# SE, SR, SS, ST Технические характеристики

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### **Reciprocating Shakers**

#### Reciprocating Shaker, IKA HS260 basic

Quiet running and very stable in operation. Provides a reciprocal motion of 20mm amplitude. The shaking speed can be adjusted between 20 and 300 cycles/minute and a timer from 5 to 50 minutes using LED analogue display. A continuous run facility is also provided. Overall 420 x 360 x 100mm high. Overall height may vary depending upon the accessories fitted. Weight 8.5kg. Maximum loading 7.5kg. For 230V 50/60Hz single phase supplies. Requires, but does not include, accessories for operation.

**SE420-15** Reciprocating Shaker HS260 basic

#### Reciprocating Shaker, IKA HS260 control

Generally as SE420-15 but with digital displays of speed from 0 to 300rpm and timer from 1 minute to 9 hours 59 minutes. Analogue and RS232 interfaces. are also provided. For 230V 50/60Hz single phase supplies. Requires, but does not include, accessories for operation.

**SE420-20** Reciprocating Shaker HS260 control

#### Accessories for SE420 models only

Universal attachment comprising basic holding device, 4 tension rollers and 8 clamping pieces to hold flasks, beakers etc. Overall 425 x 335 x 135mm high.

**SE420-27** Universal attachment

Base attachment which accepts accessory clips to hold conical and volumetric flasks. Overall 330 x 330 x 24mm high.

**SE420-29** Base attachment

**Accessory Spring Clips** for base SE420-29. The clips are supplied singly.

	For flasks, ml	Max. no. of units	
SE420-40	25	28	
SE420-42	50	22	
SE420-44	100	16	
SE420-46	200/250	8	
SE420-48	500	8	

Attachment for 6 x 50ml, 5 x 100ml , 3 x 250ml or 3 x 500ml separating funnels. Overall 334 x 425 x 145mm high.

**SE420-67** Separating funnel attachment

Attachment for petri dishes and culture flasks, surface 320  $\times$  320mm.

**SE420-72** Petri dish/flask attachment

#### **Reciprocating Shaker IKA HS501 digital**

Generally as SE420-15 but with digital display of speed 0 to 300 cycles/minute, 1 to 56 minute timer and shaking amplitude 30mm. Overall dimensions 505 x 585 x 120mm high. Overall height will vary according to the accessories fitted. Weight 26kg. Maximum loading 15kg. For 230V 50/60Hz single phase supplies. Requires, but does not include, accessories for operation.

**SE440-10** Reciprocating Shaker HS501 digital

#### Accessories for SE440 only

Universal attachment comprising basic holding device, 6 tension rollers and 12 clamping pieces to hold flasks, beakers etc. Overall 480 x 500 x 120mm high.

**SE440-30** Universal attachment

Base attachment which accepts accessory clips to hold conical and volumetric flasks. Overall 475  $\times$  460  $\times$  95mm high.

**SE440-32** Base attachment

**Accessory Spring Clips** for base SE440-32. The clips are supplied singly.

	For flasks, ml	Maximum no. of units	
SE420-40	25	50	
SE420-42	50	48	
SE420-44	100	25	
SE420-46	200/250	16	
SE420-48	500	12	

Attachment to hold 12 x 50ml, 10 x 100ml or  $6 \times 250$ ml separating funnels.

**SE440-35** Attachment

Attachment to hold 4 x 500ml, 3 x 1000ml or  $2 \times 2000$ ml separating funnels.

**SE440-37** Attachment

Attachment for petri dishes and culture flasks, 450 x 450mm (L x W).

**SE440-50** Attachment

#### **Reciprocating Shaker, Stuart SSL2**

- Speed range 25 to 250 oscillations/minute
- Stroke length 20mm
- ♦ 1 to 999 minute timer or continuous operation
- Maximum loading 10kg

With "soft start" electronic feedback control giving smooth acceleration/deceleration, digital speed and time setting from 25 to 250 oscillations/minute and 1 to 999 minutes or continuous operation respectively. Complete with cradle-type platform 375 x 335mm (L x W) with non-slip rubber mat and four horizontal securing bars covered in soft rubber, accommodating a wide variety of vessels, dishes, slides or plates, including 8 x 500ml or 6 x 1L or 2 x 2L bottles or flasks. Overall 360 x 420 x 270mm high. Weight 11kg. For 230V 50Hz single phase supplies, 50W.

**SE450-20** Reciprocating Shaker



SE420-20 in use, SE420-15 is similar



SE440-10 with SE440-37 in use



SE450-20 in use

#### Flask Shaker

#### Flask Shaker, Stuart SF1

Simulates a vigorous wrist-shaking action. With clamps to accept 8 flasks up to 500ml capacity. With stepless variable speed control and 10 to 60 minute timer with off and continuous run settings. Electronic feedback control ensures a constant speed irrespective of the load. Overall 780 x 270 x 240mm W x D x H. Weight 8.3kg. For 230V 50Hz single phase supplies.

**SE530-10** Shaker SF1 **SE534-08** Spare clamp

**Accessory side arms.** For converting SE530 to shake up to 12 flasks. Maximum loading 3 litres. Each side arm accepts six clamps. Supplied with 4 clamps.

SE534-18 Side arms

### Flask/Bottle/Tube Rotator

#### **Rotator Drive Unit, Stuart STR4**

For use with STR4/1 Drum. STR4/2 Flask/Bottle Rotator Drum, STR4/3 Figure 8 Drum, STR4/4 Bottle Holder or STR4/5 Eppendorf rack holder. Fitted with mains on/off illuminated switch. Has variable speed with electronic speed control, range 6 to 60rpm, fitted with 10 to 60 minute timer with off and manual override position. Fitted with panel mounted fuse. For use on 230V 50Hz single phase supplies. Overall dimensions 650 x 250 x 250mm W x D x H. Net weight 6.4kg.

SE580-10 Drive STR4

#### Drum STR4/1

Square drum which accepts one plate of clips on each side. The plates plug into the drum which is fitted with a push button release/lock mechanism. Without accessory plates.

**SE590-10** Drum STR4/1

#### **Accessory plates for SE590**

Fitted with clips to accept tubes vertically. Supplied in pairs.

	Tubes,	
	no. x dia.	
SE604-10	12 x 12mm	
SE604-15	10 x 16mm	
SE604-20	8 x 19mm	
SE604-25	7 x 24mm	

#### Drum with two platforms, STR4/2

Accepts two 250ml conical flasks or reagent bottles. The support columns can be detached to give two platforms 10.5 x 17.5cm each for separating funnels, jars or test tube racks.

**SE605-10** Drum STR4/2

#### Drum, Figure 8, STR4/3

The drum has a platform which can be adjusted within the drum from horizontal to 45°. In this way the sample container can be rolled and turned end over end at the same time.

- Suitable for extractions
- Paint mixing
- Powder, and granular samples

The sample container is held by an adjustable velcro strap.

**SE610-10** Drum STR4/3

#### **Bottle Holder, STR4/4**

Perspex four segment cradle with velcro straps. Holds 2 to 4 bottles each up to 1000ml capacity.

**SE610-40** Holder STR4/4

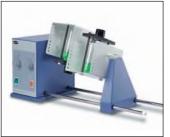
#### Rack cradle, STR4/5

Holds four acrylic racks for end over end mixing of stoppered Eppendorf tubes. The racks fit under the cradle plates and are held by clips ensuring that tube lids are firmly pressed against the plate and thus remain sealed. Supplied with four racks each with a capacity of 60 Eppendorf tubes.

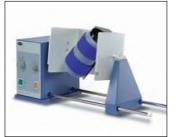
SE610-55
SE610-57
Rack cradle STR4/5
Spare rack for SE610-55.
Accepts up to 60
Eppendorf tubes



SE530 in use



SE605-10 in use



SE610-10 in use



SE580/SE590/SE604



SE610-40 in use



SE610-55 in use with SE610-57

#### **Orbital Shakers**

#### **Orbital Shaker, IKA Lab Dancer**

Fixed speed (2800rpm) personal orbital shaker with vortexing action for use with 0.5ml to 50ml test tubes and small bottles and flasks. 4.5mm orbit. Shaking commences when the flexible top cup is depressed. and continues until the vessel is removed. Inert plastic upper casing and cup with stable, die-cast zinc base. 12V d.c. low voltage operation using the mains adapter supplied Overall 100 x 70mm D x H. Weight 0.6kg. A 100-240V 50/60Hz single phase supply is required for the adapter.

SE620-50 Lab Dancer

#### Orbital Shaker, IKA Vibrax VXR basic

Opto-electrically controlled, orbital shaker with 4mm orbit. With stepless speed setting from 0 to 2200rpm. Screw clamps secure accessory attachments to the shaker platform frame. Maximum loading 2kg subject to attachment used. Overall 157 x 247 x 130mm W x D x H. Weight 6.1kg. For 230V 50/60Hz single phase supplies. Requires, but does not include, accessory attachments.

SE630-14 Vibrax VXR basic

#### **Accessory attachments**

	Ref.	Туре
SE632-15	VX1	Single vessel up to 250ml held by hand
SE632-20	VX2	Test tubes 36 x 16mm vertical. Max. loading 2kg
SE632-25	VX2E.n	Eppendorf tubes. 64 capped
SE632-30	VX7	Petri dishes. Platform 200 x 400mm
SE632-32	VX8	Conical flasks, 2 x up to 500ml



SE620-50



SE630-14 in use with SE632-32





SE632-20

#### Microplate Shaker, IKA MTS2/4

Specially designed for shaking two or four microtitre plates. Electronic feedback control maintains the set speed accurately, from 0 to 1100rpm. Orbiting movement 3mm. With digital 1 to 99 minute timer and analogue dial speed setting. Overall 185 x 320 x 105mm high. Weight 2.7kg. For 230V 50/60Hz single phase supplies.

**SE635-40** MTS2/4

#### Microplate Shaker, Grant-bio PMS-1000i

Speed range 150 to 1000rpm with 2mm orbit. With 1 minute to 24 hour x 10 second timer and LED display of remaining time, screw clamp platform to hold two 96- or 384-well microplates and 12V d.c. power adapter. Overall 220 x 205 x 90 mm high. A 220-240V 50/60Hz single phase supply is required for the adapter.

**SE640-10** PMS-1000i

#### **Accessory rack**

To hold 4 x microplates. **SE643-07** Rack MPP-4

#### Orbital Shaker, IKA KS260 basic

Quiet running and very stable in operation. Provides a circular motion of 10mm diameter. The shaking speed can be adjusted between 20 and 500rpm and a timer from 5 to 50 minutes using LED display. A continuous run facility is also provided. Overall 420 x 360 x 98mm high (unloaded). Weight 8.5kg. Maximum loading 7.5kg. For 230V 50/60Hz single phase supplies. Requires accessories for operation.

**SE745-15** Orbital Shaker, KS260 hasic

#### Accessories for SE745-15 only

Universal attachment comprising basic holding device, 4 tension rollers and 8 clamping pieces to hold flasks, beakers etc. Overall 355 x 355 x 115mm high.

**SE420-27** Universal attachment

Base attachment which accepts accessory clips to hold conical and volumetric flasks. Overall 330  $\times$  335  $\times$  25mm high.

**SE420-29** Base attachment

**Accessory Spring Clips** for base SE420-29. The clips are supplied singly.

	For flasks, ml	Max. no. of units
SE420-40	25	28
SE420-42	50	22
SE420-44	100	16
SE420-46	200/250	8
SE420-48	500	8

Attachment for 6 x 500ml, 5 x 100ml, 3 x 250ml or 3 x 500ml separating funnels. Overall 334 x 425 x 145mm high.

**SE420-67** Separating funnel attachment

Attachment for petri dishes and culture flasks, surface 320 x 320mm. Overall 410 x 370 x 33mm high.

**SE420-72** Petri dish/flask attachment



SE640-10 in use with SE643-07



SE745 in use



SE635-40





SE632-25 SE632-30

#### **Orbital Shakers continued**

#### **Orbital Shaker IKA KS501**

Similar to SE745-15 but with digital display of speed 0 to 300rpm, 1 to 56 minute timer and circular motion of 30mm. Overall dimensions 505 x 585 x 120mm W x D x H. Overall height will vary according to the accessories fitted. Weight 26kg. Maximum loading 15kg. For 230V 50/60Hz single phase supplies. Requires, but does not include, accessories for operation.

SE770-10 Orbital Shaker KS501

#### **Accessories**

Universal attachment comprising basic holding device, 6 tension rollers and 12 clamps to hold flasks, beakers etc. Overall 480 x 500 x 120mm high.

**SE440-30** Universal attachment

Base attachment, 475 x 460mm W x D, which accepts accessory clips to hold conical and volumetric flasks.

**SE440-32** Base attachment

**Accessory Spring Clips** for Base SE440-32. The clips are supplied singly.

	For flasks, ml	Max. no. of units	
SE420-40	25	50	
SE420-42	50	48	
SE420-44	100	25	
SE420-46	200/250	16	
SE420-48	500	12	

Attachment to hold 12 x 50ml, 10 x 100ml or 6 x 250ml separating funnels.

SE440-35 Attachment

Attachment to hold 4 x 500ml, 3 x 1000ml or 2 x 2000ml separating funnels.

SE440-37 Attachment

Attachment to hold petri dishes. Platform 450 x 450mm (L x W).

SE440-50 Attachment

#### Mini Orbital Shaker, Stuart SSM1

- Speed range 30 to 300rpm
- 16mm orbit
- ♦ 1 to 999 minute timer or continuous operation
- Maximum loading 3kg

Compact, mini orbital shaker with smooth, uniform circular motion, 16mm orbit, digital speed and time setting from 30 to 300rpm and 1 to 999 minutes or continuous operation, respectively. Supplied with tray-type platform 220 x 220mm W x D and non-slip mat to hold up to four microtitration plates or diagnostic cards, or nine 50/60mm diameter petri dishes. An accessory platform is available to accommodate 4 x 250ml, 2 x 500ml or 1 x 1000ml conical flasks or reagent bottles. Overall 240 x 300 x 140mm high. Weight 5kg. For 230V 50Hz single phase supplies, 50W.

**SE775-20** Mini orbital shaker SSM1

#### Accessories

#### **Cradle Platform**

320 x 320mm. With non-slip mat. Supplied with four soft rubber covered retaining bars.

**SE776-06** Cradle platform SSM1/1

#### **Large Platform**

320 x 320mm. With non-slip mat. **SE776-09** Large platform SSM1/2

#### **Plastic Cover**

SE776-11 Plastic cover SSM1/3

Blood tube rotators - see CM470.

Roller mixers - see MS400.

Shaking water baths - see BJ404/BJ875.

Vortex mixers - see MS495/MS530.

#### **Orbital Shaker, Stuart SSL1**

- Speed range 30 to 300rpm
- ◆ 1 to 999 minute timer or continuous operation
- Maximum loading 10kg

16mm orbit

Electronic feedback control provides "soft start" with smooth acceleration/deceleration, digital speed and time setting from 30 to 300rpm and 1 to 999 minutes or continuous operation, respectively. Complete with cradle-type platform 335 x 335mm W x D with non-slip rubber mat and four horizontal securing bars covered in soft rubber, accommodating a wide variety of vessels, dishes, slides or plates, including 8 x 500ml or 6 x 1L or 2 x 2L bottles or flasks. Overall 360 x 420 x 270mm high. Weight 11kg. For 230V 50Hz single phase supplies, 50W.

SE780-15 Orbital Shaker SSL1

#### **Accessory Large Cradle Platform**

510 x 510mm. Supplied with twelve soft rubber covered retaining bars.

**SE782-14** Cradle platform

#### **Orbital Shaker, Stuart SSM5**

Vibrational mixing action, ideal for microplates. With digital setting and display of speed and time, from either 1 second to 90 minutes or 1 minute to 9 hours or continuous operation, respectively. Orbit: 4mm. Maximum loading 3kg. Fitted with aluminium tray 220 x 220mm (W x D) and non-slip rubber mat which holds up to four microplates. Accessory tube holders are also available. Overall 240 x 300 x 160mm high. Weight 5kg. For 230V 50Hz single phase supplies, 50W.

SE785-15 Orbital Shaker SSM5

#### **Accessory Holders**

SE788-04 SSM5/1 for 1.5ml microtubes SE788-07 SSM5/2 for 0.5ml microtubes SE788-09 SSM5/3 for 0.2ml microtubes



SE770 in use with SE440-30



SE775-20 in use



SE780-15 in use



SE785-15 in use

### **Orbital Shakers continued**

#### **Heavy-duty Orbital Shakers, Ohaus**

Large capacity shakers with precise digital control of speed and time.

- Choice of speed range, capacity, orbit and platform size
- Triple eccentric drive for smooth, reliable and continuous operation
- Digital control system offers multiple safety features: load imbalance sensor which reduces speed accordingly, overload protection with alarms, speed ramping feature which slowly increases speed to avoid splashing and time-out alarm

Model SHHD-		4525DG	4550DG	6825DG	6850DG
Speed range	rpm	15 to 500	15 to 300	15 to 500	15 to 300
Orbit	mm	25	51	25	51
Max. capacity	kg	45.4	45.4	68	68
Platform size	mm	610 x 610	610 x 610	610 x 910	610 x 910
Timer		1 second to 160 hours - all models			
Dimensions	W, mm	729	729	914	914
	Ď, mm	678	678	744	744
	H, mm	170	170	170	170
Weight	kg	91	91	105	105
Supply requirements		230V 50/60Hz a.c all models			

As described. Supplied with non-slip rubber mat. For 230V 50/60Hz single phase supplies.

SE795-10	SHHD4525DG
SE795-20	SHHD4550DG
SE795-30	SHHD6825DG
SE795-40	SHHD6850DG



### **Rocking/Gyratory Shakers**

#### Rocking Shaker, Stuart SSM4

The platform rocks on a central pivot with a fixed 7° throw. With digital setting and readout of speed and time, from 5 to 70rpm and 1 to 999 minutes. Platform size 235 x 235mm. Supplied with a non-slip mat. An accessory tier system is available giving two further platforms with 110mm between tiers. Maximum loading 3kg. Overall 240 x 300 x 165mm. Weight 5kg. For 230V 50Hz single phase supplies, 50W.

SE800-15 Shaker SSM4

**SE802-07** Accessory tier system SSM3/1, for SE800-15 only

#### Rocking Shaker, Stuart SSL4

Generally as SE800-15 but with 335 x 335mm platform. Maximum loading 10kg. Overall 360 x 420 x 160mm W x D x H. Weight 10kg. For 230V 50Hz single phase supplies, 50W.

SE800-25 Shaker SSL4

SE802-09 Accessory tier system SSL3/1, for SE800-25 only

#### Rocking Shaker, Grant-bio PMR-30

Compact shaker with platform rocking around a central pivot with fixed 7° throw. Speed is variable from 7.5 to 30rpm, with LED digital display of speed and timer from 1 minute to 24 hours. Platform size 215 x 215mm, maximum loading 0.5kg. Supplied with non-slip mat and a.c. adapter for low voltage operation. Overall 238 x 238 x 110mm W x D x H. Weight 3.2kg. A 220-240V 50/60Hz single phase supply is required for the adapter.

**SE808-10** PMR-30

**SE808-55** PDM Dimpled mat for supporting sealed tubes

#### **Gyratory Shaker, Stuart SSM3**

With three-dimensional gyratory shaking motion on a central pivot. Platform angle can be adjusted between 3 and 12°. Digital setting and readout of speed and time, from 5 to 70rpm and 1 to 999 minutes respectively. Platform size 235 x 235mm. Supplied with a non-slip mat. An accessory tier system is available giving two further platforms with 110mm between tiers. Maximum loading 3kg. Overall 240 x 300 x 165mm W x D x H. Weight 10kg. For 230V 50Hz single phase supplies, 50W.

SE850-16 Shaker SSM3

**SE802-07** Accessory tier system SSM3/1, for SE850-16 only

#### **Gyratory Shaker, Stuart SSL3**

Generally as SE850-16 but with 335 x 335mm platform. Maximum loading 10kg. Overall 360 x 420 x 170mm W x D x H. Weight 10kg. For 230V 50Hz single phase supplies, 50W.

SE850-21 Shaker SSL3

**SE802-09** Accessory tier system SSL3/1, for SE850-21 only

#### **Gyratory Shakers, Ohaus**

With 3-dimensional, "wave" action. Choice of analogue or digital setting and control of speed 1 to 75rpm\* (analogue), 1 to 30rpm\* (digital), platform angle 0 to 16° (analogue), 0 to 20° (digital) and time 1 to 120 minutes (analogue), 1 second to 160 hours (digital). Platform dimensions 356 x 279mm W x D. Maximum capacity 2.3kg (centred load). Safety features include overload and obstruction alarms and speed ramping to gradually increase speed to avoid splashing. Supplied with non-slip rubber mat. Overall 279 x 425 x 165mm, weight 7.5kg. For 230V 50/60Hz single phase supplies.

\*Dependent on load and balance.

SE860-15 Shaker SHWV02AL, Analogue, 1 to 75rpm SE860-25 Shaker SHWV02DG, Digital, 1 to 30rpm



SE800-15 in use, SE800-25 is similar



SE808-10 in use



SE850-21 in use, SE850-16 is similar



SE860-25, SE860-15 is similar

#### **Overhead Stirrers**



#### Stirrers, Heidolph Hei-TORQUE series

- Choice of torque: 100Ncm, 200Ncm, 400Ncm
- Choice of performance features:
  - Hei-TORQUE Value: Speed display with torque level graphic indicator
  - Hei-TORQUE Precision: Multi-level, simultaneous display of speed, torque (both numerical and graphical), time, programming input with profile memory, timer/real-time clock indication and USB interface
- Cool running
- "Quick-Chuck", rapid release chuck for convenient rotor changes without tools
- Safe start/stop by swiping a touch panel rather than pressing a key
- Suitable for continuous operation

- Rotary dial adjustment of parameters
- 400Ncm models have a two-stage gear design to maximise power throughout the speed
- Sealed housing to IP54 with glass touchpanel/display screen for long-life operation within aggressive environments
- Quiet operation, <50dbA in use</li>

	SR644-10 SR644-20	BR13 TR21	Blade Radia 50mr
	SR644-30	PR30	Prope 58mr
ın	SR644-40	PR31	Prope 33mr

**Accessory Rotors, Stainless Steel** On a shaft of 7mm diameter.

Length, mm	Ref.	Impeller	Shaft
SR644-10 SR644-20	BR13 TR21	Blade 70 x 70mm Radial turbine	450
		50mm diameter	400
SR644-30	PR30	Propellor 3-blade 58mm diameter	400
SR644-40	PR31	Propellor 3-blade 33mm diameter	400

Hei-TORQUE model		100	200	400
Output	W	50	80	90
Gears		1	2	2
Speed range	rpm	10 to 2000	100 to 2000	10 to 400 or 200 to 2000
Max. viscosity range	mPas	60,000	100,000	250,000
Max. stirring capacity (water)	litres	50	50	100
Overall W x H x D, Value Overall W x H x D, Precision	mm mm	86 x 257 x 241 86 x 273 x 241	86 x 257 x 241 86 x 273 x 241	93 x 257 x 241 93 x 273 x 241
Weight	kg	4.1	5.0	5.2

As described. With 2.5mm to 12.5mm "Quick-Chuck", control panel and retort stand mounting rod. For 230V 50Hz single phase supplies.

SR570-15	Model Hei-TORQUE Value 100	SR570-60	Model Hei-TORQUE Precision 100
SR570-25	Model Hei-TORQUE Value 200	SR570-70	Model Hei-TORQUE Precision 200
SR570-35	Model Hei-TORQUE Value 400	SR570-80	Model Hei-TORQUE Precision 400

#### **Accessory Stand, S2**

Stable, H-shape, plastic laminated base 430 x 420mm and stainless steel rod 25 x 700mm diameter x length. Weight 5.8kg.

**SR640-10** Stand S2

**SR642-15** Clamp 57022 for mounting stirrers on stand SR640-10





SSR570-15 to -35

#### **Overhead Stirrers**

#### Stirrer, IKA Eurostar 40 digital

An economically priced stirrer suitable for up to 25 litres of low to medium viscosity liquids up to 30000 mPas. Continuously variable, microprocessor controlled speed range 30 to 2000rpm with LED digital speed display. With 0.5 to 10mm i.d. hollow shafted chuck and 16mm diameter clamping rod for mounting on a stand. Overall W x D x H 86 x 208 x 248mm. Weight 4.4kg. For 230V 50/60Hz single phase supplies. Without rotor.

SR730-35 Eurostar 40 digital

#### Stirrer, IKA Eurostar 60 Control

Powerful digital stirrer suitable for up to 40 litres of medium to high viscosity liquids up to 50000 mPas. Removable, multifunctional controller, with wireless connection, TFT display and continuously variable, microprocessor controlled speed range 30 to 2000rpm. Includes display of set/actual speed and temperature (-10 to +350°C, using accessory probe) with safety cut-out, torque and timer function, and USB and RS232 interfaces. With 0.5 to 10mm i.d. hollow shafted chuck and 16mm diameter clamping rod for mounting on a stand. Overall W x D x H 86 x 230 x 267mm. Weight 4.7kg. For 230V 50/60Hz single phase supplies. Without rotor.

SR730-50 Eurostar 60 control

#### Stirrer, IKA RW20 digital

A robust stirrer for processing up to 20 litres of medium viscosity liquids up to 10000 mPas. With digital speed display, adjustable two-speed ranges: 60 to 500 and 240 to 2000rpm, and 1 to 10mm i.d., hollow shafted chuck. Also incorporates an electronic temperature safety cut-out on the motor and 13mm diameter clamping rod for mounting on a stand. Overall dimensions 88 x 212 x 294mm W x D x H. Weight 3.1kg. For 230V 50/60Hz single phase supplies. Without rotor.

**SR750-25** RW20 digital

## Accessories for Eurostar and RW20 stirrers Stand

Base Plate 200 x 316mm and 16mm diameter stainless steel rod, 800mm high. Maximum loading capacity 5kg.

MT468-22 Stand R1826

#### **Bosshead R182**

For clamping Eurostar and RW20 stirrer rods to stands. With quick release screws. Accepts rod diameters from 6 to 16mm.

**SR753-09** Bosshead R182

#### Accessory temperature probes for Eurostar 60 Control model only

**5R753-80** H 62.51 stainless steel temperature probe

**SR753-85** H 66.51 stainless steel, glass coated, temperature probe

#### Stirrer, IKA RW28 digital

A heavy duty stirrer for processing up to 80 litres of medium viscosity liquids. With two reversible speed ranges 60 to 400 and 240 to 1400rpm. Provides high torque at the lower speeds. With high resolution, 4-digit, LED display, 1 to 10mm chuck and an infinitely variable mechanical speed control. Overall W x D x H 123 x 252 x 364mm. Weight 7.4kg. For 230V 50/60Hz single phase supplies. Without rotor.

**SR765-25** RW28 digital

### Accessories for RW28 digital stirrer

**Heavy duty H-stand 2722** 

With stainless steel rod, 1010mm high.

MT492-08 Stand 2722

#### **Bosshead R271**

For clamping stirrer rod to stand.

**SR768-14** Bosshead R271

#### Rotors, stainless steel

Suitable for all models. On 8mm diameter shaft.

	Ref.	Impellor length	Shaft
		Blade 70 x 70mm	550mm
SR753-17	R1345	Propellor 4-blade 100mm dia.	550mm
SR753-19	R1300	Dissolving 80mm dia.	350mm
SR753-23	R1312	Turbine 50mm dia.	350mm



SR730-50, SR730-35 is similar









SR765-25

### Overhead Stirrer, uniSTIRRER OH2

Budget overhead stirrer for basic tasks and volumes up to 20 litres (water) and viscosity 10,0000mPas. Maximum torque 40Ncm.

- Brushless, maintenance-free motor Digital speed or torque display
- Actual and set speed monitored to ensure steady speed even if viscosity
- Safety cut-out protection facility in the event of a stall or overload
- RS232 data output port
- Supplied with stand, clamp, bosshead, non-slip mat and 400 x 50mm diameter propeller stirrer

Model		UniSTIRRER OH2
Speed range	rpm	50 to 2200
Max. viscosity	mPas	10000
range		
Max. torque at chuck	Ncm	40
Overall W x D x H	mm	200 x 310 x 710
(including stand)		

#### **General Purpose Stirrer, UniSTIRRER OH2**

As described. With electronic speed control. Supplied with stainless steel stand, bosshead. clamp, non-slip mat for the sample vessel, 4-blade propeller stirrer 50mm diameter with 400mm rod. For 110-240V 50/60Hz single phase supplies. **SR810-10** OH2



SR810-10 in use

#### **Stirrer Rotors**

#### **Stainless steel**

Supplied as separate 8mm diameter shaft with tapped screwthread end onto which can be attached a choice of paddle types.

#### **Shafts**

	Overall, mm	
SR852-20	350	
SR852-30	550	

#### **Paddles**

	Туре	Width, mm
SR852-60	Small	60
SR852-65	Large	94
SR852-70	4-blade propeller	50
SR852-75	2-blade propeller	80
SR852-90	Anchor	60

#### **PTFE**

With PTFE-encased stainless steel shaft and all-PTFE paddle blades. Operating temperature range -200 to +250°C. All rotors have a 10mm diameter shaft with an 8mm diameter exposed steel length to fit appropriate chucks.

A choice of 3 paddle styles are offered:

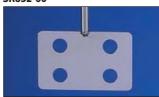
- Anchor blade that pivots in line with the shaft into a slotted mount so that the stirrer can be inserted through narrow apertures.
- Mini-propeller with 3-blades
- Maxi-propeller with 3-blades

	Paddle type	Overall length x paddle width
SR900-10	Anchor	350 x 90mm
SR900-22	Anchor	450 x 90mm
SR900-30	Anchor	510 x 90mm
SR900-40	Anchor	600 x 90mm
SR904-22	Mini-prop	450 x 75mm
SR904-40	Mini-prop	600 x 75mm
SR904-60	Mini-prop	800 x 75mm
SR906-22	Maxi-prop	450 x 140mm
SR906-30	Maxi-prop	600 x 140mm
SR906-40	Maxi-prop	800 x 140mm

Bossheads, rods and stands - see Stands and Racks section.



SR852-60



SR852-65



SR852-75, SR852-70 is similar



SR852-90



SR900



SR904, SR906 is similar

### Compressed Air Stirrers, PLR Series, Buddeberg

High torque, air-powered, continuous running overhead stirrers which are ideal for a variety of laboratory stirring tasks. Certified in accordance with the European ATEX Directive 94/9/EG (see notes below).

- Spark-free operation
- Excellent power:weight ratio
- Can be run whilst overloaded to a standstill without damage
- Can operate from 0 to 6 bar pressure compressed air supplies
- Air consumption 260 litres/minute at 6 bar pressure
- Stainless steel housing resists corrosion
- Maximum stirrer volume 25 litres
- Continuously adjustable speed control using valve supplied
- Models available with, or without, analogue tachometer
- Clockwise rotation

Catalogue No.		SR940-20/-60	SR940-25/-65	SR940-30/-70	SR940-40/-80
Model		PLR10/10T	PLR11/11T	PLR12/12T	PLR13/13T
Tachometer		<b>-/√</b>	<b>-/√</b>	<b>-</b> /√	<b>-/√</b>
Speed (no load)	rpm	15000	1750	1000	80
Torque	Nm	0.3	2.3	3.5	2.5
Gears		0	1	2	3
Sample viscosity capability		Low	Medium	High	Very high
Drive shaft, L x diameter	mm	24 x 10 — all mo	odels		
Overall height	mm	124/220	160/258	195/290	228/325
Overall diameter	mm	38 — all models			
Weight	kg	0.9/1.2	1.1/1.7	1.4/1.7	1.6/1.9

As described. Stainless steel housing. With valve for continuously adjustable speed control, integral exhaust air venting and 13mm diameter clamping tube for mounting on a stand incorporating a 9mm o.d. riffled nozzle for connection to compressed air supply tubing. Require a (preferably dry) compressed air source for operation.

SR940-20	PLR10
SR940-25	PLR11
SR940-30	PLR12
SR940-40	PLR13

#### Stirrer with analogue gauge tachometer

SR940-60	PLR10T
SR940-65	PLR11T
SR940-70	PLR12T
CD0//0_90	DI D12T

#### INFORMATION FOR OPERATING STIRRERS IN POTENTIALLY EXPLOSIVE ATMOSPHERES

- Only couplings (SR943-06 to SR943-14), rather than chucks, must be used to attach paddle shafts.
- All stirrers are provided with earthing points for equipotential bonding and must be suitably connected.
- Before using the pump, the operator must be satisfied that it is suitable for working within the prevailing environmental conditions.

#### **Accessories**

#### Stirrer chuck

Enables connection of SR940 series stirrers to rotors with shaft diameters between 0.5 and 8mm. With key.

**SR943-04** Stirrer chuck

#### **Connection couplings**

Available in rigid or flexible formats. Rigid couplings minimise rotor 'whip'. Flexible couplings allow slight shaft-to-rotor misalignment without impairing operation. Dimensions given are the rotor shaft diameters accepted.

#### **Rigid couplings**

	_
SR943-06	6mm
SR943-08	8mm
SR943-10	10mm

#### Flexible couplings

Rubber bellows,	10mm
Rubber bellows,	13mm

SR943-37 Machine oil, acid and wax-free, pack of 500ml

Air compressors - see PX485.

Bases and rods - see SL250-30 and SL350-25.

Bosshead - see SL600.

Clips - see CP130/CP135.

Reinforced tubing - see TY410-22.



SR940-20 to SR940-40 with accessories



SR940-60 to SR940-80 with accessories

### **Magnetic Stirrers - Unheated**

#### Mini-Magnetic Stirrer, uniSTIRRER 1

Maximum speed 1500rpm. Ultra-flat, magnetic stirrer with IP65-rated housing, 94mm diameter stainless steel top plate with inset membrane control keypad and toroidal coil technology stirring with no moving parts. Maximum volume stirred 800ml (water). The control panel includes an on/off key, "reverse direction" button, speed control +/- keys and five LED indicators to display speed levels on an analogue scale. Overall 121 x 165 x 12mm W x D x H. Weight: 0.5kg. For 100-230V 50/60Hz single phase supplies.

55220-10 uniSTIRRER 1

#### Mini-Magnetic Stirrer, IKA Lab Disc

Ultra-flat, IP65 encased, magnetic stirrer incorporating toroidal coil technology with no moving parts. Speed range 15 to 1500rpm. Maximum volume stirred 800ml (water). Polyester top plate with 90mm diameter white circle denoting stirring area. With membrane keypad control without display and "reversing function" button which reverses the stirring direction every 30 seconds. Overall 116 x 175 x 12mm W x D x H. Weight 0.3kg. For 100-240V 50/60Hz single phase supplies.

**55240-15** Lab Disc

#### Mini-Magnetic Stirrers, Hanna HI190M/HI200M

Maximum speed 1000rpm. Maximum volume stirred 1 litre (water). Variable speed control with 'off' position. Choice of models with ABS plastic or stainless steel top plate 120 x 120mm and moulded ABS outer case. Overall 120 x 120 x 45mm L x W x H. Supplied with 25mm PTFE coated follower. For 220-240V 50/60Hz single phase supplies.

**55307-10** HI190M, ABS top plate

**55307-20** HI200M, stainless steel top plate

#### Mini-Magnetic Stirrers, Stuart, SM5/-series

Maximum speed 2000rpm. Maximum volume stirred 1 litre (water). Variable speed control. With robust polypropylene housing and chemically resistant, polycarbonate top with a choice of pattern. Overall 143 x 143 x 66mm W x D x H. Weight 0.5kg. For 120-230V 50/60Hz single phase supplies.

SS310-15
SM5/Stuart, with 'Stuart' pattern top plate
SM5/Bibby, with 'Bibby' pattern top plate
SM5/Swirl, with 'Swirl' pattern top plate

#### Portable Magnetic Stirrer, Stuart SM27

For use in the field or inside incubators or gloveboxes where external power supply is impractical. Maximum speed 1300rpm. Maximum volume stirred 1.5 litres (water). Variable speed control with battery status indicator. AB5 top plate and casing 70mm high. Maximum operating conditions +60°C and 80%RH. Overall 150 x 160 x 70mm high. Weight 1.3kg. Supplied with 4 x 1.5V size 'D' alkaline batteries giving up to 600 hours operation, and a 25mm PTFE coated follower. Accessory adapters are available for use on 230V 50Hz mains or 12V vehicle supply using the cigar lighter socket.

**55320-40** SM27

#### Accessories

S5322-10 Mains adapter, SM27/1, for UK/Ireland. 230V 50Hz single phase supplies
S5322-20 Mains adapter, SM27/2, for continental Europe. 230V 50Hz single phase supplies
S5322-45 Vehicle battery adapter, SM27/3, with cigar lighter plug
BL610-22 Spare 1.5V battery (4 required)

#### **Magnetic Stirrer, uniSTIRRER 2**

Maximum speed 2000rpm. With 120mm diameter aluminium top plate set into a rugged, ABS housing and analogue, variable speed control. The housing incorporates a mount for use with an accessory retort rod. Maximum volume stirred 1000ml (water). Overall 150 x 135 x 53mm W x D x H. For 100-230V 50/60Hz single phase supplies. Weight 0.5kg.

**SS335-40** uniSTIRRER 2 **SL370-15** Support rod



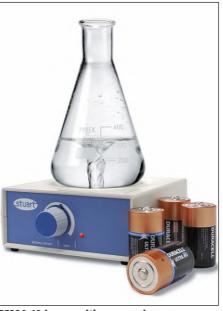
SS220-10



SS240-15



SS307-10 in use SS307-20 in use



SS320-40 in use with accessories



SS310-35, SS310-15 and -25 are similar



SS335-40

### Magnetic Stirrers - Unheated continued

#### **Magnetic Stirrers, Stuart Undergrad-series**

Speed range 100 to 2000rpm. Maximum volume stirred 15 litres. Stainless steel or ceramic top plate 150 x 150mm. Overall 172 x 248 x 109mm W x D x H. Electronic, variable speed control with dial setting and 'off' position. With facility for mounting a retort stand behind the top plate and base cut-outs to allow a retort stand base to slide under the housing. For 230V 50Hz single phase supplies.

**SS345-45** US151, stainless steel top plate **SS345-49** UC151, ceramic top plate

#### Magnetic Stirrer, 3-position, Stuart SB161-3

Maximum speed 1500rpm. Maximum volume stirred 15 litres per position (in a 20 litre flask). With stainless steel top plate 550 x 210mm, separate speed controls, fittings for retort rods at the rear of the case and 3 x 25mm PTFE coated followers. Overall  $600 \times 270 \times 110$ mm W x D x H. Weight 7kg. For 230V 50Hz single phase supplies.

**55400-20** 3-position, SB161-3

#### Magnetic Stirrer, large, Stuart SB301

Speed range 100 to 600rpm. Top plate 300 x 300mm. For stirring aqueous solutions up to 30 litres. Variable speed with electronic feedback control for accurate speed maintenance. In metal case with stainless steel top. Overall 300 x 365 x 105mm W x D x H. Weight 5kg. Supplied with one PTFE-coated follower bar 100 x 12mm. For 230V 50Hz single phase supplies, 50W.

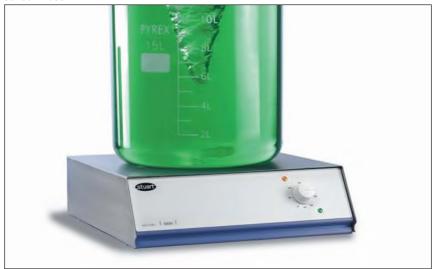
**SS425-20** Large plate, SB301



SS345-45, SS345-49 is similar



SS400 in use



SS425 in use

### Magnetic Stirrers - Unheated continued



#### Magnetic Stirrers, Single- and Multi-position, 2mag MIX

Single- and multi-position magnetic stirrers with induction drive which has no moving parts, digital control with LED display, and low-profile, stainless steel housing with IP64 protection level.

Model	MIX 1	MI	IX 6	MIX 15
Positions	1	6		15
Stirring volume range, m per position	1 to 10	0000 1 t	to 3000	1 to 3000
Speed range rpr	n 100 to	2000 — all m	nodels	
Distance between mr	n —	13	30	65
Overall W x D x H mr	n 180 x 2	230 x 38   24	15 x 425 x 38 —	- both models
Weight k	g 4.0	8.8	8 — both mod	els
Supply requirements	100-24	0V 50/60Hz s	supply — all m	odels

As described. For 100-240V 50/60Hz single phase supplies.

**SS552-04** MIX 1 *SS552-06* MIX 6 **SS552-15** MIX 15

#### Magnetic Stirrers, External Control, 2mag MIXdrive

Comprise IP68 protection level and hermetically sealed induction drive unit with stainless steel housing, which is connected to a control unit via cable. With maximum power 20W. Compact, submersible stirrers ideal for use within incubators, glove boxes or water baths at temperatures from 0 to +95°C. Require \$\$570-95 control unit for operation.

	MIXdrive 1 XS	MIXdrive 1 eco
ml	1 to 1000	1 to 3000
rpm	100 to 1600 (with cont	roller) — both models
mm	48 x 48 x 18	120 x 120 x 35
kg	0.25	1.5
	100-240V 50/60Hz (with both models	h controller) —
	rpm mm	ml 1 to 1000 rpm 100 to 1600 (with cont mm 48 x 48 x 18 kg 0.25 100-240V 50/60Hz (with

As described. Without controller. Require SS570-95 for operation.

SS570-05 MIXdrive 1 XS *SS570-20* MIXdrive 1 eco

#### **Control Unit, MIXcontrol 20**

For use with SS570-series magnetic stirrers. With stainless steel housing, speed range of 100 to 1600rpm and digital display of speed and power setting, which can be controlled in 4 increments (25, 50, 75 and 100%). With maximum power 20W. For 100-240V 50/60Hz single phase supplies.

**55570-95** MIXcontrol 20







SS552-15 in use



SS570-05



SS552-06 in use



SS570-20 in use with SS570-95

### Magnetic Stirrer/Hotplates

#### Magnetic Stirrer/Hotplate, uniSTIRRER 3

Maximum speed 1500rpm, volume stirred 3 litres (water) and temperature 280°C. Stainless steel heating plate, diameter 135mm. With analogue setting and bright, LED readout of speed to 10rpm, temperature to 1°C, overtemperature cut-out and "plate hot" warning indicator which operates even if the device is switched off (however it must still be under power from the mains supply). Supplied with a stainless steel Pt1000 probe, support rod and holder for sample temperature monitoring and control. Overall 155 x 215 x 100mm W x D x H (stirrer only). Weight 1.5kg. For 230V 50/60Hz single phase supplies. Hotplate rating 500W.

\$5590-20 uniSTIRRER 3

#### Magnetic Stirrer/Hotplate, Stuart SD162

Maximum speed 1300rpm, volume stirred 15 litres (based on water contained in a 20 litre flat bottom flask) and temperature 300°C. Cast aluminium/silicon alloy hotplate 160 x 160mm, accommodating beakers up to 5 litres capacity. With digital setting and control, via a bright, fluorescent display which also simultaneously displays set and actual temperature to 1°C and speed to 10rpm, separate safety circuit, dial setting, stirrer 'on' and heater 'on' warning indicators (the heater lamp flashes whilst plate temperature remains above 70°C). A PTFE-coated, remote temperature probe which allows control of liquid temperature to  $\pm 1^{\circ}\text{C}$  and up to 200°C is also provided and a facility for mounting a 12.5mm retort rod at the rear of the case. Overall 190 x 300 x 110mm W x D x H. Weight 3.4kg. For 230V 50/60Hz single phase supplies. Hotplate rating 750W.

**55600-40** SD162



SS600-40 in use







#### Magnetic Stirrer/Hotplates, Heidolph MR Hei-Standard and Hei-Tec

Maximum speed 1400rpm. Maximum temperature 300°C. Hotplate diameter 145mm. With variable speed control, electronic temperature control, independent safety overheat circuit which operates at 50°C above set temperature, and a ceramic-coated, aluminium alloy hotplate. Also feature a DIN 12878 connection for an accessory Pt1000 temperature probe, which allows direct monitoring and control of sample temperature up to 300°C\*, and provision for mounting a 12.5mm diameter retort rod at the rear of the case. S5620-14 additionally features a digital display of speed and time and a secondary safety overheat circuit. Overall 173 x 277 x 94mm L x W x H. For 230V 50Hz single phase supplies. Hotplate rating 800W.

**SS620-09** MR Hei-Standard, weight 2.9kg.

**55620-14** MR Hei-Tec with display, weight 2.6kg

\* Note: SS620-09 does not have a display, therefore an additional thermometer is required to monitor temperature within the sample

#### Accessory Pt1000 probes for SS620-series

**\$5620-80** Stainless steel

**\$\$5620-85** Glass-coated, chemically resistant, stainless steel

#### Magnetic Stirrer/Hotplate, IKA RCT standard 2.0

Maximum speed 1500rpm. Temperature 50 to 310°C. Suitable for stirring up to 20 litres of water. Aluminium alloy heating plate, diameter 135mm. Digital speed and temperature setting with separate LED displays, adjustable safety overtemperature circuit, error code display, "hot top" indicator and DIN 12878 connection for a Pt1000 contact thermometer to monitor and control sample temperature directly. Supplied with Pt1000 probe and cable, splash protection cover for the housing and facility for mounting a 12.5mm diameter retort rod at the rear of the case. Overall 160 x 270 x 85mm W x D x H. Weight 2.5kg. For 230V 50/60Hz single phase supplies. Hotplate rating 600W.

55625-35 RCT standard 2.0

#### Magnetic Stirrer/Hotplates, IKA RET basic safety control

Maximum speed 1700rpm. Maximum temperature 340°C. For stirring up to 20 litres of water. Stainless steel heating plate, diameter 135mm. digital speed and temperature setting with separate LED displays, adjustable safety overtemperature circuit from +50 to +300°C, error code display, "hot-top" indicator and DIN12878 connection for a Pt1000 contact thermometer to monitor and control sample temperature directly. Supplied with Pt1000 probe and cable, splash protection cover for the IP42 level housing and facility for mounting a 12.5mm diameter retort rod at the rear of the case. Overall 160 x 270 x 95mm W x D x H. Weight 2.5kg. For 230V 50/60Hz single phase supplies. Hotplate rating 600W.

**SS635-52** RET basic, safety control, stainless steel plate



SS625-35



SS590-20 SS620-14 SS635-52

### Magnetic Stirrer/Hotplates continued

#### Magnetic Stirrer/Hotplates, Stuart Undergrad US152/US152D

Maximum speed 2000rpm and volume stirred 15 litres. Maximum temperature 325°C. With cast aluminium/silicon alloy top plate 150 x 150mm, with thin ceramic coating for additional chemical resistance. Microprocessor controlled heating with safety circuit, direct temperature dial setting with back illumination which progressively lights up as the plate temperature increases to set point (US152D alternatively has a 3-digit, high contrast, red LED digital display to 1°C resolution which replaces the back illumination to the dial), and variable speed control with 'off' position, 'stirrer on' and 'heater on' warning lamps (the heater lamp flashes when the plate temperature exceeds 50°C). With retort rod mount behind the top plate and input for accessory power controller SCT1. Overall 172 x 248 x 122mm W x D x H. Weight 2.9kg. For 230V 50Hz single phase supplies, 750W.

**SS705-10** US152 **55705-12** US152D

#### Magnetic Stirrer/Hotplates, Stuart Undergrad UC152/UC152D

Generally as SS705-10 or SS705-12 but maximum temperature 450°C and with glass ceramic top plate For 230V 50Hz single phase supplies, 550W.

**SS705-15** UC152 SS705-17 UC152D

#### **External Temperature Controller, SCT1, Stuart**

Maximum temperature 200°C. For control and monitoring of stirred media temperature when used with Stuart Undergrad hotplates and hotplate/stirrers. With large, clear, LED display and membrane keypad setting, separate Pt100 sensor within a stainless steel probe (an accessory PTFE coated probe is also available) and flexible cable. Supplied with retort mounting rod and cable/plug for connection to the hotplate output socket. Power supply is provided from the hotplate. Overall W x D x H 90 x 5 x 123mm, weight 0.3kg.

HP202-05 SCT1

HP202-07 SCT1/2, accessory PTFE temperature probe

HP202-11 SCT1/1, accessory probe holder

SL360-15 Retort rod

#### Magnetic Stirrer/Hotplate, Large, Stuart CB302

Maximum speed 1500rpm. Maximum temperature 450°C. With glass ceramic top plate 300 x 300mm, precise electronic speed and temperature controls, 'hot' warning lamp which illuminates when the plate temperature exceeds 70°C, and independent overheat cut-out. A retort rod can be mounted at the rear of the housing. Supplied with 2 x 25mm stirrer followers. Overall 300 x 365 x 105mm W x D x H. Weight 7kg. For 230V 50Hz single phase supplies, 1200W.

55708-20 CB302

#### Magnetic Stirrer/Hotplate, Large, Stuart SB302

Generally as SS708-20 but with maximum temperature 300°C and cast aluminium/silicon alloy top plate 300 x 300mm. For 230V 50Hz single phase supplies, 600W.

**55708-65** SB302



HP202-05







**SS708-20** 



**SS708-65** 

### **Magnetic Stirrer/Hotplates continued**

#### Magnetic Stirrer/Hotplates, Stuart SP/CP Premium series

Maximum speed 1400rpm (SP-models), 1250rpm (CP-models) and volume stirred 15 litres. Maximum temperature 325°C (SP-models), 450°C (CP-models) with dial switch setting of heat, stirring speed and programming function, memory of temperature and speed profiles, colour TFT display with separate temperature and speed displays indicating target and actual readings, additional external, PTFE-coated, temperature probe for monitoring sample temperature with display indicator. With ceramic-coated, aluminium/silicon alloy, or solid glass ceramic top plate, 150 x 150mm W x D. Overall 182 x 300 x 85mm W x D x H. Weight 2.73kg. In a choice of three housing colours with illuminated power and "hot plate" indicators and retort rod mount behind the top plate. For 230V 50Hz single phase supplies, 750W (SP-models) 550W (CP-models).

55705-45
55705-47
55705-49
55705-64
55705-66
55705-66
55705-68
CP152K, aluminium top plate, white housing
55705-66
CP152B, glass ceramic top plate, blue housing
CP152W, glass ceramic top plate, white housing
CP152K, glass ceramic top plate, black housing



Other colours are available - details on request





SS705-49 SS705-68

### Magnetic Stirrer/Hotplates continued

#### Magnetic Stirrer/Hotplates, Square Plate, Ohaus Guardian series

Maximum speed 1600rpm and volume stirred 15 litres. Maximum temperature 500°C. Electronic setting using separate dial switch controls for heat and stirring speed, with separate high-resolution, backlit LCD readouts. With moulded glass-ceramic top-plate, single-point calibration and dual independent safety controls to continuously monitor the electronics and shut down heating before overtemperature occurs. Guardian 7000 models additionally feature SmartPresence and SmartLink technologies which allow a user to "pair" a mobile device to the unit to supervise operation and enable a heater shutdown if no operator is detected after a user-set period of time has elapsed. They also have SmartHeat and SmartPlate functions which allow maximum temperature and heat ramp rate adjustment. All units feature a "heat on" icon, retort rod holder at the rear of the housing and have a remote probe socket for use with an accessory probe to monitior media temperature directly. For 230V 50/60Hz single phase supplies.

	Model	Top plate, mm	Overall W x D x H, mm
Guardian 5	000		
<i>SS720-05</i>	e-G51HS07C	178 x 178	223 x 309 x 122
<b>SS720-15</b>	e-G51HS10C	254 x 254	286 x 415 x 122
Guardian 7	000		
<b>SS720-35</b>	e-G71HS07C	178 x 178	223 x 309 x 122
<b>SS720-45</b>	e-G71HS10C	254 x 254	286 x 415 x 122

#### Accessory temperature probes for Guardian series

55722-08 Stainless steel, 250mm long

**S5722-11** PTFE-coated, chemically resistant, stainless steel, 250mm long

**SS722-14** Support rod and clamp kit for probes

#### Magnetic Stirrer/Hotplates, Round Plate, Ohaus Guardian series

Maximum speed 1600rpm and volume stirred 20 litres. Maximum temperature 380°C. Electronic setting using separate dial switch controls for heat and stirring speed, with separate high-resolution, backlit LCD readouts. With circular, 135mm diameter top-plate, single-point calibration and dual independent safety controls to continuously monitor the electronics and shut down heating before overtemperature occurs. Guardian 7000 models additionally feature SmartPresence and SmartLink technologies which allow a user to "pair" a mobile device to the unit to supervise operation and enable a heater shutdown if no operator is detected after a user-set period of time has elapsed. They also have SmartHeat and SmartPlate functions which allow maximum temperature and heat ramp rate adjustment. All units feature a "heat on" icon, retort rod holder at the rear of the housing and have a remote probe socket for use with an accessory probe to monitor media temperature directly. Accessory blocks allow use with a variety of tubes. For 230V 50/60Hz single phase supplies.

	Model	Overall W x D x H, mm
Guardian 5	000	
SS725-25	e-G51HSRDM	173 x 267 x 126
Guardian 7	000	
<i>SS725-30</i>	e-G71HSRDM	173 x 267 x 126

#### **Accessory blocks**

Single, anodised aluminium block which covers the whole hotplate surface. Vial blocks have approximately 17mm depth wells, tube blocks have approximately 45mm depth wells. For vessels as indicated.

<i>SS727-02</i>	For 40 x 12mm diameter vials
<i>SS727-03</i>	For 40 x 15mm diameter vials
<i>SS727-06</i>	For 32x 17mm diameter vials
<i>55727-09</i>	For 24 x 21mm diameter vials
<i>55727-12</i>	For 16 x 28mm diameter vials
SS727-15	For 40 x 12mm diameter test tubes
<i>SS727-18</i>	For 32 x 16mm diameter test tubes
<b>SS727-21</b>	For 32 x 20mm diameter test tubes
<i>SS727-24</i>	For 24x 25mm diameter test tubes
<b>SS727-27</b>	Baseplate which sits on the hotplate under the accessory bloc allowing removal of blocks when hot. Requires handles \$\$727, 28 for operation.

**SS727-28** Handles for SS727-27 baseplate, pack of 2

Sectional blocks covering part of the hotplate surface, allowing mixed vessel types to be handled, are also available - details on request.



### SS720-05



SS725-25



SS720-15 SS725-30

### Magnetic Stirrer/Hotplates continued

#### Magnetic Stirrer/Hotplate, Infra-red, Stuart CR302

Maximum speed 1500rpm. Nominal maximum temperature 400°C. With black glass ceramic top 300 x 300mm (heated area 140mm diameter), 900W infra-red heater which will boil 1 litre of water over 30% faster than a conventional 1200W hotplate and powerful, rare-earth, magnetic stirring of up to 15 litres of water. A safety 'hot' warning illuminates when the plate temperature exceeds 70°C. Overall 300 x 365 x 105mm W x D x H. Weight 4kg. For 230V 50Hz single phase supplies. 950W.

55730-40 Infra-red, CR302

#### **Magnetic Stirrer/Hotplate, Ohaus**

Speed range 100 to 1200rpm. Maximum temperature  $500^{\circ}\text{C}$  and capacity 1 litre (water). With microprocessor-controlled heating and stirring, dial setting with arbitrary scale, bright white, moulded ceramic,  $102 \times 102 \text{mm}$  top plate which is acid and alkali resistant and with support rod clamp within the rear housing. Supplied with 38mm long stirrer bar. Overall W x D x H 152 x 201 x 127mm, weight 1.8kg. For 230V 50/60Hz single phase supplies.

55740-10 HSMNHS4CAL

**SL400-15** Accessory retort rod, 600mm

Bossheads and clamps - see SL600/SL660.

Magnetic stirrer followers - see ST500/ST634.

Stirrer follower retrievers - see ST800/ST804.

#### Magnetic Stirrer/Hotplate, 3-position, Stuart

Maximum speed 1500rpm. Maximum temperature 325°C. Maximum volume stirred 15 litres per plate (in a 20 litre flask). With three aluminium/silicon alloy hotplates, 160 x 160mm, individually controlled for temperature and speed, separate safety circuit to prevent overheating and 'hot' warning lamps which flash when the plate temperature exceeds 70°C. Supplied with fittings for mounting 12.5mm diameter retort rods and 3 x 25mm PTFE coated followers. Overall 600 x 270 x 110mm W x D x H. Weight 11kg. For 230V 50Hz single phase supplies, 2250W.

**55780-20** 3-position, SB162-3



SS730-40







SS780-20 in use

## 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.

57592-12 Follower set, SWN515







ST512, ST530 are similar



ST515



ST540



ST590



ST592

# Stirrer Followers, Magnetic

# **Magnetic Stirrer Follower Bars** continued

#### **Follower Bars**

PTFE encased. Supplied in packs of 2.

	Dia.	
	mm	
Crosshead		
CTC20 40	10	
ST620-10	10	
Disc		
ST622-10	10	
ST622-20	20	
ST622-30	30	

#### **Follower Bars**

PTFE encased. Supplied in packs of 2.

	Length x dia. mm	
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**

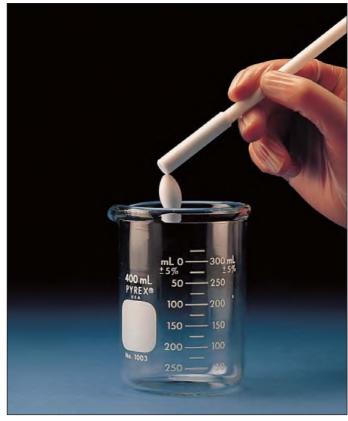
 $\mbox{\sc PTFE}$  or polypropylene encased magnet on semi-rigid handle in the same material. Supplied singly.

	Material	Length, mm
ST800-30	Polypropylene	300
ST804-25 ST804-35	=	250 350

Magnets - see MA208/MA220.

Tongs – see TR500/TR550.





ST800, ST804 in use

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