

Featured Products For
Academic & Research Labs

Europe, Middle East & Africa - 2020



Since 1955, Cole-Parmer has been a leading global source of Fluid Handling, Test & Measurement and Biosciences products, instrumentation, equipment and supplies. We are proven experts in the fields of temperature measurement, spectroscopy, fluid handling, sample preparation & handling and chromatography. Our products & instruments are used extensively in the industrial, pharmaceutical, life sciences, environmental and food & beverage industries. Our portfolio of unique industry-leading brands includes Argos Technologies[®], Digi-Sense[®], Electrothermal[®], Environmental Express[®], Ismatec[®], Jenway[®], Kinesis[®], Masterflex[®], Oakton[®], PCRmax[®], Stuart[®], Techne[®], TELOS[®], Traceable[®], Vaplock[™] and a wide range of private-label products.

Cole-Parmer is globally renowned for our highly responsive customer service and experienced Application Specialists providing exceptional technical support. Pipette Service and Calibration and Instrument Service facilities are also available in our North America and European locations.



Comprehensive range of Hot Plate Stirrers, Block Heaters, Blood Tube Rotators, Colony Counters, Incubators / Hybridisation Ovens, Rockers, and Shakers, Melting Point Apparatus and Water Purification Systems. Most products in the range have BioCote[®] antimicrobial protection.



High quality scientific and analytical instrumentation — includes products for material or physical testing and water quality analysis including CPLive[™] Cloud-enabled Spectrophotometers, Flame Photometers, and Meters for the measurement of dissolved oxygen, pH and conductivity.



Heating Mantle manufacturer with over 70 year's experience and an exemplary safety record. The range offers Electric Bunsens, Heating Mantles, Melting Point Apparatus, Histology slide preparation equipment, Heating Tapes and numerous reaction stations including the innovative Integrity 10.



Manufacture of temperature control and essential equipment for life sciences and research laboratories — offers qPCR systems, Thermal Cyclers, Hybridisation Incubators, Dri-Blocks[™] & Calibrators, Sand Baths, Liquid Baths, Gelation Timers, and Sample Concentrators.



PCR related equipment and consumables — offers real-time qPCR systems, end point Thermal Cyclers, lyophilised real-time PCR detection kits, molecular diagnostic test kits, Heating Block modules, and much more. The Arcis DNA Sample Preparation Kit is a complementary partner to the range.

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HOT PRODUCTS

Jenway® Spectrophotometers



The 72 Series

Diode array technology.

Simultaneous measurement of all wavelengths, scan time as short as 3 seconds.

Bandwidth 3.0-nm – 7.0 nm
Wavelength 198-nm – 800 nm



The 74 Series

Single-beam technology.

Units are CPLive™ enabled for remote access & comprise: Visible, UV/Vis, & UV/Vis Nano.

Bandwidth 5.0-nm
Wavelength 198-nm – 1000 nm



The 76 Series

Split-beam technology.

Units are CPLive™ enabled for remote access to data & protocols. UV/Vis spectrophotometer.

Bandwidth 1.5-nm
Wavelength 198-nm – 1000-nm

Stuart® Bioscience Lab Essentials



8500 Microcentrifuge

Personal size for quick spin downs. Safely spin samples with dual locking lid & quickly change rotors with quick-release adapter. Recessed rotor bowl contains spills.

8500 rpm



Hotplate Stirrer

Built for safety. Customisable with an online configurator giving a large choice of model type, interface, surface, & colour.

50-2000 rpm

PCRMax® PCR Systems



Alpha Cyclor 2

Compact units delivering reproducible results & independently control each block for simplified temperature and space optimisation.

96-well, 384-well, or mixed formats
Temperature accuracy 50 C: ± 0.25 C



Eco 48 Real-Time qPCR

The fastest compact real-time 48-well system on the market, with a temperature accuracy of $\pm 0.1^{\circ}\text{C}$. MIQE compliant.

Sample volume from 0.5- μL
Detects DNA as low as 2ng/ μL

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Stuart® Dry Block Heaters

Precise heating with uniform and stable temperatures

- Interchangeable block inserts accommodate test tubes, microcentrifuge tubes, cuvettes, and microtiter plates
- “Hot” warning light flashes when blocks heat above 50°C

1. Block Heaters

Anlogue Dry Block Heater. Economical, with one simple dial to set temperature. Achieve stable temperatures at 37°C. Reaches 100°C in less than 12 minutes.

Digital Dry Block Heaters. Quickly set and view the temperature with easy-to-use LED display. Select from 130°C or 200°C maximum temperature models in two- or three-block configurations. Two-block models are available as single-control or dual-control models. Order the dual-control model to control the temperature of each block independently—ideal for multiple users or for applications where samples need to be transferred between two temperatures very quickly. Three-block models are excellent for high-throughput applications such as chemical oxygen demand (COD). Order the sample concentrator (below) to use with three-block heaters to quickly concentrate samples.

What's included: block extraction tool and power cord (UK and Euro plugs).



REQUIRED System Components

- 1) Block heater
- 2) Heating blocks



36610-01
[SBH130]



36610-31
[SBH130DC]

Max temp	Uniformity (within block)	No. of blocks accepted [†]	Power (50/60 Hz)		Catalogue number	Item number
			VAC	Watts		
Anlogue dry block heater						
130°C	±0.1°C at 37°C; ±1°C at 130°C	2	230	300	PZ-36610-01	SBH130
Digital dry block heaters						
130°C	±0.1°C at 37°C; ±1°C at 130°C	2	230	300	PZ-36610-11	SBH130D
	±0.1°C at 60°C; ±1°C at 130°C	2 (dual controls)	230	2 x 150	PZ-36610-31	SBH130DC
	±0.1°C at 37°C; ±1°C at 130°C	3	230	450	PZ-36610-13	SBH130D/3
200°C	±0.1°C at 37°C; ±1°C at 130°C	2	230	300	PZ-36610-21	SBH200D
	±0.1°C at 60°C; ±1°C at 200°C	2 (dual controls)	230	2 x 150	PZ-36610-32	SBH200DC
	±0.1°C at 37°C; 1°C at 130°C	3	230	450	PZ-36610-23	SBH200D/3

*Indicates the number of single-width blocks accepted. A heater that accepts two single-width blocks will also accept one double-width block.

PZ-36610-96 [SBH/2] Cover for two-block heater

PZ-36610-97 [SBH/3] Cover for three-block heater

PZ-36610-98 [SBH/4] Replacement block extraction tool

Sample Concentrator

Use with three-block heaters to quickly concentrate multiple samples at once. Concentrator blows gas over the surface of your samples through stainless steel needles (order separately). Insert needles into a silicone membrane in virtually any configuration. Fully adjustable gas reservoir provides accurate height control. Choose PTFE-coated needles for use with corrosive samples.

PZ-36610-99 [SBHCNC/1] Sample concentrator for three-block heaters only

PZ-36620-96 [F7209] Stainless steel needle, 76-mm long. 100/pk

PZ-36620-97 [F7210] Stainless steel needle, 127-mm long. 100/pk

PZ-36620-99 [FSC4NCS] PTFE-coated stainless steel needle, 76-mm long. 100/pk

PZ-36620-98 [FSC4NCL] PTFE-coated stainless steel needle, 127-mm long. 100/pk



2. Interchangeable Heating Blocks

Blocks provide excellent thermal conductivity and are made of anodised aluminum (except 36610-42 and -43). Thermometer hole lets you monitor the block temperature.

Flexi-block inserts can hold multiple size tubes, vials, or cuvettes at once. They use autoclavable, high-density ceramic beads and come in double or triple width. Unskirted PCR plates can be heated in either size flexi-block. Skirted microtiter plates, deep-well plates, and PCR plates can only be incubated in the triple-width model.

Accommodates	No. of wells	Well depth	Catalogue number	Item number
Single-width heating blocks				
10-mm dia tubes	20	47-mm	PZ-36610-44	SHT1/10
12-mm dia tubes	20	33-mm	PZ-36610-46	SHT1/12/33
12-mm dia tubes	20	47-mm	PZ-36610-45	SHT1/12
12-mm dia tubes	20	47-mm	PZ-36610-47*	SHT1/12/6
13-mm dia tubes	20	47-mm	PZ-36610-48	SHT1/13
16-mm dia tubes	12	47-mm	PZ-36610-49	SHT1/16
17-mm dia tubes	12	47-mm	PZ-36610-50	SHT1/17/1
19-mm dia tubes	8	47-mm	PZ-36610-51	SHT1/19
25-mm dia tubes	6	47-mm	PZ-36610-56	SHT1/25
28-mm dia tubes	6	47-mm	PZ-36610-57	SHT1/28
30-mm dia tubes	4	47-mm	PZ-36610-59	SHT1/30/1
33-mm dia tubes	4	47-mm	PZ-36610-60	SHT1/33
0.2-mL tubes	48	61-mm (9° taper)	PZ-36610-62	SHT1/48
0.2-mL strip	10 x 8	—	PZ-36610-63	SHT1/80
0.5-mL tubes	30	7.8-mm (9° taper)	PZ-36610-58	SHT1/30
1.5-mL tubes	20	14-mm (9° taper)	PZ-36610-54	SHT1/22
2.0-mL tubes	20	35-mm	PZ-36610-52	SHT1/20
5.0-mL tubes	12	48-mm	PZ-36610-55	SHT1/23
Block with removable channels for glass and disposable cuvettes			PZ-36610-53	SHT1/21
Solid (no holes), aluminum			PZ-36610-42*	SHT1/0
Solid (no holes), stainless steel			PZ-36610-43*	SHT1/1
Double-width heating blocks				
96-well plate	96	7.5-mm (9° taper)	PZ-36610-64	SHT1/96
384-well plate	384	3.6-mm (9° taper)	PZ-36610-61	SHT1/384
Flexi-block	—	—	PZ-36610-40	SHT/FLEXI2
Triple-width heating block				
Flexi-block	—	—	PZ-36610-41	SHT/FLEXI3

*No thermometer hole

Stuart® Analogue Stirrers, Hot Plates, and Stirring Hot Plates

Designed for safety and performance

- Heat one large vessel or several small ones
- High-capacity models heat up to thirty 100-mL beakers simultaneously
- Flashing light warns when top plate is hot (above 50°C), even when turned off
- Chemical-resistant ceramic top plate reaches higher temperatures yet stays cool around the edges to help prevent accidental burns
- Rugged aluminum top plate offers even temperature distribution across the whole surface of the plate

Advanced units feature an innovative LED temperature indicator scale, which lights up in coloured increments as the top plate heats up, to indicate when the plate has reached its temperature set point. Use with the optional digital temperature controller (sold on page 5) for precise sample temperatures.



Top plate		Heating	Stirring		Power		Catalogue number	Item number
Dimensions	Material	Temp range	Speed range	Max capacity	VAC	Hz		
Stirrers								
15 x 15-cm	Ceramic	—	100 to 2000 rpm	15 L	230	50	PZ-04805-07	UC151
	Stainless steel	—	100 to 2000 rpm	15 L	230	50	PZ-04805-13	US151
Hot Plates								
30 x 30-cm	Ceramic	Ambient to 450°C	—	—	230	50/60	PZ-04800-07	CB300
	Coated aluminum	Ambient to 300°C	—	—	230	50/60	PZ-04801-07	SB300
High-capacity Hot Plates								
30 x 50-cm	Ceramic	Ambient to 375°C	—	—	230	50/60	PZ-04800-11	CB500
	Coated aluminum	Ambient to 300°C	—	—	230	50/60	PZ-04800-13	SB500
Advanced Hot Plates								
15 x 15-cm	Ceramic	Ambient to 450°C	—	—	230	50	PZ-04805-08	UC150
	Coated aluminum	Ambient to 325°C	—	—	230	50	PZ-04805-14	US150
Stirring Hot Plates								
30 x 30-cm	Ceramic	Ambient to 450°C	100 to 1500 rpm	15 L	230	50	PZ-04800-01	CB302
	Coated aluminum/silicon	Ambient to 300°C	100 to 1500 rpm	15 L	230	50	PZ-04801-01	SB302
Advanced stirring Hot Plates								
15 x 15-cm	Ceramic	Ambient to 450°C	100 to 2000 rpm	15 L	230	50	PZ-04805-58	UC152
	Coated aluminum/silicon	Ambient to 325°C	100 to 2000 rpm	15 L	230	50	PZ-04805-66	US152

Stuart® Digital Hot Plate

Digital, microprocessor control for high performance

- Accurate digital setting and control of temperature for rapid heating across the entire plate
- Flashing light warns when top plate is hot (above 50°C)

Angled housing is shaped for stability while deflecting spills away from the controls. An independent safety circuit protects against over-heating and internal electronic components are protected against corrosion.



Top plate	Temperature range	Power	Catalogue number	Item number
Coated aluminum, 15 x 15-cm	50 to 300°C	230 50/60	PZ-04805-29	SD160

Use add-on heating blocks to turn your hot plate into a heating mantle. See page 44.

Stuart® Advanced Digital Stirring Hot Plates

Stores safely on its side—ideal for large or educational labs

- Warning indicator stays lit when top plate is above 50°C, even if power is off
- Compact space-saving design is suitable for limited workspaces such as fume hoods

Get the simplicity of analogue control with the accuracy of digital feedback. To further increase heating accuracy, the optional digital temperature controller (order separately on page 5) controls the heating element based on the temperature of your sample. Integral fitting accommodates a support rod.



Top plate	Heating	Stirring	Power	Catalogue number	Item number
	Temp range	Speed range	Max capacity	VAC	Hz
Glass ceramic, 15 x 15-cm	Ambient to 450°C	100 to 2000 rpm	15 L	230	50
Coated aluminum/silicon, 15 x 15-cm	Ambient to 325°C			230	50
				PZ-04805-84	UC152D
				PZ-04805-90	US152D

Stuart® Digital Round-Top Hot Plate, Stirrer, and Stirring Hot Plate

Innovative fingertip control even while wearing gloves

- Get precise digital control of heating and stirring
- Advanced brushless motor provides quiet, worry-free operation
- Sealed casing keeps spills away from interior electronics
- Set a safety temperature limit to ensure liquid won't be damaged
- Hot top warning light protects you from accidental burns

Our stylish and sleek units feature a unique control pad that allows all operations to be set using just your fingertip. The LCD shows both set and real-time parameters which are lockable to prevent changes during use. Optimal heating is maintained by an integrated temperature sensor and dual PID control that rapidly heats plate and maintains desired temperature. Reverse stirring mode switches the stirring direction every 45 seconds for thorough mixing. Built-in timer can be set for up to 9 hours or continuous operation for each function.

NEW



Top plate		Max temperature	Speed range	Max stirring capacity	Power			Catalogue number	Item number
Dimensions	Material				VAC	Hz	Watts		
Hot Plate									
13.5-cm dia	Ceramic-coated aluminum	340°C	—	—	220	50/60	600	PZ-04661-24	04661-24
Stirrer									
13.5-cm dia	Ceramic-coated aluminum	—	100 to 1800 rpm	20 L	220	50/60	—	PZ-04661-30	04661-30
Stirring Hot Plate									
13.5-cm dia	Ceramic-coated aluminum	340°C	100 to 1800 rpm	20 L	220	50/60	600	PZ-04661-46	04661-46

Stuart® Temperature Controller

An ideal solution for precise sample temperatures

- Bright, easy-to-read LED display
- Two operating modes—controller or monitor

Designed for use with Stuart advanced hot plates and stirring hot plates, the digital unit can serve either as a precise controller of temperature from 20 to 200°C or as a digital thermometer from -4 to 325°C. An integral clamp lets you mount the controller either on a horizontal or vertical retort rod. Stainless steel probe (included) is detachable; store in built-in probe holder when not in use.



Accuracy	Resolution	Dimensions (W x H x D)	Catalogue number	Item number
±0.5°C	1°C	9 x 12 x 7.5-cm	PZ-04805-92	SCT1

Accessories

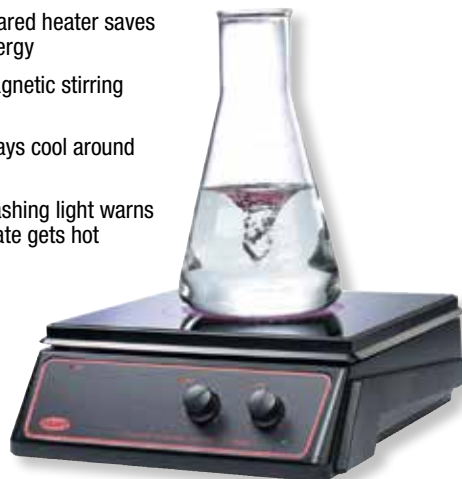
PZ-04805-48 [CD162/1] Temperature probe, stainless steel

PZ-04805-93 [SCT1/2] Temperature probe, PTFE coated for corrosive liquids

Stuart® Infrared Hot Plate and Stirring Hot Plate

Heat water to boiling 30% quicker

- Efficient infrared heater saves time and energy
- Powerful magnetic stirring to 15 litres
- Top-plate stays cool around edges
- Be safe—flashing light warns when top plate gets hot



Hot plate and stirring hot plate feature an efficient, 900-watt infrared heater that can boil a litre of water over 30% faster than a conventional, 1200-watt ceramic hotplate. Chemical-resistant ceramic top plate has a 14-cm diameter heating area that stays cool around the edges.



Top plate	Stirring		Power		Catalogue number	Item number
	Speed range	Max capacity	VAC	Hz		
Infrared Hot Plate						
Ceramic glass, 30 x 30-cm	—	—	230	50/60	PZ-84300-19	CR300
Infrared stirring Hot Plate						
Ceramic glass, 30 x 30-cm	100 to 1500 rpm	15 L	230	50	PZ-86580-01	CR302

Stuart® Stirrers, Hot Plates, and Stirring Hot Plates

Excellent performance for everyday use

- Provides accurate stirring and temperature control
- Spill-resistant front control panel with a chemically toughened glass for extra resilience
- Hot surface warning light flashes when plate temperature is above 50°C
- Durable chip-resistant aluminum top plate offers excellent heat transmission, rapid heating, and even temperature distribution
- Ceramic top plate is chemical resistant and easy to clean, plus the white surface ensures good visibility of colour changes
- All models have a 3-year warranty

Analogue Models have a basic interface with “hockey stick” LED arrays indicating temperature and speed, and offers the same quality as the two higher end models.

Digital Interface Models feature a digital temperature setting. Stirring speed is displayed by a “hockey stick” LED array with the lights progressively illuminating to represent the speed range.

Premium Interface Models offer a full-colour 10-cm TFT screen which simultaneously displays target settings and the actual temperature and stirring speed of the sample. Individual profiles can be created and saved, allowing for fast set-up of complicated experimental procedures. Supplied with PTFE-coated temperature probe.



Analogue interface with illuminated LED arrays



Digital interface with constant digital temperature display

Analogue and digital colour options



Premium interface with TFT display for temperature and stirring

Premium colour options



Order below or design yours today!
Go to

ColeParmer.co.uk/buildmystirrer



Top plate	Heating	Stirring		Body colour	Power	Analogue interface		Digital interface		Premium interface	
	Max temp	Speed range	Max capacity		(VAC, Hz)	Cat. no.	Item no.	Cat. no.	Item no.	Cat. no.	Item no.
Stirrers											
Stainless steel, 15 x 15-cm	—	50 to 1400 rpm	15 L	Blue	120/230, 50/60	PZ-04805-49	SS151B	—	—	—	—
				White		PZ-04805-50	SS151W	—	—	—	—
				Black		PZ-04805-51	SS151K	—	—	—	—
Ceramic, 15 x 15-cm	—			Blue		PZ-04805-52	CS151B	—	—	—	—
				White		PZ-04805-53	CS151W	—	—	—	—
				Black		PZ-04805-54	CS151K	—	—	—	—
Hot Plates											
Aluminum, 15 x 15-cm	325°C	—	—	Blue	230, 50/60	PZ-04806-01	SS150B	PZ-04806-25	SD150B	PZ-04806-49	SP150B
				White		PZ-04806-03	SS150W	PZ-04806-27	SD150W	PZ-04806-51	SP150W
				Black		PZ-04806-05	SS150K	PZ-04806-29	SD150K	PZ-04806-53	SP150K
				Pink		—	—	—	PZ-04806-63	SP150P	
Ceramic, 15 x 15-cm	450°C			Blue		PZ-04806-07	CS150B	PZ-04806-31	CD150B	—	—
				White		PZ-04806-09	CS150W	PZ-04806-33	CD150W	—	—
				Black		PZ-04806-11	CS150K	PZ-04806-35	CD150K	—	—
Stirring Hot Plates											
Aluminum, 15 x 15-cm	325°C	50 to 1400 rpm (digital); 50 to 2000 rpm (premium)	15 L	Blue	230, 50/60	PZ-04806-13	SS152B	PZ-04806-37	SD152B	PZ-04806-65	SP152B
				White		PZ-04806-15	SS152W	PZ-04806-39	SD152W	PZ-04806-67	SP152W
				Black		PZ-04806-17	SS152K	PZ-04806-41	SD152K	PZ-04806-69	SP152K
				Pink		—	—	—	—	PZ-04806-79	SP152P
Ceramic, 15 x 15-cm	450°C	50 to 1250 rpm (digital); 50 to 2000 rpm (premium)		Blue		PZ-04806-19	CS152B	PZ-04806-43	CD152B	PZ-04806-81	CP152B
				White		PZ-04806-21	CS152W	PZ-04806-45	CD152W	PZ-04806-83	CP152W
				Black		PZ-04806-23	CS152K	PZ-04806-47	CD152K	PZ-04806-85	CP152K
				Pink		—	—	—	—	PZ-04806-95	CP152P

Our digital temperature controller can be used with the analogue and digital interface models above. See page 5.

Use add-on heating blocks to turn your hot plate into a heating mantle. See page 44.

Stuart® Acid-Resistant Hot Plate with External Control

Impervious to chemical attack

- Specifically designed for acid digestions and trace metal analysis
- Large, square top plate accommodates one large vessel or several smaller ones



With a ceramic heating plate mounted in a solid block of pure PTFE, this rugged hot plate withstands boiling acid solutions and aggressive cleaning agents. The separate analogue temperature controller is connected via a 2-m PTFE-coated cable, allowing it to be placed away from corrosive environments. Hot warning light flashes when temperature is above 50°C.

Specifications

Power: 230 VAC, 50 Hz



Top plate			Max temperature	Catalogue number	Item number
Dimensions	Heated area	Materials			
30 x 30-cm	20 x 20-cm	Ceramic glass and PTFE	400°C	PZ-04801-08	CP300

Stuart® Three-Position Stirrer and Stirring Hot Plate

Save space with these 3-in-1 units

- Independently controlled stirring or heating/stirring positions
- Powerful magnets for strong magnetic coupling and stirring capacity
- Easily accommodate a 2-L beaker in each position



51600-08
[SB162-3]

One power source is ideal for quality control applications where multiple samples require simultaneous stirring, or heating and stirring, under the same conditions. A "Hot" warning light flashes for each position when temperature rises above 50°C—even when turned off.

Specifications

Number of positions: 3 Stirring range: 0 to 1500 rpm
Volume per position: 2000-mL Power: 230 VAC, 50 Hz



Top plate		Temperature range	Catalogue number	Item number
Dimensions (L x W)	Material			
55 x 21-cm	Stainless steel	—	PZ-51400-02	SB161-3
16 x 16-cm each position	Coated aluminum	Ambient to 325°C	PZ-51600-08	SB162-3

Stuart® Wrist-Action Shaker

Eliminate wrist strain

- Vigorous mixing action simulates hand shaking
- Ideal for extractions



Features two side arms with adjustable clamps. Holds eight flasks or bottles up to 500-mL capacity. Use for prolonged continuous shaking or set built-in analogue timer to 60 minutes. Electronic feedback controller ensures a constant speed, irrespective of load.



Specifications

Speed range: 80 to 800 oscillations/min Timer range: 10 to 60 min

Max load	Shaking amplitude	Dimensions (H x W x D)	Power		Catalogue number	Item number
			VAC	Hz		
3-kg	1.5-mm	78 x 27 x 24-cm	220	60	PZ-51900-01	SF1/220V/60
			230	50	PZ-51900-02	SF1

Stuart® Microtiter Plate Shakers

Mix small volumes with high-speed vibration

- Perfect for microwell plates
- Digital display ensures protocol repeatability
- Built-in timer and continuous mode add versatility
- Non-slip mat and platform lip securely hold plates



51707-06
[SSM5]

Shaker combines high speed with a tiny orbit to produce vigorous shaking. For routine tasks, use the saved time-and-speed program. Four-plate model is ideal for small-scale applications, or use in incubators and fume hoods. Eight-plate model is suited for high throughput benchtop applications. Optional tube holders accommodate microcentrifuge tubes (order separately).



Specifications

Speed range: 250 to 1250 rpm Timer: 1 to 999 minutes
Orbit size: 1.5-mm Power: 230 VAC, 50 Hz

Number of plates held	Max load	Platform dimensions (L x W)	Catalogue number	Item number
4	1-kg	22 x 22-cm	PZ-51707-06	SSM5
8	2-kg	30.6 x 30.6-cm	PZ-51707-04	SSL5

PZ-51900-97 [SSM5/1] Tube holder rack, 50 x 1.5-mL
PZ-51900-98 [SSM5/2] Tube holder rack, 50 x 0.5-mL
PZ-51900-99 [SSM5/3] Tube holder rack, 50 x 0.2-mL

Stuart® Slow-Speed Rocking Shakers

Preserve viability with gentle whirling or rocking

- Adjust tilt angle for optimal mixing
- Built-in timer and digital speed display provide reproducible results

Gyrational Motion Shakers delicately swirl solutions for low-foaming requirements such as cell culturing, DNA extractions, and histological staining procedures.

See-Saw Shakers produce a rolling wave in your vessel, perfect for culture flasks and petri dishes.

Choose small 3-kg capacity for tight spaces. Larger 10-kg capacity shakers suit larger laboratories and high-throughput applications. Optional tier system triples capacity and is held in place with magnets, so it easily disassembles for cleaning.



Specifications

Speed range: 5 to 70 rpm **Angle of tilt:** Gyratory models: 3° to 12°
See-Saw models: 7°

Max load	Platform dimensions (L x W)	Power	Catalogue number	Item number
Gyratory shakers (not shown)				
3-kg	23.5 x 23.5-cm	230 VAC, 50 Hz	PZ-51900-26	SSM3
10-kg	35.5 x 35.5-cm	230 VAC, 50 Hz	PZ-51900-28	SSL3
See-Saw shakers				
3-kg	23.5 x 23.5-cm	230 VAC, 50 Hz	PZ-51900-30	SSM4
10-kg	35.5 x 35.5-cm	230 VAC, 50 Hz	PZ-51900-32	SSL4

PZ-51700-94 [SSL3/1] Optional tier system for small-capacity rockers

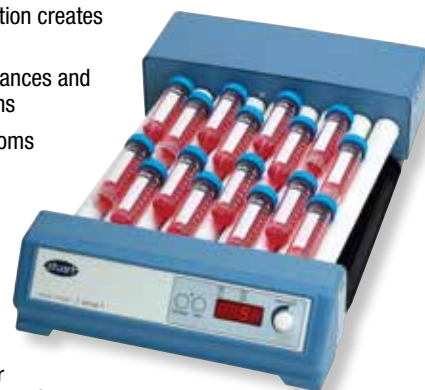
PZ-51700-93 [SSM3/1] Optional tier system for large-capacity rockers

Stuart® Roller Shakers

Gently perform complete mixing

- Rocking and rolling action creates minimum aeration
- Ideal for viscous substances and liquid-solid suspensions
- Safe for use in cold rooms or incubators
- Expand capacity and save space with optional stacking kit

The 6-roller units offer space-saving footprint—ideal for incubators. The 9-roller units provide higher throughput. Both shakers accommodate most tube and bottle sizes.



Specifications

Timer (digital models only): 1 second to 9 hours
Ambient temperature: 4 to 60°C

Overall dimensions (W x H x D):
6-rollers: 59.5 x 11 x 25.5-cm
9-rollers: 59.5 x 11 x 37.5-cm

Speed range	Number of rollers	Power		Catalogue number	Item number
		VAC	Hz		
Anologue shakers					
Fixed at 33 rpm	6	230	50	PZ-04653-02	SRT6
	9	230	50	PZ-04653-04	SRT9
Digital shakers					
Adjustable from 5 to 60 rpm	6	230	50	PZ-04653-06	SRT6D
	9	230	50	PZ-04653-08	SRT9D

PZ-04653-09 [SRT/STACK] Stacking kit includes four blocks. One kit will stack two shakers; order two kits to stack three shakers

Stuart® Tube Rotators

Gentle and effective mixing—ideal for biological suspensions

- Suspend cultures without compromising viability
- Fully adjustable rotation angle optimises mixing for any sample

Fixed-speed rotator offers easy repeatable operation at 20 rpm for routine tasks.

Variable-speed rotator is best suited to more dynamic laboratory environments with different or changing protocols requiring 2 to 40 rpm. Features a digital speed display and timer (1–999 min) providing better repeatability for optimal results.

Discs. Mix and match from six tube holder discs (order separately). Quickly and easily remove and replace tube holders without tools. Use two tube holders simultaneously with the optional dual disc adapter.

1. Rotator Drive



Speed range	Speed control	Dimensions (W x H x D)	Power		Catalogue number	Item number
			VAC	Hz		
20 rpm	—	20 x 23 x 27-cm	230	50	PZ-07650-11	SB2
2 to 40 rpm	Digital		230	50	PZ-07650-13	SB3

2. Tube Holder Discs

Holds	Tube dia (mm)	Number of tubes	Catalogue number	Item number
1.5-mL micro tubes	10 to 11.5	46	PZ-00077-11	SB3/1
Test tubes	9 to 20	20	PZ-00077-15	SB3/2
50-mL centrifuge tubes	25 to 35	12	PZ-00077-13	SB3/3
Culture tubes	12	63	PZ-00077-17	SB3/4
Culture tubes	16	63	PZ-00077-19	SB3/5
Culture tube holder	26-mm	30	PZ-00077-21	SB3/6



Accessories

PZ-00077-23 [SB3/DUAL] Dual disc adapter. Stacks two discs for increased capacity

PZ-00077-25 [SB3/1/PC] Additional clips for micro tube holder 00077-11. Pack of 20

Stuart® Orbital Shakers

Maintain consistent shaking speeds—even with continuous use

- Smooth, uniform circular motion for larger samples and multiwell plates
- Ideal for culturing and aeration applications—fit into incubators and cold chambers

Compact Shaker with non-slip mat holds up to four standard-sized, multiwell plates, dishes, and petri dishes. Optional expansion platform doubles plate capacity. Optional cradle platform holds four 250-mL flasks or other taller vessels.

Large-Capacity Shaker includes a four-bar, cradle-type platform for use with a variety of bottles and flasks. Use optional six-bar cradle platform for larger applications.



51900-20
[SSM1]

51900-22
[SSL1]



Specifications

Speed range: 30 to 300 rpm **Timer:** 1 to 999 minutes
Orbit size: 16-mm (5/8") dia

Max load	Platform dimensions	Power		Catalogue number	Item number
		VAC	Hz		
3-kg	22 x 22-cm	230	50	PZ-51900-20	SSM1
10-kg	33.5 x 33.5-cm	230	50	PZ-51900-22	SSL1

Stuart® Vortex Mixers

Compact—perfect for individual workstations

- Simply press your test tube to the rubber head for “touch” on operation
- Use for continuous mixing—housing design supports use with a lab rod
- Heavy die-cast body won’t dance across your bench
- Mix a variety of tube sizes and shapes with the included rubber cup head

The accessory pack of heads (sold separately) lets you mix in a standard microplate, a beaker or flask (up to 500-mL), eight 0.2-/0.5-mL microtubes, sixteen 1.5-mL microcentrifuge tubes, or make your own custom holder with the blank foam. **Note:** Only compatible with variable-speed model 04729-03 [SA8].



04729-03
[SA8]



Specifications

Orbit size: 4.2-mm dia
Dimensions (W x H x D): 7.8 x 13.5 x 21.5-cm

Speed range	Power		Catalogue number	Item number
	VAC	Hz		
Fixed at 2500	120 to 230	50/60	PZ-04729-01	SA7
200 to 2500 rpm	120 to 230	50/60	PZ-04729-03	SA8

PZ-04729-07 [SA8/1] Accessory head pack, for variable-speed model only

Stuart® 8500 Microcentrifuge

Be safe with dual locking lid

- Quickly change rotors with quick-release adapter—no tools required
- Built-in recessed rotor bowl contains spills for easy cleanup
- Small footprint—perfect for your personal workspace
- Spin samples rapidly or use in applications where greater g-force is required
- Automatic shut-off discontinues operation after 60 minutes of continuous use



The Stuart 8500 microcentrifuge, with enhanced safety features, provides high speed centrifugation while protecting you and your samples. Spin samples rapidly to be used in applications where greater g-force is required. The innovative dual safety lock lid prevents you from accidentally opening the unit. It will only spin when the lid is closed and will automatically shut off after 60 minutes of continuous use. The rubber-coated base allows for enhanced stability and reduced vibration.



Specifications

Rotors (included): fixed-angle, 8 x 1.5- to 2.0-mL tubes; 32 x 0.2-mL strip tubes
Power: 100 to 240 VAC, 50/60 Hz

Speed range	Max RCF x g	Catalogue number	Item number
8500 rpm	3884	PZ-17414-70	SCF4

Stuart® General-Purpose Digital Water Baths

Easy to use and easy to clean

- Choice of various capacities—6, 15 or 24 litres
- Safety features include low water level sensor and over-temperature protection
- Stainless steel tank with rounded corners will not trap dirt
- Integral drain simplifies water changes and cleaning

These utility baths feature a clear LED temperature display with an analogue dial, making set point adjustments quick and ensuring accurate temperature control. A polycarbonate lid provides a full view of bath contents and reduces heat loss. Low water level sensor prevents dry boiling, and over-temperature protection system monitors temperature and controls heater in the event of a fault.

Built-in drain empties stainless steel tank for water changes and maintenance. The heater is mounted beneath the tank, so it is not in the way.

What's included: polycarbonate lid and power cord.



CE

Bath capacity	Temperature range	Temperature stability	Bath opening (L x W)	Working depth	Heater wattage	Power (VAC, Hz)	Catalogue number	Item number	Gabled stainless steel lids	
									Cat. no.	Item number
6 L	Ambient + 5°C to 99.9°C	±0.5°C	30 x 15-cm	20-cm	500 W	230, 50	PZ-12122-91	SWB6D	PZ-12122-92	SWB6/1
15 L			30 x 32.5-cm	20-cm	1000 W	230, 50	PZ-12122-71	SWB15D	PZ-12122-72	SWB15/1
24 L			30 x 50-cm	20-cm	1700 W	230, 50	PZ-12122-81	SWB24D	PZ-12122-82	SWB24/1

Stuart® Shaking Water Bath

Customise to your needs with platforms and racks

- No need for tricky fittings—strong magnets make changing platforms easy
- Analogue controls and digital temperature display simplify operation
- Over-temperature and low-level cut-offs improve safety

Versatile water bath can be a linear (reciprocating) or orbital shaker, or used as a static bath, depending on the platform you choose. The two shaking platforms come with high-tension springs which accommodate most bottle and flask sizes; with capacity of 8 x 250-mL, 6 x 500-mL, or 4 x 1000-mL Erlenmeyer flasks. For tubes and smaller vessels, order an optional stainless steel rack.



REQUIRED System Components

- 1) Water bath
 - 2) Platform
- OPTIONAL**
- 3) Racks



CE

Specifications

Temperature range: ambient +5°C to 95°C[†] **Wetted materials:** 304 stainless steel
Temperature stability: ±0.25°C

Bath capacity	Bath opening (L x W)	Working depth	Shaking speed	Stroke length/ orbit size	Power		Catalogue number	Item number
					VAC	Hz		
24 L	30 x 50-cm	20-cm	20 to 150 rpm	20-mm	220	60	PZ-12152-01	SBS40/220V/60
					230	50	PZ-12152-02	SBS40

[†]An accessory bath cover is required to reach temperatures above 90°C.

Accessories

PZ-12152-99 [SBS40/4] Hinged, gabled polycarbonate bath cover reduces heat loss and evaporation

PZ-12152-79 [SWB3/1] Stainless steel gabled lid

Platforms (one required)

Description	Catalogue number	Item number
Reciprocating shaking action	PZ-12152-90	SBS40/1
Orbital shaking action	PZ-12152-91	SBS40/2
Perforated, for use as a nonshaking bath	PZ-12152-92	SBS40/3

Optional Tube Racks

Accommodates	Catalogue number	Item number
Centrifuge tubes, 25 x 50-mL	PZ-12152-93	SBS40/10
Microcentrifuge tubes, 143 x 1.5-mL	PZ-12152-94	SBS40/5
Culture tubes, 120 x 13-mm dia	PZ-12152-95	SBS40/6
Culture tubes, 72 x 16-mm dia	PZ-12152-96	SBS40/7
Culture tubes, 56 x 15-mL	PZ-12152-97	SBS40/8
Culture tubes, 30 x 26-mm dia	PZ-12152-98	SBS40/9

Stuart® Hybridisation Incubator/Shaker

Versatile—features both rotisserie and rocking motions

- Forced air circulation combined with microprocessor control results in excellent temperature uniformity
- Ideal for nucleic acid hybridisation applications such as Northern (RNA) blots, Southern (DNA) blots, and Western (protein) blots

Rotisserie shaker has a rotational speed from 2 to 10 rpm while the platform shaker has a rocking speed from 5 to 70 oscillations/minute. Double-glazed smoked acrylic and polycarbonate door provides radiation protection. Stainless steel interior is easy to clean. Safety features include over-temperature protection and power cut-off.

Hybridisation bottles (order separately) are made from Pyrex® borosilicate glass and are autoclavable. Thermoplastic polyester caps are rigid and will not distort during repeated heating in the incubator. PTFE insert makes a tight seal preventing leakage.

What's included: rotisserie 39454-95.



Specifications

Temperature range: ambient +8°C to 80°C	Temperature variation: ±0.5°C
Temperature fluctuation: ±0.1°C at 37°C	Chamber dimensions (W x H x D): 28.6 x 20 x 23-cm
	Overall dimensions (W x H x D): 38 x 43.5 x 38-cm

Capacity	Power (VAC, Hz)	Catalogue number	Item number
20 L	230, 50	PZ-39454-05	SI30H



Accessories

Description	Catalogue number	Item number
Rotisseries		
Holds seven 40-mm dia bottles	PZ-39454-95†	SI20H/1†
Holds two 75-mm dia bottles	PZ-39454-96	SI20H/2
Hybridisation bottles		
40-mm OD x 260-mm L	PZ-39454-97	SI20H/3
40-mm OD x 170-mm L	PZ-39454-99	SI20H/5
75-mm OD x 260-mm L	PZ-39454-98	SI20H/4

†Included with hybridisation incubator.

Stuart® Orbital Shaking Incubators

Easily reach samples at the back with retractable platform

- Microprocessor controlled shaking speed ensures accuracy
- Forced air circulation provides uniform temperature inside the entire chamber
- Set and view temperature and speed on the digital display; timer can be set from 1 second to 9 days
- Built-in USB connection and dedicated software allow long-term monitoring of temperature via a PC
- Order models with IQ/OQ (Installation Qualification/Operational Qualification) documentation to help you comply with regulatory agency requirements

A. Microplate Incubator Shaker provides high-speed orbital shaking action between 250 and 1250 rpm. The tight 1.5-mm orbit allows even the smallest vessel to be mixed well. Stainless steel water tray helps maintain a humidity level up to 80% for minimal sample evaporation. Platform with non-slip mat holds up to four microplates.

B. Incubator Shakers provide orbital shaking motion between 30 to 300 rpm with a gentle start action. Smoked acrylic windows in the door and sides let you view your samples easily. The 51-L model secures flasks up to 1-L capacity, typically accommodating 12 x 250-mL, 9 x 500-mL, or 4 x 1000-mL Erlenmeyer flasks. The 115-L model secures flasks up to 2-L capacity, typically accommodating 6 x 2000-mL, 8 x 1000-mL, or 15 x 500-mL Erlenmeyer flasks.

C. Refrigerated Incubator Shaker has the incubator shakers features above plus the ability to operate at temperatures down to 15°C below ambient (minimum 5°C) when combined with a recirculating cooler (12122-04)—ideal for cell-based protein expression. Viewing windows are double glazed to prevent condensation build-up during sub-ambient use.



Find accessories
on page 44.



Capacity	Temperature range	Temperature accuracy	Orbit dia.	Platform size	Dimensions (W x H x D)		Power	Catalogue number	Item number
					Chamber	Overall			
A. Microplate incubator shaker									
Four microplates or two microtube racks	Ambient +7°C to 60°C	±0.5°C at 37°C	1.5-mm	22 x 22-cm	30.7 x 19 x 30-cm	36.1 x 43 x 40.5-cm	230, 50	PZ-79520-10	SI505
								PZ-79520-12†	IQ/OQ-SI505
B. Incubator shakers									
51 L	Ambient +5°C to 60°C	±0.5°C	16-mm	33.5 x 33.5-cm	42.2 x 29.7 x 40.8-cm	45 x 52.2 x 47.4-cm	230, 50	PZ-79520-04	SI500
								PZ-79520-06†	SI500/ IQ0Q
115 L	Ambient +5°C to 60°C	±0.5°C	16-mm	52.6 x 39-cm	62.3 x 39.5 x 46.5-cm	67.5 x 64.2 x 54.2-cm	230, 50	PZ-79520-16	SI600
								PZ-79520-18†	SI600/ IQ0Q
C. Refrigerated incubator shaker (not shown)									
115 L	15°C below ambient to 60°C	±0.5°C	16-mm	52.6 x 39-cm	62.3 x 39.5 x 46.5-cm	67.5 x 64.2 x 54.2-cm	230, 50	PZ-79520-22	SI600C
								PZ-79520-24†	SI600C/IQ0Q

†These models come with comprehensive IQ/OQ documentation to help you comply with regulatory agency requirements.

Stuart® Analogue Melting Point Apparatus

Don't waste time—measure up to three samples at once



- No complicated programming—place sample in capillary tube, set heating rate, and watch for melt
- Monitor sample through magnifying lens and read temperature on included spirit-filled thermometer
- See sample more easily with integrated LED lamp

Unit includes open-ended capillary tubes—seal one end before using. Process multiple runs faster by cooling sample with optional cooling plug.

What's included: thermometer and pack of 100 capillary tubes (open at both ends).

Specifications

Temperature range: 50 to 250°C
Heat-up time: 1 to 20°C per minute

Number of samples	Power (VAC, Hz)	Catalogue number	Item number
Up to 3 simultaneously	240, 50/60	PZ-03013-61	SMP11

Stuart® Digital Melting Point Apparatus

No more reading glass thermometers



- Get more accuracy—select, measure, and display temperature digitally
- Be more productive—test two samples simultaneously
- Easily see melt via magnifying lens with built-in illumination

Save time by setting a plateau temperature for initial warm-up, with heating rate continuing at 2°C until melt temperature is reached. Extendable back feet optimise viewing angle.

What's included: pack of 100 capillary tubes (open at one end).

Specifications

Temperature range: ambient to 300°C
Temperature accuracy: $\pm 1.0^\circ\text{C}$ at 20°C, $\pm 2.5^\circ\text{C}$ at 300°C
Heat-up time: 20°C per minute to plateau, 2°C per minute to melt

Number of samples	Power (VAC, Hz)	Catalogue number	Item number
2 simultaneously	240, 50	PZ-03011-41	SMP10

Stuart® Automatic Digital Melting Point Apparatus

Capture and display a video of the melt



- Accurately identify the melting point with advanced digital image processing
- Get up and running quickly—intuitive set-up and navigation on large colour touchscreen
- Use the rapid ramp mode to take a fast scan of the full temperature range
- Conforms to USP and GLP requirements

Advanced features with icon-driven interface makes this the ideal melting point apparatus for your pharmaceutical, raw material, and quality control applications. Video image of melt provides proof of measurement—observe in real-time or post melt. Download videos and reports to a USB flash drive or use the optional printer for direct printing of results. Stored video results are stamped with melt temperature.

What's included: pack of 100 capillary tubes (open at one end), and storage compartment with glass cutter.

Specifications

Number of samples: up to 3 simultaneously
Temperature range: ambient to 400°C
Temperature resolution: 0.1°C
Ramp rate: 0.1 to 20°C per min (0.1°C increments)
Heat-up time: 6 min from 50 to 350°C
Display: 17.8-cm (7") colour touchscreen
Memory: 8 GB (approx. 300 results with video)
Output: USB, for flash drive
Power: 120/230 VAC, 50/60 Hz

Description	Catalogue number	Item number
Automatic Digital Melting Point Apparatus	PZ-03013-02	SMP50
Automatic Digital Melting Point Apparatus with IQ/OQ documentation	PZ-03013-03	SMP50 / IQOQ

Accessories

PZ-83056-79 [SMP50/PRINTER] Optional printer

Don't Forget These Accessories

PZ-03013-62 [SMP11/1] Thermometer, spirit filled, 0 to 250°C
PZ-03013-63 [SMP1/4] Capillary tubes, open both ends. Pack of 100
PZ-03013-64 [SMP10/1] Capillary tubes, open one end. Pack of 100
PZ-03013-65 [SMP2/1] Capillary tubes, closed both ends. Pack of 100
PZ-03013-66 [SMP1/2] Brass cooling plug
PZ-99967-49 [SMP-KIT] Melting point standard set: sulphanilamide, caffeine, vanillin

Stuart® Advanced Digital Melting Point Apparatus

No more reading glass thermometers

- Select, measure, and display the temperature digitally, ensuring accuracy and repeatability
- Easily view the melt via magnifying lens with built-in illumination
- Be more productive—test multiple samples simultaneously
- Save time by setting a plateau temperature for initial warm-up

The SMP30 model features an innovative “head-up” display which projects a floating red image of the block temperature in the same viewing field as the magnified tubes. This integrated display eliminates the need for you to constantly switch your gaze between the tubes and the temperature shown on the control panel. In addition, the viewing tube can be adjusted up or down for a comfortable viewing angle and then folds flat for easy storage. Tubes are illuminated with bright white LEDs to give the clearest view of the samples during the melt.

The unit lets you test three samples simultaneously and features a maximum temperature of 400°C, a variable ramp, and three programmable methods for repeated use. Large backlit LCD shows programming information, stored results, current temperatures, and time. The design has other useful features such as slots for storing pre-prepared samples and a storage draw to hold a container of capillary tubes.

Up to seven date-and-time stamped results per tube can be stored in memory. Use the optional printer for a hard-copy record of the melt results.

What's included: pack of 100 capillary tubes (open at one end) and power cord.



Specifications

Number of samples: up to 3 simultaneously	Display: multiline alphanumeric LCD, backlit, date/time
Temperature range: ambient to 400°C	Memory: 7 results per tube
Temperature resolution: 0.1°C	Output: RS-232
Temperature accuracy: ±0.5°C at 50°C	Power: 115/230 VAC, 50/60 Hz
Ramp rate: 0.5 to 10°C per min (0.1°C increments)	
Heat-up time: 6 min from 50 to 350°C	

Description	Catalogue number	Item number
Advanced digital melting point apparatus	PZ-03011-49	SMP30

PZ-03012-99 [SMP30/1] Printer for advanced melting point apparatus



Stuart® Merit Economy Water Still

Save money while maintaining high performance

- Two independent thermostats prevent over-heating
- Features a sturdy metal stand for either wall or bench mounting
- Operate directly from tap water

This basic economical water still is perfect for general laboratory and educational distillations. Boiler and high-efficiency condenser are both constructed of borosilicate glass to ensure the highest in distillate purity. Long-life chromium-plated metal heater is protected by twin safety thermostats. Condenser features screw thread connections and plastic 3/8" ID hose barb fittings to quickly and safely change tubing without worrying about breaking the glassware.

Built-in acid addition funnel and wastewater drain stopcock located below the level of the still allow for easy descaling without dismantling the glassware.

What's included: support stand with two boiler straps, hose kit, gasket kit, and power cord with stripped ends.



Description	Capacity	Resistivity	Cooling water	Water pressure	Dimensions (W x H x D)	Power (VAC, Hz)	Watts	Catalogue number	Item number
Single distilled	4 L/hr	0.25 to 0.3 MΩ-cm	60 L/hr consumption	3 to 100 psi (20 to 700 kPa)	50 x 45 x 15-cm	220, 50/60	3 kW	PZ-99295-06	W4000/EURO
						240, 50/60	3 kW	PZ-99293-00	W4000

Stuart® Distinction All-Glass Water Still

Get high purity with all-glass construction

- Two independent thermostats prevent over-heating
- Heating element shuts down when reservoir is full

This all-glass constructed water still with silica-sheathed heaters and high-efficiency condenser ensures top distillate purity at an economical price. Special control device automatically turns off the heater to prevent overflow of the reservoir vessel even if the still is left on when unattended. Two independent safety thermostats, mounted in the condenser and boiler, prevent over-heating in the event the water supply is interrupted.

Screw thread connections make it easy to change hoses quickly and safely without the risk of breaking any glassware. Built-in acid addition funnel and drain stopcock allow for easy descaling without dismantling the glassware. This benchtop still can also be wall-mounted using the two predrilled screw holes in the stand.

What's included: reservoir level control, predrilled support stand, hose kit, and power cord with stripped ends.



Description	Capacity	Resistivity	Cooling water	Water pressure	Dimensions (W x H x D)	Power (VAC, Hz)	Watts	Catalogue number	Item number
Single distilled water still	4 L/hr	0.5 to 1.0 MΩ-cm	60 L/hr consumption	3 to 100 psi (20 to 700 kPa)	54 x 41 x 16-cm	220, 50/60	3 kW	PZ-99295-01	D4000/EURO
						240, 50/60	3 kW	PZ-99295-00	D4000

Stuart® Aquatron® Automatic Water Stills

Produces cold distilled water for immediate use

- Provides highest purity from virtually any raw water supply
- Reservoir water level sensor turns still off when reservoir is full
- Simple conversion to pretreated feed
- Safety features allow for unattended operation

The Aquatron cabinet-style water stills are available in either single or double distilled water models—choose the double distilled model for higher purity levels. The stills, constructed of borosilicate glassware coupled with silica-sheathed heaters enclosed in a protective cabinet, deliver pyrogen-free distillate of the highest purity from virtually any raw water supply. The condenser is designed to make sure droplets of distilled water remain in contact with the cooling coil for an extended period ensuring maximum energy transfer and production of cold distilled water for immediate use.

All-glass construction allows for rapid descaling using strong mineral acids. The units can be safely and easily cleaned without dismantling the glassware. A large bore stopcock with PTFE key is fitted for easy draining of chemicals after cleaning. Safety features include flow sensor, over-temperature thermostat, acrylic screen, cabinet lid, and screw threads on all water connections.

In addition, a reservoir water level sensor automatically switches off the heaters and coolant water supply when the reservoir is filled with distilled water. It automatically restarts the still when the distilled water level drops in the reservoir.

What's included: wall-mounting bracket (for single distilled models only), reservoir water level sensor, hose kit, funnel, and power cord with stripped ends.



99294-05
[A4000]



Description	Capacity	Resistivity	Cooling water	Water pressure	Dimensions (W x H x D)	Power (VAC, Hz)	Watts	Catalogue number	Item number
Single distilled	4 L/hr	0.5 to 1.0 MΩ-cm	60 L/hr consumption	3 to 100 psi (20 to 700 kPa)	55 x 41 x 24-cm	240, 50/60	3 W	PZ-99294-05	A4000
	8 L/hr		120 L/hr consumption			240, 50/60	6 W	PZ-99294-25	A8000
Double distilled	4 L/hr	0.7 to 1.0 MΩ-cm	120 L/hr consumption		55 x 41 x 41-cm	240, 50/60	6 W	PZ-99294-15	A4000D

Accessories

PZ-99967-85 [WR20] Reservoir assembly, 20-L capacity

PZ-99294-99 [WS20] Stand for reservoir assembly

Find more accessories
on page 44.

Stuart® Flocculation Jar Testers

Get repeatable conditions between samples

- Digital display clearly indicates speed of paddles
- Save time with two preset programs
- Built-in illumination and dark background for easy viewing of samples

These flocculators are designed for repeatable conditions between samples and from run to run. Speed control with electronic feedback accurately maintains the rotational speed of the stainless steel paddles. Paddles can be individually adjusted, even while in operation. Two preset programs allow routine speed and time parameters to be entered, stored in memory, and recalled or altered at any time.

Portable tester 99551-00 holds two samples and features a handle for easy transportation. Tester 99551-05 has six positions and features a digital timer. Both testers accept 1-L beakers (not included).

What's included: stainless steel stirring paddles and power cord.



Description	Speed range	Timer	Dimensions (W x H x D)	Power		Catalogue number	Item number
				VAC	Hz		
Portable 2-position	25 to 250 rpm	—	32 x 50 x 21-cm	230	50	PZ-99551-00	SW5
6-position	25 to 250 rpm	1 to 99 min	75 x 46 x 21-cm	230	50	PZ-99551-05	SW6

Stuart® Digital Colony Counter

Long-lasting antimicrobial coating inhibits bacterial growth

- Each count is confirmed with an audible beep and counter advance on digital display
- Enhance counting of translucent or hard-to-see colonies with the supplied black background filter
- Compatible with felt-tip markers for pressure-sensitive counting
- Reduce eye strain—sub-stage white LED illumination allows glare-free viewing
- Record count results to a printer or computer via USB cable
- Easily view small colonies with optional screw-in magnifiers

Versatile digital colony counter lets you use any implement to capture a count from 0 to 999. Simply place your petri dish on the electronic pressure pad and touch the dish with a felt-tip pen to mark each colony. Pressure can be adjusted to accommodate multiple users.

Get fast and accurate counting. Every time a colony is marked, the unit will register the count with a beep and the cumulative count is shown on the digital display; the audible tone can be turned on or off. Convenient built-in function calculates the average colony counts over multiple plates. Count results and statistics, including standard deviation, can be sent directly to a printer or computer using the supplied USB cable.

What's included: black/white background filter, one Wolffhuegel graticule, two 50- to 90-mm dish centering adapters, and power cord.



Counter shown with optional magnifier



Specifications

Count: 0 to 999	Digital display: 3-digit LED	Power: 90 to 240, 50/60 Hz
Dish size: up to 90-mm	Dimensions (W x H x D): 31 x 14 x 30-cm	

Description	Catalogue number	Item number
Colony counter	PZ-14212-04	SC6PLUS
Colony counter with IQ/OQ documentation	PZ-14212-06	SC6PLUS/IQOQ
Accessories		
Printer with 90–250 VAC adapter	PZ-03012-99	SMP30/1
Magnifier, 1.7x	PZ-14212-60	SC6/1
Magnifier, 3x	PZ-14212-61	SC6/1/3
Wolffhuegel discs. 10/pk	PZ-99952-84	SC6/2
Top and bottom quadrant spacers. 2/pk	PZ-99952-85	SC6/3
Clear protective discs. 5/pk	PZ-99952-86	SC6/4
Receiver dish	PZ-99952-87	SC6/5

Stuart® Rotary Evaporators

Efficient flask and vapour tube ejection system

- Digital control for reproducible results
- Versatile—can be orientated for left or right handedness
- Simple, counterbalanced lift mechanism
- PTFE/glass liquid pathway for chemical inertness
- Long-life graphite-impregnated PTFE vacuum seal

Stuart laboratory evaporator offers simple control and three glassware configurations—diagonal, vertical, or cold finger condensing—depending on your application and space requirements. All configurations are available with plastic-coated glass† for additional safety.

Choose the diagonal condenser where height space is limited, while the vertical condenser is suitable where bench space is limited or in fume hoods. The cold finger condenser is the option to select if you don't have a constant water supply for cooling the evaporated solvent.

What's included: rotary evaporator with power cord, glassware set (condenser, 1-L pear-shaped sample flask, and 1-L round bottom receiving flask), and clips.



REQUIRED System Components

- 1) Rotary evaporator
- 2) Bath
- 3) Vacuum pump
- 4) Recirculating cooler



Specifications

Speed range: 10 to 310 rpm
Speed resolution: 1 rpm
Vacuum: 3-mm Hg (0.12" Hg)
Lift distance: 18-cm (7")
Power: 100 to 240 VAC, 50/60 Hz

Type	Uncoated glassware		Plastic-coated glassware†	
	Cat. no.	Item number	Cat. no.	Item number
Diagonal condenser	PZ-16340-57	RE400	PZ-16340-60	RE400P
Vertical condenser	PZ-16340-58	RE401	PZ-16340-61	RE401P
Cold finger (Dewar)	PZ-16340-59	RE402	PZ-16340-62	RE402P

†Plastic-coated glassware is limited to 80°C (176°F); use only with water bath 16340-64 [RE400DB].

PZ-99966-96 [RE3022C] Vacuum pump; 12 mbar pressure; 230 VAC, 50/60 Hz, 150 W



16340-57
[RE400P]



16340-58
[RE401P]



16340-59
[RE402]

Find more accessories on page 44.

Stuart® Digital Baths

Be safe with “cool-touch” outer housing

- Precise digital temperature display
- Corrosion-resistant bowl is easy to clean
- Safety features include high temperature alarm and over-heating protection

These precision digital baths have been specifically designed to be used with the Stuart rotary evaporators above to give maximum efficiency in the smallest footprint. The clear LED digital display shows the actual bath temperature or the set temperature.

Choose from two bath options. The 90°C bath has a 304 stainless steel bowl and integrated carrying handle and is for water only, suitable for low boiling point applications. The higher temperature 180°C bath has an aluminium bowl with PTFE coating and can be used with both water and oil, ideal for higher boiling point liquids.

What's included: bath cover and power cords (Euro and UK).



Description	Digital water bath	Digital water / oil bath
Catalogue number	PZ-16340-64	PZ-16340-65
Item number	RE400DB	RE400OB
Temperature range	Ambient to 90°C	Ambient to 180°C
Display resolution	1°C	1°C
Temperature control	±1°C	±1.5°C (water) / ±3°C (oil)
Capacity	4.3 litres	5 litres
Heater power	1400 W	1400 W
Power supply	230 VAC, 50 Hz	230 VAC, 50/60 Hz



16340-64
[RE400DB]



16340-65
[RE400OB]

Stuart® Recirculating Coolers

Powerful cooling in a compact footprint

- Optimise accuracy with easy temperature offset calibration
- Worry-free operation—visual safety alarm indicates overload
- Easily read current temperature readout on LED display

These reliable, easy-to-use recirculating coolers offer accurate and powerful cooling for an external device. Coolers can achieve temperatures down to -20°C , making them ideal for controlling equipment in temperature-sensitive applications. Units feature LED digital display, alarm indicator, temperature set point control, and calibration. The 9-mm ID hose barb inlet/outlet ports allow connection to a variety of external equipment.

Note: Do not use water in cooler for low temperatures. Requires use of an antifreeze-type liquid such as ethylene glycol solution.

What's included: bath cover and power cord with UK 3-pin and Schuko 2-plug plugs.



Specifications

Temperature range: -20 to 30°C Control accuracy: $\pm 2^{\circ}\text{C}$



Reservoir capacity	Cooling capacity at 10°C	Flow rate (L/min)	External dimensions (W x H x D)	Power (VAC, Hz)	Catalogue number	Item number
3.2 L	450 W	9	20.5 x 54.5 x 44.5-cm	230, 50	PZ-12152-77	SRC5
14 L	1200 W	18	35.4 x 85.1 x 38.4-cm	230, 50	PZ-12152-78	SRC14

Stuart® Variable-Speed Homogenisers

Control speed to optimise shear rate

- Quiet <72 dB noise level will not disrupt your laboratory
- Stainless steel (SS) rotor probes are well-suited for larger and tougher samples
- Disposable polycarbonate (PC) probes reduce cross-contamination—autoclave and reuse up to seven times

A. Handheld Homogeniser features an ergonomic design and easily manageable weight for handheld operation, but also works with a support stand (order separately) for longer processing times. The 125-watt motor provides plenty of torque to process hard, frozen, and fibrous tissues. Includes two plastic disposable probes and adapter.

B. Benchtop Homogeniser offers digital control for better repeatability and accuracy. Powerful 850-watt motor processes virtually any sample from emulsions to protein extraction. Soft start ensures smooth operation without splashing. Set the built-in timer from seconds to minutes—also features a 30-second countdown for remote applications in fume hoods or biosafety cabinets. Includes stand and clamp.



REQUIRED System Components

- 1) Homogeniser
- 2) Probe(s)

1A
04720-01
[SHM1/UK]

1B
04720-00
[SHM3]



1. Homogenisers



Description	A. Handheld homogeniser		B. Benchtop homogeniser
Catalogue number	PZ-04720-01	PZ-04720-02	PZ-04720-00
Item number	SHM1/UK	SHM1/EURO	SHM3
Speed range	5000 to 35,000 rpm		5000 to 25,000 rpm
Batch volume range	0.03 to 100-mL		0.2 to 2000-mL
Wattage	125 W		850 W
Power	220 to 240 VAC, 50 Hz		220 to 240 VAC, 50 Hz
Plug type	UK	Euro	UK and Euro

PZ-04720-09 [SHM/STAND] Homogeniser stand, 22 x 30 x 61-cm

Stuart® Overhead Stirrers

Ideal for daily use in the lab

- Efficient mixing up to 2000 rpm
- Keyless chuck can quickly be tightened
- Overload protection maximises safety

The general-purpose SS10 stirrer runs quietly while mixing aqueous and low viscosity liquids such as light oils, up to 15 litres. The powerful SS20 stirrer handles liquids of medium viscosity including oils and micro-biological media, up to 25 litres. Features a hollow-shaft design to easily adjust the paddle height. The keyless chuck accepts rod diameter from 1.5 to 13-mm.



Order rods, paddles, and stands separately on page 44.



Description	Overhead stirrers	
Catalogue number	PZ-99968-14	PZ-99968-27
Item number	SS10	SS20
Speed range	100 to 2000 rpm	100 to 2000 rpm
Maximum viscosity	10,000 mPa·s	20,000 mPa·s
Torque	15 N·cm	27 N·cm
Dimensions (W x H x D)	8.5 x 23.0 x 17.5-cm	8.5 x 23.0 x 19.5-cm
Power (VAC, Hz, W)	230, 50/60, 50	230, 50/60, 80

Jenway® 74- and 76-Series Spectrophotometers

Day In, Day Out Spectrophotometry Just Got Easier!

Intuitive Touchscreen Interface

Large, 7" HD colour display makes navigation easy. The touchscreen is fast and responsive, even with gloves.

Versatile Sample Chamber

Large, domed lid provides easy access, even for tall multi-cell chambers or tubes.

Memory & USB Ports

3.6 GB onboard storage lets you store methods and results, with easy-access USB ports to transfer data or connect a printer.

NEW! Split-Beam Model

Split beam optics offset any signal fluctuations for increased stability over prolonged use, making it ideal for time course and kinetic measurements.

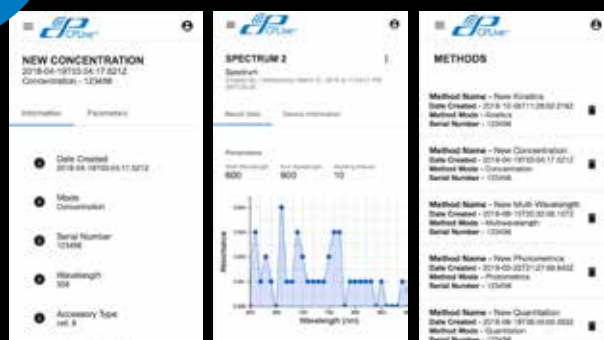


CPLive™ Connectivity

Keep your data secure and easily accessible with CPLive connectivity—results are automatically uploaded and stored in the Cloud.

Transfer and store all your spectrophotometry protocols and results to one place, and effortlessly share with colleagues. Simultaneously manage multiple devices through your free CPLive account, via tablet or computer. Or, use the CPLive app on your smartphone.

Learn more at ColeParmer.co.uk/CPLive



Model	7410 Visible, single beam	7415 UV/visible, single beam		7415 Nano UV/visible, single beam		7615 UV/visible, split beam	
Catalogue number	PZ-83056-21	PZ-83056-22	PZ-83056-32	PZ-83056-23	PZ-83056-33	PZ-83056-26	PZ-83056-36
Item number	741001	741501	741501B	747501	747501B	761501	761501B
Min sample size	Depends on cuvette used	Depends on cuvette used		0.5-µL (at 0.2-mm), 1.0-µL (at 0.5-mm)		Depends on cuvette used	
Bandwidth	5-nm	5-nm				1.5-nm	
Wavelength range	320- to 1000-nm	198- to 1000-nm				198- to 1000-nm	
Wavelength accuracy	±2-nm	±2-nm				±2-nm	
Wavelength reproducibility	±0.5-nm	±0.5-nm				±0.5-nm	
Photometric range	0 to 199.9%, −0.300 to 2.500 A						
Photometric accuracy	±1%T, ±0.01 Abs at 1.000 Absorbance						
Source lamp	Tungsten halogen	Xenon				Xenon	
Housing colour	White	White	Black	White	Black	White	Black

Specifications

Quantitation range: -300 to 9999

Concentration: with factor or 1 standard

Multi-wavelength: up to 4 wavelengths with equation

Kinetics measurement time: 2 to 9999 seconds

Spectrum scan interval: selectable 1-, 2-, 5-, or 10-nm

Output: USB Type A x 2, USB Type B x 1, Ethernet (RJ45) connection

Internal memory: 3.6 GB for results and methods

Power: 100 to 240 VAC, 50/60 Hz

Jenway® 72 Series and Genova Bio Scanning Spectrophotometers

Scan entire wavelength range in as little as six seconds

- Colour touchscreen and user-friendly interface make set-up and navigation easy
- Multiple measurement modes for broad application compatibility
- Save quantitation curves to USB memory stick—no need to recreate for each measurement
- Two USB ports for data storage and printer connectivity
- Flexible and versatile—compatible with a wide range of interchangeable cell holders

The multi-element detector on the scanning spectrophotometers measures the entire wavelength range at once, reducing wait times. Plus, each dataset contains readings from the complete spectrum, making the data readily available for future analysis. The detector's orientation shields the array from stray light, allowing you to perform measurements with the lid open, quickly exchange samples, and decreases user errors in results.

Large 10.1-cm display allows full spectrum scans, quantitation curves and kinetics runs to be viewed easily. The touchscreen capability lets you zoom in and out and select spectral analysis points all by simply tapping the screen. Measurement modes include photometrics, concentration, optical density (OD at 600-nm), quantitation, spectrum scanning, and kinetics.

Compact design with small footprint takes up less space on your benchtop. The large sample chamber permits easy access for loading samples. The USB port on the rear connects with a printer (order separately), while the USB on the front accepts flash drives for data storage, quantitation curve uploads, and firmware updates.

Genova Bio, a dedicated life science UV/Vis spectrophotometer, is pre-programmed with methods for measuring nucleic acid concentrations, protein assays, and optical density of bacterial cell cultures such as *E. coli* and yeast cells. Compatible with ultra-micro, semi-micro, micro, and macro cuvettes.

What's included: standard 10 x 10-mm cuvette holder for models 83056-01 [720 001] and -02 [720 501], micro-cuvette holder for model 83056-04 [720 601], USB memory stick, and power adapter with three plugs (EU, UK, and US).

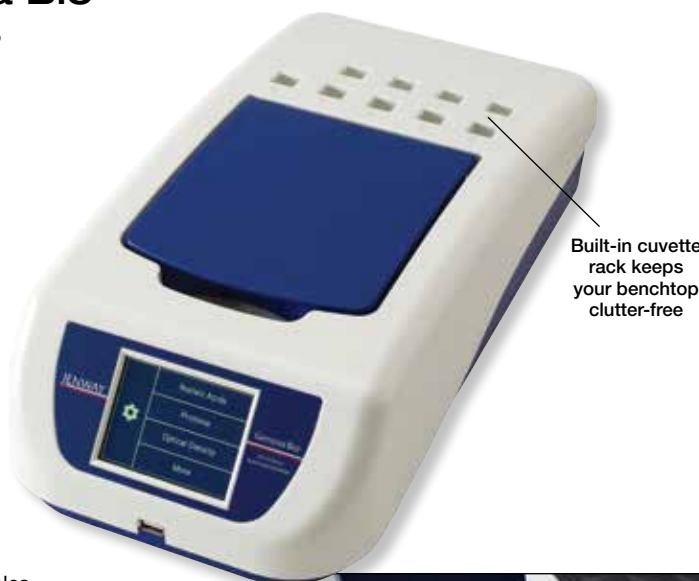


Model		7200 (Vis)	7205 (UV/Vis)	Genova Bio (UV/Vis)
Catalogue number		PZ-83056-01	PZ-83056-02	PZ-83056-04
Item number		720 001	720 501	720 601
Minimum sample size		0.7-µL†	0.7-µL†	0.7-µL†
Maximum sample size		4-mL	4-mL	4-mL‡
Bandwidth (spectral)		7-nm	5-nm	3-nm
Pathlength		10-mm	10-mm	10-mm
Wavelength	Range	335- to 800-nm	198- to 800-nm	
	Accuracy	±2-nm	±2-nm	
	Repeatability	±2-nm	±2-nm	
	Transmittance	0 to 199.9%		
Photometrics	Absorbance	-0.300 to 2.500 A		
	Accuracy	±0.01 A at 1.0 A and 546-nm		
	Stability (A)	±0.005 A/h at 0.04 A and 546-nm		
	Noise	±0.002 A at 0.04 A and ±0.02 A at 2.0 A and 546-nm		
	Stray light at 340-nm, %T	<1% T according to ANSI/ASTM E387-72		
	Beam height	15-mm		
Source lamp		Tungsten halogen lamp	Xenon lamp	
Scan time		6 seconds		
Memory		Dependent on attached mass storage device		
Outputs		(2) USB		
Power (VAC, Hz)		100 to 240, 50 to 60		

†The 0.7-µL sample volume requires TrayCell accessory 83070-29 sold separately.

‡Model 83056-04 comes fitted with the micro-cuvette holder; would require cuvette holder 83070-41 for a 4-mL sample size.

Find more accessories on page 44.



Built-in cuvette rack keeps your benchtop clutter-free



Large chamber allows easy access for loading and unloading samples, plus it accommodates the optional heated cuvette and adjustable pathlength holders.

Accessories

PZ-83070-41 [630 204] Single cuvette holder, 10 x 10-mm

PZ-83056-06 [720 304] Micro-cuvette holder for cuvettes with 8.5-mm beam height

PZ-83056-82 [630 304] Micro-cuvette holder with reduced aperture, for cuvettes with 15-mm beam height

PZ-83056-77 [725 201] Heated cuvette holder for 10 x 10-mm cuvettes, 32 to 42°C

PZ-83056-80 [630005] Adjustable pathlength cuvette holder, 10- to 100-mm

PZ-83070-43 [83070-43] Test tube holder; accepts 10-mm square cuvettes and 16- and 24-mm diameter test tubes

PZ-83070-29 [35262] TrayCell accessory for ultra-micro sample volumes, supplied with caps for 1 and 0.2-mm

PZ-83056-79 [SMP50/PRINTER] External printer with battery and power adapter with three plugs (EU, US, and UK)

PZ-99959-81 [37702] Print paper. One roll

PZ-99610-33 [60084] Plastic cuvettes, visible only; 10-mm path, 3-mL. Pack of 100

PZ-06343-73 [759150] Plastic cuvettes, UV/Vis; 10-mm path, 3-mL. Pack of 100

PZ-83070-38 [35143] Plastic micro-cuvettes, UV/Vis; 70-µL to 1.5-mL. Pack of 100

Jenway® Genova Plus and Genova Nano UV/Vis Spectrophotometers

Versatile—get life science specific analysis in addition to standard functions

- Meet the requirements of any busy laboratory—ideal for DNA, RNA, and protein measurements, but function as standard spectrophotometers
- Detects DNA concentrations as low as 2-ng/μL
- Save your methods and results to USB memory stick
- Icon-driven software with large graphical display and intuitive navigation

Genova Plus Spectrophotometer (model 83070-00 [736 501]) offers enhanced optics dedicated to life science analysis, allowing the measurement of DNA concentrations and purity ratios using wavelengths recorded at 260-, 280- and 230-nm, with an optional correction at 320-nm. Or use as a standard spectrophotometer with measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, quantitation, and kinetics.

This life science spectrophotometer is pre-programmed with methods for protein analysis in addition to nucleic acid concentrations. The OD measurement mode lets you measure optical density at 600-nm for cell harvesting. The purity scan across the entire wavelength range from 198- to 1000-nm displays any distorted peaks, easily identifying impurities.

Optional accessories let you choose the best way to measure your samples. The TrayCell accessory (83070-29 [737 501]) enables you to measure sample volumes as low as 0.7-μL and is ideal for RNA, DNA, and protein measurements requiring 1:10 or 1:50 dilutions.

Genova Nano Spectrophotometer (model 83070-02 [737 501]) offers the same features as the Genova Plus but adds a pre-installed pedestal platform which allows you to measure sample volumes as low as 0.5-μL—conserving your precious samples. Measuring small sample volumes eliminates the need to perform dilutions or use cuvettes, saving you time and money.

The versatile Genova Nano measures sample volumes with a high degree of accuracy and reproducibility in less than 6.5 seconds. Its stainless steel read head with an embedded quartz lens uses the natural surface tension of the droplet to form the bond between the read head surfaces for optimal results. When your reading is complete, simply wipe the sample with a microfiber cloth to remove all trace of the sample. The ease of cleaning allows faster changeover between samples, increasing sample throughput.

What's included: Model 83070-00 [736 501] includes a 10 x 10-mm cuvette holder, micro-cuvette holder, 4 GB USB memory stick, 100 disposable micro-cuvettes, and universal power supply. Model 83070-02 [737 501] includes a micro-volume accessory, 10 x 10-mm cuvette holder, micro- cuvette holder, 4 GB USB memory stick, and universal power supply.

Specifications

Measurement time: <6.5 seconds

Sample pedestal material of construction (model 83070-02): stainless steel and quartz

Model	Genova Plus	Genova Nano
Catalogue number	PZ-83070-00	PZ-83070-02
Item number	736 501	737 501
Sample mode(s)	Cuvette	Cuvette and pedestal
Minimum sample size	0.7-μL†	0.5-μL at 2.0-mm, 1.0-μL at 0.5-mm
Maximum sample size	5-mL	5.0-μL
Bandwidth	5-nm (spectral)	
Path length	10-mm	0.2 or 0.5-mm (auto-ranging)
Wavelength	Transmittance	0 to 199.9%
	Range	198- to 1000-nm
	Resolution	±2-nm
	Accuracy	1-nm
Source lamp	Press-to-read Xenon lamp	
Detector	Photo-diode detector	
Detection limit	—	2.0 ng/μL (dsDNA) at 0.2-mm pathlength
Measurement	Range	–0.300 to 2.500 A (10-mm pathlength equivalent = –15.0 to 125.0 A)
	Precision	<0.005 A between 0 and 1 A (at 260-nm and 0.5-mm)
	Accuracy	±1% T, ±0.01 A at 1.000 A ±2% at 1 A
Maximum concentration	—	6000-ng/μL (dsDNA)
DNA measurement modes	dsDNA, ssDNA, RNA, oligonucleotides, 260/280, 260/230, variable ratio	
Protein measurement modes	BCA, Bradford, Lowry, Biuret, Direct UV	
Memory	Up to 312 methods (including pre-programmed methods)	
Input/Output	USB, analogue, RS-232, and optional integral printer	
Power (VAC, Hz)	90 to 260, 50 to 60	

†The 0.7-μL sample volume requires TrayCell accessory 83070-29 sold separately at right.

Optional printer
83070-39
[660 101]



Spectrophotometer
83070-02
[737 501]



Accessories

PZ-83070-29 [35262] TrayCell accessory for Genova Plus (83070-00), for microvolume samples from 0.7-μL to 5-μL

PZ-83070-31 [735 401] Automatic eight-cell cuvette holder for multiple sample measurements. Accepts 10 x 10-mm pathlength cuvettes

PZ-83070-33 [735 201] Sipper pump, requires flow-through cuvette

PZ-83070-35 [735 301] Peltier temperature controller, 20 to 50°C

PZ-83070-37 [735 701] Combined sipper pump/ Peltier temperature control

PZ-83070-39 [660 101] Printer for instant results. Fits into top of spectrophotometer to save space

PZ-83070-41 [630 204] Replacement cuvette holder, 10 x 10-mm pathlength

PZ-83070-43 [637071] Test tube and cuvette holder, 13/16/24-mm diameter x 100-mm height; compatible with 10-mm square cuvettes

PZ-83070-45 [632 511] Test tube and cuvette holder, 13-mm dia; compatible with 10-mm square cuvettes

PZ-83056-80 [630005] Cuvette holder, 10 x 100-mm pathlength

PZ-83056-82 [630 304] Replacement micro-cuvette holder, for small sample volumes down to 50-μL

PZ-83070-51 [736 201] Water-heated cuvette holder, 10 x 10-mm pathlength (requires heated circulating bath for operating temperatures from 5 to 50°C)

Jenway® 73 Series Visible and UV/Visible Single-Beam Spectrophotometers

Icon-driven software and easy-to-use navigation system provide intuitive usability

- Auto-logging capabilities enable repeat measurements of the same sample with a selected time interval
- Minimal footprint with large graphical display

These Jenway 73 series single-beam spectrophotometers have improved optics resulting in a narrow spectral bandwidth of 5-nm and absorbance range of –0.3 to 2.5 A. All models feature measurement modes for absorbance, % transmittance, and concentration. Visible spectrum models have a tungsten halogen lamp with a “lamp save” feature which shuts off the lamp after periods of inactivity. UV/visible models feature a “press to read” xenon lamp to provide accurate readings and extend lamp life. Easily control the spectrophotometers via the RS-232 port and included software.

Advanced models feature additional measurement modes such as quantitation, kinetics, and spectrum scanning. Store up to 240 methods which can be copied from one unit to another using the USB port. The enhanced security feature enables the instrument and methods to be locked, preventing unauthorised changes. The home page can be customised while select modes can be deactivated, making these units ideal for use in teaching laboratories and routine quality control applications.

What's included: one 10 x 10-mm cuvette holder, 100 disposable cuvettes, PC software on CD-ROM, interface cable, and power supply. Advanced models also include a USB memory stick.



83058-15
[730 001]



83058-18
[731 501]



Model	7300 (Vis)	7305 (UV/Vis)	Advanced 7310 (Vis)	Advanced 7315 (UV/Vis)
Catalogue number	PZ-83058-15	PZ-83058-16	PZ-83058-17	PZ-83058-18
Item number	730 001	730 501	731001	731 501
Bandwidth	5-nm		5-nm	
Wavelength range	320- to 1000-nm	198- to 1000-nm	320- to 1000-nm	198- to 1000-nm
Wavelength accuracy	±2-nm			
Wavelength resolution	1-nm			
Wavelength reproducibility	±0.5-nm			
Photometric range	0 to 199.9% T, –0.300 to 2.5 A, –300 to 9999 C			
Photometric accuracy	±1% T, ± 0.01 A (at 1.000 A)			
Resolution	0.1% T, 0.001 A, selectable 1/0.1/0.01/0.001 C			
Quantitation range	—		–300 to 999	
Quantitation resolution	—		Selectable 1, 0.1, 0.01, 0.001	
Kinetics measurement time	—		2 to 9999 seconds	
Kinetics resolution	—		Selectable 1, 0.1, 0.01, 0.001	
Spectrum range	—		320- to 1000-nm	198- to 1000-nm
Spectrum scan interval	—		Selectable 1-, 2-, or 5-nm	
Source lamp	Tungsten halogen	Xenon	Tungsten halogen	Xenon
Output	RS-232, analog		USB, RS-232, analog	
Power (VAC, Hz)			115/230, 50/60	

Accessories

PZ-83070-31 [735 401] Automatic eight-cell cuvette holder for multiple sample measurements. Accepts 10 x 10-mm pathlength cuvettes

PZ-83070-33 [735 201] Sipper pump, requires flow-through cuvette

PZ-83070-35 [735 301] Peltier temperature controller, 20 to 50°C

PZ-83070-37 [735 701] Combined sipper pump/ Peltier temperature control

PZ-83070-39 [660 101] Integral printer for instant results. Fits into top of spectrophotometer to save space

PZ-83070-41 [630 204] Replacement cuvette holder, 10 x 10-mm pathlength

PZ-83056-80 [630005] Cuvette holder, 10 x 10-mm pathlength

PZ-83056-82 [630 304] Micro-cuvette holder, for small sample volumes down to 50-µL

PZ-83058-95 [735 601] Boiling tube holder

PZ-83058-96 [736201] Water-heated cuvette holder, holds one standard 10 x 10-mm cuvette

PZ-83058-94 [735001] Dust cover

Find more accessories on page 44.

Jenway® 6850 Double-Beam Scanning Spectrophotometer

Ensure regulatory compliance

- Conforms to European Pharmacopeia requirements
- Highly stable optics provide superior accuracy
- Included software comes pre-loaded with methods for DNA analysis
- Programmed measurement modes include photometrics, concentration, multi-wavelength, spectrum scanning, kinetics, quantitation, and DNA and protein analysis

The stable optics and two detectors measure your samples and reference simultaneously. Three scan speeds are available with wavelength scan intervals of 0.1-, 0.2-, 1-, 2- or 5-nm. Sample chamber features a 10 x 10-mm cuvette holder but also accommodates an 8-position cuvette changer (order 83070-61 [685 401] separately). Use the built-in software to control the spectrophotometer and to assist you with post-measurement analysis. Under the multi-wavelength measurement mode, up to 20 wavelengths can be measured simultaneously and quantitation curves can be created by measuring up to 200 standards.

What's included: one 10 x 10-mm cuvette holder, four 10-mm glass cuvettes, two 10-mm quartz cuvettes, dust cover, and PC software with USB security dongle.



Model	6850	6850 with IQ/OQ documentation
Catalogue number	PZ-83070-06	PZ-83070-08
Item number	6850/230V	6850/230V/IQOQ
Beam type	Double	
Bandwidth	Variable 0.5-, 1-, 2-, 4-, 5-nm	
Wavelength	Range	190- to 1100-nm
	Accuracy	±0.3-nm (at 0.5- and 1-nm bandwidth); ±0.5-nm (at 2-, 4- and 5-nm bandwidth)
	Resolution	0.1-nm
	Reproducibility	±0.2-nm
Photometric	Range	-0.3 to 3.0 A; 0 to 200% T
	Accuracy	± 0.002 A (0 to 0.5 A); ±0.3% T (0 to 100% T)
	Reproducibility	±0.001 Abs (0 to 0.5 Abs); ±0.002 Abs (0.5 to 1.0 Abs); 0.15% T (0 to 100% T)
Resolution	0.1% T, 0.001 A	
Output	USB and Parallel	
Power (VAC, Hz)	220, 50	

Accessories

- PZ-83070-55 [685 131] Water heated cell holder**, 10 x 10-mm, for temperature-critical samples
- PZ-83070-57 [685 005] Adjustable pathlength cuvette holder**, accepts 10, 20, 30, 40, 50 and 100-mm pathlength cuvettes
- PZ-83070-59 [685 304] Micro cuvette holder**, for biochemical applications
- PZ-83070-61 [685 401] Automatic 8-position cell changer**, increases throughput rates
- PZ-83070-53 [685 204] Replacement cuvette holder**, 10 x 10-mm

Jenway® 63 Series Visible and UV/Visible Single-Beam Spectrophotometers

Simple, intuitive operation—ideal for routine analysis

- Absorbance, %T and concentration modes
- Multi-parameter display with wavelength and photometric readouts
- Fast warm-up, low drift, and high reliability
- Model 6320D features a domed lid to accommodate tubes up to 105-mm tall

The Jenway 63 series single-beam spectrophotometers are high quality, entry level units for spectrophotometric applications in schools and colleges, as well as in QC and testing procedures for a wide variety of services and industries. Small and light-weight, these units are easy to store or move to different locations within the laboratory. Models 6300 and 6320D cover the visible region of the spectrum while model 6305 uses a pulsed xenon lamp to extend the wavelength range into the UV region of the spectrum.

Models 6300 and 6305 include: one 10 x 10 mm cuvette holder, 100 disposable cuvettes, PC software on CD-ROM, interface cable, and power supply.

Model 6320D includes: a dual cell holder so that either test tubes or standard 10 x 10 mm cuvettes can be used to measure samples and a power supply.



Find more accessories on page 44.

Model	6300 (Vis)	6320D (Vis)	6305 (UV/Vis)
Catalogue number	PZ-83054-05	PZ-83054-09	PZ-99968-68
Item number	630 501	632501	635 001
Bandwidth	8-nm		8-nm, 6-nm over UV range
Wavelength range	320- to 1000-nm		198- to 1000-nm
Wavelength accuracy	±2-nm		
Wavelength resolution	1-nm		
Photometric range	0 to 199.9% T, -0.300 to 1.999 A		
Photometric accuracy	±1% T		
Photometric resolution	0.1% T, 0.001 A		
Concentration range	-300 to 1999		
Concentration resolution	0.1 to 1		
Concentration units	ppm, mg/L, g/L, M, %, blank		
Source lamp	Tungsten halogen		Xenon
Output	RS-232, analogue		
Power (VAC, Hz)	230, 50		

Accessories

- PZ-83070-41 [630 204] Replacement cuvette holder**, 10 x 10-mm pathlength
- PZ-83056-80 [630005] Cuvette holder**, 10 x 100-mm pathlength
- PZ-83056-82 [630 304] Micro-cuvette holder**, for small sample volumes down to 50-µL
- PZ-83070-45 [632 511] Dual cell holder** for 10-mm cuvettes and 12.7-mm dia tubes (for use with 6320D only)
- PZ-83070-43 [637071] Test tube holder**; accepts 10-mm square cuvettes and 16/24-mm dia test tubes
- PZ-83058-99 [648 001] Water heated single cuvette holder**

Jenway® Research Flame Photometer

Designed for clinical applications

- Automatic flame failure detection for user safety
- Built-in lineariser circuitry
- Includes Na⁺, K⁺ and Li⁺ filters

The low temperature, single channel flame photometer is designed for use in clinical applications for routine determinations of sodium, potassium and lithium. The unit features a flame failure safety system and a built-in lineariser circuitry which allows readings of both sodium and potassium to be displayed directly in mmol/L.

Specifications

Range: 120 to 160 mmol/L Na; 0 to 10.0 mmol/L K

Detection limits: 0.2 ppm Na and K; 0.25 ppm Li

Reproducibility: <1% coefficient of variation for 20 consecutive samples using 10 ppm Na set to read 50

Linearity: <2% error when 3 ppm Na/K and 5 ppm Li are set to read 100

Stability: <2% drift over 5 minutes when continuously aspirating 10 ppm sample set to 50.0

Specificity: interference from Na/K and Li equal in concentration to test elements will be <0.5%

Fuel supply: butane, propane, natural gas and liquefied petroleum gas

Air supply: moisture and oil free, 6 L/min at 14 psi

Dimensions (W x H x D): 42 x 36 x 30 cm



REQUIRED System Components

- 1) Pump
- 2) Regulator
- 3) Calibration standards
- 4) Cleaning solution



Description	Catalogue number	Item number
Research flame photometer; 230 VAC, 50/60 Hz	PZ-12655-00	500 801
Air compressor pump; 230 VAC, 50/60 Hz	PZ-12655-98	535001
Butane regulator assembly	PZ-12655-95	500178
Propane regulator assembly	PZ-12655-96	500179
Natural gas regulator assembly	PZ-12655-97	500180
Calibration solution, 1.00 mmol/L Li; 500 mL	PZ-99959-36	025 008
Calibration solution, 100 mmol/L Na; 100 mmol/L K; 500 mL	PZ-12655-87	025 004
Calibration solution, 140 mmol/L Na, 5 mmol/L K; 500 mL	PZ-99959-34	025 006
Calibration solution, 120 mmol/L Na, 2 mmol/L K; 500 mL	PZ-12655-88	025 007
Calibration solution, 160 mmol/L Na, 8 mmol/L K; 500 mL	PZ-12655-89	025 005
Calibration solution, 160 mmol/L Na, 80 mmol/L K; 500 mL	PZ-12655-90	025 027
Calibration solution, 1000 ppm Na; 500 mL	PZ-99959-39	025 021
Calibration solution, 1000 ppm K; 500 mL	PZ-99959-40	025 023
Calibration solution, 1000 ppm Li; 500 mL	PZ-99959-41	025 024
Cleaning solution; 1 L	PZ-99959-56	025 171

Accessories

PZ-12655-93 [500176] Small water separator

PZ-12655-94 [500177] Large water separator for high humidity area

PZ-12655-92 [500134] Dust cover

Jenway® Portable pH Meters

Conveniently and accurately get pH and temperature readings

- Automatic buffer recognition and 2-point calibration
- Shuts off after 10 minutes to preserve battery life
- Model 570 also provides mV measurements

Find accessories on page 44.

Quickly ascertain the data you need to know...on the go. These smartly-designed units are easy to read and offer manual or Automatic Temperature Compensation (ATC).

What's Included: epoxy-bodied electrode, ATC probe, buffers, carrying case and three AAA batteries.



Model	550	570
Catalogue number	PZ-35459-15	PZ-35459-16
Item number	550271	570271
pH range	0 to 14	-2 to 16
pH resolution	0.01	0.01
pH accuracy	±0.05	±0.02
mV range	—	-1000 to 1000 mV
mV resolution	—	1 mV
mV accuracy	—	± 1 mV
Temperature range	0 to 100°C (32 to 212°F)	-39.9 to 149.9°C (-39.9 to 301.8°F)
Temperature resolution	0.1°C	0.1°C
Temperature accuracy	±0.5°C	±0.4° (-10 to 70°C)
Temperature compensation	Automatic or manual from 0 to 60°C	Automatic or manual from 0 to 100°C
Calibration points	Up to 2	Up to 2
Buffer recognition	Automatic	Automatic
Data logging	None	None
Power	Three AAA batteries; 5000 hrs	Three AAA batteries; 2500 hrs
Waterproof	No	Yes, IP67



Jenway® Benchtop pH and pH/Conductivity Meters

Ideal for quality control and GLP applications

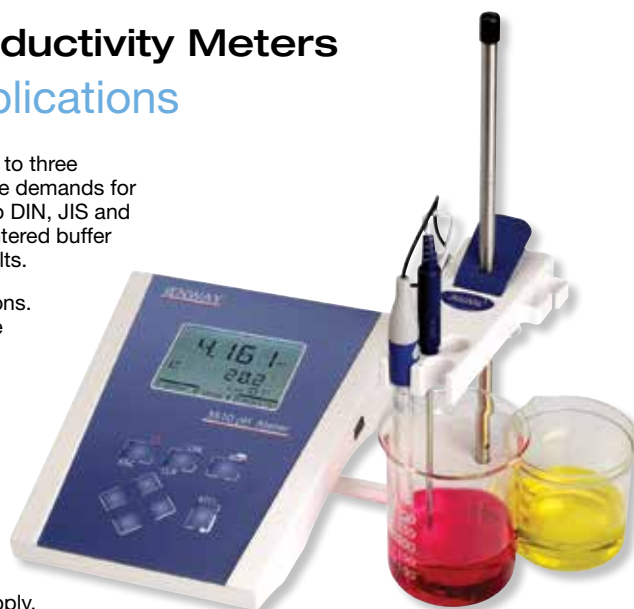
3510 pH Meter. With up to three decimal place resolution and a choice of up to three calibration points, model 3510 provides you with added flexibility where future demands for enhanced performance may be required. A choice of pH calibration buffers to DIN, JIS and NIST standards can be used for automatic calibration, as well as manually entered buffer values. The pH measurement meter also has the ability to store up to 32 results.

3520 Advanced pH Meter is ideal for your quality control and GLP applications. Built-in data logger can store, print or output readings based on a wide range of trigger options, making this model suitable for monitoring and controlling pH levels. Store up to 500 results with RS-232 connection to printer or PC or IrDA communication.

3540 Combined pH/Conductivity Meter provides simultaneous display of pH and conductivity. Two independent channels prevent interference between probes. Additional modes for resistivity, salinity, TDS and mV. GLP functions include user and sample batch identity, calibration reminder, security set-up and date/time stamping of results.

pH meter kits include: glass combination pH electrode, ATC probe, electrode stand and holder, BNC shorting plug, pH buffers (4, 7, and 10), and power supply.

pH/conductivity meter kit includes: glass combination pH electrode, glass conductivity probe (K=1), ATC probe, electrode stand and holder, BNC shorting plug, pH buffers (4, 7, and 10), and power supply.



Find accessories
on page 44.



Model	3510	3520	3540
Catalogue number	PZ-35459-02	PZ-35459-08	PZ-99959-96
Item number	351001	352001	354001
pH range	-2.000 to 19.999	-2.000 to 20.000	-2.000 to 20.000
pH resolution	0.001 / 0.01 / 0.1	0.001 / 0.01 / 0.1	0.001 / 0.01 / 0.1
pH accuracy	±0.003	±0.003	±0.003
Calibration	1, 2 or 3 points; user selectable	1, 2 or 3 points; user selectable	1, 2 or 3 points; user selectable
mV range	±1999.9 mV	±1999.9 mV	±1999.9 mV
mV resolution	0.1 / 1 mV	0.1 / 1 mV	0.1 mV
mV accuracy	±0.2 mV	±0.2 mV	±0.2 mV
Conductivity range	—	—	Autoranging from 0.01 µS to 1.999 S
Conductivity resolution	—	—	0.01 µS to 1 mS
Conductivity accuracy	—	—	±0.5 ± 2 digits
Temperature range	-10 to 105°C	-10 to 105°C	-10 to 105°C
Temperature resolution	0.1°C	0.1°C	0.1°C
Temperature accuracy	±0.5°C	±0.5°C	±0.5°C
ATC range	0 to 100°C	0 to 100°C	0 to 100°C
GLP	—	Yes	Yes
Memory	32 readings	500 readings	500 readings (250 for each mode)
Outputs	Analog and RS-232	Analog, RS-232 and IrDA	Analog, RS-232 and IrDA
Power	230 VAC, 50/60 Hz	230 VAC, 50/60 Hz	230 VAC, 50/60 Hz

Jenway® Benchtop Dissolved Oxygen Meter

Store up to 250 DO data points and 20 BOD data sets

- LCD provides clear, direct readout of percentage of dissolved oxygen, mg/L, or BOD of samples
- Easily export data to computer or printer via RS-232 or IrDA connections

The research-grade benchtop dissolved oxygen meter supports a wide range of applications from fish breeding and farming to aquaculture pollution control and environmental analysis. Store up to 250 dissolved oxygen data points taken either at timed intervals, manually or on alarm triggers. The meter offers complete support for the real-time 5-day test protocol and can record up to 20 BOD data sets with 10 samples each.

What's included: dissolved oxygen probe with ATC, electrode holder, spare membranes, KCl fill solution, zero calibration salts, and power cord.



Specifications

Mode	mg/L (ppm)	% saturation	Temperature
Range	0 to 19.99	0 to 199, 0 to 25	-10 to 60°C
Resolution	0.01	1, 0.1	0.1°C
Accuracy	±2% with 10°C of calibration temperature		±0.5°C

Temperature compensation: automatic or manual from 0 to 60°C

Salinity compensation: manual

Barometric pressure compensation: manual

Probe type: polarographic

Data logging: 250 data points and 20 BOD data sets (10 samples per set)

Outputs: analogue, RS-232, and IrDA

Display: backlit 1/2 VGA monochrome LCD

Model	Power (VAC)	Plug type	Catalogue number	Item number
9500	230	UK	PZ-35417-00	950 001
		EU	PZ-35417-04	950 201

PZ-99964-71 [522 0238] Replacement dissolved oxygen probe

Electrothermal® Digi-Mantle Stirring/Heating Mantle Systems

Greater flexibility with interchangeable cartridges

- Cool-to-the-touch design offers safe handling
- Excellent stirring stability and speeds from 100 to 2000 rpm
- Uniform heat distribution

Modular design allows you to interchange different sizes of heating mantle cartridges with the same base controller, making these systems a very cost-effective option. The outside of the heater cartridge remains cool (even at 450°C) due to continuous airflow through ventilation slots beneath and around the rim of the case.

Base controller features a touch control panel to set temperature and stirring speed. Connect the external temperature probe to see the actual temperature of the sample (up to 220°C). Without external temperature probe, the heat setting is displayed as a percentage of the total power. Built-in magnetic stirrer provides accurate stirring speed, even at a low stirring speed.

Complete systems include: controller and heating mantle cartridge. **Controller includes:** a 100 Ω Pt RTD probe, support rod clamp, and power cord with UK and EU plugs. **Heating mantle cartridges include:** stir bar.

CE

Specifications

Temperature range: ambient to 450°C

Stirring speed range: 100 to 2000 rpm

Dimensions for complete system (W x H x D): 30.0 x 65.0 x 30.0-cm



REQUIRED System Components

- 1) Digital base controller
- 2) Heating mantle cartridges

Power (50/60 Hz)	1. Digital base controller		2. Heating mantle cartridges			Complete systems	
	Catalogue number	Item number	Flask size	Catalogue number	Item number	Catalogue number	Item number
230 VAC	PZ-36204-13	OMCA	250-mL	PZ-36204-01	OM0250	PZ-36204-15	OMCA0250
			500-mL	PZ-36204-05	OM0500	PZ-36204-19	OMCA0500
			1000-mL	PZ-36204-09	OM1000	PZ-36204-23	OMCA1000

Electrothermal® CMUT Series Multiple-Volume Heating Mantle

Accommodates flasks to 1000-mL

- Cool-to-the-touch feature for safer handling
- Built-in energy regulator

Flexible, coiled heating element wraps around the flask to optimise heat transfer. Grounded earth screen to keep flask from direct contact with the heating element, plus double fuse protection provides maximum safety. Control temperature with a built-in 1 to 10 scale power controller.

What's included: integrated support rod clamp and power cords with UK and EU plugs.



CE

Specifications

Temperature range: ambient to 450°C

Case material: powder-coated aluminium
Power: 230 VAC, 50/60 Hz

Watts	Flask size (mL)	Dimensions (W x H x D)	Catalogue number	Item number
300	250 to 1000	22.0 x 17.0 x 22.0-cm	PZ-36013-14	CMUT1000/CE

Electrothermal® CMUV Series Industrial Heating Mantles

Optimal heating for large vessels

- Bottom opening allows 60° funnels of various diameters
- Accept large capacity flasks—between 10- to 22-litres
- Cool-to-the-touch design with powder-coated aluminium casing
- Control heating of top, middle, and bottom of flasks independently

Heating mantle has a “V”-shaped design to allow large, pear-shaped and round-bottom flasks. Coiled heating element, suspended within a thermal insulating material, provides optimal heat transfer and support.

Control heat throughout the mantle using three separate electrical circuits, each controlled with its own dial switch. Two coloured lights indicate “power on” and “heat on” operation. Built-in energy regulator.

What's included: three sets of integrated support rod clamps and power cords with UK and EU plugs.



CE

Watts	Flask size (L)	Max temp.	Dimensions (W x H x D)	VAC, Hz	Catalogue number	Item number
2000	10	450°C	48.5 x 30.0 x 48.5-cm	230, 50/60	PZ-36013-16	CMUV10/CL
2000	12				PZ-36013-18	CMUV12/CL
3000	20				PZ-36013-20	CMUV20/CL
3000	22				PZ-36013-22	CMUV22/CL

Electrothermal® CMU Series Heating Mantles and CMUA Stirring/Heating Mantles

Robust, reliable and hand-made in the UK

- Holds round-bottom and volumetric flasks
- Maximum element temperature of 450°C
- Cool-to-the-touch design with powder-coated aluminium casing
- Built-in energy regulator

Controlled electric heating mantles incorporate a heating element suspended within a ceramic fiber insulating material for safe, efficient heat transfer. They have a stainless steel grounded earth screen covering the element and are double-fused for added safety. Built-in power controller has a 1 to 10 scale.

What's included: integrated support rod clamp and power cords with UK and EU plugs. CMUA series also includes a stir bar.

Note: Uncontrolled heating models are available in volumes from 50 to 5000-mL.

Specifications

Stirring speed: up to 2000 rpm

Case material: powder-coated aluminium



CMU series



CMUA series



Watts	Flask size	Maximum temperature	Dimensions (W x H x D), cm	VAC, Hz	Catalogue number	Item number
CMU series heating mantles						
75	50-mL	450°C	17.5 x 15.0 x 17.5	230, 50/60	PZ-03012-13	CMU0050/CE
100	100-mL	450°C	17.5 x 15.0 x 17.5	230, 50/60	PZ-03012-23	CMU0100/CE
150	250-mL	450°C	17.5 x 15.0 x 17.5	230, 50/60	PZ-03012-33	CMU0250/CE
200	500-mL	450°C	22.0 x 17.0 x 22.0	230, 50/60	PZ-03012-43	CMU0500/CE
300	1000-mL	450°C	22.0 x 17.0 x 22.0	230, 50/60	PZ-03012-53	CMU1000/CE
CMUA series stirring/heating mantles						
75	100-mL	450°C	17.5 x 15.0 x 17.5	230, 50/60	PZ-36013-00	CMUA0100/CE
200	250-mL	450°C	17.5 x 15.0 x 17.5	230, 50/60	PZ-36013-02	CMUA0250/CE
280	500-mL	450°C	22.0 x 17.0 x 22.0	230, 50/60	PZ-36013-04	CMUA0500/CE
380	1000-mL	450°C	22.0 x 17.0 x 22.0	230, 50/60	PZ-36013-06	CMUA1000/CE
500	2000-mL	450°C	32.0 x 22.0 x 32.0	230, 50/60	PZ-36013-08	CMUA2000/CE
500	3000-mL	450°C	32.0 x 22.0 x 32.0	230, 50/60	PZ-36013-10	CMUA3000/CE
800	5000-mL	450°C	32.0 x 22.0 x 32.0	230, 50/60	PZ-36013-12	CMUA5000/CE

Electrothermal® EM and EMA Series Electromantles

Safe and robust

- Ceramic fiber insulation, unique ventilation slots, and durable, chemical-resistant polypropylene housing keep exterior case cool
- Coiled heating element is suspended within a thermal insulating cartridge to provide maximum heat transfer and support; its flexibility ensures minimum risk of flask breakage

These controlled electromantles allow maximum heat transfer with minimal risk for flask breakage. Built-in power controller has dial from 1 to 10 for repeatability. Indicator lights for "power on" and "heater on" operation. A grounded earth screen and double fuses for added safety.

The EMA models have the added functionality of bi-directional stirring which widens the range of applications. Stirring operation up to 520 rpm is simply achieved by placing the correct size stir bar into the flask, turning the stir control to the minimum speed and ramping up slowly. If the magnetic coupling to the stir bar is lost for any reason, the stir speed control should be reduced slightly and the auto-recapture switch can be activated.

What's included: integrated support rod clamp and power cords with UK and EU plugs. EMA series also includes a stir bar.



EM series



EMA series



Watts	Flask size	Maximum temperature	Dimensions (W x H x D), cm	VAC, Hz	Catalogue number	Item number
EM series heating electromantles						
60	50-mL	450°C	17.5 x 12.7 x 26.0	230, 50/60	PZ-36002-02	EM0050/CE
60	100-mL	450°C	17.5 x 12.7 x 26.0	230, 50/60	PZ-36002-06	EM0100/CE
150	250-mL	450°C	17.5 x 12.7 x 26.0	230, 50/60	PZ-36002-10	EM0250/CE
200	500-mL	450°C	23.8 x 14.5 x 31.0	230, 50/60	PZ-36002-14	EM0500/CE
300	1000-mL	450°C	23.8 x 14.5 x 31.0	230, 50/60	PZ-36002-18	EM1000/CE
500	2000-mL	450°C	35.0 x 19.0 x 40.0	230, 50/60	PZ-36002-22	EM2000/CE
500	3000-mL	450°C	35.0 x 19.0 x 40.0	230, 50/60	PZ-36002-26	EM3000/CE
800	5000-mL	450°C	35.0 x 19.0 x 40.0	230, 50/60	PZ-36002-30	EM5000/CE
EMA series heating and stirring electromantles						
80	50-mL	450°C	17.5 x 13.3 x 26.0	230, 50/60	PZ-04641-05	EMA0050/CEB
80	100-mL	450°C	17.5 x 13.3 x 26.0	230, 50/60	PZ-04641-15	EMA0100/CEB
170	250-mL	450°C	17.5 x 13.3 x 26.0	230, 50/60	PZ-04641-25	EMA0250/CEB
220	500-mL	450°C	23.8 x 15.7 x 31.0	230, 50/60	PZ-04641-35	EMA0500/CEB
320	1000-mL	450°C	23.8 x 15.7 x 31.0	230, 50/60	PZ-04641-45	EMA1000/CEB
520	2000-mL	450°C	35.0 x 19.7 x 40.0	230, 50/60	PZ-04641-55	EMA2000/CEB

Electrothermal® EMX and EMV Series Flask/Funnel Heating Mantles

Funnel-shaped cavity allows you to use different flask sizes

- Accept pear-shaped flasks and funnels
- Cool-to-the-touch design with chemical-resistant polypropylene outer casing

These heating mantles come equipped with an upper and lower heating element design capable of accommodating a wide variety of flasks and 60° funnels. Spill-proof heating mantles feature a hemispheric interior and a funnel-shaped cavity with a base opening. EMX series has a corrosion-resistant stainless steel liner that gives electrical and mechanical protection against spills. EMV series includes a safety earth (ground) screen for operator safety.

Ceramic fiber insulation keeps the chemical-resistant polypropylene case cool. Built-in power controller has dial markings from 1 to 10 for repeatability. Mantles feature indicator lights for “power on” and “heater on”. All mantles (except 5000-mL models) include a single support rod clamp that accepts a 13-mm rod. Models with 5000-mL flask size are fitted with three 13-mm dia rod clamps.

What's included: integrated support rod clamp and power cords with UK and EU plugs.



CE

Watts	Flask size (mL)	Maximum temperature	Funnel dia (mm)	Base hole dia (mm)	Dimensions (W x H x D)	Power (VAC, Hz)	Catalogue number	Item number
EMX series funnel-shaped mantle with spill-proof stainless steel liner								
245†	500 to 1000	450°C	50 to 150	24	31.0 x 14.0 x 22.0-cm	230, 50/60	PZ-36101-05	EMX1000/SCE
600†	2000 to 5000	450°C	100 to 300	58	40.0 x 19.1 x 34.9-cm		PZ-36101-15	EMX5000/SCE
EMV series funnel-shaped mantle with stainless steel screen								
60	10 to 50	450°C	50 to 100	23	26.0 x 12.7 x 17.8-cm	230, 50/60	PZ-36104-05	EMV0050/CE
150†	100 to 250	450°C	75 to 100	24	26.0 x 12.7 x 17.8-cm		PZ-36104-15	EMV0250/CE
300†	500 to 1000	450°C	100 to 200	24	31.1 x 15.2 x 32.7-cm	230, 50/60	PZ-36104-25	EMV1000/CE
800†	2000 to 5000	450°C	200 to 300	58	40.0 x 19.7 x 32.7-cm		PZ-36104-35	EMV5000/CE

†Mantles have two heating circuits with switching for upper circuit; allows more efficient heating of small vessels.

Electrothermal® Electromantle Extraction Heaters and Heater/Stirrers

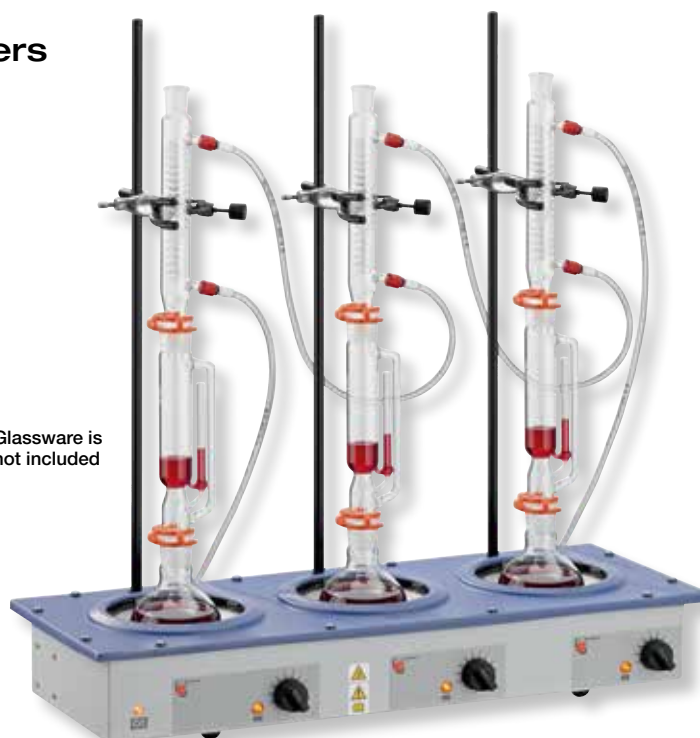
No need for multiple units

- Simultaneously heat samples with different boiling points with independent temperature controllers
- Don't get burnt—case remains cool-to-the-touch
- Ideal for routine extraction tests
- Coiled heating element is suspended within a thermal insulating cartridge to provide maximum heat transfer and support
- Earth (ground) screen encloses the heater for added safety
- Accommodate flask capacities from 100 to 1000-mL
- Combination heater/stirrer models have one dial to control stirring for each set of 3 positions

What's included: integrated support rod clamps and power cords with UK and EU plugs. Combination models also include a stir bar.

Glassware is not included

CE



Specifications

Maximum element temperature: 450°C

Housing material: powder-coated aluminium surfaces and polypropylene top cover

Thermal insulation: ceramic fiber/mineral wool

Stirring speed range (combination models only): 50 to 1000 rpm

Number of positions	Flask capacity (mL)	Dimensions (W x H x D) cm	Power (VAC, Hz)	Heaters			Combination heater/stirrers		
				Watts	Catalogue number	Item number	Watts	Catalogue number	Item number
Three	100	64.0 x 11.0 x 27.0	230, 50/60	180	PZ-03076-01	EME30100/CEB	220	PZ-03076-13	EMEA30100/CE
	250	64.0 x 11.0 x 27.0	230, 50/60	450	PZ-03076-04	EME30250/CEB	490	PZ-03076-16	EMEA30250/CE
	500	75.5 x 13.0 x 28.5	230, 50/60	600	PZ-03076-07	EME30500/CEB	640	PZ-03076-19	EMEA30500/CE
	1000	75.5 x 13.0 x 28.5	230, 50/60	900	PZ-03076-10	EME31000/CEB	940	PZ-03076-22	EMEA31000/CE
Six	100	121.0 x 11.0 x 27.0	230, 50/60	420	PZ-03076-25	EME60100/CEB	500	PZ-03076-37	EMEA60100/CE
	250	121.0 x 11.0 x 27.0	230, 50/60	900	PZ-03076-28	EME60250/CEB	980	PZ-03076-40	EMEA60250/CE
	500	145.0 x 13.0 x 28.5	230, 50/60	1200	PZ-03076-31	EME60500/CEB	1280	PZ-03076-43	EMEA60500/CE
	1000	145.0 x 13.0 x 28.5	230, 50/60	1800	PZ-03076-34	EME61000/CEB	1880	PZ-03076-46	EMEA61000/CE

Electrothermal® Electric Bunsen Burner

Provides clean and easy operation

- Top cowl deflects heat away from hands
- Air circulation from the vented housing keeps base cool to the touch
- Efficient—only consumes 400 W of power

Electric Bunsen burner combines the advantages of a regular gas burner with the clean and easy operation of a heating mantle. Corrosion-resistant, stainless steel burner features a cone-shaped coiled resistance heater which directs radiant heat to the top cavity. Ideal for non-contact radiant heating of materials in test tubes, crucibles, small flasks, and beakers. Heating of a test tube sample may be done above the top of the burner or just inside the mouth of the ceramic heating bowl for quick heating. Remove the cowl to create a broader heating area—ideal for heating crucibles, flasks and beakers.



To regulate the power input and temperature of the Bunsen burner, a heating controller is recommended. The Bunsen burner can be purchased with or without a controller.

What's included: detachable cowl, UK and EU power cords.



Description	Maximum temperature	Dimensions (H x dia)	Power (VAC, Hz)	Catalogue number	Item number
Without controller	800°C	17.7 x 12.0-cm	230, 50/60	PZ-36135-01	BA6101
With controller 36223-04 (see right)				PZ-36135-02	BA6101/C

Electrothermal® Grounded Heating Tapes

Flexible—fit metal pipes and glassware

- Maximum element temperature of 450°C

The heating element and braided ground wire are wound on a fiberglass core and covered in braided fiberglass outer sleeve. Tapes are for use in dry conditions only. Supplied with 9-cm insulated unheated flexible leads at each end.

Warning: Heating tapes should not be overlapped. Heating tapes must be connected to an external temperature or power control device (order at right). For instructions on connecting your heating tape to a power controller, please visit our website or contact your local Cole-Parmer representative.



Watts	Length	Width	Maximum temperature	Volts	Catalogue number	Item number
100	61-cm	2.5-cm	450°C	230	PZ-36220-00	HT95502
150	91-cm	2.5-cm			PZ-36220-01	HT95503
200	122-cm	2.5-cm			PZ-36220-02	HT95504
300	183-cm	2.5-cm			PZ-36220-06	HT95506
400	244-cm	2.5-cm			PZ-36220-08	HT95508
600	366-cm	2.5-cm			PZ-36220-10	HT95512
800	488-cm	2.5-cm			PZ-36220-12	HT95516
1200	732-cm	2.5-cm			PZ-36220-14	HT95524
1600	976-cm	2.5-cm			PZ-36220-15	HT95532

Electrothermal® Analogue Heating Controllers

Take control

- Provide manual control of uncontrolled heating mantles, tapes, and electric Bunsens
- Compact—use on benchtop or mount to frame

External one-way controllers allow you to manually regulate the power input to your laboratory heating equipment. Indicator lights include a white “power on” and amber “heater on” light.

What's included: support clamp at rear for standard 13-mm dia rod (not included) and UK and EU power cords.



Watts	Dimensions (W x H x D)	Power (VAC, Hz)	Catalogue number	Item number
800	9.5 x 10.5 x 13.0-cm	230, 50/60	PZ-36223-04	MC5
1800		230, 50/60	PZ-36223-02	MC242
2300	12.0 x 8.0 x 11.5-cm	230, 50/60	PZ-36223-00	MC227

Electrothermal® Digital Heating Controller

Versatile, three-way temperature control

- Three-digit LED display allows you to set a 1°C resolution over a range of –10 to 800°C
- Front-panel up/down controls make for easy programming
- Ideal for heating mantles or electric Bunsens

Benchtop digital heating controller can be used three ways: in on/off mode with the hysteresis loop controlling power switching, as a PID controller, or simply as a temperature measuring device using a probe. There is a 5-pin DIN socket on the controller for the probe.

Rugged zinc die-cast outer housing is suitable for benchtop use or wall mounting. Rear clamp accepts a standard 13-mm rod to mount on a support stand or frame.

What's included: temperature probe (model 99965-02), wall-mounting bracket, and UK and EU power cords.



Control output	Dimensions (W x H x D)	Power (VAC, Hz)	Catalogue number	Item number
1500 W	12.0 x 8.0 x 10.0-cm	230, 50/60	PZ-32587-00	MC810B

Optional temperature probes	Catalogue number	Item number
Stainless steel with PTFE sleeve, platinum RTD, 250°C max, 260-mm L x 5.0-mm dia	PZ-99965-02	AZ6705
Stainless steel, platinum RTD, 250°C max, 380-mm L x 6.0-mm dia	PZ-32587-99	AZ9046
Stainless steel, platinum RTD, 400°C max, 280-mm L x 5.0-mm dia	PZ-99965-03	AZ6706
Stainless steel with porcelain sheath, platinum RTD, 800°C max, 140-mm L x 7.0-mm dia	PZ-32587-98	AZ6741

Electrothermal® Micro-Kjeldahl Extraction Heater

Six positions allow single or multiple digestions

- Specifically designed to determine the protein content of food on a micro scale—from 18 to 50-mL
- Rugged stainless steel construction minimises damage from spills and is easy to clean
- Dedicated controller for each mantle is safely housed in a “cool zone”

This six-position extraction heater is designed for Kjeldahl digestion on a micro scale—accommodating up to six round-bottom flasks between 18 to 50-mL in size. Each mantle has an independent heater with control dial, on/off switch, and indicator light, and operates up to a maximum element temperature of 800°C.

The lower part of the unit containing the control equipment is safely separated from the upper heating elements by a well-ventilated air space. Unit is double fused on the supply line and neutral for extra safety.

What's included: support arms with brackets and power cord.



Specifications

Max element temperature: 800°C	Thermal insulation: ceramic fiber/mineral wool
Flask capacity: 18 to 50-mL	Dimensions (W x H x D): 52 x 16 x 16.2-cm
Housing material: stainless steel	



03074-32

Number of positions	Power (VAC, Hz)	Watts	Plug type	Catalogue number	Item number
Six	230, 50/60	600	UK	PZ-03074-32	MM2313/E
	230, 50/60	600	Euro	PZ-03074-34	MM2313/EX6

Accessories

PZ-03074-99 [AT4001] Fume collection tube

Electrothermal® Macro-Kjeldahl Extraction Heaters

Accommodate a variety of flask sizes from 100 to 800-mL

- Choose from two- or six-position heaters to determine the protein content of food on a macro scale from 100 to 800-mL
- Set the same temperature for all six position/recess or adjust the range of each position/recess individually
- Stainless steel construction is rugged and easy to clean

These multiposition extraction heaters let you run several projects simultaneously by using either two or six individually controlled heating mantles. Each mantle has an independent heater with control dial, on/off switch, and indicator light, and operates to a maximum element temperature of 800°C. A quartz heating element is housed in a thermally insulated cartridge for easy replacement, extending the life of the heater. Heaters are supplied with back-mounted brackets to hold support rods up to 12.7-mm in diameter.

The lower part of the unit containing the control equipment is safely separated from the upper heating elements by a well-ventilated air space. Units are double fused on the supply line and neutral for extra safety.

What's included: support stand and power cord†.



Specifications

Max element temperature: 800°C	Dimensions (W x H x D):
Housing material: stainless steel	Two-position models: 32 x 16.5 x 26-cm
Thermal insulation: ceramic fiber/mineral wool	Six-position models: 97 x 16.5 x 26-cm



03075-02

Number of positions	Flask capacity	Power (VAC, Hz)	Watts	Plug type	Catalogue number	Item number
Two	100 to 300-mL	230, 50/60	600	UK	PZ-03075-02	MQ3822B/E
			600	Euro	PZ-03075-04	MQ3822B/EX6
	500 to 800-mL		1100	UK	PZ-03075-08	MQ3824B/E
			1100	Euro	PZ-03075-10	MQ3824B/EX6
Six	100 to 300-mL	230, 50/60	1800	UK	PZ-03075-14	MQ3866B/E
			1800	Euro	PZ-03075-16	MQ3866B/EX6
	500 to 800-mL		3800	—†	PZ-03075-20	MQ3868B/EX6
			3800	—†	PZ-03075-22	MQ3868B/E

†Models 03075-20 and -22 must be hard-wired, do not have double fuses, and are not CE marked.

Electrothermal® Digital Melting Point Apparatus

Ensure comfortable viewing for multiple users

- Ergonomically designed with height-adjustable extension arm and rotating viewing head
- Digital microprocessor provides fast warm-up and accurate temperature control
- Simultaneously view up to three capillary tubes
- Extension arm folds flat for compact storage
- Units can be stacked
- Audible beeps indicate when temperature is stable and ready for sample
- Programmable models feature internal batch memory capability for storage of results

Our family of digital Melting Point Apparatus is designed for your general-purpose laboratory use. An advanced microcontroller and step-through menu system allows you to accurately control oven temperature and ramp rate. The keypad is conveniently located to ensure that temperatures can be recorded without looking away from the sample. An integral light and wide angle 8x viewing magnifier enhance sample observation, so that all three samples can be viewed without eye strain.

Fixed Ramp Rate Models offer two ramp rates and are ideal for basic melting point testing of up to three samples. A fixed 1°C/minute ramp heats sample. Use the 10°C/minute search ramp to quickly analyse sample if the melt temperature is unknown. Store up to four temperatures in temporary memory. The Mel-Temp® model has a temperature resolution of 1°C while the IA9100 model has 0.1°C.

Programmable Ramp Rate Model features five preset temperature ramps. You can program any rate from 0.1°C/minute to 10°C/minute in 0.1°C increments. Store up to four temperatures in a temporary memory; batch memory permanently stores up to 1000 sets of results with date, time, and batch number. Connect unit to a computer or printer via RS-232 interface.

Programmable Ramp Rate Model for Pharmacopeia requirements offers selectable ramp rates between 0.1°C/minute to 10°C/minute with a degree setting of 1°C/minute. Store up to two sets (beginning and ending temperatures) of three temperatures in temporary memory; batch memory permanently stores up to 500 sets of results. Unit connects to a computer or printer via RS-232 interface. Also available with IQ/OQ documentation (model 03010-64) and calibration key kit.

What's included: 100 capillary tubes and a power supply with EU, UK and US power leads.



03010-15
[1101D]



03010-41
[IA9200]



Description	Mel-Temp fixed ramp rate	Fixed ramp rate	Programmable ramp rate	Beginning/ending recordings for pharmacopeia requirements	
Model number	1101D	IA9100	IA9200	IA9300	IA9300/IQOQ
Catalogue number	PZ-03010-15	PZ-03010-51	PZ-03010-41	PZ-03010-59	PZ-03010-64†
Item number	1101D	IA9100	IA9200	IA9300	IA9300/IQOQ
Temperature range	Ambient + 5 to 400°C		1 to 400°C		
Temperature resolution	1°C		0.1°C		
Temperature accuracy	±1% of set temperature		±0.5°C ±1 digit at 20°C; ±1.0°C ±1 digit at 350°C		
Temperature sensor	100 Ω Pt RTD		100 Ω Pt RTD		
Ramp rate	1° or 10°C/min (selectable)	1.0° or 10°C/min (selectable)	0.2 to 10°C/min (default 0.2°C/min)	0.2 to 10°C/min (default 1.0°C/min)	
Melt memory	4 x 1	4 x 1	4 x 1	3 x 2	
Batch memory	—	—	1000 melts	500 melts	
Printer output	—	—	Yes	Yes	
Number of samples			Up to three, simultaneously		
Lens magnification			8x, adjustable focus		
Display			Dual-line LCD, backlit		
Dimensions (W x H x D)			20 x 8 x 35.5-cm (with arm closed)		
Power (VAC, Hz, W)			100 to 240, 50/60, 45		

†Model includes IQ/OQ documentation and calibration key kit.

Accessories

PZ-03010-63 [AZ9001] Cold finger

PZ-03010-65 [AZ9253] Calibration key

PZ-03010-67 [AT4042] Replacement capillary tubes, 1.5-mm dia.
Pack of 1000

PZ-03010-68 [AT4043] Capillary tubes, 2.0-mm dia. Pack of 1000

PZ-03010-69 [PR2000S] Serial printer for 03010-41, -59 and -64

PZ-03010-62 [AT4044] Paper rolls (2) and ribbon for printer

PZ-99967-49 [SMP-KIT] Melting point standard set: sulphanilamide, caffeine, vanillin

Electrothermal® Histology Products

Electrothermal® Wax Dispenser

Prevent wax blockage with heated tap

- Accurate temperature control with digital display
- Constructed of stainless steel with antimicrobial coating to inhibit bacterial growth
- Enhanced safety with high temperature cut-off at 120°C
- Prevent heat loss with fully insulated 7.5-L tank

This paraffin wax dispenser provides ultrafast heating for on-demand molten wax. Convenient “wax on tap” is available for an even flow of wax, ideal for your histology and pathology applications. The heated tap eliminates the possibility of wax blockage and the 0.5-mm mesh filter screen prevents coarse particles from entering the tap. The non-drip lever has three settings: off, on-demand pull dispense, and continuous flow.

The set temperature can be controlled via the control panel, and allows for a temperature range ambient to 70°C. When set at 65°C, the unit will take approximately 90 minutes to fully melt 5-kg of pelletised wax.



CE

Capacity (L)	Temperature range	Temperature resolution	Temperature accuracy	Dimensions (W x H x D)	Power (VAC, Hz)	Catalogue number	Item number
7.5	Ambient to 70°C	1°C	±1°C	18.1 x 45.5 x 50.0-cm	230, 50/60	PZ-85230-07	MH8524

Electrothermal® Slide Warmer

Get faster output—holds up to fifty slides!

- Mount tissue and stain slides easier
- Easy-set dial



CE

Specifications

Capacity: fifty 75 x 25-mm slides

Temperature range	Power	Catalogue number	Item number
Ambient to 100°C	230 VAC, 50/60 Hz	PZ-48573-06	MH6616

Electrothermal® Tissue Float Bath

View tissue cuttings more easily

- Improved visibility with black anodised bath surface
- Easily set temperature from 30 to 70°C with analogue dial
- Dry slides easily on convenient edge



CE

Specifications

Internal dimensions (H x dia): 8.0 x 22.0-cm

Bath capacity	Power	Catalogue number	Item number
2.3-L	230 VAC, 50/60 Hz	PZ-48572-55	MH8517

Accessories

PZ-48572-99 [AZ9241] Bath lid ensures temperatures are maintained in the bath

Electrothermal® STEM RS Series Parallel Reaction Stations

Run multiple reactions in a single station, saving you time and money

- Excellent temperature uniformity across the block
- Soft-start feature minimises splashing

These energy-efficient reaction stations let you easily carry out parallel synthesis by offering the same controlled temperature and stirring rates at several positions simultaneously. High-performance magnetic stirrers ensure maximum coupling. Easily set and view temperature and stir rate on the digital display. The rugged, well-insulated stations stay cool to the touch for safe handling and the PTFE coating protects the unit from chemical spills.

Order test tubes, reducing sleeves, and stir bars separately from Integrity 10 table below.



36630-11
[PS80010]

36630-13
[PS80034]



Model	Number of stirred positions	Sample volume	Tube diameter	Stir speed range (rpm)	Temperature range	Temperature stability	Power (230 VAC)	Catalogue number	Item number
RS600	6	Up to 250-mL	57.5-mm	400 to 2000	Ambient to 250°C	±0.5°C	600 W	PZ-36630-13	PS80034
RS1000	10	1 to 25-mL	25-mm	400 to 2000	Ambient to 150°C	±0.5°C	300 W	PZ-36630-11	PS80010
RS9000	(Choose block directly below)	Block dependent	Up to 24-mm	100 to 600 (agitation)	Ambient to 150°C	Block dependent	900 W	PZ-99968-12	PS83000

Heating blocks for model RS9000	Catalogue number	Item number
Accommodates 96 x 16-mm tubes	PZ-99968-07	PS80052
Accommodates 40 x 24-mm tubes	PZ-99968-08	PS80064
Accommodates 96 x 1.5-mL tubes	PZ-99968-11	PS80114
Accommodates 4 x 96-well microplates	PZ-99968-05	PS80047

PZ-36630-62 [AZ140940] External temperature probe, RTD

PZ-36630-74 [ATS10377] Inerting cap, PTFE, SVL thread, 25 x 150-mm. 10/pk

Electrothermal® PS20000 Integrity 10 Reaction Station

Establish ideal process conditions

- Individually control temperature and stirring rate for each cell
- View the results of your experiments in real-time on the monitor
- Easily transfer data to a PC via a USB port

The Integrity 10 reaction station lets you conduct 10 different reactions simultaneously within the same reaction unit, each reaction being conducted within its own cell, at its own individual temperature and stir rate. If desired, fast heating and cooling rates can be selected, with controlled temperature ramps of between 0.1°C/min to 5°C/min. Extreme temperature accuracy is guaranteed, with a temperature stability of ±0.5°C and a maximum set point overshoot of 0.5°C.

Each cell features a magnetic stirrer; order stir bars separately at right. Order tapered test tubes and reducing sleeves to accommodate sample volumes down to 1-mL. Use the optional reflux/inerting head when you need to run parallel reactions over a long time period, as is commonly required in organic chemistry experiments.



Specifications

Number of positions: 10
Cell cavity diameter: 25.5-mm
Sample volume: 1 to 25-mL (down to 1-mL with optional reducing sleeve)
Temperature range: -30 to 150°C*
Max controlled heating cooling ramp rate: 0.1 to 5°C/min in 0.1 steps
Stir speed range: 350 to 1200 rpm
Viscosity capacity: glycerine at 25°C
Output: USB, RS-232, and RS-485
Power: 110/115/230 VAC, 50/60 Hz

*Chilled water supply required to run the Integrity 10 station; we recommend using a recirculating chiller. For more information, go to our website or contact your local sales representative.

Description	Qty	Catalogue number	Item number
Integrity 10 reaction station with 10 individually controlled cells	1	PZ-36630-00	PS20000
Accessories			
Integrity 10 software	1	PZ-36630-92	ATS11005
Small-volume test tubes, 1-mL, 24 to 11-mm taper	10	PZ-36630-87	ATS10209
Small-volume test tubes, 3-mL, 24 to 16-mm taper	10	PZ-36630-83	ATS10055
Reducing sleeves for 1-mL test tubes	10	PZ-36630-86	ATS10101
Reducing sleeves for 3-mL test tubes	10	PZ-36630-84	ATS10056
Stirrer bars, 10 x 6-mm	10	PZ-36630-98	AZS4206
Stirrer bars, 12 x 4.5-mm	10	PZ-36630-99	AZS4235
Reflux/inerting head	1	PZ-36630-97	ATS20100
Inerting cap for reflux/inerting head, SVL 22 thread	10	PZ-36630-94	ATS20002
Inerting cap for reflux/inerting head, Kimble type	10	PZ-36630-95	ATS20003
Glass tubes, 24 x 150-mm, SVL 22 thread	10	PZ-36630-85	ATS10075
Glass tubes, 24 x 150-mm, Kimble type	10	PZ-36630-96	ATS20004
Temperature probe	6	PZ-36630-81	ATS10027
Temperature probe	10	PZ-36630-82	ATS10027/10
Multi-temp 10 plug-in box	1	PZ-36630-80	ATS10001
Non-intrusive IR sensor	1	PZ-36630-90	ATS10360/1
Small intrusive IR probe in stainless steel	1	PZ-36630-88	ATS10230
PID-NIR5-BNSD	1	PZ-36630-91	ATS10394/1
Large intrusive IR/NIR probe	1	PZ-36630-89	ATS10232E
Multi-IR plug-in box	1	PZ-36630-89	ATS10232E

Note: For help configuring the Integrity 10 Reaction Station system to your application, contact your local Cole-Parmer representative.

PCRmax® Eco 48 Real-Time PCR System

Save time and money with unique plate geometry

- Fast cycling—runs 40 cycles in 15 minutes when optimised
- Uses four colours for easy multiplexing
- Offers $\pm 0.1^\circ\text{C}$ temperature uniformity

Compact footprint with MIQE compliant open license software for publishing your data. High-resolution melt (HRM) functionality is standard and can discriminate class IV SNP 99.9% of the time. The PCRmax Eco 48 features industry-leading $\pm 0.1^\circ\text{C}$ temperature uniformity with no settle time (recorded at 95°C).

Fastest block-based qPCR system with the ability to run 40 cycles in 15 minutes (or less when optimised). With an open platform, it can utilise any chemistry, dye or PCR reagent. No need to run triplicates, to compensate for poor thermal uniformity of block. Calibrated for SYBR®, FAMTM, HEXTM, VICTM, ROXTM and Cy5 fluorescent dyes.

What's included: dock and squeegee, EcoControl and EcoStudy software USB stick, 50 PCR plates, 50 plate seals, Ethernet cable, and power cord.



CE

Temperature range	Temperature accuracy	Ramp rate	Block uniformity	Block description	Memory	Power	Catalogue number	Item number
35 to 100°C	$\pm 0.25^\circ\text{C}$	$5.5^\circ\text{C}/\text{sec}$	$\pm 0.1^\circ\text{C}$	Proprietary hollow silver/gold block, Peltier-based system with conductive fluid, 48 wells	Unit saves the run data of last experiment, or unlimited via USB	100 to 240 VAC, 50/60 Hz	PZ-93947-00	ECORT48

PZ-99965-52 [ECOPLATE48] PCR plates for Eco 48. Pack of 50.

PZ-93947-99 [ECOSEAL48] PCR plate seals for Eco 48. Pack of 50.

PCRmax® Alpha Cyclers

Easily create, modify and access programs, saving time

- Flexible—your choice of one, two, or four block capacities in 96-well, 384-well, or mixed formats
- Independently control each block for simplified temperature and protocol optimisation
- Software allows quick access to commonly used protocols
- Save precious lab space with 2- or 4-block systems
- Gradient as standard

These compact thermal cyclers deliver reproducible results every run—with little to no training needed. Features include a clear responsive touchscreen, secure user-specific programming, adjustable heated lid, and active sample cooling for sharper amplification.

A Program Wizard generates a protocol specific to your sequence in seconds—a quick way to optimise new assays. Units also retain approximately 1000 reports for reviewing at a later date and run on an intuitive, HD Android™ tablet interface. Save your personal settings to your USB drive; sign-in is as simple as inserting your USB drive, no password needed.

Choose multiple-block systems to save bench space and money. Control each block separately for added versatility and use by more than one person at a time, or run on the same program to increase throughput. Each block also has its own independent heated lid—no interruption of assays running at different settings.



93945-06
[AC4296]



93945-00
[AC1384]

Specifications

Block temperature range: 10 to 100°C (4°C final hold)

Max heating rate: 3.4°C per sec.

Block uniformity at 55°C : $\pm 0.3^\circ\text{C}$

Temp. accuracy at 50°C : $\pm 0.25^\circ\text{C}$

Thermal gradient: 29°C maximum, 1°C minimum

Heated lid temp: 35 to 115°C , or off

Heated lid pressure: adjustable

Max programs stored: 1000

Data transfer: USB port

Auto restart on power failure: yes

Power: 100 to 230 VAC, 50/60 Hz



Model	Block format	Dimensions (W x H x D)	Catalogue number	Item number
Alpha Cyclers 1	(1) 384-well block	43 x 26 x 33-cm	PZ-93945-00	AC1384
	(1) 96-well block		PZ-93945-02	AC196
Alpha Cyclers 2	(2) 384-well blocks	47 x 53.5 x 33-cm	PZ-93945-28	AC2384
	(2) 96-well blocks		PZ-93945-22	AC296
Alpha Cyclers 4	(1) 384-well block, (1) 96-well block	70 x 53.5 x 33-cm	PZ-93945-20	AC2196
	(4) 384-well blocks		PZ-93945-08	AC4384
	(3) 384-well blocks, (1) 96-well block		PZ-93945-04	AC4196
	(2) 384-well blocks, (2) 96-well block		PZ-93945-06	AC4296
	(1) 384-well block, (3) 96-well blocks		PZ-93945-10	AC4396
	(4) 96-well blocks		PZ-93945-12	AC496

PCRmax® Delta Seek qPCR Detection Kits

Crucial tool for fast and accurate verification

- No need to refrigerate—all contents are lyophilised for simple transport and storage
- Positive copy number standard curve provides accurate quantification
- Broadest detection profiles
- Many more kits available online



What's included: lyophilised primer probe mix, positive control for standard curve, internal extraction control DNA, endogenous control, and RNase/DNase-free water. Kits with mastermix also include lyophilised mastermix, lyophilised ROX, and resuspension buffer.

Description	Nucleic acid	Tests per kit	Catalogue number	Item number
Kits with mastermix				
<i>Arachis hypogaea</i> (peanut)	DNA	100	PZ-93944-61	PKIT06019M
<i>Brucella abortus</i>	DNA	150	PZ-93946-36	PKIT08001M
<i>Capra hircus</i> (goat)	DNA	100	PZ-93944-71	PKIT06028M
<i>Coxiella burnetii</i>	DNA	150	PZ-93946-70	PKIT08002M
<i>Enterococcus faecalis</i>	DNA	150	PZ-93941-52	PKIT07006M
<i>Enterococcus faecium</i>	DNA	150	PZ-93946-74	PKIT07007M
<i>Equus asinus</i> (donkey)	DNA	100	PZ-93944-77	PKIT06030M
<i>Equus caballus</i> (horse)	DNA	100	PZ-93944-79	PKIT06031M
<i>Escherichia coli</i>	DNA	150	PZ-93946-78	PKIT08008M
<i>Felis catus</i> (cat)	DNA	100	PZ-93944-81	PKIT06032M
<i>Gallus gallus</i> (chicken)	DNA	100	PZ-93944-85	PKIT06033M
Hepatitis A virus	RNA	150	PZ-93942-37	PKIT07008M
Hepatitis C virus	RNA	150	PZ-93942-41	PKIT10051M
Hepatitis E virus	RNA	150	PZ-93942-45	PKIT07009M
Human immunodeficiency virus type 1	RNA	150	PZ-93942-67	PKIT10062M
Human parainfluenza virus type 1	RNA	150	PZ-93943-35	PKIT10066M
<i>Lactobacillus plantarum</i>	DNA	150	PZ-93942-03	PKIT06015M
<i>Legionella</i> (all species)	DNA	150	PZ-93945-82	PKIT07012M
<i>Merlangius merlangus</i> (whiting)	DNA	100	PZ-93944-95	PKIT06040M
<i>Mus musculus</i> (mouse)	DNA	100	PZ-93944-97	PKIT06041M
<i>Mycobacterium tuberculosis</i>	DNA	150	PZ-93941-07	PKIT10151M
<i>Naegleria</i> (all species)	DNA	150	PZ-93945-84	PKIT07014M
<i>Ovis aries</i> (sheep)	DNA	100	PZ-93944-99	PKIT06042M
<i>Pisum sativum</i> (green pea)	DNA	100	PZ-93945-32	PKIT06046M
<i>Salmonella enterica</i>	DNA	150	PZ-93947-39	PKIT08018M
<i>Sus scrofa</i> (pig/pork)	DNA	100	PZ-93945-54	PKIT06050M
Universal fish detection	DNA	100	PZ-93945-58	PKIT06051M
<i>Vibrio</i> (all species)	DNA	150	PZ-93945-94	PKIT07020M
Kits without mastermix				
<i>Arachis hypogaea</i> (peanut)	DNA	100	PZ-93944-60	PKIT06019
<i>Brucella abortus</i>	DNA	150	PZ-93946-35	PKIT08001
<i>Capra hircus</i> (goat)	DNA	100	PZ-93944-70	PKIT06028
<i>Coxiella burnetii</i>	DNA	150	PZ-93946-69	PKIT08002
<i>Enterococcus faecalis</i>	DNA	150	PZ-93941-51	PKIT07006
<i>Enterococcus faecium</i>	DNA	150	PZ-93946-73	PKIT07007
<i>Equus asinus</i> (donkey)	DNA	100	PZ-93944-76	PKIT06030
<i>Equus caballus</i> (horse)	DNA	100	PZ-93944-78	PKIT06031
<i>Escherichia coli</i>	DNA	150	PZ-93946-77	PKIT08008
<i>Felis catus</i> (cat)	DNA	100	PZ-93944-80	PKIT06032
<i>Gallus gallus</i> (chicken)	DNA	100	PZ-93944-84	PKIT06033
Hepatitis A virus	RNA	150	PZ-93942-36	PKIT07008
Hepatitis C virus	RNA	150	PZ-93942-40	PKIT10051
Hepatitis E virus	RNA	150	PZ-93942-44	PKIT07009
Human immunodeficiency virus type 1	RNA	150	PZ-93942-66	PKIT10062
Human parainfluenza virus type 1	RNA	150	PZ-93943-33	PKIT10066
<i>Lactobacillus plantarum</i>	DNA	150	PZ-93942-02	PKIT06015
<i>Legionella</i> (all species)	DNA	150	PZ-93945-81	PKIT07012
<i>Merlangius merlangus</i> (whiting)	DNA	100	PZ-93944-94	PKIT06040
<i>Mus musculus</i> (mouse)	DNA	100	PZ-93944-96	PKIT06041
<i>Mycobacterium tuberculosis</i>	DNA	150	PZ-93941-06	PKIT10151
<i>Naegleria</i> (all species)	DNA	150	PZ-93945-83	PKIT07014
<i>Ovis aries</i> (sheep)	DNA	100	PZ-93944-98	PKIT06042
<i>Pisum sativum</i> (green pea)	DNA	100	PZ-93945-30	PKIT06046
<i>Salmonella enterica</i>	DNA	150	PZ-93947-38	PKIT08018
<i>Sus scrofa</i> (pig/pork)	DNA	100	PZ-93945-52	PKIT06050
Universal fish detection	DNA	100	PZ-93945-56	PKIT06051
<i>Vibrio</i> (all species)	DNA	150	PZ-93945-93	PKIT07020

PCRmax® Transparent PCR Plates

Ultrathin walls provide faster heat transfer and cycle times

- Quality polypropylene for optimal clarity and solvent resistance
- Certified free of RNase, DNase, endotoxins, and human DNA
- 96-wells with 0.2-mL well volume
- Autoclavable

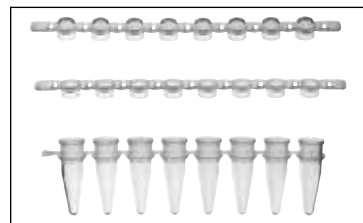


Description	Qty/cs	Catalogue number	Item number
Full skirt, low profile	50	PZ-67104-21	67104-21
Half skirt, standard profile	50	PZ-67104-23	67104-23
Half skirt, low profile	50	PZ-67104-25	67104-25
Half skirt, low profile, elevated rim	50	PZ-67104-27	67104-27
Unskirted, standard profile	50	PZ-67104-29	67104-29
Unskirted, low profile	50	PZ-67104-31	67104-31

PCRmax® PCR Tube and Cap Strips

Five colour choices for quick identification

- Constructed of pure high-quality polypropylene without any additives
- Ultrathin walls for optimal heat transfer
- Certified RNase, DNase, and endotoxin free



Suitable for use in common thermal cyclers, these strip tubes are available in PCR as well as qPCR options. Both come in a strip of 8 connected tubes. Corresponding caps provide a tight seal to prevent sample loss; order separately. Autoclavable.

Description	Colour	Qty/cs	Catalogue number	Item number
8-tube strips, PCR, 0.2-mL well volume	Clear	125	PZ-67104-07	67104-07
	Pink		PZ-67104-08	67104-08
	Yellow		PZ-67104-09	67104-09
	Green		PZ-67104-11	67104-11
	Blue		PZ-67104-12	67104-12
Strip of 8 domed caps, PCR	Clear	125	PZ-67104-15	67104-15
	Pink		PZ-67104-16	67104-16
	Yellow		PZ-67104-17	67104-17
	Green		PZ-67104-18	67104-18
8-tube strips, qPCR, 0.2-mL well volume	White	125	PZ-67104-13	67104-13
Strip of 8 flat caps, PCR/qPCR	Clear	125	PZ-67104-14	67104-14

Wait! There's More...

Amplify samples in less than 3 minutes. See the Arcis Sample Prep Kit on page 42.



Techne® Dri-Block® Heaters

Engineered for accuracy

- Versatile—work with many size sample tubes and plates
- Lightweight and flat top surface allow heaters to be stacked taking up less space
- Independent indicator lights show power, heater action, and over-temperature cut-out



REQUIRED System Components

- 1) Block heater
- 2) Heating blocks



1. Block Heaters

Analogue Heaters let you set the temperature in 2°C increments using a calibrated rotary dial. Excellent stability at 40°C for two-block model and at 40°C for three-block model.

Digital Heaters produce a fast heat-up rate (7 to 9 minutes from 25 to 100°C) and achieve temperature stability at 37°C. Quickly set and view temperature on LED display. Side panels help dissipate heat from the outer surfaces. Adjust the countdown timer between 1 minute and 100 hours in 1 minute increments.

Select a dual-control unit to independently control the temperature of two blocks—ideal for multiple users or for applications where samples have to be transferred quickly between temperatures. Use three- and four-block models for high-throughput applications. Model 36620-16 has an RS-232 connection so you can set and receive block temperature using your computer.

What's included: block extraction tool and power cord.



Max temp	Uniformity	No. of blocks accepted [†]	Power (50/60 Hz)		Catalogue number	Item number
			VAC	Watts		
Analogue dry block heaters						
100°C	0.2°C between block at 40°C	2	230	300	PZ-36620-12	FDB02AD
		3	230	450	PZ-36620-21	FDB030D
200°C		3	230	450	PZ-36620-14	FDB03AD
Digital dry block heaters						
100°C	0.2°C within the block at 37°C; 0.5°C between block at 37°C	2	230	300	PZ-36620-00	DB100 / 2
		2 (dual controls)	230	300	PZ-36620-02	DB100 / 2TC
		3	230	450	PZ-36620-04	DB100 / 3
		4	230	600	PZ-36620-06	DB100 / 4
200°C	0.2°C within the block at 37°C; 0.5°C between block at 37°C	2	230	300	PZ-36620-08	DB200 / 2
		3	230	450	PZ-36620-10	DB200 / 3
		3 (RS-232 output)	230	450	PZ-36620-16	FDB03DDR

[†]Indicates the number of single-width blocks accepted by each block heater. A heater that accepts two single-width blocks will accept one double-width block.

Sample Concentrators

Use only with three-block heaters to quickly concentrate multiple samples at once. Concentrator blows gas over the surface of your samples through stainless steel needles (order separately). Insert needles into a silicone membrane in virtually any configuration. Fully adjustable gas reservoir provides accurate height control. Choose PTFE-coated needles for use with corrosive samples.



- PZ-36620-40 [FSC400D] Sample concentrator** for use with test tubes
PZ-36620-41 [FSC496D] Sample concentrator for use with 96-well plates
PZ-36620-96 [F7209] Stainless steel needle, 76-mm long. 100/pk
PZ-36620-97 [F7210] Stainless steel needle, 127-mm long. 100/pk
PZ-36620-99 [FSC4NCS] PTFE-coated SS needle, 76-mm long. 100/pk
PZ-36620-98 [FSC4NCL] PTFE-coated SS needle, 127-mm long. 100/pk

2. Interchangeable Heating Blocks

Aluminium heating blocks provide excellent thermal conductivity. Depending on the combination of blocks selected, plastic spacers can be used to fill a half-width recess for optimal thermal performance. Most blocks have a separate hole to accept a thermometer.

Flexi-block inserts hold multiple size tubes, vials, or cuvettes at once. They use high-density, autoclavable ceramic beads and come in double or triple width. Unskirted PCR plates can be heated in either size flexi-block. Skirted microtiter plates, deep-well plates, and PCR plates can only be incubated in the triple-width version.

Accommodates	Number of wells	Well depth	Well shape	Catalogue number	Item number
Single-width heating blocks					
6-mm dia tubes	30	38-mm	Tapered	PZ-36620-51	F3502
7-, 9-mm dia tubes	20, 10	38-mm	Conical	PZ-36620-62†	F4461
10-mm dia tubes	20	48-mm	Conical	PZ-36620-52	F3503
12-mm dia tubes	20	20-mm	Flat	PZ-36620-87	F4569
12-mm dia tubes	20	24-mm	Flat	PZ-36620-85	F4567
12-mm dia tubes	20	24-mm	Conical	PZ-36620-82	F4501
12-mm dia tubes	20	48-mm	Conical	PZ-36620-53	F3504
13-mm dia tubes	20	48-mm	Conical	PZ-36620-54	F3505
15-mm dia tubes	12	30-mm	Flat	PZ-36620-86	F4568
15-mm dia tubes	12	48-mm	Conical	PZ-36620-55	F3506
16-mm dia tubes	12	25-mm	Flat	PZ-36620-89	F4675
16-mm dia tubes	12	48-mm	Conical	PZ-36620-56	F3507
19-mm dia tubes	8	48-mm	Conical	PZ-36620-57	F3508
20-mm dia tubes	8	48-mm	Conical	PZ-36620-81	F4490
24-mm dia tubes	6	48-mm	Conical	PZ-36620-63	F4462
25-mm dia tubes	6	48-mm	Conical	PZ-36620-58	F3509
26-mm dia tubes	6	48-mm	Conical	PZ-36620-64	F4463
30-mm dia tubes	5	48-mm	Conical	PZ-36620-79	F4485
43-mm dia tubes	2	45-mm	Flat	PZ-36620-80	F4487
0.2-mL tubes	72	13.8-mm	Tapered	PZ-36620-72	F4471
0.5-mL tubes	30	27-mm	Tapered	PZ-36620-66	F4465
1.5-mL tubes	20	35-mm	Tapered	PZ-36620-65	F4464
2.0-mL tubes	20	35-mm	Conical	PZ-36620-71	F4470
50-mL tubes	5	48-mm	Conical	PZ-36620-77	F4480
Gelation timer	1	—	Flat	PZ-36620-75	F4476
10-mm cuvettes (13-mm W)	2 channels	38-mm	Flat	PZ-36620-59	F3510
Solid (no holes)	—	—	—	PZ-36620-50†	F3501
Solid (no holes)	—	—	—	PZ-36620-61	F4460
Double-width heating blocks					
96-well PCR plate	96	17.3-mm	Tapered	PZ-36620-73	F4473
384-well PCR plate	384	7-mm	Tapered	PZ-36620-76	F4477
96-well culture plate	96	—	Round	PZ-36620-69	F4468
96-well culture plate	96	—	Flat wells	PZ-36620-70	F4469
96-well high-temp	96	—	Round	PZ-36620-68	F4467
96-well plate	Flat perimeter ridge	Flat bottom	—	PZ-36620-78	F4481
1.0-mL Porvair plate	96	—	—	PZ-36620-74†	F4474
Flexi-block	—	—	—	PZ-36620-90	FLEX12
Flat bottom plate	—	—	—	PZ-36620-95	F4678
Triple-width heating blocks					
20-mm dia tubes	18	35-mm	Flat	PZ-36620-83	F4515
23-mm dia tubes	18	35-mm	Flat	PZ-36620-94	F4516
Flexi-block	—	—	—	PZ-36620-91	FLEX13
Solid (no holes)	—	—	—	PZ-36620-60	F3512

†No thermometer hole.

PZ-36620-67 [F4466] Plastic spacers, half-width. Measure 95 x 37 x 50-cm. Pack of 2

Techne® Portable Dry Block Temperature Calibrator

Case is cool to the touch—even at maximum temperatures

- Maximum temperature of 430°C
- Fast heat-up and cool-down
- Independent over-temperature cutout and temperature sensor burnout protection
- Built rugged to handle field use and lightweight to be portable

What's included: one multi-well insert (3.17-, 4.76-, 6.35-, 7.93- and 9.52-mm well sizes), insert extractor, mains cable, and NIST-traceable calibration report supplied by the manufacturer.



Model	3028950
Catalogue number	PZ-16101-98
Item number	FDBU400D
Minimum temperature	5°C / 9°F above ambient
Maximum temperature	430°C / 806°F
Cooling rate 400 to 100°C	21 min
Heating rate, 20 to 400°C	12 min
Independent over-temp. cutout	Approx. 450°C / 842°F
Display resolution	0.1°C / 0.1°F
Insert immersion depth	11.43-cm (4½")
Stability after 15 minutes	±0.03°C @ 200°C; ±0.05°C @ 400°C
Display accuracy	±0.3°C @ 200°C; ±0.5°C @ 400°C
Well-to-well uniformity	0.015°C @ 200°C; 0.025°C @ 400°C
Dimensions (H x W x D)	222 x 203 x 203-mm (8¾" x 8" x 8")
Power (VAC, Hz, W)	240, 50/60, 900

PZ-16104-43 [7032718] Soft-side carrying case

Techne® Cooling/Heating Block

Safely cool your biological samples

- Fast cool-down time so ready to use when you need it
- Count-up/count-down timer with audible alarm can be programmed for up to nine days
- Choose from a wide range of interchangeable block inserts on page 35



Cooling/heating block is ideal for chilling samples at sub-ambient temperatures from 0 to 40°C. Isotemp® temperature control zone ensures all contents of the unit are kept at an even temperature, whether cold or warm. Integrated count-up/count-down timer with audible alarm can be programmed for up to nine days.

Aluminium inserts provide a temperature stability of ±0.2°C for precise control of reaction temperature. Unit holds two single-width or one double-width inserts; order separately on page 35.

What's included: dark plastic lid and power cord.



Model	Catalogue number
Catalogue number	PZ-36620-17
Item number	FBLOCKICE
Temperature range	0 to 40°C
Temperature accuracy	±1°C
Uniformity between blocks	±0.2°C
Display resolution	0.1°C
Cooling technology	Peltier
Cool-down time to 4°C	30 minutes
Power	100–230 VAC, 50/60 Hz

Optional Inserts

Model	Description	Catalogue number	Item number
7032533	Insert 5 x 0.63-cm	PZ-08510-70	FINSALF
7032534	Insert 0.95-cm + 0.79-cm + 0.63-cm + 0.47-cm + 0.3-cm	PZ-16104-25	FINSALG
7032535	Insert 2 x 0.95-cm + 2 x 0.63-cm	PZ-16104-26	FINSALH
7032536	Insert 2x 1.27-cm + 2 x 0.63-cm	PZ-16104-27	FINSALI
7032537	Insert 1 x 0.63-cm	PZ-16104-28	FINSALJ
7032538	Insert blank	PZ-16104-29	FINSALK
7032574	Insert 1 x 1.42-cm & 1 x 0.63-cm	PZ-16104-39	FINSALL
7032575	Insert 1 x 1.58-cm & 1 x 0.63-cm	PZ-16104-40	FINSALM
7032576	Insert 1 x 1.74-cm & 1 x 0.63-cm	PZ-16104-41	FINSALN
7032577	Insert 1 x 1.9-cm & 1 x 0.63-cm	PZ-16104-42	FINSALO

Techne® Gelation Timers

Maintain stricter quality control

- Ideal for adhesives and resins
- Requires only 100-mL of sample
- Audible and visual alarms confirm transition from liquid to solid

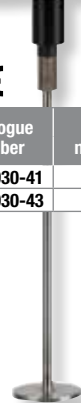
What's included: stainless steel paddle (22-mm) and power cord with stripped ends.



Timing range	Resolution	Accuracy	Power VAC	Hz	Catalogue number	Item number
0.1 to 999.9 minutes	0.1 minute	±2%	230	50	PZ-98930-41	FGT6
1 to 9999 minutes	1 minute	±2%	230	50	PZ-98930-43	FGT5

Accessories

- PZ-98930-47 [F7846] Sample cups. Pack of 240
- PZ-98930-49 [F0982] Stainless steel paddle, 16-mm dia
- PZ-98930-48 [F0979] Stainless steel paddle, 19-mm dia
- PZ-98930-44 [F0985] Replacement stainless steel paddle, 22-mm dia



Techne® Hybridisation Incubators

Use and recover volumes as low as 5-mL,
ensuring preservation of precious samples

- Radioactive-safe protective casing and non-drip tube design minimise risk to user
- Mix and match tube sizes and holders to suit your application
- Select from various accessories for added versatility

With excellent stability of $\pm 0.1^{\circ}\text{C}$ within the tubes, these Hybrigene and Hybridiser incubators are great for nucleic hybridisation applications such as Northern, Southern, and Western blots.

Each incubator features two shakers—rotisserie shaker with rotational speed from 0 to 20 rpm and platform shaker with rocking speed up to 60 oscillations/minute. A removable drip tray provides for easy cleaning. Adjustable feet make leveling on uneven surfaces quick and easy.

Hybrigene Incubator is ideal when space is at a premium. Stack up to three incubators using a stacking kit (order separately), saving valuable benchtop space. Incubator has temperature range from 10°C above ambient to 80°C and can hold up to four large/small glass tubes or 16 mini tubes.

Hybridiser Incubator features a unique double-glazed glass door that provides excellent protection from hybridisation hazards. Incubator reaches up to 100°C and can hold up to six large/small tubes or 24 mini tubes.

Mix and match tube sizes and holders to suit your application. Tube holders with clips accommodate smaller tube sizes—ideal for higher throughput of smaller samples. Order rocking platform to process membranes using a wave motion while allowing a number of hybridisation tubes to be placed above. Use the static stainless steel shelf to use the incubator as a non-motion incubator. Each shelf holds up to 4-kg.

What's included: drip tray, silicone grease, and power cord with UK/EU plug. Models 39455-03 and -06 also include large 80-mm glass tubes.



39455-06
[FHB4DDT]



Specifications

Temperature stability: 1.0°C (in chamber);
 $\pm 0.1^{\circ}\text{C}$ (in tubes)
Temperature accuracy: $\pm 0.3^{\circ}\text{C}$

Rotational speed range: 0 to 20 rpm
Rocker speed range: 5 to 20 or 15 to 60
oscillations/minute

Display type: LED
Display resolution: 0.1°C

Capacity	Temperature range*	Temperature uniformity	Dimensions (W x H x D)	Description	Power (50/60 Hz)		Catalogue number	Item number
					VAC	Watts		
4 tubes (small/large in any combination), 9 small tubes (using three 39455-33), 16 mini tubes [†] (using holders 39455-24), 32 x 50-mL [†] (using holders 39455-29), or 64 x 15-mL tubes [†] (using holders 39455-31)	10°C above ambient to 80°C	$\pm 1.5^{\circ}\text{C}$ (inside chamber); $\pm 0.5^{\circ}\text{C}$ (inside tubes)	35.5 x 43.2 x 38.3-cm	Hybrigene incubator	230	750	PZ-39455-04	FHB4DD
				Hybrigene incubator with four large 80-mm tubes with end caps	230	750	PZ-39455-06	FHB4DDT
6 (large/small in any combination), 24 mini tubes [†] (with holders 39455-18), 48 x 50-mL tubes [†] (using holders 39455-34), or 96 x 15-mL tubes [†] (using holders 39455-28)	10°C above ambient to 100°C	$\pm 1.5^{\circ}\text{C}$ (inside chamber); $\pm 1.0^{\circ}\text{C}$ (inside tubes)	38.5 x 55.5 x 28.5-cm	Hybridiser incubator	230	750	PZ-39455-02	FHB1DE
				Hybridiser incubator with three large 80-mm tubes with end caps	230	750	PZ-39455-03	FHB1DG

*Larger tubes are fitted with seals suitable for use up to 70°C . For higher temperature seals, please contact us. [†]Order tubes and holders separately below.

Accessories

Description	For Hybrigene models		For Hybridiser models	
	Catalogue number	Item number	Catalogue number	Item number
Large 80-mm glass tube with end caps	PZ-39455-13	FHB16	PZ-39455-11	FHB12
Large 80-mm glass tube without end caps	PZ-39455-12	FHB15	PZ-39455-10	FHB11
Small 44-mm glass tube with screw caps	PZ-39455-15	FHB36	PZ-39455-14	FHB32
Mini 32-mm glass tubes with screw caps (requires holder for mini tubes; order below). 4/pk	PZ-39455-17	FHB41	PZ-39455-17	FHB41
Holder plus three 44-mm (small) tubes	PZ-39455-33	FHB72	—	—
Holder for 4 x 32-mm (mini) tubes	PZ-39455-24	FHB61	PZ-39455-18	FHB43
Holder for 8 x 50-mL tubes	PZ-39455-31	F50ML4TH	PZ-39455-34	F50ML1TH
Holder for 16 x 15-mL tubes	PZ-39455-29	F15ML4TH	PZ-39455-28	F15ML1TH
Rocking platform	PZ-39455-16	FHB4/PLAT	PZ-39455-09	FHB1/PLAT
Stainless steel mesh shelf	PZ-39455-22	FHB4SH1	PZ-39455-26	FHB5H1
Membrane separators, 20 x 20-cm. Reusable porous mesh sheets ensure even hybridisation when processing multiple membranes in one tube. 5/pk	PZ-39455-32	FMEM2020	PZ-39455-32	FMEM2020
Tube rack holder. Use to store tubes during membrane loading or when not in use. Holds up to 3 large and 3 small tubes	PZ-39455-27	FHTRACK	PZ-39455-27	FHTRACK
Kit for stacking two Hybrigene incubators	PZ-39455-21	FHB4DSTK	—	—
Kit for stacking three Hybrigene incubators	PZ-39455-19	FHB4DKIT	—	—



Techne® Digital Immersion Circulators

Remain in control with higher stability

- Bright 4-digit LED temperature display

TE-10D series offer precise PID temperature control at a competitive price and are ideal for your routine laboratory applications.

TU-20D and TU-20 HT high-powered series deliver increased heater power to enable accurate control over a wider temperature range, designed for applications requiring temperatures above 100°C or for the larger 26-L and 48-L baths when temperature control above 50°C is required. Controlled heating rates and hold times can be achieved by linking the unit to the free TechneWorks software (available online). Bidirectional RS-232 lets you control bath remotely and download data to a computer for further analysis.

What's included: thermometer holder, clamp, and power cord with EU plug.



ISO9001:2008
CERTIFIED SUPPLIER



Specifications

Control method: PID
Temperature sensor: PRT

Wetted materials: 316 stainless steel
and PPS (polyphenylene sulphide)
Extension below base: 145-mm

Over-temperature cutoff: yes,
adjustable
Low-level cutoff: yes

Interface (TU models only): RS-232

Model	Controller type	Temperature range	Stability	Pump type	Max pump pressure	Max flow (L/min)	Heater wattage	Power (VAC, Hz)	Catalogue number	Item number
TE-10D basic series										
TE10DDC	Basic digital	Ambient +5 to 120°C	±0.01°C	Force	2.1 psi (145 mbar)	10	1000 W	230, 50/60	PZ-01262-07	FTE10DDC
TU-20D high-powered series										
TU20DDC	Advanced digital	Ambient +5 to 200°C	±0.005°C	Force	2.1 psi (145 mbar)	10	1800 W	230, 50/60	PZ-01262-15	FTU20DDC
TU-20HT high-temperature high-powered series										
TU20HDC	Advanced digital	Ambient +5 to 250°C	±0.005°C	Force	2.1 psi (145 mbar)	10	1800 W	230, 50/60	PZ-16112-55	FTU20HDC

Techne® Unheated Water Baths

Corrosion-resistant stainless steel for easy cleaning

- Constructed of durable stainless steel with rugged splash-proof case
- Integrated carrying handle for added safety
- Maximum working temperature of 200°C

Designed to be used with a Techne clip-on immersion circulator (sold separately above), these water baths are supplied with bridge mounting plate to hold the circulator.

Order an optional stainless steel lid to prevent evaporation loss. Gabled lids provide extra working headroom for tall items.

What's included: bridge mounting plate.



Model	Bath capacity	Working area (L x W)	Working depth (min/max)	Overall dimensions (W x H x D)	Catalogue number	Item number	Flat lid		Gabled lid	
							Catalogue number	Item number	Catalogue number	Item number
B-8	8-L	115 x 300-mm	100 / 130-mm	325 x 172 x 265-mm	PZ-16104-53	FBATH08	PZ-12122-88	FFLAT08	PZ-12122-95	FGABLE08
B-12	12-L	205 x 300-mm	100 / 130-mm	325 x 172 x 354-mm	PZ-16101-88	FBATH12	PZ-12122-89	FFLAT12	PZ-12122-96	FGABLE12
B-18	18-L	380 x 300-mm	100 / 130-mm	325 x 172 x 530-mm	PZ-16112-01	FBATH18	PZ-12122-90	FFLAT18	PZ-12122-97	FGABLE18
B-26	26-L	380 x 300-mm	150 / 180-mm	325 x 222 x 530-mm	PZ-16101-89	FBATH26	PZ-12122-90	FFLAT18	PZ-12122-97	FGABLE18
B-48	48-L	430 x 330-mm	224 / 255-mm	365 x 298 x 594-mm	PZ-16104-45	FBATH48	PZ-12122-94	FFLAT48	PZ-12122-98	FGABLE48

Techne® Refrigerated Baths

Build a complete refrigerated circulating system

- Circulating bath with built-in refrigeration
- Robust stainless steel construction makes for easy cleaning

These baths, when paired with a Techne immersion circulator (sold separately on page 38), offer a complete refrigerated circulating system for open or closed applications with a temperature range from –35 to 150°C. Baths are designed to cool liquids to temperatures around ambient and below by extracting heat continuously; they are air cooled, pulling air in through the front and expelling it in the rear. An indicator on the front power switch lights up when the bath is running.

What's included: lid, bridging plate, and power cord.



REQUIRED System Components

- 1) Refrigerated bath Page 39
- 2) Immersion circulator Page 38



Bath capacity	Temperature range	Working area (W x L x D)	Cooling capacity at 20°C	Power (VAC, Hz)	Catalogue number	Item number
7-L	–20 to 150°C	15.1 x 19.2 x 20.0-cm	145 W	230, 50/60	PZ-12212-04	FRB5D
12-L	–35 to 100°C	30.0 x 20.8 x 15.0-cm	240 W	230, 50/60	PZ-12212-02	FRB2D
22-L	–30 to 100°C	30.0 x 20.8 x 22.5-cm	240 W	230, 50/60	PZ-12212-00	FRB22D

Techne® Dip and Flow Coolers

Quickly cool liquids down to –35°C

- Compact refrigeration unit takes up minimal bench space
- Designed for use with Techne liquid baths

Flow Cooler FC Series is capable of achieving temperatures of –20°C or –35°C. The bath liquid flows through the unit which continually extracts heat from the bath fluid by means of the heat exchanger which is built into the cooler. Internal capacity of 200-mL.

Dip Cooler RU Series features an external immersion cooling probe, designed to fit securely into the corner of the Techne bath by means of a specially designed mounting bracket (supplied). The cooling probe immediately extracts heat from the liquid once it is placed in the bath; dip coolers work most efficiently when liquid flows over the cooling probe. Probe coil measures 85-mm L x 75-mm diameter. Hose length to coil is 125-cm.

Other baths may be used as long as the flexible hose attached to the cooling probe does not come in contact with the liquid. If bath volume is >48 L, we recommend using the RU-500 model.

What's included: power cord with UK plug.



Model	Minimum temperature	Cooling capacity		Dimensions (L x W x H)	Power (VAC, Hz)	Catalogue number	Item number
		At 20°C	At –10°C				
FC-200 flow cooler	–20°C	140 W	110 W	42.0 x 23.5 x 30.0-cm	230, 50	PZ-16112-43	FFC2D
FC-500 flow cooler	–35°C	210 W	200 W	43.0 x 37.0 x 32.5-cm	230, 50	PZ-16112-45	FFC5D
RU-200 dip cooler	–20°C	145 W	110 W	42.0 x 23.5 x 30.0-cm	230, 50	PZ-14576-01	FRU2D
RU-500 dip cooler	–35°C	240 W	230 W	43.0 x 37.0 x 32.5-cm	230, 50	PZ-14576-07	FRU5D

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Techne® Liquid Calibration Baths

Calibrate your thermal sensors for optimal accuracy

- Temperature stability up to $\pm 0.005^{\circ}\text{C}$ depending on choice of immersion circulator
- Fully insulated bath for excellent heat retention
- Corrosion-resistant stainless steel interior is easy to clean



REQUIRED System Components

- 1) Liquid calibration bath
- 2) Immersion circulator

When temperature calibration is required, these compact liquid baths offer excellent stability over the entire temperature range. They can be also be used for external circulation to maintain temperatures of samples in viscometers, photometers, refractometers, fermenters and other reaction vessels. Pair with a Techne immersion circulator on page 38.

All LCB models offer high pump performance and exceptional thermal stability from -35°C to 250°C . The water baths are fully insulated on all sides and base and are fitted with a cooling coil for connection to a cold water supply for use at temperatures around ambient. The minimum temperature achievable is -35°C when used with a FC series flow cooler or RU series dip cooler†: order separately on page 39.

What's included: bridge mounting plate, cover, lid, drain tap, handles, a cooling coil (with bung), and hole to position a certified sensor.



Model	Bath capacity	Working area (L x W)	Working depth	Overall dimensions (L x W x H)	Catalogue number	Item number
LCB-5	5-L	143.0 x 151.2-mm	125-mm	351 x 260 x 183-mm	PZ-16112-03	FBCAL05D
LCB-7	7-L	143.0 x 151.2-mm	175-mm	351 x 260 x 233-mm	PZ-16105-04	FBCAL07D
LCB-12	12-L	168.0 x 151.2-mm	300-mm	351 x 260 x 358-mm	PZ-16104-50	FBCAL12D

†LCB baths with a TU-20HT thermoregulator are not suitable for use with a FC flow cooler.

Techne® Fluidised Sand Bath System

Fast heat-ups and accurate temperature control to 500°C

- Dry, inert, non-toxic aluminium oxide ensures hazard-free operation
- Safer alternative to high temperature oil and salt baths

1. Sand Bath is ideal for heat treating processes, temperature sensor calibrations, and electrical component testing. Bath uses aluminium oxide (Al_2O_3) fluidised by low-pressure air as a dry bath medium with excellent heat transfer properties. Inert, nonflammable aluminium oxide (included) is safer to use than oil and will not corrode your sample vessels or produce toxic fumes.

Bath requires a dry air flow of approximately 3 cu ft/minute at about 3 psi pressure; order an air pump separately online. If your laboratory is equipped with an air line, it must be fitted with a filter and a pressure regulator.

What's included: overspill flange and universal power cord.



REQUIRED System Components

- 1) Sand bath
- 2) Temperature controller



Temperature range	Optimum uniformity	Heaters	Heat-up times	Working area	Power (50/60 Hz)	Catalogue number	Item number
50 to 500°C	$\pm 0.5^{\circ}\text{C}$	2 x 750 W	6 min to 200°C , 8 min to 350°C , 22 min to 500°C	14.0 x 17.7-cm	240 VAC	PZ-01184-02	F932D

PZ-01184-63 [AOX 120HC 25# PAILS] Replacement aluminium oxide, 25 lbs

2. Temperature Controller integrates an air flowmeter and a PID temperature control with dual-setpoint programming to improve accuracy. Includes a chromel/alumel type K thermocouple which fits into the bath's thermowell and 3 metres of $\frac{3}{8}$ " tubing for air flow control.

Temperature range	Temperature resolution	Temperature stability	Catalogue number	Item number
0 to 620°C	1°C	$\pm 0.2^{\circ}\text{C}$	PZ-01184-50	F937P

Techne® Precision Fluidised Sand Baths

Safe and clean alternative to conventional liquid systems or salt baths

- More efficient and cost effective than ovens and salt baths
- Non-abrasive to any devices or parts put into the bath
- Digital display indicates set point value and actual bath temperature
- Ideal for calibrating and testing irregularly shaped temperature sensors
- Complete with built-in dust extraction and collection system

These precision fluidised sand baths with PID temperature control provide critical temperature calibrations and heat treatment processing. Suitable for many applications including thermal testing of sensitive components such as semiconductor devices, wire products, and delicate transducers or as a constant temperature environment for chemical reactions.

Due to their exceptional temperature uniformity and fast temperature immersions, processing time is between two to three minutes per item for immersion in the bath, followed by quenching in cold fluid. Because the fluidised bed is a fine dry powder, it does not have surface tension effects of liquid baths, and does not wet any objects immersed in it. The basic electrical insulating property of the aluminium oxide used in the baths is not affected by fluidisation, making it possible to conduct electrical measurements on immersed objects such as assembled printed circuit boards.



Fluidised air circulation is manually controlled for model 12184-03 [F949D], while model 12184-94 [F949J] features an automatic fluidising air circulation control. This automatic control allows calibration of thermal sensors with minimum supervision and will adjust the airflow rate to suit the set temperatures of the bath.

What's included: single-probe plate, air filters, regulators, and power cord.



Specifications

Temperature range: 50 to 700°C

Temperature stability: $\pm 0.2^\circ\text{C}$ at 50°C short term, $\pm 0.3^\circ\text{C}$ at 600°C short term, $\pm 0.5^\circ\text{C}$ at 50°C long term, $\pm 0.5^\circ\text{C}$ at 600°C long term, ± 0.010 dead bed

Heat-up times: 105 minutes from 20 to 700°C

Air circulation control	Working area (D x dia)	Overall dimensions (W x H x D)	Power			Catalogue number	Item number
			VAC	Hz	kW		
Manual	38.5 x 16.5-cm	51.5 x 60.0 x 77.0-cm	230	50/60	3	PZ-12184-03	F949D
Automatic						PZ-12184-94	F949J

PZ-12184-00 [F0855] Aluminium oxide, white, 1-kg

PZ-12184-01 [F120D] Air compressor

PZ-12184-02 [F7759] Basket/probe plate, stainless steel mesh

PZ-12184-96 [FFB08DS1] Dust suppression system with chimney.
Requires probe carrier/holder at right

PZ-12184-97 [FFB08FL1] Spare filter for dust suppression system

PZ-12184-98 [FFB08PR1] Probe carrier/holder. Holds eight probes measuring 8-mm x 281-mm deep. Requires dust suppression system

PZ-12184-99 [FFB08PR2] Probe carrier/holder. Holds eight probes measuring 3-mm, 4-mm (x3), 5-mm, 6-mm (x2), 8-mm x 300-mm deep. Requires dust suppression system

Techne® Industrial Fluidised Sand Baths

Safe, efficient, and cost effective cleaning

- Removes plastics, paints, epoxy, rubber, adhesives, grease, lubricants, and oils
- Fast cleaning minimises production equipment down-time

Industrial sand baths are ideal for heat-treatment cleaning, temperature calibrations, and reactive analysis (exothermic and endothermic reactions). They remove most polymers from tooling, including PVC, PET, PTFE, and PEEK without eroding the tool or mold. Easily set temperature for fast heat-ups to 600°C (1112°F) using the integral PID controller and standard type K thermocouple. Temperature stability of $\pm 1.0^\circ\text{C}$ at 450°C. Baskets are available for small parts.

Note: An air source is required.

What's included: 240 VAC power cord.



Temperature range	Stability at 450°C	Heat-up times	Load capacity (L)	Working area	Power (50/60 Hz)	Catalogue number	Item number
50 to 600°C	$\pm 1.0^\circ\text{C}$	105 min to 450°C, 150 min to 600°C	5	33.0 x 24.1-cm	240 VAC	PZ-01184-10	FIFB51D
			37	66.0 x 24.1-cm	240 VAC	PZ-01184-20	FIFB52D

Accessories

PZ-01184-66 [FA625] Basket for bath 01184-10 [FIFB51D]

PZ-01184-70 [7031658] Basket for bath 01184-20 [FIFB52D]

Techne® Prime Thermal Cyclers

No more condensation in your samples

- Adjustable temperature and heated lid eliminate formation of condensation
- Intuitive software and touchscreen for effortless programming of up to 1000 programs
- High performance and reliable—utilise the Peltier effect
- Transfer programs between PC and unit with USB-port



3 Prime Personal and Mid-Sized Thermal Cyclers

- Small space-saving footprint is ideal for research and educational laboratories
- Get fast ramping—heating and cooling rates up to 3.0°C/second

Prime Full-Size Thermal Cycler

- Get more samples processed in less time—high throughput with large number of samples in parallel
- See your experiment progress in real-time via graphic display
- Quicker ramping of heating and cooling of up to 3.4°C/second

Large-format blocks accept nearly any plate type including skirted and nonskirted plates. The Combi-Block holds both 33.0 x 0.2-mL and 33.0 x 0.5-mL tubes.

Specifications

Block temperature range: 4 to 100°C	Gradient range: 30 to 80°C
Block uniformity at 50°C: $\pm 0.3^\circ\text{C}$	Program interface: colour touch-screen with graphical display
Temperature accuracy at 50°C: $\pm 0.2^\circ\text{C}$	Maximum number of programs stored: 1000, or unlimited via USB
Heated lid temperature: 100 to 115°C or off, selectable	Data transfer: USB port
	Power: 100 to 230 VAC, 50/60 Hz

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Description	Block format (included)	Thermal gradient	Catalogue number	Item number
Personal	24.0 x 0.2-mL tubes (also 8 tube strips)	No	PZ-93945-01	3PRIMEBASE/02
	18.0 x 0.5-mL tubes	No	PZ-93945-03	3PRIMEBASE/05
Mid-size with extended capacity	48.0 x 0.2-mL tubes (also half 96-well plate, horizontal)	No	PZ-93945-05	3PRIMEX / 02
		Yes	PZ-93945-09	3PRIMEG / 02
	30.0 x 0.5-mL tubes	No	PZ-93945-07	3PRIMEX / 05
		Yes	PZ-93945-11	3PRIMEG / 05
Full size	96.0 x 0.2-mL tubes	No	PZ-93945-13	5PRIME / 02
		Yes	PZ-93945-19	5PRIMEG / 02
	60.0 x 0.5-mL tubes	No	PZ-93945-15	5PRIME / 05
		Yes	PZ-93945-21	5PRIMEG / 05
	384-well plates	No	PZ-93945-17	5PRIME / 384
		Yes	PZ-93945-23	5PRIMEG / 384
	Combi-block (33.0 x 0.2-mL and 33.0 x 0.5-mL tubes)	No	PZ-93945-71	5PRIME / C
		Yes	PZ-93945-73	5PRIMEG / C

Warning—These products are not approved or intended for, and should not be used for, medical, clinical, surgical or other patient orientated applications.

Techne® Prime Pro 48 Real-Time PCR System

Get quicker, more precise cycles from one temperature to the next

- Fast cycling — runs 40 cycles in under 20 minutes when optimised
- Uses four colours for easy multiplexing
- Offers $\pm 0.1^\circ\text{C}$ temperature uniformity
- No need to run duplicates



Compact real-time thermal cycler can accommodate a 48-well polypropylene PCR plate using the same geometry as standard 384-well plates, but is only $\frac{1}{8}$ of the size. An advanced high-performance optical system delivers precise and sensitive fluorescence detection, facilitating all four colour multiplex applications. The qPRC unit is MIQE compliant, features an adaptive LED control and High-Resolution Melt (HRM) functionality.

Easy-to-use software provides instrument control, data collection, and data analysis. An ergonomic plate loading dock allows for quick loading of the plate and is backlit for clear visibility.

What's included: dock and squeegee, ProControl and ProStudy software USB stick, 50 PCR plates, 50 plate seals, ethernet cable, and power cord.



Specifications

Capacity: 48-well plate, 5 to 20- μL per well	Average ramp rate: 5.5°C/sec
Temperature range: 30 to 100°C	Memory: saves the run data of last experiment, or unlimited via USB
Temp accuracy: $\pm 0.25^\circ\text{C}$	Power: 120 to 240 VAC, 50/60 Hz
Block uniformity: $\pm 0.1^\circ\text{C}$	

Description	Catalogue number	Item number
Pro 48 real-time PCR system	PZ-93945-14	PRIMEPRO48

PZ-93945-98 [PROPLATE48] PCR plates for Pro 48. 50/pk.

PZ-93945-99 [PROSEAL48] PCR plate seals for Pro 48. 50/pk.

Arcis Sample Prep Kit

Amplify sample in less than 3 minutes

- Simple 2-step process
- No instrumentation required
- Stable DNA for 30 days; RNA for 8 days
- No refrigeration needed—shipped/stored at ambient temperatures



Convenient sample preparation kit allows fast analysis and identification without the need for isolation or purification. The complete, ready-to-use system enables you to go from sample to amplifiable DNA and RNA in less than 3 minutes.

The sample is prepared and stabilised without the need for heating or cooling steps and there are no spins—it's a simple 2-step tube protocol. The sample is suitable for use in PCR, qPCR, and sequencing reactions using standard and fast cycling protocols.

What's included: 1 tube of lysis buffer and 1 tube of wash buffer.



Description	Number of reactions	Catalogue number	Item number
Sample prep kit	50	PZ-13204-52	UFL002B
Demo sample prep kit	12 x 3	PZ-13204-53	UFL002BD

Techne® Cell Culture Stirring Systems

Unique stirring action provides high-cell yields

- Combined magnetic biological stirrer/culture vessel creates high-yield cell culture system
- Bulb-ended stir rod provides smooth stirring to prevent cell shearing
- Stirring action offers optimal cell suspension at lowest speed possible
- Slow start/stop feature avoids excessive turbulence in culture media eliminating cell damage
- Interval stirring mode further reduces agitation—ideal when culturing fragile cells
- System creates virtually no heat—suitable for incubators and cold rooms

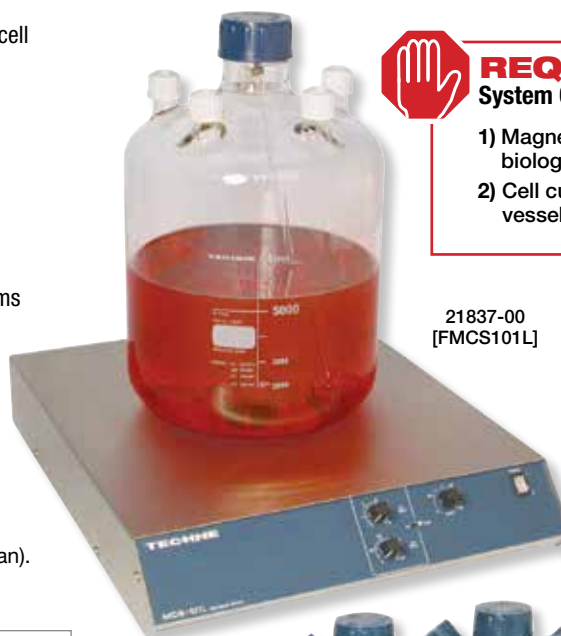
Culture vessels come calibrated and have two side ports and a central filling port. All culture vessel parts can be autoclaved at 121°C and 15 psi for 30 minutes. Completely seal the vessels for use with pathogenic materials. Silicone-encapsulated stir rods reduce the possibility of cells attaching to and growing on the surface. Order as a complete culture vessel (flask, stir rod, and caps) to use with these biological stirrers or order just a flask to use with an existing stirrer.

What's included: three power cords with plug (US, UK, and European).



REQUIRED System Components

- 1) Magnetic biological stirrer
- 2) Cell culture vessel(s)



21837-00
[FMCS101L]



21837-03
[FMCS104S]

Specifications

Speed range: 0 to 80 rpm
Speed accuracy: ± 3 rpm
Soft start speed control:
20 second acceleration;
20 second deceleration

Interval stirring mode:
Variable on time: 6 seconds to 5 minutes
Variable off time: 2 minutes to 2 hours
Max operating conditions: 40°C, 95% RH (noncondensing)
Power: 115/230 VAC, 50/60 Hz

1. Magnetic Biological Stirrers

Flasks per system	Max flask size	Dimensions (L x W x H)	Catalogue number	Item number
1	5000-mL (3000-mL minimum)	49.5 x 39.5 x 9.0-cm	PZ-21837-00	FMCS101L
2	1000-mL	40.0 x 14.0 x 9.0-cm	PZ-21837-01	FMCS102L
4	500-mL	36.5 x 25.0 x 9.0-cm	PZ-21837-03	FMCS104S
4	1000-mL	49.5 x 39.5 x 9.0-cm	PZ-21837-02	FMCS104L
4	5000-mL (only)	59.5 x 53.0 x 9.0-cm	PZ-21837-04	FMCS104X

2. Cell Culture Vessels

Flask size (nominal working volume)	Center neck thread size	Side arm thread size	Side arm diameter	Complete culture vessels		Replacement flasks	
				Catalogue number	Item number	Catalogue number	Item number
125-mL	42-mm	20-mm	14-mm	PZ-21837-37	F7988	PZ-21837-36	F7987
250-mL	42-mm	20-mm	14-mm	PZ-21837-34	F7689	PZ-21837-35	F7690
500-mL	42-mm	30-mm	23-mm	PZ-21837-30	F7607	PZ-21837-32	F7609
1000-mL	60-mm	42-mm	33-mm	PZ-21837-31	F7608	PZ-21837-33	F7610



The largest offering of lyophilised qPCR detection kits available

- No need to refrigerate—all contents are lyophilised for economical, simple transport and storage
- Positive copy number standard curve provides accurate quantification
- Exceptional value at 150 tests per kit
- Each kit available with and without mastermix

ColeParmer.co.uk/Techne



Heating Mantle Blocks for Hot Plates* on pages 4 and 6

Description	Catalogue number	Item number
Small (S) base plate, holds 3 inserts	PZ-04805-70	SHB100BASE
Medium (M) base plate, holds 3 inserts	PZ-04805-76	SHB250BASE
Large (L) base plate, holds 1 insert	PZ-04805-62	SHB1000BASE
Clamp for small base plate	PZ-04805-72	SHB100CLAMP
Clamp for medium base plate	PZ-04805-78	SHB250CLAMP
5-mL heating block insert, S/M (pk of 3)	PZ-04805-98	SHB5ML
10-mL heating block insert, S/M (pk of 3)	PZ-04805-75	SHB10ML
25-mL heating block insert, S/M (pk of 3)	PZ-04805-85	SHB25ML
50-mL heating block insert, S/M (pk of 3)	PZ-04805-97	SHB50ML
100-mL heating block insert, S/M (pk of 3)	PZ-04805-74	SHB100ML
250-mL heating block insert, M (pk of 3)	PZ-04805-83	SHB250ML
50-mL heating block insert, L	PZ-04805-89	SHB50C
100-mL heating block insert, L	PZ-04805-71	SHB100C
250-mL heating block insert, L	PZ-04805-77	SHB250C
500-mL heating block insert, L	PZ-04805-87	SHB500C
Small base, 9 inserts (25, 50, 100-mL)	PZ-04805-73	SHB100KIT9
Medium base, 3 inserts (250-mL)	PZ-04805-79	SHB250KIT3
Medium base, 6 inserts (100, 250-mL)	PZ-04805-81	SHB250KIT6
Large base, 4 inserts (50, 100, 250, 500-mL)	PZ-04805-67	SHB1000KIT

*Compatible on any 15 x 15 cm square top hot plate with ceramic-coated aluminium surface.

Accessories for Orbital Shaking Incubators on page 11

Description	Catalogue number	Item number
Rack, holds 64 x 1.5-mL microtubes	PZ-79520-96	SI500/1
Rack, holds 25 x 15-mL centrifuge tubes	PZ-79520-97	SI500/2
Rack, holds 12 x 50-mL centrifuge tubes	PZ-79520-98	SI500/3
Rack, holds 16 x 30-mL tubes	PZ-79520-99	SI500/4

Accessories for Aquatron® Water Stills on page 14

Description	Catalogue number	Item number
Conversion kit for pre-treated feed (A4000)	PZ-99967-29	A4000/WCK
Conversion kit (A4000D and A8000)	PZ-99964-93	A4000D/WCK
Key for ADH cartridges	PZ-99294-02	ADH/KEY
Wall bracket for deioniser housing, single	PZ-99294-03	ADHSIBKT
Wall bracket for deioniser housing, double	PZ-99294-04	ADHDOBKT
Deioniser housing, double capacity	PZ-99294-06	ADHDOUBLE
Deioniser housing, single capacity	PZ-99294-07	ADHSINGLE
Ion cartridge, 110-capacity (pack of 3)	PZ-99294-08	ADI
Ion exchange cartridges	PZ-99294-09	ADICART
Filter elements (pack of 3)	PZ-99294-12	AFI
Deioniser filter/housing bracket	PZ-99294-13	AFD
Coupling to connect to deioniser unit ADH	PZ-99294-14	ALC

Accessories for Rotary Evaporators on page 16

Description	Catalogue number	Item number
Anti-splash protector	PZ-99955-80	RE200/SA
Evaporating flask, 50-mL	PZ-28615-71	FD50/4RE/1
Evaporating flask, 100-mL	PZ-28615-72	FD100/4RE/1
Evaporating flask, 250-mL	PZ-28615-73	FD250/4RE/1
Evaporating flask, 500-mL	PZ-28615-74	FD500/4RE/1
Evaporating flask, 500-mL, plastic coated	PZ-28615-76	FD500/4REP
Evaporating flask, 1-L	PZ-28615-66	FD1L/4RE/1
Evaporating flask, 1-L, plastic coated	PZ-28615-67	FD1L/4REP
Evaporating flask, 2-L	PZ-28615-68	FD2L/4RE/1
Evaporating flask, 2-L, plastic coated	PZ-28615-69	FD2L/4REP
Extension adapter	PZ-28615-36	RE100/EA
Receiver flask, 50-mL	PZ-28615-39	RE100/RF/50
Receiver flask, 100-mL	PZ-28615-61	RE100/RF/100
Receiver flask, 250-mL	PZ-28615-62	RE100/RF/250
Receiver flask, 500-mL	PZ-28615-63	RE100/RF/500
Receiver flask, 500-mL, plastic coated	PZ-28615-64	RE100/RF/500P
Receiver flask, 1-L	PZ-28615-37	RE100/RF/1L
Receiver flask, 1-L, plastic coated	PZ-28615-38	RE100/RF/1LP

Accessories for Overhead Stirrers on page 17

Description	Catalogue number	Item number
Stand, general purpose, with boss head	PZ-99968-14	SS10/1
Stand, heavy duty, with boss head	PZ-99968-21	SS10/2
Paddle rod, stainless steel, 350-mm	PZ-99968-25	SS10/5
Paddle rod, stainless steel, 550-mm	PZ-99968-26	SS10/6
Small paddle head, 60-mm dia	PZ-99968-16	SS10/10
Small paddle head, 94-mm dia	PZ-99968-17	SS10/11
Large propeller head, 2 blade, 80-mm dia	PZ-99968-18	SS10/12
Large propeller head, 4 blade, 50-mm dia	PZ-99968-19	SS10/13
Anchor paddle head, 60-mm dia	PZ-99968-20	SS10/14
Boss head	PZ-99968-22	SS10/20

Accessories for Spectrophotometers on pages 18–22

Description	Catalogue number	Item number
Sipper pump with inlet/outlet tubing; 230 VAC, 50 Hz	PZ-83061-20	632 001
Serial printer, 40 column, with interface cable, paper roll, ribbon, and universal power supply	PZ-83058-97	543 001
RS-232 interface cable	PZ-53020-52	542 009
RS-232 to USB converter for use with computers without a serial port	PZ-99959-79	037 551
Sipper pump with external control box	PZ-83070-77	685 201
Peltier accessory with external control box	PZ-83070-79	685 301
Combined sipper Peltier with external control box	PZ-83070-81	685 601
Moulded cuvette rack for 16 10 x 10-mm cuvettes	PZ-99610-35	060 422
Automatic 8-cell changer for 74 and 76 series	PZ-83056-29	740 401
10- to 100-mm adjustable path length cuvette holder for 63, 72, 73, 74 and 76 series	PZ-83054-53	630 005
Test tube holder (accepts 10-mm square cuvettes, 16- and 24-mm diameter test tubes) for 63, 72, 73, 74 and 76 series	PZ-83040-43	637 071
External printer for 72, 74 and 76 series	PZ-83056-79	SMP50/PRINTER
10 x 10-mm single cuvette holder for 63, 72, 73, 74 and 76 series	PZ-83070-41	630 204
Micro-cuvette holder with reduced aperture for 63, 72, 73, 74 and 76 series. For cuvettes with 15-mm beam height	PZ-83056-82	630 304
Micro-cuvette holder with reduced aperture for 63, 72, 73, 74 and 76 series. For cuvettes with 8-mm beam height (e.g. Eppendorf Uvette)	PZ-83056-06	720 304

Electrodes for pH Meters on pages 23–24

Description	Catalogue number	Item number
General purpose, epoxy body, for general solutions, up to 80°C	PZ-99960-34	924 001
12-mm stem spear type, glass body, for soil and slurry samples	PZ-35459-18	924 002
Redox (platinum), glass body, for redox measurements	PZ-35459-19	924 003
General purpose, glass body, for general solutions	PZ-99960-35	924 005
4.5-mm semi-micro, 90-mm reach, glass body, for small volume liquid samples	PZ-99960-36	924 007
Spear type, 6-mm stem, glass body, for small volume soil and slurry samples	PZ-35459-20	924 010
350-mm reach probe, glass body, for measurement in flasks	PZ-35459-21	924 078
Glass electrode, pH only. Requires separate reference electrode	PZ-35459-22	924 015
3 in 1 combination pH temperature, epoxy body, up to 100°C	PZ-35459-23	924 070
Life science, 6-mm micro, 150-mm reach, glass body, for test tubes and small sample volumes, up to 100°C	PZ-99960-41	924 049
Tris buffer, semi-micro with 90-mm reach, glass body, for biological buffers, blood and protein samples, up to 50°C	PZ-99960-39	924 030
Environmental, glass body, for low ionic strength solutions and purified water, up to 50°C	PZ-99960-42	924 050
Food extracts and agar plates, epoxy body, flat membrane, up to 60°C	PZ-99960-43	924 051
Jam and preserves, epoxy body	PZ-35459-26	924 077
Spear knife probe, epoxy based, for solid samples	PZ-35459-27	924 034
Difficult applications, glass body; for oils, biofuels, non-aqueous samples, and Tris buffers	PZ-35459-29	924 076
High temperature, glass body, up to 110°C	PZ-35459-30	924 079
Laboratory, glass body, for aggressive chemical solutions	PZ-35459-31	924 080
Waterproof, general purpose, epoxy body, with ATC, up to 100°C	PZ-59530-70	027 227
Waterproof environmental, with ATC, up to 50°C	PZ-99960-44	924 052
Waterproof 12-mm stem spear type, glass body, with ATC	PZ-35459-32	924 053
Waterproof redox (platinum), glass body, with ATC	PZ-35459-33	924 054
Waterproof Tris buffer, glass body, for biological buffers, blood and protein samples, with ATC, up to 50°C	PZ-35459-34	924 055
Waterproof food, with ATC, up to 60°C	PZ-35459-35	924 056
Adapter lead with waterproof connector to BNC electrode connector	PZ-59530-72	538 014
ATC/temperature probe	PZ-99959-71	027 500
PTFE-coated ATC probe, for aggressive/corrosive samples	PZ-35459-36	027 502
Double junction, AgCl, glass body reference electrode, up to 50°C	PZ-35459-37	924 017
Single junction, AgCl, glass body reference electrode, up to 100°C	PZ-35459-38	924 036

Probes for Conductivity Meters on page 24

Description	Catalogue number	Item number
Glass body, K = 1	PZ-99968-36	027 013
Glass body, K = 0.1	PZ-99959-64	027 113
Epoxy body, K = 0.1	PZ-99959-66	027 211
Epoxy body, K = 1	PZ-99959-67	027 212
Epoxy body, K = 10	PZ-99959-68	027 213
Ultra-pure water, K < 0.1	PZ-99959-74	027 900
Micro-volume, glass body, 4-mm diameter, 120-mm reach, K = 1	PZ-99959-72	027 815
Micro-volume, glass body, 6-mm diameter, 180-mm reach, K = 1	PZ-99959-73	027 816



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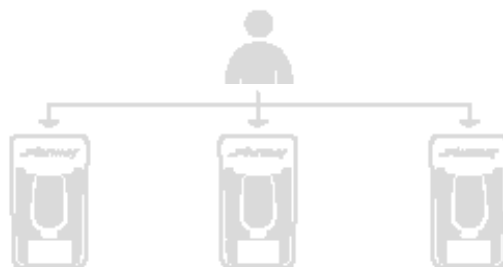
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