10 to 100	0.1	< \pm 1.0	< \pm 0.8
PR670-21	20 to 200	0.2	< \pm 1.0	< \pm 0.7
PR670-22	40 to 350	0.4	< \pm 1.0	< \pm 0.8

Accessories

- PR672-12 Work station for up to 3 pipettors PR670-series

Tips, polypropylene. Supplied in packs or racks as indicated.

	Max. cap. μ l	Colour	Pack/rack qty.
PR580-18	200	Yellow	1000
PR672-21	200	Yellow	10 x rack 96*
PR672-26	200	Natural	10 x rack 96*
PR672-28	300	Natural	rack 96*
PR580-22	1000	Blue	250

*Supplied in autoclavable racks.

Twister Universal Pipettor Stands, Socorex

Easily assembled, bench-mounting, 360° rotating, carousel racks for holding up to 6 Acura- and Calibra-series manual single channel micropipettors, along with most other leading brands. Available in a choice of translucent colours as indicated. Not recommended for use with electronic pipettors.

- PR642-10 Pipettor stand, sapphire blue
- PR642-12 Pipettor stand, emerald green
- PR642-14 Pipettor stand, topaz orange
- PR642-16 Pipettor stand, quartz grey
- PR642-18 Pipettor stand, rubine red
- PR642-20 Pipettor stand, diamond white
- PR642-22 Pipettor stand, citrine yellow



PR670-22



PR642-10 in use

Pipettors

▲ SOCOREX SWISS Electronic Micropipettors

Acura Electro 926XS, 936, and 956 series

Lightweight, ergonomic, electronic pipettors with microprocessor control and motor driven to provide fatigue free, high performance pipetting.

- ◆ A choice of variable volume models up to 10,000µl and multichannel models up to 350µl
- ◆ Five programmable functions:
 - Pipetting
 - Step-by-step pipetting
 - Mixing
 - Reverse pipetting
 - Dilution
 - Tactile titration and gel loading
- ◆ Reversible display for left or right-handed use
- ◆ Three position pipetting speed selection
- ◆ Autoclavable and interchangeable pipette tip manifolds
- ◆ Adjustable tip ejector length accommodates various tip positions
- ◆ Easy user calibration mode

Acura 926XS and 936-series Single Channel Pipettors

As described. Supplied as a basic starter pack including pipettor, Q.C./calibration certificate, charging stand, a.c. adapter/charger and additional rechargeable battery, pipette tips and instructions.

	Range µl	Divisions µl	Accuracy % (at µl)	
Acura 926XS-series				
PR690-05	0.1 to 2.0	0.01	<±2.5 (0.1)	<±0.9 (2.0)
PR690-12	0.5 to 10	0.05	<±1.2 (0.5)	<±0.6 (10)
PR690-16	1.0 to 20	0.1	<±1.2 (1.0)	<±0.5 (20)
PR690-27	2.5 to 50	0.25	<±1.0 (2.5)	<±0.5 (50)
PR690-29	5 to 100	0.50	<±1.0 (5.0)	<±0.5 (100)
PR690-32	10 to 200	1.00	<±1.0 (5.0)	<±0.4 (200)
PR690-62	50 to 1000	5.00	<±0.8 (50)	<±0.4 (1000)
Acura 936-series				
PR690-83	100 to 2000	0.01	<±1.5 (100)	<±0.5 (2000)
PR690-87	250 to 5000	0.05	<±1.2 (250)	<±0.5 (5000)
PR690-92	500 to 10,000	0.05	<±1.0 (500)	<±0.5 (10,000)

Accessories

Pipettors only. With Q.C./calibration certificate, spare battery and instructions.

PR693-05	0.1 to 2.0µl
PR693-12	0.5 to 10µl
PR693-16	1.0 to 20µl
PR693-27	2.5 to 50µl
PR693-29	5 to 100µl
PR693-32	10 to 200µl
PR693-62	50 to 1000µl
PR693-83	100 to 2000µl
PR693-87	250 to 5000µl
PR693-92	500 to 10,000µl

Acura 956-series Multichannel Pipettors

As described. Supplied as a basic starter pack including pipettor, Q.C./calibration certificate, charging stand, a.c. adapter/charger and additional rechargeable battery, pipette tips and instructions.

	Range µl	Divisions µl	Accuracy % (at µl)	
Acura 956-series, 8-channel				
PR696-17	0.5 to 10	0.05	<±3.5 (0.5)	<±1.0 (10)
PR696-32	2.5 to 50	0.25	<±1.0 (2.5)	<±0.8 (50)
PR696-47	10 to 200	1.00	<±0.9 (10)	<±0.6 (200)
PR696-49	20 to 350	5.00	<±1.0 (20)	<±0.6 (350)
Acura 956-series, 12-channel				
PR696-52	0.5 to 10	0.05	<±3.5 (0.5)	<±1.0 (10)
PR696-67	2.5 to 50	0.25	<±1.0 (2.5)	<±0.8 (50)
PR696-82	10 to 200	1.00	<±0.9 (10)	<±0.6 (200)
PR696-90	20 to 350	5.00	<±1.0 (20)	<±0.6 (350)

Spares and accessories

PR694-15	Charging stand, 3-position (requires charger/a.c. adapter)
PR694-40	Charger/a.c. adapter 100-240V, with UK plug
PR694-45	Charger/a.c. adapter 100-240V, with European plug

Tips, polypropylene. Supplied in packs as indicated.

	Max. cap.	Colour	Pack qty.
PR580-09	10µl	Natural	1000
PR580-18	200µl	Yellow	1000
PR580-23	1000µl	Blue	1000
PR587-40	5000µl	Natural	250
PR587-55	10,000µl	Natural	100



PR690



PR690/696 with stand and battery



PR696-17 to PR696-49



PR696-52 to PR696-90

Pipette Tips

Disposable Pipette Tips



Compatibility key:-

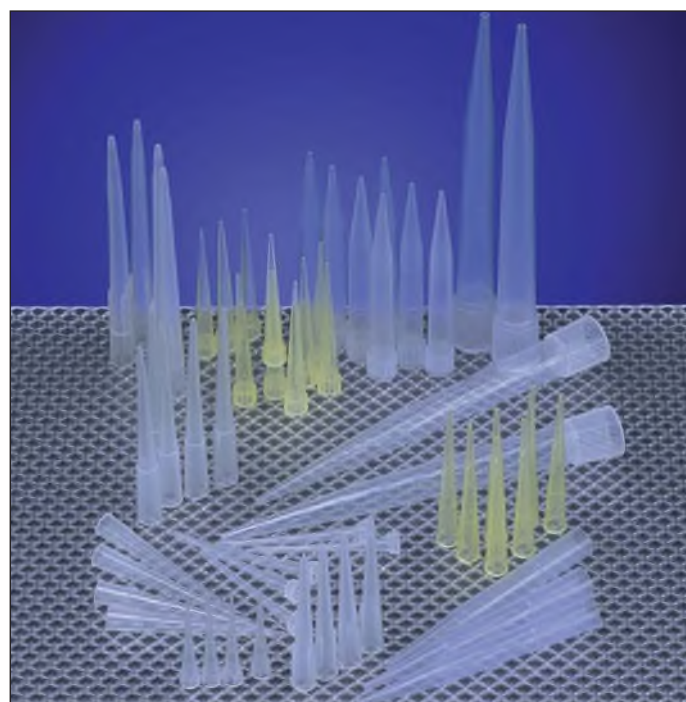
G: to fit Gilson, Brand pipettors

U: Universal, to fit Bibby, Biohit, Brand, Finnpiquette, Eppendorf, Gilson, Socorex or Volac pipettors subject to capacity limitations

Non-sterile

Polypropylene. Supplied loose in bench pack dispensers.

	Ref.	Type	Capacity μ l	Colour	Pack qty.
PR820-10	BCT25	G	5 to 200	Yellow	2000
PR820-15	BCT30	U	5 to 200	Yellow	2000
PR820-47	BCB70	U	100 to 1000	Blue	10000



PR820

Filter Pipette Tips



Provide aerosol protection to the pipettor, reducing the risk of cross-contamination and sample carry-over in radioassay, PCR and other applications.

- ◆ High-purity, clear polypropylene with hydrophobic, inert filter
- ◆ Sterilised tips are to ISO11137 by β -irradiation
- ◆ Autoclavable
- ◆ DNA-, RNase-, ATP-, endotoxin-, DiHEMDA- and oleamide-free
- ◆ Supplied in sterilised racks of 96 with one sterile polypropylene TipBox holder, plus additional TipRacks as indicated, or alternatively non-sterile in bulk packs of 960

Capacity μ l	For pipettors
0.1 to 1	Gilson, Finnpiquette, Biohit, Brand
0.5 to 10	Gilson P2, P10, Finnpiquette, Biohit, Brand
2 to 20	Gilson P20, Eppendorf, Finnpiquette, Biohit, Brand, Socorex
5 to 100	Gilson P100, Eppendorf, Finnpiquette, Biohit, Brand, Socorex
5 to 200	Gilson P200, Finnpiquette, Biohit, Brand, Socorex
50 to 1000	Gilson P1000, Eppendorf, Finnpiquette, Biohit, Brand, Socorex

	Capacity μ l	Sterile	Rack/pack qty.
PR844-15	0.1 to 1	✓	10 racks x 96 tips* (960)
PR844-17	0.1 to 1	—	pack 960
PR844-21	0.5 to 10	✓	10 racks x 96 tips* (960)
PR844-23	0.5 to 10	—	pack 960
PR844-26	2 to 20	✓	10 racks x 96 tips* (960)
PR844-29	2 to 20	—	pack 960
PR844-33	5 to 100	✓	10 racks x 96 tips* (960)
PR844-35	5 to 100	—	pack 960
PR844-37	5 to 200	✓	10 racks x 96 tips* (960)
PR844-40	5 to 200	—	pack 960
PR844-48	50 to 1000	✓	10 racks x 96 tips* (960)
PR844-53	50 to 1000	—	pack 960

*Includes sterile tip box filled with one rack.



PR844

Pipette Tips

Disposable Pipette Tips



RefillPro Tip Reload System

Provide a robust, economical solution for tip reloading requirements. Reusable, autoclavable racks manufactured from recycled plastic. Can be fitted with refill "wafers" of 96 non-sterile tips. No special tools or alignment devices are required. A hinged lid protects the tips between uses.

- ◆ Tip capacities: 10µl extended, 200µl , 300µl and 1250µl extended
- ◆ Tips manufactured in 100% virgin polypropylene, certified RNase, pyrogen and DNase free
- ◆ Single and multichannel pipettor capability
- ◆ Extended pattern tips allow insertion into narrow neck tubes and plates
- ◆ Plastic rack waste reduced by over 60%

Selection chart

Capacity µl	Colour	For use with
1 to 10 (extended)	Natural	Biohit, Finnpiquette, Gilson P2/P10, Nichiryo, Oxford, Rainin, Socorex, Volac
1 to 200	Yellow	Biohit, Brand, Eppendorf, Finnpiquette, Gilson P200, Socorex, Volac
1 to 300 (multichannel)	Natural	Biohit, Brand, Eppendorf, Finnpiquette, Rainin, Socorex, Volac
200 to 1250 (extended)	Natural	Biohit, Brand, Eppendorf, Finnpiquette, Gilson P1000, Nichiryo, Oxford, Rainin, Socorex, Volac

RefillPro Tip Reload System

Comprising 10 empty racks (8 - 1250µl tips only) and one refill pack of 10 nested wafers x 96 tips (8 wafers - 1250µl tips only) with capacities as indicated.

PR870-58	1 to 10µl
PR870-64	1 to 200µl
PR870-67	1 to 300µl
PR870-76	200 to 1250µl

RefillPro Refill Packs

40 x 96 tips (32 x 96 - 1250µl tips) in nested tip wafers with bottom tray and dust cover. Tip capacities as indicated.

PR874-58	1 to 10µl
PR874-64	1 to 200µl
PR874-67	1 to 300µl
PR874-76	200 to 1250µl

RefillPro Racks

Supplied empty, in packs of 20 racks. For tip capacities as indicated.

PR874-90	1 to 10µl, 200µl or 300µl
PR874-95	200 to 1250µl



PR870 and PR874



PR874 in use

Pipette Tips

Disposable Pipette Tips



Selection chart

Capacity μ l	Colour	For use with	Image No.
1-10	Natural	Biohit, Finnpiquette, Gilson, Nichiryo, Oxford, Rainin, Socorex, Volac	1
1-200	Natural	Nichiryo, Oxford	5
2-200	Yellow	Brand, Eppendorf, Finnpiquette, Gilson, Oxford, Rainin	3
2-200	Lemon	Biohit, Eppendorf, Finnpiquette, Nichiryo, Oxford, Rainin, Socorex, Volac	4
2-200	Natural	Biohit, Eppendorf, Finnpiquette, Gilson, Nichiryo, Oxford, Socorex, Volac	5
101-1000	Blue	Biohit, Brand, Eppendorf, Finnpiquette, Gilson, Oxford, Rainin, Socorex, Volac	2
1001-5000	Natural	Oxford, Volac, Eppendorf, Socorex, Gilson, Nichiryo, Oxford	6
1001-5000	Natural	Finnpiquette	6

Non-sterile

Supplied loose in bags. Polypropylene.

	Capacity μ l	Colour	Pack qty.	Image No.
PR850-05	1 to 10	Natural	1000	1
PR850-10	101 to 1000	Blue	1000	2
PR850-30	2 to 200	Yellow	1000	3
PR850-60	1001 to 5000	Natural	250	4
PR854-35	2 to 200	Lemon	1000	5
PR854-55	2 to 200	Natural	1000	6
PR854-65	1001 to 5000	Natural	250	7

Sterile, Wrapped

Each tip individually wrapped in a peel apart envelope. Polypropylene. Sterilised by gamma radiation.

	Capacity μ l	Colour	Pack qty.	Image No.
PR860-19	2 to 200	Lemon	700	4
PR860-28	101 to 1000	Blue	350	2

Reservoirs

Multichannel pipette reservoirs, Trifill

Innovative, multi-purpose reagent reservoir for use with multi-channel pipettors. Autoclavable polypropylene. Combines a graduated, single reagent reservoir, capacity 50ml with marks at 10, 25, 40 and 50ml, and when reversed 8 and 12 compartment reservoirs each compartment holding 5ml and individually numbered for reagent identity. Supplied in pack of 10.

PR940-30 Trifill reservoir

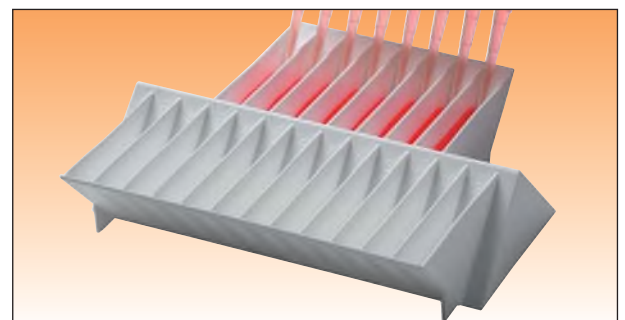
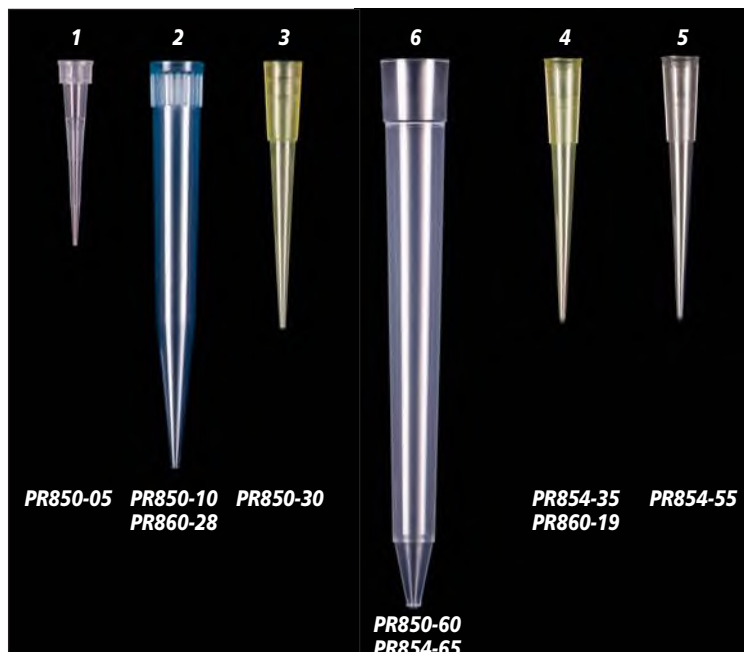
Multichannel pipette reservoirs, disposable

Non-sterile, transparent PVC. Will accept up to 12-channel pipettors. Capacity 55ml. Supplied in pack of 100.

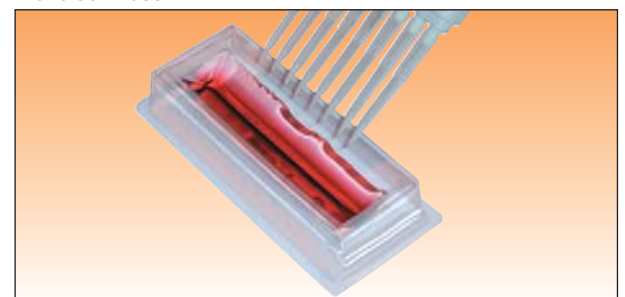
PR940-45 Pipette reservoirs, non-sterile

Sterile, white polystyrene. Will accept up to 12-channel pipettors. Capacity 55ml. Supplied individually wrapped in a pack of 100.

PR940-47 Pipette reservoirs, sterile



PR940-30 in use



PR940-45 in use, PR940-47 are similar

DROPPING PIPETTE PE 1.5ML CAP. 7.5MM DIA X 100MM STEM LENGTH



Product Code: PP785-25

DROPPING PIPETTE PE 5ML CAP. 7.5MM DIA X 160MM STEM LENGTH

Product Code: PP785-30



Sealants

Parafilm® M Sealing Film Miscellaneous Sealants

The two-way stretch sealing film which is free from plasticisers and resistant to polar substances such as saline solutions, inorganic acid and alkaline solutions for up to 48 hours. Resistant to most of the lower alcohols but is unstable in many common solvents such as diethyl ether and carbon tetrachloride.

- ◆ Non-toxic
- ◆ Melting temperature 60°C
- ◆ Stretches up to 200%
- ◆ Clings around irregular shapes and surfaces
- ◆ Conforms to the general requirements of the FDA (Federal Food, Drug and Cosmetic Act, USA) if used below 55°C

Parafilm® M is a Registered Trade Mark of Bemis Company Incorporated, USA.

Parafilm® M Sealing Film

Two-way stretch. Supplied in rolls interleaved with paper in dispenser box.

	Roll	
	Width mm	Length metres
SE165-15	50	76
SE165-20	100	38
SE165-25	100	76
SE165-32	500	15

Cutter/Dispenser for Parafilm M

Accepts one roll of either 50mm wide (SE165-15) or 100mm wide (SE165-20, SE165-25) Parafilm-M. With hinged top, side handwheels and protected blade. Overall 190 x 203 x 159mm W x D x H.

- SE168-10 Cutter/Dispenser
- SE168-25 Spare blade

Cutter/Dispenser for Parafilm M

A transparent acrylic box which accepts one roll of Parafilm M SE165-20 or SE165-25. With stainless steel serrated cutting edge and lid. Allows the user to see how much Parafilm M remains on the roll. Overall 119 x 175 x 168mm W x D x H.

- SE170-20 Cutter/Dispenser, transparent

Cling Film

Food-grade, commercial, transparent PVC for wrapping and sealing containers. Supplied in rolls within a cutter box dispenser. Dimensions indicated are roll length x film width.

- SE175-22 300 metres x 300mm
- SE175-25 300 metres x 450mm

Aluminium Foil

Suitable for a wide variety of laboratory applications including sealing of tubes, wrapping of columns, shaping into weighing boats, etc. In roll, dimensions are roll length x foil width.

- AL200-11 75 metres x 100mm
- AL200-13 60 metres x 450mm

Sealing Film, Saran wrap

A flexible, transparent, microwaveable PVDC sealing film offering excellent barrier characteristics against oxygen, moisture and chemical attack. Particularly suited to gel drying applications where it can be used to prevent contamination of the silicone sealing mat of the gel dryer, and to enhance even drying across the gel. It has less tendency to cling than traditional sealing films and therefore does not lift the gel on removal. Can be used to cover and store pre-cast gels for long periods at +40°C and is UV transparent, allowing use as a cover for agarose gels during observation and photography on a transilluminator. Supplied in a roll of 300 metres within a cutter box dispenser carton.

- SE177-20 300mm wide

Plasticine

Soft moulding compound. Supplied in packs of 500g.

	Colour
SE180-15	Blue
SE180-25	Grey
SE180-30	Orange
SE180-35	Red
SE180-40	Terracotta
SE180-45	White

Microplate sealing film – see MN380/MN385.

Scissors – see DS500.

Steristoppers – see SW536.



SE165 in use showing SE168



SE180



SE170



SE175



SE177



AL200

Bulbs

Bulbs

Bulbs, PVC, pear shape

	Size	Bulb dia. mm	Capacity ml	Neck bore mm
BU800-10	0	34	15	6.5
BU800-15	1	43	30	4
BU800-20	2	58	60	5
BU800-25	3	68	100	13
BU800-30	4	80	150	15

Bulbs (teats) rubber

For dropper pipettes.

	Size	Capacity ml	Neck bore mm
BU810-10	0	1.5	4
BU810-15	1	2	5
BU810-20	3	2.75	6
BU810-25	5	5	6

Bellows – see *BP200* to *BP210*.

Bulb condensers, Allihn – see *Quickfit* section.

Bulb pipettes – see *PM102* to *PM230*.

Graduated pipettes – see *PM402* to *PM854*.

Droppers and teats – see *ME770*.

Latex tube policemen – see *RS260*.

Pipette controllers – see *PP820* to *PP895*.

Pipette Bulbs

Pipette Bulbs

Small capacity, chemically resistant rubber bulbs for rapid and easy pipetting. Colour-coding aids identification.

	Capacity ml	Colour
PP845-09	2	Grey
PP845-14	5	Grey

Pipette Bulbs

Chemically resistant rubber with valves for suction, emptying and air release controlled by thumb and finger pressure.

PP850-10 Standard model. For bulb and graduated pipettes up to 10ml

PP852-10 Universal model. With extended cone which accommodates all sizes of bulb and graduated pipettes

Pipette Bulb, automatic venting

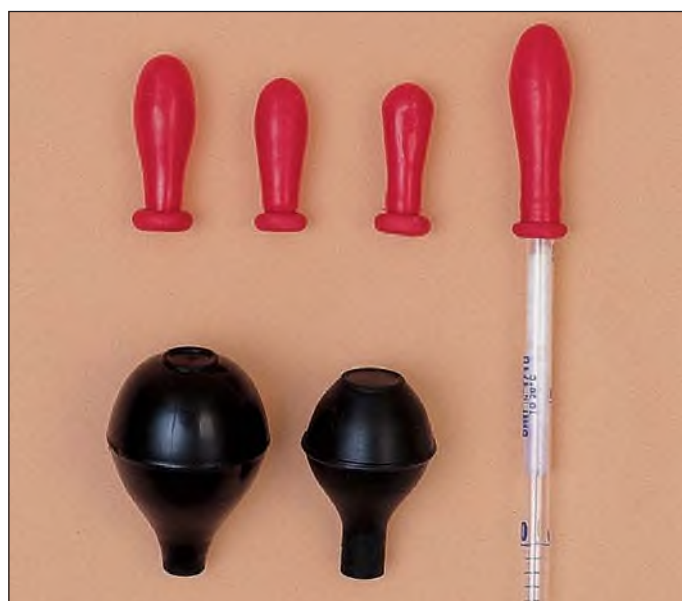
For bulb and graduated pipettes up to 100ml capacity. Reservoir bulb incorporates one-way valve which allows it to vent when squeezed and reseal when released. The valve is removable, allowing easy internal cleaning should accidental contamination occur.

PP854-12 Pipette bulb, automatic venting

Safety Bulb Pipette Filler

For bulb and graduated pipettes up to 25ml capacity, and is particularly suitable as an aspirator for Westergren and Wintrobe sedimentation pipettes. The tapered silicone rubber seal prevents loss of suction. Easily cleaned and can be autoclaved.

PP860-25 Pipette filler



BU800 bottom

BU810 top

PP845



PP850/852

PP854

PP860

Rod

Stirring Rods

Glass

One end flat paddle, other plain.

	<i>Length, mm</i>
RS200-15	150
RS200-20	200
RS200-25	250
RS200-30	300

PTFE coated metal

Both ends plain.

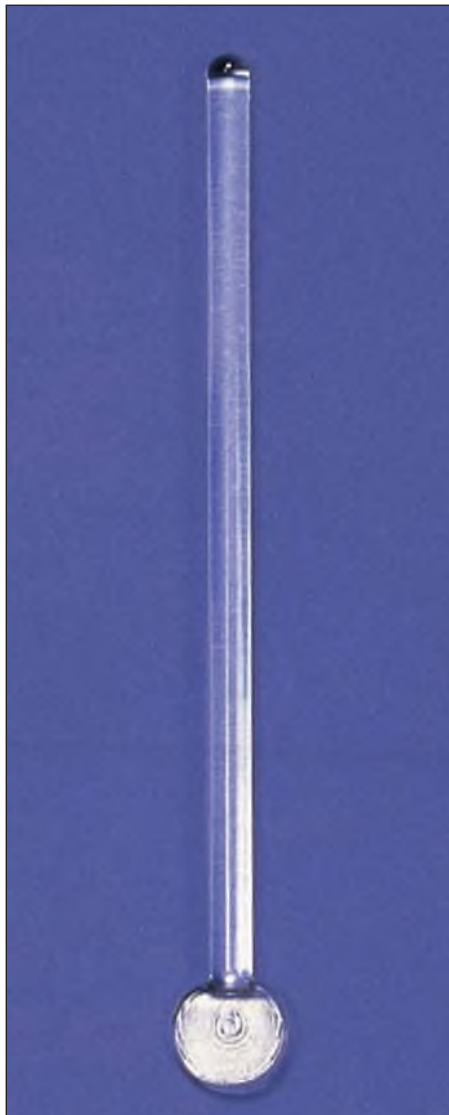
	<i>Length, mm</i>
RS218-25	250

Policemen

Latex tube, one end closed. For fixing over plain end stirring rods. Length 40mm. Dimension given is approximate internal diameter.

	<i>Diameter, mm</i>
RS260-15	3
RS260-18	4.5
RS260-22	6
RS260-25	8

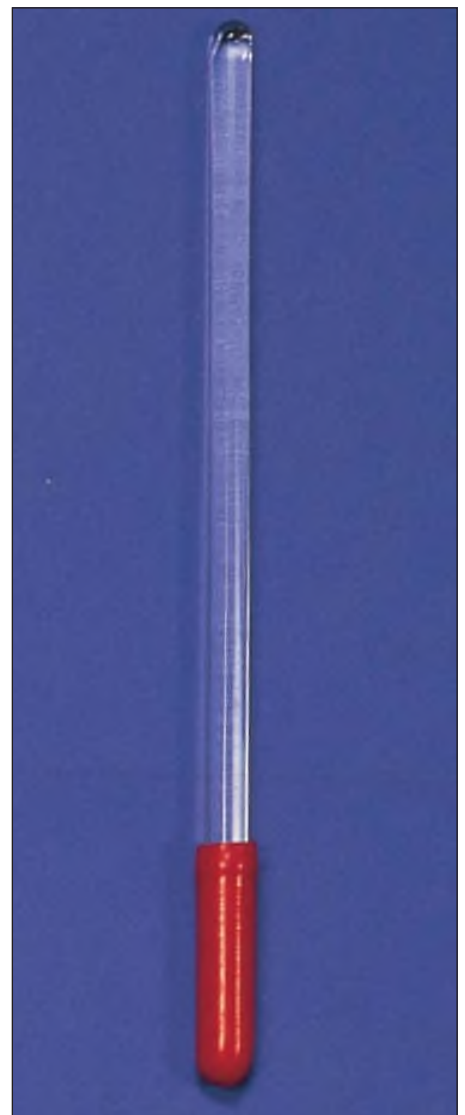
Retort Stands and Rods – see *Stands* section.



RS200



RS218



RS260 on rod

Rules

Rules

White polystyrene printed in black with alternative scales on each side, as indicated. 1 metre long. Width 25mm, thickness 6mm.

	Side A subdivisions		Side B subdivisions	
	Edge 1	Edge 2	Edge 1	Edge 2
Horizontal reading				
RX100-10	cm	cm/mm	cm/mm	cm/mm
RX105-10	cm/mm	inch/tenths	cm/mm*	cm/mm*

*Vertical reading

Caliper and micrometer gauges – see GK150/GK160.

Measuring microscopes – see MK600.

Eyepiece Graticules

For use with light microscopes. Surface type where the pattern is formed in a layer bonded to the surface of the glass disc 1mm thick. In this type the pattern reads correctly when viewed through the glass. When the microscope is focussed the image of the specimen and graticule will be seen together.

Horizontal

Calibration 10mm x 0.1mm.

ML200-15 19mm diameter

ML200-20 21mm diameter

Crossed

Calibration 10mm x 0.1mm.

ML205-15 19mm diameter

ML205-20 21mm diameter

Indexed Squares

1mm grid squares with each square numbered.

ML215-15 19mm diameter

ML215-20 21mm diameter

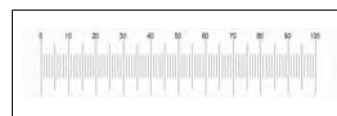
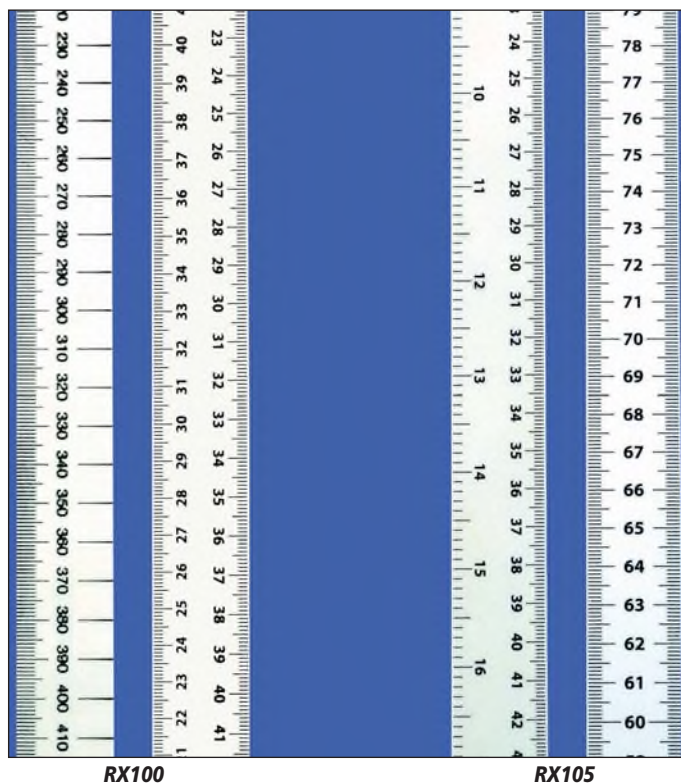
Particle Size Counting

To BS3625. Range 150µm to 0.38µm.

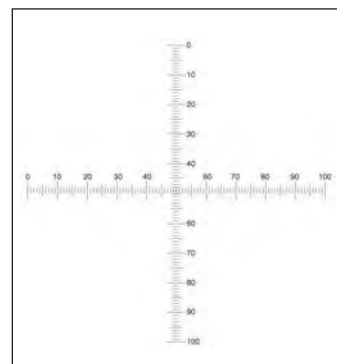
ML220-15 19mm diameter

ML220-20 21mm diameter

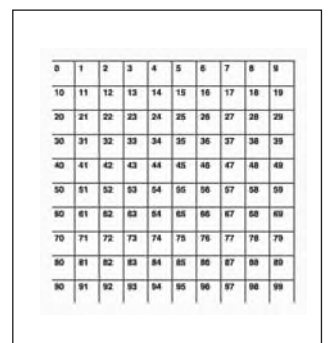
Stage micrometers – see ML250.



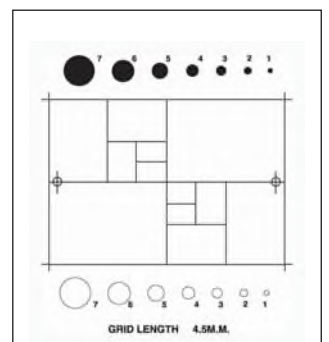
ML200



ML205



ML215



ML220

Auto-Analyser Consumables

Sample Cups

Elkay

Polystyrene. Compatible with Bayer, Hitachi, I.L., Kodak and Olympus analysers (except AT150-40 which is compatible with Hitachi only). Supplied in packs of 1000.

- AT150-15** 0.5ml conical
- AT150-20** 2ml conical
- AT150-40** 2ml Hitachi

Ezee-Nest cups, Elkay

Polystyrene. For use with blood tubes of diameters as indicated. Samples are poured from blood collection tubes into the cup which is then placed inside the tube, eliminating the need to re-label. Supplied in packs of 1000.

- AT155-25** 1ml, for 13mm blood tubes
- AT155-35** 2ml, for 16mm blood tubes

Sample cups

Polystyrene. AT160-12 is compatible with Gensaeac analysers, AT160-15 and AT160-35 are compatible with Technicon analysers. Supplied in packs of 1000.

- AT160-12** 0.5ml conical
- AT160-15** 1.5ml conical
- AT160-35** 4.5ml conical

Autosampler vials – see *Chromatography section*.

Tubing



Manifold Pump Tubing

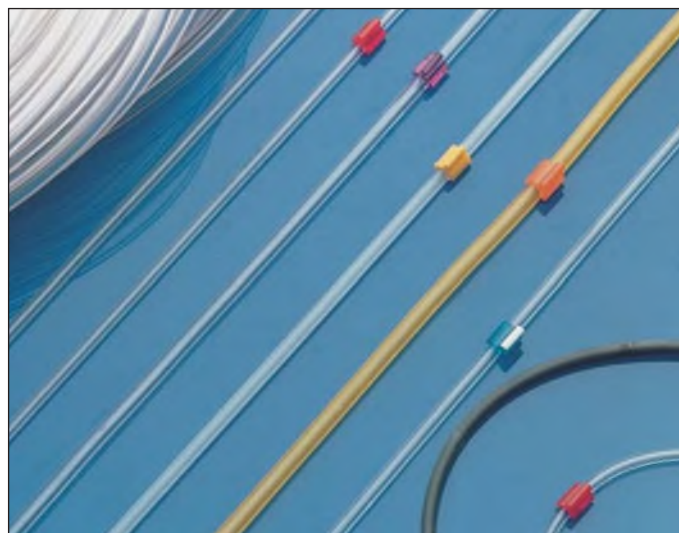
Specially formulated PVC tubing which is heat treated for increased operating life, and resistant to a broad range of inorganic chemicals. For use with continuous flow analyser peristaltic pumps. Identified by the colour of the bridges which corresponds to the colour and location of the original equipment manufacturer. Distance between bridges is 152mm. Supplied in packs of 12 tubes each 406mm long.

ACCU-rated for use where flow consistency and accuracy are critical.

	Flow rate ml/min	Bridge colours
AT175-17	0.05	orange/blue
AT175-23	0.10	orange/green
AT175-26	0.16	orange/yellow
AT175-29	0.23	orange/white
AT175-32	0.32	black
AT175-35	0.42	orange
AT175-38	0.60	white
AT175-41	0.80	red
AT175-44	1.00	grey
AT175-47	1.20	yellow
AT175-50	1.40	blue/yellow
AT175-53	1.60	blue
AT175-56	2.00	green
AT175-59	2.50	purple
AT175-62	2.90	purple/black
AT175-65	3.40	purple/orange
AT175-68	3.90	purple/white



Sample cups



Manifold pump tubing

Scintillation and Sealants

Scintillation

Scintillation Vials

With urea formaldehyde screw cap. Non-sterile.

Glass

SD700-10 Pack of 500

Insert Vial

For glass or plastic scintillation vials. Polypropylene body with polyethylene push-fit cap. Non-sterile. Supplied in pack of 1000.

SD720-10 Sterilin 505

Scintillation Bottle

Polypropylene body with polyethylene screw cap. Non-sterile. Supplied in pack of 1000.

SD735-10 Sterilin S31

Nylon Sealing Film

- ◆ Autoclavable at 136°C
- ◆ High strength and elasticity characteristics
- ◆ Resistant to bacterial contamination, heat, oils and greases
- ◆ Maintains sterility of wrapped item for long periods after autoclaving
- ◆ Non-toxic, odourless and tasteless

A non-toxic, elastic nylon film which is ideal for most packaging applications. Working temperature range -70 to +180°C. Permeable to steam allowing use as a wrapping for autoclaving. Available in a variety of layflat widths to accommodate various item shapes and sizes. Thickness 0.05mm (Gauge C). Supplied in a roll of 30 metres.

Approx. layflat width, mm

SE162-13	25
SE162-24	125
SE162-27	150
SE162-30	200



SD700-10

SD720-10

SD735-10



SE162

Scoops

Scoops

All dimensions are nominal. Supplied singly unless otherwise stated.

Scoops

	Cap. approx. ml	Overall length, mm
Polypropylene		
SH200-10	2	60
SH200-15	5	82
SH200-20	10	102
SH200-25	25	137
SH200-30	50	160
SH200-35	100	198
SH200-40	250	259
SH200-45	500	315
SH200-50	1000	385
Polyethylene		
SH204-35	150	250
SH204-45	1000*	350
SH204-50	1500*	405
Polystyrene		
Sterile. Supplied individually wrapped within an outer pack of 100.		
SH207-30	60	200

*Brimful capacities.

Scoops, disposable, LaboPlast®/SteriPlast®, Bürkle

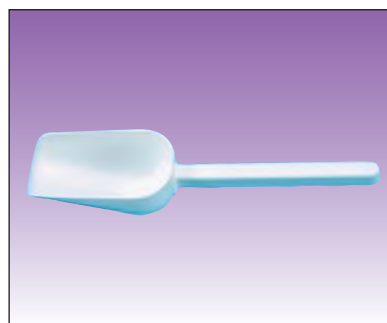
Disposable, polystyrene scoops for sampling and dispensing powders, granules and pastes. Comply with EU foodstuffs contact and FDA regulations. Available with, or without, closure cover to exclude contaminants from samples and either non-sterile or sterile (gamma-irradiated). Prepared and individually packed in a class (10,000) cleanroom and supplied in an outer pack of 10.

Capacity, ml	With cover?	Non-sterile LaboPlast®	Sterile SteriPlast®
25ml	No	SH209-05	SH210-05
25ml	Yes	SH209-09	SH210-09
50ml	No	SH209-13	SH210-13
50ml	Yes	SH209-17	SH210-17
100ml	No	SH209-21	SH210-21
100ml	Yes	SH209-25	SH210-25
150ml	No	SH209-29	SH210-29
150ml	Yes	SH209-33	SH210-33

"Green polyethylene" versions of these spoons are available - details on request.



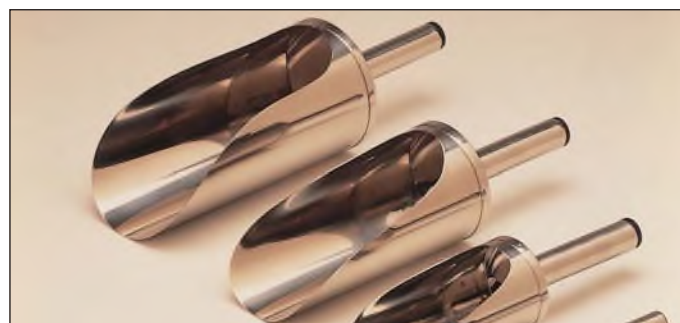
SH200/SH204



SH207



SH209/SH210



SH215



SH220

Scoops

Stainless steel.

	Dia. x scoop length, mm	Capacity approx. ml
SH215-20	50 x 100	100
SH215-30	75 x 150	250
SH215-40	100 x 200	500
SH215-50	115 x 230	1000

FoodScoops, Bürkle

Stainless steel. Crevice-free, with smooth, mirror polished surface, preventing materials from being trapped. Particularly suitable for handling foodstuffs and pharmaceutical intermediates.

	Dia. x scoop length, mm	Capacity approx. ml
SH220-10	60 x 120	100
SH220-20	75 x 140	200
SH220-25	85 x 155	250
SH220-35	100 x 180	350
SH220-50	130 x 220	500

Spatulas

Spatulas

All dimensions are nominal. Supplied singly unless otherwise stated.

Spatulas, Azlon

Polypropylene. Flat and tapered with chamfered ends. Can be autoclaved. Dimension given is the overall length.

Length, mm	
SH240-20	150

Spatulas, Polypropylene

Autoclavable, blue polypropylene, with one spoon and one flat end. Overall length as indicated. Supplied in packs of 25.

SH247-10	150mm
SH247-15	180mm
SH247-20	200mm

Spatulas

Stainless steel. Flat and tapered with rounded ends. Dimension given is overall length.

Length, mm	
SH265-10	90
SH265-15	120
SH265-20	150

Spatulas, Chattaway pattern

Dimension given is overall length.

Length, mm		Length, mm	
Nickel		Stainless Steel	
SH280-10	100	SH285-10	100
SH280-15	150	SH285-15	150
SH280-20	200	SH285-20	200
—	—	SH285-25	230

Spatulas

As Chattaway shape but thin blade for microchemical applications. Dimension given is overall length.

Length, mm		Length, mm	
Nickel		Stainless Steel	
SH300-10	100	SH305-10	100
SH300-15	150	SH305-15	150

Spatula

Stainless steel. With double flat square end. Length 150mm.

SH335-15 Spatula, 150mm

Spatula, Nuffield pattern

Stainless steel. Length 140mm.

SH350-10 Nuffield

Spatula, Trulla

Stainless steel. Length 175mm.

SH360-10 Trulla

Spatulas

Stainless steel. Spoon one end.

Length, mm		Length, mm	
Straight spoon		Offset spoon	
SH400-15	150	SH405-20	190
SH400-20	210	—	—

Spatulas

Stainless steel. As SH400 but with thin stem and small spoon for microchemical applications. Dimension given is overall length.

Length, mm	
SH410-10	100
SH410-15	150

continued on next page.



SH247



SH265



SH280/SH285

SH300/SH305



SH335



SH400 (top)

SH410 (bottom)

Spatulas and Palette Knives

Spatulas continued

Spoons and Sporks, Nasco

Disposable, sterile, white polystyrene. Supplied in sleeves of 20 within a pack of 100.

- SH425-25** Spoons
- SH425-40** Sporks

Spoons, disposable, LaboPlast, Bürkle

Disposable, polystyrene spoons, available in two sizes and either non-sterile or sterile (gamma-irradiated). Comply with EU foodstuffs contact and FDA regulations. Prepared and individually packed in a class 7 (10,000) cleanroom and supplied in an outer pack of 100.

Capacity, ml	Length, mm	Non-sterile	Sterile
2.5ml	127	SH450-05	SH454-05
10ml	170	SH450-15	SH454-15

"Green polyethylene" versions of these spoons are available - details on request.

Spatula, Single ended

Stainless steel.

- DS590-20** Blade 55mm



SH425-25 and SH425-40



SH450/SH454

Palette Knives

Palette Knives

Dimension given is length of blade.

	Length, mm
--	------------

Stainless steel with wooden handle. Parallel sided blade

SH600-10	100
SH600-15	150
SH600-20	200
SH600-25	250
SH600-30	300

Stainless steel with wooden handle. Tapered blade

SH610-08	75
SH610-10	100
SH610-13	150

All stainless steel. Crevice and pit-free and polished throughout. Parallel sided blade

SH630-10	100
SH630-15	150
SH630-20	200
SH630-25	250
SH630-30	300

Scraper

All stainless steel. Crevice and pit-free and polished throughout. Blade length x maximum width 125 x 110mm.

- SH634-23** Scraper

Spatulas, Disposable, Corning - see *TP493 series*.

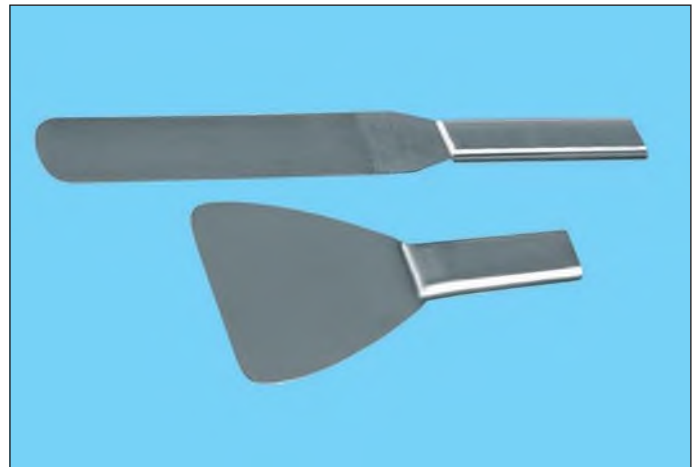
Scalpels - see *DS325/DS330*.

Tiles - see *TJ998*.



SH600 (top)

SH610 (bottom)



SH630 (top)

SH634 (bottom)

Tubes

Glass Specimen Tubes

Glass Specimen Tubes

Clear soda glass or Type 1 neutral glass. Flat bottom. Dimensions are nominal height x diameter. TW157 and TW164 ranges are supplied without closure. Supplied in packs as indicated.

	Size, mm	Capacity, ml	Pack qty.
Soda glass. Supplied with push-in plastic closure			
TW150-13	50 x 12	4	300
TW150-19	50 x 18	12	150
TW150-23	50 x 24	20	100
TW150-25	75 x 9	5	150
TW150-26	75 x 12	7	150
TW150-29	75 x 18	15	150
TW150-36	75 x 24	30	100
TW150-46	100 x 24	40	100
Neutral glass. Without closure, requires TW159-09 snap-on closure			
TW157-13	34 x 23	7	190
TW157-21	48 x 25	15	162
TW157-29	72 x 27	30	140
Neutral glass. Without closure, requires TW167 series screw cap			
TW164-50	36 x 11	1.75 (½ dram)	882
TW164-55	46 x 12	3.5 (1 dram)	666
TW164-60	58 x 17	7 (2 dram)	399
TW164-70	72 x 20	14 (4 dram)	264
TW164-80	96 x 23	28 (8 dram)	190

Accessory Caps

Snap-on caps

Opaque polyethylene. For use with TW157-series tubes. Supplied in packs as indicated.

- TW159-13** Snap-on caps, pack of 190
- TW159-21** Snap-on caps, pack of 162
- TW159-29** Snap-on caps, pack of 140

Screw caps, black polypropylene

For use with TW164-series tubes. With "buttress" thread and foil lined wad. Supplied in a pack of 100.

	For tubes	Pack qty.
TW168-50	TW164-50	882
TW168-55	TW164-55	666
TW168-60	TW164-60	399
TW168-70	TW164-70	264
TW168-80	TW164-80	190

Bottles, culture

Clear glass. All caps where specified have a rubber liner.

		Capacity	Pack qty.
With aluminium screw cap, plain			
BS150-10	Bijou	7ml (¼oz)	288
BS150-25	Universal	28ml (1oz)	144
Without cap			
BS152-10	Bijou	7ml (¼oz)	255
BS152-25	Universal	28ml (1oz)	150

Caps for BS150/152

Aluminium with rubber liner. Supplied in packs of 100.

- BR247-06** For 7ml and 14ml Bijou size R3/20
- BR247-15** For 28ml Universal size R3/28

Caps, Sterilin, polypropylene

Wadless, non-sterile. Supplied in pack of 2850.

- BS165-10** For 28ml Universal size R3/28

Culture vials, Universal, tubular glass

Tubular formed, Type III soda glass vials, capacity 30ml. With R3/24 neck and fitted white PP caps. Supplied in pack of 500.

- BS170-25** Tubular vials, 14ml Universal size



BS150



BS152



BS170



TW150

TW157 with TW159



TW164 with TW168

Tubes

Plastic Specimen Tubes

Polycarbonate Specimen Tubes, Azlon

Transparent, shatterproof polycarbonate with leakproof polypropylene cap. Withstand freezing down to -80°C and can be autoclaved at 121°C up to 10 times. Supplied in packs of 100.

	<i>Ref.</i>	<i>Capacity, ml</i>	<i>H x o.d., mm</i>	<i>Neck i.d., mm</i>
TW216-10	BRC0005	5	52 x 22	14
TW216-20	BRC0010	10	62 x 24	14

Polystyrene Specimen Tubes, Azlon

Transparent. With snap-on polyethylene cap. Flat bottom. Dimensions are nominal height x diameter. Supplied in packs as indicated.

	<i>Ref.</i>	<i>Size, mm</i>	<i>Pack qty.</i>
TW225-50	BGG456P	87 x 65	5

Polyethylene Specimen Tubes, Azlon

With captive hinged cap. Flat bottom. Dimensions are nominal height x diameter. Supplied in packs of 10.

	<i>Ref.</i>	<i>Size, mm</i>
Squat form		
TW240-20	BGG308	32 x 29
Tall form		
TW244-25	BGG304	40 x 12
TW244-30	BGG306	49 x 15
TW244-35	BGG312	78 x 25



TW216



TW225



TW240/TW244

Stirrer Followers, Magnetic

Magnetic Stirrer Follower Bars

Follower Bars

Cylindrical shape, encased in the materials specified. Supplied singly or in packs as indicated.

Length, mm	Glass plain	Qty.
6	ST500-06	1
12	ST500-12	1
45	ST500-45	1
60	ST500-60	1

Length, mm	PTFE plain	Pack qty.
6	ST512-06	2
8	ST512-08	2
12	ST512-12	2
15	ST512-15	2
20	ST512-20	2
25	ST512-25	2
30	ST512-30	2
35	ST512-35	2
40	ST512-40	2
50	ST512-50	1
60	ST512-60	1
80	ST512-80	1

Length, mm	PTFE centre rim	Pack qty.
8	ST515-08	2
12	ST515-12	2
20	ST515-20	2
25	ST515-25	1
30	ST515-30	1
35	ST515-35	1
45	ST515-45	1
50	ST515-50	1
60	ST515-60	1
70	ST515-70	1

Follower Bars

PTFE coated. Supplied singly or in packs as indicated.

	Length x dia. mm	Pack qty.
Large size		
ST530-11	106 x 27	1
ST530-16	159 x 27	1
Micro-flea size		
ST540-14	2 x 2	1
ST540-19	3 x 3	1
ST540-25	5 x 2	1
ST540-30	7 x 2	2
ST540-35	8 x 1.5	2
ST540-40	10 x 3	2
ST540-45	13 x 3	2

Follower Bar Set

Set of 10 stirrer bars, comprising one each glass cylindrical sizes 6, 12, 20, 25, 45 and 60mm and PTFE with centre rim sizes 12, 25, 45 and 60mm from the ST500/ST515 series.

ST590-12 Follower set

Follower Bar Set, Azlon

Set of 22 stirrer bars all PTFE, supplied in a polypropylene, compartmented case with opaque lid and integral clip. Comprising two each 12mm, 25mm, 45mm and 60mm long octagonal, two each 20mm, 25mm, 35mm and 50mm long oval and three each 7mm and 10mm long micro follower bars.

ST592-12 Follower set, SWN515



ST500



ST515



ST590



ST512, ST530 are similar



ST540



ST592

Stirrer Followers, Magnetic

Magnetic Stirrer Follower Bars continued

Follower Bars

PTFE encased. Supplied in packs of 2.

	<i>Dia. mm</i>
Crosshead	
ST620-10	10
Disc	
ST622-10	10
ST622-20	20
ST622-30	30

Follower Bars

PTFE encased. Supplied in packs of 2.

	<i>Length x dia. mm</i>
Octagonal	
ST630-12	13 x 8
ST630-25	28 x 8
ST630-35	38 x 8
ST630-50	50 x 10
ST630-75	75 x 12
Oval	
ST634-20	20 x 10
ST634-25	25 x 12
ST634-30	30 x 16
ST634-35	35 x 16
ST634-40	40 x 20
ST634-50	50 x 20

Follower Retrievers

Follower Retrievers

PTFE or polypropylene encased magnet on semi-rigid handle in the same material. Supplied singly.

	<i>Material</i>	<i>Length, mm</i>
ST800-30	Polypropylene	300
ST804-25	PTFE	250
ST804-35	PTFE	350

Magnets – see MA208/MA220.

Tongs – see TR500/TR550.



ST800, ST804 in use

Stands and Racks

Wooden and Plastic Stands

Hardwood Stands

With plastic clamping screws. Rods approximately 460mm high x 16mm diameter. Single base 200 x 110mm, double base 290 x 110mm.

Description

For burettes

- SL200-10** Single end
- SL200-20** Double end

For conical funnels

Holders with front cut-out.

- SL202-10** Single end
- SL202-20** Double end

Retort Stand, Azlon

Comprising weighted white polyethylene base and polyethylene coated metal rod. Base 248 x 171 x 52mm. Weight 2.5kg. Rod 760 x 12.5mm, mounted as indicated.

- SL480-16** SWP014, short edge
- SL480-24** SWP012, centre



SL200-10

SL200-20



SL202-10

SL202-20



SL250

SL260



SL290

SL310

SL480-24

Metal Retort Bases and Rods

Rectangular Retort Stand Bases

Steel with rod hole tapped 10mm x 1.5mm in the short side and rubber feet. Details given are dimensions of base and the alternative base finishes. Supplied singly. Without rod.

Size mm	Weight kg	Blue acrylic paint	White epoxide resin
160 x 100	0.75	SL250-16	SL260-16
200 x 125	1.25	SL250-20	SL260-20
250 x 160	2.00	SL250-25	SL260-25
315 x 200	3.00	SL250-30	SL260-30

Retort Rods

With screw end 10mm x 1.5mm. Supplied singly.

Length x dia. mm	Mild steel	Zinc steel
500 x 10	SL350-10	SL360-10
600 x 12.5	SL350-15	SL360-15
760 x 12.5	SL350-20	SL360-20
1000 x 12.5	SL350-25	SL360-25

Length x dia. mm	Aluminium*	Stainless steel
500 x 10*	SL370-12	SL380-10
600 x 12.5	SL370-15	SL380-15
760 x 12.5	SL370-20	SL380-20
1000 x 12.5	SL370-25	SL380-25

* All aluminium rods are 12.5mm diameter.

Tripod Retort Stand Bases

Cast iron finished in blue acrylic paint. With rod hole tapped 10mm x 1.5mm and rubber feet. Dimension given is approximate spread from rod to foot. Without rod. Supplied singly.

Size mm	Weight kg
SL290-15	1.5
SL290-20	1.75
SL290-25	3.25

Nesting Retort Stand Base

Cast iron finished in blue acrylic paint. A-shape. Length of side 200mm. Weight 2.5kg. Rod fitting hole has both locking screw to hold SL400 rods, and tapped hole to accept screw end rods SL350 to SL380. Without rod. Supplied singly.

SL310-30 Nesting base

Retort Rods

Zinc plated steel. Domed both ends. 12.5mm diameter. Supplied singly.

Length mm
SL400-10
SL400-15
SL400-20
SL400-25
1000

Stands and Racks

Bossheads and Clamps

Bosshead, straight

Natural finish, with blue plastic headed, nickel plated screws. For rods up to 16mm diameter.

SL600-10 Bosshead, straight, natural

Clamp

Natural finish. With cork/rubber lined interlocking jaws. Accepts articles up to 80mm diameter. Rod 8mm diameter.

SL660-10 Clamp, cork/rubber jaw

Clamps

Natural finish alloy or stainless steel. With three prong rubber covered jaws. Accepts articles up to 70mm. Rod 8mm diameter.

SL685-10 Clamp, alloy

SL700-10 Clamp, stainless

Clamp

Alloy and stainless steel. With three prongs fitted with heat resistant sleeves. One prong is pivoted for accurate alignment. Accepts articles up to 125mm diameter. Rod 8mm diameter.

SL710-10 Clamp, pivoted

Clamp

For beakers. Alloy and stainless steel. With heat resistant covered jaws. Accepts beakers up to 175mm diameter. Rod 9mm diameter.

SL720-10 Clamp, beaker

Clamp

For reaction vessels. Alloy and cadmium plated steel with heat resistant covered jaws and supplied with two extension rods 9mm diameter to allow reaction vessels up to 20 litre capacity to be held.

SL725-10 Clamp, vessels

Chain Clamp

For supporting articles up to 150mm diameter. The object is aligned into cork lined inner jaws and a rubber sleeved chain is passed around it, then back to a fixing stub on the nickel plated tensioner mounted on the clamp rod. The chain is tightened by a plastic headed, nickel plated screw. Rod 10mm diameter.

SL726-14 Chain clamp

Clamps, burette

Polypropylene, spring-loaded, with rubber grips on the arms and a central boss to allow mounting on rods from 11 to 14mm diameter.

Type	
SL745-10	Single
SL745-15	Double

Clamp, burette

A double burette clamp with pressed steel body, in powder-coated, blue finish and central bosshead for mounting on vertical rods up to 16mm diameter, spring clamps with plastic coated grips providing a secure hold without damaging glassware. Suitable for burettes up to 100ml capacity.

SL746-15 Clamp, burette, double

Clamp

For 50ml burettes. A one piece sprung plastic clamp which holds one 50ml burette securely. With mounting hole to accept a 13mm support rod.

For burette	
SL755-12	50ml

Clamp, funnel

Double funnel clamp, polypropylene with grip screw clamp for mounting on 12.5mm retort rods.

SL760-10 Clamp, funnel, double



SL726-14



SL746-15



SL745-10 in use



SL745-10

SL745-15



SL755 in use



SL760-10

Stands and Racks

Rings and Jacks

Retort Rings

Mild steel. Plain form has a stem 8mm diameter x 135mm long. Bosshead form has stem length producing various centre to centre dimensions when on the same vertical. Supplied singly.

Size	Diameter i.d. x o.d. mm	Plain stem	With bosshead
2	50 x 62	SL800-15	SL804-15
4	62 x 74	SL800-25	SL804-25
5	69 x 81	SL800-30	SL804-30
6	75 x 87	SL800-35	SL804-35
8	82 x 98	SL800-40	SL804-40
11	100 x 116	SL800-45	SL804-45
12	106 x 122	SL800-50	—
14	125 x 141	SL800-55	SL804-55
15	131 x 147	SL800-60	SL804-60
17	150 x 166	SL800-65	SL804-65

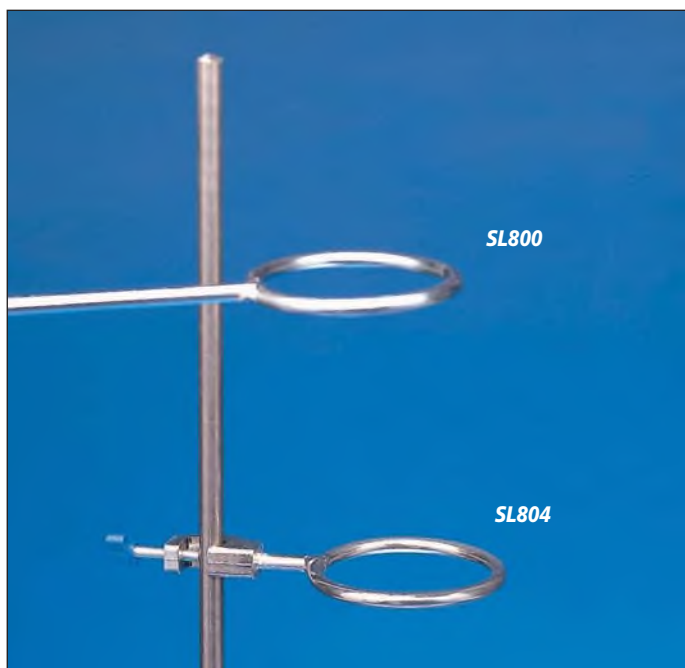
Laboratory Jacks

Stainless steel with aluminium plates providing a rigid support platform. The scissor action movement is activated by a large control knob. SL950-15, SL950-20 and SL950-25 have a tapped hole with locking nut in the top plate which accepts an M10 threaded retort rod.

	Plate mm	Max. height mm	Max. load kg
SL950-10	100 x 100	140	30
SL950-15	150 x 150	275	60
SL950-20	200 x 200	275	80
SL950-25	200 x 230	275	80

Extension plates set, 300 x 300mm. Aluminium.
With fixing screws.

SL954-30 Extension plates



SL950

Stands and Racks

Plastic Pipette Stands

Pipette Stand, Azlon

White polyethylene. Supplied as a kit for easy assembly by the user.

SM200-30 SWP038

Pipette Stand

Blue Polypropylene. For holding up to 94 pipettes vertically. Comprises removable pipette support mounted on base and rod.

SM250-50 Pipette stand

Wooden Test Tube Racks

Test Tube Racks

Hardwood with polypropylene end supports. Supplied as kit for easy assembly by the user.

	Holes	Pegs
For test tubes*		
SM300-10	6	—
SM300-13	6	6
SM300-30	12	—
SM300-33	12	12
For boiling tubes**		
SM304-10	6	—

*Holes 20mm diameter except two end holes which are 32mm.

**Holes 32mm diameter.

Plastic Test Tube Rack

Micro-Tube Rack

Polypropylene. Autoclavable. Will hold maximum of 20 tubes. Overall 210 x 70 x 35mm L x W x H. With 20 x 10mm diameter, numbered holes.

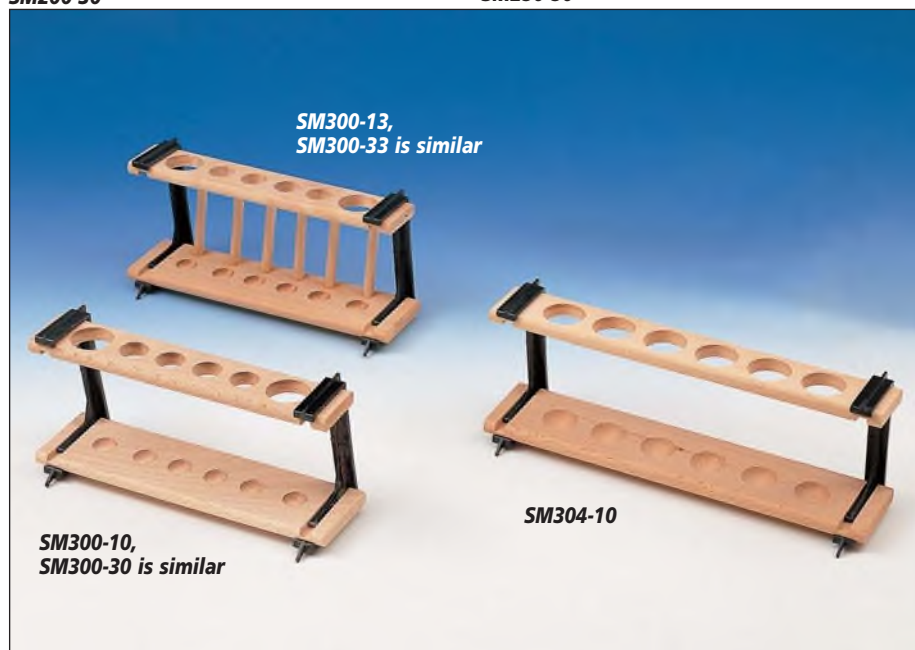
SM575-15 Micro-tube rack



SM200-30



SM250-50



SM575

Stands and Racks

Plastic Test Tube Racks



Microcentrifuge Tube Racks, Brand

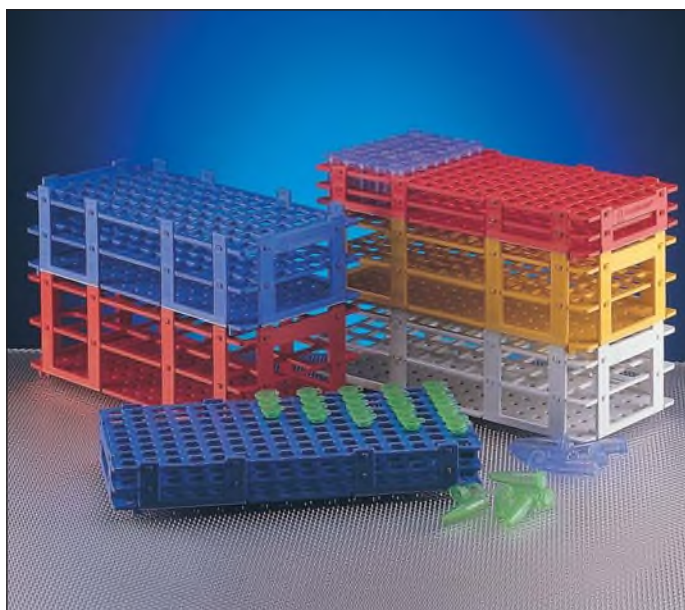
Polypropylene. To hold up to 128 x 1.5ml microcentrifuge tubes, (maximum 11mm o.d.). Autoclavable to 121°C. With alphanumeric references and colour coding as indicated. The racks sink readily in a water bath and can be stacked when not in use. Operating range -20 to +90°C. Overall 265 x 126 x 38mm W x D x H. Supplied in flat pack of 5 racks for easy assembly by the user.

	Colour
SM349-25	White
SM349-35	Blue
SM349-45	Red

Tube Racks, Brand

Versatile, polypropylene racks, autoclavable to 121°C. With square holes to accept tubes with diameters as indicated, alphanumeric marking and choice of colour coding. Sink readily in a water bath and are stackable when not in use. Operating range -20 to +90°C. Overall 265 x 126 x 75mm W x D x H. Supplied in flat pack of 5 racks for easy assembly by the user.

	Holes x tube diameter, mm	Colour
SM350-10	84 x 13	White
SM350-24	84 x 13	Blue
SM350-38	84 x 13	Red
SM350-12	55 x 18	White
SM350-26	55 x 18	Blue
SM350-40	55 x 18	Red
SM350-14	40 x 21	White
SM350-28	40 x 21	Blue
SM350-42	40 x 21	Red
SM350-16	32 x 26	White
SM350-30	32 x 26	Blue
SM350-44	32 x 26	Red
SM350-18	21 x 31	White
SM350-32	21 x 31	Blue
SM350-46	21 x 31	Red



SM350 background, SM349 foreground



SM350-40 in use

Stands and Racks

Metal Racks and Trays

Test Tube Racks

Stainless steel. 3-tier. Supplied flat for assembly by the user. Dimensions stated are nominal.

	<i>For tubes</i>
SM390-12	36 x 13mm
SM390-16	26 x 17mm
SM390-19	18 x 19mm
SM390-25	16 x 26mm

Test Tube Racks

Stainless steel. 3-tier. Dimensions stated are nominal.

	<i>For tubes</i>
SM394-10	12 x 17mm
SM394-14	24 x 17mm
SM394-18	48 x 17mm
SM394-38	12 x 20mm
SM394-42	24 x 20mm
SM394-46	36 x 20mm

Test Tube Rack

Aluminium. With holes arranged in 3 rows; 5 x 28mm, 6 x 19mm and 8 x 13mm.

SM395-14 Z-rack

Folding Rack

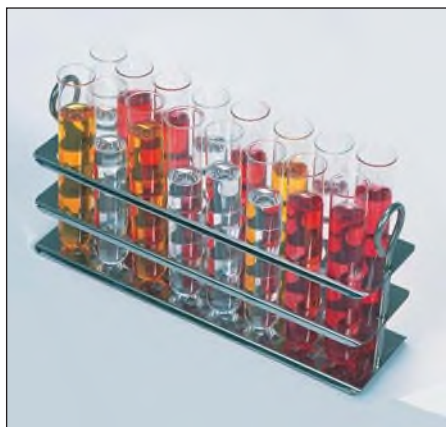
Aluminium, with 18 x 18mm, 6 x 29mm and 4 x 42mm holes to accept commonly used blood tubes, bijou bottles, universal containers, sputum cups, cryogenic vials etc. Supplied flat for folding easily into shape by the user when required. In use the rack is simply positioned to the hole arrangement required.

SM450-15 Folding Rack

Trays, Square Section

Aluminium. Overall 156 x 156 x 34mm W x D x H. Dimensions stated are nominal.

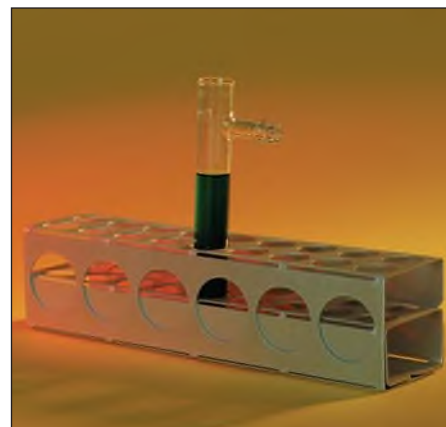
	<i>Sections No.</i>	<i>Dimensions</i>
SM470-15	196	10mm square
SM470-25	100	14mm square
SM470-35	81	16mm square
SM470-45	64	18mm square
SM470-55	36	24mm square
SM470-65	25	30mm square



SM390 in use



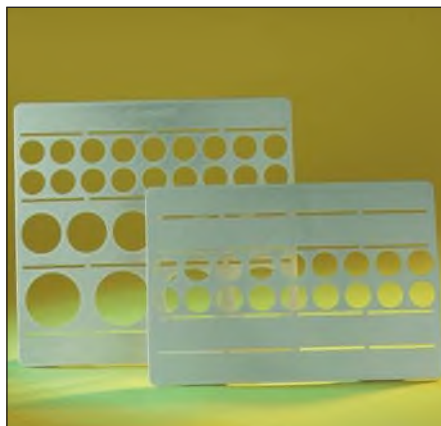
SM394 in use



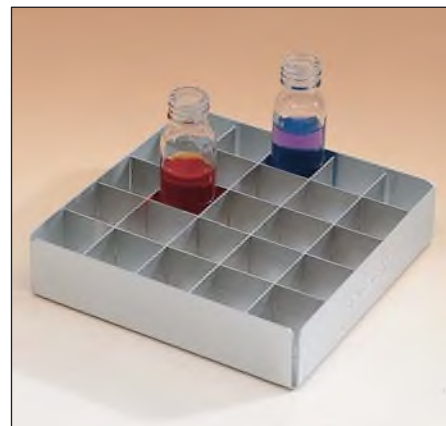
SM450 in use



SM394



SM450



SM470 in use

Stands and Racks

Test Tube Racks

NALGENE®  **Unwire™**

Test Tube Racks, 5970 series

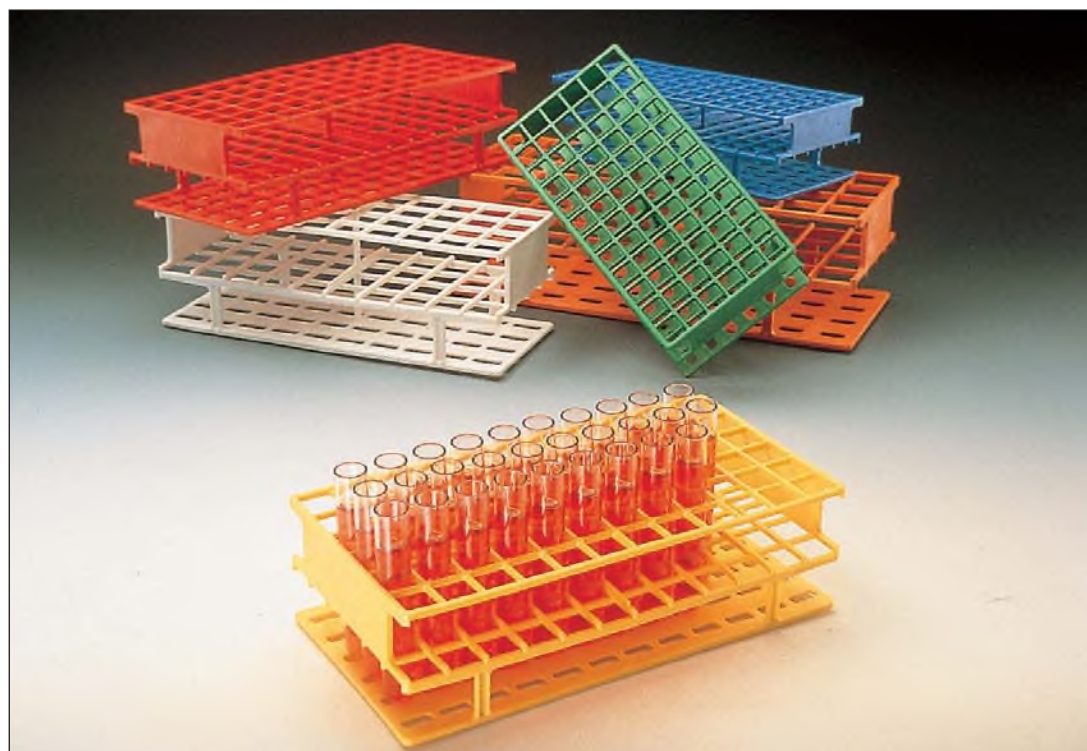
Polyketone. Three-tier grid design moulded in one piece, with alphanumeric references moulded into the top tier. Can be autoclaved and suitable for use in water baths up to 121°C.

Tube size	mm	13	16	20	25	30
Array		6 x 12	6 x 12	4 x 10	4 x 10	3 x 8
Overall						
L	mm	200	248	250	300	283
W	mm	102	127	102	121	108
H	mm	57	70	83	92	83

For tubes,	13mm	16mm	20mm	25mm	30mm
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Colour code

White	SM580-10	SM580-12	SM580-14	SM580-16	SM580-18
Orange	SM580-24	SM580-26	SM580-28	SM580-30	SM580-32
Yellow	SM580-38	SM580-40	SM580-42	SM580-44	SM580-46
Blue	SM580-52	SM580-54	SM580-56	SM580-58	SM580-60
Green	SM580-66	SM580-68	SM580-70	SM580-72	SM580-74
Red	SM580-80	SM580-82	SM580-84	SM580-86	SM580-88



SM580 in use

Stands and Racks

Test Tube Racks



Floating Microtube Racks, 5974 series

Polypropylene. Racks will float in water with a full load of filled tubes. Legs prevent the bottom of the tubes touching the bench surface. With moulded handle for easy removal of the rack from the water bath. Can be autoclaved. Supplied in packs of 4.

	Colour	Tube size	Array
Square shape			
Overall 103 x 103 x 65mm.			
SM588-17	White	1/1.2/1.5/2ml	4 x 4
Round shape			
Diameters 66 and 96mm respectively.			
SM588-22	White	1/1.2/1.5/2ml	8
SM588-25	White	1/1.2/1.5/2ml	20

Floating Foam Tube Racks

Flexible, high density polyethylene in a choice of colours. Racks will float on water with a full load of filled tubes. Closed-cell foam resists water absorption and can be washed and reused multiple times. With detachable carry handle for easy removal of the rack from water baths, etc. Supplied in packs of 5.

	Colour	Shape	Holes	Tube size
SM593-05	Blue	Round	18	0.2/0.5/1.5/2ml
SM593-10	Yellow	Rectangle	24	1.5/2ml
SM593-15	Blue	Parallelogram	8	15ml
SM593-20	Green	Diamond	4	50ml

Multipurpose Racks

Versatile polypropylene racks, suitable for freezer storage. Reversible format accommodating 0.5ml microcentrifuge tubes on one side and 1.5 to 2ml microcentrifuge tubes, cryovials or sample tubes up to 12mm o.d. on the reverse side. The larger apertures are 12mm o.d. to a depth of 10mm where they narrow to 10.8mm for a further depth of 15mm. All apertures are widely spaced apart to accommodate screw cap vials and for ease of use when inserting or removing tubes. Both sides of the rack have moulded-in alphanumeric references and the racks are available in a choice of colours. Autoclavable at 121°C for 15 minutes. Supplied singly.

48-position Racks

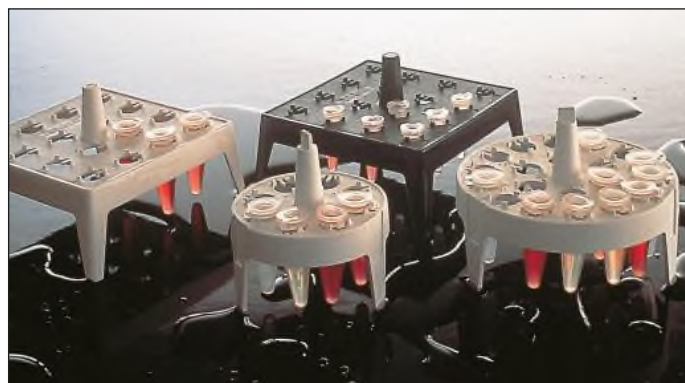
As described. Overall dimensions 215 x 69 x 27mm L x W x H. Weight 180g. Colour as indicated.

- SM595-05** 48-position reversible rack, natural
- SM595-15** 48-position reversible rack, yellow
- SM595-20** 48-position reversible rack, blue
- SM595-25** 48-position reversible rack, green

96-position Racks

As described. Overall dimensions 215 x 131 x 27mm L x W x H. Weight 330g. Colour as indicated.

- SM597-08** 96-position reversible rack, natural
- SM597-13** 96-position reversible rack, red
- SM597-18** 96-position reversible rack, yellow
- SM597-23** 96-position reversible rack, blue
- SM597-28** 96-position reversible rack, green



SM588 in use



SM593 in use



SM595, SM597 in use

Stands and Racks

Test Tube Racks

Kartell

Polypropylene. Three-tier grid design. Alphanumeric references moulded into top tier. Can be autoclaved and used in water baths up to 110°C. Supplied packed flat as one piece which can be folded to shape by the user without the use of tools.

Tube size	mm	13	16	20	25	30
Array		6 x 15	5 x 12	4 x 10	4 x 10	3 x 8
Overall	L	mm	247	247	247	300
	W	mm	104	104	104	110
	H	mm	60	70	70	85

	For tubes, mm	Colour Code		For tubes, mm	Colour Code
SM805-10	13	Grey	SM805-38	13	Red
SM805-12	16	Grey	SM805-40	16	Red
SM805-14	20	Grey	SM805-42	20	Red
SM805-16	25	Grey	SM805-44	25	Red
SM805-18	30	Grey	SM805-46	30	Red
SM805-24	13	Blue	SM805-60	13	Yellow
SM805-26	16	Blue	SM805-62	16	Yellow
SM805-28	20	Blue	SM805-64	20	Yellow
SM805-30	25	Blue	SM805-66	25	Yellow
SM805-32	30	Blue	SM805-68	30	Yellow



SM805 in use

Stands and Racks, Steamer, Steriliser

Tripods

Tripod Stands

Height 200mm.

	Length of side, mm
--	--------------------

Iron rod, triangular top

SM900-12 125

Cast iron, triangular top

SM904-12 125

SM904-15 150

SM904-20 200

Cast iron, circular top

SM914-15 150

Gauzes, iron wire

	Size cm
--	---------

Open mesh

GK600-12 12.5 x 12.5

GK600-15 15 x 15

Ceramic centre

GK605-10 10 x 10

GK605-12 12.5 x 12.5

GK605-15 15 x 15

Mats

Mats, ceramic fibre

Provide heat protection to benches. An alternative to asbestos bench mats. Approximately 5mm thick. Maximum operating temperature 80°C. Supplied singly.

	Size, mm
--	----------

MB800-15 150 x 150

MB800-22 225 x 225

MB800-30 300 x 300

Mats, Ceran®

Ceran® is a highly resistant, glass ceramic material. Operating temperature range -200 to +700°C, allowing the mat to be used as a heating surface in place of a wire gauze or fireclay triangle. Care should be taken to ensure that the maximum operating temperature is not exceeded when using with a Bunsen burner. Supplied in packs of 10.

	Size, mm
--	----------

MB820-10 135 x 135

MB820-20 155 x 155

MB820-30 175 x 175

Ceran® is a registered trade mark of Schott Glaswerk.

Bench Protection Sheets – see *Safety section*.

Steamer

A stainless steel insulated boiler with removable lid and 1.5kW immersion heater with cut-out facility which operates if the tank boils dry. With two removable shelves, lifting handles, water filling trough and 25mm tube in the lid for mounting a thermometer. Internal 300 x 302 x 500mm deep and overall 329 x 329 x 690mm W x D x H. For 230V 50/60Hz a.c. single phase supplies.

SP715-10 Koch Steamer

Steriliser

Quartz Bead Steriliser

Small, economic steriliser for small instruments and probes. Sterilising temperature 240°C. Epoxy painted steel housing with insulated sterilising chamber 65 x 75mm diameter x height. Overall 160 x 129 x 150mm W x D x H. Weight 1.7kg. Supplied with one charge of quartz beads. For 230V 50Hz single phase supplies. 160W.

SP850-10 Steriliser, quartz bead

SP852-05 Spare quartz bead charge for SP850-10

Autoclaves – see *AU112/AU180*.

Boiling water baths – see *BH105/BH120*.

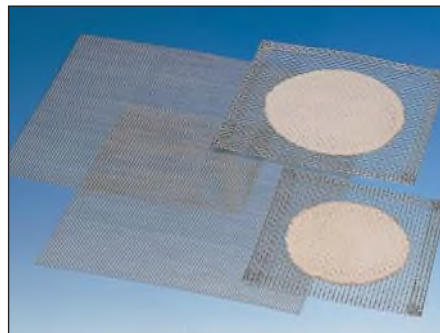


SM900



SM904

SM914



GK600

GK605



MB800



MB820 in use



SP715



SP850 in use

Stopcocks

Pyrex® Glass Key

A range of Pyrex® borosilicate glass stopcocks which meet DIN 12541 specification. With interchangeable keys. Keys and barrels have 1:10 taper. Supplied with plastic screwthread key retainer (bore sizes 1.5mm to 4mm).

All side arms are 100mm long except where indicated.

Straight Stopcocks

Plain arms. All with 1.5mm wall thickness.

	Ref.	Key x stem bore o.d., mm	Spare key
Single bore			
SV260-10	SSD102	1.5 x 8	SV305-10
SV260-15	SSD103	2.5 x 9	SV305-15
SV260-20	SSD104	4 x 10	SV305-20

Spare Keys

For Pyrex® glass key stopcocks to DIN 12541 specification only. Supplied with plastic screwthread key retainer.

	Ref.	Bore, mm	Type
SV305-10	SSD102K	1.5	Straight
SV305-20	SSD104K	4	bore

Note:

Components from Pyrex® DIN 12541 glass key stopcocks are incompatible with the previous Interkey range. Please contact us for advice.



SV260



SV305

Stopcocks

Pyrex® PTFE Key

With PTFE keys in polished glass barrels having a taper of 1:10 (DIN 12541 standard). Side arms are 100mm long unless otherwise stated.

With two types of retaining device.

Bore sizes 1 to 4mm – Nylon nut, PTFE washer and nitrile rubber O-ring.

Bore size 6mm – Nylon nut, nylon washer and tension spring.

Straight bore stopcocks up to 12mm o.d. side arms have 1.0mm wall thickness all others have 1.5mm wall thickness.

Ref.	Key bore mm	Side arm o.d. mm	Spare key	
Straight stopcocks, plain arms, single bore				
SV330-10	SST102	1.5	8	SV350-10
SV330-15	SST103	2.5	10	SV350-15
SV330-20	SST104	4	10	SV350-20
SV330-30	SST106	6	12	SV350-30
Straight stopcocks, plain arms, double oblique bore				
SV335-15	SST203	2.5	9	—
T-bore stopcocks, plain arms, 3-way				
SV340-20	SST304	4	10	SV358-20

Spare PTFE Keys

For Pyrex DIN stopcocks.

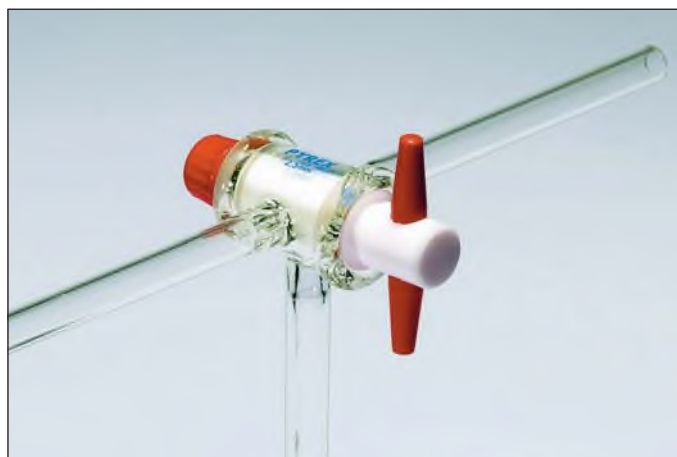
	Ref.	Bore, mm	Type
SV350-10	SST102K	1.5	Straight bore
SV350-15	SST103K	2.5	
SV350-20	SST104K	4	
SV358-20	SST304K	4	

Note:

Components from Pyrex® DIN 12541 PTFE key stopcocks are incompatible with the previous Interflon range. Please contact us for advice.



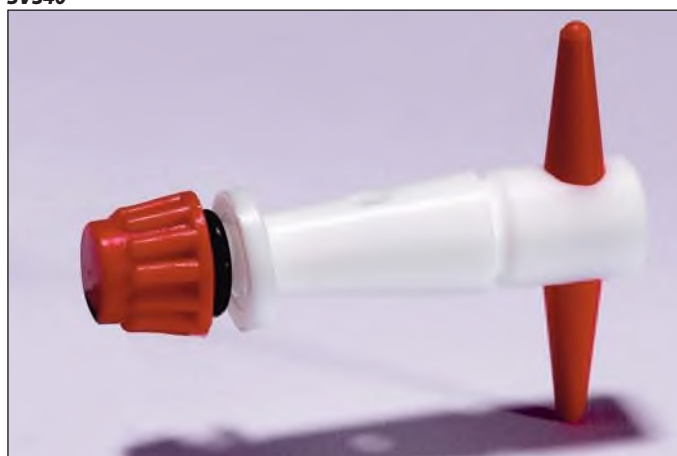
SV330



SV340



SV335



SV350 to SV358

Stopcocks

High Vacuum

Borosilicate glass. Both key and barrel are individually coded with the same number to ensure that they are always matched. Side arms 100mm long unless otherwise stated.

Straight Stopcocks

Plain arms, plain key.

	Ref.	Key bore, mm	Side arms o.d. x wall, mm
Single bore			
SV600-20	SSV103	3	9 x 1.5
SV600-25	SSV104	4	10 x 1.5
SV600-30	SSV106	6	11 x 1.5
Double oblique bore			
SV604-25	SSV204	4	10 x 1.5

Rotaflo®

With safety locking device which prevents complete unscrewing of the key.

- ◆ All glass/PTFE pathway
- ◆ Excellent flow control
- ◆ No lubrication required
- ◆ Interchangeable keys

General purpose (GP) fitted with blue control cap for easy identification.

- ◆ Vacuum operation to 10⁻⁴ torr
- ◆ Temperature range -20 to 200°C
- ◆ Bore sizes 3, 6 and 10mm
- ◆ Straight, right angle, burette configurations

Rotaflo is a registered trade mark. Barloworld Scientific - registered user.

General Purpose Rotaflo Stopcocks

Borosilicate glass with PTFE screw-in key and safety locking ring.

mm	Bore, overall	Type arms	Approx. length, mm	Side o.d. mm
QGP3ST/5	3	Straight	210	5
QGP3RA/5	3	Right angle	150	5
QGP3BU/5B	3	Burette – borosilicate	175	5
QGP6ST/7	6	Straight	210	7
QGP6RA/7	6	Right angle	165	7
QGP10ST/10	10	Straight	165	10
QGP10RA/10	10	Right angle	175	10

Spare keys. For GP Rotaflo stopcocks.

Bore, mm
QGP3K
QGP6K
QGP10K

Spare safety locks. For GP Rotaflo stopcocks.

Bore, mm
QLR3
QLR6
QLR10

Full details of both GP and HP Rotaflo stopcocks can be found in the Quickfit section.



SV600



QGP -RA/-



QGP -ST/-



QLR-



SV604



QGP3BU/5B



QGP -K

Stopcocks

Plastic Stopcocks

Straight Stopcocks

For tubing connection. 2-way.

	<i>For tubing i.d. mm</i>
Polyethylene	
SV880-15	5 to 7
SV880-20	7 to 9
SV880-25	9 to 11

T-bore Stopcock

For tubing connections. 3-way.

	<i>For tubing i.d. mm</i>
Polyethylene	
SV920-15	5 to 7
SV920-20	7 to 9
SV920-25	9 to 11

Polyvinylidene Fluoride*

SV924-15	5 to 7
SV924-20	7 to 9
SV924-25	9 to 11

* Polyvinylidene fluoride can be used up to 150°C and has a chemical resistance level approaching PTFE.

Aspirator Stopcocks

Polyethylene, with airflow valve to allow easy venting of jerrycans when dispensing. To fit DIN necks or outlets as indicated.

	<i>Inlet thread</i>
SV942-10	DIN51
SV942-40	DIN61

Right Angled Stopcocks, Laboplast, Bürkle

Available in either polypropylene/polyethylene or electroconductive polyamide, with PTFE seals. Smooth-action dispensing stopcock with scaled lever to allow reproducible flow regulation, tapered, rotatable outlet spout to prevent dripping and allow use within narrow neck vessels (6mm minimum diameter) or tubing and R³/₄inch, inner threaded cap nut and inlet connection (SV944-30 suitable for use with solvents). Withstands pressures up to 2bar at 20°C ambient.

SV944-20	Laboplast stopcock
SV944-30	Laboplast electroconductive stopcock

Compact Stopcock, Laboplast, Bürkle

Polypropylene/polyethylene with PTFE seal. Compact design especially suitable for containers stored in restricted spaces. Smooth dispensing. With R³/₄inch inner threaded cap nut and inlet connection.

SV950-10	Compact stopcock
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SV880



SV924



SV944-20 in use



SV944-30 in use



SV920



SV942



SV950 in use

Stoppers

Glass/Plastic

Stoppers, Pyrex

Interchangeable. Hollow blown.

	Ref.	Cone size
SW400-10	2595/01	10/13
SW400-12	2595/02	12/14
SW400-14	2595/03	14/15
SW400-19	2595/05	19/17
SW400-24	2595/06	24/20
SW400-29	2595/07	29/32
SW400-45	2595/12	45/25

Stoppers, MBL glass

Interchangeable, hollow-blown borosilicate glass with 'drip-tip' on lower surface of cone to ensure any fluid adhering is directed into the flask.

	Ref.	Cone size
SW402-19	TRF691	10/19
SW402-21	TRF692	12/21
SW402-23	TRF693	14/23
SW402-26	TRF695	19/26
SW402-29	TRF696	24/29
SW402-32	TRF697	29/32
SW402-35	TRF698	34/35

Stoppers, plastic

	Ref.	Cone size
Polyethylene, white		
SW432-10	TRF591	10/19
SW432-12	TRF592	12/21
SW432-14	TRF593	14/23
SW432-19	TRF595	19/26
SW432-24	TRF596	24/29
SW432-29	TRF597	29/32
SW432-35	TRF598	34/35

PTFE, natural

SW442-10	—	10/19
SW442-14	—	14/23
SW442-19	—	19/26
SW442-24	—	24/29
SW442-29	—	29/32

Plastic Screw Cap

Stoppers, SVL screwcap

A black, polybutylene terephthalate (PBT) cap with an ethylene propylene sealing disc faced with PTFE. Can be dry heat and steam sterilised to 180°C.

	Ref.	SVL cap size, mm	External dia. x height, mm
SW460-13	4503/13	13	17 x 16
SW460-15	4503/15	15	20 x 21
SW460-18	4503/18	18	23 x 21
SW460-20	4503/20	20	25 x 21
SW460-22	4503/22	22	27 x 21
SW460-25	4503/25	25	31 x 26
SW460-30	4503/30	30	36 x 26
SW460-42	4503/42	42	52 x 30
SW460-60	4503/60	60	70 x 42

Spare inserts

PTFE coated ethylene propylene.

	Ref.	Cap size, mm
SW464-13	4513/13	13
SW464-15	4513/15	15
SW464-18	4513/18	18
SW464-20	4513/20	20
SW464-22	4513/22	22
SW464-25	4513/25	25
SW464-30	4513/30	30
SW464-42	4513/42	42
SW464-60	4513/60	60

continued on next page



SW400



SW402



SW432



SW442



SW460

Stoppers

Special Purpose

Stoppers, Turnover

With turnover flange and serrations to grip the inside of narrow neck containers. Supplied in packs of 10.

	Size ref.	Plug dia. mm
Cream, food-grade rubber		
SW504-20	(25)	12.5
SW504-45	(37)	17.5
SW504-65	(49)	22
Red, food-grade rubber		
SW505-30	(25)	12.5
SW505-35	(29)	14
SW505-45	(37)	17.5
SW505-50	(41)	19
SW505-55	(45)	20.5
SW505-60	(49)	22
SW505-65	(53)	24

Aluminium foil – see AL200.

Stoppers, Steristoppers

Preformed cellulose plugs for sealing culture tubes and flasks. They are permeable to air and can be hot air sterilised up to 200°C. All stoppers are tapered and the cellulose material will depress slightly to ensure a tight fit into the tube or neck. Length varies from approximately 30 to 60mm according to size. Supplied in packs as indicated.

	To fit tube i.d., mm	Pack qty.
SW536-21	10	1000
SW536-27	12	1000
SW536-39	15	500
SW536-58	20	400
SW536-80	32	800

Closures, Lab-O-Cap

Anodised aluminium, in single colours as indicated, with internal, stainless steel, radial spring providing a gentle grip on glass tubes. Supplied in packs of 100 of one colour as specified.

	For tube o.d., mm
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Silver

TE870-13	12 to 13
TE870-16	15 to 16
TE870-18	17 to 18
TE870-20	19 to 20
TE870-26	24 to 26

Blue

TE873-13	12 to 13
TE873-16	15 to 16
TE873-18	17 to 18
TE873-20	19 to 20
TE873-26	24 to 26

Red

TE877-13	12 to 13
TE877-16	15 to 16
TE877-18	17 to 18
TE877-20	19 to 20
TE877-26	24 to 26

Corks, tapered

Dimension given is the small end diameter. Pack quantities are approximate.

	Dia. mm	Pack qty.
CW300-06	6	250
CW300-08	8	250
CW300-10	10	240
CW300-12	12	160
CW300-14	14	160
CW300-16	16	120
CW300-18	18	80
CW300-19	19	60
CW300-22	22	50
CW300-25	25	30
CW300-29	29	30
CW300-32	32	25
CW300-35	35	20
CW300-38	38	20
CW300-42	42	15
CW300-45	45	15
CW300-48	48	10
CW300-50	50	10
CW300-70	Assorted	150

Parafilm sealing film – see SE165.

Plasticine – see SE180.



SW505, SW504 are similar



SW536 in use



TE870/TE873/TE877



CW300

Stoppers

Rubber – General Purpose

Rubber Stoppers to BS2775

Each stopper has a moulded-in number, corresponding to the bottom diameter in millimetres. All forms supplied in pack quantities specified.

Stopper No.	Bottom x top diameters x length, mm	Natural Solid	Pack qty.	Natural 1-hole	Pack qty.	Natural 2-holes	Pack qty.	Neoprene Solid	Pack qty.	Silicone Solid	Pack qty.
3	3 x 4.5 x 12	SW600-10	50	—	—	—	—	SW655-10	50	SW680-10	50
4	4 x 5.8 x 14	SW600-14	50	—	—	—	—	SW655-14	50	SW680-14	50
5	5 x 7 x 16	SW600-18	50	SW615-18	50	—	—	SW655-18	20	SW680-18	50
6	6 x 8 x 16	SW600-22	50	SW615-22	50	—	—	SW655-22	20	SW680-22	50
7	7 x 9 x 16	SW600-26	20	SW615-26	20	—	—	SW655-26	20	SW680-26	50
8	8 x 10.5 x 20	SW600-30	20	SW615-30	20	—	—	SW655-30	20	SW680-30	20
9	9 x 11.5 x 20	SW600-34	20	SW615-34	20	—	—	SW655-34	20	SW680-34	20
10	10 x 12.5 x 20	SW600-38	20	SW615-38	20	—	—	SW655-38	20	SW680-38	20
11	11 x 14 x 24	SW600-42	20	SW615-42	20	—	—	SW655-42	20	SW680-42	10
13	13 x 16 x 24	SW600-46	20	SW615-46	20	—	—	SW655-46	20	SW680-46	10
15	15 x 18 x 24	SW600-50	20	SW615-50	20	SW626-50	20	SW655-50	20	SW680-50	10
17	17 x 20.5 x 26	SW600-54	20	SW615-54	20	SW626-54	20	SW655-54	20	SW680-54	10
19	19 x 22.5 x 28	SW600-58	20	SW615-58	20	SW626-58	20	SW655-58	10	SW680-58	5
21	21 x 24.5 x 28	SW602-12	20	SW617-12	20	SW628-12	20	SW657-12	10	SW682-12	5
23	23 x 26.5 x 28	SW602-16	20	SW617-16	20	SW628-16	20	SW657-16	10	SW682-16	5
25	25 x 28.5 x 28	SW602-20	20	SW617-20	20	SW628-20	20	SW657-20	10	SW682-20	2
27	27 x 31 x 32	SW602-24	10	SW617-24	10	SW628-24	10	SW657-24	10	SW682-24	2
29	29 x 33 x 32	SW602-28	10	SW617-28	10	SW628-28	10	SW657-28	10	SW682-28	2
31	31 x 36 x 35	SW602-32	10	SW617-32	10	SW628-32	10	SW657-32	5	SW682-32	2
33	33 x 38.5 x 38.5	SW602-36	10	SW617-36	10	SW628-36	10	SW657-36	5	SW682-36	2
35	35 x 40.5 x 38.5	SW602-40	10	SW617-40	10	SW628-40	10	SW657-40	5	SW682-40	1
37	37 x 42.5 x 38.5	SW602-44	10	SW617-44	10	SW628-44	10	SW657-44	5	SW682-44	1
39	39 x 44.5 x 38.5	SW602-48	10	SW617-48	10	SW628-48	10	SW657-48	5	SW682-48	1
41	41 x 47 x 42	SW602-52	5	SW617-52	5	SW628-52	5	SW657-52	2	SW682-52	1
43	43 x 49 x 42	SW602-56	5	SW617-56	5	SW628-56	5	SW657-56	2	SW682-56	1
45	45 x 51 x 42	SW602-60	5	SW617-60	5	SW628-60	5	SW657-60	2	SW682-60	1
49	49 x 55 x 42	SW604-13	5	SW619-13	5	SW630-13	5	SW659-13	2	SW684-12	1
53	53 x 59.5 x 45.5	SW604-17	2	SW619-17	2	SW630-17	2	SW659-17	1	SW684-17	1
57	57 x 64 x 49	SW604-21	2	SW619-21	2	SW630-21	2	SW659-21	1	SW684-21	1
62	62 x 69 x 49	SW604-25	2	SW619-25	2	SW630-25	2	SW659-25	1	SW684-25	1
67	67 x 74 x 49	SW604-29	2	SW619-29	2	SW630-29	2	SW659-29	1	SW684-29	1
71	71 x 78 x 49	SW604-33	1	SW619-33	1	SW630-33	1	SW659-33	1	SW684-33	1
75	75 x 85 x 54	SW604-37	1	SW619-37	1	SW630-37	1	—	—	—	—
79	79 x 89 x 54	SW604-41	1	SW619-41	1	SW630-41	1	—	—	—	—
86	86 x 96 x 54	SW604-45	1	SW619-45	1	SW630-45	1	—	—	—	—
92	92 x 102 x 54	SW604-49	1	SW619-49	1	SW630-49	1	—	—	—	—
99	99 x 108 x 54	SW604-53	1	SW619-53	1	SW630-53	1	—	—	—	—
105	105 x 117 x 63.5	SW604-57	1	SW619-57	1	SW630-57	1	—	—	—	—

Stoppers, assorted packs

Natural rubber. Comprising five each Nos. 7, 8, 9 10, 11, 13, 15, 17, 19, 21, 23. Two each Nos. 25, 27, 29, 31, 33, and 35.

SW640-20 Solid stopper pack

SW640-30 1-hole stopper pack

Hole drilling

Natural rubber stoppers are available pre-drilled. Where specified the hole diameter will be sizes:

3 and 4	supplied solid only
5 to 8	1 hole of 3mm
9 to 105	1 hole of 5mm
15 to 105	2 holes of 5mm

Neoprene rubber stoppers are available pre-drilled to special order. Hole diameters are as given for natural rubber stoppers.



Test Tubes

Glass Test Tubes, Round Bottom

Sizes are nominal length x o.d. Pack quantities are nominal.

Test Tubes

Soda-lime glass. To ISO4142. The medium wall range TE154 series are bacteriological grade. Supplied in packs as indicated.

Size mm	Pack qty.	Light wall rimmed	Medium wall rimless
50 x 6	150	TE150-10	—
50 x 6	300	—	TE154-10
50 x 10	150	TE150-12	TE154-12
75 x 10	150	TE150-20	TE154-20
75 x 12*	150	TE150-22	TE154-22
100 x 12	150	TE150-30	TE154-30
100 x 16	150	TE150-32	TE154-32
125 x 12	150	TE150-36	TE154-36
125 x 16	150	TE150-38	TE154-38
125 x 18	150	TE150-40	TE154-40
150 x 16	150	TE150-46	TE154-46
150 x 18	150	TE150-48	TE154-48
150 x 24	75	TE150-50	TE154-50

* TE154-22 is suitable for Kahn tests.

Test Tubes

Borosilicate glass. To ISO4142. Supplied in packs as indicated.

Size mm	Pack qty.	Light wall rimmed	Medium wall rimless
75 x 10	100	TE200-20	TE204-20
75 x 12*	100	TE200-22	TE204-22
100 x 12*	100	TE200-30	TE204-30
100 x 16	100	TE200-32	TE204-32
125 x 16	100	TE200-38	TE204-38
150 x 16	100	TE200-46	TE204-46
150 x 18	100	TE200-48	TE204-48
150 x 24	100	TE200-50	TE204-50
180 x 18	100	TE200-68	TE204-68

* TE204-22 and TE204-30 are suitable for the Wasserman test.

Test Tubes, disposable

Borosilicate glass. Rimless. Without cap. Supplied in packs of 1000.

	Size mm
TP160-13	75 x 10
TP160-18	75 x 12
TP160-28	100 x 13
TP160-33	100 x 16
TP160-38	125 x 16
TP160-43	150 x 16

Stoppers, Steristoppers

Preformed cellulose plugs for sealing culture tubes and flasks. They are permeable to air and can be hot air sterilised up to 200°C. All stoppers are tapered and the cellulose material will depress slightly to ensure a tight fit into the tube or neck. Length varies from approximately 30 to 60mm according to size. Supplied in packs as indicated.

	To fit tube i.d. mm	Pack qty.
SW536-21	10	1000
SW536-27	12	1000
SW536-39	15	500
SW536-50	17	1000
SW536-58	20	400
SW536-80	32	800



TE150/TE200

TE154/TE204/TP160



SW536 in use

Test Tubes

Glass Test Tubes, Round Bottom and Special Purpose

Sizes are nominal length x o.d. Pack quantities are nominal.

Test Tubes, Pyrex

Borosilicate glass. Medium wall. Conform to ISO4142. Supplied singly.

Size mm	Rimmed 1620 series	Rimless 1622 series
75 x 10	TE250-20	TE254-20
75 x 12	TE250-22	TE254-22
100 x 12	TE250-30	TE254-30
100 x 16	TE250-32	TE254-32
125 x 16	TE250-38	TE254-38
150 x 16	TE250-46	TE254-46
150 x 18	TE250-48	TE254-48
150 x 24	TE250-50	TE254-50
160 x 16	TE250-56	TE254-56
180 x 18	TE250-68	TE254-68
200 x 24	TE250-80	TE254-80

Test Tubes, Pyrex

Borosilicate glass. Heavy wall. Conform to ISO4142. Supplied singly.

Size mm	Rimmed 1624 series	Rimless 1626 series
125 x 16	TE270-38	TE274-38
150 x 16	TE270-46	TE274-46
150 x 18	TE270-48	—
150 x 24	TE270-50	—

Test Tubes, Pyrex stoppered

Borosilicate glass with polyethylene stopper. Supplied singly.

	Size mm	Stopper	Capacity x subdivisions, ml
Graduated 1628 series			
TE310-32	100 x 13	10/13	5 x 0.1
TE310-40	125 x 18	14/15	10 x 0.2
TE310-50	150 x 22	19/17	25 x 0.5
TE310-80	200 x 26	24/20	50 x 1.0

Dreyer Tubes

For agglutination tests. To BS625. Size 60 x 7mm. With conical base and rimmed funnel top. Supplied in packs as indicated.

TE400-15 Soda-lime glass, pack 300

TE404-15 Neutral resistance glass, pack 100

Durham Tubes

For fermentation tests. To BS625. Supplied in packs as indicated.

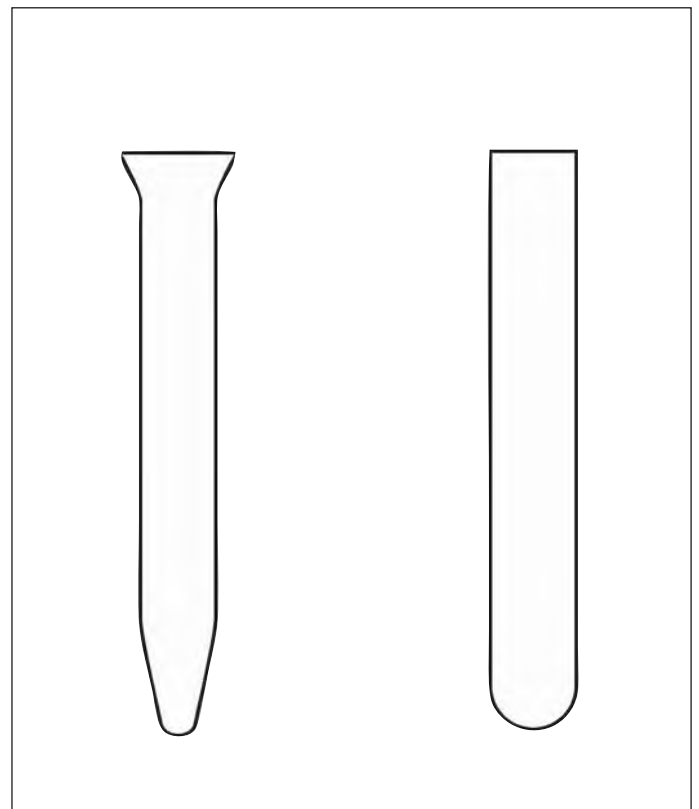
	Size mm	Pack qty.
Soda-lime glass		
TE420-13	25 x 6	300
TE420-17	30 x 6	300
TE420-23	35 x 8	300
TE420-27	50 x 7.5	250
Neutral glass		
TE424-13	25 x 6	250
TE424-17	30 x 6	250
TE424-23	35 x 7.5	250
TE424-27	50 x 7.5	250



TE250
TE270

TE254
TE274

TE310



TE400/TE404

TE420/TE424

Test Tubes

Plastic Test Tubes

All dimensions, capacities and pack quantities are nominal.

Test Tubes, Sterilin

Disposable polystyrene. All cylindrical with rounded base except tubes 144AS which have a conical base. Supplied in packs as indicated.

Ref.	Size, mm	Pack qty.
Non-Sterile		
TE600-10	RT15	40 x 6
Sterile with polyethylene screw cap		
TE604-65	142AS	100 x 16
TE604-70	144AS	100 x 16*

Accessories

TE622-15 Caps 147A for tubes TE600-65 and TE600-70, pack of 1200

Test Tubes, Elkay

Disposable. Cylindrical with rounded base. Non-sterile. Dimensions are nominal. Supplied in packs as indicated. TE730-28 is suitable for clinical analysers.

Size, mm	Polystyrene	Pack qty.	Polypropylene	Pack qty.
75 x 12	TE730-26	4000	TE738-25	1000
75 x 13	TE730-28	4000	TE738-28	4000
100 x 13	TE730-30	3000	TE738-31	3000

Test Tube Accessories

Test Tube Caps, Elkay

Polyethylene. Supplied in packs as indicated.

Type	For tubes, mm	Pack qty.
TE765-55	Plug	75 x 12, 75 x 13
TE765-60	Plug	125 x 16

Closures, Lab-O-Cap

Anodised aluminium in single colours as indicated, with internal, stainless steel, radial spring providing a gentle grip on glass tubes. Maximum operating temperature 140°C. Supplied in packs of 100 of one colour as specified.

For tube o.d. mm	Colour	Colour	Colour
	Silver	Blue	Red
12 to 13	TE870-13	TE873-13	TE877-13
15 to 16	TE870-16	TE873-16	TE877-16
17 to 18	TE870-18	TE873-18	TE877-18
19 to 20	TE870-20	TE873-20	TE877-20
24 to 26	TE870-26	TE873-26	TE877-26

Bacteriological Seals, Astell-type

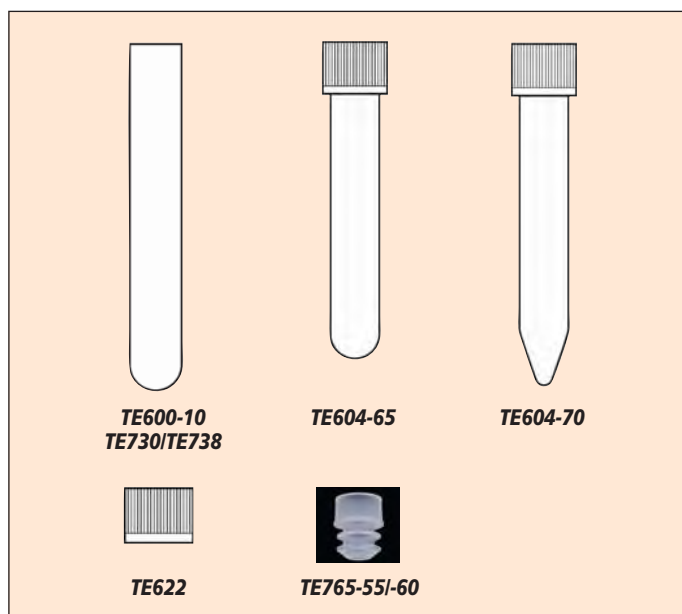
Moulded, non-toxic rubber, plug-sealing stoppers which are autoclavable at 121°C. Designed to fit 17mm i.d. tubes or media bottle necks, allowing them to vent automatically when heated. Available in a choice of colours within packs of 144, as indicated.

TE885-10	Blue
TE885-20	Red
TE885-30	Grey

Test Tube Holders

Dimension given is the maximum diameter of tube which can be held. Supplied in packs as indicated.

Dia. mm	Material	Pack qty.
TE920-20	19	Hardwood/steel spring
TE920-30	30	Spring steel, nickel plated
TE920-45	45	Brass/wooden handle



Syringes

Disposable and Glass Syringes

Syringes, disposable

Polypropylene with eccentric Luer slip nozzle (except SY210-23 to -43 which have concentric Luer slip nozzles and SY210-90 which has a catheter tip and luer adapter). Without needle. Supplied sterile in individually sealed envelopes, within boxes as indicated.

	Capacity, ml	Box qty.
With two-piece plunger		
SY210-11	1TB	120
SY210-23	2	100
SY210-33	5	100
SY210-43	10	100
SY210-55	20	120
SY210-60	30	60
SY210-70	50	60
SY210-90	100	50

Needles, disposable

Stainless steel, with bevelled injection tip*. With Luer push fitting for use with disposable syringes. Supplied sterile in individually sealed envelopes, within boxes of 100. Colour coded.

	Gauge	Nominal dia. x length, mm
SY217-15	18G x 1½in	1.2 x 40
SY217-17*	18G x 1½in	1.2 x 40
SY217-25	19G x 1½in	1.1 x 40
SY217-35	20G x 1in	0.9 x 25
SY217-55	21G x 1½in	0.8 x 40
SY217-75	23G x 1in	0.6 x 25
SY217-85	25G x ¾in	0.5 x 16

Note: SY217-15 is a thin-wall needle with short bevel. SY217-35 and SY217-55 are intravenous thin-wall needles.

* SY217-17 has a blunt tip for filling purposes.



SY210/SY217



SY354, SY352/356/358 are similar



SY365

Syringes, borosilicate glass

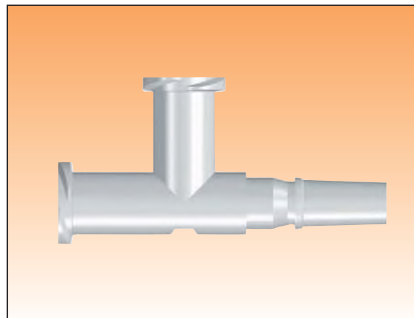
Without needle. Supplied singly.

	Capacity, ml
Central Luer tip	
SY352-16	Tuberculin 0.5*
SY354-10	1
SY354-20	2
SY354-30	5
SY354-40	10
SY354-50	20
SY354-60	30
SY354-70	50
SY354-80	100

Central Luer lock

SY356-17	Tuberculin 1*
SY358-12	1
SY358-22	2
SY358-32	5
SY358-42	10
SY358-52	20
SY358-62	30
SY358-72	50
SY358-82	100

*These syringes have nickel-plated brass tips.



SY390-15

Needles, Luer fitting

Corrosion resistant steel. Supplied in boxes of 12.

	Gauge
SY365-30	17G x 2¾in (Serum 0)
SY365-35	19G x 2in (Serum II)
SY365-95	30G x ½in (TB)

Connectors, Y-pattern

2 x female luer lock upper terminations to single luer male lower termination. Supplied in packs of 100.

SY390-15 Y-connectors

Sharps Bins

Sharps Bins, to BS7320:1990

A comprehensive range of puncture resistant, rigid polypropylene bins with snap-tight lids for the safe containment and disposal of sharp objects and infectious waste. Manufactured to BS7320:1990 and designed to be incinerated with minimum environmental impact. Supplied singly.

	Capacity litres
CM915-16	0.6
CM915-21	1.0*
CM915-26	2.5
CM915-31	5.0
CM915-36	7.0
CM915-41	22.0

*Rectangular shape.

Sharps collectors – see CM905, CM910.



CM915-21



CM915-41

Syringes

Microlitre Syringes Hamilton 700/1000/1700 Series

Precision glass barrel syringes and stainless steel needles.

Microlitre Syringes, Hamilton

General purpose 700 series. Liquid tight for precision dispensing. Suitable for sample injection in gas, liquid and thin layer chromatography.

	Ref.	Capacity µl
With fixed needle (N) 12° bevel, 51mm long.		
SY600-15	75N	5
SY600-20	701N	10
SY600-24	702N	25
SY600-30	705N	50
SY600-40	710N	100
SY600-45	725N	250
SY600-50	750N	500
With removable needle (RN) 12° bevel, 51mm long.		
SY604-15	75RN	5
SY604-20	701RN	10
SY604-24	702RN	25
SY604-30	705RN	50
SY604-40	710RN	100

Microlitre pipettors – see PR100/IPR164.

Syringe filters – see FC800/FC812.

Microlitre Syringes, Hamilton

Gas tight and liquid tight. 1000/1700 series. With PTFE plunger. Wide range of applications including sample injection in chromatography.

	Ref.	Capacity µl
With fixed needle (N) 12° bevel, 51mm long.		
SY625-30	1705N	50
SY625-35	1710N	100
SY625-60	1001LTN	1000
With removable needle (RN) 12° bevel, 51mm long.		
SY629-30	1705RN	50
SY629-35	1710RN	100
SY629-60	1001RN	1000
With Luer tip (LT) Without needle.		
SY632-30	1705LT	50
SY632-35	1710LT	100
SY632-45	1750LT	500
SY632-60	1001LT	1000

Needles, stainless steel

Length 51mm, 12° bevel. Supplied in packs as indicated.

	Gauge	Diameter o.d. x i.d. mm	Pack qty.
For SY604 and SY629 Series			
SY636-20	22S	0.72 x 0.15	6
SY636-30	26S	0.47 x 0.12	6
For SY632 Series			
SY638-30	22S	0.72 x 0.15	6
SY638-40	26S	0.47 x 0.12	6



Syringe Pumps

Razel

For precise infusing of liquids, utilising standard glass or plastic syringes from 5ml to 50ml, and microlitre to 5ml syringes using the accessory adapter. 99 delivery speeds are selectable and can be adjusted during operation if required. A built-in, manual, flow-rate calculator indicates the speed setting necessary to achieve specific flow rates when using 5, 10, 20, 30 or 50ml syringes. A separate flow rate chart is also provided for other sizes and indicates variation factors for different makes of syringe. An acoustic alarm activates when the syringe is empty, and halts infusion. Lifetime lubricated, bronze bearings and critical parts constructed in stainless steel, ensure dependable long-term service.

Syringe Pumps, Razel

As described. Supplied with acoustic alarm. For 230V 50Hz single phase supplies. Without syringes.

PX890-10 Model R99-EF, 1.45 to 143ml/hr*

PX890-60 Model R99-FJM 0.145 to 427ml/hr*

*Using 50ml syringe.

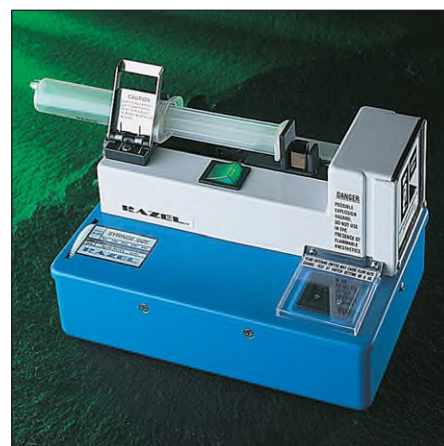
Micro syringe adapters

Enables PX890-series syringe pumps to be used with single place adapter to hold one micro syringe only

PX890-85 Micro syringe adapter, single place

Enables PX890-series syringe pumps to be used with up to six microlitre volume to 3ml capacity syringes (maximum syringe diameter 10mm).

PX890-90 Micro syringe adapter, 6-place



PX890-series

Syringes

Self-Refilling Syringes, Dosys Series 174/173



Designed for rapid, repetitive dispensing of a wide range of liquids.

- ◆ Range of models from 0.025 to 20ml capacities and suitable for corrosive or non-corrosive liquids
- ◆ Volume setting by micrometer screw with locking nut
- ◆ Precision glass barrel gives reliable repeatability
- ◆ Ergonomically designed, pistol-grip handle and thumb plunger bar allow comfortable operation when used repeatedly
- ◆ Fully autoclavable up to 121°C
- ◆ Luer-lock outlet fitting enables use with a wide range of needles and cannulae
- ◆ All syringes supplied with 3-way charging/dispensing valve, silicone filling tube, 1 metre long with sinker for use with most reservoirs (except SY720-85), aspirating and vent cannulae and valve spares kit
- ◆ Easy to disassemble and clean
- ◆ High strength, lightweight construction materials ensure long-term reliability and minimise fatigue during extended periods of use

Dosys 174 Self-refilling Syringes

As specified. Suitable for use with corrosive liquids and recommended for research or medical applications. All metal parts in contact with liquid are stainless steel (the plunger is nickel-plated). The valve can easily be dismantled for cleaning. Precision and reproducibility is better than $\pm 1\%$.

	Range ml	Increments ml
SY700-10	0.1 to 1	0.05
SY700-20	0.3 to 2	0.1
SY700-30	0.5 to 5	0.5
SY700-40	1 to 10	1

Dosys 173 Self-refilling Syringes

As specified. Suitable for general dispensing of non-corrosive liquids. With chrome-plated, fixed valve, 1 metre of silicone feed tubing and stainless steel plunger.

	Range ml	Increments ml
SY720-15	0.025 to 0.3	0.025
SY720-25	0.1 to 0.5	0.1
SY720-35	0.1 to 1	0.05
SY720-45	0.3 to 2	0.1
SY720-55	0.5 to 5	0.5
SY720-65	1 to 10	1
SY720-85	5 to 20*	1

* Supplied without feed tubing and sinker.

Accessory Stand

Convenient bench mounting stand for holding SY700 or SY720 syringes.

SY724-06 Bench stand

Needles – see SY365.



SY700 on SY724



SY720

Test Papers

Test Papers

Test Paper Books, Whatman

Supplied in packs of 100 books. Each book containing 20 leaves.

- TD150-20** pH 1 to 11
- TD158-12** Litmus blue
- TD158-18** Litmus red
- TD158-45** Starch iodide

Test Paper Reels, Whatman

Each reel contains a paper strip 5 metres long x 7mm wide. Supplied singly.

- TD170-22** pH 1 to 14
- TD174-12** pH 0.5 to 5.5
- TD174-15** pH 4 to 7
- TD174-18** pH 6.4 to 8
- TD174-21** pH 8 to 10

- TD178-14** Litmus blue
- TD178-20** Litmus red
- TD178-32** Phenolphthalein
- TD178-47** Potassium iodide

Test Paper Wide Reel, Whatman

Range pH1-11. Reel 5 metres long x 10mm wide. With three separate colour bands on each strip.

- TD185-20** pH 1 to 11

Test Paper Strips, Whatman CF

Supplied in packs of 100 strips 6 x 80mm. Dyes chemically bonded to ensure no leaching.

- TD200-20** pH 0 to 14, bonded
- TD200-30** pH 4.5 to 10, bonded

Test Paper Strips, Whatman CS

Supplied in packs of 200 strips 11 x 100mm. With blank central segment. Suitable for coloured solutions.

- TD205-20** pH 1 to 12
- TD209-10** pH 1.8 to 3.8
- TD209-13** pH 3.8 to 5.5
- TD209-16** pH 5.2 to 6.8
- TD209-19** pH 6.0 to 8.1
- TD209-22** pH 8.0 to 9.7

Test Paper Books, Johnsons

Supplied in packs of 10 books. Each book containing 20 leaves. TD300-21 is additionally CE-marked in compliance with the IVD Directive.

- TD300-20** pH 1 to 11 universal
- TD300-21** pH 1 to 11 universal, CE-marked
- TD308-12** Litmus blue
- TD308-15** Litmus neutral

- TD308-18** Litmus red
- TD308-20** Congo red
- TD308-45** Starch iodide

Test Paper Reels, Johnsons

Each reel contains a paper strip 5 metres long x 7mm wide. Supplied singly.

- TD312-10** pH 1 to 14 universal
- TD312-15** Litmus blue
- TD312-20** Litmus red



TD312



Water Testing

Test Strips continued

Arsenic Test Kits

Comprising reaction vessels, reagents and test strips to conduct colorimetric tests under modified Gutzeit methodology. Reaction of the reagents and sample generates arsine gas (if arsenic is present) which is brought into contact with a test pad impregnated with mercuric bromide indicator. After a specified exposure period (generally 14 minutes) the pad is removed and the colour compared with a colour chart supplied. In packs of tests and with detection limit ranges as indicated.

	Range/increments, g/l (ppb)	Pack quantity
WS565-44	<1, 2, 3, 4, 5, 6, 7, 8, 10, 13, 20, 25, 30, 40, >50, >80, >160	50
WS565-47	0, 5, 10, 20, 60, 100, 300, 500, >500	100

Other ranges are available - *details on request.*

Chlorine Test Strips, J-Quant®

For routine checks of chlorine levels in reservoirs, water mains and swimming pools and to monitor the concentration of chlorine-based sanitisers in these applications. Supplied in packs of 100 and with ranges as indicated.

WS574-10	0, 0.5, 1, 3, 5, 10, 20mg/l
WS574-20	0, 25, 50, 100, 200, 300mg/l
WS574-30	0, 50, 100, 250, 500, 1000mg/l
WS574-40	0, 1000, 2500, 5000, 7500, 10000mg/l

J-Quant® is a registered trademark of Johnsons Test Papers Ltd.

Bacteria Check

Tests for the presence of coliform bacteria. Follows the APHA Standard Method 9221D screen test for total coliforms in potable water. U.S. EPA compliant. Simple test involves filling a 100ml sterile bottle with a water sample, capping and standing for 24 hours at room temperature. Indicating media within the bottle will turn purple if coliforms are present or yellow if absent. Supplied in a pack of 12.

WS580-10 Bacteria check, 100ml bottles, pack of 12



WS565-44



WS574



WS565-47



WS580-10

Thermometers

General Purpose Series

Nominal diameter 7mm. Spirit filled, with ranges and graduations as indicated. Supplied singly.

T = Total immersion

P = Partial immersion (76mm)

Thermometers, general purpose

Nominal length 300mm unless otherwise stated.

	Ref.	Range, °C	Grad. °C	Imm.
White back, Red spirit filled				
	TG150-22	—	-50 to 50	1.0 P
	TG154-26	—	-10 to 50	0.5 P
	TG154-30	—	-10 to 110	0.5 P
	TG154-35	—	-10 to 110	1.0 P
	TG154-40	—	-10 to 150	1.0 P
	TG154-50	—	-10 to 250	2.0 P

Yellow Back, Blue Spirit filled, PTFE encapsulated

PTFE encapsulation retains glass and filling should the thermometer be broken.

	TG225-30	—	-50 to 110	1.0 P
	TG225-35	—	-10 to 110	1.0 P
	TG225-40	—	-10 to 150	1.0 P
	TG225-50	—	-10 to 250 [#]	1.0 P

*Red spirit filled

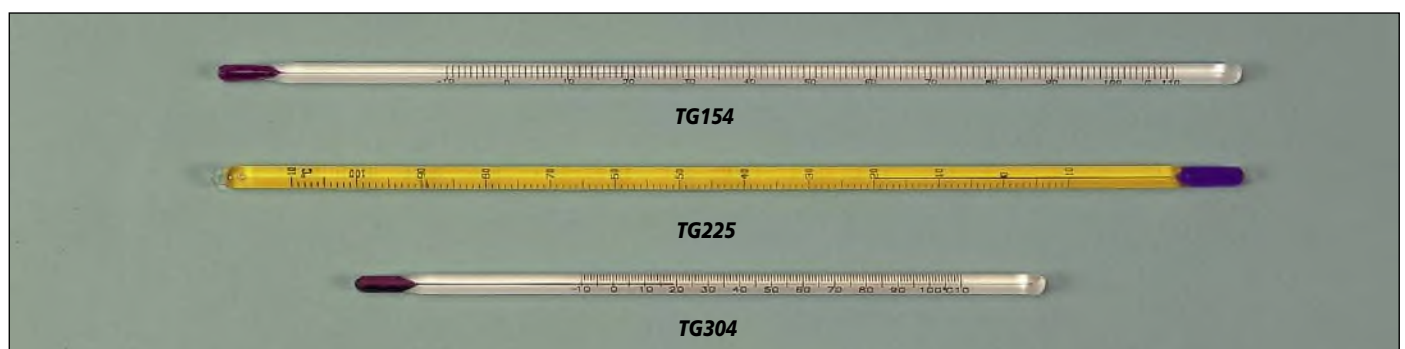
Thermometer, general purpose

Nominal length 200mm. White back. Red spirit filled.

	Range, °C	Grad. °C	Imm.
TG304-35	-10 to 110	1.0	T

Mercury Thermometers

Under European Regulation (EC) no. 1907/2006 amend. (EU) no. 847/2012, mercury thermometers can no longer be supplied within the EU.



Thermometers

UKAS Certified Thermometers

UKAS Certified BS1704:1985 (ISO1770:1981) Thermometers

White backed. Spirit filled. The certificate issued provides observed correction at 5 points on the thermometer scale. 75mm immersion.

	Schedule	Range, °C	Grad. °C	Length, mm
TG525-30	D/75 UKAS	0 to 100	1.0	305
TG525-35	E/75 UKAS	0 to 160	1.0	305
TG525-40	F/75 UKAS	0 to 250	1.0	305

Mercury Thermometers

Under the requirements of Annex XVII of EC552/2009 REACH Regulations, mercury thermometers can no longer be sold within the UK or EU.

Uncertified BS1704 thermometers remain available to special order only and subject to deletion without notice - details on request.

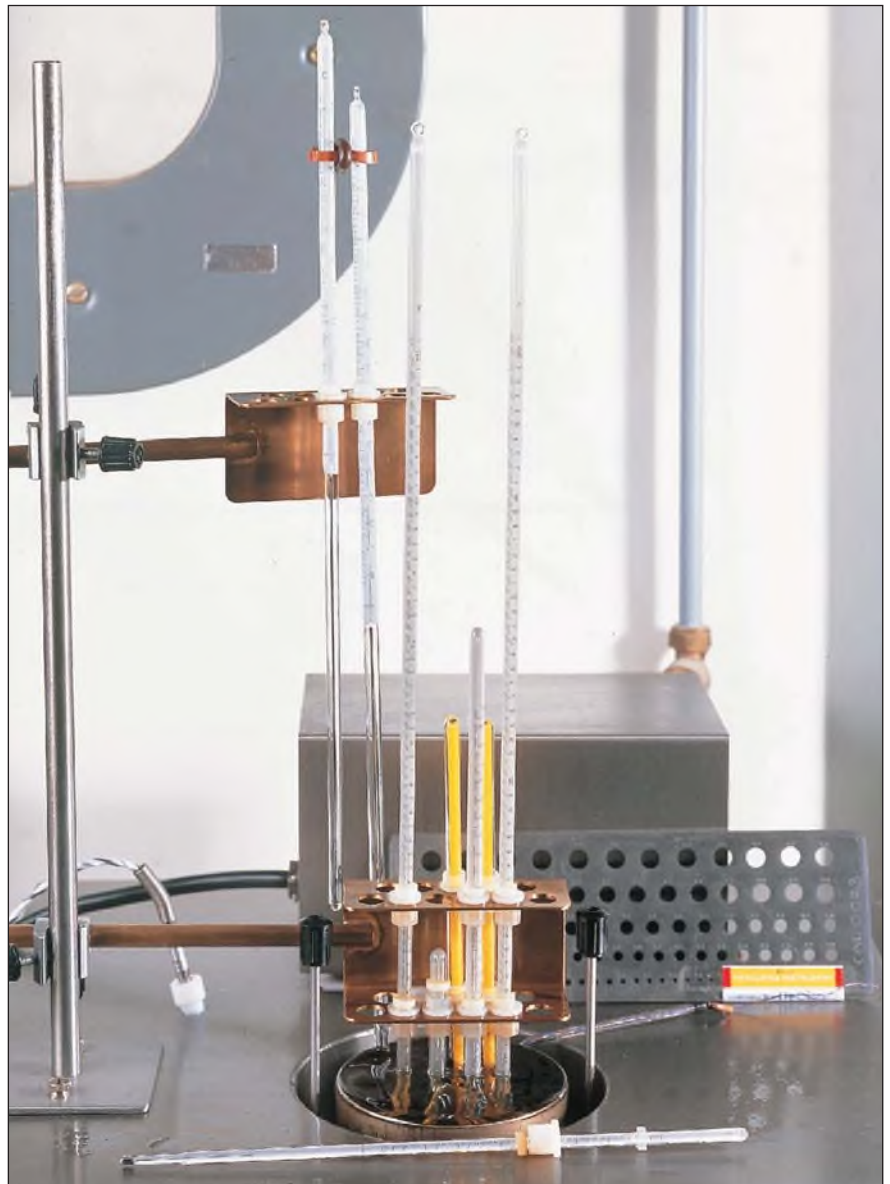
Certification of Thermometers

Most types of standard thermometer including BS1704, BS593, IP and ASTM can be certified either as:-

- a) A certificate of conformity.
- or b) The manufacturer's test which provides observed corrections at 5 points on the scale.
- or c) A UKAS (BCS/NPL) test which provides observed corrections at 5 points on the scale.

If you require prices for Certified Thermometers please contact our Sales Department for a quotation.

UKAS – United Kingdom Accreditation Service, formerly NAMAS.



Thermometers

Standard, BS593

Spirit filled. Yellow back. Nominal diameter 7mm. Nominal length: 400mm.

	Schedule	Range °C	Grad. °C
A-Series 100mm Immersion			
TG604-15	A10C/100	-30 to 10	0.1
TG604-25	A40C/100	0 to 40	0.1
TG604-30	A70C/100	40 to 70	0.1
TG604-35	A100C/100	70 to 100	0.1

Mercury Thermometers

Under the requirements of Annex XVII of EC552/2009 REACH Regulations, mercury thermometers can no longer be sold within the UK or EU.

Clinical Thermometers

Clinical Thermometer

Gallium filled. With enclosed scale, range 35°C to 42°C x 0.1°C. Length approximately 100mm. In plastic case.

TG700-45 Clinical thermometer, 35°C to 42°C

Digital Clinical Thermometer

Range 32 to 43.9°C with LCD temperature indication to 0.1°C. Symbols "L" (low) and "H" (high) indicate when the temperature is outside the normal limits and the °C symbol flashes until the temperature has stabilised. Accuracy $\pm 0.1^\circ\text{C}$ between 35 and 38°C and $\pm 0.2^\circ\text{C}$ outside this range. Powered by one 1.5V silver oxide battery type SR41 which has a life equivalent to about 4000 temperature measurements in normal use. Overall 110 x 14 x 8mm. Weight 7g. With battery.

TG715-10 Digital clinical

BL630-06 Spare battery, 1.5V



TG700



TG715



TG604

Thermometers

Special Purpose Thermometers

Dipping Thermometer

Spirit filled glass thermometer in a stainless steel case. Range -10 to 110°C. Overall length 320mm.

TG745-15 Dipping

Soil Thermometer

A spirit-in-glass thermometer, range 0 to 110°C mounted in an aluminium tube 225mm long with probe end for inserting into soil or compost and a cut-out front for reading the temperature. The top of the tube is marked with a large red sphere for ease of identification in the field.

SG680-10 Soil

Standard Joint Thermometers – see *Quickfit* section.

Digital Max./Min. thermometer – see *TJ365-10*.

Maximum/Minimum Thermometer

Six's pattern. Spirit filled. Dual scaled -30 to 50°C and -20 to 120°F and with two, push-button resettable, cursors. In wall mounting, cream plastic case with sloping weather shield.

TG775-37 Max./Min.

Maximum/Minimum Thermometer, Dial

With large, easy-to-read dual scale -40 to 50°C and -40 to 120°F. Simple twist dial resetting. With keyhole attachment hook for wall mounting.

TG780-10 Dial

Oven Thermometer

Dual scale dial thermometer, 50 to 300°C (100 to 600°F) in a stainless steel housing with integral hook. Dial diameter 50mm.

TG795-10 Oven thermometer

Pocket Thermometer

Red spirit filled. Range -10 to 110°C. Total immersion. Length 150mm. Mounted in opaque case which has a pocket clip.

TG805-15 Pocket

Wall Thermometers

Spirit filled. Dual scaled -10 to 50°C and 20 to 120°F. White plastic frame for wall mounting.

TG835-15 General purpose

TG835-20 Factory Act model

Wall Thermometer, dial

Dual scaled -10 to 50°C and 14 to 120°F. Wall mounting.

TG850-20 Dial wall

Thermometer Cases

For solid stem thermometers from 5 to 7mm diameter. Brass case with front cut out, screw top and hanging ring.

	Thermometer length, mm
TG950-30	300/305
TG950-35	350/355

Mercury Thermometers

Under the requirements of Annex XVII of EC552/2009 REACH Regulations, mercury thermometers cannot be sold within the UK or EU.



TG775-37



TG795-10



TG850



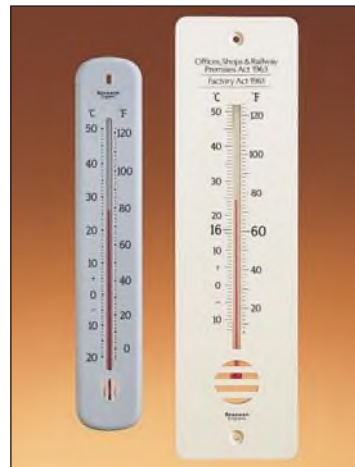
TG745



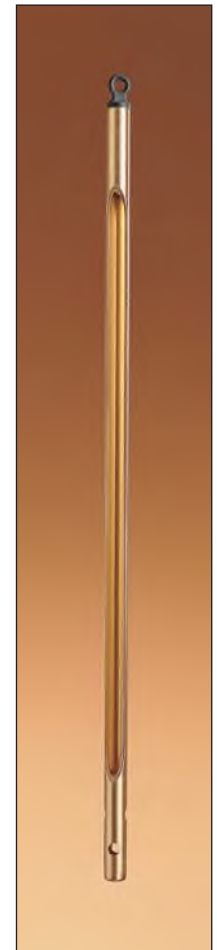
SG680



TG805



TG835-15



TG950

TG835-20

Thermometers

ASTM and IP Petroleum Test Thermometers

Spirit filled. Where a reference number appears in both ASTM and IP columns this designates that the thermometer has been agreed by ASTM and IP as direct equivalents. Lengths given are nominal. Other references and titles are available to special order only.

Reference	ASTM	IP	Title	Range	Grad.	Imm. x length, mm
TH300-10	1C	-	Partial Immersion	-20° to +150°C	1°C	76 x 327
TH300-23	3C	73C	Partial Immersion	-5° to +400°C	1°C	76 x 420
TH300-30	5C	1C	Cloud and Pour	-38° to +50°C	1°C	108 x 235
TH300-37	6C	2C	Low Cloud and Pour	-80 to +20°C	1°C	76 x 235
TH300-44	7C	5C	Low Distillation	-2° to +300°C	1°C	total x 390
TH300-77	12C	64C	Density-Wide Range	-20° to +102°C	0.2°C	total x 425
TH300-80	12F	64F	Density-Wide Range	-5° to +215°F	0.5°F	total x 425
TH300-94	15C	60C	Low Softening Point	-2° to +80°C	0.2°C	total x 400
TH304-72	28C	31C	Kinematic Viscosity	36.6° to 39.4°C	0.05°C	total x 310
TH308-32	37C	77C	Solvents Distillation	-2° to +52°C	0.2°C	100 x 400
TH328-52	120C	92C	Kinematic Viscosity	38.6° to 41.4°C	0.05°C	total x 310
TH328-55	121C	32C	Kinematic Viscosity	98.6° to 101.4°C	0.05°C	total x 310
TH406-74	-	39C	Density	-1° to +38°C	0.1°C	total x 450

Mercury Thermometers

Under the requirements of Annex XVII of EC552/2009 REACH Regulations, mercury thermometers cannot be sold twithin the UK or EU.



Thermometers

Irreversible Strips and Checkers

THERMAX

- Simple to use, self adhesive strips and liquid crystals for monitoring surface temperatures

Temperature Strips, 5-step

Each strip measures 35 x 15mm, is self-adhesive and printed with a temperature range in 5 steps, both in °C and °F. The temperature sensitive strip is encapsulated to resist oil, water and steam. When subjected to heat, an irreversible colour change from silver white to black occurs along the strip in stages thereby recording the maximum temperature reached. Supplied in packs of 10 strips.

	Range, °C	Range, °F
TH700-10	29/40	84/105
TH700-13	37/46	100/115
TH700-16	49/71	120/160
TH700-19	77/99	170/210
TH700-22	104/127	220/260
TH700-26	132/154	270/310
TH700-30	160/182	320/360
TH700-34	188/210	370/410
TH700-38	216/249	420/480
TH700-42	249/290	480/554

Temperature Strips, 8-step

Comprising irreversible self-adhesive strips generally as TH700 series but with dual °C/°F temperature range printed in 8-stages. Each strip measures 51 x 18mm. Supplied in packs of 10 strips.

	Range, °C	Range, °F
TH704-12	37/65	99/149
TH704-15	71/110	160/230
TH704-18	116/154	241/309
TH704-21	160/199	320/390
TH704-24	204/260	399/500

Temperature Strips, 10-step

Generally as TH704 but with dual °C/°F temperature range printed in 10-stages. Each strip measures 51 x 18mm. Supplied in packs of 10 strips.

	Range, °C	Range, °F
TH715-10	40/71	104/106
TH715-15	77/127	717/261
TH715-20	132/182	270/360
TH715-25	188/249	370/480

Reversible Liquid Crystals

Liquid Crystal Strips

Self adhesive. The liquid crystal changes from black through a spectrum of colours as the temperature changes. Supplied in packs of 10 strips.

	Range, °C	Range, °F
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7-step (5°C steps)

44 x 12mm.

TH782-18	0/30	32/86
TH782-22	30/60	86/140
TH782-26	60/90	140/194

8-step (1°C steps)

63 x 12mm.

TH784-12	-3/+4	26/40
TH784-20	14/22	58/72
TH784-24	23/31	74/88

Liquid Crystal Strips

Self-adhesive, 12-step, horizontal scale, reversible liquid crystal thermometer strips. Colour panels appear behind figures as the specific temperature is reached. Available in two scales for use in refrigerators or monitoring room temperature. Size 90 x 10mm L x W. Supplied in packs of 10 strips.

TH786-15	Refrigerator, 0 to 12°C x 1°C
TH786-25	Room, 10 to 32°C x 2°C

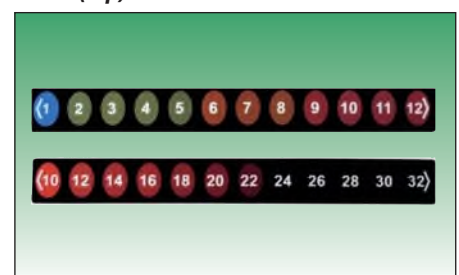
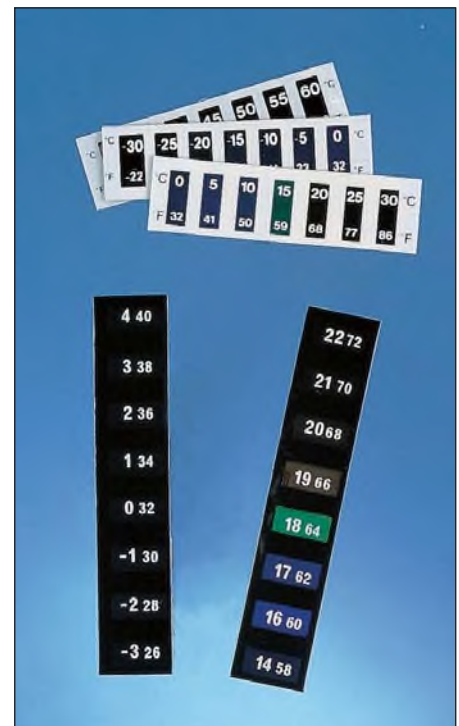
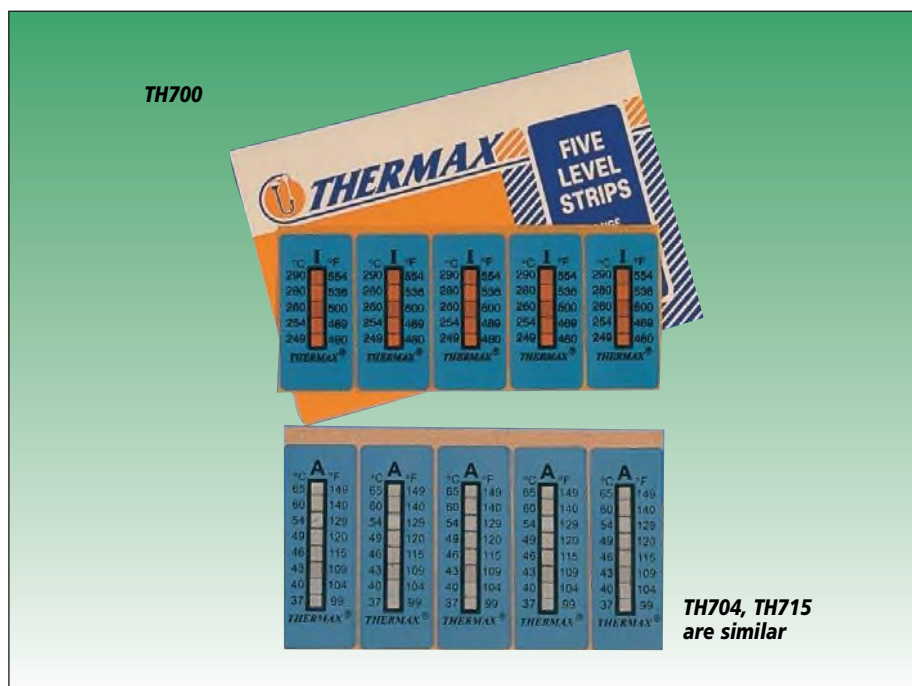
Important Note - Irreversible temperature strips

Irreversible temperature strips have a limited shelf life which can be maximised by storage in a sealed bag at temperatures as follows. If stored correctly the approximate shelf-lives of strips will be:

Ranges from 29 to 34°C / 84 to 93°F – 6 months (require refrigerated storage between +2 and +10°C).

Ranges from 37 to 49°C / 99 to 120°F – 12 months (require refrigerated storage between +2 and +10°C).

Ranges from 54 to 290° / 130 to 554°F – 24 months (require storage at room temperature & Humidity, i.e. 20°C or 68°F & 50% relative humidity).



Thermometers

Digital Thermometers, C2000 Series

A range of compact, high accuracy, microprocessor controlled digital thermometers offering enhanced specifications at a competitive price.

- ◆ Choice of Pt100 or thermocouple sensor input models
- ◆ Waterproof, rugged ABS casing to IP67 standard
- ◆ Very wide ambient temperature operating range, -30 to +50°C
- ◆ High contrast LCD and user-friendly keypad operation
- ◆ Secondary display feature on Models C2010, C2020 and C2050
- ◆ Thermocouple sensor models feature user selection of probe type input via the keypad (types K, J, E, T, R or N thermocouples selectable)
- ◆ Dual input thermocouple model available with differential display (Model C2020)
- ◆ Open circuit sensor detection and "low battery" warning featured on all models

Range Specifications

Sensor input		Measurement ranges* °C	Accuracy °C (at ambient 23°C)
Thermocouples	K	-200 to +1372	±0.2 ±0.15% of reading
	J	-200 to +1200	±0.2 ±0.15% of reading
	E	-200 to +1000	±0.2 ±0.15% of reading
	T	-200 to +400	±0.2 ±0.15% of reading
	R	-50 to 200	±0.8 ±0.6% of reading
	N	>+200 to +1767	±0.8 ±0.3% of reading
Pt100		-200 to +850	±0.2 ±0.1% of reading

* These are the display capabilities of the instruments only, measurable range will depend on the thermocouple probe used - please contact us if you require a probe for use outside our standard range.

General Specifications

Model	C2000	C2010	C2020	C2050
Sensor inputs	K, J, E, T, R, N	K, J, E, T, R, N	K, J, E, T, R, N	Pt100
Temperature scales	°C, °F	°C, °F, °A	°C, °F, °A	°C, °F, °A
Resolution °C, °F, °A	0.1 (range 1000), 1 (range >1000) — all models			
Additional features	—	Max./min. Hold	Twin inputs, Difference, Hold	Max./min. Hold
Power	9V PP3 Alkaline battery — all models			
Dimensions W x D x H mm	70 x 130 x 33 — all models (meter only)			

Digital Thermometer, Model C2000

Budget level, general purpose instrument for use with thermocouple sensor probes. °C or °F display selectable. Supplied with rubber surround, 9V battery and instructions. Without sensor probe.

TJ105-10 C2000

Digital Thermometer, Model C2010

Generally as TJ105-10 but with additional °A display selection and max./min./hold feature on a secondary display whilst real-time measurement continues on the primary display. Without sensor probe.

TJ105-20 C2010

Digital Thermometer, Model C2020

For direct or differential measurement applications. Generally as TJ105-20 but with dual thermocouple inputs. Simultaneous display of both inputs or differential measurement reading on the primary display, whilst input 1 readings continue on the secondary display (thermocouple inputs must be of the same type). A hold facility is also provided. Without sensor probes.

TJ105-30 C2020

Digital Thermometer, Model C2050

High accuracy Pt100 thermometer with long-term stability, four wire system, °C, °F, °A display selection, max./min./hold feature with secondary display. Without sensor probe.

TJ107-25 C2050

BL610-25 Spare 9V battery

Accessory sensor probes – see following page.



Thermometers

Thermocouple Simulator C2030

COPE

A highly accurate and versatile instrument which can simulate a known temperature to cross check calibration accuracy of other type K, J, E, T, R or N thermocouple thermometers or alternatively be used itself as a measuring instrument.

Model	C2030	
Ranges*	Type K	°C 0 to +1372
	Type J	°C -200 to +1200
	Type E	°C -200 to +1000
	Type T	°C -200 to +400
	Type R	°C -50 to +1767
	Type N	°C -200 to +1200
Accuracy (at 23°C ambient)	°C	±0.2 ±0.15% of reading (±0.8 ±0.6% max. with Type R sensor)
Scales	°C, °F, °A	
Resolution °C, °F, °A		0.1 (range 1000), 1 (range >1000)
Power		9V PP3 Alkaline battery
Dimensions W x D x H	mm	70 x 130 x 33

* Measure or simulate modes.

Thermocouple Simulator C2030

As described. Supplied with thermometer connector, with 1m coiled cable and miniplugs at each terminal, 9V battery and instructions.

TJ109-05 C2030
BL610-25 Spare 9V battery



TJ109-05

Accessory Probes for C2000 Series Thermometers and Model C2030

Platinum Resistance (Pt100) Probes for TJ107-25 only

With encapsulated handle, 2 metre coiled cable and connector.

	Temp. range °C	Shape, dimensions
Immersion* TJ114-01	-50 to +500	
Penetration* TJ114-08	-50 to +500	
Moving air TJ114-14	-50 to +500	

* Waterproof.

Thermocouple Probes for TJ105-10 to TJ105-30 and TJ109-05

Mineral insulated. Types K or T thermocouples with encapsulated handle, 2 metre coiled cable and connector with heavy duty, food safe, polyurethane sleeving and miniplug.

	Type	Temp. range °C	Shape, dimensions
Still air TJ115-30	K	-100 to +750	
TJ117-30	T	-100 to +450	
General purpose TJ115-33	K	-200 to +1100	
	T	-200 to +400	
General purpose* TJ115-36	K	-200 to +1100	
	T	-200 to +400	
Needle* TJ115-39	K	-100 to +280	
	T	-100 to +280	
Spring-loaded TJ115-42	K	-50 to +600	

* Waterproof.

Fine Wire Thermocouple Sensors for TJ105-10 to TJ105-30 and TJ109-05

Low mass, small bead thermocouples, 0.2mm diameter, giving fast response and excellent repeatability in air, liquid or surface applications. Supplied 1 metre long with miniplug.

	Type	Temp. range °C	Style
PTFE insulation TJ115-65	K	-100 to +250	
TJ117-65	T	-100 to +250	
Glass fibre insulation TJ115-67	K	-50 to +450	
TJ117-67	T	-50 to +400	

Alternative Thermocouples

A wide variety of thermocouple types and styles and for use at extreme ranges can be offered on receipt of detailed specifications - please contact us with your requirements.

Thermometers

Printing Thermometer P4101

Portable, dual input, type K or type T thermocouple thermometer with integral thermal printer for permanent recording of results.

- ◆ Prints temperature with time and date record
- ◆ Programmable printing intervals
- ◆ Min./Max./Average temperature functions
- ◆ Optical High/Low alarm
- ◆ °C, °F selectable
- ◆ Membrane keypad operation
- ◆ Supplied with NIST-traceable certificate, print roll and carrying case

Model	P4101	
Ranges*	Type K	°C -200 to +1333
	Type T	°C -200 to +400
Accuracy	°C ±1.0	
Scales	°C, °F	
Resolution °C, °F	0.1	
Power	9V PP3 Alkaline battery	
Dimensions W x D x H	mm	75 x 190 x 38
Weight	g	300

Printing Themometer P4101

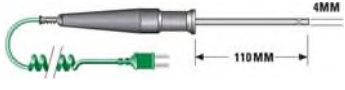

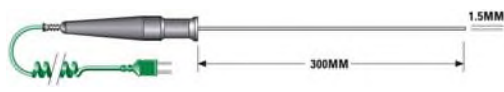


As described. Supplied with NIST-traceable calibration certificate, print roll, carrying case and 6 x 1.5V batteries. Without sensor probes.

- TJ108-20** P4101
- TJ108-56** Spare print roll for TJ108-20
- TJ108-59** Accessory a.c. adapter for TJ108-20, 100-240V supplies
- BL610-08** Spare 1.5V battery (6 required)

Accessory Probes for P4101

Thermocouple Probes for TJ108-20



Mineral insulated. Types K or T thermocouples with encapsulated handle, 2 metre coiled cable and connector with heavy duty, food safe, polyurethane sleeving and miniplug.

	Type	Temp. range °C	Shape, dimensions
Still air			
TJ115-30	K	-100 to +750	
TJ117-30	T	-100 to +450	
General purpose			
TJ115-33	K	-200 to +1100	
TJ117-33	T	-200 to +400	
General purpose*			
TJ115-36	K	-200 to +1100	
TJ117-36	T	-200 to +400	
Needle*			
TJ115-39	K	-100 to +280	
TJ117-39	T	-100 to +280	
Spring-loaded			
TJ115-42	K	-50 to +600	

* Waterproof.

Fine Wire Thermocouple Sensors for TJ108-20

Low mass, small bead thermocouples, 0.2mm diameter, giving fast response and excellent repeatability in air, liquid or surface applications. Supplied 1 metre long with miniplug.

	Type	Temp. range °C	Style
PTFE insulation			
TJ115-65	K	-100 to +250	
TJ117-65	T	-100 to +250	
Glass fibre insulation			
TJ115-67	K	-50 to +450	
TJ117-67	T	-50 to +400	

Alternative Thermocouples

A wide variety of thermocouple types and styles and for use at extreme ranges can be offered on receipt of detailed specifications - *please contact us with your requirements.*



TJ108-20

Thermometers

Digital Thermometers

Indoor/Outdoor Thermometer

Ranges -10°C to +50°C (indoor), -50 to +70°C (outdoor), resolution 0.1°C (0.1°F) accuracy ±1°C (±1.5°F). With 12mm high, dual LCD readout. The upper display shows the temperature measured by the built-in sensor. The lower display shows the temperature measured by the water-resistant remote probe which is fitted to a 3 metre cable. A max./min. memory function is provided which allows the maximum and minimum recorded value for each sensor to be recalled and displayed; the user then has the option to reset. Overall 70 x 20 x 110mm W x D x H. Supplied with 1 x 1.5V AAA battery for operation.

TJ355-15 Indoor/outdoor thermometer

BL610-08 Battery, 1.5V AAA

Digital Maximum/Minimum Thermometer

For indoor or outdoor use. Range -20°C to +50°C switchable to -4°F to +122°F with reset. Displays current temperature and maximum and minimum temperatures since the last reset. With splash-resistant casing, overall 75 x 44 x 115mm W x D x H, with keyhole for hanging and battery.

TJ365-10 Digital max./min. thermometer

BL610-15 Battery, 1.5V AAA

Mini Infra-red Thermometer

For non-contact temperature measurement. With Min./Max. display modes. "Hold" and "Lock" functions.

Range: -33°C to +220°C x 0.1°C

Accuracy: ±1.5°C (0 to 50°C) otherwise ±2°C or 2%, whichever is larger (for rest of the range)

Emissivity: Fixed (E=0.95)

Response time: 1 second

With ergonomically designed casing, LCD readout, and 1 x 3V battery. Overall 68 x 37 x 18mm W x D x H. Weight 31g.

TJ380-40 Infra-red thermometer

BL590-25 Battery, 3V

Infra-red Thermometer

For non-contact temperature measurement. With Min./Max. display modes, and differential, averaging and "Hold" functions.

- ◆ Ergonomic, pistol-grip, hand-held design
- ◆ Over/under temperature audio/visual alarm
- ◆ Backlit LCD readout

Range	Temperature:	-10°C to +199.9°C x 0.1°C
Accuracy	Temperature:	±2°C
Measuring time		<1 second
Range distance : spot dia. ratio		12:1
Overall H x W x D	mm	174 x 40 x 72
Weight	g	180
Power		2 x 1.5V AAA batteries

As described. Supplied with carrying case and 2 x 1.5V AAA batteries.

TJ390-20 Infra-red thermometer

BL610-08 Battery, 1.5V AAA (2 required)

Digital memory thermohygrometer - see *HY390-20*.



TJ355-15



TJ365-10



TJ380-40



TJ390-20

Thermometers

Digital Thermometers, Certified and Traceable

Waterproof Thermometer, Certified

Hand-held, waterproof (to IP65 ingress level), digital thermometer, range -40 to +240°C x 0.1°C with 120 x 4mm L x diameter, fixed stainless steel probe, Max./Min. function, manufacturer's certificate of calibration (two point) traceable to national and international standards, including NPL and NIST and 1.4V LR48 button cell battery. Overall 20 x 15 x 200mm W x D x H weight: 33g.

TJ460-35 Waterproof thermometer, certified

Waterproof Folding Probe Thermometer, Certified

Hand-held, waterproof (to IP65 ingress level), digital thermometer, range -50 to +150°C x 0.1°C with 85 x 3.5mm L x diameter, folding stainless steel probe, Auto On/Off and Hold functions, manufacturer's certificate of calibration (two point) traceable to national and international standards, including NPL and NIST and 1.4V LR44 button cell battery. Overall 45 x 18 x 125mm W x D x H, weight: 85g.

TJ460-40 Waterproof thermometer, certified

BL610-04 Spare 1.4V LR44 battery

Twin reading Thermometer, Certified

Digital thermometer with attached probe and 2m cable with single display that can be toggled between unit and probe temperatures respectively. Ideal for monitoring fridges, freezers or outdoor/indoor temperatures simultaneously. Ranges -20 to +70°C (internal), -50 to +70°C (external probe) x 0.1°C resolution, with Max./Min.function, magnetic attachment and supplied with 1.5V AAA battery and manufacturer's certificate of calibration (two point) traceable to national and international standards including NPL and NIST. Overall 110 x 35 x 170mm W x D x H (unit) , weight 62g.

TJ460-50 Twin reading thermometer, certified

BL610-08 Spare 1.5V AAA battery



TJ460-35



TJ460-40



TJ460-50

Thermometers

Digital Thermometers

HANNA

Digital Thermometers, Checktemp

Temperature range:

-50 to +150°C. Resolution 0.1°C

Accuracy:

±0.3°C (-20 to 90°C), ±0.5°C (rest of range)

All-in-one unit with thermometer housing mounted on a stainless steel cased thermistor probe, on/off switch, LCD readout, calibration test switch and 1.4V battery. Overall 171 x 50 x 25mm L x W x H. Probe 105 x 3mm L x dia. Weight 50g.

TJ702-10 Checktemp C

BL610-04 Spare battery, 1.4V

Digital Thermometers, Checktemp 1

Ranges, resolutions and features as TJ702 but with stainless steel cased thermistor probe on 1 metre flexible lead for remote operation. Overall 106 x 58 x 19mm L x W x H. Probe 106 x 3mm L x dia. Weight 80g.

TJ705-12 Checktemp 1C

Digital Thermometer, Checktemp 4C

Temperature range: -50 to +220°C

Resolution:

0.1°C (-50 to 199.9°C),
1°C (rest of range)

Accuracy:

±0.3°C (-20 to +90°C), ±1%fsd (rest of range)

With hinged, stainless steel thermistor probe 117 x 3.5mm L x dia., folding into case when not in use. Automatic calibration check at switch-on. With 1 x 1.5V AA battery and wrist strap. Overall 165 x 50 x 20mm L x W x H (probe folded). Weight 100g.

TJ710-17 Checktemp 4C

Digital Thermometer, dual range, HI-935007

Dual measurement ranges:

-50 to +199.9°C. Resolution 0.1°C

+200 to +900°C. Resolution 1°C

-58 to +399.9°F. Resolution 0.1°F

+400 to +1650°F. Resolution 1°F

Accuracy:

±0.2% of full scale

Microprocessor based, with splashproof keypad. Includes temperature 'hold' facility and maximum/minimum temperature memory with twin-line LCD display featuring actual, min and max (since switch-on) temperatures. Readings can be user-selected in °C or °F. Overall 150 x 80 x 36mm L x W x H. Weight 300g. With fixed, Type K thermocouple probe and 3 x 1.5V AA batteries.

TJ720-85 HI-935007

BL610-15 Spare battery, 1.5V AA (3 required)

Digital Clinical Thermometer – see TG715.

Digital Hygrometers – see HY390/HY530.

Digital Thermometers

Ergonomically designed, high accuracy Type K thermocouple thermometers.

Dual measurement ranges:

-200 to +1371°C -328 to +2500°F

Resolution:

0.1°C/0.1°F <1000°C/1000°F

1.0°C/1.0°F >1000°C/1000°F

Accuracy:

±0.2% of full scale

Microprocessor controlled, with splashproof rubber keypad. Includes on/off switch, display "hold" key, °C/°F mode key, wrist strap and 9V battery. In addition TJ725-20 has a memory to register both highest and lowest values and separate recall keys. Overall dimensions 150 x 80 x 36mm L x W x H. Weight 235g. Requires, but does not include, type K thermocouple probe.

TJ725-10 HI-93530

TJ725-20 HI-93531, with memory

BL610-25 Spare battery, 9V

Thermocouple Probes Type K

For TJ725-10 and TJ725-20. With handle and 1 metre of flexible cable.

	Max. temp. °C	Length x dia. mm	Type
TJ733-10	900	120 x 3	Immersion. Air/liquid
TJ733-15	300	250 x 3	Air probe. Fast response
TJ733-17	900	125 x 3.2	Hypodermic insertion for most semi-solids
TJ733-22	650	205 x 5	Surface



TJ702



TJ710



TJ705



TJ725-10, TJ725-20 is similar



TJ720-85

Thermometers

Temperature Sticks



Temperature Sticks, Testo 905 series

Compact temperature measurement sticks with choice of immersion or surface type K thermocouple probes. Range -50 to +350°C, accuracy ±1% reading. With swivelling display head, large LCD readout, on/off key, auto-off function and 3 x 1.5V AAA batteries. Overall 230 x 37 x 36mm H x W x D. Weight 80g. Dimensions stated are probe length x diameter.

- TJ780-20** Testo 905-T1, immersion, 200 x 3mm
- TJ780-30** Testo 905-T2, surface, 150 x 12mm
- BL610-08** Spare battery, 1.5V AAA (2 required)

Penetration Thermometers, Testo 106

Penetration Thermometers, Testo 106

For rapid, spot checking of temperature in a variety of applications. Range -50 to +275°C x 0.1°C. With robust ABS casing, LCD readout, push button operation including 'hold' function, LED alarm indicator which operates should a set temperature range be exceeded or undershot, fixed stainless steel probe with protection sleeve and batteries. Also available as a set supplied with protective outer casing, giving IP67 level protection, and belt holster. Overall 215 x 34 x 19mm, L x W x H. Weight 80g.

- TJ785-24** Testo 106
- TJ785-26** Testo 106 set
- BL590-25** Spare battery, 3V (2 required)



TJ780-30

TJ780-20



TJ785

Thermometers

Digital Thermometers



Ergonomically designed, compact and easy-to-use digital thermometers. With infra-red data output to accessory printer, adjustable alarm settings, max./min. display and backlit LCD readout.

Model	110	720	925
Input	NTC sensor	Pt100 sensor	Type K thermocouple
Measurement range*	°C -50 to +150	-100 to +800	-50 to +1000
Accuracy (± 1 significant digit)	°C ±0.2 (-20 to +80) ±0.3 (rest of range)	±0.2% of reading (+100 to +800°C), ±0.2°C (rest of range)	±0.5°C ±0.3% of reading (-40 to +900°C), ±0.7°C ±0.5% of reading (rest of range)
Resolution	°C 0.1	0.1	0.1 (-50 to +199.9), 1.0 (rest of range)
Display	13mm LCD, with hold facility — all models		
Overall L x W x H	mm 182 x 64 x 40 — all models		
Power supply	9V PP3 battery with auto shut off — all models		

* This is the display capability of the instrument only, measurable range will depend on the thermocouple probe used.

Digital Thermometers, Testo

As described. With carrying case, instruction manual and 9V battery. Without probe.

TJ800-20 Testo 110

TJ810-30 Testo 720

TJ820-35 Testo 925

Spares and accessories for all models

BL610-25 Spare 9V PP3 battery

Thermal paper printer. With infra-red cordless data communication. Supplied with 4 x AA batteries and 1 roll of paper.

AN472-40 Printer

Rechargeable battery charger for AN472-40. With 4 x NiMH rechargeable AA batteries and built-in mains adapter requiring a 100-240V 50/60Hz single phase supply.

AN472-42 Battery charger/pack

AN472-45 Spare thermal paper for AN472-40, pack of 6 rolls.

BL610-15 Spare 1.5V AA battery for AN472-40 (4 required)

HY472-08 TopSafe protection boot, protects against impacts and dirt

Accessory probes

Stainless steel, with water-tight handles and 1.2 metre cables (except laboratory probes which are glass sheathed, have non water-tight handles and 1.5 metre cables). For applications as indicated.

Probe dimensions: 115 x 5mm L x diameter, except TJ812-20 which is 200 x 6mm L x diameter.

For meter	Probe range, °C	Immersion/ Penetration	Air	Surface*	Laboratory
TJ800-20	-50 to +150	TJ802-14	TJ802-17	TJ802-19	—
TJ810-30	-50 to +400	TJ812-12	TJ812-15	TJ812-18	TJ812-20
TJ820-35	-60 to +400	TJ822-10	TJ822-17	TJ822-19*	—

*This probe has a 12mm diameter flat tip with sprung sensor strip and has a range of -60 to +300°C.



TJ800



TJ820 in use, TJ810 is similar

Thermometers

Mini Datalogger 174T



Compact, economical, single channel datalogger for temperature monitoring in various applications.

- ◆ Non-volatile memory, even when battery exhausted
- ◆ Internal NTC thermistor sensor
- ◆ Conforms to EN12830
- ◆ Large LCD readout with alarm and battery status indicators
- ◆ Data transfer via USB interface which also enables programming
- ◆ Push-button start
- ◆ IP65 protection class casing
- ◆ Battery powered, with easy replacement

Range x resolution	°C	-30.0 to +70.0 x 0.1
Accuracy	±°C	0.5
Maximum storage		16,000 readings
Measuring time cycle		Adjustable 1 minute to 24 hours
Overall, L x W x H	mm	59 x 37 x 16
Weight	g	25
Power supply		2 x CR2032 lithium battery giving approximately 500 days operation

As described. With wall holder, USB interface port, receiver and cable, and 2 x batteries. Requires Comsoft basic download/programming software (free, internet download).

- TJ847-20** Testo 174T set
- TJ847-24** Accessory Testo 174T logger only
- HY618-24** Accessory interface port receiver and cable
- BL590-15** Spare battery (2 required)



TJ847-20 in use

Dataloggers, 175, 176



Long term, reliable temperature loggers with robust ABS casing offering either IP65 or IP68 protection, push-button start, SD card or USB data connection and flexible data handling options.

- Model 175 T1 Single channel, with internal NTC sensor and LCD readout
- Model 175 T2 Two channel, with internal NTC sensor, external NTC probe socket for use with accessory probes and LCD readout
- Model 176 T1 Single channel, expanded memory version, with internal sensor, but without display
- ◆ Internal interfaces for both USB or SD card data collection
- ◆ Measuring time cycle adjustable from 10 seconds to 24 hours (175 series) or 1 second to 24 hours (model 176)

Model		175 T1	175 T2	176 T1
Ranges	internal sensor	°C -35 to +55	-35 to +55	-35 to +70
	external sensor	°C —	-40 to +120	—
Resolution	°C	0.1 — both models		0.01
Memory	readings	1 million - both models		2 million
Protection rating		IP65 - both models		IP68
Overall, L x W x H	mm	53 x 27 x 89	53 x 27 x 89	63 x 33 x 103
Weight	g	150	150	260
Battery life (average)	years	>3	>3	>8

As described. Supplied with both USB and SD card data collection interfaces, wall holder, infra-red data transfer/control port, battery and calibration protocol. Requires, but is not supplied with, either an accessory USB cable or SD card for data transfer.

- TJ847-60** Testo 175 T1
- TJ847-65** Testo 175 T2
- TJ847-80** Testo 176 T1

Accessories

Accessory probes for TJ847-65

With 1.5m lead. Dimensions are probe length x diameter.

- TJ802-14** Immersion, 110 x 4mm
- TJ802-17** Air, 110 x 4mm
- TJ802-20** Laboratory, glass sheathed, 200 x 6mm

- TJ847-87** USB cable for connecting 175 and 176 dataloggers to the user's PC

Comsoft 4 Professional software

With data handling, database, graphical and trend analysis functions for Windows™ OS.

- TJ847-98** Comsoft 4

SD cards - local purchase recommended



TJ847-60



TJ847-65



TJ847-80

Tiles

Tiles

Cavity Tile/Plate, plastic

White polypropylene. With 12 cavities. Suitable for spotting applications. 115 x 95mm. Supplied singly.

TJ995-10 Cavity tile, plastic

Cavity Tile/Plate, ceramic

White glazed ceramic with 12 cavities. Suitable for spotting applications. 115 x 90mm. Supplied singly.

TJ995-25 Cavity tile, ceramic

Flat Tile/Plate, ceramic

White ceramic glazed top 150 x 150mm. Supplied in a pack of 5.

TJ998-30 Flat tile, ceramic

Ceramic Plates for bench protection – see *Mats section*.

Microtest and Multiwell Plates – see *Tissue Culture and Microtitration sections*.

Support Plates for use with retort stands – see *Stands section*.

Mats

Mats, ceramic fibre

Provide heat protection to benches. An alternative to asbestos bench mats. Approximately 5mm thick. Supplied singly.

	Size, mm
MB800-15	150 x 150
MB800-22	225 x 225
MB800-30	300 x 300

Mats, PTFE

5mm thick, white PTFE. Operating temperature range -200°C to +250°C. Note: DO NOT EXPOSE TO DIRECT HEAT. Supplied singly.

	Size, mm
MB810-25	150 x 150

Mats, Ceran®

Ceran® is a highly resistant, glass ceramic material. Operating temperature range -200 to +700°C, allowing the mat to be used as a heating surface in place of a wire gauze or fireclay triangle. Care should be taken to ensure that the maximum operating temperature is not exceeded when using with a Bunsen burner. Supplied in packs of 10.

	Size, mm
MB820-10	135 x 135
MB820-20	155 x 155
MB820-30	175 x 175

Ceran® is a registered trade mark of Schott Glaswerk.

Bench Protection Sheets – see *Safety section*.



TJ995-10



TJ995-25



TJ998-30



MB800



MB810



MB820 in use

Tissue Culture

Culture Tubes, Glass

Dimensions are approximate length x o.d.

Culture Tubes, Comet, Disposable

Borosilicate glass. Round bottom, rimless. Without cap. Supplied in packs as indicated.

	Size, mm	Pack qty.
TP160-13	75 x 10	1000
TP160-18	75 x 12	1000
TP160-28	100 x 13	1000
TP160-33	100 x 16	1000
TP160-38	125 x 16	1000
TP160-43	150 x 16	1000

Culture Tubes, Corning, Disposable

Borosilicate glass. Without caps. Supplied in packs as indicated.

	Ref.	Size, mm	Pack qty.
Round bottom, rimless			
TP180-15	99445-10	75 x 10	1000
TP180-20	99445-12	75 x 12	1000
TP180-25	99445-15	85 x 15	1000
TP180-30	99445-13	100 x 13	1000
TP180-35	99445-16	100 x 16	1000
TP180-40	99445-16X	125 x 16	1000
TP180-45	99445-16XX	150 x 16	1000
TP180-50	99445-18	150 x 18	500
TP180-55	99445-20	150 x 20	500
Round bottomed, screw neck			
TP190-25	99449-13	100 x 13	1000
TP190-35	99449-16	100 x 16	1000
TP190-40	99449-16X	125 x 16	1000
TP190-45	99449-20	125 x 20	500
TP190-50	99449-16XX	150 x 16	1000
TP190-55	99449-20X	150 x 20	500
Flat bottomed, screw neck			
TP215-40	99448-16	125 x 16	1000

Accessory Screw Caps for TP190/TP215

Supplied in packs as indicated.

	Ref.	To fit tube diameter	Pack qty.
Disposable with rubber liner			
TP220-13	99999-13	13mm	1000
TP220-16	99999-15	16mm	1000
TP220-20	99999-18	20mm	1000
Autoclavable with PTFE faced rubber liner			
TP224-13	9998-13	13mm	288
TP224-16	9998-15	16mm	288
TP224-20	9998-18	20mm	192

Culture Tubes, Pyrex

Borosilicate glass. With SVL polybutylene terephthalate (PBT) screw-cap, having an inert PTFE-lined, rubber disc insert, resistant to repeated dry heat and steam sterilisation cycles (up to 180°C). Supplied singly.

	Ref.	Size, mm	Cap size
TP250-25	1636/24	100 x 14	13
TP250-30	1636/26	100 x 16	15
TP250-35	1636/32	100 x 18	18
TP250-40	1636/36	100 x 20	20
TP250-45	1636/42	100 x 26	25
TP250-55	1636/04	125 x 16	15
TP250-65	1636/30	160 x 16	15
TP250-70	1636/34	180 x 18	18
TP250-75	1636/38	200 x 20	20
TP250-80	1636/10	200 x 22	22
TP250-85	1636/44	200 x 26	25

Spare caps and inserts for TP250-series

Supplied singly.

	Cap size
SW460-13	13
SW460-15	15
SW460-18	18
SW460-20	20
SW460-22	22
SW460-25	25

SVL Polybutylene Terephthalate (PBT) Caps

SW460-13	13
SW460-15	15
SW460-18	18
SW460-20	20
SW460-22	22
SW460-25	25

Inserts for Caps

SW464-13	13
SW464-15	15
SW464-18	18
SW464-20	20
SW464-22	22
SW464-25	25



TP160
TP180

TP190
with cap

TP215
with cap

TP250

Tissue Culture

Culture Tubes, Plastic

Dimensions are approximate length x o.d.

Culture Tubes, Corning

Available in polystyrene (PS) or treated polystyrene (TPS) for anchorage dependent cells. Sterilised by gamma irradiation. TP320-37 has a screw cap and is supplied loose in bags of 25, TP320-40 is supplied with screw cap in 50-tube polyfoam racks, both within outer packs as indicated.

	Ref.	Material	Size, mm	Pack qty.
TP320-37	430157	PS	125 x 16	500
TP320-40	430172	TPS	125 x 16	500

Culture Tubes, Elkay

Polystyrene, with printed graduations and fitted with "push-on" polyethylene caps for gassing or gas-tight use. Sterilised by gamma irradiation. Supplied in trays of 25 within outer packs as indicated.

	Ref.	Material	Size, mm	Pack qty.
TP367-30	2058	PS	75 x 12	500
TP367-40	2001	PS	100 x 17	500

Safety Notes

Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen.

It is recommended that insulated gloves and face protection be worn when inserting or removing cryovials from cryogenic storage.

Incubators – see *IN060* et seq.

Slow speed mixer – see *CM470*.

Orbital shaker – see *SE745*.

Inset: TP367



TP320

Cryogenics

Cryogenic Vials, Corning

Polypropylene with cap, permanent marking spot and graduations. Withstand temperatures down to -196°C . Sterilised by gamma irradiation. Supplied in sterile packs of 50 within the outer packs of 500. Self-standing vials have an integral skirt.

	Ref.	Cap fitting	Capacity
With external cap			
TP445-11	430658	Screw	1.2ml self standing
TP445-14	430659	Screw	2ml self standing
TP445-15	430661	Screw	2ml
TP445-17	430662	Screw	4ml self standing
TP445-18	430663	Screw	5ml self standing
With internal plug seal cap			
TP445-20	430487	Screw	1.2ml self standing
TP445-24	430488	Screw	2ml self standing
TP445-27	430489	Screw	2ml
TP445-32	430490	Screw	4ml
TP445-35	430491	Screw	4ml self standing
TP445-40	430492	Screw	5ml
TP445-43	430656	Screw	5ml self standing

Accessories for TP445

Vial rack. Polypropylene. Holds 50 cryogenic vials. Supplied in a pack of 2.

TP447-08 431131

Cryogenic Workstation

ABS plastic. Includes an ice bath, self-locking vial rack, an open area for odd size tubes and alphanumeric identification markings. Holds 30 cryogenic vials.

TP447-30 430525

Coloured inserts for Cryogenic Vials

These inserts are unsuitable for TP445-10 and TP445-12. Supplied in an inner pack of 50, containing 10 each white, blue, red, green and yellow inserts, within an outer pack of 500.

TP447-52 430499

Cryogenic Boxes

ABS plastic. To hold 81 x cryogenic vials TP445 with capacities as indicated. With clear, drop-on lid, with printed numeric grid to aid sample identification. Supplied in packs of 10.

	Ref.	For vials, ml
TP447-60	431119	1 to 2
TP447-65	431120	4 to 5



TP445 series with TP447

Tissue Culture

Cryoware



Cryovials

Polypropylene with polyethylene closure. Skirted and self-standing. With marking area and fill line. Sterilised by irradiation. Supplied in sleeves as indicated.

	Ref.	Cap. ml	Sleeve qty.
TP453-09	5000-0012	1.2	25
TP453-12	5000-0020	2	25
TP453-14	5000-0050	5	10

Cryovial Holder

Polycarbonate. Accommodates fifty TP453 vials in 5 x 10 array. With identification letters and numbers moulded in the upper surface. Can be autoclaved. Overall 197 x 102 x 28mm high.

TP453-20 5030-0510

Cryovials, System 100

Space saving design for use in the System 100 CryoBox. Polypropylene with polyethylene closure. Skirted and self standing. With marking area and fill line. Sterilised by irradiation.

	Ref.	Cap. ml	Pack qty.
TP453-24	5000-1012	1	500
TP453-27	5000-1020	1.5	500

Cryo Freezing Container

Polycarbonate outer container with HDPE closure and cryovial holder. When used as instructed with isopropyl alcohol and a mechanical freezer it will provide the 1°C critical cooling rate required for successful cell cryopreservation and recovery. The rigid vial holder, which accepts up to 18 x 1.2ml or 2ml cryovials (TP453-10 and TP453-13) prevents vials contacting the alcohol. Moulded numbers provide quick vial identification. The vial holder floats in a water bath for thawing. Overall 86 x 117mm H x D.

TP453-37 5100-0001

CryoBoxes™

Polycarbonate. For ultra-low temperature storage of vials. Identification numbers on box and lid are keyed so that grid numbers match. Overall:

TP453-40 76 x 76 x 51mm high TP453-45 133 x 133 x 51mm high
TP453-47 133 x 133 x 95mm high

	Ref.	Array
TP453-40	5025-0505	5 x 5*
TP453-45	5026-0909	9 x 9*
TP453-47	5027-0909	9 x 9**

* For 1.2 and 2ml vials

** For 5ml vials

CryoBox™, System 100

Polycarbonate. For ultra-low temperature storage of up to 100 x TP453-24/-27 vials. With matching identification numbers on box and lid in 10 x 10 grid array. Overall 133 x 133 x 51mm high. Supplied singly.

	Ref.	Array
TP453-50	5026-1010	10 x 10

Microcentrifuge Tube Boxes

Polycarbonate. Provides safe storage of filled microcentrifuge tubes. The transparent lid allows viewing of the tubes. Can be autoclaved. Must not be immersed in liquid nitrogen. Overall 52 x 133 x 133mm H x W x D.

	Ref.	For tubes
TP453-54	5055-5005	81 x 0.5ml
TP453-56	5055-5015	64 x 1.5ml

Safety Note

It is recommended that insulated gloves and face protection be worn when inserting or removing cryovials from freezer storage. Extreme care must be exercised when using any screw cap vials with liquid nitrogen.

continued on next page



TP453-20 with vials TP453



CryoBoxes



TP453-37 with vials TP453



TP453-54

Tissue Culture

Cryoware continued

CryoCane™

Aluminium. Holds five x 1, 1.2, 1.5 or 2ml cryovials for storage in Dewar-type liquid nitrogen freezers. Overall length 290mm. It is recommended that the cane be enclosed in a sleeve TP453-65 for extra security. Supplied singly.

TP453-60 5015-0001

CryoSleeve™

Transparent PVC. For enclosing cane to provide extra security during handling and storage. Overall 273mm. Supplied singly.

TP453-65 5016-0001

Cryoware Labels

Plain cloth labels 25 x 50mm which adhere to plastic or cardboard storage boxes. Designed for use at ultra-low temperatures. Supplied in pack of 10 sheets of labels with each sheet containing 20 labels.

TP455-25 5040-0002

Cryoware Marker Set

For marking labels. Will not fade at ultra-low temperatures. Supplied in pack containing one each fine point pens in black, blue, green and red.

TP455-30 6313-0010

Cryo-aprons and Gloves – see SA260 and SA720 series in the Safety section.

Dewar Storage – see DE710 to DE760 in the Dewars section.

Dry Ice Makers – see IC410.

Goggles and Shields – see SA952 to SA980 and SB970/SB973 in the Safety section.

Liquid nitrogen refrigerators – see CX800/CX810.

Minus 80°C Freezers – see RG400/RG415 in the Refrigeration section.

Safety Note

It is recommended that insulated gloves and face protection be worn when inserting or removing cryovials from freezer storage. Extreme care must be exercised when using any screw cap vials with liquid nitrogen.



CryoCanes and Sleeves

CryoBox Racks, vertical

Stainless steel. With top handle. For use in chest freezers.

For CryoBox TP453-40

Cat. No.		TP455-50	TP455-53
Shelves		4	9
Overall, mm	W	83	83
	D	84	84
	H	225	502

TP455-50 5035-0004

TP455-53 5035-0009

For CryoBox TP453-45

Cat. No.		TP455-60	TP455-63
Shelves		4	9
Overall, mm	W	140	140
	D	143	143
	H	225	502

TP455-60 5036-0004

TP455-63 5036-0009

For CryoBox TP453-47

Cat. No.		TP455-70	TP455-73	TP455-76
Shelves		2	4	7
Overall, mm	W	140	140	140
	D	143	143	143
	H	206	406	705

TP455-70 5037-0002

TP455-73 5037-0004

TP455-76 5037-0007

CryoBox Racks, horizontal

Stainless steel. With side handles. For use in upright freezers. For CryoBox TP453-45.

Cat. No.		TP456-10	TP456-13
Shelves		12 (4 x 3)	16 (4 x 4)
Overall, mm	W	143	143
	D	445	590
	H	225	225

TP456-10 5038-4322

TP456-13 5038-4422



TP456 in use



CryoBox Racks, vertical

Tissue Culture

Storage Boxes

Storage Boxes

Rigid cardboard, with drop on lid. Suitable for use at freezer temperatures down to -85°C. Overall 133mm x 133mm x W x D. Choice of height and colour, as indicated. Accessory grid dividers are available to accommodate a variety of tube sizes. Supplied singly.

	Box height, mm	Colour
TP458-02	50	White
TP458-04	50	Blue
TP458-06	50	Red
TP458-08	50	Green
TP458-10	50	Yellow
TP458-22	75	White
TP458-24	75	Blue
TP458-26	75	Red
TP458-28	75	Green
TP458-30	75	Yellow
TP458-42	100	White
TP458-44	100	Blue
TP458-46	100	Red
TP458-48	100	Green
TP458-50	100	Yellow

Accessory Grid Dividers for TP458-02 to TP458-50 boxes only

Plain white card. With compartments to hold tube sizes and to fit box heights as indicated. Supplied singly.

	Grid array	To hold tubes, mm	For box height, mm
TP458-61	7 x 7	16	50
TP458-63	8 x 8	14	50
TP458-65	9 x 9	13	50
TP458-67	10 x 10	12	50
TP458-71	7 x 7	16	75
TP458-73	8 x 8	14	75
TP458-75	9 x 9	13	75
TP458-77	10 x 10	12	75
TP458-81	7 x 7	16	100
TP458-83	8 x 8	14	100
TP458-85	9 x 9	13	100
TP458-87	10 x 10	12	100



TP458-02 to TP458-50 boxes



TP458-08 in use with TP458-65

Tissue Culture

Storage Boxes

Storage Boxes

Translucent, polypropylene sectioned boxes, autoclavable at 121°C for 15 minutes and suitable for use at temperatures down to -85°C. Bases and lids have raised rims to enable boxes to be securely stacked.

Rectangular boxes, 50-section

As described, with drop-on lid. Accommodate up to 50 x 0.5 to 2ml microcentrifuge tubes or cryovials with maximum height 55mm. Overall 144 x 75 x 55mm L x W x H maximum. Colour coded as indicated. Supplied singly.

	Box colour
TP460-09	Natural
TP460-12	Pink
TP460-15	Green
TP460-18	Blue
TP460-20	Yellow

Square boxes, 100-section

As described, with hinged lid. Accommodate up to 100 x 2ml microcentrifuge tubes or cryovials with maximum height 53.5mm. An all black version is available for light sensitive samples or for easy batch identification. Overall 140 x 140 x 60mm L x W x H. Supplied singly.

	Base colour	Lid colour
TP462-04	Natural	Natural
TP462-09	Natural	Red
TP462-14	Natural	Green
TP462-19	Natural	Blue
TP462-23	Natural	Yellow
TP462-47	Black	Black

Rack Inserts

Polypropylene. For use with square 100 section boxes TP462-series or as stand-alone racks. Available in two capacities to hold up to 64 x 0.5ml or 1.5ml microcentrifuge tubes in 8 x 8 configuration. Autoclavable at 121°C for 15 minutes and suitable for use at temperatures down to -85°C. With locating rings on the top surface to allow stacking, moulded-in alphanumeric references for easy sample identification and available in a choice of colours. Supplied singly.

	Colour
For 0.5ml microtubes	
TP464-12	Natural
TP464-15	Red
TP464-18	Green
TP464-21	Blue
TP464-24	Yellow

For 1.5ml microtubes

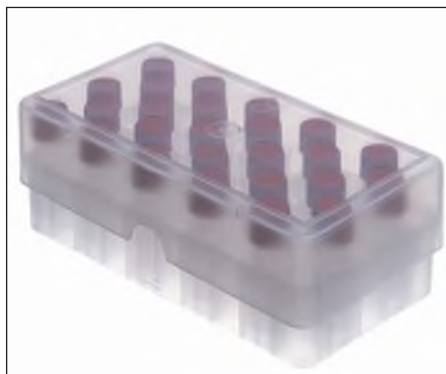
TP464-62	Natural
TP464-65	Red
TP464-68	Green
TP464-72	Blue
TP464-75	Yellow

Cryogenic vial boxes

Polycarbonate. For ultra-low temperature storage of most types of 1 to 2ml capacity cryogenic vials in 9 x 9 standard array. Suitable for use between -196°C and 121°C (autoclavable at 121°C for 20 minutes). With clear lid printed with numeric identification key and choice of coloured base. Overall 133 x 133 x 52mm W x D x H. Supplied in packs of 5.

	Base colour
TP465-20	Blue
TP465-25	Green
TP465-30	Orange
TP465-35	White
TP465-40	Yellow

Freezer racks suitable for use with TP460/TP462/TP465 boxes can be found overleaf.



TP460-09 in use



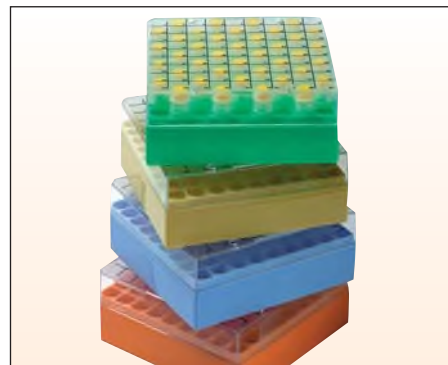
TP462 in use



TP464 in use with TP462



TP462-47 in use



TP465 in use

Tissue Culture

Freezer Racks

Chest Freezer Racks

Stainless steel. With handle and retaining bar (to secure boxes during transportation). Dimensions stated are overall W x D x H. Supplied singly and empty.

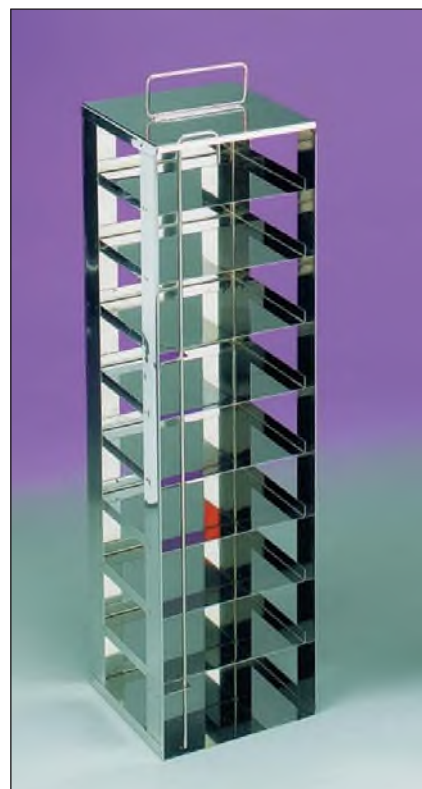
	Dimensions, mm	Shelves
TP466-32	150 x 160 x 539	8
TP466-36	150 x 160 x 605	9

Stainless steel. For use particularly with cryogenic boxes up to maximum dimensions 135 x 135 x 51mm L x W x H. With handle and retaining bar (to secure boxes during transportation). Dimensions stated are overall W x D x H. Supplied singly and empty.

	Dimensions, mm	Shelves
RG416-90	140 x 140 x 335	6
RG416-95	140 x 140 x 610	11

Note

These racks are not freezer-specific and therefore we suggest that dimensions are checked before ordering.



TP466, RG416 are similar

Inventory Systems, Lab Tower

Flexible, multi-deck storage rack/inventory tower systems to hold 1.5ml conical micro tubes, cryogenic vials and other tubes up to 12mm o.d. with maximum height 55mm, in removable racks of 81 (9 x 9 format). Ideal for benchtop transport, or freezer storage, and wet/dry incubation. Polycarbonate construction with very wide operating temperature range, -196°C to +121°C. The small 16 x 16cm footprint minimises valuable space requirements. The internal dimensions of each deck are 142 x 142mm and the standard rack can be replaced by any storage rack, tray or box up to these dimensions and maximum 60mm high. Each deck platform has a front lip to secure the rack or box and the top deck has a carry-grip* mounted on it to aid portability. Available as standard tower systems comprising 5, 8 or 10 decks with or without standard racks, or alternatively as components for self assembly by the user.

Inventory Systems, Lab Tower, assembled

As described. The dimension stated is overall assembled height. All systems are 160 x 160mm W x D. Supplied singly.

	Decks	With racks	Height, mm
TP468-05	5	✓	340
TP468-07	5	x	340
TP468-16	8*	✓	660
TP468-18	8*	x	660
TP468-27	10*	✓	820
TP468-29	10*	x	820

*The 8 and 10-deck systems are supplied with 2 carry-grips to allow "splitting" of the towers.

Inventory System components

TP468-72 Lab Tower decks (supplied with two carry-grips), pack of 16

TP468-76 81-place polycarbonate tube racks, pack of 10

TP468-78 Carry-grips, pack of 5

Dry-ice makers – see IC410.

Igloo ice containers and trays – see IC475.

Storage boxes – see TP460/TP462.

Ultralow freezers – see RG400/IRG415.



TP468 in use

Tissue Culture

Dishes

Dishes, Corning

Polystyrene. Treated to ensure reproducible growth and adhesion. Optically clear. All dishes are triple vented, except where indicated and have stacking rims. Supplied in packs as indicated.

	Ref.	Size, mm	Pack qty.
TP475-17	430165	35 x 10	500
TP475-30	430166	60 x 15	500
TP475-33	430196	60 x 15 gridded	500
TP475-48	430293*	100 x 20	480
TP475-50	430167	100 x 20	500
TP475-65	430599†	150 x 25	60
TP475-80	431110††	245 x 25	16

* With 6 pack carrier † 6 vents †† Square dish 245 x 245mm

Dishes, Corning

Polystyrene, untreated for non-anchorage dependent cell culture. Triple vented, except where indicated. Supplied in packs as indicated.

	Ref.	Size, mm	Pack qty.
TP477-15	430588	35 x 10	500
TP477-28	430589	60 x 15	500
TP477-31	3261**	60 x 15	20
TP477-34	3262**	100 x 15	20
TP477-47	430591	100 x 20	500
TP477-64	430597†	150 x 25	60
TP477-79	431111††	245 x 25	16

† 6 vents. †† Square dish 245 x 245mm. **With ultra-low attachment surface.

Spatulas, Corning

Antistatic, modified polystyrene. Single-use, disposable spatulas designed to reduce time in repetitive, contamination-free, sampling applications in quality assurance and research labs, eliminating the need for sterilisation of, or the risk of contamination from, reusable spatulas. With spoon one end and choice of styles at the other. Supplied sealed individually in a sterile sleeve within outer packs of 100, certified non-pyrogenic and RNase- and DNase-free.

	Ref.	Style
TP493-06	3003	Tapered blade/spoon
TP493-09	3004	Small spoon/spoon
TP493-12	3005	Round end/spoon
TP493-15	3006	V-scoop/spoon
TP493-18	3007	Flat-end/spoon



TP475/TP477 series



TP493

Flasks

Flasks, Corning

Polystyrene. Treated surface for optimum cell adhesion and growth. With wide locating rims and graduated volume markings. Sterilised by gamma irradiation. With screw cap. Pe = polyethylene with plug seal; Ph = Phenolic. The vented cap includes a hydrophobic acrylic copolymer membrane; pore size 0.22 µm. Supplied in packs as indicated.

	Ref.	Culture area	Cap	Pack qty.
Canted neck				
TP525-10	430372	25cm ²	Ph	500
TP525-15	430168	25cm ²	Pe	500
TP525-48	430824	150cm ²	Ph	50
TP525-50	430823	150cm ²	Pe	50
TP526-12	430639	25cm ²	Pe Vented	200
TP526-47	430825	150cm ²	Pe Vented	50
Straight neck				
TP527-24	3275	75cm ²	Ph	100
Angled neck				
TP527-50	431079	175cm ²	Pe	50
TP527-52	431085	175cm ²	Ph	50
TP527-54	431080	175cm ²	Pe Vented	50
TP527-62	431081	225cm ²	Pe	25
TP527-70	431082	225cm ²	Pe Vented	25

flasks continued on next page

Cell Scrapers, Corning

For aseptic harvesting of tissue culture cells from flat surface flasks and dishes. A flat blade is pivoted on the offset stem head to facilitate ease of use, maximise harvest volumes and minimise cell damage. Sealed individually in a sterile sleeve within outer packs of 100.

	Ref.	Blade length, mm	Handle length, mm
TP535-20	3010	18	250
TP535-40	3011	30	390



TP525/TP526/TP527 series



TP535 series

Tissue Culture

Flasks continued

Erlenmeyer Flasks, Corning

Polycarbonate with polypropylene adjustable screw cap which can provide a gassing or a leak-proof seal. Transparent and graduated. Sterilised by gamma irradiation. Sealed singly in a sterile sleeve within outer packs as indicated.

	Ref.	Capacity ml	Neck size, mm	Pack qty.
Plug Seal				
TP550-15	430421	125	26	50
TP550-20	430183	250	31	50
TP550-25	430422	500	43	25
TP550-30	431146	1000	43	25
Vented cap				
TP552-15	431143	125	26	50
TP552-20	431144	250	31	50
TP552-25	431145	500	43	25
TP552-30	431147	1000	43	25

Culture Flasks, disposable, Corning

Polycarbonate with wide mouth and flat screw caps in polypropylene. Available in Erlenmeyer or Fernbach styles. With or without baffles moulded into the base. Supplied singly in a sterile sleeve within outer packs as indicated.

	Ref.	Capacity ml	Neck size, mm	Baffled	Pack qty.
Erlenmeyer					
TP554-40	431255	2000	50	—	6
TP554-42	431256	2000	50	✓	6
Fernbach					
TP554-80	431252	3000	60	—	4
TP554-85	431253	3000	60	✓	4

Culture Flasks, baffled, Nalgene

Tough polycarbonate flasks with indented baffles which increase mixing when trypsinizing and aerating in a variety of processes such as cell culture growth and fermentation. Supplied in packs as indicated.

	Ref.	Capacity ml	Pack qty.
TP575-13	4110-0250	250	4
TP575-16	4110-0500	500	4
TP575-19	4110-1000	1000	2

Culture Flasks, Pyrex, 1134/1135/1138 Series

Erlenmeyer (conical) or Fernbach shape. Suitable for culture preparation. Available either plain or with baffled sides to increase agitation during shaking of culture media. With 38mm o.d., rimless tube neck (except 1134-series which are rimmed) for use with TP587-series closures, approximate graduations and large marking area.

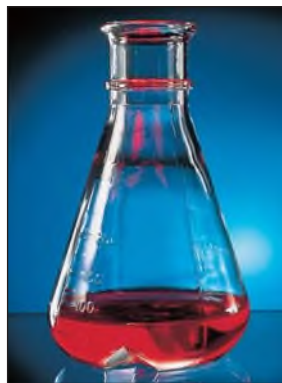
	Ref.	Capacity ml
Erlenmeyer, baffled		
TP585-05	1134/08	250
TP585-10	1134/10	500
TP585-15	1134/12	1000
TP585-20	1134/14	2000
Erlenmeyer, plain		
TP585-30	1135/14D	250
TP585-35	1135/20D	500
TP585-40	1135/26D	1000
TP585-45	1135/30D	2000
Fernbach, baffled		
TP585-80	1138/10	2800

Closures for 1135- and 1138-series flasks only. 38mm i.d. Suitable for autoclaving.

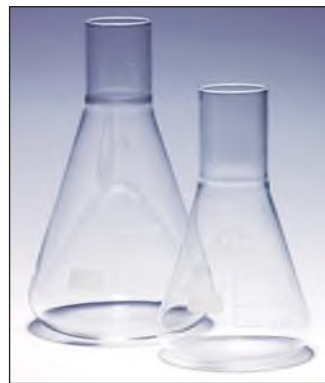
TP587-12 Aluminium, pack of 10
TP587-15 2-position polypropylene, supplied singly



TP550, TP552 are similar



TP575



TP585-30 to -45



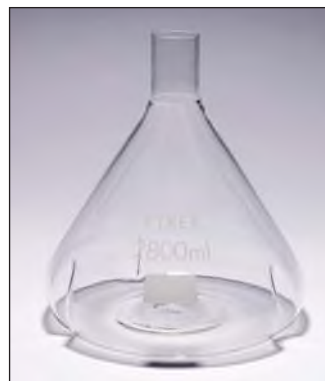
TP587-12 and -15



TP554



TP585-10 to -20



TP585-80

Tissue Culture

Multiwell Plates

Multiwell Plates, Corning

Optically clear polystyrene (except TP680-40 which is polypropylene) treated for optimal cell attachment (except TP680-26, -28 and -40 which are untreated). Optically flat. TP680-40 is additionally DMSO-, ethanol- and methanol-resistant. Sterilised by gamma irradiation (except TP680-26, -28 and -40). Each well individually numbered. A raised rim on each cell reduces the risk of accidental contamination. Supplied with non-reversible lids (except TP680-26, -28 and -40) which have condensation rings to reduce evaporation. Sealed in a sterile sleeve within packs, as indicated.

	Ref.	No. of wells	Sleeve qty.	Pack qty.
Flat bottom well				
TP676-05	3516	6	1	50
TP676-06	3471**	6	1	24
TP676-07	3513	12	1	50
TP676-11	3526	24	1	50
TP676-13	3473**	24	1	24
TP676-14	3548	48	1	100
TP676-18	3595†	96	1	50
TP676-20	3997	96	10	50
TP676-22	3598	96	5	100
TP676-25	3696*	96	1	50
TP676-27	3474**	96	1	24
U-bottom well				
TP677-26	3799	96	1	50
U-bottom well without lid. Untreated polystyrene				
TP680-26	3795	96	25	100
TP680-28	3798	96	25	100
U-bottom well without lid. Untreated polypropylene				
TP680-40	3365	96	25	100
V-bottom well				
TP682-18	3894	96	1	50
Lid only for 96-well plates				
TP650-59	3098		1	100

†Supplied with low-evaporation lid.

* This is a 96 half-well plate.

**With ultra-low attachment surface, hydrogel.

Tissue Culture Filters

4, 13 and 25mm Syringe Disc Filters – see FC370 to FC390.

Complete Membrane Filter Units – see FD244.

Microplate Block Heaters and Coolers – see BK205, MN663-14/-18 and MW340

Microplate Incubators – see *Microtitration*.

Microplate Washers and Reader – see MN615/MN625.

Multichannel Pipettors – see PR160/PR164 series.

Microplate sealing film and sealers – see MN380/MN385 and MN400/MN405.



TP676

Tissue Culture

Multiwell Plates



Optically clear or opaque coloured, polystyrene 96-well plates with lid. Sterilised by beta radiation. SBS format ensures compatibility with robotic systems. With choice of well profile; U-, V-, F- (flat), or C- (flat with radiused corners). Plasma surface treatments available.

cellGrade™

Standard surface for culture of adhesive cell lines. Chemical groups on the surface of the plate bind to serum compounds, stimulating immobilised cell growth.

cellGrade™ plus

This surface is a Poly-D-Lysine equivalent, with optimised surface characteristics, enabling culture of the most fastidious cell lines, with comparable growth to Poly-D-Lysine surfaces.

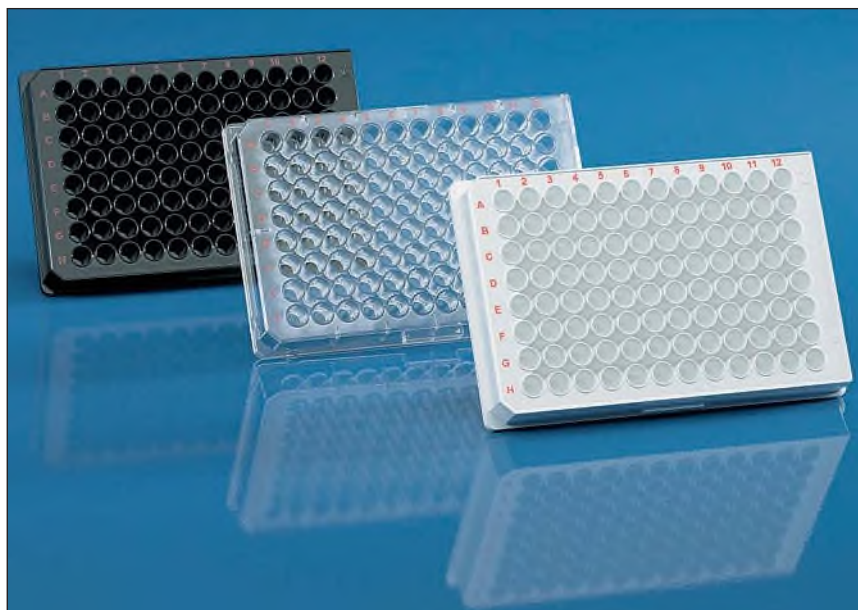
inertGrade™

Inhibits cell binding, ideal for working with cell suspensions or stem cells where cell adhesion is not desired.

As described. Supplied individually sleeved in packs of 50.

	Colour*	Well profile	Well volume, µl
cellGrade™ surface			
TP690-05	T	U	330
TP690-10	T	V	360
TP690-15	T	F	350
TP690-30	W	F	350
TP690-45	B	F	350
TP690-55	W/T	F	330
TP690-60	B/T	F	330
cellGrade™ plus surface			
TP692-15	T	F	350
TP692-55	W/T	F	330
TP692-60	B/T	F	330
cellGrade™ premium surface			
TP694-15	T	F	350
TP694-55	W/T	F	330
TP694-60	B/T	F	330
inertGrade™ surface			
TP697-05	T	U	330
TP697-15	T	F	350
TP697-55	W/T	F	330
TP697-60	B/T	F	330

*Key: T = transparent, W = white, B = black, /T = transparent base.



TP690/TP697-series

Tissue Culture

Flasks, Culture, Roux

Culture Flasks, Pyrex 1350 series

Roux culture. With fire polished, offset neck.

	Ref.	Capacity ml	Neck
FK502-37	1350/04	600	Offset
FK502-42	1350/06	1200	Offset

Cylindrical Culture Flasks

Culture vessels

A range of cylindrical, flat bottom vessels suitable for fermentation and certain culture work. When fitted with flat flange/multi-socket lids they will accommodate large stirrers and thermometers. The lids also permit the addition of solutions and gases and facilitate sampling. Culture vessels are not suitable for use under vacuum or pressure.

	Nom. cap. ml	Flange bore mm	Approx. overall height mm	Approx. dia. of body mm
QFV500	500	75	130	80
QFV1L	1000	100	160	105
QFV2L	2000	100	225	133
QFV5L	5000	100	290	181
QFV10L	10000	100	375	227
QFV20L	20000	100	465	288

Proculture® spinner flasks - see next page



FK502



QFV:

Tissue Culture

Biological Stirrers



Suitable for microcarrier and suspension cell culture. Uniform suspension of the microcarrier beads in the medium is achieved by a gentle stirring action which aids attachment and promotes circulation of the medium around the cells on each microcarrier bead to encourage a high rate of growth.

- ◆ Stainless steel stirrer platform
- ◆ Siliconised borosilicate glass culture vessels and stirrer rods
- ◆ Negligible heat input to culture vessels
- ◆ Can be operated inside an incubator
- ◆ Speed range 0 to 80rpm

Stirrer Units, MCS

Model	102L	104S	104L	104XL	
Vessels/system	2	4	4	4	
Max. vessel size	litres	1	0.5	1	5
Overall, H	mm	90	90	90	90
W	mm	140	250	395	530
D	mm	400	365	495	595
Weight	kg	3.0	4.1	6.1	11.5

Culture Vessels

Size	250ml	500ml	1 litre	
Working volume min./max.	100/350ml	200/700ml	0.5/1.5 litre	
Overall height x depth	mm	170 x 80	205 x 100	280 x 135
Side necks	2	2	2	

Biological Stirrers, Techne

For 220-240V 50/60Hz single phase supplies. Without culture vessel or stirring rod.

- TR150-30 MCS102L
- TR150-45 MCS104S
- TR154-25 MCS104L
- TR154-50 MCS104XL

Culture Vessels

As described. Siliconised borosilicate glass. Complete with caps and stirrer rod.

- TR170-20 250ml
- TR170-30 500ml
- TR170-40 1 litre

Incubator – see IN800-10.

Culture Vessels

Spinner Flasks, Proculture®, Corning®

Borosilicate glass. With extended design, vortex impellor which maximises cell growth and viability by ensuring gentle, constant, liquid motion from top to bottom, eradicating dead spots, and agitation of the gas:liquid interface to promote better aeration.

- ◆ Wide centre neck opening
- ◆ Angled side arms that easily accommodate 50ml pipettes
- ◆ Unique dual-bearing impellor and shaft securing mechanism
- ◆ Constant flask height to width ratios for greater predictability in scale up across the range
- ◆ Baffled sides enhance liquid agitation
- ◆ All materials used in construction are FDA-approved

As described. Supplied with two angle side-arms and centre neck with diameters as indicated, screw cap assemblies and a polysulphone shaft with vortex impellor paddle. Supplied singly.

	Ref. 4500-	Cap. litres	Centre neck, mm	Side arm, mm
TR285-10	-125	0.125	70	32
TR285-20	-250	0.250	70	32
TR285-30	-500	0.500	100	45
TR285-40	-1L	1	100	45
TR285-50	-3L	3	100	45
TR285-60	-6L	6	100	45
TR285-70	-8L	8	100	45
TR285-80	-15L	15	100	45
TR285-90	-36L	36	100	45



TR150-45 in use



TR285

Tools

Files

Needle File Set

Set of 12. Profile shapes are flat head, flat taper, joint, taper round, half round, square, three square, oval, crossing, crochet, barrette and knife. Length 140mm. In plastic wallet.

TS150-20 File set

Knives

Trimming Knife

With retractable blade. The blade can be used in three positions and is fully retractable by using a slide button. Supplied with five standard blades stored inside the body.

TS170-10 Trimming knife

Spare blades

TS174-08 Standard, pk of 10

TS174-12 Hooked, pk of 5

Scalpel/Tool Set, Swann-Morton

Comprising slotted plastic handle with clamping screw and one each No. 1 straight edge and No. 2 convex curved edge blades.

DS260-10 Tool Set

Glass Cutting

Tungsten Carbide Knife

- ◆ For cutting soda-lime, borosilicate and silica glass tubing and rod
- ◆ Long lasting tough reversible blade which can be sharpened on a silicon carbide stone

Moulded plastic handle.

GM222-10 Blade length 40mm

GM222-14 Spare blade

Glass Cutting Diamond

Mounted in wood handle.

GM230-10 Diamond

Pliers

Combination Pliers

Tool steel with cushion grip handles. Length 160mm.

TS200-10 With slip guards

TS200-12 Without slip guards

Note: These pliers are not suitable for use on live power circuits.

Watchmakers Pliers

Chrome vanadium hardened steel with cushion grip handles. The flat-wide jaws have smooth gripping surfaces. Overall length 125mm.

TS215-10 Flat-wide

Scissors

Scissors, heavy duty

Side bent with polished steel blades. Blade length 125mm. Overall 225mm.

TS285-12 Scissors

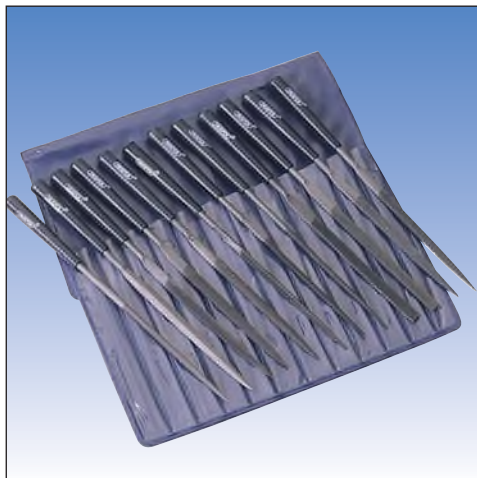
Scissors, general purpose

Stainless steel. Straight, closed shanks. Dimension given is overall length.

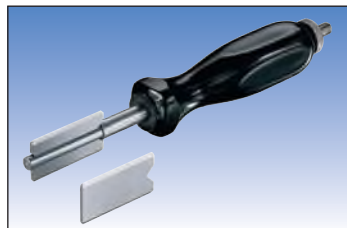
DS500-20 125mm

DS500-25 150mm

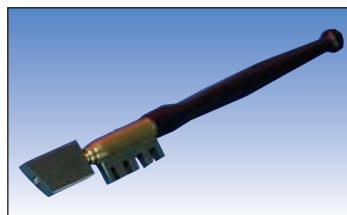
DS500-30 175mm



TS150



GM222-10 and GM222-14



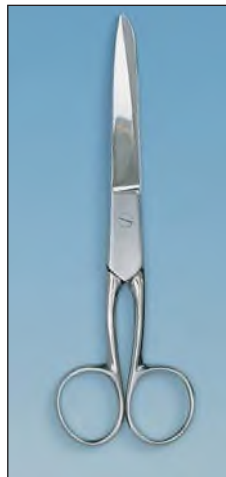
GM230-10



TS200



TS170



DS500



TS215



TS285

Tools

Screwdrivers

Screwdrivers

Chrome vanadium steel blade and transparent plastic handle. For plain slot screws except where stated.

Blade

Electricians

TS350-14 150 x 6.5mm

Instrument

TS350-25 75 x 3mm

Chubby

TS350-30 38 x 6mm

Engineers

TS350-40 150 x 8mm

Engineers Cross Slot

TS350-50 100 x 6mm
(Tip No. 2)

TS350-55 250 x 6mm
(Tip No. 2)

Chubby Cross Slot

TS350-60 38 x 6mm
(Tip No. 2)

Watchmakers/Jewellers Screwdriver Set

Comprising six screwdrivers with hardened steel blades and plated brass bodies in a plastic wallet. Blade widths from 1 to 3.8mm.

TS370-10 Screwdriver set

Sealers

Impulse Heat Sealers

For heat sealing polyethylene film and other low melting point plastics, metallised film laminates etc. With hand operated hinged sealing bar and automatic control for adjusting the weld time. Will seal film up to 250 microns thick (1000 gauge). For 220-240V 50Hz single phase supplies.

Single timer model

TS400-20 Seal length 230mm

Dual timer model

Provides additional control of the cooling part of the weld cycle. Includes also a cutter for layflat tubing.

TS400-30 Seal length 300mm

Hot Air Blower – see *HE775*.

Safety Equipment – see *Safety section*.

Sealing film – see *SE165/SE175*.

Sealing Labels – see *LA290*.



TS350



TS400-30, TS400-20 is similar



TS370

Tools

Soldering to Storage

Soldering Kit

Comprising 30W iron and 100W soldering gun, both with 1.2 metre cable and UK plug, soldering tip, tube of solder, flux, solder sucker, tweezers, wire holder/pointer and workpiece clamp with magnifier. For 230V 50/60Hz single phase supplies. Supplied in a rigid carrying case.

TS480-15 Soldering kit

Tool Roll

Heavy duty PVC with fabric bound edges and securing tapes. With eight pockets. Overall length when opened 390mm.

TS550-10 Tool roll

Storage Containers

Transparent acrylic. Designed to provide visible storage of small laboratory items. Hinged lids provide rapid filling and dispensing. These bench-mounting units provide simple, convenient and visible storage for small items such as pipette tips, septa etc. Dimensions stated are H x W x D.

SX200-15 2-compartment unit
365 x 140 x 160mm

SX200-18 3-compartment unit
210 x 210 x 160mm

SX200-20 4-compartment unit
210 x 290 x 160mm

Storage Rack

Polypropylene open tiered rack, bench mounting, for storing small laboratory items such as corks, bungs, pipettor tips, small bottles etc. Stops prevent the bins falling off the ends and to improve visibility the bins can be angled down by approximately 7°. Overall dimensions of each assembly 380 x 500 x 305mm H x W x D.

	Tiers	Bins of H x W x D, mm
SX210-14	4	8 of 50 x 125 x 130 4 of 75 x 125 x 170 4 of 100 x 125 x 225

Storage Cabinets

With transparent tough plastic drawers mounted in a strong steel frame. Allow clean storage of small laboratory items, components, spares etc. Units can be wall or bench mounted. A retaining lip at the rear prevents the drawers from falling out of the cabinet. Overall dimensions of each cabinet 420 x 307 x 150mm H x W x D.

	Drawers of H x W x D, mm
SX225-10	36 of 35 x 64 x 135
SX225-14	18 of 57 x 87 x 135
SX225-18	6 of 57 x 275 x 135
SX225-22	24 of 35 x 64 x 135 3 of 57 x 87 x 135 1 of 57 x 275 x 135

Storage Cabinet, large depth

General construction and uses as SX225 series but with transparent, tough plastic drawers 240mm deep. Overall 440 x 360 x 250mm. Can be wall or bench mounted. With 8 drawers each 85 x 160 x 240mm H x W x D.

SX230-10 Cabinet, large depth

Wall mounting Storage Bin panels – see SX215.



TS480-15



SX200-18, SX200-15 and SX200-20 are similar



SX210



TS550



SX225-22



SX230

Trays, Triangles

Plastic Trays

Trays, multipurpose

White polypropylene, deep, tough trays which resist flexing and have a strong rounded edge. Resistant to most common acids, alkalis and solvents. Maximum operating temperature +60°C (+80°C can be sustained for short periods). The polished surface makes them easy to clean. Empty trays can be stacked one inside the other to save space. Dimensions given are nominal. Widely used for:

- collecting aggressive materials
- storing instruments
- collecting medical samples
- holding photographic chemicals

	Cap. litres	External L x W x D, mm
TT210-12	0.5	180 x 230 x 42
TT210-15	1.5	250 x 310 x 65
TT210-18	3	310 x 370 x 75
TT210-24	10	420 x 520 x 120
TT210-28	21	534 x 634 x 140
TT210-32	39	648 x 846 x 160

Trays, deep

White polypropylene.

	Ref. TWR-	L x W x D, mm
TT215-30	204	390 x 290 x 110

Accessory lids

White polystyrene.

TT217-32 TWR205 for TT215-30



TT210 in use



TT218



TT220

Plastic/Glass Trays

Trays, multipurpose, autoclavable

Blue polypropylene, robust trays with rounded edges which resist flexing and most acids, alkalis and solvents. Smooth surfaces enable easy cleaning and the trays are autoclavable at 121°C for 15 minutes or 134°C for 3 minutes. Trays can be nested to save space. Dimensions and capacities indicated are nominal.

	Cap. litres	External L x W x D, mm
TT218-15	0.6	181 x 134 x 54
TT218-25	1.1	200 x 150 x 51
TT218-35	2.0	300 x 250 x 52

Trays, instrument

White melamine resin. Autoclavable at 121°C for 15 minutes.

	L x W x D, mm
TT220-25	240 x 180 x 20
TT220-35	300 x 150 x 20
TT220-45	360 x 240 x 20
TT220-55	430 x 290 x 20

Tray, instrument

Polypropylene. With vertical sides. Can be autoclaved.

	Ref. TWR-	L x W x D, mm
TT230-40	022	610 x 350 x 22

Tidy Trays

White polystyrene. Designed for use inside a drawer to store pipettes, thermometers and other small items. Can be used for light or occasional carrying but will not support heavy loads.

Compartments of L x W, mm

55mm deep

TT250-15 2 of 100 x 400
1 of 140 x 400

TT250-25 12 of 95 x 95

65mm deep

TT250-35 2 of 90 x 190
1 of 95 x 400
2 of 120 x 190



TT215-30 with TT217-32



TT250 in use



TT230



TT350

Trays, Pyrex glass

Autoclavable.

	Ref. 1490/-	L x W x D, mm
TT350-17	02	275 x 200 x 51
TT350-22	04	200 x 210 x 60
TT350-27	06	337 x 230 x 57
TT350-34	08	389 x 270 x 57

Triangles

Dimension given is the length of side.

	Length, mm
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Pipeclay tubes on iron wire

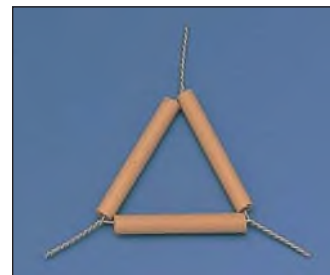
TT600-20 40
TT600-25 50
TT600-32 65
TT600-38 75
TT600-45 90

Silica tubes on nickel/chromium wire

TT620-25 50
TT620-32 63

Silica

TT630-32 65



TT600



TT620



TT630

Tubing

Rubber

Tubing, Normal Wall, to BS2775

Supplied in coils of 10 metres.

Size	Bore x wall, mm	Natural red	Neoprene black
N3	3 x 0.75	TY200-10	TY204-10
N5	5 x 1.5	TY200-15	TY204-15
N6.5	6.5 x 1.5	TY200-20	TY204-20
N8	8 x 2	TY200-25	TY204-25
N10	10 x 2	TY200-30	TY204-30
N12.5	12.5 x 2.25	TY200-35	TY204-35
N16	16 x 3.25	TY200-40	TY204-40
N20	20 x 3.25	TY200-45	—
N25	25 x 3.25	TY200-50	—

Tubing, Heavy Wall, to BS2775

Supplied in coils of 10 metres.

Size	Bore x wall, mm	Natural red	Neoprene black
H3	3 x 3	TY230-12	TY234-12
H5	5 x 4	TY230-17	TY234-17
H6.5	6.5 x 5	TY230-22	TY234-22
H8	8 x 6	TY230-27	TY234-27
H10	10 x 7	TY230-32	—
H12.5	12.5 x 8.5	TY230-37	—

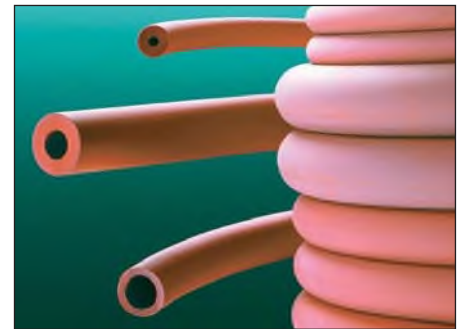
Tubing, for gas burners

Neoprene rubber with 8mm i.d. reinforced ends. Supplied singly.

	Length, mm		Length, mm		Length, mm
TY280-15	450	TY280-20	600	TY280-25	900



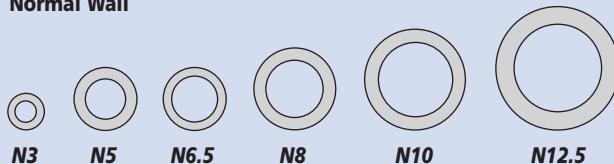
TY280 in use



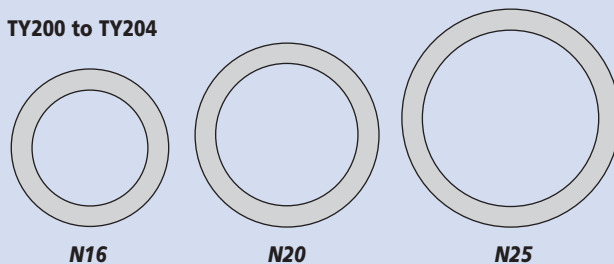
TY240/TY260

Natural and Neoprene tubing to BS2775. The illustrations below show the approximate full size diameters.

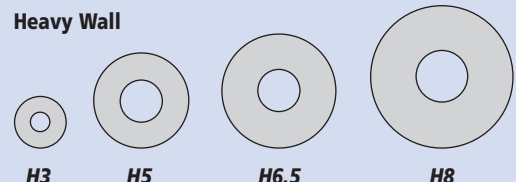
Normal Wall



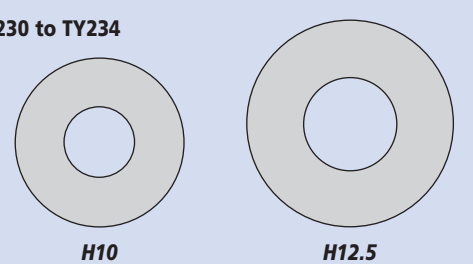
TY200 to TY204



Heavy Wall



TY230 to TY234



Tubing

Plastic

Tubing, PVC

Flexible transparent non-toxic general purpose tubing in coils as indicated.

	Bore x o.d. mm	Coil length metres
TY403-15	3 x 4.5	30
TY403-20	5 x 8	30
TY403-30	8 x 12	30
TY403-35	10 x 14	30
TY403-40	12.5 x 17	30
TY403-50	16 x 22.5	10
TY403-55	20 x 26.5	10
TY403-60	25 x 31.5	10

Tubing, reinforced PVC

Transparent and flexible but with terylene mesh reinforced thick wall for increased strength and to resist kinking. Can be used for low pressure and vacuum. Coil of 30 metres. Dimensions given are nominal.

	Bore x wall, mm
TY410-14	5 x 2.5
TY410-18	6.5 x 2.8
TY410-22	8 x 3
TY410-26	10 x 3
TY410-30	12.5 x 3.2
TY410-34	16 x 3
TY410-38	19 x 3

Tubing, translucent PVC

Food quality unreinforced tubing BSS No 43/45. Operating range -20 to +55°C. Silicone and Cadmium free. In coils of 30 metres.

	Bore x o.d. mm
TY505-20	3 x 6
TY505-24	4 x 6
TY505-28	5 x 8
TY505-32	5 x 11
TY505-36	6 x 9
TY505-40	8 x 11
TY505-44	8 x 14
TY505-48	9 x 12
TY505-52	10 x 16

Tubing, reinforced PVC, colour-coded

As TY505 series but reinforced with polyester yarn for higher operating pressures and with a coloured outer coating as indicated. In coils of 30 metres.

	Bore x o.d. mm	Colour
TY512-12	6.3 x 11.2	Black
TY512-14	6.3 x 11.5	Blue
TY512-16	6.3 x 11.5	Green
TY512-18	6.3 x 11.5	Red
TY512-20	6.3 x 11.5	Yellow
TY514-12	8 x 13.5	Black
TY514-14	8 x 13.5	Blue
TY514-18	8 x 13.5	Red
TY514-20	8 x 13.5	Yellow
TY516-12	10 x 16	Black
TY516-14	10 x 16	Blue
TY516-18	10 x 16	Red
TY516-20	10 x 16	Yellow
TY518-12	12.5 x 18.5	Black
TY518-14	12.5 x 18.5	Blue
TY518-16	12.5 x 18.5	Green
TY518-18	12.5 x 18.5	Red
TY518-20	12.5 x 18.5	Yellow

Tubing, Polyethylene

Flexible, food quality, translucent polyethylene. Operating temperature range -35 to +55°C. In coils of 30 metres.

	Bore x o.d., mm
TY535-04	2.5 x 4
TY535-07	3 x 5
TY535-09	4 x 6
TY535-14	6 x 8
TY535-17	8 x 10
TY535-19	10 x 12

Tubing, Nylon 12

Flexible, lightweight tubing with operating temperature range from -35 to +70°C. In coils of 30 metres.

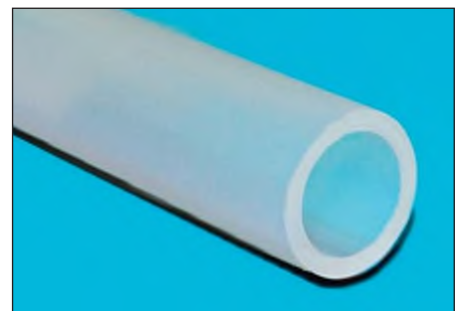
	Bore x o.d., mm
TY565-04	2.5 x 4
TY565-07	3 x 5
TY565-13	5.5 x 8
TY565-16	7 x 10



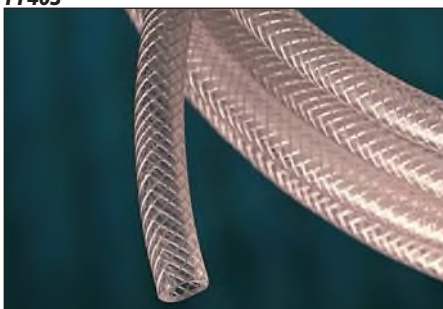
TY403



TY505



TY535



TY410



TY512/TY514/TY516/TY518



TY565

Tubing

Plastic, continued

Tubing, PFA

Flexible, highly inert, perfluoroalkoxy (PFA) copolymer tubing which is mainly corrugated for strength under vacuum use, dampening vibrations and compensating thermal expansion. Transparent and non-porous. Available in lengths of 0.5 or 1 metre. The last 40mm of each end is uncorrugated for easy fitting onto connectors or bars.

	Bore x o.d., mm	Coil length metres
TY600-05	6 x 8	0.5
TY600-07	6 x 8	1.0
TY600-10	8 x 10	0.5
TY600-12	8 x 10	1.0
TY600-15	10 x 12	0.5
TY600-17	10 x 12	1.0
TY600-20	12 x 14	0.5
TY600-22	12 x 14	1.0
TY600-25	14 x 16	0.5
TY600-27	14 x 16	1.0
TY600-30	16 x 18	0.5
TY600-32	16 x 18	1.0
TY600-35	18 x 20	0.5
TY600-37	18 x 20	1.0

Peristaltic pumps – see *Pumps* section.

Santoprene®, Silicone

Tubing, Santoprene®

Highly resistant, medical grade, peristaltic pump tubing offering extended working life and wide chemical compatibility, with USP Class VI and EU 2003/11/EC approval. It is also autoclavable. For highest dispensing precision silicone tubing is recommended. All tubing has 1.6mm wall thickness and is supplied in packs of 15 metres.

	Bore x o.d., mm
TY567-22	1.6 x 4.8
TY567-26	3.2 x 6.4
TY567-32	4.8 x 8.0
TY567-36	6.4 x 9.6
TY567-42	8.0 x 11.2

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Tubing, Silicone

Translucent, flexible, platinum cured, pure silicone tubing ideal for most laboratory and food handling applications, especially in use with peristaltic pumps. Medical grade, but not suitable for in-vivo use. Operating temperature range -80 to +200°C. Shore hardness 60. Non toxic and National Water Council approved. In coils of 10 metres.

	Bore x o.d., mm
TY571-11	1.6 x 4.8
TY571-15	3.2 x 4.8
TY571-16	3.2 x 6.4
TY571-22	4.0 x 8.0
TY571-28	5.0 x 8.0
TY571-35	6.3 x 9.5
TY571-39	8.0 x 11.2
TY571-41	8.0 x 12.0
TY571-50	9.5 x 15.9
TY571-54	12.5 x 19.0

Silclear SILICONE SOLUTIONS

Tubing, Silicone, Silclear

Precision extruded, medical grade, transparent silicone tubing, optimised to provide strength, tear resistance and clarity throughout a long working life.

- ◆ Complies with Eur. Pharmacopoeia 7.1.9 Hygiene standards; FDA 177.2600; BfR XV Part A: Silicone; 3-A 18-03; (EC) No 1935/2004 Food Contact regulations; Eur. Pharmacopoeia EP 7.0 3.19
- ◆ Operating temperature range: -70 to +170°C
- ◆ Unaffected by UV or ozone

Dimensions given are bore i.d. x o.d. in mm. Supplied in coils of 10 metres.

	Bore x o.d., mm
TY574-05	6 x 12
TY574-10	7 x 15
TY574-15	8 x 16
TY574-20	9 x 17
TY574-25	10 x 18
TY574-30	14 x 24
TY574-35	16 x 26
TY574-45	19 x 29
TY574-50	19 x 31.8
TY574-60	22 x 34



TY600



TY567



TY571



TY574

Tubing Accessories

Tubing Accessories

Clamps

With non-slip serrated wheel and sloped floor which allow variable flow regulation. Plastic. Can be autoclaved up to 134°C.

	Ref.	Max. tubing o.d. mm
TY900-20	KT4.5	4.5
TY900-25	KT6	6
TY900-30	KT10	10
TY900-40	KT14	14

Tubing Cutter

For normal wall rubber and plastic flexible tubing up to 19mm o.d. With spring loaded hardened steel blade which is covered when the cutter is not in use.

TY915-20	Cutter
TY917-18	Spare blade

Non-return valve – see PX185.

Tubing adapters – see AD100/AD220.

Clips/Clamps

Providing shut-off or flow control for flexible tubing.

	Type	Max. tubing dia. mm	Material
CP100-15	Mohr	10	Nickel plated alloy
CP100-19		12	
CP103-10	Ratchet	10	Polypropylene
CP106-08	Centre hinged, spring	8	Stainless steel and acetal
CP106-10		10	
CP109-10	'Stop-it', bottom hinged	10	PVDF and zinc plated steel
CP109-15		15	
CP109-20		20	
CP114-25	Hoffman, bottom hinged, light	25	Nickel plated brass
CP114-30		30	
CP114-40		40	
CP115-40	Hoffman, bottom hinged	40	Nickel plated brass
CP120-14	Hoffman, side hinged	14	Acetal



TY900 in use



CP103



CP106



CP120



TY915 in use



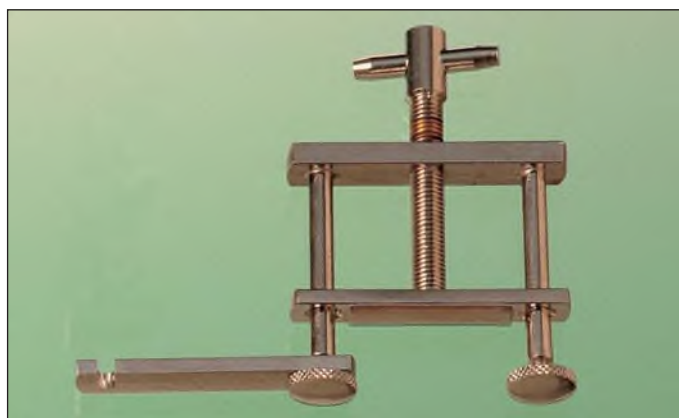
CP109



CP114



CP100



CP115

Dewar Flasks

Dewar Flasks

All dimensions and capacities are nominal.

Dewar Flasks

Silvered glass cylindrical inner vessel with plastic outer container, screw stopper and cap.

DE700-10	500ml
DE700-15	1000ml

Dilvac Flasks, Tall Form

Borosilicate glass in stainless steel outer container. With swivel handle and insulated vented lid secured by toggle clamps.

	<i>Int. dia. x depth, mm</i>	<i>Cap. litres</i>
DE710-10	85 x 185	1
DE710-15	106 x 205	2
DE710-20	150 x 280	4.5
DE710-25	200 x 285	7

Refills for DE710-series

DE712-10	85 x 185	1
DE712-15	106 x 205	2
DE712-20	150 x 280	4.5
DE712-25	200 x 285	7

Dilvac Flasks, Shallow Form

Borosilicate glass in stainless steel outer container. Open top. Without handle or lid.

	<i>Int. dia. x depth mm</i>	<i>Cap. litres</i>
DE725-12	77 x 50	0.2
DE725-17	100 x 65	0.5
DE725-22	115 x 70	0.7
DE725-27	138 x 80	1
DE725-32	155 x 120	2

Refills for DE725-series

DE727-12	77 x 50	0.2
DE727-17	100 x 65	0.5
DE727-22	115 x 70	0.7
DE727-27	138 x 80	1
DE727-32	155 x 120	2

Dilvac Flasks

All stainless steel open top

Can be used for ultra-low or high temperatures from -196°C to +300°C. Suitable for the storage and transportation of liquid oxygen and liquid nitrogen. With steel detachable swivel handle but without lid.

	<i>Int. dia. x depth mm</i>	<i>Cap. litres</i>
DE735-12	85 x 206	1
DE735-15	100 x 157	1
DE735-18	100 x 285	2

Dewar Flasks, Nalgene

Double-walled HDPE flasks with urethane foam insulation, moulded-in ribs for added safety when held, and loose fitting insulated cover. The 1, 2 and 4 litre sizes additionally have a polyethylene coated swivel carrying handle. Suitable for use over the range -196°C to +100°C. Dimensions given are neck internal diameter x internal depth.

	<i>Int. dia. x depth mm</i>	<i>Cap. litres</i>
DE750-40	96 x 195	1
DE750-43	122 x 231	2
DE750-46	158 x 295	4
DE750-49	198 x 396	10



DE700



DE725 and DE727



DE750-40 to -46



DE710 & DE712



DE735

Dewar Flasks

Dewar Flasks continued



Dewar Flasks, Shallow form, KGW-Isotherm

To DIN12492. Silvered, borosilicate glass with textured aluminium housing and plastic rim and base protection. Antimagnetic materials allow use with magnetic stirrer. Will also accept round bottom flasks of diameters as indicated.

	Int. dia. x depth mm	Cap. litres	For flask dia. mm
DE740-20	100 x 65	0.26	85
DE740-30	110 x 70	0.40	85
DE740-40	138 x 80	0.80	105
DE740-50	170 x 110	1.60	131

Dewar Flasks, Tall form, KGW-Isotherm

To DIN12492. Silvered, borosilicate glass with blue powder-coated aluminium housing and plastic rim protection. Antimagnetic materials allow use with magnetic stirrer.

	Int. dia. x depth mm	Ext. dia. mm	Cap. litres
DE744-10	40 x 170	63	0.2
DE744-25	57 x 210	81	0.5
DE744-35	67 x 350	90	1.2
DE744-45	77 x 345	105	1.5
DE744-55	100 x 290	130	2.0

Dewar Flasks, Spherical, KGW-Isotherm

To DIN12492. Silvered, borosilicate glass, spherical vessel for the storage and transport of liquid nitrogen. With rugged, aluminium housing, carrying handle and narrow neck with drop on, insulating lid.

	Cap. litres	Neck dia. mm	Ext. dia. mm
DE746-16	1.0	30	175
DE746-22	3.0	60	225
DE746-27	5.0	60	260
DE746-34	10.0	65	330

Ice and dry ice carriers, Igloo – see Ice Production/Storage section.

Cold Traps (Cold Fingers)

Simple cold traps, comprising a one litre, insulated dewar reservoir and separate glass trap with cylindrical body, 205 x 50mm height x diameter, 150ml capacity and GL18 threaded inlet/outlet connections fitted with screw cap and 8.5mm diameter PTFE tubing ferrule. An alternative model with fitted screw cap top allows easier removal of trapped liquid. The accessory dry ice basket cage allows cold trap removal/re-insertion into the dewar by stopping the solid dry ice coolant from collapsing into the space occupied by the trap.

- DE748-10 Without screw cap
- DE748-20 With screw cap
- DE748-65 Accessory dry-ice basket cage



DE740



DE746



DE744



DE748-10



DE748-20

Dewar Flasks, Dialysis

Liquid Nitrogen Storage Vessels

MVE Lab Series

Lightweight aluminium construction with high efficiency insulation and vacuum retention. With carrying handle.

Model		LAB4	LAB5	LAB10	LAB20	LAB30	LAB50
Capacity	litres	4	5	10	21	32	50
Static evaporation rate,	per day, litres	0.19	0.15	0.18	0.18	0.22	0.49
Neck diameter	mm	35.5	56	56	51	64	64
Overall height	mm	426	462	546	627	611	779
Overall diameter	mm	185	222	260	368	432	432
Weight,	empty, kg	2.7	4	6	9	12	15
	full*, kg	6	8	14	26	38	56

* When filled with liquid nitrogen.

Liquid Nitrogen Dewar Vessels

As described. Supplied empty.

- DE757-04** Dewar, LAB4
- DE757-05** Dewar, LAB5
- DE757-10** Dewar, LAB10
- DE757-20** Dewar, LAB20
- DE757-30** Dewar, LAB30
- DE757-50** Dewar, LAB50

Alternative sizes of dewars, filling tubes and dispensing siphons are available – details on request.



DE757 with accessories

Dialysis Tubing, Visking

Dialysis Tubing, Visking

A transparent seamless viscose cellulose containing glycerine water and approximately 0.1% sulphur. Permeable to water and with an average pore radius of 24Å. Will permit diffusion of low molecular weight compounds in aqueous solution through the walls but retain high molecular weight compounds such as bacteria and proteins. Supplied as a flat roll in an airtight container. Dimensions given are inflated diameter x flat width and are approximate. Supplied in rolls of 30 metres (except DG100-05 which is supplied in a roll of 15 metres).

- DG100-05** 6 x 10mm
- DG100-12** 14 x 25mm
- DG100-18** 19 x 32mm
- DG100-26** 29 x 44mm

Clips, for dialysis tubing

Plastic. For closing the end of tubing up to 29mm inflated diameter. Supplied in pack of 10.

- DG110-10** Clips



DG100 with DG110



DG110

Pumps, Peristaltic

Peristaltic Pumps

Verderflex®

Model EV500

Compact, manual control pump with forward/reverse switch, fast prime button, rotary potentiometer speed control and two-roller, polycarbonate pump head.

- ◆ Range 2 to 185ml/minute
- ◆ Accepts 1.6mm wall tubing up to 4.8mm bore
- ◆ Permanent magnet drive motor
- ◆ IP30 protection rating, chemical resistant, epoxy coated housing

Performance

Tube bore, mm	Flow rate, ml/minute
1.6	2 to 23
3.2	50 to 82
4.0	7 to 115
4.8	11 to 185

Peristaltic Pump EV500

As described. Overall 205 x 110 x 195mm W x D x H. Weight 1.7kg. For 110, 230V 50/60Hz single phase supplies.

PX710-10 EV500

Peristaltic Pump Tubing, Santoprene®

Highly resistant, medical grade, peristaltic pump tubing offering extended working life and wide chemical compatibility, with USP Class VI and EU 2003/11/EC approval. It is also autoclavable. For highest dispensing precision silicone tubing is recommended. All tubing has 1.6mm wall thickness and is supplied in packs of 15 metres.

	Bore x o.d., mm
TY567-12	0.5 x 3.7
TY567-16	0.8 x 4.0
TY567-22	1.6 x 4.8
TY567-26	3.2 x 6.4
TY567-32	4.8 x 8.0
TY567-36	6.4 x 9.6
TY567-42	8.0 x 11.2

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Model Vantage 3000 P EZ

Fully programmable, flexible-use pumps providing highly accurate and repeatable flow rates with quick, easy set-up from on-board display and membrane keypad, or remotely via an analogue input (0 to 10V d.c., 4 to 20mA), potentiometer input (10kohm), or RS232 interface for connection to the user's PC.

- ◆ Ranges: 0.9 to 1310ml/minute, 10 to 250rpm
- ◆ Accepts 1.6mm wall tubing up to 8.0mm bore
- ◆ Brushless d.c. motor for continuous operation
- ◆ Self-priming
- ◆ Reversible pumping
- ◆ Single or repeat dose compatibility with user defined interval
- ◆ Accuracy when pumping viscous products can be achieved using the calibration mode
- ◆ Run-back option prevents spillages
- ◆ IP66 protection class housing
- ◆ Acetal and nylon pumphead with Nylatron rollers

Performance

Tube bore, mm	Flow rate, ml/minute
0.8	0.9 to 18.8
1.6	2.8 to 70.0
3.2	10.7 to 268.0
4.8	243.3 to 588.0
6.4	37.3 to 938.0
8.0	52.7 to 1310.0

Peristaltic Pump Vantage 3000 P EZ

As described. Overall 291 x 252 x 168mm W x D x H. Weight 4.5kg. For 110, 230V 50/60Hz single phase supplies.

PX712-15 Vantage 3000 P EZ Programmable



PX710



PX712

Furniture

Fume Extraction Hood



Low cost, easily installed, bench mounting, fume extraction hood with open base for use over existing electricity, gas and/or water supply systems.

- ◆ Epoxy coated, galvanised steel construction
- ◆ Acrylic, one-piece sliding sash front for easy access
- ◆ Choice of model:
 - with built-in, all-PVC, extraction fan
 - without fan for use with existing extraction systems

As described. With or without fan as indicated and internal lighting. Requires, but does not include, accessory extraction fittings. Overall 1350 x 800 x 640mm H x W x D. For 230V 50Hz a.c. single phase supplies.

FZ450-20 Fume hood with built-in fan

FZ450-24 Fume hood without built-in fan

Accessories

All accessories are 110mm diameter and for FZ450-20/-24 fume hoods only.

FZ454-58 Flexible hose, 1 metre length

FZ454-61 Rigid hose, 1 metre length

FZ454-64 Discharge piece (blow-out)

FZ454-67 Bend, 90°, rigid

FZ454-70 Bend, 45°, rigid

FZ454-74 Pipe clamp (one required per joint)

FZ454-77 Rain cowl



FZ450 on base

Furniture

Filtration Fume Cupboards, FumeCare FC-series

A range of five sizes of fume cupboards accommodating accessory replaceable, activated carbon filters providing filtration, absorption or neutralisation of airborne contaminants. Accessory impregnated carbon filters are available for use in a wide range of extraction applications.

- ◆ Greater than 0.5m/s face velocity
- ◆ All filter exchange mechanisms are on the clean side of the filter and switches and electrical components are totally isolated from the dirty airflow and contamination
- ◆ Built-in , 2 x 15W fluorescent illumination
- ◆ Low airflow alarm if face velocity <0.3m/second
- ◆ Hinged front panel
- ◆ Electrostatic pre-filter
- ◆ Quiet (<58dBa)

Construction

White epoxy coated mild steel frame, rear panel and head unit with clear acrylic side panels. The clear acrylic front panel is hinged and self-locking. A removable front panel to the head unit allows easy access to the filters and clamping mechanisms. Controls are situated in the head unit front panel for easy operation.

Specification

Model FC-	10	15	20	25	30
Dimensions, mm W	750	1000	1250	1500	1750
D	600	700	700	700	700
H*	1210	1210	1210	1210	1210
Filters [†]	1	1	2	2	2
Weight kg	40	50	70	90	100
Service required	230V 50Hz a.c. single phase supply — all models				

*Internal height: 800mm.

†Indicates the number of main (and safety) exhaust filters required.

COMMISSIONING

A commissioning service for the filtration fume cupboards is available within the UK at additional cost — *details on request.*



FZ482-15

Filtration Fume Cupboards, FumeCare

As described. Supplied with low airflow alarm, electrostatic pre-filter(s) and main filter i.d. window. For 230V 50Hz single phase supplies. Require, but are not supplied with, main exhaust filters, as indicated in the table.

FZ482-10	Model FC-10
FZ482-15	Model FC-15
FZ482-20	Model FC-20
FZ482-25	Model FC-25
FZ482-30	Model FC-30

Main Filters

Impregnated carbon exhaust filters to absorb specific contaminants as indicated. PLEASE STATE THE CHEMICAL CONTAMINANTS TO BE EXTRACTED WHEN ORDERING SO THAT THE MOST APPROPRIATE FILTER CAN BE SPECIFIED FOR THE PURPOSE. Supplied singly. Please refer to the main table for individual cupboard requirements.

	Ref.	Contaminant
FZ487-06	GP	Solvents, alcohols etc.
FZ487-09	ACR	Iodines
FZ487-12	ACM	Mercury
FZ487-15	AMM	Ammonia/amines
FZ487-18	FOR	Aldehydes
FZ487-21	ACI	Acids
FZ487-24	SUL	Sulphur, mercaptans
FZ487-27	CYN	Cyanides
FZ487-30	ETH	Ether
FZ487-33	HEPA	Particulates (HEPA)

Other filters available on request.

Accessory Safety Exhaust Filters

Provide additional filtration and extraction to the main filters. Supplied singly. Please refer to the main table for individual cupboard requirements.

	Ref.	Contaminant
FZ489-07	GP	Solvents, alcohols etc.
FZ489-10	ACR	Iodines
FZ489-13	ACM	Mercury
FZ489-15	AMM	Ammonia/amines
FZ489-19	FOR	Aldehydes
FZ489-22	ACI	Acids
FZ489-25	SUL	Sulphur, mercaptans
FZ489-28	CYN	Cyanides
FZ489-31	ETH	Ether
FZ489-34	HEPA	Particulates (HEPA)

Spare Main Pre-Filters

Filtrete electrostatic pre-filters. Supplied in a pack of 6. Please refer to the main table for individual cupboard requirements.

FZ489-50 Main filter pre-filters

Accessories for Models as indicated

Support Stand

Enclosed support stand with storage facility.

FZ489-52	Model FC-10
FZ489-55	Model FC-15
FZ489-58	Model FC-20
FZ489-61	Model FC-25
FZ489-64	Model FC-30

Electronic filter saturation alarm

Monitors the main filter for contaminant breakthrough. FACTORY FITTED. MUST BE ORDERED AT THE SAME TIME AS THE CABINET.

FZ489-71 Filter saturation alarm

Electronic monitoring system

Full airflow and filter constant monitoring system with display, service date information and filter type indicator. FACTORY FITTED. MUST BE ORDERED AT THE SAME TIME AS THE CABINET.

FZ489-74 Monitoring system

Furniture

Filtration Fume Cupboards, FumeCare FCES-series

A range of three sizes of sliding sash door fume cupboards accommodating accessory replaceable, activated carbon filters providing filtration, absorption or neutralisation of airborne contaminants. Accessory impregnated carbon filters are available for use in a wide range of extraction applications. Comply with BS EN61326-1:2006 and tested to BS7989 (face velocity and containment).

- ◆ Full airflow and filter constant monitoring system with display, service date information and filter type indicator.
- ◆ Greater than 0.5m/s face velocity
- ◆ All filter exchange mechanisms are on the clean side of the filter and switches and electrical components are totally isolated from the dirty airflow and contamination
- ◆ Built-in, 2 x 15W fluorescent illumination
- ◆ Low airflow alarm if face velocity <0.3m/second
- ◆ Sliding sash door opening
- ◆ Electrostatic pre-filter
- ◆ Quiet (<58dBa)

Construction

White epoxy coated mild steel frame, rear panel and head unit with glass windows in the side panels and glass sash front door. A removable front panel to the head unit allows easy access to the filters and clamping mechanisms. Controls are situated in the head unit front panel for easy operation.

Specification

Model FC-ES-	10	20	30
Dimensions, mm W	800	1300	1650
D	720	720	720
H*	1200	1200	1200
Filters [†]	1	2	3
Weight kg	45	80	100
Service required	230V 50Hz a.c. single phase supply — all models		

*Internal height: 800mm.

†Indicates the number of main (and safety) exhaust filters required.

COMMISSIONING

A commissioning service for the filtration fume cupboards is available within the UK at additional cost — details on request.



FZ491

Filtration Fume Cupboards, FumeCare FCES-series

As described. Supplied with full airflow and filter constant monitoring system with display, service date information and filter type indicator, low airflow alarm and electrostatic pre-filter(s). For 230V 50Hz single phase supplies. Require, but are not supplied with, main exhaust filters, as indicated in the table.

FZ491-10 Model FCES-10

FZ491-20 Model FCES-20

FZ491-30 Model FCES-30

Main Filters

Impregnated carbon exhaust filters to absorb specific contaminants as indicated. PLEASE STATE THE CHEMICAL CONTAMINANTS TO BE EXTRACTED WHEN ORDERING SO THAT THE MOST APPROPRIATE FILTER CAN BE SPECIFIED FOR THE PURPOSE. Supplied singly. Please refer to the main table for individual cupboard requirements.

	Ref.	Contaminant
FZ487-06	GP	Solvents, alcohols etc.
FZ487-09	ACR	Iodines
FZ487-12	ACM	Mercury
FZ487-15	AMM	Ammonia/amines
FZ487-18	FOR	Aldehydes
FZ487-21	ACI	Acids
FZ487-24	SUL	Sulphur, mercaptans
FZ487-27	CYN	Cyanides
FZ487-30	ETH	Ether
FZ487-33	HEPA	Particulates (HEPA)

Other filters available on request.

Accessory Safety Exhaust Filters

Provide additional filtration and extraction to the main filters. Supplied singly. Please refer to the main table for individual cupboard requirements.

	Ref.	Contaminant
FZ489-07	GP	Solvents, alcohols etc.
FZ489-10	ACR	Iodines
FZ489-13	ACM	Mercury
FZ489-15	AMM	Ammonia/amines
FZ489-19	FOR	Aldehydes
FZ489-22	ACI	Acids
FZ489-25	SUL	Sulphur, mercaptans
FZ489-28	CYN	Cyanides
FZ489-31	ETH	Ether
FZ489-34	HEPA	Particulates (HEPA)

Spare Main Pre-Filters

Filtrete electrostatic pre-filters. Supplied in a pack of 6. Please refer to the main table for individual cupboard requirements.

FZ489-50 Main filter pre-filters

Furniture

Filtration Fume Hoods

For operator protection against fumes, vapours and smoke when handling modest volumes of chemicals. Ideal for intermittent procedures or educational demonstrations.

- ◆ Comply with French AFNOR NF X.15-211 class 2 standard
- ◆ All four side walls have transparent polycarbonate panels to maximise lighting of the work area and visibility externally, within a coated steel framework and overhead fan/filter housing
- ◆ Standard features includes filtered air sampling port, timer with periodic alarm reminder to test filter saturation, air flow meter, two cable ports to allow instruments to be used inside the cabinet and CD-ROM with list of approved chemicals for use with filters
- ◆ Hingeing front panel allows full access to the work area for set-up with choice of ergonomically designed, 2-hand or single trapezoidal apertures for unhindered working during operation
- ◆ Accessory plastic coated, laminated ply or tempered glass work surfaces with spill retention sump
- ◆ A choice of four standard activated carbon filters is offered, for organic or corrosive fumes and vapours, formaldehyde or ammonia
- ◆ Rapid, easy filter cartridge replacement
- ◆ Quiet fan extraction reduces noise disturbance to the operator
- ◆ Electronic filter alarm monitors airflow through the filter and activates when this falls below a safe level due to filter clogging or fan failure

Model	2-hand opening	H061D	H092D	H122D	H152D
	trapezoidal opening	H061Z	H092Z	H122Z	H152Z
Dimensions, external (internal) H, mm		950 (735)	1160 (935)	1160 (935)	1160 (935)
	W, mm	600 (545)	900 (845)	1200 (1145)	1500 (1445)
	D, mm	650 (505)	750 (700)	750 (700)	750 (700)
Internal volume	m ³	0.20	0.61	0.75	0.95
Average face velocity	m/sec.	0.5 — all models			
Filter/light modules required		1	2	2	2
Supply requirements		220-240V 50/60Hz — all models			
Rating	A	0.1 - all models			
Weight	kg	41	67	85	102



FZ540-44 with FZ552-40 in use

Filtration Fume Hoods

As described. For 220-240V 50Hz single phase supplies. Without filters which are required for operation.

FZ540-12	Model H061D
FZ540-14	Model H061Z
FZ540-17	Model H092D
FZ540-19	Model H092Z
FZ540-42	Model H122D
FZ540-44	Model H122Z
FZ540-47	Model H152D
FZ540-49	Model H152Z

Accessories

Filters*

Activated carbon. for use with fumes/vapours and as indicated. Supplied singly. Please refer to the table for the numbers of filters required per cabinet.

FZ541-10	Organic fumes
FZ544-10	Corrosive fumes
FZ546-10	Formaldehyde vapours
FZ549-10	Ammonia vapours

*HEPA filters are also available - details on request.

Work Surfaces

Choice of plastic-coated laminate plywood or toughened glass worktops with spill retention sump. For fume hoods as indicated.

FZ550-10	Laminate, H061
FZ550-12	Glass H061
FZ550-15	Laminate, H092
FZ550-17	Glass H092
FZ550-40	Laminate, H122
FZ550-42	Glass H122
FZ550-45	Laminate, H152
FZ550-47	Glass H152

Trolleys

Enable fume hoods to become mobile, increasing flexibility of use. Supplied with removable shelf. Steel construction. For cabinets as indicated.

FZ552-10	H061
FZ552-15	H092
FZ552-40	H122
FZ552-45	H152

Lighting panel

For direct illumination of the work area. Mounted externally and supplied singly. Please refer to the table for the numbers of filters required per cabinet.

FZ552-95	All models
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Furniture

Mini Filtration Fume Hood, H60

A compact, stand-alone unit, allowing small volumes of volatile or fuming reagents to be conveniently handled on the benchtop.

- ◆ Complies with French AFNOR NF X 15-211 class 2 standard
- ◆ Built-in, quiet running (43 db(A)), fan with IP54 protection-rated housing, providing 86m³ per hour airflow
- ◆ Timer with alarm to prompt inspection of the filter every 60 hours to see if it requires replacement
- ◆ Filter window in the front panel to allow visual check of the filter type in use (accessory filter required)
- ◆ Epoxy painted steel cabinet with tilting top panel for accessory filter replacement, side and front transparent PVC strip curtains for easy access, integral base trough to contain spillages and levelling feet
- ◆ Accessory activated charcoal filters for organic vapours, corrosive and organic vapours, or formaldehyde fumes, all with pre-filters to remove 92% of dust particles with less than 3µm diameter
- ◆ Rapid, easy filter cartridge replacement

As described. Overall 605 x 505 x 485mm (external H x W x D), 410 x 455 x 455mm (internal H x W x D), weight 25kg. For 220-240V 50Hz single phase supplies. Without filters which are required for operation.

FZ554-10 Model H60 labopur®

Accessory Filters

Activated carbon filters specifically formulated for fume or vapour types as specified.

FZ554-35 ORG50, for organic vapours

FZ554-37 CORG51, for corrosive and organic vapours

FZ554-39 FOR50, for formaldehyde fumes



FZ554-10 in use

Gloveboxes

Simple gloveboxes for use at atmospheric pressure. Comprises rigid, aluminium frame with acrylic panel sides, roof, angled, hinged lid and polyethylene floor panel. The front panel incorporates two glove ports with natural rubber, size 9 gloves. The working chamber includes two inlet/outlet ports with hose connectors for gassing and aeration and two further cable ports to allow use of instruments inside the glovebox.

- ◆ Lightweight, robust construction is easy to move around
- ◆ Excellent, all-round visibility
- ◆ Airtight construction
- ◆ Available with, or without, side transfer (intermediate) chamber

Capacity	litres	290
Usable interior dimensions, W x D x H	mm	850 x 540 x 650
Overall W x D x H*	mm	890 x 600 x 700
Operating temperature range	°C	-20 to +70
Maximum loading	kg	40
Glove opening diameter	mm	190
Distance between gloves	mm	390
Lid opening, W x D	mm	850 x 425
Weight	kg	14

*Tubing attachment coupling requires extra 150mm when in use. The transfer chamber adds 220mm to the width.

As described. Supplied with 2 x size 9 rubber gloves, 2 x 5m lengths of PVC (gassing) and PE (aeration) tubing and rubber feet.

FZ590-60 Glovebox, 290 litres

FZ590-65 Glovebox, 290 litres with side transfer chamber 220 x 320 x 275mm W x D x H

Accessory Floor Stands

FZ591-06 For seated use, overall 890 x 600 x 720mm W x D x H

FZ591-09 For standing use, overall 890 x 600 x 1020mm W x D x H

Alternative glovebox designs are available – details on request.



FZ590-60



FZ590-65

Furniture

Taps, XL Series

Brownall Labtap®

Robust brass construction finished in "Tektocote" electrostatic epoxy paint and with colour coded controls.

Gas cocks Spring loaded taper plug cocks with drop lever controls.

Water taps Designed and manufactured to Water Research Centre requirements. Suitable for use with hot or cold water.

Needle valve For metering applications and fitted with metering plug. For use with compressed air.

Colour code to DIN 12920:1995-10

Carbon dioxide – Blue with blue/black insert.

Cold water – Green with yellow/blue insert.

Compressed air – Blue with blue/yellow insert.

Hot water – Green with yellow/red insert.

Nitrogen – Blue with green insert.

Oxygen – Blue with blue insert.

Gas

Gas Cock, single

For natural (methane) gas. BSP male thread for horizontal mounting. Light grey.

Drop lever

FZ600-55 BSP 1/4in

Gas Cocks

For natural (methane) gas. BSP 1/4in male thread for vertical mounting flush to the bench top. Outlets on 2- and 4-way versions are 90° apart. With drop levers. Light grey.

FZ603-05 1-way

FZ603-10 2-way

FZ603-15 4-way

Gas burner tubing – see *TY280*.

Bunsen burners – see *BY100/BY250*.

Water

Water Taps, swan neck

BSP 1/2 in male thread inlet for vertical mounting flush to a benchtop. Grey with control wheel colour coded for non-potable*, cold water (The mixer taps have two inlets and one hot/one cold control wheel). Choice of fixed or moveable swan neck as indicated (except FZ615-75 which has a removable, aerator nozzle head).

Single swan neck

FZ615-10 Fixed

FZ615-12 Fixed, back-flow resistant**

FZ615-15 Moveable

3-Way (swan neck plus 2 bibs)

FZ615-45 Moveable

Mixer (swan neck plus two controls colour coded one hot/one cold)

FZ615-75 Moveable

* Potable water versions are available - details on request.

** Incorporates a pipe interruptor with air gap at the nozzle and 300mm clearance from nozzle to bench/sink top in compliance with UK water regulation AUK3.

Compressed Gas

Needle Valves, compressed gas

BSP 1/2 in male thread inlet for horizontal mounting. With single outlet. Light grey with hand wheel colour coded for gases as indicated.

Note: All gases must be dry.

FZ645-10 1-way, compressed air

FZ645-13 1-way, nitrogen

FZ645-16 1-way, oxygen

FZ645-19 1-way, carbon dioxide



FZ600-55



FZ603-05



FZ615-75



FZ615-10, FZ615-12 and FZ615-15 are similar



FZ615-45



FZ645-13

Furniture

Stools

Wood

Epoxy powder coated 20mm mild steel frame with choice of medium density fibreboard (MDF) or laminated beech seat. Stackable when not in use. Dimension given is overall height.

MDF

FZ498-06	470mm
FZ498-09	520mm
FZ498-17	620mm
FZ498-22	670mm

Laminated Beech

FZ500-06	470mm
FZ500-09	520mm
FZ500-17	620mm
FZ500-22	670mm

Polypropylene

Black epoxy powder coated tubular steel frame with footrest and contoured polypropylene seat with lumbar support, in colours as indicated. Dimension given is overall height.

FZ510-04	Green, 445mm
FZ510-08	Green, 560mm
FZ510-12	Green, 610mm
FZ510-16	Green, 685mm

FZ512-04	Charcoal, 445mm
FZ512-08	Charcoal, 560mm
FZ512-12	Charcoal, 610mm
FZ512-16	Charcoal, 685mm

Other seat colours are available - *details on request.*



FZ500, FZ498 is similar



FZ510



FZ512

Furniture

Laboratory Stools and Chairs, Throna

The Throna range of European developed and manufactured, purpose-built, laboratory chairs have been designed so that users maintain good posture and are constructed using high-quality components and materials, providing continued comfort throughout a long working life. Specific features, such as antibacterial finishes and smooth lines with minimal folds for easy cleaning, ensure excellent performance within the working laboratory environment.

Please note that all chairs are supplied as four parts; base, gas-strut, seat and backrest modules for easy assembly by the user. This is to reduce shipping costs incurred if the chair was supplied fully-assembled.

Stools

Sturdy, steel frame with light blue*, polypropylene seat with vents for easy cleaning, gas-strut stem and re-inforced, wide, stable base with five arms, fitted with rubber based glides or soft-wheeled castors, as indicated. Alternative models are available with height adjustment as indicated. FZ530-25 also has a height adjustable footrest.

FZ530-15 420 to 550mm, glides

FZ530-18 420 to 550mm, castors

FZ530-25 600 to 850mm, glides, footrest

* Other colours are available - details on request

Laboratory Chairs, PU seat and backrest

Incorporating a robust steel frame with contoured, hygienic, black polyurethane foam seat for easy cleaning, wide backrest, gas-strut stem and re-inforced, wide, stable base with five arms fitted with rubber based glides or soft-wheeled castors as indicated. Two ranges of height adjustment are available and taller models have a footrest

FZ532-40 420 to 550mm, glides

FZ532-50 420 to 550mm, castors

FZ532-60 600 to 850mm, glides, footrest

Laboratory Chairs, PVC padded seat and backrest

Robust steel frame with foam padded, PVC faux leather seat for easy cleaning, adjustable, foam padded backrest, gas-strut and reinforced, stable base with five feet fitted with glides. Two ranges of height adjustment and seat colour are available, as indicated. Lower height models are also available with castors, taller models have footrests.

FZ535-10 430 to 560mm, glides, red seat

FZ535-15 430 to 560mm, castors, red seat

FZ535-30 550 to 800mm, glides, footrest, red seat

FZ535-40 430 to 560mm, glides, black seat

FZ535-45 430 to 560mm, castors, black seat

FZ535-50 550 to 800mm, glides, footrest, black seat

Laboratory Chairs, wooden seat and backrest

Incorporating a robust steel frame with laminated beech, wooden seat and backrest, gas-strut stem and reinforced, wide, stable base with five arms fitted with rubber based glides or soft-wheeled castors as indicated. Two ranges of height adjustment are available and taller models have a footrest

FZ538-25 420 to 550mm, glides

FZ538-35 420 to 550mm, castors

FZ538-45 600 to 850mm, glides, footrest



FZ530-15



FZ532-40



FZ535-15



FZ538-35



FZ530-18



FZ532-60



FZ535-50



FZ538-45

Furniture

Antibacterial Computer Accessories

Computer Keyboards, SterileFLAT®

Conventional-style, computer keyboards enclosed in a nano-silver impregnated, latex-free, antibacterial, flexible silicone membrane barrier, allowing use in chemical/medical and microbiological or cleanroom laboratory environments.

- ◆ Totally flat surface; easy to clean and sanitise
- ◆ Can be cleaned using antibacterial- and alcohol-based reagents or Chlor-clean
- ◆ Keyboard underside incorporates an easy-clean cover
- ◆ Ultra slim profile with soft touch, tactile keys
- ◆ Comply with current electrical safety and recycling legislation, CE, FCC approvals and ROHS compliant
- ◆ Compatible with Microsoft™ Windows™ operating systems
- ◆ Magnetised versions available to allow attachment to compatible metal surfaces or an accessory mounting plate

As described. Available wired, with USB connection or wireless, with 2.4GHz frequency connection, USB port for dongle connection and 2 x 1.5V AAA batteries. Overall 400 x 130 x 22mm W x D x H, weight 0.8kg.

- FZ650-15** Antibacterial keyboard, wired
- FZ650-25** Antibacterial keyboard, wireless
- FZ650-35** Antibacterial keyboard, wired, magnetic
- FZ650-45** Antibacterial keyboard, wireless, magnetic

Accessories and Spares

- FZ652-06** Mounting plate, metal, with adhesive pad to allow attachment of FZ650-35 or FZ650-45 to any surface
- BL610-08** Spare 1.5V AAA battery for FZ650-25/-45 (2 required)

Computer Mice, SterileMOUSE®

Stylish, ergonomically designed, computer mice with nano-silver impregnated, antibacterial silicone body, sealed command buttons and page up/down slider control.

- ◆ Comfortable, rubberised surface
- ◆ Laser diode optics, 800dpi optical sensor with 3000 frames per second scan rate provide precise, smooth cursor tracking
- ◆ Allow cleaning using antibacterial- and alcohol-based reagents or Chlor-clean
- ◆ Compatible with IBM AT or Windows™ operating systems
- ◆ Comply with current electrical safety and recycling legislation, CE, FCC approvals and ROHS compliant

As described. Available wired, with USB connection or wireless, with 2.4GHz frequency connection, mini-USB receiver and 2 x 1.5V AAA batteries. Overall 114 x 65 x 41mm W x D x H, weight 0.12kg.

- FZ654-10** Antibacterial mouse, wired
- FZ654-20** Antibacterial mouse, wireless
- BL610-08** Spare 1.5V AAA battery for FZ654-20 (2 required)



FZ650-15/-35 and FZ654-10 in use, FZ650-25/-45 and FZ654-20 are similar

Furniture

Mobile Steps/ Safety Shelving

Kick-Step

Mobile kick-step with rubber-coated footpads, sprung roller support and rubber clad base rim which holds the base firmly in position when stood upon. Height 400mm, base diameter 470mm, top diameter 300mm. Available in a choice of colours, as indicated.

- FZ680-45** Kick-Step, black
- FZ680-47** Kick-Step, blue
- FZ680-49** Kick-Step, red

Safety shelving

Ruggedly constructed all-plastic shelving unit designed for the storage of corrosive materials. With stable HDPE frame and five equally spaced shelf levels each with a removable PVC tray with 30mm high surround, giving approximately 12 litres retention capacity in case of spillage. Total shelving unit capacity is 120 litres and spillage capacity 60 litres. Overall 1880 x 910 x 450mm H x W x D. Weight 35kg.

- FZ685-10** Safety shelving

Safety Enclosure, Waysafe GP540

A benchtop safety enclosure to protect the operator when handling or weighing powders.

- ◆ Rigid anodised aluminium frame with clear acrylic glazing to the sides, top and cover
- ◆ Variable speed fan air recirculation; 0.3 metres/second to 0.9 metres/second
- ◆ HEPA EU13 main filter (retains 99.997% of particles down to 0.3 µm)
- ◆ Cable access port in back panel

As described. Overall dimensions 540 x 610 x 500mm W x D x H. With variable fan, pre- and main filters and cable access port. For 240V 50Hz single phase supplies.

- FZ850-20** Waysafe GP540
- FZ852-13** Spare pre-filters, pack of 10
- FZ852-16** Spare HEPA main filter, supplied singly

Anti-Vibration Platform, Vibrasorb®

For absorbing and damping vibrations down to 9Hz. Comprises a moulded terrazzo slab with polished surfaces supported on four absorbers with non-slip feet. Suitable for isolating sensitive analytical instruments such as balances and microscopes. Will support up to 16kg. Overall 450 x 560 x 76mm W x D x H. Weight 39kg.

- FZ990-10** Anti Vibration platform

Bench protection material – see SA200.

Fire extinguishers/blankets – see SB215/SB270.

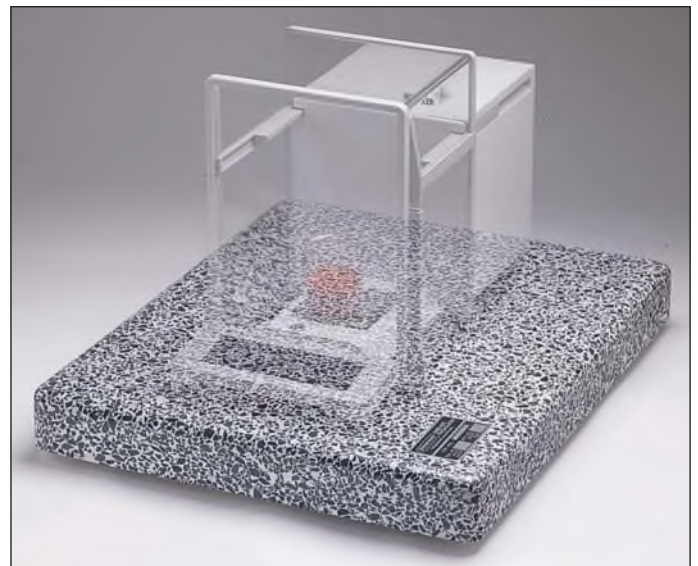
Flammable liquids stores – see SB875.

Trolleys – see TT710.

Wall clocks – see TM900.



FZ680-45, FZ680-47 and -49 are similar



FZ990-10



FZ685-10 in use



FZ850-20

DISPOSAL BAGS NON STERILE PP SMALL 300X600MM PK.200



Product Code: BA040-10

**CAPS BLACK ENAMELLED METAL WAXED WOODPULP WAD R3/28
PK 100**



Product Code: BR240-15

CAPS BLACK ENAMELLED METAL WAXED WOODPULP WAD R3/48 PK 100



Product Code: BR240-27

CAPS ALUMINIUM WITH RUBBER WAD R3/20 PK 100



Product Code: BR247-09

CAPS ALU. WITH 4.8MM HOLE R3/22 FOR MCCARTNEY BOTTLES PK 100



Product Code: BS160-15

GRAD. PIPETTE BLAUBRAND SCH/BCH SODA GLASS CLASS AS 1X.0.01M

Product Code: PM856-17



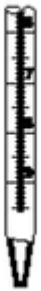
GRAD. PIPETTE BLAUBRAND SCH/BCH SODA GLASS CLASS AS 2X0.02ML

Product Code: PM856-27



GRAD. PIPETTE BLAUBRAND SCH/BCH SODA GLASS CLASS AS 5X0.05ML

Product Code: PM856-35



GRAD. PIPETTE BLAUBRAND SCH/BCH SODA GLASS CLASS AS 10X0.1ML

Product Code: PM856-45



GRAD. PIPETTE BLAUBRAND SCH/BCH SODA GLASS CLASS AS 25X0.1ML

Product Code: PM856-55



WARNING SIGN DANGER FIRE RISK 400X300MM

Product Code: SC360-58



FUNNEL STOPCOCK BORO. BODY 2MM KEY BOREX10MM STEM OD

Product Code: SV418-10



FUNNEL STOPCOCK BORO. BODY 3MM KEY BOREX10MM STEM OD

Product Code: SV418-15



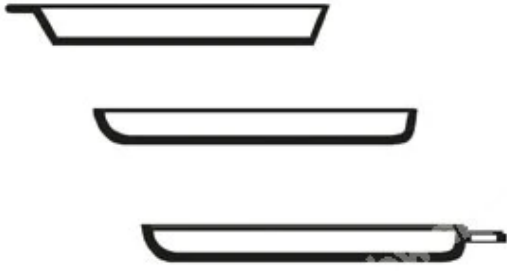
FUNNEL STOPCOCK BORO. BODY 4MM KEY BOREX12MM STEM OD

Product Code: SV418-20



COMBUSTION BOAT SILICA WITH HANDLE 50X15X9MM

Product Code: BP325-10



CAPS ALUMINIUM WAXED WOODPULP WAD R3/83 PK 100



Product Code: BR245-39

GLASS CELL OPTICAL PATH LEN. 10MM FOR CT600-10 AND CT600-20



Product Code: CT602-14

CRUCIBLE LOW FORM SILICA 29X19MM 5ML



Product Code: CX500-10

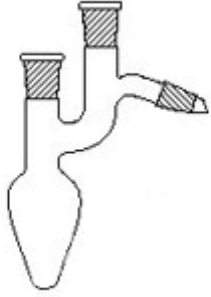
HAND-HELD ILLUMINATED MAGNIFIER 8X MAG. LOW DISTORTION LENS



Product Code: MB215-10

FLASK CLAISEN PEAR SHAPE 25ML 14/23 SOCKET & CONE

Product Code: QMD3/25



STOPCOCK BORO. PLAIN ARMS DOUBLE OBLIQUE BORE 2MM KEY BORE

Product Code: SV440-15



TUBING FLEX. SILICONE 1.6 X 4.8MM BORE X O.D. COIL 30M

Product Code: TY568-11



Safety

Bench Protection

Benchkote, Whatman

Used for protecting laboratory benches and drawers. The smooth, highly absorbent paper top surface is laminated to a strong layer of impermeable polyethylene. A contaminated sheet can be discarded easily and incinerated if necessary.

SA200-20 Pack of 50 sheets, 46 x 57cm

SA200-30 Pad of 50 sheets, 46 x 57cm

SA204-15 Reel 50 metres x 46cm wide

SA204-25 Reel 50 metres x 92cm wide

Benchkote Plus, Whatman

Similar to the standard Benchkote SA200/204 series but with a greater thickness and more open structure to provide greater absorbency. With impermeable polyethylene backing.

SA205-12 Pack of 50 sheets, 50 x 60cm

SA205-18 Reel 50 metres x 60cm wide

BenchGuard

For protecting work surfaces. A highly absorbent white paper with a polycoated underside to prevent seepage through to the bench. Suitable for the majority of applications.

SA215-12 Wallet of 100 sheets, 60 x 49cm

SA215-15 Dispenser pack of 50 metres x 49cm wide

BenchGuard Extra

Has extra absorbency to soak up heavy spillages.

SA215-50 Wallet of 50 sheets, 60 x 49cm

SA215-55 Dispenser pack of 50 metres x 49cm wide

Mats, Ceran®

Ceran® is a highly resistant glass ceramic material with a smooth, pore-free surface making it ideal for bench protection purposes where chemically aggressive materials may be spilled or hot vessels may be placed. Operating temperature range -200 to +700°C allows the mat to be used as a heating surface in place of a wire gauze or fireclay triangle. Care should be taken to ensure that the maximum operating temperature is not exceeded when using with a Bunsen burner. Supplied in packs of 10.

MB820-10 135 x 135mm

MB820-20 155 x 155mm

MB820-30 175 x 175mm

Ceran® is a registered trade mark of Schott Glaswerk.

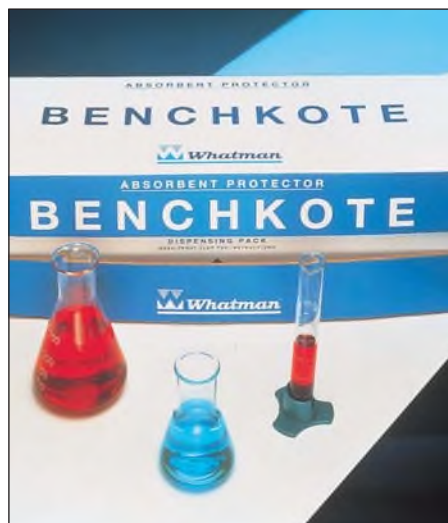
Ceramic Fibre and PTFE Mats for bench protection – see *Mats section*.



SA200 in use



SA205 in use



SA204 in use



SA215



MB820 in use

Safety

Spill Containment

Spillage Binder/Absorbent

A polymer/kieselguhr based pale green, odourless powder which is capable of binding and absorbing liquid spillage from a wide range of common chemicals including oils. It will bind/absorb up to 75 times its own weight of water. No dangerous reactions occur during the process. The subsequent gels produced can be disposed of safely. Non aqueous liquids are absorbed by capillary action but with aqueous solutions a binding reaction takes place. Polyethylene glycol is included in the powder to assist the absorption of higher viscosity liquids. The powder does not neutralise the liquids but indicators in the powder colour yellow with acid solutions and red with alkalis. It is recommended that a dust mask be worn when applying the powder. If the powder comes into contact with the eyes flush thoroughly with clean water.

- SA225-07** 0.45kg pack
- SA225-13** 1.5kg pack
- SA225-25** 5kg pack

Spill Response Pads

Highly absorbent pads to contain spillages of most types of chemical fluids.

- ◆ Easy to deploy and collect
- ◆ Pack quantity will absorb up to 100 litres of fluid
- ◆ Non-linting, bonded absorbent material
- ◆ Non-toxic, non-reactive and inert
- ◆ Available in single or double weight versions
- ◆ Constructed to prevent shredding and tearing during clean-up
- ◆ Supplied in dispenser packs
- ◆ Unlimited shelf life

As described. Supplied in dispenser packs as indicated.

- SA227-16** Single weight, 39 x 48cm, pack of 100

Spill Response Roll

Manufactured using the same absorbent material as SA227 but in rolls offering a wider coverage by cutting to length if required. Supplied in pack of 1 roll.

- SA228-46** Single weight, 48cm wide x 39 metres long, pack of 1 roll

Spill Roll Dispenser

Manufactured in UV-stabilised polyethylene, to hold rolls up to 550 x 520mm diameter x width. With hinged lid cover to protect the roll from dust.

- SA228-48** Spill roll dispenser

Tissues, wipes and cloths – see *CL700/CL760*.



SA225



SA228



SA227



SA228-48 in use

Safety

Spill Containment continued

Spill Response Packs

Comprising highly absorbent sock booms and cushions to contain spillages of many chemical solutions and solvents.

- ◆ Choice of absorbent grades:
 - Lab-Pack, for non-aggressive liquids, chemical solutions, solvents and oils
 - Chem-Pack, additionally for use with aggressive liquids, acids, caustics and lyes
- ◆ Will absorb substantial volumes of liquid without dripping
- ◆ Absorb spillage very rapidly
- ◆ Unlimited shelf life
- ◆ Non-toxic and can be disposed of by incineration (see note below)
- ◆ Supplied in a convenient, easily carried, flexible zipped case
- ◆ Contains no products that are COSHH regulated

The absorbent material is based upon cellulose fibre and expanded soft wood pulp and is contained in socks or pads of spun polyester resin. Even at high loading the polyester resin remains damp only which allows for safe disposal without dripping. Chem-Pak material is treated to resist chemical attack more effectively and aid absorbence.

Spill Response Packs, regular

Will absorb approximately 20 litres of liquid. Comprising:

- 2 sock booms 120cm long x 8cm diameter to contain the spillage
- 12 pads 40 x 50 x 0.5cm thick for fast pick up of spilt liquid
- 1 disposal bag and tie

Supplied in flexible vinyl holdall, overall 280 x 450 x 330mm H x W x D.

- SA235-42** Lab-Pack, regular
- SA235-47** Chem-Pack, regular

Spill Response Packs, large

Will absorb approximately 50 litres of liquid. Comprising:

- 2 sock booms 300cm long x 8cm diameter to contain the spillage
- 30 pads 40 x 50 x 0.5cm thick for fast pick up of spilt liquid
- 1 disposal bag and tie

Supplied in flexible vinyl holdall, overall 490 x 620 x 170mm H x W x D, suitable for shoulder carrying.

- SA235-56** Lab-Pack, large
- SA235-62** Chem-Pack, large

Spares for Lab-Pack

- SA237-14** Absorbent sock booms 120 x 8cm, pack of 20
- SA237-16** Absorbent cushions 23 x 23 x 2.5cm, pack of 20

Spares and accessories for Chem-Pack

- SA237-21** Absorbent sock booms 300 x 8cm, pack of 4
- SA237-24** Absorbent cushions 23 x 23 x 2.5cm, pack of 20
- SA237-27** Disposal bags and ties, pack of 10
- SA450-33** Accessory gloves, red PVC, extra large per pair

Body fluid disposal kit – see SB390-06.

Important Note

Although there are no toxicity problems caused by incinerating the absorbent material on its own, this may not apply when it has absorbed the spillage. The spillage is not made safe by being absorbed and the appropriate regulations must be observed when disposing of the contaminated absorbent.

Trays

Mercury spill tray

White PVC. With plugged outlet and end handles.

Ref.	L x W x D
TWR-	mm
TT204-22	056 400 x 310 x 20

Trays

White melamine resin. Autoclavable at 121°C for 15 minutes.

	L x W x D, mm
TT220-25	240 x 180 x 20
TT220-35	300 x 150 x 20
TT220-45	360 x 240 x 20
TT220-55	430 x 290 x 20



SA235-42 SA235-56 is similar



SA237-14, SA237-21 are similar



SA235-62, SA235-47 is similar



SA237-24, SA237-16 are similar



TT204



TT220

Spill Containment continued

Drip Trays

Rotary-moulded, polyethylene drip trays with removable grid to secure minor spillages from stored bottles and carboys.

	Model	Sump capacity litres	Dimensions L x W x H, mm	Weight kg
SA242-10	ST20	22	595 x 395 x 175	4
SA242-20	ST30	31	805 x 405 x 170	5
SA242-30	ST40	43	800 x 605 x 170	7.5
SA242-40	ST60	63	1000 x 605 x 200	10
SA242-65	ST66WH*	66	933 x 608 x 938	13.5

* Fitted with swivel castors and full width handle for ease of movement.



SA242-10 in use



SA242-40 in use



SA242-20 in use



SA242-30 in use



SA242-65 in use

Safety

Aprons and Coats

Aprons

Disposable, white polyethylene. Bib fronted.

Length, mm

Loose packs of 100

SA250-11 1065
SA250-18 1165

Roll packs of 200

SA252-09 1065
SA252-15 1165

SA253-06 Wall dispenser for aprons on roll, SA252. Supplied complete with fixings

Aprons

Reusable, PVC, white. Supplied singly.

Length, mm

SA254-12 1000
SA254-17 1200

Cryo-Aprons

Provide protection when working in cold environments and with liquid nitrogen atmospheres. Waterproof and washable. Are lint free and contain no asbestos. Reversible with adjustable straps. Must not be immersed in liquid nitrogen or used near an open flame or in areas where ignition could occur. Lengths given are approximate.

Size Length, mm

SA260-12 Small 910
SA260-14 Medium 1060
SA260-16 Large 1220

It is recommended that these aprons be used with Cryo-Gloves SA720 series.

Laboratory Coats

White, washable, polyester/cotton. Front fastening with two side pockets and one breast pocket. Unisex design. Length approximately 100cm.

Size Chest/Bust, cm

Standard
SA280-15 Small 86-92
SA280-20 Medium 92-98
SA280-35 Large 102-108
SA280-45 X-large 110-116

Laboratory Coats, Howie-style

Generally as SA280-series coats but with wrap-over front with side fastening, single breast pocket and internal side pocket. With elasticated, knitted cuffs. Unisex design. Length approximately 105cm.

Size Chest/Bust, cm

SA282-20 Medium 92-98
SA282-30 Large 102-108

Laboratory Coats, disposable, 3M™ 4440

Disposable laboratory coats designed to protect the wearer from non-hazardous dusts and liquid splashing. Manufactured from microporous polypropylene/polyethylene laminate ensuring breathability and low-linting. The fabric is anti-static treated and natural latex-free. With collar, zip front fastening and knitted polyester cuffs. Without pockets. Coat length is approximately to the knee. Supplied in a pack of 10.

Size Approx. chest, cm

SA292-20 Medium 81-91
SA292-35 Large 91-97
SA292-45 X-Large 96-101

Laboratory Coats, disposable, Kleenguard® EP (T7)

Non-woven, anti-static, silicone-free (EN1149-1) soft polypropylene fabric. With collar, press-stud fastening, two thigh and a left breast pockets. Water washable but this will adversely affect the anti-static properties.

Size Approx. chest, cm

SA293-20 Medium 104-112
SA293-25 Large 112-120

Kleenguard® is a Registered Trademark of the Kimberly-Clark Corporation.



SA250/SA252



SA254



SA280



SA292



SA260 with gloves SA720 in use



SA282



SA293

Safety

Semi-durable Protective Clothing

Limited life garments manufactured in DuPont TYVEK®, a 100% polyethylene, spun-bonded, filament sheet material having characteristics making it ideal for clean room and controlled area applications or where hazard containment renders the use of semi-disposable clothing preferable.

- ◆ Chemically and biologically inert
- ◆ Strong and durable, withstands laundering/ re-use several times
- ◆ Low porosity
- ◆ Excellent barrier characteristics
- ◆ Antistatic
- ◆ Low linting

Laboratory Coats, TYVEK®

White, unisex, with zip front and two side pockets. Supplied in packs of 10.

- SA300-13** Small
- SA300-17** Medium
- SA300-19** Large
- SA300-21** X-Large
- SA300-23** XX-Large

Laboratory Coats, 'Howie' style, TYVEK®

White, unisex, side fastening coats offering greater protection than the traditional style. Press stud closure. Without pockets. Supplied in packs of 10.

- SA300-24** Small
- SA300-28** Medium

Coveralls, TYVEK®

White, unisex, with elasticated cuffs and ankles, zip-fronted. Without pockets. Where included, the hood is integral. Supplied in packs of 5.

Coveralls with hood

- SA300-36** Small
- SA300-40** Medium
- SA300-44** Large

Coveralls without hood

- SA300-48** Small
- SA300-52** Medium
- SA300-56** Large

Foot Protection TYVEK®

White with elasticated ankle grip and PVC sole. Supplied in a pack of 20 (10 pairs).

- SA300-67** Shoe covers
- SA300-71** Boot covers

Sleeves, TYVEK®

White, one-size, elasticated at both ends providing additional forearm protection. Supplied in a pack of 20 (10 pairs).

- SA300-76** Sleeves

Garment Sizing

Chest sizes for TYVEK® coats and coveralls are:

Small	—	84-92cm
Medium	—	92-100cm
Large	—	100-108cm
X-Large	—	108-116cm
XX-Large	—	116-124cm

Face Masks

Face masks, cleanroom

Low lint, cellulose face masks produced in non-woven material, with ties. Supplied in a pack of 50.

- SA300-88** Face masks, non-sterile

Face masks

To EN14683 Type IIR. Latex- and fibreglass-free blue/white polypropylene, with integral nose wire and earloops. Supplied in a pack of 50.

- SA300-89** Face masks, EN14683 Type IIR, non-sterile

Overshoes/Overboots

Overshoes

Disposable PVC. With elasticated top. Size 360mm. Supplied in a pack of 100.

- SA330-15** Overshoes

Tyvek® overshoes and overboots – see SA300-67 and SA300-71.

Note:

TYVEK® may not be suitable for use in some environments and with certain reagents. Suitability should be verified for the intended use. Avoid naked flame or intense heat when wearing these products. TYVEK® garments are also available with an outer coating of polyethylene for liquid splash protection – details on request.



SA300-13 to -23



SA300-24 to -28 with
SA300-67



SA300-36 to -44 with SA300-71
SA300-48 to -56 are similar



SA300-88 in use, SA300-89 are similar



SA300-76 in use



SA330-15

Safety

Coveralls

KleenGuard
BRAND

- ◆ Wide range of materials for protection against dusts through to chemical spray or jetted liquids.
- ◆ CE0120 assured to category 3. Complex design

Performance Data

Product		A25	A40	A50	A80
	<i>Test method</i>				
	<i>Class/Result</i>				
Fabric Tests					
Abrasion resistance	EN530 method 2	1	6	2	6
Flex cracking resistance	ISO7854 method B	1	4	4	5
Trapezoidal tear resistance	ISO9073-4	1	2	2	3
Puncture resistance	EN863	1	2	1	2
Tensile strength	ENISO13934-1	1	1	1	2
Liquid repellency/penetration resistance	EN368 (10% NaOH)	3/3	3/3	3/3	6/6*
	EN368 (30% H ₂ SO ₄)	2/3	3/3	3/3	6/6*
Ignition resistance	EN13274-4 method 3	pass	pass	pass	pass
Seam strength	EN ISO 13935-2	2	3	3	4
Surface resistivity (inside surface),	EN1149-1:1995	—	—	<5 x 10 ¹⁰	<5 x 10 ¹⁰
Infective agents	EN14126:2003	—	—	—	pass
Garment Tests					
Liquid spray penetration (mist test)	EN468	pass	pass	pass	pass
Aerosol/fine particle penetration	pr ISO13982-2 (average total inward leakage)	4.27%	5.09%	6.4%	3.6%
Radioactive dust†	EN1073-2:2002	—	1	1	1

Tests performed with taping at wrists, ankles and hood.

*Tested under EN374:3 with Class 6 result at all levels.

†Provide no protection against radioactive radiation.

Continued on next page



SA335 in use



SA337 in use

Safety

Coveralls continued

KleenGuard
BRAND

Coveralls, A25

General purpose, liquid and particle protection coverall in breathable white, silicone-free, SMS fabric with grey stretchable film laminate band for additional user comfort. Triple stitched internal seams resist tearing. Supplied in packs of 25.

- SA335-10 Small
- SA335-20 Medium
- SA335-30 Large
- SA335-40 X-Large
- SA335-50 XX-Large

Coveralls, A40

White, ultra-low linting, film laminate material coverall for protection against chemical splashes and particles. Fabric is also antistatic to EN1149-1 and silicone-free. Supplied in packs of 25.

- SA337-10 Small
- SA337-20 Medium
- SA337-30 Large
- SA337-40 X-Large
- SA337-50 XX-Large

Coveralls, A50

White, durable, breathable SMS fabric treated for increased protection against chemical splashes. Low-linting, antistatic and silicone-free. With 2-way zip for quick easy access to work clothes. Supplied in packs of 25.

- SA339-10 Small
- SA339-20 Medium
- SA339-30 Large
- SA339-40 X-Large
- SA339-50 XX-Large

Garment sizing

All garments comply with EN340 recommendations:

Designation	Chest, cm	Height, cm
Small	96-104	164-170
Medium	104-112	170-176
Large	112-120	176-182
X-Large	120-128	182-188
XX-Large	128-136	188-194



SA339 in use

Safety

General Purpose Gloves

Gloves, polyethylene

Disposable. Loose fitting shape allows glove to be worn on either hand. Suitable for use as a temporary hand covering. Supplied in packs of 100 gloves, except SA350-25 which is supplied in individually sterile sleeved pairs within an outer pack of 100 pairs.

	Size
SA350-15	Medium, non-sterile
SA350-20	Large, non-sterile

Sleeves

Disposable polyethylene, shoulder length gloves, size large. Supplied in a pack of 100.

SA360-10 Shoulder length gloves

Gloves, Keepsafe

Medium weight, blue acrylonitrile rubber. To EN388:4101 and EN374 cat. III. Strong, flexible, floc lined gloves with finger and palm gripping surface. Nominal length 330mm. Please note size comment below. Supplied in single pairs.

	Size
SA436-14	6½ (small)
SA436-19	7½ (medium)
SA436-24	8½ (large)
SA436-29	9½ (extra large)

Note: Due to additional shrinkage which takes place in synthetic rubbers it is advisable to choose a nitrile glove one size larger than normal.

Gloves

Medium weight red PVC. Nominal length 270mm. Supplied in single pairs.

SA450-33 Extra large

Gloves, Marigold™

Black heavyweight rubber. Floc lined and with finger and palm gripping surface. Nominal length 300mm. Supplied in single pairs.

	Size
SA465-14	Small
SA465-19	Medium
SA465-24	Large
SA465-29	Extra large

Gloves, Marigold™

Suregrip heavyweight rubber. Floc lined. With raised surface pattern on palms and fingers to provide excellent grip even on wet surfaces. Nominal length 300mm. Supplied in single pairs.

	Size
SA480-14	Small
SA480-19	Medium
SA480-24	Large
SA480-29	Extra large

Marigold is a trademark of the Comasec International Group

Hand Protectors, Azlon

Silicone rubber, with multi-studded grip for safe handling of hot beakers, flasks etc. Will withstand -57 to +250°C temperatures. Supplied singly.

Ref.	Size
SA500-09	PGR406 Finger
SA500-19	PGR402 Medium hand

Barrier hand cream - see CL910.



SA350



SA360



SA436



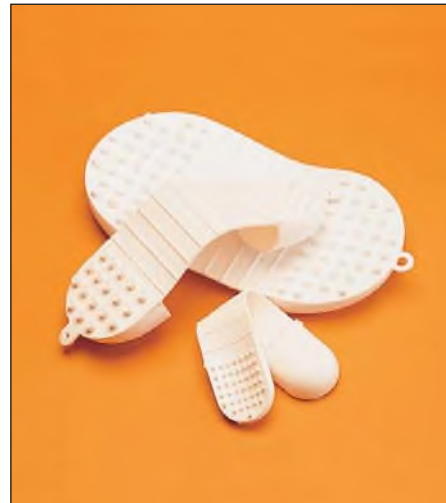
SA450



SA465



SA480



SA500

Safety

Examination Gloves

Latex Gloves

Lightweight, disposable, hypoallergenic latex rubber gloves. Close fitting and with high finger sensitivity. Nominal length 270mm. Powder free. Supplied in dispenser cartons of 100 gloves.

Size	
Non-sterile	
SA537-14	Small
SA537-19	Medium
SA537-24	Large

Latex Gloves, Premier

Powder-free. Disposable. Nominal length 270mm. Supplied in packs of 50 pairs, individually packed in pouches.

Size	
Sterile	
SA555-15	Small
SA555-20	Medium
SA555-25	Large

Vinyl Gloves

Lightweight, disposable, stretch vinyl with enhanced finger sensitivity. Powder free. Length 240mm. Supplied in packs of 100 gloves.

Size	
Non-sterile	
SA592-15	Small
SA592-20	Medium
SA592-30	Large
SA592-40	X-Large

Barrier hand cream - see CL910.

Nitrile Gloves, "ergo", "standard" and "strong"

Conform with EN420, EN455, EN374 CE category III for complex risks. Disposable, lightweight, blue nitrile gloves offering good chemical and puncture resistance, comfort and 100% latex, protein and powder-free. With beaded cuff. Overall length 240mm except "standard long" gloves which are 300mm providing increased forearm protection. Available with glove wall thicknesses and in packs as indicated.

	Size	Pack qty.
"ergo", thickness 0.14mm		
SA615-05	X-small, 5 to 6	200
SA615-10	Small, 6 to 7	200
SA615-20	Medium, 7 to 8	200
SA615-30	Large, 8 to 9	200
SA615-40	X-Large, 9 to 10	180
"standard", thickness 0.16mm		
SA617-10	Small, 6 to 7	100
SA617-20	Medium, 7 to 8	100
SA617-30	Large, 8 to 9	100
SA617-40	X-Large, 9 to 10	90
"strong", thickness 0.26mm		
SA619-10	Small, 6 to 7	100
SA619-20	Medium, 7 to 8	100
SA619-30	Large, 8 to 9	100
SA619-40	X-Large, 9 to 10	90

Nitrile Gloves, Kimtech Science®

Purple. Lightweight, disposable. Excellent chemical and puncture resistance, low odour, latex and powder free. Supplied in packs of 100 gloves.

Size	
Non-sterile	
SA646-15	Small
SA646-20	Medium
SA646-30	Large

Kleenguard and Kimtech are registered trademarks of Kimberly-Clark Worldwide, Inc.



SA537



SA592



SA646



SA555



SA615 to SA619

Safety

Special Gloves

Gloves, Leather

With heat resisting leather palm and fingers. Fleece lined. Overall length 290mm. Nominally sized 8/9. Supplied in single pairs.

SA700-25 Leather

Gloves, Autoclave

Heat resistant to 121°C. Soft, supple gloves made from washable terry cloth knit. With gauntlet cuffs for wrist protection. CE-marked and approved to EN 388-2342 and EN 407-X2XXXX. White. Supplied in single pairs.

	Length, mm
SA704-10	320

Gloves, High Temperature

Heat resistant to 232°C. Heavyweight, soft, washable terry cloth knit construction with cotton lining. CE-marked and approved to EN 388-2241 and EN 407-X242XX. Brown. Supplied in single pairs.

	Length, mm	Cuff
SA706-14	270	Short
SA706-18	320	Gauntlet

Gloves, Clavies®

Heat resistant to 230°C. Soft, pliable, easy-to-wear gloves fabricated from washable terry cloth knit. CE-marked and approved to EN 388-2241 and EN 407-X242XX. Supplied in single pairs.

	Length, mm
SA710-12	330
SA710-15	470

Gloves, High Temperature, Nomex

Heat resistant to 250°C. Very supple, seamless, knitted material providing extreme comfort and freedom of movement. Available as gloves, or gauntlets with additional cotton wrist/forearm protection. Supplied in single pairs.

	Cuff
SA715-10	Glove
SA715-15	Gauntlet

Cryo-Gloves, Waterproof

Provide protection at low temperatures down to -160°C and high temperatures up to +150°C. Suitable for retrieving articles from liquid nitrogen vapours and handling materials in freezers and ovens. Must not be immersed in liquid nitrogen, used near an open flame or in areas where ignition could occur. CE-marked and approved to EN 388-1323 and EN 511-321. Supplied in single pairs.

	Size
--	------

Mid-arm length. Approximately 350mm long.

SA720-10	Small
SA720-13	Medium
SA720-16	Large

Wrist length. Approximately 300mm long.

SA720-22	Small
SA720-25	Medium
SA720-28	Large

Gloves, Kevlar®

String-type, ambidextrous gloves manufactured from DuPont Kevlar® giving durability and extended working life in comparison to leather or cotton gloves. Ideal for retrieving broken glass or handling objects with sharp edges but are not puncture-resistant. CE-marked. Yellow, with soft PVC dots on the palm and finger surfaces for enhanced grip. Supplied in single pairs.

	Size
SA730-40	9

Barrier hand cream - see CL910



SA700



SA710



SA704



SA715-10



SA720



SA706



SA715-15



SA730

Safety

3M Masks and Respirators

Nuisance Dust & Mists Mask, 3M 8710E

Complies with EN149:2001 FFP1. Moulded shape. Provides lightweight, effective, comfortable and hygienic protection against fine dusts and oil- and water based mists. Twin strap design, with foam nose seal and aluminium nose clip to ensure a good seal to most face shapes.

SA800-16 8710E, pack of 20

Dust Respirator, 3M 8812

Complies with EN149:2001 FFP1. 78% efficient against fine particulates down to 0.5 micron. Maximum usage level 4 x OEL*. Fitted with an exhale valve.

SA805-14 8812, pack of 10

Dust/Mist Respirators, 3M 8810 and 8822

Comply with EN149:2001 FFP2. Maintenance free. 92% efficient against fine particulates and water-based aerosols down to 0.5 micron. Maximum usage level 12 x OEL*. In addition, 8822 is fitted with an exhale valve.

SA810-17 8810, pack of 20

SA810-19 8822, pack of 10

Dust/Mist Respirator, 3M 8825+

Complies with EN149:2001 FFP2RD. Similar to SA810-19 but shaped to further lower breathing resistance and increase comfort. Maximum usage level 12 x OEL* (particulates), 6 x OEL* (metal fume).

SA815-14 8825+, pack of 5

Respirators, 3M 9900 series

Lightweight, comfortable, colour coded respirators giving particulate protection up to 4 x OEL* (meet EN149:2001 FFP1). Also offer relief against low levels (below OEL*) of gases and vapours as indicated. The respirator should be disposed of immediately the substance can be detected by the user through smell or taste.

Acid Gas Respirator, 9915

For relief against low levels (below OEL*) of acid gases and some organic vapours including Hydrogen Fluoride, Sulphur Dioxide and Chlorine. Dark blue.

SA835-10 9915, pack of 20

Nuisance Odour Respirator, 9913

For relief against low levels (below OEL*) of organic vapours. Not suitable for use with Formaldehyde. Dark grey.

SA835-25 9913, pack of 20

***OEL:** Occupational Exposure Limit of contaminant as specified in relevant Guidance Notes from the Health and Safety Executive (HSE).

Warning on the use of Masks and Respirators.

Masks and respirators should be used in well ventilated areas, minimum 19.5% oxygen (manufacturer's definition of minimum oxygen requirements). They should not be used for escape purposes and are not suitable for use by operatives with facial hair that restricts direct contact between the face and the mask/respirator edge.

The wearer should immediately leave the work area and remove the respirator if:

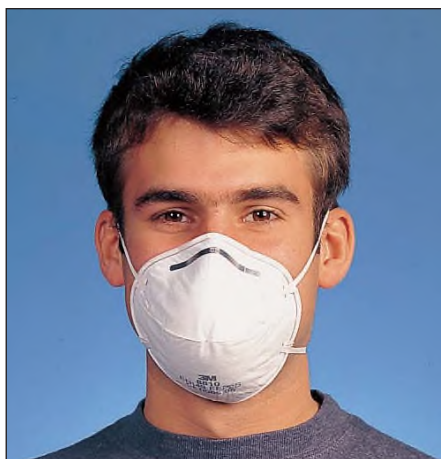
- (a) difficulty with breathing occurs
- (b) they become dizzy or distressed
- (c) the respirator is damaged in any way

Safety note

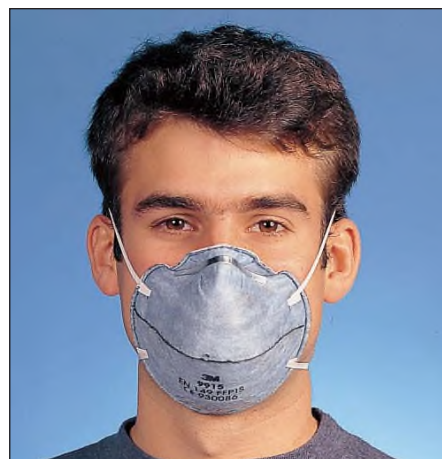
These respirators should only be used where the gas/vapour has good warning properties i.e. strong smell or taste. They are not suitable for use in atmospheres immediately dangerous to health or life.



SA800-16



SA810-17



SA835-10



SA810-19, SA805-14 is similar



SA815-14



SA835-25

Safety

3M Masks and Respirators continued

Respirators, 3M 9300+ series

Advanced, 3-panel design offers greater comfort, easy communication and improved wearer acceptance. Lightweight and foldable for easy storage. A soft cover web is provided on the inner panel ensuring enhanced comfort against the skin. All masks are individually bagged within the outer pack.

Premium Dust Respirator, 3M 9310+

Complies with EN149:2001 + A1:2009 FFP1, giving particulate protection up to 4 x OEL*.

SA842-20 9310+, pack of 20

Premium Dust/Mist Respirator, 3M 9320+

Complies with EN149:2001 + A1:2009 FFP2, giving protection against fine particulates up to 10 x OEL* and water based aerosols.

SA842-25 9320+, pack of 20

Premium Dust Respirator, 3M 9312+

Complies with EN149:2001 + A1:2009 FFP1, giving particulate protection up to 4 x OEL*. With fitted exhale valve to reduce heat build-up behind the mask and to make breathing easier.

SA842-30 9312+, pack of 10

Premium Dust/Mist Respirator, 3M 9322+

Complies with EN149:2001 + A1:2009 FFP2, giving protection against fine particulates up to 10 x OEL* and water-based aerosols. With fitted exhale valve to reduce heat build-up behind the mask and to make breathing easier.

SA842-35 9322+, pack of 10

Premium Dust/Mist/Metal Fume Respirator, 3M 9332+

Complies with EN149:2001 + A1:2009 FFP3, giving protection against fine particulates up to 20 x OEL*, metal fumes and water-based aerosols. With fitted exhale valve to reduce heat build-up behind the mask and to make breathing easier.

SA842-40 9332+, pack of 10

Respirators, 3M 4000 series

Single piece construction which provides protection against particulates and specific gases/vapours. With twin inhalation valves, a parabolic exhalation valve which reduces breathing resistance, four point strap adjustment, adjustable head cradle and non-allergenic facepiece. Minimum 78% efficiency against particulates to 0.5 micron up to 4 x OEL* (4277 Plus offers up to 20 x OEL*). Additional protection against gases/vapours as indicated up to 10 x OEL* or 1000 ppm, whichever is lower. The respirator should be discarded immediately the gas/vapour is detected by smell or taste. Supplied singly in a resealable foil bag.

Organic Vapour/Particulate Respirator, 4251 Plus

To EN405:2002 (FFA1P2D) Approved Standard. Protects against organic vapours (boiling above +65°C) Colour code brown/white.

SA850-10 4251 Plus

Organic Vapours and Inorganic/Acid Gases Respirator, 4277 Plus

To EN405:2002 (FFABE1P31D) Approved Standard. Protects against organic vapours (boiling above +65°C), inorganic and acid gases. Colour code brown/grey/yellow/white.

SA850-30 4277 Plus

*OEL: Occupational Exposure Limit of contaminant as specified in relevant Guidance Notes from the Health and Safety Executive (HSE).

Safety note

These respirators should only be used where the gas/vapour has good warning properties i.e. strong smell or taste. They are not suitable for use in atmospheres immediately dangerous to health or life.



SA842-20



SA842-30



SA842-40



SA842-25



SA842-35



SA850-10, SA850-30 is similar

Safety

Ear Protection

Ear Plugs, disposable

Soft, slow expanding, polyurethane foam plugs which are pliable and tapered for easy insertion. Meet the requirements of EN352-2. The foam gives an evenly distributed pressure, optimising comfort and sealing. Plugs are brightly coloured (neon yellow) and long (25mm) aiding removal. The Simplified Noise-level Reduction (SNR) achieved is in the order of 36db. Supplied in pack of 250 pairs.

SA858-20 Ear plugs

Ear plugs, disposable, Kleenguard™ H10

To EN352-2 (2002). Provide simplified noise-reduction (SNR) of 31db. Soft, roll down foam plugs for easy insertion and giving an evenly distributed pressure. Supplied in packs of 200 pairs.

SA858-25 H10, uncorded

Ear plugs, re-useable, Kleenguard™ H20

Styled for easy holding and insertion. To EN352-2 (2002). Provide simplified noise-reduction (SNR) of 25db. Available corded together or uncorded. Supplied in packs of 100 pairs.

SA858-31 H20, uncorded

SA858-33 H20, corded

Ear clips, re-useable, Kleenguard™ H50

To EN352-2 (2002). Provide simplified noise-reduction (SNR) of 23db. Innovative design, secure, unobtrusive ear clip frame with soft foam plugs which conform to the ear canal without rolling. Available corded together or uncorded. Supplied in packs of 10 pairs.

SA858-42 H50, uncorded

SA858-45 H50, corded

Hearing Protector

A lightweight protector suitable for short term use. Tested to BS5108 and conforming to the quality requirements of BS6344. With adjustable headband and soft ear cushions. Can be folded for easy storage when not in use. Weight 180g.

SA860-10 Folding protector

Sound Level Meter

Portable instrument suitable for measuring industrial and civil noise levels. According to IEC61672-1 with class 2 accuracy.

- ◆ Range: +30 to +130dB x 0.1dB resolution
- ◆ Precision: ±1.4dB (±1 digit)
- ◆ Max/Min. memory function
- ◆ Frequency weighing according to A characteristics curves

As described. With backlit LCD display, robust ABS housing with screw mounting for fitting to an accessory camera tripod, microphone with wind shield, 9V PP3 battery and instruction manual.

SA885-10 Sound level meter, compact

BL610-25 Spare battery, 9V



SA858-20



SA858-42



SA858-25



SA860



SA858-33



SA885-10

Safety

Safety Eyewear

bolle
SAFETY

Carbo-glass mentioned in the specifications is a high impact but scratch resistant material based on polycarbonate but sprayed with a quartz crystal coating. Standard spectacles and goggles shown here are Kitemarked and CE approved. Laser goggles are DIN and ANSI approved.

Spectacles, Bollé Bandido

Robust, all-polycarbonate, 1-piece frame/nosebridge and clear, panoramic vision, carbo-glass coated lenses to EN166 2C-1.2 1FT and side shields integrated into the side arms. Weight 31g.

SA904-25 Bandido spectacles

Spectacles, Bollé IRI-S

Lightweight, polycarbonate frame with soft, pivoting, bi-material temples and fully adjustable nose bridge. Scratch resistant, clear polycarbonate lenses with anti-fog coating, complying with EN166 2C-1.2 1FT. Available with plain, or bi-focal lenses with a reading area at the base of dioptries as indicated. Weight 27g.

SA906-20 IRI-S, plain lens

SA906-22 IRI-S, bi-focal lens, +1.5 dioptries

SA906-24 IRI-S, bi-focal lens, +2 dioptries

SA906-26 IRI-S, bi-focal lens, +2.5 dioptries

SA906-28 IRI-S, bi-focal lens, +3 dioptries

Laser goggles - If you have a requirement for laser goggles let us have full details of the laser type and output and we will quote.

UV protective eyewear – see LM370.

Spectacles, Bollé Silium

Strong, brass metal frame with PVC nosepads and "wrap-around" extended lenses in clear carbo-glass coated polycarbonate, offering side protection. Lenses comply to EN166 2-1.2 1F. With flexible side-arm hinges and soft ear hooks for a comfortable, close fit. Weight 34g.

SA908-17 Silium spectacles, metal frame

Eyeshield, Bollé Axis

Polycarbonate, 1-piece frame/nosebridge/brow-guard with PVC nosepads and "wrap-around" extended lenses in carbo-glass coated polycarbonate offering side protection. Lenses comply to EN166 2-1.2 1FT. With adjustable side arm angles and soft ear hooks for a comfortable, close fit. Weight 28g.

SA912-30 Axis eyeshield

Eyeshield, Bollé B272

Single, wide vision lens incorporating side shields and built-in brow-guard, in scratch resistant, carboglass coated polycarbonate to EN166 2C-1.2 1F. With adjustable side arms in blue. Weight 31g.

SA922-05 B272 eyeshield

Eyeshield, Bollé Viper

Single wide vision lens in scratch-resistant, carbo-glass coated polycarbonate to EN166 3-1.2 1F with adjustable side arms. Weight 28g.

SA922-20 Viper eyeshield

Eyeshield, Bollé Visiteur

Clear polycarbonate side shields, brow guard and lenses to EN166 1F. Can be worn over prescription spectacles. Weight 36g.

SA930-10 Visiteur eyeshield

Eyeshields, Bollé Contour

Ultra lightweight, nylon frame with flexible side arms and 'wrap-around' extended lenses in a choice of clear or tinted, carbo-glass coated polycarbonate. Lenses comply to EN166 1F, the tinted version additionally to EN166 5-1.4 1FT (solar protection) for outdoor use. Weight 21g.

SA934-12 Contour eyeshield, clear lens

SA934-18 Contour eyeshield, tinted lens

Spectacles, Bollé Spider

Full frame spectacles in nylon with flexible side arms and padded ear hooks. Carbo-glass coated polycarbonate lenses with choice of clear (indoor use), tinted, and red mirror (outdoor use) lenses to EN166 2C-1.2 1FT, the tinted versions to EN166 5-1.4 1FT K (solar protection). Weight 26g.

SA938-10 Spider spectacles, clear lens

SA938-13 Spider spectacles, tinted lens

SA938-16 Spider spectacles, red mirror lens



SA904



SA912



SA930



SA906



SA922-05



SA934-12



SA908



SA922-20



SA938-16

Safety

Safety Eyewear cont./Goggles/Face Shield

Spectacles, X-Ray Protective

Comply with Annex II of EU Directive 89/686/EEC, meeting requirements of EN61331-1:2002 and ANSI Z87.1+. Intended to be used for reduction of scatter radiation from X-rays used in medical environments. Lightweight, polycarbonate or rubberised nylon (SA945-85 and -95) frame in a choice of colours with lead oxide SF56HT glass lenses giving a lead equivalency of 0.75mm (± 0.08 mm). Weight 72g.

Note: Cannot be used as protection from impacts, against laser, ionising radiation and infectious materials.

- SA945-10 Silver
- SA945-15 Black
- SA945-20 Blue/yellow

- SA945-25 Taupe
- SA945-30 Purple/grey
- SA945-35 Red

Over Spectacles, X-Ray Protective

Comply with Annex II of EU Directive 89/686/EEC, meeting requirements of EN61331-1:2002 and ANSI Z87.1+. Intended to be used for reduction of scatter radiation from X-rays used in medical environments. Lightweight, rubberised nylon frame in a choice of colours with lead oxide SF6HT glass lenses giving a lead equivalency of 0.75mm (± 0.08 mm). Weight 89g.

Note: Cannot be used as protection from impacts, against laser, ionising radiation and infectious materials.

- SA945-85 Black
- SA945-95 Tortoiseshell



SA945-20



SA945-95

Goggles, Bollé Attack, single lens

Highly comfortable, compliant, soft PVC frame giving all the benefits of a foam surround whilst retaining the cleanliness and longevity of PVC. With adjustable elastic headband and clear, wide angle polycarbonate lens to EN166 2-1.2 2FT. Weight 95g.

- SA953-10 Attack goggles

Goggles, Bollé Blast, single lens

Comfortable, soft PVC, extended frame designed to be worn over prescription spectacles. With adjustable elastic headband with pivoting attachments and clear, wide angle polycarbonate lens to EN166 2-1.2 9BT 9.

- SA979-04 Blast goggles

Accessory visor for SA979-04

Clip on polycarbonate visor to EN166 3BT providing additional protection to nose and face. Can also be worn in conjunction with small respirator masks such as SA800/SA842 series.

- SA979-09 Visor for SA979-04

Cleaning concentrates – see CL640.

Lens cleaning tissues – see CL760.

UV protective eyewear – see LM370.



SA953-10



SA979-04 fitted with SA979-09

Face Shield

A modular system comprising lightweight brow-guard with adjustable head harness, elasticated nape strap and a choice of accessory snap-fit visors in clear acetate or polycarbonate, with or without chinguard.

- SA980-25 Brow-guard only, without visor

Visor, clear acetate, 200 mm deep

- SA982-16 Visor only
- SA982-18 Visor, with fittings for chingard

Visor, clear polycarbonate, 200mm deep

- SA982-22 Visor only
- SA982-24 Visor, with fittings for chingard

- SA982-30 Chinguard only for use with SA982-18 and SA982-24

Semi-disposable Face Shield

Semi-disposable face shield for protection from liquid splash or aerosol spray with polyurethane foam browband, polyester visor 230 x 330mm width x depth and elastic strap.

- SA988-10 Semi-disposable face shield



SA980/SA982



SA988-10



LM370-15, -25, -30 series

Safety

Eyewear Sundries

Goggle Box™ Dispensers

Wall mounting boxes in heavy duty smoked finish acrylic for storing and dispensing eyeshields of the SA930 type.

Size 1 accepts up to 5 eyeshields and is overall 170 x 90 x 190mm W x D x H.

Size 2 accepts up to 10 eyeshields and is overall 170 x 90 x 320mm W x D x H.

Both boxes are supplied with a safety sticker plus screws and plugs for wall mounting.

- SA990-05** Gogglebox III
- SA990-07** Gogglebox III with 5 eyeshields
- SA990-10** Gogglebox I
- SA990-15** Gogglebox I with 10 eyeshields

Lens Cleaning Station, disposable

Comprising a hand operated pump dispenser containing approximately 500ml of anti-static cleaning fluid, and 1200 tissues mounted in a unit for wall or bench mounting. Suitable for cleaning glass or plastic lenses. Intended to be discarded when cleaning materials exhausted.

- SA995-10** Lens station

Fire Extinguishers

Portable Fire Extinguishers

Suitable for small fires involving flammable liquids and electrical appliances (class ABC). Stored pressure controlled discharge powder extinguishers to BS-EN3. Fire rating 5A 34B. Comply with the European Aerosol Directive. Supplied with mounting bracket.

- SB215-12** EPS1Z, 1kg capacity
- SB215-14** EPS2Z, 2kg capacity

Dry Powder Fire Extinguisher

Suitable for use on wood, paper, flammable liquids and electrical fires (class ABC). Stored pressure powder extinguisher to BS-EN3. Fire rating 21A 113B. Supplied with fitted pressure gauge and mounting bracket.

- SB220-30** EPS4, 4kg capacity

Carbon Dioxide Fire Extinguisher

For fires involving flammable liquids (class B) and electrical appliances. Conforming to BS-EN3. Fire rating 34B. Supplied with wall mounting bracket.

- SB225-08** EC2F, 2kg capacity

Foam Fire Extinguisher

For use with flammable polar liquids, such as alcohol and methanol. Conforms to BS-EN3:2006 amendment. Fire rating 13A/113B and 55B. Discharge time 22 seconds.

- SB233-10** TY-S6AKA, 6 litre capacity

Fire Blankets

Light duty, two-ply glass fibre with fire retardant material interleaving. Manufactured to BS-EN1869:1997 and kite-marked. Supplied in a plastic holder for wall mounting.

- SB270-30** Fire blanket 1100 x 1100mm
- SB270-35** Fire blanket 1200 x 1200mm
- SB270-40** Fire blanket 1800 x 1200mm

Supply of Fire Extinguishers

Please note that the fire extinguishers on this page can only be exported as SEA FREIGHT-DECK CARGO.



SA990-07 in use



SB215-12/14



SB225-08



SB233-10



SA995 in use



SB220-30



SB270

Safety

First Aid

First Aid Boxes, workplace

All components shown in the Contents list comply with the Revised Approved Code of Practice (ACOP97) with Health & Safety First Aid Regulations 1981.

Contents	For employees	
	1-10 Standard ACOP 1	11-50 Medium ACOP 2
Advice leaflet on first aid	1	1
Assorted plasters	20	60
Triangular bandage	4	6
Eye dressing	2	4
Medium dressing 12 x 12cm	6	8
Large dressing 18 x 18cm	2	4
Gloves, pair	1	2
Safety pins	6	12
Security seal	1	1
Wipes, alcohol-free	10	10

First Aid Boxes, workplace, standard

Green ABS box with hinged lid printed with white cross on the outside and wall mounting bracket. Contents as Standard list. Overall 260 x 170 x 90mm W x D x H. Weight 0.7kg. Also available with wall mounting.

SB350-05 Standard, with wall mounting

SB354-12 Refill. Complete Standard contents

First Aid Boxes, workplace, medium

Green ABS box with hinged lid printed with white cross on the outside and wall mounting bracket. Contents as Medium list. Overall 370 x 250 x 110mm W x D x H. Weight 1.5kg. Also available with wall mounting.

SB370-05 Medium, with wall mounting

SB374-12 Refill. Complete Medium contents

Body fluid disposal kit

For the safe cleaning up and removal of potentially hazardous spillages of all body fluids. Single application kit comprises disinfectant spray effective against bacteria, viruses (including HIV, Herpes, Hepatitis) and fungi, together with absorbent granules that congeal and deodorise aqueous fluids. The spillage may then be removed using a disposal pack provided, which contains gloves, apron, scoop, spatula, paper towels, disinfectant wipes and biohazard bag. Supplied in a grip-seal pouch containing 1 each disinfectant spray and disposal pack, with 10g of absorbent granules. Overall 260 x 170 x 50mm W x D x H. Weight 0.6kg.

SB390-06 Body fluid disposal kit

Eye Washing

Eye Wash Board

Wall mounting. Complete with mirror, two 500ml bottles of sterile eyewash solution and two eyepads. Overall 370 x 270mm.

SB690-14 Eye wash board

Spare sterile eyewash solution, 500ml

SB694-07 Pack of 1



SB350



SB390-06



SB690-14



SB370



SB694

Safety

Laboratory Drench Hoses, Eyewashes and Showers

Laboratory Drench Hoses and Eyewashes. Comply with EN15154-1 and -2 requirements.

Drench Hose DS04/LV04

For the rapid flushing of spillages and splashes from the body. Comprises self-closing valve opened by a squeeze handle. The valve head incorporates single or dual nozzles with dustcap. The valve/nozzle assembly is connected to a 1.5 metre flexible PVC supply hose with 1/2" male thread inlet connector. Supplied with wall mounting hook. Requires connection to a suitable water supply.

SB720-40 Drench hose, single nozzle, DS04

SB720-45 Drench hose, dual nozzle, LV04

Drench Hose DS54/LV54

Similar to SB720-40, but with an integral mounting flange which allows fixing to benchtops up to 40mm thick. The valve/nozzle is connected to a 1.5 metre flexible reinforced PVC supply hose with 1/2" female threaded inlet connector. In use the valve/nozzle is removed and the hose is drawn through the benchtop and flange. Requires connection to a suitable water supply.

SB720-50 Drench hose, single nozzle, DS54

SB720-55 Drench hose, dual nozzle, LV54

Eyewash LV14

Wall mounting with aerated single nozzle sprayheads at either side of a 250mm diameter green epoxy-coated, stainless steel bowl with 1 1/4" threaded female drain outlet, epoxy-coated, galvanised steel fittings and pipework, and wall bracket. The side mounted supply stem has a stay-open ball valve activated by a push plate. Inlet connector 1/2" male thread. Requires connection to a suitable water supply.

SB730-25 Eyewash LV14

Eyewash LV12

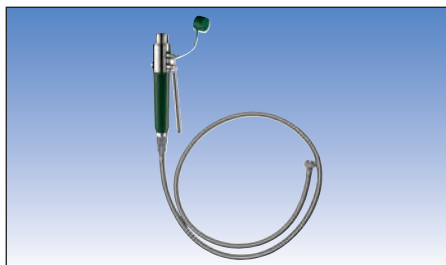
Similar to SB730-25 but with polished stainless steel bowl, pipework and fittings. Inlet connected 1/2" female thread. Requires connection to a suitable water supply.

SB730-60 Eyewash LV12

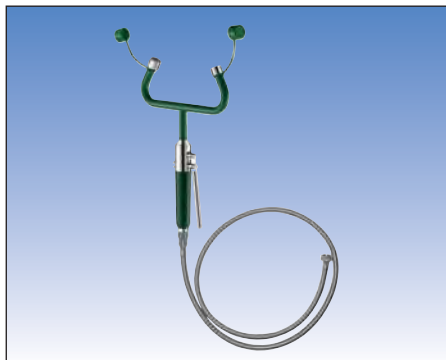
Eyewash LP22

Generally as SB730-60 but with bowl and nozzles mounted on a 900mm high stainless steel pedestal with footswitch in the base to operate the valve and supply inlet at 855mm height. Requires connection to a suitable water supply.

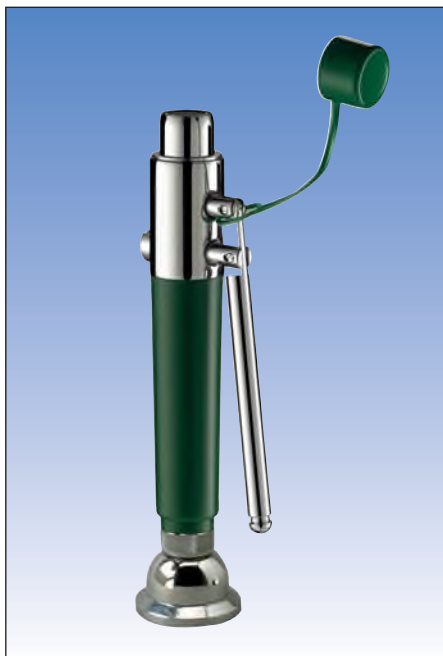
SB730-80 Eyewash LP22



SB720-40



SB720-45



SB720-50



SB720-55



SB730-25



SB730-60



SB730-80

Safety

Safe Storage

Hazardous Substances Cabinets

Designed to provide safe storage of small quantities of flammable liquids, chemicals, pesticides, paints and other hazardous substances. Manufactured in sheet steel with riveted seams. Shelves provided are height adjustable, perforated and galvanized.

- ◆ Choice of
 - chest bin with sloping lid, hasp and staple for padlocking
 - upright cabinets with two-point locking handle, adjustable height, tray-type shelves and integral sump to retain spillages
- ◆ Finished in powder coated safety yellow (except shelves) and labelled

Chest bin

As described. Supplied with hasp and staple for use with a padlock (not supplied). Dimensions stated are overall width x depth x height.

SB840-15 Chest bin, 1170 x 460 x 610mm

Upright cabinets

As described. With two-point locking handle, shelves as indicated and integral spillage sump.

Catalogue No.	SB845-20	SB845-30	SB845-40	SB845-45	SB845-50
Overall	H mm 700	900	700	900	1800
	W mm 350	460	900	900	900
	D mm 300	460	460	460	460
Doors	Single	Single	Double	Double	Double
Shelves	1	1	1	1	3

SB845-20 700 x 350 x 300mm

SB845-30 900 x 460 x 460mm

SB845-40 700 x 900 x 460mm

SB845-45 900 x 900 x 460mm

SB845-50 1800 x 900 x 460mm

Accessory additional shelves for SB845-series

Galvanized steel, tray-type. For cabinet sizes as indicated.

	W x D, mm
SB845-82	350 x 300
SB845-84	460 x 460
SB845-86	900 x 460

Accessory Floor Stand

For SB845-30 only. Increases the height of the cabinet by 535mm. With one adjustable foot for levelling.

SB845-95 Floor stand for SB845-30



SB845

SB840

Acid and Alkali Storage Cabinets

White powder coated steel carcass with labelling, riveted seams, integral spillage sump and reinforced door with recessed 2-point locking handle. Tray-type shelves provided are height adjustable and finished in a polyester powder coating.

Catalogue No.	SB847-10	SB847-20	SB847-30	SB847-40
Overall	H mm 700	700	900	1800
	W mm 350	900	900	900
	D mm 300	460	460	460
Doors	Single	Double	Double	Double
Shelves	1	1	1	3

SB847-10 700 x 350 x 300mm

SB847-20 700 x 900 x 460mm

SB847-30 900 x 900 x 460mm

SB847-40 1800 x 900 x 460mm

Accessory additional shelves for SB847-series

Polyester powder coated, tray-type. For cabinet sizes as indicated.

	W x D, mm
SB847-73	350 x 300
SB847-77	900 x 460

Accessory Floor Stands

Increase the height of the cabinets by 535mm. With one adjustable foot for levelling.

SB847-84 Floor stand for SB847-10 only

SB847-88 Floor stand for SB847-20 and SB847-30 only

Safety Note:

SB847 Acid and Alkali Storage cabinets are used primarily for secure storage of reagents. They may be susceptible to attack by corrosive vapours.

If greater corrosion resistance is required please refer to SB860/SB864 HDPE storage cabinets.

Plastic Acid and Alkali storage cabinets – see SB860/SB864.

Stainless steel hazardous substances cabinets are also available – details on request.



SB847

Safety

Flammable Storage Cabinets to EN14470-1

Exacta & Optech

High quality safety cabinets for the storage of inflammables, certified fire-resistant for 90 minutes, certified by BVQI (Bureau Veritas Quality International) to EN14470-1.

Construction

Electrostatically galvanised, external sheet steel panels finished in grey, thermo-set (minimum 90µm thick) epoxy resin, with "rockwool" solid slab thermal insulation, 90-minute fire resistant according to EN14470-1 regulations and melamine-faced chipboard, internal panels. Free-standing (not underbench) cabinets have height adjustable, AISI 304 stainless steel, tray-type shelves (see table) which can contain small leaks and spillages. Maximum loading per shelf 100kg. A gridded base trough is also provided in all cabinets for easy collection/disposal of larger spillages. Cabinets are designed without a central rib allowing easy shelf removal/replacement. Self-closing, single vent outlets are provided in the roof and at the base for venting heavier-than-air fumes. An additional 100mm diameter vent connector with blanking plug is provided in the roof for connection to an existing extraction system. All cabinets have lockable doors (see table) with automatic, oil damped, hydraulic piston closure, are labelled in accordance with DIN V4844-1 and supplied with instructions to DIN V8418.

Safety features

All cabinets feature self-sealing ventilation ports. Doors exert a pressure of no more than 100N when closing to prevent injury and full height, non-sparking hinges. Both door edges and frames have 30mm wide, mineral fibre reinforced, graphite-based, intumescent strip seals to DIN 4102 which automatically expand when the ambient temperature exceeds a safe level. A cabinet earthing plate is also provided for grounding to dissipate static charge.

Note:

Due to the large size and weight of these units the user must ensure that suitable space area, floor loading and access for installation is available prior to ordering. They are installable by the user and delivery therefore will only be made to the customers unloading area.



SB855-12



SB855-17

Catalogue No.	SB855-12	SB855-17	SB855-27	SB855-37
Capacity* litres	80	160	360	800
Doors	1	2	1	2
Shelves x spill capacity*	—	—	3 x 4 litres	3 x 9 litres
Base trough litres	7.5	16	20	45
Overall	H mm	620	2055	2055
	W mm	595	1090	1200
	D mm	520	520	600
Weight kg	82	134	235	390

*Approximate capacities.

As described. With adjustable tray shelves as indicated and instructions.

- SB855-12** Flammable storage cabinet, 80 litres
- SB855-17** Flammable storage cabinet, 160 litres
- SB855-27** Flammable storage cabinet, 360 litres
- SB855-37** Flammable storage cabinet, 800 litres

Accessories and Spares

Door latches for SB855-27 and SB855-37 only

Hold the doors open, allowing both hands to be used during loading/unloading. The door is then closed by pressure on the door to release the latch. An override automatically closes the door should the ambient temperature exceed 50°C. Please note: one latch per door is required.

- SB857-06** Right-hand door latch for SB855-37 only
- SB857-08** Left-hand door latch for SB855-27 and -37

Extraction fan

With IP44-rated motor to DIN40050, flow rate 260m³/h. Housed in a glass-fibre reinforced polyamide resin case which is antistatic and corrosion resistant. Includes sliding drawer for accessory activated carbon filters. For 220-230V 50Hz single phase supplies. Without filter.

- SB857-12** Extraction fan for SB855 series
- SB857-19** Carbon filter for acids and organic solvents

Additional tray shelves

	For cabinet	H x W x D, mm
SB857-44	SB855-12	30 x 480 x 330
SB857-48	SB855-17	30 x 975 x 330
SB857-51	SB855-27	39 x 493 x 420
SB857-54	SB855-37	39 x 1094 x 420



SB855-27 in use



SB855-37

Safety

Flammable Storage Cabinets, Dual Compliance

- ◆ Comply fully with EN14470-1 (30 minute fire resistance - ISO834 test) and FM6050
- ◆ Melamine-faced, wooden construction offers excellent chemical resistance and structural rigidity
- ◆ Self-closing doors and inlet/outlet vents with fused links which shut the doors automatically and seal the ventilation system if the ambient temperature exceeds 43°C
- ◆ 3-point locking of doors ensure high security
- ◆ Base trough provided for easy collection and disposal of spillages
- ◆ Larger cabinets have tray-type, steel shelves for minor spillages, which are height-adjustable
- ◆ Labelled in accordance with ISO3684, EN14470-1 (04/2004), FM6050 and European Directive 92/58/CEE

Catalogue No.	SB858-15*	SB858-25*	SB858-35	SB858-45	SB858-55
Capacity, litres	30	60	130	170	250
U.S. Gallons	8	16	34	45	68
Doors	Single	Double	Single	Double	Double
Shelves	—	—	3	2	3
Base trough, litres	20	41	20	31	41
Overall					
H mm	700	900	700	900	1800
W mm	350	460	900	900	900
D mm	300	460	460	460	460
Weight, kg	64	108	117	210	225

* Underbench models

As described. Supplied with adjustable tray shelves as indicated and instructions.

SB858-15 Dual range flammable storage cabinet, 30 litres

SB858-25 Dual range flammable storage cabinet, 60 litres

SB858-35 Dual range flammable storage cabinet, 130 litres

SB858-45 Dual range flammable storage cabinet, 170 litres

SB858-55 Dual range flammable storage cabinet, 250 litres

Accessory additional shelves for SB858-series

Steel, tray-type. For cabinets as indicated.

SB858-80 For cabinet SB858-35

SB858-82 For cabinets SB858-45/55



SB858

Safety

Fire-Resistant Acid and Alkali Storage Cabinet

- ◆ Fire-resistant up to 30 minutes according to ISO834 test conditions
- ◆ Compliant with EN14470-1 (if used with accessory fume extraction system) and EN1363-1
- ◆ Independent compartments for acids and alkali storage
- ◆ Earthing point to dissipate static electricity
- ◆ Intumescent seals for doors and vent
- ◆ Self-closing doors with key lock

Accessories

- SB859-22** Spare/accessory shelf
- SB859-25** Extraction system. Steel construction with fan, activated charcoal filter, connection kit to mount onto cabinet, 1 metre flexible exhaust hose, and 100mm diameter clips/clamps. For 220-240V 50Hz single phase supplies

Catalogue No.	SB859-10	
Capacity	litres	300
Adjustable shelves	6 (3 per compartment), 30kg capacity each	
Base trough	2 (1 per compartment)	
Doors	2	
Mounting	Pedestal with removable front panel for manoeuvre by forklift	
Overall (internal)	H mm	1900 (1545)
	W mm	1120 (1015)
	D mm	550 (440)
Weight	kg	230

Note:

Due to the large size and weight of this unit the user must ensure that suitable space area, floor loading and access for installation is available prior to ordering. It is installable by the user and delivery therefore will only be made to the customers unloading area.

It is the responsibility of the user to ensure adequate extraction or venting is available for connection of the extraction exhaust hose.

As described. Supplied with shelves and base trough as indicated.

SB859-10 Fire resistant acid and alkali storage cabinet



SB859-10 in use

Safety

Acid and Alkali Storage Cabinets, Plastic, continued

One-piece rotomoulded, rigid polyethylene cabinet with separate, hinged, door panel. Provides immediate, secure storage for acids and bases

- ◆ Corrosion resistant
- ◆ Lockable door
- ◆ Integral, fixed sump

Model		PSC1	PSC2	PSC3	PSC4	PSC5
Overall	H, mm	990	1650	1835	1835	1520
	W, mm	440	570	920	920	920
	D, mm	545	650	720	720	720
Shelves provided,		2	3	0	1	1
Sump capacity, litres		30	70	225	225	100
Weight, kg		15	40	56	60	52

- SB869-05** PSC1
- SB869-25** PSC2
- SB869-45** PSC3
- SB869-65** PSC4
- SB869-85** PSC5



SB869-05 in use



SB869-45 in use



SB869-25 in use



SB869-65 in use



SB869-85 in use

Safety

Safety Cans

For carrying, dispensing and disposing of flammable liquids.

- ◆ U.S. Underwriters Laboratories (UL) listed and/or Factory Mutual (FM) approved
- ◆ Leakproof closures with spring mounted positive pressure relief valve which vents at 5 psig to prevent explosion in the event of fire
- ◆ Double mesh flame arrester in spout to guard against flashback ignition
- ◆ All capacities and dimensions are approximate

Safety Cans Type 1, metal

Heavy duty terne plate construction which protects against corrosion. With leakproof closure, relief valve and flame arrester. UL listed and FM approved. The 1 and 3.8 litre models have a fixed handle with trigger release for the cap. The 19 litre model has a swing handle designed for the heavier load.

	Cap. litres	Overall o.d. x H, mm
SB880-10	1	120 x 210
SB880-20	3.8	185 x 295
SB880-35	19	295 x 435

Sharps Containers, to BS7320 – see *CM915*.

Specimen Carrier, Carrisafe – see *Clinical section*.

Waste bins – see *WD215/WD370*.

Safety Cans Type 1, polyethylene

Generally as SB880 series but high density polyethylene with stainless steel fittings. FM approved. The 1.9 and 3.8 litre models have a fixed handle with trigger release for the cap. The 9.5 litre model has a swing handle.

	Cap. litres	Overall W x L x H, mm
SB882-10	1.9*	120 x 195 x 245
SB882-15	3.8*	120 x 195 x 325
SB882-20	9.5	275 x 365 (o.d. x H)

* These sizes are oval shape.

Safety Can with Tap

Terne plate construction as SB880 series. With self closing tap mounted approximately 50mm from the base. With leakproof closure, relief valve and flame arrester. FM approved.

	Cap. litres	Overall o.d. x H, mm
SB885-25	19	295 x 435

Waste Disposal Cans, polyethylene

For containment and disposal of corrosive liquids. High density polyethylene with metal fittings. With leakproof closure, pressure relief valve, flame arrester and handle latch which holds the cap open for easier pouring during disposal. FM approved.

	Cap. litres	Overall o.d. x H, mm
SB890-30	7.6	305 x 375
SB890-40	19	305 x 510

Self Closing Containers, polyethylene

Translucent high density polyethylene containers with moulded in graduations designed to resist acids and caustic solutions. With stainless steel fittings and sprung, self closing, leakproof closure and handle.

	Cap. litres	Overall o.d. x H, mm
SB895-45	3.8*	120 x 195 x 325 (W x L x H)
SB895-55	7.6	305 x 375
SB895-65	8.5	305 x 395
SB895-75	19	305 x 510

* This size is oval shape.



SB880-35



SB882-20



SB890



SB882-15, SB882-10 is similar



SB885-25



SB895

Safety

Stainless Steel Safety Cans

For carrying, dispensing and storage of corrosive, flammable or contamination-sensitive liquids.

- ◆ TÜV/GS* approved
- ◆ Grade 1.4571 stainless steel construction with powder-coated, ergonomic, aluminium handle
- ◆ Leakproof closure with PTFE gasket
- ◆ Spring-operated pressure/vacuum relief valve
- ◆ Perforated stainless steel flame arrester in spout resists flashback ignition
- ◆ Base formed in one-piece
- ◆ UN-approved versions available
- ◆ Neoprene bumper guard
- ◆ Fitted with carry handle

Safety Cans

Stainless steel construction with choice of self-closing, leakproof dispenser cap and nozzle which can be removed to allow filling or 32mm (1 1/4") screw cap. SB896-45,-55 and-65 are with a design approved to ADR, RID, IMDG, ICAO-TI, GGVSEB, and licensed for all types of hazardous goods (packaging group X).

Capacity litres	Overall dia. x H, mm	Self-closing, dispenser cap	Screw cap	Screw cap, UN-approved
1	111 x 235	SB896-15	SB896-40	SB896-45
2	131 x 295	SB896-25	SB896-50	SB896-55
5	165 x 400	SB896-35	SB896-60	SB896-65



SB896



SB898

Safety Canisters

Stainless steel construction with leakproof 37mm (1 1/2") screw closure, stainless steel flame arrester, carrying handle and neoprene bumper guard. SB897-37, -47 and -57 are with a design approved to ADR, RID, IMDG, ICAO-TI, GGVSEB, and licensed for all types of hazardous goods (packaging group X).

Capacity litres	Overall W x D x H, mm	Standard	UN-approved
5	130 x 280 x 310	SB897-35	SB897-37
10	130 x 280 x 380	SB897-45	SB897-47
20	175 x 345 x 470	SB897-55	SB897-57

Dispensing Canisters

Generally as SB897 series but with self closing, leakproof tap and separate vent to allow dispensing from a shelf or an accessory dispensing station.

	Capacity litres	Overall W x D x H, mm
SB898-37	5	130 x 200 x 310
SB898-45	10	130 x 280 x 380
SB898-55	20	175 x 345 x 470

Stainless Steel Filling Funnels

For use with safety canisters and cans as indicated.

- SB898-60** Straight, plug-fit, for SB896-series only
- SB898-62** Angled, plug-fit, for SB897/SB898-series only
- SB898-64** Angled, with screw connection and overflow protection for SB897/SB898-series only

Accessory Dispensing Station

For use with up to two SB898 series dispensing cans. Free standing or wall mounting steel frame with removable stainless steel drip tray. Overall dimensions 555 x 405 x 600mm (W x D x H). Without cans.

- SB898-95** Dispensing station

*TÜV/GS approval

Indicates that products have been independently tested under the German Product Safety Act by the Technischer Überwachungs - Verein e.V. (TÜV). The GS (Geprüfte Sicherheit) trademark indicates that a seal of approval has been awarded.



SB897

SB898-60

SB898-62

Safety

Safety Shield

Safety Shield

Transparent, rigid Makrolon® panels 6mm thick, mounted within a metal frame with stable feet. The sliding centre panel 660 x 700mm W x H is adjustable to four heights and the 220mm wide, angled side panels are hinged so that they can be folded away for storage. Overall (fully opened) 950 x 700mm W x H. Weight 9.9kg.

SB973-10 Safety shield



SB973

Radiation Shields

◆ Choice of construction/shielding types

- clear optical acrylic, minimum 10mm thick, for shielding against beta particles
- clear lead acrylic*, minimum 12mm thick, for shielding against gamma particles

*Note: Lead acrylic has a slight yellowish tint.

Safety shields

Fixed angle pattern with stable, curved base and single face angled at 15°. Dimensions are stated H x W x D.

For beta radiation

RA600-20 450 x 300 x 150mm

RA600-30 530 x 350 x 150mm

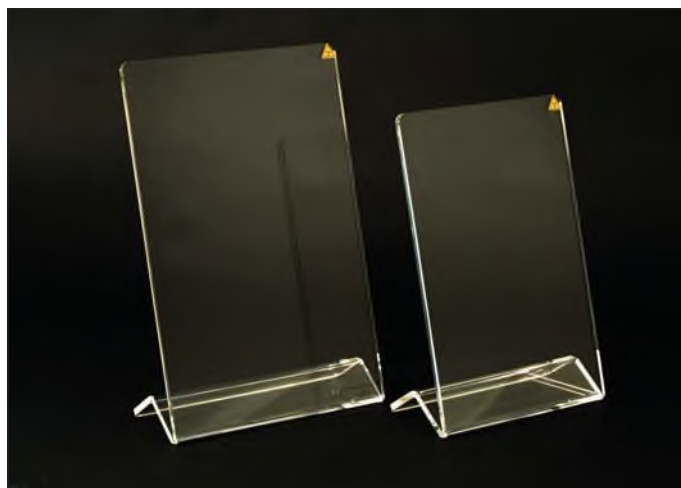
For gamma radiation

RA604-20 450 x 300 x 150mm

RA604-30 530 x 350 x 150mm

Hourglass and dual angled patterns are also available on request.

Further products offering protection against radiation – see *Radiation Shielding* section.



RA600/RA604

Signs & Labels

In accordance with Safety Sign Regulations 1980, BS5378 and EEC Regulations.

Hazard Warning Tapes

In hard wearing, self-adhesive vinyl. Supplied singly in a continuous roll of 66 metres long x 25mm wide on a 75mm core (except STERILE which is 12mm wide). Dimensions and pattern repeats are nominal. Text and symbols in black unless otherwise stated.

	Title	Pattern Repeat	Colour
SC250-30	Explosive	70mm	Orange Yellow
SC250-38	CAUTION RADIOACTIVE MATERIAL	70mm	Orange Yellow
SC250-42	BIOHAZARD	30mm	Orange Yellow
SC250-46	HEPATITIS RISK (With Biohazard symbol)	100mm	Orange Yellow
SC250-50	DANGER OF INFECTION (With Biohazard symbol)	165mm	Orange Yellow

	Title	Pattern Repeat	Colour
SC250-54	BURN WITHOUT OPENING (With Biohazard symbol)	185mm	Orange Yellow
SC250-58	CARCINOGEN	35mm	Pink
SC250-62	POISON	35mm	White
SC250-66	PATHOLOGICAL SPECIMEN FRAGILE WITH CARE	130mm	Blue and Red text on white
SC250-70	RETURN TO PHARMACY IF SEAL IS BROKEN	80mm	White
SC250-74	STERILE	70mm	Red text on white

SC250-95 Tape dispenser for tapes up to 50mm wide



SC250 Series

Inset: Tape shown actual size




























Safety

Hazard Warning Tapes, GHS-CLP

In accordance with EU regulation EC1272/2008, Classification, Labelling, and Packaging of hazardous substances and mixtures (CLP).

Hazard Warning Tapes, GHS-CLP

In compliance with the U.N. Globally Harmonised System (GHS) for classifying and labelling chemicals under EU regulation EC1272/2008, Classification, Labelling, and Packaging of hazardous substances and mixtures (CLP). Hard-wearing, self-adhesive vinyl in white printed with the pictogram as indicated and blank area to the side to allow the risk phrase and hazard/contents information to be written or applied by the user. Pattern repeat 75mm with 50mm long blank area between symbols. Supplied singly in a continuous roll of 66 metres long x 25mm wide on a 75mm core.

	Pictogram Ref.	Hazard Class			
SC250-12	GHS-01	Explosives, self-reactive substances, types A, B mixtures and organic peroxides			
SC250-16	GHS-02	Flammable materials and flammable gas emitters, self-reactive or self-heating substances and mixtures, pyrophoric materials, organic peroxides			
SC250-20	GHS-03	Oxidising Substances			
SC250-24	GHS-04	Compressed, liquefied, refrigerated or dissolved gases			
SC250-28	GHS-05	Corrosive agents			
SC250-32	GHS-06	Acute toxicity (categories 1-3)			
SC250-36	GHS-07	Acute toxicity (category 4), skin, eye or respiratory tract irritation, sensitisation, organ toxicity, narcotic effects			
SC250-40	GHS-08	Respiratory sensitizer, mutagenic/ carcinogenic agent, reproductive/ specific organ toxicity, aspiration hazard			
SC250-44	GHS-09	Environmental toxicity			

Safety

Signs and Labels continued

Hazard Warning Labels

In hard wearing, self-adhesive vinyl rolls. Each roll is on a 75mm core and comprises 330 labels per roll. The 50 x 50mm sizes are individually cut labels on a backing paper. The 100 x 100mm labels are laminated for extra protection and perforated for easy tear off. Text and symbols in black unless otherwise stated.

	Size, mm	Title	Colour
SC300-10	50 x 50	CORROSIVE	Black/White with white text
SC300-15	100 x 100		
SC300-20	50 x 50	EXPLOSIVE	Orange
SC300-25	100 x 100		
SC300-30	50 x 50	FLAMMABLE GAS	Red
SC300-35	100 x 100		
SC300-40	50 x 50	NON-FLAMMABLE COMPRESSED GAS	Green
SC300-45	100 x 100		
SC300-52	50 x 50	FLAMMABLE LIQUID	Red
SC300-58	100 x 100		
SC300-60	50 x 50	OXIDISING AGENT	Yellow
SC300-65	100 x 100		
SC300-80	50 x 50	TOXIC	White
SC300-85	100 x 100		
SC304-12	50 x 50	RADIOACTIVE	Yellow
SC304-17	100 x 100		
SC304-22	50 x 50	BIOHAZARD	Yellow
SC304-27	100 x 100		
SC304-32	50 x 50	LASER BEAM	Yellow
SC304-37	100 x 100		
SC304-42	50 x 50	DO NOT SWITCH OFF	Red circle with bar
SC304-47	100 x 100		
SC304-52	50 x 50	RISK OF ELECTRIC SHOCK	Yellow
SC304-57	100 x 100		
SC304-62	50 x 50	NOT DRINKING WATER	Red circle with bar
SC304-67	100 x 100		



SC300



SC304

Warning Signs

Warning Safety Signs

Individual self adhesive vinyl signs with yellow background, black text and symbol. Supplied singly.

All signs incorporate the word DANGER in the title.

	Size, mm	Title
SC360-13	200 x 150	Biological hazard
SC360-18	400 x 300	
SC360-23	200 x 150	Corrosion risk
SC360-28	400 x 300	
SC360-33	200 x 150	Electric shock risk
SC360-38	400 x 300	
SC360-43	200 x 150	Explosive material
SC360-48	400 x 300	
SC360-53	200 x 150	Fire risk
SC360-73	200 x 150	Laser beam
SC360-83	200 x 150	Radiation risk
SC360-93	200 x 150	Toxic hazard



SC360

Sampling/Preparation

Samplers



Liquid Samplers

Stainless steel. For single, one-handed operation with thumb-operated valve. Available in two sizes as indicated.

	Length, mm	Diameter, mm	Capacity, ml
SD050-10	460	32	50
SD050-20	540	32	100

LiquiSamplers

Available in either PTFE or polypropylene. For single, one-handed use with thumb operated valve. Features adjustable depth mark for bottom sampling. Available in 3 sizes and in materials as indicated.

	Material	Overall length, mm	Capacity, ml
SD056-25	PTFE	600	150
SD056-30	PTFE	1000	250
SD056-34	PTFE	2000	500
SD056-40	PP	600	150
SD056-45	PP	1000	250
SD056-50	PP	2000	500



SD050



SD056



SD056 in use

Sampling/Preparation

Samplers



MiniSampler General

Portable kit for routine sampling of liquids. Comprises manual vacuum pump, 10 x 100ml PE sample bottles, 10 metres of PE sampling tubing, cutter, stainless steel sinker weight for tubing and 24 x labels. Supplied in a rigid transport case.

- SD057-15** MiniSampler General
- SD057-22** Spare sample bottle, PE, 100ml
- SD057-24** Spare sample tubing, PE, coil of 100 metres

MiniSampler Ultrapur

Portable kit for ultrapure sampling of liquids. Comprises manual vacuum pump, 1 x 180ml PFA sample bottle, 5 metres of PFA sampling tubing, cutter, stainless steel sinker weight for tubing and 24 x labels. Supplied in a rigid transport case.

- SD058-20** MiniSampler Ultrapur
- SD058-32** Spare sample bottle, PFA, 180ml
- SD058-35** Spare sample tubing, PTFE, coil of 5 metres



SD057-15, SD058-20 is similar



SD065-10 to SD065-50

TeleScoop Sample Dippers

Modular system featuring telescopic sampling rods in corrugated aluminium for lightness with rigidity, with snap-on fitment at the end for attaching accessory PP angular or pendulum beakers in a choice of volumes. Angular beakers can be adjusted to a wide variety of positions and pendulum beakers swing to an upright position.

- SD065-10** Sampling rod, 0.65 to 1.2 metres
- SD065-20** Sampling rod, 0.95 to 2.8 metres
- SD065-25** Sampling rod, 1.15 to 3.0 metres
- SD065-30** Sampling rod, 1.25 to 2.5 metres
- SD065-40** Sampling rod, 1.65 to 4.5 metres
- SD065-50** Sampling rod, 1.74 to 6 metres
- SD065-53** Angular beaker, PP, 600ml
- SD065-56** Angular beaker, PP, 1000ml
- SD065-59** Angular beaker, PP, 2000ml
- SD065-72** Pendulum beaker, PP, 600ml
- SD065-75** Pendulum beaker, PP, 1000ml
- SD065-78** Pendulum beaker, PP, 2000ml
- SD065-79** Pendulum beaker, stainless steel, 1000ml
- SD065-84** Bottle holder for bottles up to 750ml*
- SD065-87** Metal cup, 1000ml
- SD065-90** Surface net, PVC/PA, 310 x 280mm L x W
2.5 to 5mm mesh
- SD065-95** Depth net, PP/PA, 190 x 430 x 250mm L x W x D
2.5 to 5mm mesh

*Bottles - see BR767 series.



SD065-53 to SD065-59



SD065-84



SD065-72 to SD065-78



SD065-87



SD065-79



SD065-90, SD065-95 is similar

Sampling/Preparation

Samplers continued



Silo Drill

Manufactured in aluminium. Designed to sample powders, granules and semi-solid, caked materials from tanker vehicles and silos. In use the drill is screwed into the media with the scraping sample chamber shutter closed. The shutter is opened at the required depth and the sample taken by twisting the drill. The scraper edge to the shutter will ensure more dense materials are sampled. The shutter is then closed and the drill withdrawn for sample analysis. Total length x diameter 1500 x 40mm, screw spirals 80mm diameter. Depths up to 3 metres can be reached by using accessory extension rods.

- SD068-15** Silo drill
- SD068-20** Extension rod, 1000mm

StickProof

Manufactured in electropolished 316 stainless steel. Developed for use in the Pharmaceutical industry when sampling powders and granules from sacks. Smooth, crevice-free construction for easy cleaning. The sample is directed straight into the sample bag which is clamped to the handle. Overall 410 x 25mm L x dia. Supplied with clamp and 100 sampling bags.

- SD072-15** StickProof

Spare bags – see BA055-20.

Penetration samplers

Disposable, polystyrene samplers with slim, bladed scoop and rigid handle that can be used to sample powders, granulates and pastes from paper or plastic sacks. Comply with EU foodstuffs contact and FDA regulations. Available with, or without, closure cover to exclude contaminants from samples and either non-sterile or sterile (gamma-irradiated). Overall length x insertion depth 263 x 150mm. Prepared and individually packed in a class 7 (10,000) cleanroom and supplied in an outer pack of 10.

	Non-sterile	Sterile
Without closure cover	SD074-10	SD074-20
With closure cover	SD074-14	SD074-24

“Green polyethylene” versions of these spoons are available - details on request.

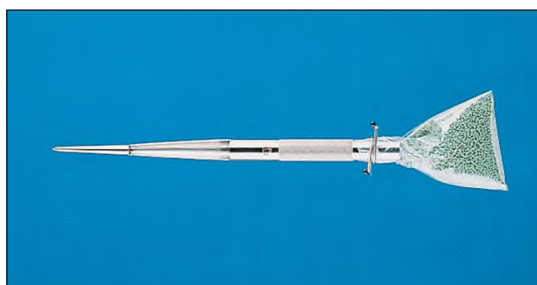
Control Seal Labels, Close-it®, Bürkle

Quality control seal labels with aluminium backing allowing hermetic sealing of sacks pierced for sampling. Strong adhesive will adhere even to surfaces coated with powder (plaster, flour etc.). Supplied in colours, sizes and packs as indicated. Printed with ruled writing area for labelling by pen.

Colour	95 x 95mm, roll of 500	150 x 150mm, roll of 250
Red	LA290-04	LA290-50
Green	LA290-08	LA290-54
Yellow	LA290-12	LA290-58
Blue	LA290-16	LA290-62
Black	LA290-20	LA290-66



SD068



SD072



LA290



SD074

Sampling/Preparation

Samplers continued



Zone Samplers

For cross-section sampling of bulk powders and granules. Available in 4 lengths, 55cm for sacks, 85cm for drums and barrels, 150cm and 250cm for sacks, silos and tanks, and incorporating one to seven sample chambers. In use the sampler is inserted to the required depth with the chamber shutters closed. The shutters are then opened, allowing sampling, then reclosed before withdrawal. The sampling chambers can then be emptied onto accessory sample paper (Quali-Paper) for analysis. Available in aluminium, all stainless steel or stainless steel with PTFE chamber cores which are lighter in weight and more economical.

	Diameter mm	Sampling depth, mm	Chambers x volume
Aluminium			
SD075-15	25	430	3 x 14ml
SD075-20	25	710	3 x 17ml
SD075-25	25	1355	5 x 17ml
SD075-30	25	430	3 x 70ml
SD075-35	25	710	3 x 130ml
SD075-40	25	1355	5 x 260ml
SD075-45	50	710	3 x 880ml
SD075-50	50	1355	5 x 1700ml
SD075-55	50	2355	7 x 2900ml
Stainless steel			
SD077-15	25	430	3 x 14ml
SD077-20	25	710	3 x 17ml
SD077-25	25	1355	5 x 17ml
Stainless steel with PTFE chamber cores			
SD078-15	25	430	3 x 14ml
SD078-20	25	710	3 x 17ml
SD078-25	25	1355	5 x 17ml
SD079-10	25	430	1 x 17ml
SD079-12	25	710	1 x 17ml
SD079-14	25	1355	1 x 17ml

Accessories

Cleaning brushes for SD075/SD079 samplers.

SD079-65 600 x 25mm length x diameter

SD079-67 1000 x 50mm length x diameter

SD079-75 Quali-Paper, lint-free, 1000 x 250mm length x width, pack of 50 sheets



SD075/SD079

Sampling/Preparation

Samplers

Nasco

Swing Sampler, Nasco

Designed for sampling from a horizontal flowing stream. With 1.83m (6ft) to 3.66m (12ft) extending fibreglass pole with swing-hinged head and 960ml polyethylene bottle which is held firmly to the head with a snapper ring. The bottle is also supplied with a polyurethane lined cap for leakproof sample storage.

SD084-05 Swing sampler

Grease Trap Sampler, Nasco

For measuring the grease level in a holding tank. Comprises two 1.22m (4ft) transparent plastic tube sections that screw together and are 3.5cm in diameter to allow small food particles to pass easily through the valve opening at one end. The sections are marked at 0.3m (1ft) intervals. The valve automatically opens when immersed and closes when the sample is removed. It can be re-opened by touching the top valve on a hard surface. Note: not suitable for solid or semi-solid materials.

SD084-33 Grease trap sampler

Coliwasa Multi-phase Liquid Sampler, Nasco

Enables representative sampling of multi-phase liquid wastes, operating within a wide range of viscous, corrosive, high volatiles or solids content liquids, except those containing ketones, nitrobenzene, dimethylformamide, mesityl oxide or tetrahydrofuran. Comprises a 1.53m (5ft) x 1.9cm (3/4 inch) i.d. tube, with valve at the base which is controlled by an internal rod. In use, the rod is pressed to close the valve, the tube is then immersed to the desired depth, then the valve opened by pulling the rod back 5 to 8cm. The rod is then pushed to close the valve and sample is removed.

SD084-44 Coliwasa multi-phase sampler

Sampling line, Nasco

For use with Whirl-Pak® bags up to 2041ml capacity. Weighted urethane bag holder with strong clamp to secure the bag and 7.62m (25ft) nylon rope to enable sampling from liquid sources at deep levels. Supplied with carrying case and retaining clamps for different size bags. Weight 1.58kg.

SD084-55 Sampling line

Fuel Sampler, Nasco

For sampling ethanol and ethanol-blended fuels within petroleum tankers or fuel station forecourt tanks. Made up of three 1.53m (5ft) clear PVC sections that screw together with a float valve at the base which opens on immersion and closes on withdrawal. Once the base of the tank has been reached, the sample can be withdrawn giving a core section of the fuel and any water layers present. The sampler is emptied by touching the valve tip against the tank side.

SD084-65 Fuel sampler



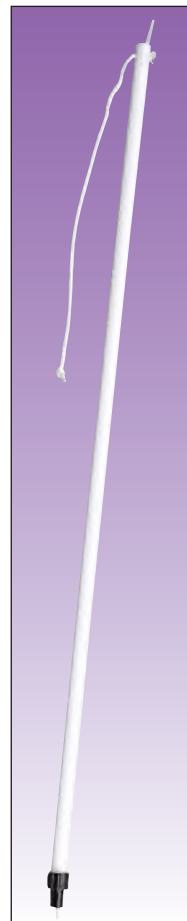
SD084-05



SD084-05 in use



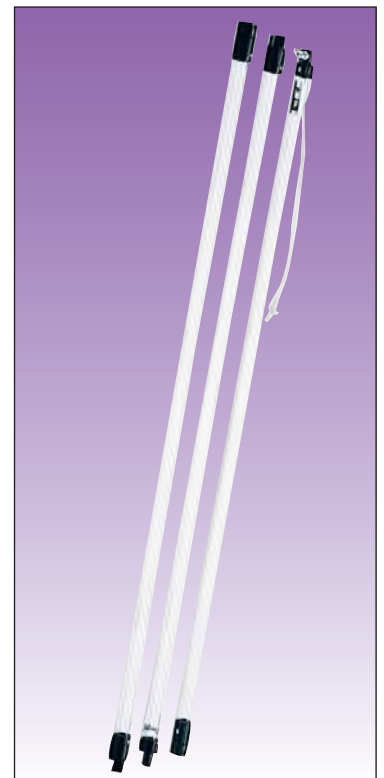
SD084-33



SD084-44



SD084-55



SD084-65

Sampling/Preparation

Samplers continued

Nasco

Sludge Judge®

Designed to take readings of settleable solids of 5% or less in a variety of non-caustic liquids to any depth. Ideal for use in sewage, chemical or food processing plants. The Sludge Judge® is supplied in 3 x 1.53m (3ft) sections of 19mm (3/4") diameter plastic pipe with screw connectors. The pipe is marked every 0.3m (1ft) and holds approximately 89ml (3oz.) of liquid between marks. The top section includes a nylon raising/lowering rope and the bottom section a float valve which opens when submerged and is closed by tugging the rope sharply upwards whilst raising. When the vent has been raised clear of the liquid, the amount of solids in the sample can be read. To release the material in the unit, a check pin at the base of the bottom section is tapped against a hard surface, which opens the check valve, draining the sample. Additional accessory centre sections can be purchased to extend the overall length of the Sludge Judge®.

SD090-25 Sludge Judge®, 4.6m (15ft)

Accessories and Spares

- SD094-05** Cloth carry bag to hold up to 4 sections
- SD094-10** Accessory centre section, 1.53m (5ft)
- SD094-15** Spare top section with rope, 1.53m (5ft)
- SD094-20** Spare bottom section with valve
- SD094-25** Cleaning brush, 1.83m, with bristle head for cleaning SD090/SD094-series

Sludge Judge II®

Similar to features on SD090-25 but with a larger capacity. With 3.18cm (1¼ inch) diameter tubing, holding approximately 178ml (6oz) of liquid between the 0.30m (1ft) marks.

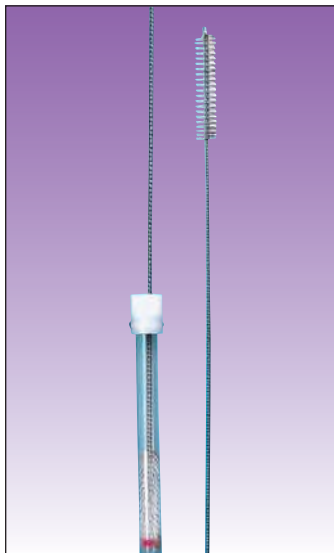
- SD095-15** Sludge Judge II®
- SD096-12** Accessory spare section, 1.53m (5ft)
- SD096-17** Spare top section with rope, 1.53m (5ft)
- SD096-22** Spare bottom section with valve



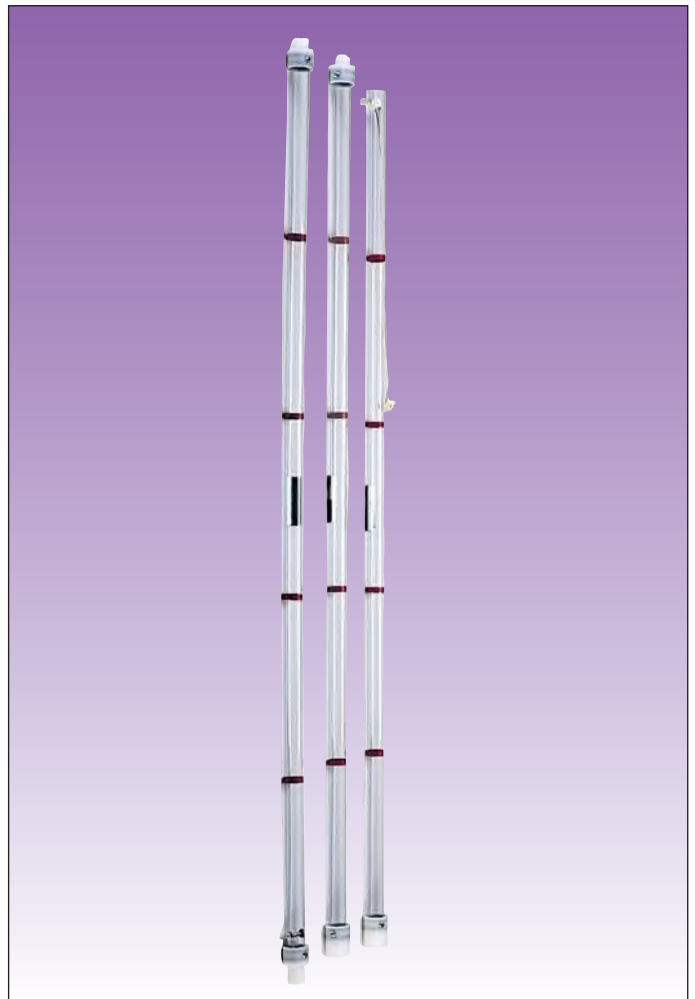
SD090-25



SD094-05 in use



SD094-25 in use



SD095-15

Sampling/Preparation

Sample Preparation

Riffle Boxes

Gravity operated. To BS812 and BS1377. Designed to provide rapid separation of bulk powdered and granular materials into two equal representative samples. The open top has twelve slots and three sample receiver boxes are supplied.

	Aperture size, mm	Material
SD160-10	7	Mild steel
SD160-14	15	Mild steel
SD162-12	6.35	Stainless steel
SD162-16	12.7	Stainless steel

Repro sample divider – see *SF200-10*.

Sieves and Sieve Shakers – see *Sieves section*.

Grinding Mill A11 basic, IKA

For small scale, high speed grinding of hard, brittle, or soft, fibrous materials. Comprises drive module with stainless steel beater and shroud which mounts onto a screw-fitting, plastic grinding chamber, volume 80ml. Grinding speed 28000rpm. Maximum running time 5 minutes. With electronic overload protection and overheat safety switch. Overall 85 x 85 x 240mm high. Weight 1.5kg. For 230V 50/60Hz single phase supplies. 300W.

MP300-20 A11 basic

Accessories and spares for MP300-20 only

MP305-09 Coated, hard steel beater for grinding hard, brittle materials with grain size 6 to 7mm

MP305-11 Cutter knife for grinding soft, fibrous materials

MP305-16 250ml grinding container, requires double beater MP305-48 for operation

MP305-47 Spare beater, stainless steel

MP305-48 Double beater, titanium for use with MP305-16 only

Mortar and Pestle Mill RM200

For dry or wet grinding of a wide range of materials including ceramics, chemicals, cosmetics, pharmaceuticals, mineral paints, plastics etc. Depending on suitability, samples from 10ml to 190ml can be milled, pulverised and homogenised to an ultimate fineness of approximately 10µm. A choice of accessory porcelain or agate mortars and pestles are available. Sample can be fed into the mortar during operation, maximum feed size 8mm. Pestle pressure is adjustable and reproducible. With digital control. Includes automatic overload cut-out and "quick-stop" motor. Overall 400 x 370 x 450mm W x D x H. Weight 24kg. For 230V 50Hz single phase supplies. Supplied without mortar and pestle which are required for operation.

MX300-30 RM200

MX303-05 Mortar for RM200, porcelain

MX303-07 Mortar for RM200, agate

MX303-15 Pestle for RM200, porcelain

MX303-17 Pestle for RM200, agate



SD162, SD160 are similar



MP300-20 with MP305-16



MX300 in use

Sampling/Preparation

Sample Concentrators



Patent No. 1484356

- ◆ Choice of models: ambient + 5 to 100°C, ambient +5 to 200°C
- ◆ Rapid concentration of up to 90 samples simultaneously

Widely used in the preparation of samples for analytical techniques including drug screening, hormone assay, chromatographic analysis and scintillation counting.

Each concentrator comprises an adjustable gas reservoir mounted on a block heater which will accept three insert blocks. As the samples are being heated gas is passed via the unique patented gas reservoir through hypodermic needles on the surface of the test solution, so providing the environment for rapid evaporation and sample concentration. The hypodermic needles are set in a silicone rubber matrix enabling their positions to be changed to accommodate different tube configurations. The concentrators can be placed in a fume cupboard when toxic vapours are being evaporated.

Sample Concentrators, Techne

As described. With gas reservoirs, block heater and instructions. Requires a gas supply and for use on 230V 50/60Hz single phase supplies. Without insert blocks (three required) or needles.

- SD300-12** Concentrator with DB3 Dri-Block®
- SD300-17** Concentrator with DB3A Dri-Block®
- SD300-21** Concentrator with DB200/3 Dri-Block®
- SD300-31** Gas reservoir and stand, spare. Requires block heater, needles and blocks

Needles, plain

- SD304-08** 76mm long, pack of 100
- SD304-12** 127mm long, pack of 100

Needles PTFE coated

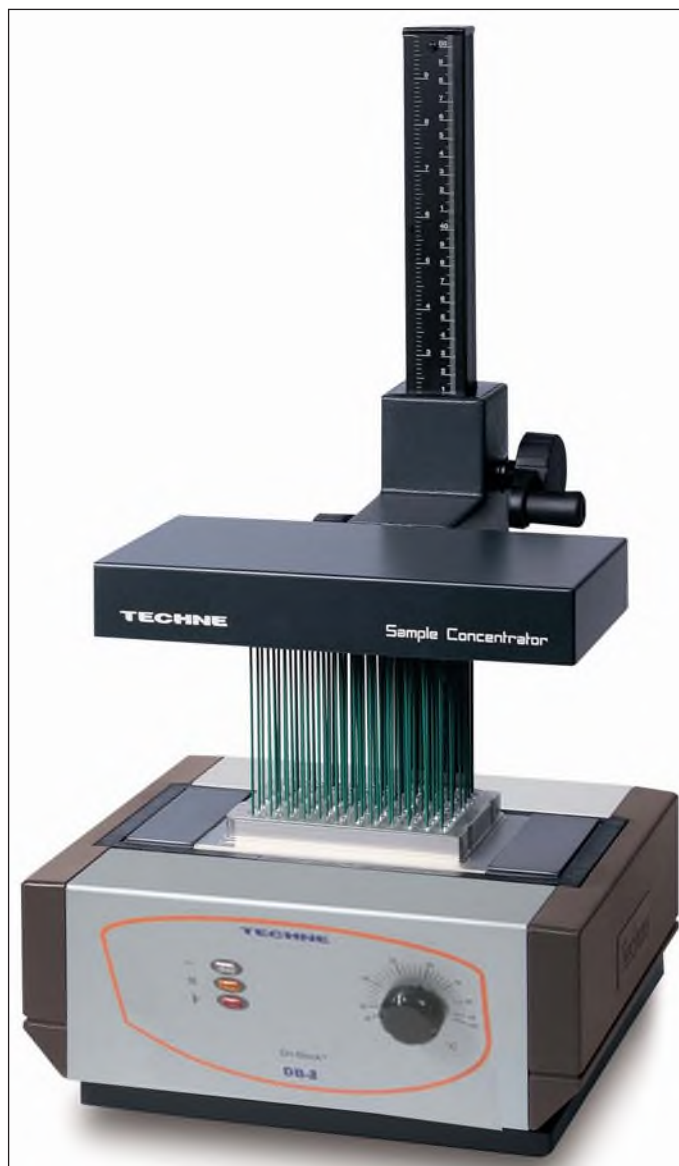
- SD304-16** 76mm long, pack of 100
- SD304-20** 127mm long, pack of 100

Aluminium Insert blocks

Overall 95 x 76 x 51mm, hole depth 48mm, mass 0.7kg.

- BK360-04** For 30 x 6mm tubes
- BK360-08** For 20 x 10mm tubes
- BK360-12** For 20 x 12mm tubes
- BK360-16** For 20 x 13mm tubes
- BK360-20** For 12 x 15mm tubes
- BK360-24** For 12 x 16mm tubes
- BK360-28** For 8 x 19mm tubes
- BK360-32** For 6 x 24mm tubes
- BK360-36** For 6 x 25mm tubes
- BK360-40** For 6 x 26mm tubes
- BK362-04** For 2 x 10mm cuvettes
- BK364-04** For 20 x 1.5ml Eppendorf tubes
- BK364-06** For 30 x 0.5ml Eppendorf tubes
- BK366-04** Solid for user to drill
- BK368-04** Solid but with thermometer hole

Catalogue No.	SD300-12	SD300-17	SD300-21
Dri-Block® supplied	DB-3	DB-3A	DB200/3
Temperature range	°C ambient + 5 to 100 – both models		ambient + 5 to 200
Control	Analogue – both models		Digital
Temperature stability at 100°C	°C ± 0.15 — all models		
Nominal heater power at 240V	W 650 — all models		
Timer, 1minute to 99hours, 59minutes	no	no	yes
Electrical supply	230V 50/60Hz – all models		
Gas supply	Suitable for most common gases. Pressure not to exceed 14kN/m ² (2psi) — all models		
Overall L x W x H			
Concentrator stand	mm	295 x 240 x 530	
Dri-Block®	mm	279 x 260 x 105	



SD300-12 in use

Sieves

Sieve Set

Sieve Set

Stainless steel mesh mounted in an aluminium frame. Diameter 100mm, depth 45mm. Set of nine, mesh numbers 10, 20, 30, 40, 60, 80, 100, 120 and 250. Supplied with one aluminium cover and one receiver pan.

SF300-45 Sieve set

Riffle Boxes

Riffle Boxes

Gravity operated. To BS812 and BS1377. Designed to provide rapid separation of bulk powdered and granular materials into two equal representative samples. The open top has twelve slots and three sample receiver boxes are supplied.

	Aperture size mm	Material
SD162-12	6.35	Stainless steel
SD162-16	12.7	Stainless steel



SF300-45



SD162

Sieving

Test Sieves, Metal

Endecotts

Test Sieves, Endecotts

Diameter 200mm. Full height. In nesting frame. To ISO3310:2016. All brass and stainless steel frame sieves are supplied with stainless steel mesh.

- ◆ Precisely manufactured, seamless frames with structured rims
- ◆ Crevice-free construction designed to give optimum performance
- ◆ Evenly tensioned mesh with precisely measured apertures
- ◆ Supplied with certificate of conformity and individually serial numbered

Nominal aperture mm	Brass frame	Stainless steel frame
16.0	SF500-20	SF520-20
13.2	SF500-23	SF520-23
11.2	SF500-26	SF520-26
9.50	SF500-29	SF520-29
8.00	SF500-32	SF520-32
6.70	SF500-35	SF520-35
5.60	SF500-38	SF520-38
4.75	SF500-41	SF520-41
4.00	SF500-44	SF520-44
3.35	SF500-47	SF520-47
2.80	SF500-50	SF520-50
2.36	SF500-53	SF520-53
2.00	SF500-56	SF520-56
1.70	SF500-59	SF520-59
1.40	SF500-62	SF520-62
1.18	SF500-65	SF520-65
1.00	SF500-68	SF520-68

Test Sieves, Endecotts, continued

Nominal aperture microns	Brass frame	Stainless steel frame
850	SF504-12	SF524-12
710	SF504-15	SF524-15
600	SF504-18	SF524-18
500	SF504-21	SF524-21
425	SF504-24	SF524-24
355	SF504-27	SF524-27
300	SF504-30	SF524-30
250	SF504-33	SF524-33
212	SF504-36	SF524-36
180	SF504-39	SF524-39
150	SF504-42	SF524-42
125	SF504-45	SF524-45
106	SF504-48	SF524-48
90	SF504-51	SF524-51
75	SF504-54	SF524-54
63	SF504-57	SF524-57
53	SF504-60	SF524-60
45	SF504-63	SF524-63
38	SF504-66	SF524-66

Cover/receiver sets

Diameter 200mm.

- SF508-08 Brass
- SF528-08 Stainless steel

Sieve brush

Double ended for use with both fine and coarse sieves.

- SF512-10 Sieve brush

Alternative sieve diameters and standards specifications, such as ASTM E11, are available — details on request.



SF520/SF524 Series, SF500/SF504 are similar

Sieving

Test Sieves, Metal, continued



A competitively priced range of high quality test sieves suitable for all relevant applications requiring precise particle analysis.

- ◆ Stainless steel seamless frames
- ◆ Certificate of conformity issued with each sieve and individually serial numbered
- ◆ Traceable mesh specifications

Test Sieves

Diameter 200mm. Full height. Stainless steel woven wire mesh in nesting stainless steel frame. BS410/ISO3310:2000 pt.1.

Nominal aperture mm		Nominal aperture microns	
16.0	SF545-20	850	SF548-12
13.2	SF545-23	710	SF548-15
11.2	SF545-26	600	SF548-18
9.50	SF545-29	500	SF548-21
8.00	SF545-32	425	SF548-24
6.70	SF545-35	355	SF548-27
5.60	SF545-38	300	SF548-30
4.75	SF545-41	250	SF548-33
4.00	SF545-44	212	SF548-36
3.35	SF545-47	180	SF548-39
2.80	SF545-50	150	SF548-42
2.36	SF545-53	125	SF548-45
2.00	SF545-56	106	SF548-48
1.70	SF545-59	90	SF548-51
1.40	SF545-62	75	SF548-54
1.18	SF545-65	63	SF548-57
1.00	SF545-68	53	SF548-60
		45	SF548-63
		38	SF548-66

Covers and receivers

Diameter 200mm.

- SF560-14 Cover stainless steel
- SF560-18 Receiver stainless steel

Sieve brush

Double ended for use with both fine and coarse sieves.

- SF512-10 Sieve brush



SF545/SF548

Test Sieves, Plastic

Test Sieves, Plastic

For non-abrasive, low-density or metal-sensitive samples. Applications can be found in the food, cosmetic, pharmaceutical and mineral industries, agriculture, drinking and waste water treatment and filtration. 190mm diameter x 44.5mm high. Nylon mesh in nesting PVC frame.

Nominal aperture microns	
50	SF575-06
125	SF575-26
500	SF575-58
850	SF575-68



SF575

Sieving

Endecotts Sieve Shakers

- ◆ Ruggedly constructed for reliable long-term operation
- ◆ Electromagnetic drive which has no rotating parts to wear
- ◆ Non-metallic, laminated leaf springs
- ◆ Built-in timer with "continuous run" mode
- ◆ Quick release clamping system for easy sieve mounting and removal (EFL- and Octagon models only)

Catalogue No.	SF725-15	SF790-15I-17	SF795-10
Model	Minor 200	Octagon 200/Octagon 200CL	EFL300
Maximum sieve capacity, full height (half height)			
100mm diameter sieves	8 (16)	12 (24)	6 (12)
200mm diameter sieves	8 (16)	8 (16)	6 (12)
300mm diameter sieves	—	—	6 (12)
Drive	Electro-magnetic- all models		
Intermittent vibration	No	Yes - both models	No
Timer	0 to 60 minutes	0 to 99 hr 59min. - both models	0 to 99 hr 59min.
Overall (without sieves)	mm 250 dia. x 180 H	480 x 480 x 730 W x D x H - both models	427 x 427 x 700 W x D x H
Weight, net	kg 17	65 - both models	48
Power	230V 50Hz	230V 50Hz/100-240V 50/60Hz	230V 50Hz

Sieve Shaker, Minor 200

For dry sieving. Compact low cost sieve shaker, ideal for intermittent use or where portability is a major requirement. With electromagnetic drive. Vibratory action. With 0 to 60 minute timer, on/off switch and strap clamping system. For 230V 50Hz single phase supplies. Without sieves.

SF725-15 Minor 200

Sieve Shakers, Octagon 200 series

For dry sieving. With electromagnetic drive. Vertical and horizontal, quiet vibrating action. With digital control of 0 to 99 hour 59 minute timer and vibration amplitude, separate intermittent or continuous vibration selection, on/off switch and quick release clamping device for sieves. The Octagon 200CL model additionally has closed-loop amplitude control for accuracy and an RS232 interface for control and evaluation of sieving on the user's PC using accessory "Sieeware" software. For operation on power supplies as indicated. Without sieves.

SF790-15 Octagon 200, 230V 50Hz a.c.

SF790-17 Octagon 200CL, 100-240V 50/60Hz a.c.

SF790-50 "Sieeware" evaluation and control software for use with SF790-17 only. Requires a personal computer running Windows™ 2000 to Windows™ 7 OS.

Sieve Shaker, EFL300

Suitable for wet or dry sieving with appropriate fittings. With electromagnetic drive. Vertical and horizontal, vibrating action. With 0 to 99 hour 59 minute timer, amplitude adjustment, separate digital controller, on/off switch and quick release clamping device for sieves. Overall 427 x 427 x 700mm. Weight 48kg. For 230V 50Hz single phase supplies. Without sieves.

SF795-10 EFL300



SF725 in use



SF790 in use



SF795 in use

Storage

Containers/Racks

Storage Containers

Transparent acrylic. Designed to provide visible storage of small laboratory items. Hinged lids provide rapid filling and dispensing. These bench-mounting units provide simple, convenient and visible storage for small items such as pipette tips, septa etc. Dimensions stated are H x W x D.

- SX200-15** 2-compartment unit
365 x 140 x 160mm
- SX200-18** 3-compartment unit
210 x 210 x 160mm
- SX200-20** 4-compartment unit
210 x 290 x 160mm

Storage Rack

Polypropylene open tiered rack, bench mounting, for storing small laboratory items such as corks, bungs, pipettor tips, small bottles etc. Stops prevent the bins falling off the ends and to improve visibility the bins can be angled down by approximately 7". Overall dimensions of each assembly 388 x 500 x 360mm H x W x D.

	Tiers	Bins of H x W x D, mm
SX210-14	4	8 of 50 x 125 x 130 4 of 75 x 125 x 170 4 of 100 x 125 x 225



SX200-18, SX200-15 and SX200-20 are similar



SX210-14

Storage Bin Panels

Storage Bin Panels

Flat, wall-mounting steel panels finished in colours as indicated, with louvred cut-outs to hold hanging storage bins in the following sizes:

Bin size	L x W x H, mm
1	90 x 100 x 50
2	165 x 100 x 75
3	240 x 150 x 125

Supplied without wall fixings.

Red panel 320 x 300 x 1.2mm W x H x D, with 6 each size 1 and size 2 bins in blue.

SX215-20

Blue panel 320 x 300 x 1.2mm W x H x D, with 6 each size 1 and size 2 bins in red.

SX215-25

Red panel 457 x 300 x 1.2mm W x H x D, with 6 size 3 bins in blue.

SX215-32

Blue panel 457 x 300 x 1.2mm W x H x D, with 6 size 3 bins in red.

SX215-36

Grey panel 457 x 438 x 1.2mm W x H x D, with 8 each size 2 bins in red and blue.

SX215-43

Grey panel 457 x 946 x 1.2mm W x H x D, with 9 each size 3 bins in red and blue.

SX215-47

Grey panel 457 x 641 x 1.2mm W x H x D, with 24 size 2 bins in red.

SX215-51



SX215-20



SX215-36

Cabinets

Storage Cabinets

With transparent tough plastic drawers mounted in a strong steel frame. Allow clean storage of small laboratory items, components, spares etc. Units can be wall or bench mounted. A retaining lip at the rear prevents the drawers from falling out of the cabinet. Overall dimensions of each cabinet 407 x 306 x 150mm H x W x D.

	Drawers of H x W x D, mm
SX225-10	36 of 35 x 64 x 135
SX225-14	18 of 57 x 87 x 135
SX225-18	6 of 57 x 275 x 135
SX225-22	24 of 35 x 64 x 135 3 of 57 x 87 x 135 1 of 57 x 275 x 135

Storage Cabinet, large depth

General construction and uses as SX225 series but with transparent tough plastic drawers 240mm deep. Overall 435 x 357 x 255mm. Can be wall or bench mounted. With 8 drawers each 85 x 160 x 240mm H x W x D.

SX230-10 Cabinet, large depth

Security cabinets – see FZ540/FZ542.



SX225-22



SX230

Storage

Storage Containers

Bench or wall mounting, dispensing/storage containers, with rigid polystyrene outer bodies and transparent ABS inner compartments that tilt forward for filling or dispensing. All units have a common width of 600mm. Provide convenient, clean and visible storage of small parts and accessories. Supplied in packs as indicated.

	No of Bins	Bin height x depth, mm	Pack qty.
SX204-04	9	77 x 64	10
SX204-08	6	113 x 93	10
SX204-12	5	164 x 135	5
SX204-16	4	207 x 171	4
SX204-20	3	240 x 197	3
SX204-24	2	353 x 310	1

Accessory

Retaining bars. Secure compartments in place if unit is moved and prevents accidental opening (not necessary for SX204-04).

SX204-30 Accessory retaining bars, pack of 25



SX204

Storage Cabinets

All polypropylene construction with strong, moulded frame holding transparent, pull-out drawers for holding small components and spare parts etc. Units can be wall or bench mounted. Overall dimensions of the cabinet 420 x 270 x 130mm H x W x D. Supplied in packs of 3.

	No of Drawers	Drawer H x W x D, mm
SX234-15	24	36 x 62 x 125
	4	36 x 127 x 125
	2	36 x 255 x 125
SX234-35	40	36 x 62 x 125



SX234-15 in use

Storage

Storage Panels and Bins

Flat, wall-mounting steel panels finished in grey with louvred cut-outs to hold storage bins in the following sizes:

Bin size	D x W x H, mm
2	165 x 100 x 75
3	240 x 150 x 132
4	350 x 205 x 132

Wall Panel

Grey powder-coated, sheet steel with louvres as indicated. Supplied in a pack of 2.

	Overall W x H, mm	Maximum Bin capacity
SX217-10	457 x 438	16 x size 2 8 x size 3 5 x size 4

Storage Bins

Strong, durable, moulded industrial plastic with smooth internal surfaces for easy cleaning and solvent-resistant to most reagents. Operating temperature range -15°C to +50°C. An index card slot is provided at the front of the bin to hold accessory labelling cards. Available in a choice of colours and in pack sizes as indicated.

	Bin size	Colour	Pack qty.
SX218-12	2	Blue	20
SX218-14	2	Red	20
SX218-22	3	Blue	20
SX218-24	3	Red	20
SX218-32	4	Blue	10
SX218-34	4	Red	10

Accessory Labelling Cards

SX218-75 Plain white card labels to fit the front slot of SX218-bins, pack of 100.

Transport Boxes, DuraPorter™

Transport Boxes, DuraPorter™

Transparent, fully autoclavable, polycarbonate carrying boxes in a choice of colours with silicone lid gasket and clamps to provide a water-tight secure closure. Applications include moving biological and clinical samples, protection of instruments and tools in the field or within challenging environmental conditions and as portable desiccator cabinets.

- ◆ Choice of three colours allows coding or individual identification
- ◆ Contents readily visible without opening box
- ◆ Carry handle folds neatly into the body to enable boxes to be stacked
- ◆ lid opens fully, allowing easy access and cleaning

As described. Overall 380 x 196 x 160mm W x D x H.

SX235-20 DuraPorter™, clear with blue handles

SX235-40 DuraPorter™, red with red handles

SX235-60 DuraPorter™, yellow with yellow handles

Accessory racks for SX235-series

Colour-coded, as indicated.

To hold 72 x 13mm diameter tubes.

SM580-10 White **SM580-52** Blue

SM580-24 Orange **SM580-66** Green

SM580-38 Yellow **SM580-80** Red

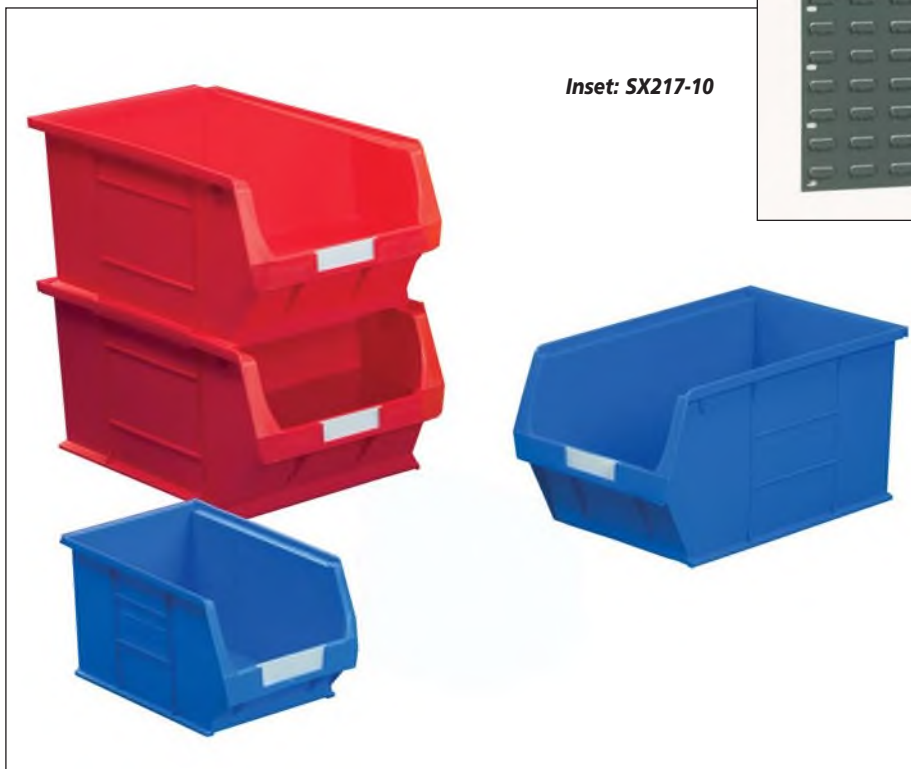
To hold 72 x 16mm diameter tubes.

SM580-12 White **SM580-54** Blue

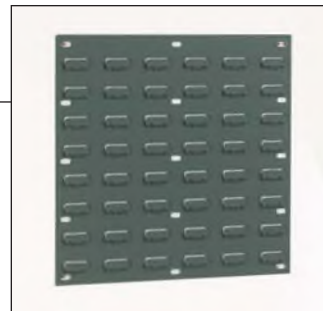
SM580-25 Orange **SM580-68** Green

SM580-40 Yellow **SM580-82** Red

GG150-95 Silica gel, self-indicating, pack of 500g



SX218 bins in use with SX218-75



Inset: SX217-10



SX235

Storage

Service Cases

Service Case

Copolymer case with hinged snap shut polypropylene lid and carrying handle. With 17 removable full depth inserts. Overall 338 x 261 x 57mm high.

SX240-10 Service case

Carry-Lite Case

Robust, polypropylene case with clear polycarbonate, hinged cover. The floor of the case and lid are gridded to hold 15, removable, full depth inserts in place. The case is equipped with strong, sliding catches and hinged, carrying handle. Overall 413 x 330 x 79mm high.

SX240-45 Carry-Lite case

Other Storage Containers for Chemicals – see *Bottles section*.

Flammable liquids – see *Bottle Accessories and Safety sections*.

Microscope slides – see *Microscopy section*.

Specimen – see *Bottles, Boxes, Jars and Tubes sections*.



SX240-10 in use



SX240-45

Storage/Mixing Containers

Containers, Azlon

Translucent HDPE. Lightweight, tapered containers with snap-on lid, ideal for storing powders and granules. Supplied in pack quantities as indicated.

	Ref. JWH-	Capacity, ml	Pack qty.
SX290-15	0125P	125	250
SX290-20	0250P	250	250
SX290-25	0500P	400	100
SX290-30	01000P	1000	100
SX290-35	2000P	2000	50
SX290-40	2500P	2500	25
SX290-45	5000P	5000	25

Containers, polyethylene

For storage and transportation of samples. With press-on lid and plastic handles. Capacities are approximate. Supplied in pack quantities as indicated.

	Capacity, litres	Pack qty.
SX310-20	1.0	1
SX310-25	2.5	1
SX310-30	5	1
SX310-35	10	1
SX310-40	15	1
SX310-55	25	1



SX290



SX310 in use

Storage Bins

White, food-grade HDPE. With ribbed walls for rigidity and to aid stacking. Wide, turn-over lip edges ensure comfortable gripping. Side handles in the lip enable easy carrying. All bins are 660 x 450mm L x W overall, 600 x 400mm L x W internally. External/internal heights as indicated. Supplied singly.

	Capacity, litres	Height ext./int., mm
SX330-25	29	130/120
SX330-50	48	220/210
SX330-70	94	410/400

SX332-09 Lid for SX330 bins, polystyrene



SX330-25 in use



SX330-50 in use



SX330-70 in use

Storage, Surface Tension

Storage/Mixing Containers continued

Cylindrical Containers

Stainless steel with loose lid. Vessels up to 10 litres have a swing handle, those over 10 litres have two side handles. Not suitable for use as pressure vessels. Alternatively, available fitted with three toggle clamps which hold the lid firmly in place.

	Capacity, litres	Dia. x height mm
Without lid clamps		
SX400-13	1	100 x 155
SX400-16	2	130 x 175
SX400-25	5	175 x 240
SX400-31	8	200 x 285
SX400-34	10	220 x 280
SX400-37	20	350 x 390
SX400-40	25	380 x 390
SX400-43	30	380 x 460
With three lid clamps		
SX402-13	1	100 x 155
SX402-16	2	130 x 175
SX402-25	5	175 x 240
SX402-31	8	200 x 285
SX402-34	10	220 x 280
SX402-37	20	350 x 390
SX402-40	25	380 x 390
SX402-43	30	380 x 460

Kegs, HDPE

White. With extra-wide mouth for easy filling. Ideal for waste disposal or storage of liquids, powders or granules. With red, leakproof PE cap, suitable for tag sealing. UN-approved to schedule X cat. I, II and III. Supplied singly.

	Cap. litres	Dia. x ht. mm	Neck i.d. mm
BR928-30	10	270 x 240	200
BR928-35	26	316 x 424	204
BR928-43	33	338 x 450	295



SX400, SX402 are similar



BR928 in use

Trolleys

Platform Trolleys

Robust construction, with rigid, fixed, polypropylene shelves, aluminium pillars and large, thermoplastic rubber wheels, two with brakes.

- ◆ Choice of 2 or 3-platform versions and two platform sizes
- ◆ Easily cleaned

Catalogue no.	TT730 -15	-30	-45	-60
Platforms	2	2	3	3
Size	mm 630 x 424	866 x 500	630 x 424	866 x 500
Height between platforms	mm 560 — both models		280 — both models	
Overall capacity	kg 100	120	150	200
Overall	W, mm	750	990	750
	D, mm	460	513	460
	H, mm	940	970	980

As described. Supplied flat-packed for assembly by the user.

- TT730-15** 2-platform, small
- TT730-30** 2-platform, large
- TT730-45** 3-platform, small
- TT730-60** 3-platform, large

Claxmobil Trolley

Stable aluminium frame with high-strength plastic fittings. Lightweight, portable, folding trolley with "pram-style" handle, 2 tray tiers 530 x 370mm L x W, 175mm diameter rear wheels with elastic foam tyres, foot brake and 90mm diameter swivelling front castors. Max. loading: 20kg top tier, 40kg bottom tier. Overall 890 x 550 x 1030mm W x D x H assembled, 670 x 470 x 110mm W x D x H folded. Weight 6.7kg. Supplied with one collapsible box to fit either tray tier.

- TT745-10** Claxmobil
- TT745-35** Collapsible box, 270mm high, to fit TT745-10

Tray Trolleys

Stainless steel construction with welded-in flat plates and four 100mm diameter swivel castor tyred wheels, two with brakes. Number of trays supplied match tiers stated. Dimensions and weights are nominal.

	Tray size, mm	Tiers	Max. loading, kg	Overall height, mm	Weight kg
TT810-20	875 x 465	2	100	900	14
TT810-25	875 x 465	3	100	900	18
TT810-30	875 x 465	4	100	1100	24
TT810-35	875 x 465	5	100	1400	28
TT810-40	1090 x 545	3	100	900	24



TT730-15 in use



TT745-10



TT730-45 in use



TT810

Trolleys

Flatbed Trolley and Sack Truck

Flatbed Trolley

Robust steel trolley with non-slip, rubber platform, folding steel handle powder-coated in grey and 100mm diameter, non-marking wheels (two fixed, two swivelling). Capacity 150kg. Overall 810 x 470 x 730mm H x W x D unfolded, 230mm high when folded.

TT870-25 Flatbed trolley

Telescopic Folding Sack Truck

For transporting small items or packages. Lightweight, aluminium construction with collapsible frame and telescopic handle for convenient storage when not in use. Maximum capacity 90kg. Fitted with 355 x 240mm W x D, folding footplate and 150mm diameter rubber cushioned wheels. Overall 1105 x 400 x 410mm H x W x D unfolded, 740 x 400 x 180mm when collapsed.

TT880-10 Sack Truck

Gas Cylinder Trolleys

Gas Cylinder Trolleys

Single cylinder capacity. Stoved enamel steel frame finished in blue, incorporating side shield bars for added protection of the cylinder, galvanised retaining chain, wide, perforated base platform to aid condensation drainage and provide support, and tyred wheels. Maximum capacity 150kg and cylinder height 1220mm. Maximum cylinder diameter as indicated. Available with, or without, dismountable rear arm with castors to aid manoeuvrability.

GF402-10 For 280mm cylinder, without castor arm

GF404-15 For 280mm cylinder, with castor arm

GF406-20 For 380mm cylinder, without castor arm

GF406-25 For 380mm cylinder, with castor arm



TT870-25



GF406-20, GF406-25 is similar



TT880-10 folded and unfolded in use



GF404, GF402 is similar

Waste

Waste Bins and Sacks

Waste Bins

Polyethylene. Dimensions and capacities stated are approximate*.

	Capacity, litres	H x W x D, mm
Swing top, removable hood		
WD215-25	45	700 x 350 x 350
WD215-27	Disposable bin liners for WD215-25, pack of 100	

	Capacity, litres	H x dia. mm
Loose lid, carrying handles		
WD220-35	90	700 x 500

* Please Note. These bins are subject to regular design and dimensional changes and may be supplied in a variety of colours.

Waste Sacks

Black plastic. Dimensions 450 x 725 x 975mm. Supplied in a pack of 100.

WD300-20 Waste sacks

"Hazardous Waste" Sacks

Yellow polyethylene bags with ties, printed with "Hazardous Waste" text and warning symbols. Dimensions stated are nominal flat width x depth. Supplied in packs as indicated.

WD315-10 460 x 900mm, pack of 100

WD315-20 600 x 1100mm, pack of 50

Waste Bins

Polyethylene. With loose fitting lid.

	Capacity, litres	H x dia. mm
WD370-12	15	185 x 425
WD370-22	20	390 x 350
WD370-44	70	585 x 510
WD370-47	120	650 x 575

Clinical Waste Bins

Single use polypropylene containers for safe disposal and incineration of all types of clinical waste as defined in the "Safe Disposal of Clinical Waste" report issued by the H.S.A.C. With non-reversible locking lid giving an air and water tight seal once closed and moulded-in carrying handles. Supplied singly.

WD380-12 Clinical waste bin, 30 litres, 355 x 400 x 315mm high

WD380-22 Clinical waste bin, 60 litres, 336 x 406 x 619mm high

Disposal Bins, Azlon

Self-assembled, rigid cardboard boxes with strong, leakproof LDPE liner and integral waste flap in the lid, for disposal of broken glass. The lid flap can be sealed when the bin is full. A choice of floor-standing or benchtop versions are available. Printed with safety hazard symbol and instructions for use. Supplied in a pack of 6.

WD405-15 DBG001P, floor standing, 300 x 300 x 700mm high

WD405-25 DBG002P, bench top, 230 x 230 x 265mm high

Clinical sharps bins - see *CM915-ICM920-ICM926-series*.



WD215-25



WD370



WD380



WD405



WD220-35



WD300



WD315

Waste, Watch Glasses

Beta and Gamma Radiation Shielding, Boxes

A range of benchtop storage boxes with hinged lids to accept accessory inserts as indicated. Dimensions stated are H x W x D.

For beta radiation

- RA612-15** Mini-box,
75 x 105 x 105mm
- RA612-25** Midi-box,
80 x 185 x 105mm
- RA612-35** Maxi-box,
160 x 300 x 185mm

For gamma radiation

- RA615-25** Midi-box,
784 x 189 x 109mm
- RA615-35** Maxi-box,
164 x 304 x 189mm

SAFETY NOTES

- 1) Beta radiation shields are unsuitable for use against secondary x-rays (Bremsstrahlung) or gamma radiation.
- 2) Gamma radiation shields will block emissions effectively from ¹²⁵I and any low energy gamma emitters. They are not suitable for more energetic isotopes of iodine. Heavier-walled shields are available for use with these isotopes - details on request. Gamma shields must not be used with beta isotopes since Bremsstrahlung will be produced.
- 3) Radioactive waste must never be stored on the benchtop for long periods and must be disposed of properly. Proper handling and storage of isotopes minimises unnecessary exposure to radiation.



RA612-15 in use with accessories



RA612-25 with accessories, RA615-25 is similar

Watch Glasses

Watch Glasses

Clear glass with ground edges. Diameters are nominal. Supplied singly.

	Dia. mm
WG100-10	30
WG100-15	40
WG100-20	50
WG100-25	60
WG100-30	70
WG100-35	80
WG100-40	90
WG100-45	100
WG100-50	130
WG100-55	150
WG100-60	200

Watch Glasses, Pyrex

Borosilicate glass. Diameters are nominal. Supplied singly.

	Ref. 1060-	Dia. mm
WG130-13	/04D	40
WG130-18	/06D	50
WG130-23	/09D	60
WG130-38	/10D	80
WG130-48	/14D	100
WG130-52	/18D	125
WG130-58	/20D	150
WG130-63	/21D	200
WG130-70	/24D	250

Watch glasses

Polypropylene. Transparent with stable ring base. Autoclavable 121°C.

	Dia. mm
WG145-23	60
WG145-38	80
WG145-48	100
WG145-52	125

Gas jar covers – see GE302.

Weighing boats – see BD750/BD757.



WG100

WG130



WG145

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