RE
Технические характеристики

Portable Analogue

BELLINGHAM & STANLEY

B&S Portable Refractometers, Eclipse

For the rapid quality control checking of solutions and semi-solids with applications in a wide range of industries. All models include a certificate of calibration with traceability to UKAS standards.

Eclipse range

Robust metal casing with focusing eyepiece, zero adjustment for sample temperature and sealed prism with transparent flap allowing easy cleaning.

	Range
Sugar scale*	
RE106-17	0 to 15% x 0.1%
RE106-32	0 to 30% x 0.2%
RE106-52	0 to 50% x 0.5%
RE106-62	28 to 65% x 0.2%
RE106-68	45 to 80% x 0.2%
RE106-72	72 to 95% x 0.2%
Starch scale	
RE106-85	0 to 30% x 0.2%
Salinity scale	
RE106-93	0 to 28% x 0.1%

* All sugar scales are based on % w/w sucrose in water.

Portable Digital, uniREFRACTO 5 pro

Compact, hand-held, digital refractometer with three scales available to view with two pre-set to 0-95% x 0.1% Brix and 1.33-1.54 R.I. x 0.0001 R.I., the third is freely selected from 45 scales available from an on-board library including Brix, R.I., AdBlue®, degrees Baume, degrees Butyro, Ethylene glycol %, Calcium chloride % and specific gravity.

◆ Ergonomic design
◆ 4-digit LCD readout
◆ Shallow, stainless steel prism dish for 0.3ml samples
◆ IP65-rated, ultrasonically welded, housing
◆ Automatic temperature compensation
◆ Measurement time: 2 seconds

Cat No.		**RE115-95**
Ranges		0 to 95% Brix, 1.33 to 1.54 R.I., plus user slected
Resolution		0.1% Brix, 0.0001 R.I.
ATC range	°C	+5 to +80
Power		2 x 1.5V AAA batteries
Overall W x D x H	mm	55 x 120 x 35
Weight	g	180

As described. Overall 120 x 55 x 35mm L x W x D, weight 180g. Supplied with 2 x 1.5V AAA batteries, soft cover and instructions.

RE115-95   UniREFRACTO 5 pro

RE106

RE115-95

Model Abbe 5

BS BELLINGHAM & STANLEY

Budget-level refractometer, ideal for wide ranging refractive index (R.I.) measurement, or where sample throughput is relatively low. particularly suited to educational demonstrations.

◆ R.I. and Brix scales indicated

◆ Uses ambient white light as a light source

◆ Digital sample temperature readout

◆ Water-jacketed prism block with inlet and outlet ports

Model		Abbe 5
Scales	R.I.	1.30 to 1.70
	Brix	0 to 95˚
Resolution	R.I.	0.00005
	Brix	0.25˚
Temp. display x resolution ˚C		+5 to +70 x 0.1
Power supply		1 x 1.5V AA battery (temp. display only)
Overall W x D x H	mm	120 x 220 x 310
Weight	kg	2.6

Abbe 5 Refractometer
As described. Supplied with glass calibration plate, contact liquid, instruction manual, battery and rigid carrying case. Requires a source of white light (natural or lamp) for operation.
RE160-10   Abbe 5
BL610-15   Spare battery, 1.5V AA (1 required)

RE160-10

Refractometers

Models RFM330-M and RFM340-M

BELLINGHAM & STANLEY

- ◆ Solid state measuring system
- ◆ Shallow, easy-clean prism dish
- ◆ Choice of Refractive Index, % Sugar solids or up to 100 ranges from pre-programmed standard scales: Zeiss, Oechsle, Butyro, Fructose or custom
- ◆ Built-in peltier temperature control
- ◆ 700 reading memory
- ◆ Extended sugar compensation, acid correction, offset, scaling and drift run facilities
- ◆ High resolution, full colour readout
- ◆ RS232, LAN and USB interfaces

Model	RFM330-M	RFM340-M
Scales R.I. % Sugar (°Brix)	1.32 to 1.58 — both models 0 to 100 — both models	
Resolution (accuracy) R.I. % Sugar (°Brix)	0.0001 (±0.0001) 0.1 (±0.1)	0.00001 (±0.00004)* 0.01 (±0.03)*
Other scales	100 available from pre-programmed standard scales: Zeiss, Oechsle, Butyro, Fructose, or user-defined — both models	
Auto. temp.comp., Sugar (°Brix) AG fluids, User-defined units	ICUMSA 5 to 70°C — both models Simple coefficient (units/°C) or polynomial function — both models	
Temp. stability checks	Selectable by method — both models	
Working temperature range	Ambient -10°C to +70°C, peltier-controlled, accuracy ±0.05°C — both models	
Reading update	4 seconds (minimum) — both models	
Prism	Artificial sapphire — both models	
Sample illumination	LED and filter at 589nm — both models	
Power supply	100-240V 50/60Hz single phase adapter	
Overall W x D x H mm	187 x 337 x 211 — both models	
Weight kg	5.4 — both models	

*±0.00002 (1.32 to 1.36 R.I.) and ±0.01 (0 to 30% Sugar)

As described. Supplied with instructions and power adapter for 100-240V 50/60Hz single phase supplies.

RE280-55   Model RFM330-M
RE280-65   Model RFM340-M

Accessories
For use in highly humid or wet, factory environments.

RE284-20   Printer cable for all RFM-series refractometers
RE284-30   Printer, CBM910
RE284-32   Paper rolls for RE284-30
RE284-34   Ribbon cartridge, black, for RE284-30
RE284-39   Spare power supply, 110-230V 50/60Hz a.c.

Automatic RFM700-M Series

BELLINGHAM & STANLEY

Low cost, fully automatic, digital refractometers designed for quality control in the food and beverage industries, but also useful in a variety of research and monitoring applications.

- ◆ Choice of Brix ranges:
  - — 0 to 50% x 0.1% sugar
  - — 0 to 100% x 0.1% sugar
  - — 0 to 100% x 0.01% sugar
- ◆ Easy to use, four button keypad operation
- ◆ Bright LED display is clearly visible in all ambient light conditions
- ◆ Moisture-resistant, sealed casing and membrane keypad
- ◆ RS232 interface
- ◆ External, low voltage power supply

Model		RFM712-M	RFM732-M	RFM742-M
Range	% sugar (Brix)	0 to 50	0 to 100	0 to 100
Resolution	% sugar (Brix)	0.1 — both models		0.01
Accuracy	% sugar (Brix)	±0.1 — both models		±0.04
ATC		all readings compensated to +20°C		
Reading time	sec	3.2	4.5	4.5
Power supply		100-240V 50/60Hz a.c. single phase		
Overall L x W x H	mm	187 x 337 x 211 — all models		
Weight	kg	3 — all models		

As described. Supplied with instruction manual and external power adapter for 100 to 240V 50/60Hz a.c. single phase supply.

RE285-20   Model RFM712-M
RE285-40   Model RFM732-M
RE285-60   Model RFM742-M

Accessories
RE284-30   Printer, CBM910
RE287-10   Printer cable for RE285-, RE290-series and RE284-30

Thermostatic baths and cooling systems – *see BJ185/BJ240.*

RE280-65, RE280-55 is similar

RE285

Refractometers

Automatic Digital RFM900-T Series

BELLINGHAM & STANLEY

High performance instruments providing fast, accurate and reliable measurements. Choice of Refractive index (R.I.), % sugar (Brix) or user-defined ranges and resolution.

- ◆ Built in temperature regulation via peltier heating/cooling modules and precise, electronic control by "Intelligent Thermal Management"
- ◆ Separate, multiple probe, temperature monitoring and compensation of the optical and detector systems
- ◆ Conform to GLP, OIML, ASTM 05006, 1747, 2140, 1218, USP/EP/BP and meet security and technical requirements of U.S. FDA Regulation 21 CFR Part 11
- ◆ Highly stable optical system
- ◆ RFID (radio frequency i.d.) tag swipe system to identify specific users, enable measurement or reconfigure settings
- ◆ 700 result memory with tabular readout
- ◆ Powerful microprocessor controller with touchscreen colour graphics display
- ◆ Low-profile sample dish and non-contact presser enable easy cleaning
- ◆ Artificial sapphire prism with Kalrez seal set in 316 stainless steel and PEEK dish
- ◆ Parallel printer and dual RS232 interface for connection to the users' PC or another instrument
- ◆ Modern design
- ◆ Software features include:
  - — Multiple product configuration presets
  - — Single/continuous read modes
  - — Reading log
  - — Reading tolerance limits
  - — Result verification
  - — Calibration log
  - — Calibration check/report
  - — PIN password control
  - — Batch/operator i.d.
  - — Data export to PC
  - — On-line help

Automatic Digital Refractometers RFM900-T series
As described. Supplied with instruction manual and external power adapter for 100 to 240V 50/60Hz single phase supplies.

RE290-40   Model RFM960-T
RE290-50   Model RFM970-T

Catalogue No.		*RE290-40*	*RE290-50*
Model		RFM960-T	RFM970-T
Ranges	R.I.	1.30 to 1.70	1.30 to 1.70
	% sugar (Brix)	0 to 100	0 to 100
	User-defined*	Yes (up to 100)	Yes (up to 100)
Resolution	R.I.	0.0001	0.00001
	% sugar (Brix)	0.1	0.01
Accuracy	R.I.	±0.0001	±0.00002
	% sugar (Brix)	±0.1	±0.02
Auto. temp compensation — both models	% sugar (Brix)	5 to 80°C	
	User-defined*	Simple coefficient (units/°C) or polynomial function	
	ATC ref. temp.	Selectable	
Reading time	seconds	Adjustable for accuracy (typically 4 to 10 seconds) — both models	
Temperature measuring range	°C	Ambient less 10 to 80 — both models	
Temperature accuracy	°C	±0.03 — both models	
Sample temperature stability	°C	±0.02 — both models	
Interfaces		1 x Parallel, 2 x RS232 (serial) — both models	
Sample illumination		Light emitting diode (589nm) — both models	
Overall W x D x H	mm	187 x 337 x 211 — both models	
Weight	kg	4.6 — both models	

*User-defined scales: available from the Bellingham and Stanley library of existing scales (at extra charge) or created by the user from experimental data.

Accessories

RE284-32   Paper rolls for RE284-30
RE284-30   Printer, CBM910
RE284-34   Ribbon cartridge, black for RE284-30
RE284-20   Printer cable for all RFM-series refractometers

RE290

Refractometers

Sucrose Calibration Solutions

BS BELLINGHAM & STANLEY

For calibration and check of refractometers. Supplied in tamper-evident, 15ml dropper bottles with certificate indicating traceability references. Please note that these products have a limited shelf-life (6 weeks) and are therefore supplied to order only.

	Concentration, % w/w	R.I. (N_d @ 20°C)
RE295-05	5.00	1.34026
RE295-07	7.50	1.34401
RE295-10	10.00	1.34782
RE295-11	11.20	1.34968
RE295-12	12.50	1.35172
RE295-15	15.00	1.35568
RE295-20	20.00	1.36384
RE295-25	25.00	1.37233
RE295-30	30.00	1.38115
RE295-35	35.00	1.39032
RE295-40	40.00	1.39986
RE295-45	45.00	1.44078
RE295-50	50.00	1.42009
RE295-55	55.00	1.43080
RE295-60	60.00	1.44193

Portable Digital

HANNA

- IP67 class housing can be cleaned with running water
- Automatic temperature compensation
- Separate temperature display
- Rapid reading
- Brix or % w/w sugar models available
- Calibrate using distilled water

Catalogue No.		RE355-05	RE355-10	RE355-15	RE355-20
Model		HI-96801	HI-96802	HI-96803	HI-96804
Range	0 to 85%	Brix	w/w Fructose	w/w Glucose	w/w Invert sugar
Resolution	%	0.1 — all models			
Accuracy	±%	0.2 — all models			
Temperature range	°C	0 to 80 x 0.1 — all models			
ATC range	°C	10 to 40 x 0.1 — all models			
Reading time	secs.	1.5 — all models			
Power		1 x 9V alkaline battery MN1604 or equivalent — all models			
Overall W x D x H	mm	192 x 102 x 67 — all models			
Weight	g	420 — all models			

As described. Supplied with 9V battery and operating instructions.

RE355-05	HI-96801
RE355-10	HI-96802
RE355-15	HI-96803
RE355-20	HI-96804
BL610-25	Spare battery, 9V

RE295

RE355

Refractometers

Portable Analogue

⌀ATAGO®

Lightweight, hand-held, analogue refractometers for routine testing and quality control of solutions or semi-solid samples including food, drinks, cleaning solutions and oils. All feature metal casing, focussing eyepiece and sealed prism.

◆ Choice of model.

— Master M-series: standard models covering a wide range of Brix scales, for samples up to +40°C. Overall 33 x 33 x 204mm H x W x D. Weight 160g

— Master T-series: generally as Master M-series models but with built-in automatic temperature compensation from +10 to +30°C

— Master ⍺-series: generally as Master T-series models but additionally with water resistant housing to IP65 rating

— H-series: generally as ⍺-series models but additionally with heat resistant material construction for samples up to +100°C such as soup, jams or marmalade

	Model Master-	% sugar (Brix) Range	% sugar (Brix) Resolution
RE395-05	20M	0.0 to 20.0	0.1
RE395-25	53M	00 to 53.0	0.5
RE397-05	20T	0.0 to 20.0	0.1
RE397-25	53T	00 to 53.0	0.5
RE399-05	20⍺	0.0 to 20.0	0.1
RE399-25	53⍺	0.0 to 53.0	0.5
RE412-15	50H	0.0 to 50.0	0.5
RE412-25	80H	30.0 to 80.0	0.5
RE412-35	93H	45.0 to 93.0	0.5

Custom scales are available - *please contact us with your requirements.*

Portable Digital, PEN-PRO

⌀ATAGO®

Small, convenient, pen-type, digital refractometer allowing one-handed operation.

◆ Measure by touch, immersion or stirring using the IP67-rated prism head (instrument is IP65-rated)

◆ Light and compact

◆ Rapid measurements: results typically available within two seconds and refreshed every second thereafter

◆ Automatic temperature compensation between +10 and +60°C

◆ Warning signal if too much straylight is affecting the reading (ELI - external light interference)

Model		PEN-PRO
Range	% sugar (Brix)	0.0 to 85.0
Resolution	% sugar (Brix)	0.1
Accuracy	% sugar (Brix)	±0.2
ATC range	°C	10 to 60
Power		1 x AAA battery
Overall, W x D x H	mm	38 x 18 x 160
Weight	g	70

As described. Supplied with lanyard and battery.
RE430-15   PEN-PRO
BL610-08   1.5V battery, spare

RE395

RE430-15

RE399

Refractometers

Portable Digital, PAL-series

ATAGO®

Lightweight, compact, robust, digital refractometers providing accurate measurements and convenient use.

◆ Only 0.3ml of sample required

◆ Rapid reading, within 3 seconds from activating the start key

◆ IP65 class casing and sealed prism allow easy cleaning under running water

◆ LCD readout with battery level indicator

◆ Automatic temperature compensation

◆ Measure high temperature samples (reading stabilises after multiple repeated measurements)

◆ Zero key allows easy zero reset using water, no standard solutions required

Model		PAL-1	PAL-2	PAL-3
Range % sugar (Brix)		0.0 to 53.0	45.0 to 93.0	0.0 to 93.0
Resolution % sugar (Brix)		0.1	0.1	0.1
Accuracy % sugar (Brix)		±0.2	±0.2	±0.2
ATC range	°C	10 to 60 — all models		
Power		2 x 1.5V AAA batteries — all models		
Overall, W x D x H	mm	55 x 31 x 109 — all models		
Weight	g	100 — all models		

As described. Supplied with storage case and batteries.

RE440-30 PAL-1
RE440-60 PAL-2
RE440-80 PAL-3
BL610-08 1.5V battery, spare (2 required)

Portable Digital, PR-α Series

ATAGO®

Functionally-designed, reliable digital refractometers covering a total range of 0.0 to 90.0% sugar (Brix) using a minimum sample volume of 0.1ml.

◆ Built-in, automatic temperature compensation

◆ Separate temperature display function

◆ User scale function - sample concentrations with up to 3 separate scales

◆ IP64 class splashproof casing

Catalogue No.		RE450-05	RE450-10	RE450-15	RE450-20
Model		PR-32α	PR-101α	PR-201α	PR-301α
Range	% sugar (Brix)	0.0 to 32.0	0.0 to 45.0	0.0 to 60.0	45.0 to 90.0
Resolution	% sugar (Brix)	0.1 — all models			
Accuracy	% sugar (Brix)	±0.1 (+5 to +40°C)	±0.1 (+5 to +40°C)	±0.1 (+10 to +40°C)	±0.1 (+10 to +30°C)
Temperature (ATC) range	°C	+5 to +40	+5 to +40	+10 to +40	+10 to +40
Reading time	seconds	3 — all models			
Power		9V alkaline battery MN1604 or equivalent — all models			
Overall, W x D x H	mm	170 x 90 x 40 — all models			
Weight	g	300 — all models			

As described. Supplied with 9V battery and operating instructions.

RE450-05 PR-32α
RE450-10 PR-101α
RE450-15 PR-201α
RE450-20 PR-301α

BL610-25 9V battery, spare

RE440-60, RE440-30 and RE440-80 are similar

RE450

Refractometers

Automatic, Smart-1

⊘ATAGO®

Fully automatic, digital refractometer designed for a variety of applications.

◆ Simple, three key operation

◆ Choice of four scales selectable: Brix, Inverted Sugar Concentration, HFCS-55 (High Fructose Corn Syrup) and HFCS-42

◆ Bright, highly visible LED display

◆ Automatic temperature compensation

◆ Zero key allows easy zero reset using water

◆ Stable reading display mode provides measurement value without requirement to note temperature

Model		Smart-1
Range x resolution	%	0.00 to 95.00 x 0.01
Accuracy (all scales)	%	±0.05
Temperature (ATC) range x resolution	°C	+5 to +40 x 0.1
Temperature accuracy	°C	±0.10
Output		RS232C
Power supply		a.c. adapter requiring a 100, 240V 50/60Hz single phase supply
Overall, W x D x H	mm	120 x 270 x 90
Weight	kg	3

As described. Supplied with a.c. adapter for 100, 240V 50/60Hz single phase supplies and instructions.
RE475-30   Smart-1

Automatic RX-α Series

⊘ATAGO®

High accuracy, automatic, digital refractometers with thermostatically controlled sample chamber.

◆ Choice of % sugar (Brix) or Refractive index (R.I.) ranges

◆ Adjustable thermostatic control of sample chamber temperature with built-in, heating/cooling Peltier thermo-module

◆ Manual calibration facility allows compensation to known standards or other control instruments

◆ 30-reading memory and 30 custom user scales memorised (with optional unit display: %, g/100g, g/100ml, mol/l, %mas, % vol, none)

Model		RX-5000α	RX-7000α
Ranges	% sugar (Brix)	0.00 to 95.00	0.0 to 95.0
	R.I. (nD)	1.32700 to 1.58000	1.3250 to 1.7000
	°C	Ambient -10.00 to + 60.00	Ambient -10.00 to +70.00
Resolution	% sugar (Brix)	0.01	0.1/0.01 (selectable)
	R.I. (nD)	0.00001	0.0001/0.00001 (selectable)
	°C	0.01	0.01
Accuracy	% sugar (Brix)	±0.03	±0.1
	R.I. (nD)	±0.00004	±0.0001
	°C	±0.05	±0.05
Output		RS232C — both models	
Display		Backlit dot matrix LCD with readout of result, temperature, date, time, mode, and sample range bar (if set) — both models	
Sample chamber/ illumination		Artificial sapphire prism with 316 stainless steel surround and LED illumination (D line) — both models	
Power supply		100, 240V 50/60Hz single phase supply — both models	
Overall, W x D x H	mm	370 x 260 x 140 — both models	
Weight	kg	9 — both models	

As described. For 100, 240V 50/60Hz single phase supplies. Supplied with instructions.
RE500-15   RX-5000α
RE500-35   RX-7000α

RE475

RE500-35, RE500-15 is similar

По вопросам продаж и поддержки обращайтесь:

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Симферополь (3652)67-13-56

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
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