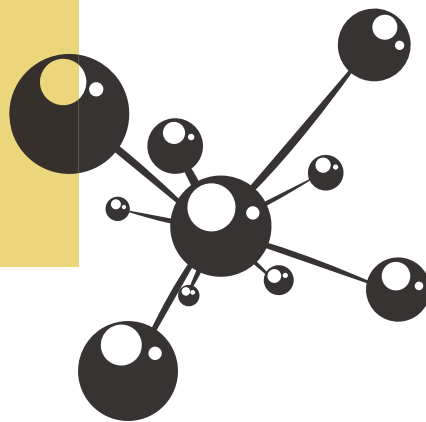


Thermo Scientific Laboratory Products

*Maximizing Productivity for
Every Lab, Every Day*



Thermo
SCIENTIFIC

Optimize Your Productivity...

Welcome to the Thermo Scientific Laboratory Products Every Lab, Every Day catalog featuring a wide range of essential solutions ideal for maximizing your daily work.

From heating, stirring and shaking to water purification and fluid handling, we hope you find this catalog an invaluable resource for selecting the laboratory solutions required to produce consistent, optimal work... in every lab, every day – all backed by the quality, value and expertise you've come to expect from us.

Please visit our web site, www.thermoscientific.com/everylab for additional information and resources.

Here is a preview of some of the daily lab essentials featured in this catalog....



► Digital Water Baths

Thermo Scientific LabLine Water Baths are available in a range of sizes and feature dual and independent high-limit thermostats for over-temperature protection.



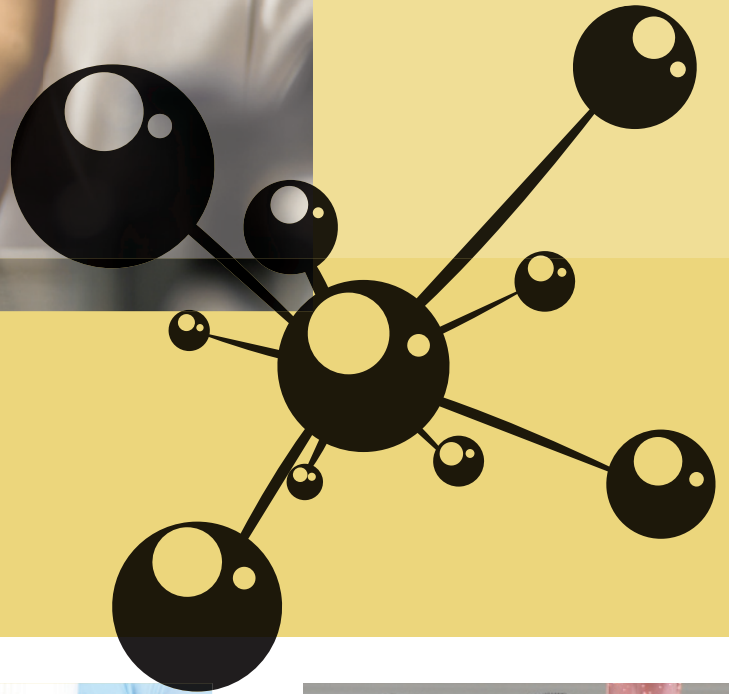
► Digital Stirring Hotplates

Thermo Scientific RT Elite Stirring Hotplates feature advanced Stir Track Technology for stronger magnetic coupling. Controller with external probe and built in timer included.



► Lab Rotators

Thermo Scientific Lab Rotators feature two platform sizes to hold a large variety of vessels ranging from plastic/glass trays, petri dishes, microwell plates, slides, test tube racks, and agglutination cards for a variety of applications, such as molecular biology, immunology and clinical use.



► Furnaces

Thermo Scientific Heraeus High Temperature Furnaces are designed to meet the stringent demands of today's laboratory, delivering precise and reproducible temperature performance. Made in Germany, our furnaces provide superior long-lasting reliability, state-of-the-art safety and excellent energy efficiency.



► Vortex Mixers

Thermo Scientific Maxi Mix II vortex mixer features continuous-run or touch-activated run modes. It includes a soft rubber pad for mixing one to four test tubes simultaneously or small flasks and a single cup holder for mixing individual test tubes.



► Dry Blocks

Thermo Scientific Dry Blocks offer precise temperature control and a compact design to save valuable bench space. Units hold one to six modular aluminum blocks to accommodate a variety of vessels. Digital dry baths include a built-in temperature sensing probe for better temperature accuracy and control.



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BATHS

Thermo Scientific* Lab-Line* AquaBath* Water Baths



The Thermo Scientific Lab-Line AquaBath General-Purpose Water Bath provides precise temperature control and is available with an analog or digital operating system.

The Lab-Line Water Bath is available in a variety of sizes from 2 to 28L, including a shallow form to meet specific application needs and budgets. Bath features dual thermostats and an independent high-limit thermostat for overtemperature protection.

- Hinged acrylic cover lifts to a 90° stay-open position or can be removed completely
- “Fins” on the hinged clear acrylic gable cover (included) protect hands from hot vapors
- Exterior remains cool to the touch even after extended use to prevent accidental burns
- Temperature-resistant plastic rim fits over the seamless stainless-steel reservoir for a leak-free seal
- Stainless-steel exterior resists corrosion and has a tough, easy-to-clean enamel coating
- Rounded, seamless stainless-steel reservoir and diffuser tray resist rust and contamination for simple maintenance
- Movable temperature controllers on the 20 and 28L digital models can be used on the bath long or short side to best utilize bench space
- Heating elements will not burn out if the bath accidentally runs dry
- Drain pump is included with 10, 20, 28 and 5/10L models

Digital Operating System

- Field-calibratable
- PID control provides ±0.24°C uniformity, ±0.5°C stability and ±0.1°C control resolution at 37°C
- Digital temperature set and readout selectable display with 0.1° resolution

Analog Operating System

- Easy-to-use analog control and hydraulic thermostat—ideal for fixed-setpoint applications
- Temperature uniformity ±0.2°C at 37°C
- Diffuser tray, thermometer clip and nonhazardous liquid, partial immersion (76mm) thermometer (-10° to +110°C) included (230V models do not include a thermometer)

Ordering Information: Stainless-steel covers available separately.

Warranty: One year, parts; 90 days, labor

Certifications: CSA and CE certified

Specifications	
Temperature Range	Ambient to 100°C
Chamber	Stainless steel
Cabinet	Stainless-steel shell with enamel coating

Cat. No.	Capacity	Temperature Uniformity	Interior L x W x D	Exterior L x W x H	Shipping Weight	Electrical Requirements
Analog Control						
18050A-1CEQ	2L (0.5 gal.)	±0.2°C at 37°C	13 × 15 × 15cm (5.3 × 5.9 × 6")	25 × 27 × 19cm (9.9 × 10.8 × 7.6")	3.3kg (7 lb.)	230V 50/60Hz
18020A-1CEQ	2L (0.5 gal.) Shallow Chamber	±0.5°C at 37°C	15 × 30 × 6cm (5.9 × 11.8 × 2.5")	27 × 37 × 19cm (10.5 × 14.5 × 7.5")	4kg (9 lb.)	230V 50/60Hz
18000A-1CEQ	5L (1.3 gal.)	±0.2°C at 37°C	15 × 30 × 15cm (6 × 11.8 × 6")	27 × 37 × 19cm (10.5 × 14.5 × 7.6")	4.5kg (10 lb.)	230V 50/60Hz
18800A-1CEQ	5/10L (1.3/2.6 gal.)	±0.2°C at 37°C	30 × 15 × 15cm/30 × 33 × 15cm (11.8 × 5.9 × 6"/11.8 × 12.9 × 6")	42 × 62 × 23cm (16.4 × 24.2 × 8.9")	11.1kg (24.5 lb.)	230V 50/60Hz
18005A-1CEQ	10L (2.6 gal.)	±0.2°C at 37°C	33 × 30 × 15cm (12.9 × 11.8 × 6")	42 × 39 × 23cm (16.4 × 15.4 × 8.9")	7.5kg (16.5 lb.)	230V 50/60Hz
18100A-1CEQ	20L (5.3 gal.)	±0.2°C at 37°C	30 × 50 × 15cm (11.8 × 19.8 × 6")	42 × 62 × 23cm (16.4 × 24.2 × 8.9")	10.1kg (22.3 lb.)	230V 50/60Hz
18900A-1CEQ	28L (7.4 gal.)	±0.24°C at 37°C	30 × 50 × 20cm (11.7 × 19.7 × 8")	42 × 62 × 28cm (16.4 × 24.4 × 10.9")	12kg (26 lb.)	230V 50/60Hz
Digital Control (Temperature Uniformity: ±0.24°C at 37°C)						
18052A-1CEQ	2L (0.5 gal.)	±0.5°C at 37°C	13 × 15 × 15cm (5.3 × 5.9 × 6")	25 × 27 × 19cm (9.9 × 10.8 × 7.6")	3.3kg (7 lb.)	230V 50/60Hz
18022A-1CEQ	2L (0.5 gal.) Shallow Chamber	±0.24°C at 37°C	15 × 30 × 6cm (5.9 × 11.8 × 2.5")	27 × 37 × 19cm (10.5 × 14.5 × 7.5")	4kg (9 lb.)	230V 50/60Hz
18002A-1CEQ	5L (1.3 gal.)	±0.24°C at 37°C	15 × 30 × 15cm (6 × 11.8 × 6")	27 × 37 × 19cm (10.5 × 14.5 × 7.6")	4.5kg (10 lb.)	230V 50/60Hz
18802A-1CEQ	5/10L (1.3/2.6 gal.)	±0.24°C at 37°C	30 × 15 × 15cm/30 × 33 × 15cm (11.8 × 5.9 × 6"/11.8 × 12.9 × 6")	42 × 62 × 23cm (16.4 × 24.2 × 8.9")	11.1kg (24.5 lb.)	230V 50/60Hz
18007A-1CEQ	10L (2.6 gal.)	±0.24°C at 37°C	33 × 30 × 15cm (12.9 × 11.8 × 6")	42 × 39 × 23cm (16.4 × 15.4 × 8.9")	7.5kg (16.5 lb.)	230V 50/60Hz
18102A-1CEQ	20L (5.3 gal.)	±0.24°C at 37°C	30 × 50 × 15cm (11.8 × 19.8 × 6")	42 × 62 × 23cm (16.4 × 24.4 × 8.9")	10.1kg (22.3 lb.)	230V 50/60Hz
18902A-1CEQ	28L (7.4 gal.)	±0.2°C at 37°C	30 × 50 × 20cm (11.7 × 19.7 × 8")	42 × 62 × 28cm (16.4 × 24.4 × 10.9")	12kg (26 lb.)	230V 50/60Hz

Thermo Scientific* Covers for Aquabath* Water Baths

Thermo Scientific covers ensure temperatures are maintained in Aquabath water baths.

Stainless steel.

Cat. No.	For Use with
19000-11Q	2L Baths
19000-13Q	2L Shallow-form and 5L Baths
19000-15Q	10L Baths
19000-17Q	20L and 28L Baths

Thermo Scientific* Precision* Digital Circulating Water Baths



Thermo Scientific Precision Digital Circulating Water Baths are microprocessor controlled and combine simplicity with excellent temperature uniformity.

Ideal for applications where temperature uniformity and control are critical, such as enzymes and serology. Available in three different models, these high performance baths include a stainless-steel gable cover and diffuser shelf.

- Temperature controller provides $\pm 0.05^{\circ}\text{C}$ uniformity at 37°C and control resolution of $\pm 0.05^{\circ}\text{C}$ with stainless-steel gable cover
- Microprocessor control with digital LED display
- Set temperature in 0.1°C increments
- Water flow directed around bath perimeter
- Elevated sample platform for more thorough circulation
- Overtemperature protection capability
- Single switch control for heater and circulator pump
- Stainless-steel construction; exterior finished with baked-on epoxy-polyester

Includes: Stainless-steel gable cover; Diffuser shelf; 3-wire cord and plug; Duck

Warranty: One year, parts and labor

Compliance: ASTM* E715 Class IIA standards for uniformity

Certifications: UL and CE Listed

Specifications	
Temperature Range	Ambient + 5°C to $99.9^{\circ}\text{C}^{\dagger}$
Temperature Control Resolution	$\pm 0.05^{\circ}\text{C}$
Temperature Uniformity	$\pm 0.5^{\circ}\text{C}$
Control	Microprocessor
Display	Digital LED
Chamber	Stainless steel
Cabinet	Epoxy powder-coated stainless steel

[†] With stainless-steel gable cover.

Cat. No.	Model	Capacity	Interior D x W x H	Exterior L x W x H	Shipping Weight	Electrical Requirements
2865	260	19L (5.1 gal.)	30.5 x 38.1 x 19cm (12 x 15 x 7.5")	35.6 x 62.2 x 24.1cm (14 x 24.5 x 9.5")	20.4kg (45 lb.)	230V 50/60Hz, 4.3A
2867	265	34.5L (9.1 gal.)	30.5 x 68.6 x 19cm (12 x 27 x 7.5")	35.6 x 92.7 x 24.1cm (14 x 36.5 x 9.5")	30.8 kg (68 lb.)	230V 50/60Hz, 6.7A
2869	270	89L (23.8 gal.)	46 x 91 x 24cm (18 x 36 x 9.5")	51 x 114 x 30cm (20 x 45 x 12")	38.5kg (85 lb.)	230V 50/60Hz, 6.7A

Thermo Scientific* Sample Racks for Precision* Water Baths



Thermo Scientific Sample Racks are for use with Precision General-Purpose and Circulating Water Baths.

- Stainless-steel racks hold Petri dishes or test tubes

Petri Dish Rack

- Measures 9.75 x 8.75 x 6.25" (24.8 x 22.2 x 15.9cm)
- Holds 80 x 50mm or 30 x 90mm Petri dishes

Test Tube Rack

- Measures 10 x 8.5 x 5.5" (25.4 x 21.6 x 14cm)
- Openings are 1" (2.5cm) square
- Holds 50 test tubes up to 25mm from 97 to 150mm high

Cat. No.	Description	Holds
3166183	Petri dish rack	80 x 50mm or 30 x 90mm Petri dishes
3161601	Test tube rack	50 test tubes up to 25mm from 97 to 150mm high

Thermo Scientific* Water Level Regulator Kit for Precision* Baths

The Thermo Scientific Precision Water Level Regulator Kit is for use with Precision water baths.

- Adjustable float valve automatically opens when the water level in the bath falls below preset limits to keep the bath full
- Valve and float are mounted on a removable bonnet for easy maintenance and service

Includes: 6ft. (1.8m) 0.25" Tygon* tubing, nylon fittings, clamps and adjustable mounting bracket

Cat. No.	For Use with
3166223	Circulating, Reciprocal Shaking and Coliform Water Baths

Thermo Scientific* Glass Thermometer for Precision* Water Baths

This glass thermometer is for use with Thermo Scientific Precision General-Purpose and Circulating Water Baths.

- Nonhazardous spirit-filled glass thermometers read in 1.0°C increments
- For monitoring purposes only

Cat. No.	Temperature Range	Thermometer Length	For Models
3166220	0° to 100°C	305mm (12")	Models 181/281 through 188/288; 260/253/265/270 circulating baths; 25/50/Dubnoff/Shallow Form baths

Thermo Scientific* Gable Covers for Precision* Baths

Gable covers ensure temperatures are maintained in Thermo Scientific Precision water baths.

Cat. No.	For Use with
3166208	Precision Model 253 coliform, Model 265 circulating and Model 50 shaking baths
3166230	89L Precision Circulating Water Bath Model 270
3166565	Precision Model 260 circulating and Model 25 shaking baths

DRY BLOCKS

Thermo Scientific* Dry Block Heaters



Thermo Scientific analog and digital dry baths offer precise temperature control resolution and a much smaller footprint than a general purpose incubator and can be used at temperatures up to 130°C.

These analog and digital dry block heaters feature a built-in temperature-sensing probe for improved temperature accuracy and control. Compact design saves valuable bench space. The anodized aluminum modular blocks accommodate test tubes, square cuvettes, microcentrifuge tubes, 96-well plates, PCR plates and conical bottom centrifuge tubes. Dry block heaters hold 1, 2, 3, 4, and 6 interchangeable modular blocks to accommodate a variety of vessels.

- Number of block configurations meet the needs of virtually any application
- Compact design is ideal for tight space locations
- Digital units utilize a PID microprocessor controller with digital temperature set and easy-to-read LED display for accurate and reproducible temperature control
- Analog units feature bimetallic dual thermostat control
- Powder-coated steel body construction ensures durability
- Chemically resistant design meets the needs of the laboratory environment

Analog Units

- Ideal for fixed temperature applications
- Temperature control at 37°C: $\pm 3.5^\circ\text{C}$, with uniformity of $\pm 0.5^\circ\text{C}$
- Dual temperature control for precise control over two ranges: low range slightly above ambient to 60°C, high range 50° to 130°C
- Read thermometer and adjust knob controller to desired setpoint

Digital Units

- Temperature control at 37°C: $\pm 0.5^\circ\text{C}$, with uniformity of $\pm 0.4^\circ\text{C}$
- Setpoint easily adjusted via up and down arrow keys on front of unit
- Modular block mounts on a single temperature probe in Dry Block Heater bottom, for optimum temperature accuracy and control

Warranty: 90 days on labor and one year on parts

Certifications: CE marked, CSA approved

Specifications	
Temperature Range	Ambient +5° to 130°C
Hertz	50/60

Cat. No.	No. of Blocks Accommodated	Temperature Stability	Temperature Uniformity	Overall L x W x H	Amperage	Watts	Shipping Weight
Digital Models							
2000-1CEQ	1	$\pm 0.5^\circ$ at 37°C	$\pm 0.4^\circ$ at 37°C	28.4 x 22.1 x 9cm (11.2 x 8.7 x 3.6")	0.42A	100w	2kg
2001-1CEQ	2	$\pm 0.5^\circ$ at 37°C	$\pm 0.4^\circ$ at 37°C	36 x 22.1 x 9cm (14.2 x 8.7 x 3.6")	0.63A	150w	3kg
2002-1CEQ	3	$\pm 0.5^\circ$ at 37°C	$\pm 0.4^\circ$ at 37°C	30.4 x 27.4 x 9cm (12 x 10.8 x 3.6")	0.80A	200w	4kg
2003-1CEQ	4	$\pm 0.5^\circ$ at 37°C	$\pm 0.4^\circ$ at 37°C	35.5 x 27.4 x 9cm (14.1 x 10.8 x 3.6")	1.25A	300w	4kg
2004-1CEQ	6	$\pm 0.5^\circ$ at 37°C	$\pm 0.4^\circ$ at 37°C	43 x 27.4 x 9cm (17 x 10.8 x 3.6")	1.67A	400w	5kg
Analog Models							
2050-1CEQ	1	$\pm 3.5^\circ$ at 37°C	$\pm 0.5^\circ$ at 37°C	27.3 x 16 x 9cm (10.8 x 6.2 x 3.4")	0.42A	100w	2kg
2052-1CEQ	2	$\pm 3.5^\circ$ at 37°C	$\pm 0.5^\circ$ at 37°C	29.7 x 21 x 9cm (11.7 x 8.4 x 3.4")	0.63A	150w	3kg
2053-1CEQ	3	$\pm 3.5^\circ$ at 37°C	$\pm 0.5^\circ$ at 37°C	29.7 x 29 x 9cm (11.7 x 11.25 x 3.4")	0.83A	200w	4kg
2054-1CEQ	4	$\pm 3.5^\circ$ at 37°C	$\pm 0.5^\circ$ at 37°C	38.6 x 21 x 9cm (15.2 x 8.3 x 3.4")	1.25A	300w	4kg
2056-1CEQ	6	$\pm 3.5^\circ$ at 37°C	$\pm 0.5^\circ$ at 37°C	40.1 x 29 x 9cm (15.8 x 11.25 x 3.4")	1.67A	400w	5kg

Thermo Scientific* Modular Block Accessories



Thermo Scientific modular block accessories include a wide variety of blocks for Thermo Scientific modular dry baths.

These blocks are made of anodized aluminum for the greatest heat transfer and retention.

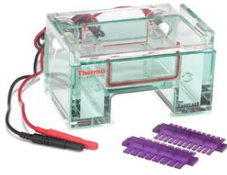
- For use with the digital 2000 series and analog 2050 series modular block dry baths
- Designed to provide close contact of tubes to block walls for excellent heat transfer
- Block W x H x D: 9.5 x 5.1 x 7.4cm (3.75 x 2 x 2.9")

Includes: Thermometer well for monitoring block temperatures; block puller for safe, easy block removal

Cat. No.	Description	No. of Wells	Tube Diameter	For Use with
Blocks				
2070Q	Test Tubes; 6mm	30	0.79cm (0.31")	Digital 2000 series; Analog 2050 series
2071Q	Test Tubes; 10mm	24	1.02cm (0.4")	Digital 2000 series; Analog 2050 series
2072Q	Test Tubes; 12 to 13mm	22	1.35cm (0.53")	Digital 2000 series; Analog 2050 series
2073Q	Test Tubes; 15 to 16mm	12	1.73cm (0.68")	Digital 2000 series; Analog 2050 series
2081Q	Test Tubes; 17 to 18mm	12	1.9cm (0.75")	Digital 2000 series; Analog 2050 series
2074Q	Test Tubes; 20mm	8	2.06cm (0.81")	Digital 2000 series; Analog 2050 series
2075Q	Test Tubes; 25mm	6	2.62cm (1.03")	Digital 2000 series; Analog 2050 series
2076Q	Test Tubes Combination; Three 25mm, five 12 to 13mm, six 6mm	14	2.62cm (1.03"); 1.35cm (0.53"); 0.79cm (0.31")	Digital 2000 series; Analog 2050 series
BKX40LLQ	Centrifuge Tube Block; 15mL	12	16mm	Digital 2000 series; Analog 2050 series
BKX43LLQ	Centrifuge Tube Block; 50mL	4	30mm	Digital 2000 series; Analog 2050 series
2059Q	Microcentrifuge; 0.2mL	79	0.61cm (0.24") taper	Digital 2000 series; Analog 2050 series
2068Q	Microcentrifuge; 0.5mL	30	0.74cm (0.29") taper	Digital 2000 series; Analog 2050 series
2069Q	20 wells for 1.5mL microcentrifuge tubes	20	1.04cm (0.44") taper	
2058Q	Microcentrifuge Combination; Thirty 0.5mL; Nineteen 0.2mL	49	0.74cm (0.29") taper; 0.61cm (0.24") taper	Digital 2000 series; Analog 2050 series
2078Q	Specialty; Solid block for customization	n/a	n/a	Digital 2000 series; Analog 2050 series
2083Q	Specialty; PCR Block (size of 2 blocks)	n/a	n/a	Digital 2000 series; Analog 2050 series
Titer Plates				
2064Q	Titer Plate; Direct contact; Size of two blocks	1	n/a	Digital 2000 series; Analog 2050 series
2065Q	Titer Plate; Size of two blocks	1	n/a	Digital 2000 series; Analog 2050 series
2085	Titer Plate; Stainless-steel cover	n/a	n/a	Models 2064Q and 2065Q
Additional Accessories				
2066Q	Cuvette; 12.5mm	12	n/a	Digital 2000 series; Analog 2050 series

ELECTROPHORESIS

Thermo Scientific* Owl* EasyCast* B1A Mini Gel Electrophoresis Systems



Thermo Scientific* Owl EasyCast B1A Mini Gel Electrophoresis Systems are an ideal size for every lab.

The Owl B1A EasyCast Mini Gel System is designed to provide flat, even banding patterns and consistent results with less hassle. This is the perfect size to determine molecular weight ranges of PCR fragments or larger sized DNA molecules. The all in one design allows the option of casting and running a gel in the buffer chamber, eliminating the need for additional equipment.

- Two comb slots on gel tray double sample capacity by doubling number of sample wells
- UVT gel trays are silk screened with a florescent ruler for easy measurement of bands
- Feature leakproof casting that allows a gel to be cast and run in the same chamber with no tape or additional parts required
- Run from 5 to 24 samples in 15 minutes

Ordering Information: Available with optional buffer exchange ports (B1A-BP) for use with an external recirculation pump.

Includes: Main buffer chamber, SuperSafe* lid with attached power supply leads, EasyCast gasketed UVT gel tray, two heavy-duty, one-piece, double-sided combs: 6 & 10 well, 1.0/1.5mm thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
B1A	EasyCast	Mini	8 x 7cm	16 x 10.5 x 9.5cm (6.31 x 4.13 x 3.75")	400mL	5 to 24
B1A-BP	EasyCast w/Buffer exchange ports	Mini	8 x 7cm	16 x 10.5 x 9.5cm (6.31 x 4.13 x 3.75")	400mL	5 to 24

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* EasyCast B1A Mini Gel System Replacement Parts

Cat. No.	Description
B1A-UVT	EasyCast gasketed UVT gel tray
B1A-GK	Replacement gaskets (1 pair)
B1A-CST	External caster (trays & combs not included)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* EasyCast* B1A Mini Gel Electrophoresis System Combs

For use with the Thermo Scientific* Owl EasyCast B1A Mini Gel Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B1A-5C	Standard comb; 5 teeth	1.0mm / 11.3mm	8µL	30µL	51µL	72µL
B1A-5D	Standard comb; 5 teeth	1.5mm / 11.3mm	13µL	44µL	76µL	108µL
B1A-6	Double-sided comb; 6 teeth	1.0 / 1.5mm / 9.1 / 9.1mm	7 / 10µL	24 / 36µL	41 / 61µL	58 / 87µL
B1A-8	Double-sided comb; 8 teeth	1.0 / 1.5mm / 6.4 / 6.4mm	5 / 7µL	17 / 25µL	29 / 43µL	41 / 61µL
B1A-10	Double-sided comb; 10 teeth	1.0 / 1.5mm / 4.8 / 4.8mm	4 / 5 µL	13 / 19µL	21 / 32µL	30 / 46µL
B1A-12	Double-sided comb; 12 teeth	1.0 / 1.5mm / 3.7 / 3.7mm	3 / 4µL	10 / 14µL	16 / 25µL	23 / 35µL
B1A-PREP	Prep comb; 2 teeth	1.5mm / 57 / 5 mm	64 / 6µL	225 / 19µL	385 / 32µL	550 / 46µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* EasyCast* B1 Mini Gel Electrophoresis Systems



Thermo Scientific* Owl EasyCast B1 Mini Gel Electrophoresis Systems are economical enough for every researcher to have one at their workstation.

The Owl B1 EasyCast Mini Gel System features leakproof casting that allows a gel to be cast and run in the same chamber with no tape or additional parts required. The durability and ease of use makes this the perfect choice for students and high volume researchers.

- Offers a wide range of combs
- Two comb slots on gel tray double sample capacity by doubling number of sample wells
- UVT gel trays are silk screened with a florescent ruler for easy measurement of bands

Ordering Information: Available with optional buffer exchange ports, (B1-BP), for use with an external recirculation pump. **Please order using Cat. No. B1 when ordering the EasyCast system without buffer exchange ports.**

Includes: Main buffer chamber, SuperSafe* lid with attached power supply leads, EasyCast Gasketed UVT gel tray, two Combs: 10 & 14 Well, Double-sided, 1.0/1.5mm thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
B1-PTM†	EasyCast	Mini	11 x 9cm	22 x 15 x 9.5cm (8.63 x 5.88 x 3.75")	600mL	5 to 34
B1-BP	EasyCast w/buffer exchange ports	Mini	11 x 9cm	22 x 15 x 9.5cm (8.63 x 5.88 x 3.75")	600mL	5 to 34

† Please order using Cat. No. B1 when ordering the EasyCast system without buffer exchange ports.

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* EasyCast B1 Mini Gel System Replacement Parts

The compact, yet functional Thermo Scientific Owl EasyCast B1 Mini Gel System runs from 5 to 34 samples.

Cat. No.	Description
B1-UVT	EasyCast Gasketed UVT Gel Tray
B1-GK	Replacement Gaskets (1 pair)
B1-CST	External Caster (trays and combs not included)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* EasyCast* B1 Mini Gel Electrophoresis System Combs

For use with the Thermo Scientific* Owl EasyCast B1 Mini Gel Electrophoresis System

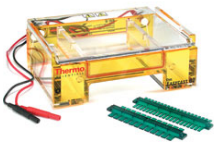
Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B1-5C	Standard 5-tooth comb	1.0mm / 15.4mm	12µL	40µL	69µL	98µL
B1-5D	Standard 5-tooth comb	1.5mm / 15.4mm	17µL	61µL	104µL	147µL

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B1-8C	Standard 8-tooth comb	1.0mm / 9.0mm	7µL	24µL	40µL	57µL
B1-8D	Standard 8-tooth comb	1.5mm / 9.0mm	10µL	35µL	61µL	86µL
B1-10	Double-sided 10 tooth comb	1.0 / 1.5mm / 6.8 / 6.8mm	5 / 8µL	18 / 27µL	31 / 46µL	43 / 65µL
B1-12C	Standard 12 tooth comb	1.0mm / 5.4mm	4µL	14µL	24µL	34µL
B1-12D	Standard 12 tooth comb	1.5mm / 5.4mm	6µL	21µL	36µL	51µL
B1-14	Double-sided 14 tooth comb	1.0 / 1.5mm / 4.4 / 4.4mm	3 / 5µL	11 / 17µL	20 / 29µL	28 / 42µL
B1-RL-9C‡	Rapid-load 9 tooth (1X) comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
B1-RL-9D‡	Rapid-load 9 tooth (1X) comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
B1-RL-17C‡	Rapid-load 17 tooth (2X) comb	1.0mm / 2.5mm	2µL	7µL	12µL	17µL
B1-RL-17D‡	Rapid-load 17 tooth (2X) comb	1.5mm / 2.5mm	3µL	11µL	18µL	26µL
B1-PREP	Prep comb	1.5mm / 78 / 5mm	90 / 6µL	310 / 19µL	525 / 32µL	750 / 46µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* EasyCast* B2 Mini Gel Electrophoresis Systems



Thermo Scientific Owl EasyCast B2 Mini Gel Electrophoresis Systems provide superior flexibility in a small footprint.

The simple to use casting method, and multiple comb and tray options, makes the EasyCast B2 Owl's most popular system.

The EasyCast systems feature leakproof casting that allows a gel to be cast and run in the same chamber with no tape or additional parts required. The EasyCast B2's longer gel length and the 2 comb slots provide the flexibility of running 8 to 48 samples on 1 gel. The optional multi load tray can increase the maximum number of samples to 108 in an 8 or 12 multichannel pipette format.

- 2 comb slots on the U.V. Transmissible (UVT) gel tray double sample capacity by doubling the number of sample wells
- UVT gel trays are silk screened with a florescent ruler for easy measurement of bands

Ordering Information: Available with optional buffer exchange ports (B2-BP) for use with an external recirculation pump

Includes: Buffer chamber, SuperSafe* lid with attached power supply leads, EasyCast gasketed U.V. Transmissible (UVT) gel tray, 2 combs: 12 & 20 well, double-sided, 1.0/1.5 mm thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
B2	EasyCast	Mini	14 x 12cm	24.5 x 18 x 9.5cm (9.63 x 7.06 x 3.75")	800mL	8 to 48
B2-BP	EasyCast w/buffer exchange ports	Mini	14 x 12cm	24.5 x 18 x 9.5cm (9.63 x 7.06 x 3.75")	800mL	8 to 48

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* EasyCast* Mini Gel System Replacement Parts

Thermo Scientific EasyCast Mini Gel Systems provide flexibility in a very small footprint.

Cat. No.	Description
B2-UVT	EasyCast gasketed UVT gel tray
B2-GK	Replacement gaskets (1 pair)

Thermo Scientific* Owl* EasyCast* B2 Mini Gel System Accessories

Cat. No.	Description
B2-RL-UVT	EasyCast gasketed rapid load UVT gel tray with 12 slots
B2-RL	EasyCast gasketed rapid load UVT gel tray with 12 slots and 12 rapid load combs
B2-CST	External caster (trays & combs not included)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* EasyCast* B2 Mini Gel Electrophoresis System Combs

For use with the Thermo Scientific* Owl EasyCast B2 Mini Gel Electrophoresis Systems

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B2-8C	Standard 8-tooth comb	1.0mm / 12.5mm	9µL	33µL	56µL	80µL
B2-8D	Standard 8-tooth comb	1.5mm / 12.5mm	14µL	49µL	84µL	120µL
B2-12	Double-sided 12 tooth comb	1.0 & 1.5mm / 7.2mm	5 / 8 µL	18 / 28µL	32 / 49µL	46 / 69µL
B2-16	Double-sided 16 tooth comb	1.0 & 1.5mm / 5.4mm	4 / 6µL	14 / 21µL	24 / 36µL	34 / 52µL
B2-20	Double-sided 20 tooth comb	1.0 & 1.5mm / 3.9mm	3 / 4µL	10 / 15µL	18 / 26µL	25 / 37µL
B2-24	Double-sided 24 tooth comb	1.0 & 1.5mm / 3.0mm	2 / 3µL	8 / 12µL	14 / 20µL	19 / 29µL
B2-RL-9C‡	Rapid-load 9 tooth (1X) comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
B2-RL-9D‡	Rapid-load 9 tooth (1X) comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
B2-RL-25C‡	Rapid-load 25 tooth (2X) comb	1.0mm / 2.5mm	2µL	7µL	12µL	17µL
B2-RL-25D‡	Rapid-load 25 tooth (2X) comb	1.5mm / 2.5mm	3µL	11µL	18µL	26µL
B2-PREP	Prep comb w/2 teeth	1.5mm / 106 / 5	120 / 5.5µL	415 / 20µL	710 / 34µL	1000 / 48µL
B2-WALL	Wall comb w/1 tooth	1.5mm / 120	—	—	—	—

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* EasyCast* B3 Gel System with Built-In Recirculation



Thermo Scientific* Owl B3 EasyCast Systems with Built-in Recirculation are ideal for long runs, multiple sample sets or RNA gels.

- Prevent the formation of pH and ionic gradients
- Provide high resolution and uniform, reproducible results
- Deliver clear results for samples run over long time periods
- Do not require external pumps, tubing or stir bars, because recirculation system is built into buffer chamber
- Eliminate uneven migration, band distortion or disassociation of pH-dependent glyoxylated RNA molecules that can result when ionic depletion occurs

Includes: Minigel system includes buffer chamber, SuperSafe* lid with attached power supply leads, EasyCast* gasketed UVT gel tray, as well as 12- and 20-well, double-sided 1.0/1.5mm thick combs.

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
B3	EasyCast	Mini	14 x 12cm	25 x 18 x 12cm (9.75 x 7 x 4.72")	1000mL	8 to 50

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* EasyCast* Mini Gel System Replacement Parts

Thermo Scientific EasyCast Mini Gel Systems provide flexibility in a very small footprint.

Cat. No.	Description
B2-UVT	EasyCast gasketed UVT gel tray
B2-GK	Replacement gaskets (1 pair)

Thermo Scientific* Owl* EasyCast* Mini Gel System Accessories

Cat. No.	Description
B2-RL-UVT	EasyCast gasketed rapid load UVT gel tray with 12 slots
B2-RL	EasyCast gasketed rapid load UVT gel tray with 12 slots and 12 rapid load combs
B2-CST	External caster (trays & combs not included)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* EasyCast* B3 Mini Gel Electrophoresis System Combs

For use with the Thermo Scientific* Owl EasyCast B3 Mini Gel Electrophoresis Systems

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B2-8C	Standard 8-tooth comb	1.0mm / 12.5mm	9µL	33µL	56µL	80µL

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B2-8D	Standard 8-tooth comb	1.5mm / 12.5mm	14µL	49µL	84µL	120µL
B2-12	Double-sided 12 tooth comb	1.0 & 1.5mm / 7.2mm	5 / 8 µL	18 / 28µL	32 / 49µL	46 / 69µL
B2-16	Double-sided 16 tooth comb	1.0 & 1.5mm / 5.4mm	4 / 6µL	14 / 21µL	24 / 36µL	34 / 52µL
B2-20	Double-sided 20 tooth comb	1.0 & 1.5mm / 3.9mm	3 / 4µL	10 / 15µL	18 / 26µL	25 / 37µL
B2-24	Double-sided 24 tooth comb	1.0 & 1.5mm / 3.0mm	2 / 3µL	8 / 12µL	14 / 20µL	19 / 29µL
B2-RL-9C‡	Rapid-load 9 tooth (1X) comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
B2-RL-9D‡	Rapid-load 9 tooth (1X) comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
B2-RL-25C‡	Rapid-load 25 tooth (2X) comb	1.0mm / 2.5mm	2µL	7µL	12µL	17µL
B2-RL-25D‡	Rapid-load 25 tooth (2X) comb	1.5mm / 2.5mm	3µL	11µL	18µL	26µL
B2-PREP	Prep comb w/2 teeth	1.5mm / 106 / 5	120 / 5.5µL	415 / 20µL	710 / 34µL	1000 / 48µL
B2-WALL	Wall comb w/1 tooth	1.5mm / 120	—	—	—	—

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* D2 Wide-Gel Electrophoresis Systems



Thermo Scientific* Owl D2 Wide-Gel Electrophoresis System can run from 10 to 80 samples on one gel.

- Wide gel size allows 15 or 30 samples to be loaded per row with a micro well comb
- Using special combs and a multichannel pipetter, samples may be loaded directly from a 96-well plate, 8 or 12 at a time
- Excellent for screening PCR samples or routine DNA fragment analysis
- Small footprint saves space on lab bench
- Incorporates EasyCast* casting design with external caster—gel tray is fitted with gasket, allowing it to fit snugly into caster and providing a leakproof seal without tape
- Electrode placement allows gel to be run quickly without compromising resolution

Includes: Buffer chamber, SuperSafe* lid with attached power supply leads, EasyCast gasketed UVT gel tray, external multiple gel caster, four combs (two 30-well and two 40-well, 1.5mm thick)

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
D2	Wide	14.4 x 10.2cm	19 x 20 x 10cm (7.38 x 7.75 x 4")	600mL	10 to 80
D2-BP	Wide w/buffer exchange ports	14.4 x 10.2cm	19 x 20 x 10cm (7.38 x 7.75 x 4")	600mL	10 to 80

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* D2 Wide-Gel System Replacement Parts

Thermo Scientific* Owl D2-Wide Gel System is great for protocols with large numbers of samples.

- UVT gel tray incorporates gasketed end gates which provide a leakproof seal without tape
- Comb slots are positioned so you can arrange up to 12 sample sets on the same gel

Cat. No.	Description
D2-UVT	EasyCast gasketed UVT gel tray
D2-GK	Replacement gaskets (1 pair)
D2-CST	External caster (no trays/combs)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* D2 Wide-Gel Electrophoresis System Combs

For use with the Thermo Scientific* Owl D2 Wide-Gel Electrophoresis Systems

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
D1-10C	Standard 10-tooth comb	1.0mm / 12.2mm	9µL	32µL	55µL	78µL
D1-10D	Standard 10-tooth comb	1.5mm / 12.2mm	14µL	48µL	82µL	117µL
D1-20C	Standard 20-tooth comb	1.0mm / 5.2mm	4µL	14µL	23µL	33µL

Cat. No. †	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
D1-20D	Standard 20-tooth comb	1.5mm / 5.2mm	6µL	20µL	35µL	50µL
D1-30C‡	Micro well 30-tooth (2X) comb	1.0mm / 2.7mm	5µL	19µL	32µL	46µL
D1-30D‡	Micro well 30-tooth (2X) comb	1.5mm / 2.7mm	8µL	28µL	49µL	69µL
D1-40C	Standard 40-tooth comb	1.0mm / 1.7mm	1µL	4µL	8µL	11µL
D1-40D	Standard 40-tooth comb	1.5mm / 1.7mm	2µL	7µL	11µL	16µL
D1-MTC‡	Micro well 15-tooth (1X) comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
D1-MTD‡	Micro well 15-tooth (1X) comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
D2-RL-9C‡	Rapid load 9-tooth (1X) comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
D2-RL-9D‡	Rapid load 9-tooth (1X) comb	1.5mm / 7.2mm	8µL	28µL	48µL	69µL
D2RL25C‡	Rapid load 25-tooth (2X) comb	1.0mm/2.5mm	2µL	7µL	12µL	17µL
D2-RL-25D‡	Rapid load 25-tooth (2X) comb	1.5mm / 2.5mm	3µL	11µL	18µL	26µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* D3-14 Horizontal Electrophoresis System



Thermo Scientific Owl D3-14 Horizontal Electrophoresis System is ideal for screening PCR products, plasmid preps, restriction mapping and cloning.

- System screens 25 to 200 samples on a single agarose gel in less than 30 minutes, producing clear, tight banding patterns with no “smiling”
- Using special combs and a multichannel pipetter, samples may be loaded directly from a 96-well plate, 8 or 12 at a time
- Incorporates Owl's EasyCast* casting design with external caster—gel tray is fitted with gasket, allowing it to fit snugly into caster and providing a leakproof seal without tape
- Sample loading with multichannel pipetter speeds up transfer
- Electrode placement allows gel to be run quickly without compromising resolution
- Bubble level ensures casting of flat, uniformly thick gels

Includes: Buffer chamber, SuperSafe* lid with attached power cords, EasyCast* gasketed UVT gel tray, external caster, four combs (50 micro well, 1.5mm thick)

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
D3-14	Wide	14 x 23cm	30 x 27 x 11cm (11.8 x 10.6 x 4.3")	800mL	25 to 200

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* D3-14 System Replacement Parts

Thermo Scientific* Owl D3-14 Wide gel system offers a simple, convenient and fast method for screening multiple samples on a single agarose gel.

- UVT gel tray incorporates gasketed end gates which provide a leakproof seal without tape; comb slots are positioned to enable up to 12 sample sets on the same gel

Cat. No.	Description
D3-UVT-14	EasyCast* gasketed UVT Gel Tray
D3-GK	Replacement gaskets (1 pair)
D3-CST-14	External caster (no trays/combs)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* Casting Dams



Thermo Scientific Owl Casting Dams are high-quality aluminum dams that block off a portion of the gel tray, allowing shorter gels or gradient gels to be cast and run.

- Seal agarose on contact, eliminating the need for tape
- Do not attach to gel tray, enabling gels of any length to be poured
- Easily handled and maneuvered using knob or finger depressions
- Dam blocks off a portion of UVT gel tray
- Allows shorter gels to be cast and run in one device

Cat. No.	Description
DAM-23	Chameleon casting dam; 23cmW

Thermo Scientific* Owl* D3-14 Horizontal Electrophoresis System Combs

For use with the Thermo Scientific* Owl D3-14 Horizontal Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume				Price
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness	
D3-MTC‡	Micro well 25 (1X)-tooth comb	1.0mm / 7.5mm	6µL	20µL	34µL	48µL	
D3-MTD‡	Micro well 25 (1X)-tooth comb	1.5mm / 7.5mm	8µL	30µL	51µL	72µL	
D3-MT2C‡	Micro well 50 (2X)-tooth comb	1.0mm / 3mm	2µL	8µL	14µL	19µL	
D3-MT2D‡	Micro well 50 (2X)-tooth comb	1.5mm / 3mm	3µL	12µL	20µL	29µL	
D3-WALL	Wall comb, 1 tooth	1.5mm / 230mm	—	—	—	—	

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* A6 Horizontal Electrophoresis System



Thermo Scientific Owl A6 Horizontal Electrophoresis System is ideal for high-throughput laboratories.

- System screens 25 to 500 samples on a single agarose gel, producing clear, tight banding patterns with no “smiling”
- Gel tray's unique comb-slot design allows use of up to 10 evenly spaced combs
- Using special combs and a multichannel pipetter, samples may be loaded directly from a 96-well plate, 8 or 12 at a time
- Incorporates Owl's end-gate casting design—gel tray is fitted with gasketed end gates which provide a leakproof seal without tape
- Sample loading with multichannel pipetter speeds up transfer
- Bubble level ensures casting of flat, uniformly thick gels

Includes: Buffer chamber with three-point leveling base, SuperSafe* lid with attached power supply leads, UVT gel tray with gasketed end gates, four combs (two 25-well and two 50-well, 1.5mm thick)

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
A6	Wide	25 x 23cm	35 x 38 x 11cm (13.75 x 14.94 x 4.38")	3.0L	25 to 500

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* Model A6 Wide Gel Electrophoresis System Replacement Parts

The Thermo Scientific Owl A6 Wide Gel System offers a simple, convenient and fast method for screening multiple samples on a single agarose gel.

- UVT gel tray incorporates gasketed end gates which provide a leakproof seal without tape

Cat. No.	Description
A6-UVT	UVT gel tray with gasketed end gates
A3-GK-1	Replacement gaskets (1 pair)
A3-1-EG	Replacement end gates (1 pair)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level

Thermo Scientific* Owl* Casting Dams



Thermo Scientific Owl Casting Dams are high-quality aluminum dams that block off a portion of the gel tray, allowing shorter gels or gradient gels to be cast and run.

- Seal agarose on contact, eliminating the need for tape
- Do not attach to gel tray, enabling gels of any length to be poured
- Easily handled and maneuvered using knob or finger depressions
- Dam blocks off a portion of UVT gel tray
- Allows shorter gels to be cast and run in one device

Cat. No.	Description
DAM-23	Chameleon casting dam; 23cmW

Thermo Scientific* Owl* A6 Horizontal Electrophoresis System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
D3-MTC‡	Micro well 25 (1X)-tooth comb	1.0mm / 7.5mm	6µL	20µL	34µL	48µL
D3-MTD‡	Micro well 25 (1X)-tooth comb	1.5mm / 7.5mm	8µL	30µL	51µL	72µL
D3-MT2C‡	Micro well 50 (2X)-tooth comb	1.0mm / 3mm	2µL	8µL	14µL	19µL
D3-MT2D‡	Micro well 50 (2X)-tooth comb	1.5mm / 3mm	3µL	12µL	20µL	29µL
D3-WALL	Wall comb, 1 tooth	1.5mm / 230mm	—	—	—	—

† Customized combs are available (Order SKU #XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* A3-1 Large-Gel Electrophoresis System



Thermo Scientific Owl A3-1 Large-Gel Electrophoresis System is well suited for plant genomics studies.

- Horizontal system can run from 25 to 600 samples on one gel
- Gel can be cast in varying lengths to help conserve agarose when fewer samples need to be run
- Built-in buffer exchange ports allow for buffer recirculation on extended runs
- UVT gel tray has gasketed end gates for leakproof seal without tape
- Built-in leveling ensures flat, uniformly thick gels
- Large number of comb slots provides sample number and resolving distance flexibility
- Microwell-format combs provide fast, error-free sample loading with a multichannel pipetter
- Samples may be loaded directly from a 96-well plate, 8 or 12 at a time

Includes: Buffer chamber with three-point leveling base, SuperSafe* lid with attached power supply leads, UVT gel tray, four combs (two 25- and two 50-well), built-in buffer exchange ports and bubble level

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
A3-1	Large	40 x 23cm	53 x 32 x 11cm (20.63 x 12.5 x 4.25")	4.5L	25 to 600

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* A3-1 Large Gel System Replacement Parts

The Thermo Scientific Owl A3-1 Large Gel System can run from 25 to 600 samples on one gel.

Cat. No.	Description
A3-UVT-1	UVT gel tray with gasketed end gates
A3-1-EG	Replacement end gates (1 pair)
A3-GK-1	Replacement gaskets (1 pair)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level

Thermo Scientific* Owl* Casting Dams



Thermo Scientific Owl Casting Dams are high-quality aluminum dams that block off a portion of the gel tray, allowing shorter gels or gradient gels to be cast and run.

- Seal agarose on contact, eliminating the need for tape
- Do not attach to gel tray, enabling gels of any length to be poured
- Easily handled and maneuvered using knob or finger depressions
- Dam blocks off a portion of UVT gel tray
- Allows shorter gels to be cast and run in one device

Cat. No.	Description
DAM-23	Chameleon casting dam; 23cmW

Thermo Scientific* Owl* A3-1 Horizontal Electrophoresis System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
D3-MTC‡	Micro well 25 (1X)-tooth comb	1.0mm / 7.5mm	6µL	20µL	34µL	48µL
D3-MTD‡	Micro well 25 (1X)-tooth comb	1.5mm / 7.5mm	8µL	30µL	51µL	72µL
D3-MT2C‡	Micro well 50 (2X)-tooth comb	1.0mm / 3mm	2µL	8µL	14µL	19µL
D3-MT2D‡	Micro well 50 (2X)-tooth comb	1.5mm / 3mm	3µL	12µL	20µL	29µL
D3-WALL	Wall comb, 1 tooth	1.5mm / 230mm	—	—	—	—
† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details. ‡ 8 and 12-channel pipette format (1X) and (2X) combs.						

Thermo Scientific* Owl* A1 Large Gel Systems



Thermo Scientific* Owl A1 Large Gel Systems have the smallest footprint of a large format device, and is ideal for detailed RNA/DNA analysis.

- Gel can be cast in varying lengths to help conserve agarose when fewer samples need to be run
- Optional built-in buffer exchange ports allow for buffer recirculation on extended runs
- Programmable power inverter may be used for field reversal electrophoresis
- UVT gel tray has gasketed end gates for leakproof seal without tape
- Built-in leveling ensures flat, uniformly thick gels
- Comb slots allow two, three or four sample sets of equal lengths to be run on the same gel
- Microwell-format combs provide fast, error-free sample loading with a multichannel pipetter
- Samples may be loaded directly from a 96-well plate, 8 or 12 at a time

Includes: Buffer chamber with three-point leveling base, SuperSafe* lid with attached power supply leads, UVT gel tray, gasketed end gates, three combs (12, 16 and 20-well), 1.5mm thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
A1	Large	25 x 13cm	37.5 x 21.5 x 11cm (14.8 x 8.5 x 4.3")	1.6L	8 to 150
A1-BP	Large, w/buffer exchange ports	25 x 13cm	37.5 x 21.5 x 11cm (14.8 x 8.5 x 4.3")	1.6L	8 to 150

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* A1 Large Gel System Replacement Parts

- UVT gel tray incorporates gasketed end gates which provide a leakproof seal without tape
- Comb slots are positioned so you can arrange up to 10 sample sets on the same gel
- Unique electrode placement allows this gel to be run quickly without compromising the resolution

Catalog Number	Description
A1-UVT	UVT gel tray with gasketed end gates
A1-GK	Replacement gaskets (1 pair)
A1-EG	Replacement end gates (1 pair)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level

Thermo Scientific* Owl* Casting Dams



Thermo Scientific Owl Casting Dams are high-quality aluminum dams that block off a portion of the gel tray, allowing shorter gels or gradient gels to be cast and run.

- Seal agarose on contact, eliminating the need for tape
- Do not attach to gel tray, enabling gels of any length to be poured
- Easily handled and maneuvered using knob or finger depressions
- Dam blocks off a portion of UVT gel tray
- Allows shorter gels to be cast and run in one device

Cat. No.	Description
DAM-13	Chameleon casting dam; 13cmW

Thermo Scientific* Owl* A1 Large Gel Electrophoresis System Combs

For use with the Thermo Scientific* Owl A1 Large Gel Electrophoresis Systems

Heavy duty, one piece combs eliminate comb assembly.

Cat. No. †	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
A1-8C	Standard 8-tooth comb	1.0mm / 13.9mm	10µL	36µL	63µL	89µL
A1-8D	Standard 8-tooth comb	1.5mm / 13.9mm	16µL	55µL	95µL	133µL
A1-12C	Standard 12-tooth comb	1.0mm / 8.7mm	7µL	23µL	39µL	55µL
A1-12D	Standard 12-tooth comb	1.5mm / 8.7mm	10µL	34µL	59µL	83µL
A1-16C	Standard 16-tooth comb	1.0mm / 6.1mm	5µL	16µL	27µL	39µL
A1-16D	Standard 16-tooth comb	1.5mm / 6.1mm	7µL	24µL	41µL	58µL
A1-20C	Standard 20-tooth comb	1.0mm / 4.5mm	3µL	12µL	20µL	29µL
A1-20D	Standard 20-tooth comb	1.5mm / 4.5mm	5µL	18µL	30µL	43µL
A1-24C	Standard 24-tooth comb	1.0mm / 3.5mm	3µL	9µL	16µL	22µL
A1-24D	Standard 24-tooth comb	1.5mm / 3.5mm	4µL	14µL	24µL	33µL
A1-MTC‡	Micro well 14 (1X) tooth comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
A1-MTD‡	Micro well 14 (1X) tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
A1-RL-9C‡	Rapid load 9 (1X) tooth comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
A1-RL-9D‡	Rapid load 9 (1X) tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
A1-RL-25C‡	Rapid load 25 (2X) tooth comb	1.0mm / 2.5mm	2µL	7µL	12µL	17µL
A1-RL-25D‡	Rapid load 25 (2X) tooth comb	1.5mm / 2.5mm	3µL	11µL	18µL	26µL
A1-PREP	Prep 2-tooth comb	1.5mm / 117 / 5mm	130 / 6µL	455 / 20µL	775 / 34µL	1100 / 48µL
A1-WALL	Wall 1-tooth comb	1.5mm / 130mm	—	—	—	—

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* A2 Large Gel Systems



Thermo Scientific Owl Horizontal A2 Large Gel Systems are ideal for detailed RNA/DNA analysis and handle high throughput with consistent, reliable results.

- Gel can be cast in varying lengths to help conserve agarose when fewer samples need to be run
- Optional built-in buffer exchange ports allow for buffer recirculation on extended runs
- UVT gel tray has gasketed end gates for leakproof seal without tape
- Built-in leveling ensures flat, uniformly thick gels
- Comb slots allow two, three or four sample sets of equal lengths to be run on the same gel
- Microwell-format combs provide fast, error-free sample loading with a multichannel pipetter
- Samples may be loaded directly from a 96-well plate, 8 or 12 at a time
- Offers the greatest variety of comb options

Includes: Buffer chamber with three-point leveling base, SuperSafe* lid with attached power supply leads, UVT gel tray, gasketed end gates, three combs (16, 24 and 36-well), 1.5mm thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
A2	Large	25 x 20cm	37.5 x 32.5 x 10.5cm (14.8 x 12.8 x 4.1")	2.3L	8 to 432
A2-BP	Large, w/buffer exchange ports	25 x 20cm	37.5 x 32.5 x 10.5cm (14.8 x 12.8 x 4.1")	2.3L	8 to 432

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* A2 Large Gel System Replacement Parts

Cat. No.	Description
A2-UVT	UVT gel tray with gasketed end gates
A2-GK	Replacement gaskets (1 pair)
A2-EG	Replacement end gates (1 pair)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level

Thermo Scientific* Owl* Casting Dams



Thermo Scientific Owl Casting Dams are high-quality aluminum dams that block off a portion of the gel tray, allowing shorter gels or gradient gels to be cast and run.

- Seal agarose on contact, eliminating the need for tape
- Do not attach to gel tray, enabling gels of any length to be poured
- Easily handled and maneuvered using knob or finger depressions
- Dam blocks off a portion of UVT gel tray
- Allows shorter gels to be cast and run in one device

Cat. No.	Description
DAM-20	Chameleon casting dam; 20cmW

Thermo Scientific* Owl* 24-slot Rapid Load UVT Gel Trays

Thermo Scientific Owl 24-slot Rapid Load UVT Gel Trays enable multiple sample loading.

Cat. No.	Description
A2-RL-UVT	24-slot rapid load UVT gel tray with gasketed end gates
A2-RL-12	24-slot rapid load UVT gel tray with (12) 18-well combs
A2-RL-24	24-slot rapid load UVT gel tray with (24) 18-well combs

Thermo Scientific* Owl* A2 Large Gel Electrophoresis System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
A2-8C	Standard 8-tooth comb	1.0mm / 22.7mm	17µL	59µL	102µL	144µL
A2-8D	Standard 8-tooth comb	1.5mm / 22.7mm	25µL	89µL	153µL	217µL
A2-12C	Standard 12-tooth comb	1.0mm / 14.5mm	11µL	38µL	65µL	92µL
A2-12D	Standard 12-tooth comb	1.5mm / 14.5mm	16µL	57µL	98µL	138µL
A2-16C	Standard 16-tooth comb	1.0mm / 10.5mm	8µL	27µL	47µL	67µL
A2-16D	Standard 16-tooth comb	1.5mm / 10.5mm	12µL	41µL	70µL	100µL
A2-20C	Standard 20-tooth comb	1.0mm / 8.0mm	6µL	21µL	36µL	51µL
A2-20D	Standard 20-tooth comb	1.5mm / 8.0mm	9µL	32µL	54µL	77µL
A2-24C	Standard 24-tooth comb	1.0mm / 6.5mm	5µL	17µL	29µL	41µL
A2-24D	Standard 24-tooth comb	1.5mm / 6.5mm	7µL	25µL	43µL	61µL
A2-28C	Standard 28-tooth comb	1.0mm / 5.0mm	4µL	14µL	23µL	33µL
A2-28D	Standard 28-tooth comb	1.5mm / 5.0mm	6µL	20µL	35µL	50µL
A2-32C	Standard 32-tooth comb	1.0mm / 4.0mm	3µL	11µL	19µL	27µL
A2-32D	Standard 32-tooth comb	1.5mm / 4.0mm	5µL	17µL	29µL	41µL
A2-36C	Standard 36-tooth comb	1.0mm / 3.5mm	3µL	10µL	17µL	24µL
A2-36D	Standard 36-tooth comb	1.5mm / 3.5mm	4µL	15µL	25µL	35µL
A2-MTC‡	Micro well 21 (1X)-tooth comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
A2-MTD‡	Micro well 21 (1X)-tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
A2-MT2C‡	Micro well 42 (2X)-tooth comb	1.0mm / 2.7mm	2µL	7µL	12µL	17µL
A2-MT2D‡	Micro well 42 (2X)-tooth comb	1.5mm / 2.7mm	3µL	11µL	18µL	26µL
A2-RL-18D‡	Rapid Load 18 (1X)-tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
A2-PREP	Prep comb with 2 teeth	1.5mm / 187 / 5mm	211 / 5.5µL	736 / 20µL	1263 / 34µL	1789 / 48µL
A2-WALL	Wall comb with 1 tooth	1.5mm / 130mm	—	—	—	—

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* A5 Large Gel System



Thermo Scientific Owl A5 Large Gel Systems feature built-in recirculation, and are ideal for long runs, multiple sample sets or RNA gels.

- Prevent the formation of pH and ionic gradients
- Provide high resolution and uniform, reproducible results
- Deliver clear results for samples run over long time periods
- Do not require external pumps, tubing or stir bars, because recirculation system is built into buffer chamber
- Eliminate uneven migration, band distortion or disassociation of pH-dependent glyoxylated RNA molecules that can result when ionic depletion occurs

Includes: Large gel system includes buffer chamber with three-point leveling base, Supersafe lid with attached power supply leads, UVT gel tray with gasketed end gates, as well as 16-, 24-, and 36-well, 1.5m thick combs.

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
A5	Large	25 x 20cm	37.5 x 32.5 x 15cm (14.8 x 12.8 x 5.9")	2.0L	8 to 432

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* A5 Large Gel System Replacement Parts

Cat. No.	Description
A2-UVT	UVT gel tray with gasketed end gates
A2-GK	Replacement gaskets (1 pair)
A2-EG	Replacement end gates (1 pair)

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level

Thermo Scientific* Owl* Casting Dams



Thermo Scientific Owl Casting Dams are high-quality aluminum dams that block off a portion of the gel tray, allowing shorter gels or gradient gels to be cast and run.

- Seal agarose on contact, eliminating the need for tape
- Do not attach to gel tray, enabling gels of any length to be poured
- Easily handled and maneuvered using knob or finger depressions
- Dam blocks off a portion of UVT gel tray
- Allows shorter gels to be cast and run in one device

Cat. No.	Description
DAM-20	Chameleon casting dam; 20cmW

Thermo Scientific* Owl* 24-slot Rapid Load UVT Gel Trays

Thermo Scientific Owl 24-slot Rapid Load UVT Gel Trays enable multiple sample loading.

Cat. No.	Description
A2-RL-UVT	24-slot rapid load UVT gel tray with gasketed end gates
A2-RL-12	24-slot rapid load UVT gel tray with (12) 18-well combs
A2-RL-24	24-slot rapid load UVT gel tray with (24) 18-well combs

Thermo Scientific* Owl* A5 Large Gel Electrophoresis System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No. †	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
A2-8C	Standard 8-tooth comb	1.0mm / 22.7mm	17µL	59µL	102µL	144µL
A2-8D	Standard 8-tooth comb	1.5mm / 22.7mm	25µL	89µL	153µL	217µL
A2-12C	Standard 12-tooth comb	1.0mm / 14.5mm	11µL	38µL	65µL	92µL
A2-12D	Standard 12-tooth comb	1.5mm / 14.5mm	16µL	57µL	98µL	138µL
A2-16C	Standard 16-tooth comb	1.0mm / 10.5mm	8µL	27µL	47µL	67µL
A2-16D	Standard 16-tooth comb	1.5mm / 10.5mm	12µL	41µL	70µL	100µL
A2-20C	Standard 20-tooth comb	1.0mm / 8.0mm	6µL	21µL	36µL	51µL
A2-20D	Standard 20-tooth comb	1.5mm / 8.0mm	9µL	32µL	54µL	77µL
A2-24C	Standard 24-tooth comb	1.0mm / 6.5mm	5µL	17µL	29µL	41µL
A2-24D	Standard 24-tooth comb	1.5mm / 6.5mm	7µL	25µL	43µL	61µL
A2-28C	Standard 28-tooth comb	1.0mm / 5.0mm	4µL	14µL	23µL	33µL
A2-28D	Standard 28-tooth comb	1.5mm / 5.0mm	6µL	20µL	35µL	50µL
A2-32C	Standard 32-tooth comb	1.0mm / 4.0mm	3µL	11µL	19µL	27µL
A2-32D	Standard 32-tooth comb	1.5mm / 4.0mm	5µL	17µL	29µL	41µL
A2-36C	Standard 36-tooth comb	1.0mm / 3.5mm	3µL	10µL	17µL	24µL
A2-36D	Standard 36-tooth comb	1.5mm / 3.5mm	4µL	15µL	25µL	35µL
A2-MTC‡	Micro well 21 (1X)-tooth comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
A2-MTD‡	Micro well 21 (1X)-tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
A2-MT2C‡	Micro well 42 (2X)-tooth comb	1.0mm / 2.7mm	2µL	7µL	12µL	17µL
A2-MT2D‡	Micro well 42 (2X)-tooth comb	1.5mm / 2.7mm	3µL	11µL	18µL	26µL
A2-RL-18D‡	Rapid Load 18 (1X)-tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL
A2-PREP	Prep comb with 2 teeth	1.5mm / 187 / 5mm	211 / 5.5µL	736 / 20µL	1263 / 34µL	1789 / 48µL
A2-WALL	Wall comb with 1 tooth	1.5mm / 130mm	—	—	—	—

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* A2-OK Multiple Gel Electrophoresis System



Thermo Scientific Owl A2-OK Multiple Gel Electrophoresis System is ideal for teaching labs or labs that need to run multiple gels simultaneously.

- Up to six 7 x 8cm minigels can be run on one system
- Screen up to 120 samples at once with supplied combs
- EasyCast* casting design permits casting without tape or plugs
- UV-transmissible (UVT) gel trays may be placed directly on the transilluminator for easy photodocumentation
- Teacher can instruct up to 12 students using one system and one power supply

Includes: Buffer chamber with three-point leveling base; SuperSafe* lid with attached power supply leads; Six EasyCast UVT gasketed gel trays; Twelve 10-well, double-sided combs, 1.0/1.5mm thick; Two external multiple gel casters; Gel tray holder

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
A2-OK	Teaching	8 x 7cm	37.5 x 32.5 x 10.5cm (14.8 x 12.8 x 4.1")	2.3L	5 to 144

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* A2-OK Multi Gel System Replacement Parts

For use with Thermo Scientific* Owl* A2-OK Multi Gel Systems.

Cat. No.	Description
B1A-UVT	EasyCast gasketed UVT gel tray
B1A-GK	Replacement gaskets (1 pair)
B1A-CST	External caster (trays & combs not included)
A2-OT	Gel tray holder for A2-OK large gel system

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level

Thermo Scientific* Owl* A2-OK Multi Gel Electrophoresis System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
B1A-5C	Standard comb; 5 teeth	1.0mm / 11.3mm	8µL	30µL	51µL	72µL
B1A-5D	Standard comb; 5 teeth	1.5mm / 11.3mm	13µL	44µL	76µL	108µL
B1A-6	Double-sided comb; 6 teeth	1.0 / 1.5mm / 9.1 / 9.1mm	7 / 10µL	24 / 36µL	41 / 61µL	58 / 87µL
B1A-8	Double-sided comb; 8 teeth	1.0 / 1.5mm / 6.4 / 6.4mm	5 / 7µL	17 / 25µL	29 / 43µL	41 / 61µL
B1A-10	Double-sided comb; 10 teeth	1.0 / 1.5mm / 4.8 / 4.8mm	4 / 5µL	13 / 19µL	21 / 32µL	30 / 46µL
B1A-12	Double-sided comb; 12 teeth	1.0 / 1.5mm / 3.7 / 3.7mm	3 / 4µL	10 / 14µL	16 / 25µL	23 / 35µL
B1A-PREP	Prep comb; 2 teeth	1.5mm / 57 / 5 mm	64 / 6µL	225 / 19µL	385 / 32µL	550 / 46µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* D4 Horizontal Electrophoresis System



Thermo Scientific Owl D4 Horizontal Electrophoresis System provides optimal flexibility while conserving valuable bench space.

- Designed to provide flat, even banding patterns and consistent results with hassle-free gel casting — no tape, grease, agarose seals, or other accessories are required
- Run one gel tray (51 samples) in the buffer chamber, or to save bench space, two stacked trays (102 samples)
- Two 16 x 17cm UV Transmissible (UVT) gel trays accommodate up to three combs each, allowing the user to run up to three series of samples equal distances
- Stand-alone casting platform included for casting two gels simultaneously
- A single gel can be cast right in the buffer chamber or in the external caster

Includes: Buffer chamber (buffer volume, 1.8L); three-point leveling base; SuperSafe* lid with attached power supply leads; two UVT gel trays; six 1.5mm thick combs; external gel caster; bubble level

Warranty: Three years

Certifications: CE marked

Cat. No.	Horizontal System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume	Sample Range
D4	Space Saving	17 x 16cm	23 x 27 x 14cm (9.1 x 10.6 x 5.5")	1.8L	17 to 102
D4-BP	Space Saving, w/ buffer exchange ports	17 x 16cm	23 x 27 x 14cm (9.1 x 10.6 x 5.5")	1.8L	17 to 102

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* D4 Horizontal Electrophoresis System Replacement Parts

Thermo Scientific Owl D4 system is ideal for optimal flexibility with space savings.

Cat. No.	Description
D4-UVT	EasyCast* gasketed UVT gel tray
D4-GK	Replacement gaskets (1 pair)
D4-CST	External caster

Thermo Scientific* Owl* Leveling Platform



Thermo Scientific Owl Leveling Platform is a three-point leveling platform that ensures a flat casting and running surface.

- 36 x 46cm: Large enough to accommodate most applications

Includes: Bubble level

Cat. No.	Type
BBL-1	Bubble Level
B-LP	Leveling Platform

Thermo Scientific* Owl* D4 Horizontal Electrophoresis System Combs

For use with the Thermo Scientific* Owl D4 Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No. †	Description	Thickness / Width of Teeth	RECOMMENDED LOADING VOLUMES Calculated at 75% of total well volume			
			0.25cm gel thickness	0.5cm gel thickness	0.75cm gel thickness	1.0cm gel thickness
D4-17C‡	Micro well 17-tooth comb	1.0mm / 7.2mm	5µL	19µL	32µL	46µL
D4-17D‡	Micro well 17-tooth comb	1.5mm / 7.2mm	8µL	28µL	49µL	69µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.
‡ 8 and 12-channel pipette format (1X) and (2X) combs.

Thermo Scientific* Owl* P81 Single-Sided Vertical Electrophoresis System



Thermo Scientific Owl P81 Single-Sided Vertical Electrophoresis System is an economical system for quick protein runs.

- Simple, rugged system provides excellent results
- Upper buffer chamber extends the length of the gel to distribute heat evenly across the entire gel surface
- Side clamps press glass plates against silicone gasket to provide uniform pressure and form a leakproof seal resulting in flat, even banding patterns
- Notched alumina ceramic plate (included) may be used in front of notched glass for cooler, faster runs

Includes: Upper and lower buffer chambers, SuperSafe* lid with attached power supply leads, blank glass plate, notched glass plate, notched alumina plate, two combs (10 well, 0.8mm thick), spacer set (0.8mm thick)

Warranty: Three years

Certifications: CE marked

Cat. No.	Vertical System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume		
				Upper Buffer	Lower Buffer	Total Buffer
P81	Single Sided	10 x 10cm	18 x 8 x 13cm (7.1 x 3.1 x 5.1")	100mL	50mL	150mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* P81 System Replacement Parts

For use with Thermo Scientific* Owl P81 systems

Cat. No.	Description	Dimensions
P81-009	Supersafe* lid with attached power supply leads	—
P81-001	Upper and lower buffer chambers	—
P8-GK	Orange replacement gaskets (1 pair)	—
P8-CL	Side clamps (1 pair)	—
R10446	Wing knob	—
P7-SA	Spacer Set (2 sides, 1 bottom)	0.5cmW x 0.5mm thickness
P7-SC	Spacer Set (2 sides, 1 bottom)	0.5cmW x 0.8mm thickness
P7-SD	Spacer Set (2 sides, 1 bottom)	0.5cmW x 1.5mm thickness
P7-10R	Notched glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10G	Blank Glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10FR	Frosted notched glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10FG	Frosted blank glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10RA	Notched alumina plate	10cmL x 10cmW x 1.0mm thickness

Thermo Scientific* Owl* P8-Series Vertical Electrophoresis System Accessories

Gel casters for use with Thermo Scientific Owl Vertical Electrophoresis Systems



Cat. No.	Description	Gel Size (L x W)	Footprint (L x W x H)
JGC-4	Gel Casting System; Compatible with P8DS	10 x 10cm	13 x 13 x 11cm
P7-CST	Gradient Gel Caster	10 x 10cm	13 x 15 x 13cm

Thermo Scientific* Owl* P8-Series System Combs

For use with the Thermo Scientific* Owl P8-Series Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
MP-6A	Standard 6-tooth comb	0.5mm	11.1mm	89µL
MP-6C	Standard 6-tooth comb	0.8mm	11.1mm	142µL
MP-6D	Standard 6-tooth comb	1.5mm	11.1mm	266µL
MP-8A	Standard 8-tooth comb	0.5mm	7.7mm	62µL
MP-8C	Standard 8-tooth comb	0.8mm	7.7mm	99µL
MP-8D	Standard 8-tooth comb	1.5mm	7.7mm	185µL
MP-10A	Standard 10-tooth comb	0.5mm	5.7mm	46µL
MP-10C	Standard 10-tooth comb	0.8mm	5.7mm	73µL
MP-10D	Standard 10-tooth comb	1.5mm	5.7mm	134µL
MP-12A	Standard 12-tooth comb	0.5mm	4.3mm	34µL
MP-12C	Standard 12-tooth comb	0.8mm	4.3mm	55µL
MP-12D	Standard 12-tooth comb	1.5mm	4.3mm	103µL
MP-15A	Standard 15-tooth comb	0.5mm	2.9mm	23µL
MP-20A	Standard 20-tooth comb	0.5mm	1.6mm	13µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* P82 Dual-Gel Electrophoresis System



Thermo Scientific Owl P82 Dual-Gel Electrophoresis System is an easy-to-use system that produces flat, even banding and crisp resolution.

- Runs two 10 x 10cm gels or one gel when used with blocking plate; accommodates 8 x 10cm gels utilizing the provided adapter
- Allows gels to easily be placed into the device
- Wedge placed in front of the cassettes provides even pressure against the leakproof gasket, places the cassettes in proper running position
- Two sizes of wedges accommodate varying thickness of precast gels
- Flexible—use precast polyacrylamide gels or hand cast gels
- No cooling required

Includes: Inner buffer chambers, buffer tank, SuperSafe* lid with attached power supply leads, two wedges (1.27cm thick), two wedges (1.59cm thick), adapter plates for 10 x 8 gels (2) and blocking plate

Warranty: Three years

Certifications: CE marked

Cat. No.	Vertical System	Gel Size (L x W)	Footprint (L x W x H) (5.88 x 4.75 x 6.69")	Running Buffer Volume		
				Upper Buffer Chamber Vol.	Lower Buffer Chamber Max. Vol.	Lower Buffer Chamber Min. Vol. (8cm / 10cm gel)
P82	Double Sided	8-10 x 10cm	15.2 x 12.4 x 17cm (5.88 x 4.75 x 6.69")	150mL	300mL	150mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* P82 Dual Gel System Replacement Parts

Thermo Scientific Owl P82 Dual Gel System is one of the easiest systems to run and produces flat even banding and crisp resolution.

Cat. No.	Description	Dimensions
OG-PL1	Blocking plate	—
R12009	Replacement gaskets (1 pair)	—
P82DS-016	Adapter Plate	—
P82DS-012	Thick replacement wedge; 1.59cm	—
P82DS-013	Thin replacement wedge; 1.27cm	—
P82DS-GK	Replacement gasket (1 pair)	—
P7-SA	Spacer Set (2 sides, 1 bottom)	0.5cmW x 0.5mm thickness
P7-SC	Spacer Set (2 sides, 1 bottom)	0.5cmW x 0.8mm thickness
P7-SD	Spacer Set (2 sides, 1 bottom)	0.5cmW x 1.5mm thickness
P7-10R	Notched glass	10cmL x 10cmW x 3/32" thickness
P7-10G	Blank Glass	10cmL x 10cmW x 3/32" thickness
P7-10FR	Frosted notched glass	10cmL x 10cmW x 3/32" thickness
P7-10FG	Frosted blank glass	10cmL x 10cmW x 3/32" thickness
P7-10RA	Notched alumina plate	10cmL x 10cmW x 1.0mm thickness

Thermo Scientific* Owl* P8-Series Vertical Electrophoresis System Accessories

Gel casters for use with Thermo Scientific Owl Vertical Electrophoresis Systems



Cat. No.	Description	Gel Size (L x W)	Footprint (L x W x H)
JGC-4	Gel Casting System; Compatible with P8DS	10 x 10cm	13 x 13 x 11cm
P7-CST	Gradient Gel Caster	10 x 10cm	13 x 15 x 13cm

Thermo Scientific* Owl* P8-Series System Combs

For use with the Thermo Scientific* Owl P8-Series Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
MP-6A	Standard 6-tooth comb	0.5mm	11.1mm	89µL
MP-6C	Standard 6-tooth comb	0.8mm	11.1mm	142µL
MP-6D	Standard 6-tooth comb	1.5mm	11.1mm	266µL
MP-8A	Standard 8-tooth comb	0.5mm	7.7mm	62µL
MP-8C	Standard 8-tooth comb	0.8mm	7.7mm	99µL
MP-8D	Standard 8-tooth comb	1.5mm	7.7mm	185µL
MP-10A	Standard 10-tooth comb	0.5mm	5.7mm	46µL
MP-10C	Standard 10-tooth comb	0.8mm	5.7mm	73µL
MP-10D	Standard 10-tooth comb	1.5mm	5.7mm	134µL
MP-12A	Standard 12-tooth comb	0.5mm	4.3mm	34µL
MP-12C	Standard 12-tooth comb	0.8mm	4.3mm	55µL
MP-12D	Standard 12-tooth comb	1.5mm	4.3mm	103µL
MP-15A	Standard 15-tooth comb	0.5mm	2.9mm	23µL
MP-20A	Standard 20-tooth comb	0.5mm	1.6mm	13µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* P8DS Dual-Gel Vertical Electrophoresis Systems



Thermo Scientific Owl P8DS systems offer fast run times and easy operation for excellent results.

The Owl P8DS System can quickly and easily cast and run 1 or 2 gels in the same device. When used with the available combs, spacers, alumina and glass plates, it is the perfect tool for second dimension protocols of 2-D electrophoresis, SDS and agarose gels, and native PAGE electrophoresis.

The unique agarose plug method makes casting gel simple and quick. Gel assemblies do not have to be moved once set-up. The two individual steps of casting and running in different devices are now combined. Simply secure the glass cassettes, pour the agarose plug in the specially designed trough, cast polyacrylamide solution in the cassettes, load samples, and run the gel.

- Manufactured using a time-tested acrylic fabrication technology, providing a durable, long-lasting system
- Central cooling core provides even cooling across the gel surface for outstanding resolution and clear banding
- Cooling is achieved by circulating fluid through the core with external circulator or cool tap water
- Very simple clamping mechanism makes loading glass cassettes and most manufacturers' precast gels trouble free

Applications: SDS electrophoresis, the second dimension of two-dimensional (2-D) electrophoresis, agarose electrophoresis and native electrophoresis

Includes: Complete System includes Upper Buffer Chamber with Internal Cooling Core, Lower Buffer Chamber, SuperSafe Lid with Attached Power Supply Leads, 4 Blank Glass Plates, 2 Notched Glass Plates, 2 Notched Alumina Plates, 2 Spacer Sets: 0.8 mm Thick, Blocking Plate for Single Gel Operation, Spacer Placer, 2 Combs: 10 Well, 0.8 mm Thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Vertical System	Gel Size L x W	Footprint (L x W x H)	Running Buffer		
					Lower Buffer	Upper Buffer	Total
P8DS-1	P8DS Complete System plus Caster	Double-sided	8-10 x 10cm	17 x 13 x 14cm (6.7 x 5.1 x 5.5")	150mL	150mL	300mL
P8DS-2	P8DS Complete System	Double-sided	8-10 x 10cm	17 x 13 x 14cm (6.7 x 5.1 x 5.5")	150mL	150mL	300mL
P8DS-3	P8DS Apparatus Only	Double-sided	8-10 x 10cm	17 x 13 x 14cm (6.7 x 5.1 x 5.5")	150mL	150mL	300mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* P8DS Gel System Replacement Parts

The Thermo Scientific* Owl P8DS Gel System has fast run times and easy operation for excellent results.

Cat. No.	Description	Dimensions
P8DS-016	Blocking Plate	—
P8DS-008	Lower Buffer Chamber	—
P8DS-001	Upper Buffer Chamber Assembly	—
P8DS-012	Super Safe Lid with Attached Power Supply Leads	—
R12009	Replacement gaskets (1 pair)	—
P8-CL	Side clamps (1 pair)	—
R10446	Wing knob	—
ST-10	Sponge Tips (Pack of 10)	—
P7-SA	Spacer Set (2 sides, 1 bottom)	0.5cmW x 0.5mm thickness
P7-SC	Spacer Set (2 sides, 1 bottom)	0.5cmW x 0.8mm thickness
P7-SD	Spacer Set (2 sides, 1 bottom)	0.5cmW x 1.5mm thickness
P7-10R	Notched glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10G	Blank Glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10FR	Frosted notched glass	10cmL x 10cmW x ³ / ₃₂ " thickness
P7-10FG	Frosted blank glass	10cmL x 10cmW x ³ / ₃₂ " thickness

P7-10RA	Notched alumina plate	10cmL x 10cmW x 1.0mm thickness
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Thermo Scientific* Owl* P8-Series Vertical Electrophoresis System Accessories

Gel casters for use with Thermo Scientific Owl Vertical Electrophoresis Systems



Cat. No.	Description	Gel Size (L x W)	Footprint (L x W x H)
JGC-4	Gel Casting System; Compatible with P8DS	10 x 10cm	13 x 13 x 11cm
P7-CST	Gradient Gel Caster	10 x 10cm	13 x 15 x 13cm

Thermo Scientific* Owl* P8-Series System Combs

For use with the Thermo Scientific* Owl P8-Series Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
MP-6A	Standard 6-tooth comb	0.5mm	11.1mm	89µL
MP-6C	Standard 6-tooth comb	0.8mm	11.1mm	142µL
MP-6D	Standard 6-tooth comb	1.5mm	11.1mm	266µL
MP-8A	Standard 8-tooth comb	0.5mm	7.7mm	62µL
MP-8C	Standard 8-tooth comb	0.8mm	7.7mm	99µL
MP-8D	Standard 8-tooth comb	1.5mm	7.7mm	185µL
MP-10A	Standard 10-tooth comb	0.5mm	5.7mm	46µL
MP-10C	Standard 10-tooth comb	0.8mm	5.7mm	73µL
MP-10D	Standard 10-tooth comb	1.5mm	5.7mm	134µL
MP-12A	Standard 12-tooth comb	0.5mm	4.3mm	34µL
MP-12C	Standard 12-tooth comb	0.8mm	4.3mm	55µL
MP-12D	Standard 12-tooth comb	1.5mm	4.3mm	103µL
MP-15A	Standard 15-tooth comb	0.5mm	2.9mm	23µL
MP-20A	Standard 20-tooth comb	0.5mm	1.6mm	13µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* P9DS Dual-Gel Vertical Electrophoresis Systems



Thermo Scientific Owl P9DS Dual-Gel Vertical Electrophoresis Systems are ideal for two-dimensional electrophoresis.

The Owl P9DS System can quickly and easily cast and run 1 or 2 gels in the same device. When used with the available combs, spacers, alumina and glass plates, it is the perfect tool for second dimension protocols of 2-D electrophoresis, SDS and agarose gels, and native PAGE electrophoresis.

The unique agarose plug method makes casting gel simple and quick. Gel assemblies do not have to be moved once set-up. The two individual steps of casting and running in different devices are now combined. Simply secure the glass cassettes, pour the agarose plug in the specially designed trough, cast polyacrylamide solution in the cassettes, load samples, and run the gel.

- Manufactured using a time-tested acrylic fabrication technology, providing a durable, long-lasting system
- Central cooling core provides even cooling across the gel surface for outstanding resolution and clear banding
- Cooling is achieved by circulating fluid through the core with external circulator or cool tap water
- Very simple clamping mechanism makes loading glass cassettes and most manufacturers' precast gels trouble free

Applications: SDS electrophoresis, the second dimension of two-dimensional (2-D) electrophoresis, agarose electrophoresis and native electrophoresis

Includes: Complete System includes Upper Buffer Chamber with Internal Cooling Core, Lower Buffer Chamber, SuperSafe Lid with Attached Power Supply Leads, 4 Blank Glass Plates, 2 Notched Glass Plates, Spacer Set: 1.5mm Thick, Blocking Plate for Single Gel Operation, 2 Combs: (2) 10-Well and (2) 15-Well, 1.5mm Thick

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Vertical System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume		
					Lower Buffer	Upper Buffer	Total
P9DS-1	P9DS Complete System plus Caster	Double-sided	14–16 x 16cm	25 x 13 x 19.5cm (9.8 x 5.1 x 7.7")	350mL	200mL	550mL
P9DS-2	P9DS Complete System	Double-sided	14–16 x 16cm	25 x 13 x 19.5cm (9.8 x 5.1 x 7.7")	350mL	200mL	550mL
P9DS-3	P9DS Apparatus Only	Double-sided	14–16 x 16cm	25 x 13 x 19.5cm (9.8 x 5.1 x 7.7")	350mL	200mL	550mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* P9DS Dual Gel System Replacement Parts

Thermo Scientific Owl P9DS Dual Gel System is the best device for two-dimensional electrophoresis.

Cat. No.	Description	Dimensions
P9DS-006	Blocking Plate	—
P9DS-008	Lower Buffer Chamber	—
P9DS-001	Upper Buffer Chamber Assembly	—
P9DS-012	Super Safe Lid with Attached Power Supply Leads	—
P9-GK	Orange replacement gaskets (1 pair)	—
P9-CL	Side clamps; pack of 2	—
R10446	Wing knob	—
ST-10	Sponge Tips (Pack of 10)	—
P1-SC	Spacer set (2 sides, 1 bottom)	1.0cmW x 0.8mm thickness
P1-SD	Spacer set (2 sides, 1 bottom)	1.0cmW x 1.5mm thickness
P1-14R	Notched glass	14cmL x 16cmW x 1/8" thickness
P1-14G	Blank glass	14cmL x 16cmW x 1/8" thickness
P1-14FR	Frosted notched glass	14cmL x 16cmW x 1/8" thickness
P1-14FG	Frosted blank glass	14cmL x 16cmW x 1/8" thickness
P1-12G	Offset glass	12cmL x 16cmW x 1/8" thickness

Thermo Scientific* Owl* P9-Series Vertical Electrophoresis System Accessories

Gel casters for use with Thermo Scientific Owl Vertical Electrophoresis Systems



Cat. No.	Description	Gel Size (L x W)	Footprint (L x W x H)
JGC-2	Gel Casting System	14 x 16cm	17 x 18 x 15cm
P1-CST	Multiple Gradient Gel Caster	14 x 16cm	13 x 20 x 18cm

Thermo Scientific* Owl* P9DS System Combs

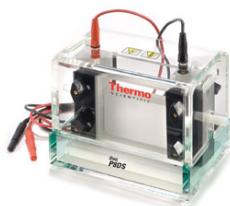
For use with the Thermo Scientific* Owl P9DS Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
P1-10C	Standard 10-tooth comb	0.8mm	10.4mm	138µL
P1-10D	Standard 10-tooth comb	1.5mm	10.4mm	343µL
P1-15C	Standard 15-tooth comb	0.8mm	6.1mm	107µL
P1-15D	Standard 15-tooth comb	1.5mm	6.1mm	201µL
P1-20C	Standard 20-tooth comb	0.8mm	3.9mm	69µL
P1-20D	Standard 20-tooth comb	1.5mm	3.9mm	129µL
P1-24C	Standard 24-tooth comb	0.8mm	2.9mm	51µL
P1-24D	Standard 24-tooth comb	1.5mm	2.9mm	96µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* P10DS Dual-Gel Vertical Electrophoresis Systems



Thermo Scientific Owl P10DS Dual-Gel Vertical Electrophoresis Systems are the optimal device for a large number of samples that need extended separation and mobility shift assays.

The Owl P10DS Dual Gel System casts and runs one or two 20 × 20cm gels in the upper buffer chamber. The larger size cassette gives you the maximum number of samples and separation length. Ideal for second dimension protocols of 2-D electrophoresis applications.

- Manufactured using a time-tested acrylic fabrication technology, providing a durable, long-lasting system
- Central cooling core provides even cooling across the gel surface for outstanding resolution and clear banding
- Cooling is achieved by circulating fluid through the core with external circulator or cool tap water
- Very simple clamping mechanism makes loading glass cassettes and most manufacturers' precast gels trouble free

Applications: SDS electrophoresis, the second dimension of two-dimensional (2-D) electrophoresis, agarose electrophoresis and native electrophoresis

Includes: Complete System includes Upper Buffer Chamber with Internal Cooling Core, Lower Buffer Chamber, SuperSafe* Lid with Attached Power Supply Leads, 4 Blank Glass Plates, 4 Notched Glass Plates, 4 Combs: (2) 15 Well and (2) 20 Well, 1.5mm Thick, 4 Spacer Sets: 1.5mm Thick, Blocking Plate for Single Gel Operation, and Spacer Placer

Warranty: Three years

Certifications: CE marked

Cat. No.	Description	Vertical System	Gel Size (L × W)	Footprint (L × W × H)	Running Buffer Volume		
					Lower Buffer	Upper Buffer	Total
P10DS-1	P10DS Complete System plus Caster	Double-sided	20 × 20cm	30.5 × 16.5 × 23cm (12 × 6.5 × 9")	600mL	650mL	1250mL
P10DS-2	P10DS Complete System	Double-sided	20 × 20cm	30.5 × 16.5 × 23cm (12 × 6.5 × 9")	600mL	650mL	1250mL
P10DS-3	P10DS Apparatus Only	Double-sided	20 × 20cm	30.5 × 16.5 × 23cm (12 × 6.5 × 9")	600mL	650mL	1250mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* P10DS Dual Gel System Replacement Parts

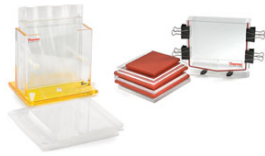
Thermo Scientific Owl P10DS Dual Gel System is an optimal device for a large number of samples that need extended separation and mobility shift assays.

Cat. No.	Description	Dimensions
P10DS-006	Blocking Plate	—
P10DS-008	Lower Buffer Chamber	—
P10DS-001	Upper Buffer Chamber Assembly	—
P10DS-012	Super Safe Lid with Attached Power Supply Leads	—
P10-GK	Orange replacement gaskets (1 pair)	—
P10-CL	Side Clamps (1 pair)	—
R10446	Wing knob	—
ST-10	Sponge Tips (Pack of 10)	—
P2-SC	Spacer Set (2 sides, 1 bottom)	1.0cmW × 0.8mm thickness
P2-SD	Spacer Set	1.0cmW × 1.5mm thickness
P2-20R	Notched glass	20cmL × 20cmW × ³ / ₁₆ " thickness
P2-20G	Blank glass	20cmL × 20cmW × ³ / ₁₆ " thickness
P2-20FR	Frosted notched glass	20cmL × 20cmW × ³ / ₁₆ " thickness
P2-20FG	Frosted blank glass	20cmL × 20cmW × ³ / ₁₆ " thickness
P2-18G	Offset glass	18cmL × 20cmW × ³ / ₁₆ " thickness
P10-20R	Notched glass	20cmL × 20cmW × ¹ / ₈ " thickness
P10-20G	Blank glass	20cmL × 20cmW × ¹ / ₈ " thickness

P10-18G	Offset glass	20cmL × 18cmW × 1/8" thickness
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Thermo Scientific* Owl* P10-Series Vertical Electrophoresis System Accessories

Gel casters for use with Thermo Scientific Owl Vertical Electrophoresis Systems



Cat. No.	Description	Gel Size (L × W)	Footprint (L × W × H)
JGC-3	Gel Casting System	20 × 20cm	23 × 17 × 17cm
P2-CST	Gradient Gel Caster	20 × 20cm	13 × 25 × 23cm

Thermo Scientific* Owl* P10-Series System Combs

For use with the Thermo Scientific* Owl P10-Series Electrophoresis System

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
P2-10C	Standard 10-tooth comb	0.8mm	13.6mm	239µL
P2-10D	Standard 10-tooth comb	1.5mm	13.6mm	449µL
P2-15C	Standard 15-tooth comb	0.8mm	8.2mm	144µL
P2-15D	Standard 15-tooth comb	1.5mm	8.2mm	271µL
P2-20C	Standard 20-tooth comb	0.8mm	5.5mm	97µL
P2-20D	Standard 20-tooth comb	1.5mm	5.5mm	182µL
P2-25C	Standard 25-tooth comb	0.8mm	3.9mm	69µL
P2-25D	Standard 25-tooth comb	1.5mm	3.9mm	129µL
P2-PREP	Prep comb with 2 teeth	1.5mm	151 / 5.0mm	4604 / 162µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* S4S Aluminum-Backed Sequencers



Thermo Scientific* Owl Aluminum-Backed Sequencers are manual systems that provide easy setup with even heat distribution for "smile"-free results.

- Floating aluminum heat sink reduces chance of plates cracking during runs
- Upper buffer chamber (UBC) requires minimal buffer and is easily drained via inline drain port into removable bottle
- Lower buffer chamber (LBC) is removable for simple buffer disposal
- Full-length side clamps press gel plates against gasket seated on UBC, applying even pressure across the entire plate providing a reliable, leak-proof seal between the plate and gasket
- Clamps slide over glass plates for easy setup and removal of gels

Includes: UBC with removable drain bottle (with safety interlocking lid and attached power supply lead), removable LBC, Anodized Aluminum Heat sink, Two side clamps, Two blank glass plates, Two notched glass plates, Two sharktooth combs (39 teeth, 0.4mm thick), Well comb (20 well, 0.4mm thick), 2 Spacer sets (0.4mm), Adhesive temperature indicator

Warranty: Three years

Certifications: CE marked

Cat. No.	Vertical System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume		
				Lower Buffer	Upper Buffer	Total
S4S	Sequencing system	45 x 20cm	27 x 23 x 50cm	500mL	300mL	800mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* S4S Aluminum Backed Sequencer System Replacement Parts

Thermo Scientific Owl S4S Aluminum Backed Sequencer System has easy set-up with even head distribution for "smile" free results.

Cat. No.	Description
S3S-CL	Side Clamp (1 pair)
R10384	Buffer Drain Bottle
S4S-GK	Replacement Gasket
ST-10	Sponge Tips (Pack of 10)
TEMP-5	Adhesive Temperature Indicator (Pack of 5)
STK-10	Stopcocks (1 pair)
S3S-KNOB	Replacement Knob (Pack of 6)

Thermo Scientific* Owl* Sequencing System Spacer Sets and Glass Plates

For use with Thermo Scientific Sequencing Gel Casting Systems

Cat. No.	Description	Dimensions
S2S-SA4	Spacer Set (2 sides, 1 bottom)	1.0cmW x 0.4mm thickness
S2S-SA2	Spacer Set (2 sides, 1 bottom)	1.0cmW x 0.2mm thickness
S2S-SAW	Wedge (Pack of 2)	1.0cmW x 0.4 - 0.8mm thickness
S1S-45R	Notched Glass	45cmL x 20cmW x ³ / ₁₆ " thickness
S1S-45G	Blank Glass	45cmL x 20cmW x ³ / ₁₆ " thickness
S1S-43G	Offset Glass	43cmL x 20cmW x ³ / ₁₆ " thickness

Thermo Scientific* Owl* SGC-1 Sequencing Gel Casters

Thermo Scientific Owl SGC-1 Sequencing Gel Casters use a simple method that permits bubble-free gels to be cast in less than three minutes.



A horizontal plate sliding procedure, capillary action drawing gel between plates, and surface tension, keeps the gel from leaking.

- No taping or special assembly required
- Exposure to hazardous acrylamide is decreased, reducing cleanup time

- Fully adjustable to accommodate glass plates from 20 to 42cm wide

Includes: Adjustable casting platform, width adjustment knobs, 12 binder clamps

Cat. No.	Gel Size (L x W)	Footprint (L x W x H)
SGC-1	48 x 20-42cm	71 x 21 x 12.2cm (28 x 8.25x 4.75")

Thermo Scientific* Owl* S4S System Combs

For use with the Thermo Scientific* Owl S4S System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
S1S-20A	20-tooth Well Comb	0.4mm	6.8mm	15µL
S1S-30A	30-tooth Well comb	0.4mm	4.1mm	9µL
S1S-SHARK4	39-tooth Sharktooth Comb	0.4mm	—	9µL
S1S-SHARK2	39-tooth Sharktooth Comb	0.2mm	—	5µL
S1S-MT2	36 (2X)-tooth Sharktooth Micro-Well Comb	0.4mm	—	10µL
S1S-MT3	55 (3X)-tooth Sharktooth Micro-Well Comb	0.4mm	—	5.5µL
S1S-MT44	73 (4X)-tooth Sharktooth Micro-Well Comb	0.4mm	—	3.7µL
S1S-MT42	73 (4X)-tooth Sharktooth Micro-Well Comb	0.2mm	—	2.0µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* S3S Aluminum-Backed Sequencers



Thermo Scientific Owl S3S Aluminum-Backed Sequencers are the most common size for manual sequencing, providing the optimal size for separation.

- Floating aluminum heat sink reduces chance of plates cracking during runs
- Upper buffer chamber (UBC) requires minimal buffer and is easily drained via inline drain port into removable bottle
- Lower buffer chamber (LBC) is removable for simple buffer disposal
- Side clamps press gel plates against gasket seated on UBC applying even pressure across plate, forming a leak-proof seal resulting in flat, even banding patterns
- Clamps slide over glass plates for easy setup and removal of gels

Includes: UBC with removable drain bottle (with safety interlocking lid and attached power supply lead), Removable LBC, Heat sink, Two side clamps, Two blank glass plates, Two notched glass plates, Two sharktooth combs (78 teeth, 0.4mm thick), Well comb (40 well, 0.4mm thick), 2 Spacer sets (0.4mm), Adhesive temperature indicator

Warranty: Three years

Certifications: CE marked

Cat. No.	Vertical System	Gel Size (L x W)	Footprint (L x W x H)	Running Buffer Volume		
				Lower Buffer	Upper Buffer Chamber	Total
S3S	Sequencing System	45 x 35cm	44 x 23 x 50cm	450mL	500mL	950mL

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* S3S Aluminum Backed Sequencer System Replacement Parts

For use with the Thermo Scientific* Owl S3S Aluminum Backed Sequencer System

Cat. No.	Description
S3S-CL	Side Clamp (1 pair)
R10383	Buffer drain bottle
S3S-GK	Replacement Gasket
ST-10	Sponge Tips (Pack of 10)
TEMP-5	Adhesive Temperature Indicator (Pack of 5)
STK-10	Stopcocks (1 pair)
S3S-KNOB	Replacement Knob (Pack of 6)

Thermo Scientific* Owl* Sequencing System Spacer Sets and Glass Plates

For use with Thermo Scientific Sequencing Gel Casting Systems

Cat. No.	Description	Dimensions
S2S-SA4	Spacer Set (2 sides, 1 bottom)	1.0cmW x 0.4mm thickness
S2S-SA2	Spacer Set (2 sides, 1 bottom)	1.0cmW x 0.2mm thickness
S2S-SAW	Wedge (Pack of 2)	1.0cmW x 0.4 - 0.8mm thickness
S2S-45R	Notched Glass	45cmL x 35cmW x ³ / ₁₆ " thickness
S2S-45G	Blank Glass	45cmL x 35cmW x ³ / ₁₆ " thickness
S2S-43G	Offset glass	43cmL x 35cmW x ³ / ₁₆ " thickness

Thermo Scientific* Owl* SGC-1 Sequencing Gel Casters



Thermo Scientific Owl SGC-1 Sequencing Gel Casters use a simple method that permits bubble-free gels to be cast in less than three minutes.

A horizontal plate sliding procedure, capillary action drawing gel between plates, and surface tension, keeps the gel from leaking.

- No taping or special assembly required
- Exposure to hazardous acrylamide is decreased, reducing cleanup time
- Fully adjustable to accommodate glass plates from 20 to 42cm wide

Includes: Adjustable casting platform, width adjustment knobs, 12 binder clamps

Cat. No.	Gel Size (L x W)	Footprint (L x W x H)
SGC-1	48 x 20-42cm	71 x 21 x 12.2cm (28 x 8.25x 4.75")

Thermo Scientific* Owl* S3S System Combs

For use with the Thermo Scientific* Owl S3S System Combs

Heavy duty, one piece combs eliminate comb assembly.

Cat. No.†	Description	Thickness of teeth	Width of teeth	EST Well Volume
S2S-20A	40-tooth Well Comb	0.4mm	6.8mm	15µL
S2S-30A	60-tooth Well Comb	0.4mm	4.1mm	9µL
S2S-SHARK4	78-tooth Sharktooth Comb	0.4mm	—	9µL
S2S-SHARK2	78-tooth Sharktooth Comb	0.2mm	—	5µL
S2S-MT2	72 (2X)-tooth Sharktooth Micro-Well Comb	0.4mm	—	10µL
S2S-MT3	110 (3X)-tooth Sharktooth Micro-Well Comb	0.4mm	—	5.5µL
S2S-MT44	146 (4X)-tooth Sharktooth Micro-Well Comb	0.4mm	—	3.7µL
S2S-MT42	146 (4X)-tooth Sharktooth Micro-Well Comb	0.2mm	—	2µL

† Customized combs are available (Order SKU # XCM). Please contact your Customer Service Representative for further details.

Thermo Scientific* Owl* JGC-4 Gel Casting Systems



Thermo Scientific* Owl JGC-4 Gel Casting Systems are vertical protein gel casters that offer a fast, unique way to cast polyacrylamide gels.

- Pouch collects excess polyacrylamide and seals bottom of gel, eliminating need for tape or bottom spacers
- Design allows storage of gels without dehydration by adding buffer and heat sealing
- Casts from one to four gels
- Few moving parts result in outstanding durability and extra long life

Includes: Casting stand with three-point leveling base, blocking plate, spacer placer, 25 gel pouches, clamping screws, bubble level and leveling screws

Certifications: CE marked

Cat. No.	Compatible With	Gel Size	L x W x H [METRIC]
JGC-4	Owl P8DS, P82, P81	10 x 10cm	13 x 13 x 11cm

Thermo Scientific* Owl* JGC-4 Gel Casting System Replacement Parts

Cat. No.	Description	Dimensions
GP4-100	Gel Pouches; Pack of 100	10 x 10cm
GP4-25	Gel Pouches; Pack of 25	10 x 10cm
JG4-PL	Spacer Placer; Pack of 3	—
JGC4-006	Blocking Plate; Each	10 x 10cm
R10013	Leveling screws	1"L
R10014	Clamping screws	2"L

Thermo Scientific* Owl* JGC-2 Gel Casting Systems



Thermo Scientific Owl JGC-2 Gel Casting Systems are vertical protein gel casters that offer a fast, unique way to cast polyacrylamide gels.

- Pouch collects excess polyacrylamide and seals bottom of gel, eliminating need for tape or bottom spacers
- Design allows storage of gels without dehydration by adding buffer and heat sealing
- Casts from one to four gels
- Few moving parts result in outstanding durability and extra long life

Includes: Casting stand with three-point leveling base, blocking plate, spacer placer, 25 gel pouches, clamping screws, bubble level and leveling screws

Certifications: CE marked

Cat. No.	Compatible With	Gel Size	Footprint (L x W x H)
JGC-2	Owl P9DS	14 x 16cm	17 x 18 x 15cm

Thermo Scientific* Owl* JGC-2 Gel Casting System Replacement Parts

Cat. No.	Description	Dimensions (L x W)
GP2-100	Gel Pouches; Pack of 100	14 x 16cm
GP2-25	Gel Pouches; Pack of 25	14 x 16cm
JG2-PL	Spacer Placer; Pack of 3	—
JGC2-003	Blocking Plate; Each	14 x 16cm
R10013	Leveling screws	1"L
R10014	Clamping screws	2"L

Thermo Scientific* Owl* JGC-3 Gel Casting Systems



Thermo Scientific Owl JGC Gel Casting Systems are vertical protein gel casters that offer a fast, unique way to cast polyacrylamide gels.

- Pouch collects excess polyacrylamide and seals bottom of gel, eliminating need for tape or bottom spacers
- Design allows storage of gels without dehydration by adding buffer and heat sealing
- Casts from one to four gels
- Few moving parts result in outstanding durability and extra long life

Includes: Casting stand with three-point leveling base, blocking plate, spacer placer, 25 gel pouches, clamping screws, bubble level and leveling screws

Certifications: CE marked

Cat. No.	Compatible With	Gel Size	Footprint (L x W x H)
JGC-3	Owl P10DS	20 x 20cm	23 x 17 x 17cm

Thermo Scientific* Owl* JGC-3 Gel Casting System Replacement Parts

Cat. No.	Description	Dimensions (L x W)
GP3-100	Gel Pouches; Pack of 100	20 x 20cm
GP3-25	Gel Pouches; Pack of 25	20 x 20cm
JG3-PL	Spacer Placer; Pack of 3	—
JGC-003	Blocking plate; Each	20 x 20cm
R10013	Leveling screws	1"L
R10014	Clamping screws	2"L

Thermo Scientific* Owl* Gradient Gel Casters



Thermo Scientific Owl Gradient Gel Casters are one of the more simple devices to cast gradient gels.

- Simultaneously casts from 1 to 5 gels
- Use external gradient maker to cast gels with ease and great reproducibility
- Gradient gels may be pumped in through port in base of caster—requires no external pump due to gravity pull
- Design and format of unit will provide years of service

Includes: Casting stand with base port, spacer placer, foam, acrylic spacer plates, four binder clamps, front plate, 2 wing knobs and blocking plate

Cat. No.	Description	Gel Size (L x W)	Footprint (L x W x H)	Compatible Owl Units
P7-CST	Gradient Gel Caster	10 x 10cm	15 x 13 x 13cm (5.8 x 5.1 x 5.1")	P81, P82, P8DS
P1-CST	Gel Caster	14 x 16cm	20 x 13 x 18cm (7.9 x 5.1 x 7")	P9DS
P2-CST	Gel Caster	20 x 20cm	25 x 13 x 23cm (9.8 x 5.1 x 9")	P10DS

Thermo Scientific* Owl* Accessories for CST Multiple Gradient Gel Casters

Binder clamps for Thermo Scientific* Owl CST Multiple Gradient Gel Casters

Cat. No.	Description
CL-12	Binder clamps (pk. of 12)
CL-125	Stainless-steel clamps (pk. of 12)

Thermo Scientific* Owl* SGC Sequencing Gel Casters

Thermo Scientific Owl SGC Sequencing Gel Casters use a simple method that permits bubble-free gels to be cast in less than three minutes.



A horizontal plate sliding procedure, capillary action drawing gel between plates, and surface tension, keeps the gel from leaking.

- No taping or special assembly required
- Exposure to hazardous acrylamide is decreased, reducing cleanup time
- Available in two lengths: 48 or 65.5cm
- Fully adjustable to accommodate glass plates from 20 to 42cm wide

Includes: Adjustable casting platform, width adjustment knobs, 12 binder clamps

Cat. No.	Plate Size (L x W)	L x W x H	Compatible Owl Units
SGC-1	48 x 20-42cm	71 x 21 x 12.2cm (28 x 8.25x 4.75")	S4S, S3S
SGC-2	65.5 x 20-42cm	102 x 21 x 12.2cm (40 x 8.25 x 4.75")	S4S, S3S

Thermo Scientific* Owl* Accessories for CST Multiple Gradient Gel Casters

Binder clamps for Thermo Scientific* Owl CST Multiple Gradient Gel Casters

Cat. No.	Description
CL-12	Binder clamps (pk. of 12)
CL-125	Stainless-steel clamps (pk. of 12)

Thermo Scientific* Owl* Gel-Drying Kits



Thermo Scientific Owl Gel-Drying Kits preserve protein gels easily and economically, while eliminating distortion problems common in other drying procedures.

- Available in minigel and large format sizes
- Convenient method of preserving gels by air drying them between two sheets of cellophane
- Beveled-edge design of gel-drying frame makes assembly easy

Includes: Complete kits include two sets of gel-drying frames, 50 sheets of precut cellophane, two solid back plates, and eight side clips; frames and cellophane are also available separately

Cat. No.	Description	L x W
GDF-10	Gel-Drying Kit, Minigel Format	14 x 14cm
GDF-20	Gel-Drying Kit, Large Format	24 x 24cm

Thermo Scientific* Owl* Gel Drying Kit Accessories

Drying frames and pre-cut cellophane for use with Thermo Scientific* Owl Gel Drying Kits.

Cat. No.	Description	L x W
GDF-3	Gel drying frame, Minigel	14 x 14cm
GDF-1	Gel drying frame, Large	24 x 24cm
CM10	Precut Cellophane; 50 sheets	14 x 14cm
CM20	Precut Cellophane; 50 sheets	24 x 24cm

Thermo Scientific* Owl* Gel Staining Box



Thermo Scientific* Owl Gel Staining Box is resistant to most organic dyes, silver and other stains.

- Permits staining, fixing and destaining in the same container
- Holds up to 125mL of liquid and one gel when used on a shaking platform
- Grooved lid enables proper orientation and stability when stacking
- Made of clear plastic, so gels can be viewed directly in the tray

Ordering Information: Package of 5

Cat. No.	Exterior Dimension L x W x H	Capacity
GSB-3	11 x 11 x 3cm	125mL

Thermo Scientific* Owl* Blotting Paper

Thermo Scientific Owl Blotting Paper is high-quality blotting paper ideal for wicking and blotting applications.

Provides sufficient thickness to absorb adequate amounts of buffer for semi-dry electroblotting without the loss of mechanical stability.

- High purity, 100% cotton fiber
- Available in pre-cut mini gel and large format gel sizes
- Compatible with Owl electroblotting systems

Ordering Information: Sold in packs of 100 sheets

Specifications	
Material	100% cotton fiber
Weight	183g/m ²
Thickness	0.83mm
Flowrate	35mL/min.

Cat. No.	Dimensions	Compatible Blotter
FP-1	20 × 20cm	HEP-1
FP-2	35 × 45cm	HEP-3
FP-3	46 × 57cm	—
FP-4	10 × 10cm	HEP-1, VEP-2
FP-5	18 × 20cm	HEP-1, VEP-3
FP-6	9 × 9cm	HEP-1, VEP-3
FP-7	12 × 16cm	HEP-1

Thermo Scientific* Owl* Transfer Membranes



Thermo Scientific Owl Transfer Membranes are hydrophobic membranes that are ideal for Western blotting.

- Thermo Scientific offers Immobilon*-P, PVDF transfer membrane manufactured by Millipore
- This membrane provides the highest signal-to-noise ratio, which allows the use of mild blocking procedures
- Immobilon-P has high protein retention; is compatible with all standard visualization methods; and can be used for protein sequencing
- Immobilon is available in minigel and large-format gel sizes

Cat. No.	Format	Membrane Size
TM151-1	Roll, 26.5cm x 3.75m	26.5cm x 3.75m
TM151-4	Sheets (Pack of 10)	15 x 15cm
TM151-5	Sheets (Pack of 10)	10 x 10cm

Thermo Scientific* Owl* RF-3 Filing System



Thermo Scientific Owl RF-3 Filing System is ideal for organizing your refrigerator, coldroom, freezer or benchtop.

- Eight compartments constructed of durable 0.64cm thick acrylic
- No skid rubber feet prevent sliding
- Use either vertically or horizontally

Notes: Microtube racks are not included.

Cat. No.	Array	Compartments	Exterior L x W x H	Interior L x W x D
RF-3	2 x 4	8	6 x 9 x 12"	2.625 x 2.625 x 8.875"

Thermo Scientific* Owl* Pipet Holder



Thermo Scientific Owl Pipet Holder is designed to hold standard glass and disposable pipets in square or round cans.

- Constructed of sturdy 0.25" thick acrylic

Cat. No.	Description	Exterior L x W x H	Interior L x W x H
PCH-1	Pipet Holder	13.5 x 11.5 x 16"	3 x 3 x 11.25"

Thermo Scientific* Owl* Survey Detectors



Thermo Scientific Owl Survey Detectors provide detection of isotopes most commonly used in the lab.

- Each meter provides a standard scale of 0 to 5KCPM and reads both CPM and REM
- Meters have a counting range of 0.1X, 1X, 10X and 100X and will provide external calibration plots
- A built-in speaker, clip-on probe handle, and strain relief cable maximize ease of use
- Each meter is factory calibrated to ensure accuracy
- Models for the detection of beta or low-energy gamma radiation are available
- Choose beta detectors in thin-end or pancake styles

Required Accessories: Meters require two “D” batteries, which will provide approximately 200 hours of use

Certifications: CE marked

Cat. No.	Description	Indicated Use	Window (mg/cm ²)	Active Window (cm ²)
SM-1	Thin-end beta detector with meter	xβ-	1.7±0.3 (mica)	approx. 6.4
SM-1-DET	Thin-end beta detector only	xβ-	1.7±0.3 (mica)	approx. 6.4
SM-2	Pancake beta detector with meter	xβ-	1.7±0.3 (mica)	approx. 15.5
SM-2-DET	Pancake beta detector only	xβ-	1.7±0.3 (mica)	approx. 15.5
SM-3	Gamma scintillator with meter	low energy γ	14	5.0
SM-3-DET	Gamma scintillator only	low energy γ	14	5.0

Thermo Scientific* Owl* EC-105 Compact Power Supply



Thermo Scientific Owl EC-105 Compact Power Supply is ideal for DNA and RNA electrophoresis.

Equipped with an over current detector for maximum safety

- Easy-to-use power supply operates in constant voltage
- The adjustment knob and hi-lo range switch control the output, which is variable in 10V increments from 20V to 250V
- Two-position switch toggles the bright LED display from indicating output voltage to output current
- The supply is also equipped with an over current detector for maximum safety and has two jacks

Warranty: One year

Certifications: CE marked

Specifications	
Maximum Voltage	250V
Max. Current	300mA @ 150-250V; 500mA below 150V
No. of Jacks	2
Display Modes	Voltage or current
L x W x H	15 x 20 x 11 cm (6 x 8 x 4.5")
Electrical Requirements	230V/50Hz

Cat. No.	Description
105ECA-LVD	Compact Power Supply

Thermo Scientific* Owl* EC-300XL2 Compact Power Supply



Thermo Scientific Owl EC-300XL Compact Power Supply is simple-to-use, multi-purpose, lightweight and great for DNA / RNA and Protein electrophoresis.

- Power-off memory retains settings after shut-down
- Stackable design saves benchtop space
- Soft-touch key pad allows quick set-up
- Easy to operate
- Designed for safety
- Non-skid rubber feet provide stability

Warranty: One year

Certifications: CE marked

Specifications	
Output Voltage	300V
Max. Current	400mA
No. of Jacks	3
Display Modes	Voltage or current
Timer	0-999 min.
L x W x H	26 x 14 x 13.3cm (10.25 x 5.5 x 5.25")
Electrical Requirements	230V 50/60Hz

Cat. No.	Description
EC-300XL2	Compact Power Supply

Thermo Scientific* Owl* EC-200XL High Current Power Supply



The Thermo Scientific Owl EC-200XL High Current Power is Simple-to-use, multi-purpose, lightweight and grea for DNA / RNA, Protein and Blotting electrophoresis.

- Power-off memory retains settings after shut-down
- Stackable design saves benchtop space
- Soft-touch key pad allows quick set-up
- Easy to operate
- Designed for safety
- Non-skid rubber feet provide stability

Warranty: One year

Certifications: CE marked

Specifications	
Output Voltage	200V
Max. Current	2000mA
No. of Jacks	4
Display Modes	Voltage or current
Timer	0-99 hr. 59 min.
L x W x H	31 x 27 x 13.3cm (12 x 10.75 x 5.25")
Electrical Requirements	230V 50/60Hz

Cat. No	Description
EC-200XL2	High Current Power Supply

Thermo Scientific* Owl* EC-1000XL Programmable Power Supply



Thermo scientific Owl EC-1000XL Programmable Power Supply is great for DNA / RNA, Protein and Blotting electrophoresis.

- Power-off memory retains settings after shut-down
- Offers constant power mode
- Stackable design saves benchtop space
- Soft-touch key pad allows quick set-up
- Easy to operate
- Designed for safety
- Non-skid rubber feet

Warranty: One year

Certifications: CE marked

Specifications	
Output Voltage	1000V
Max. Current	500mA
No. of Jacks	4
Display Modes	Voltage, current, or power
Timer	0-99 hr. 59 min.
L x W x H	31 x 27 x 13.3cm (12 x 10.75 x 5.25")
Electrical Requirements	230V 50/60Hz

Cat. No.	Description
EC-1000XL2	Programmable Power Supply

Thermo Scientific* Owl* EC-3000XL Programmable Power Supply



The Thermo Scientific Owl EC-3000XL Programmable Power is simple-to-use, multi-purpose and lightweight.

- Power-off memory retains settings after shut-down
- Offers constant power mode
- Stackable design saves benchtop space
- Soft-touch key pad allows for quick set-up
- Easy to operate
- Designed for safety
- Non-skid rubber feet

Warranty: One year

Certifications: CE marked

Specifications	
Output Voltage	3000V
Max. Current	400mA
No. of Jacks	4
Display modes	Voltage, current, or power
Timer	0-99 hr. 59 min.
L x W x H	31 x 27 x 13.3cm (12 x 10.75 x 5.25")
Electrical Requirements	230V 50/60Hz

Cat. No.	Description
EC-3000XL2	Programmable Power Supply

Thermo Scientific* Owl* Power Supply Leads

Thermo Scientific Owl Power Supply Leads are three feet long with a retractable sheath end for convenience and safety.

- Manufactured with a strain relief cord to prevent breakage

Includes: One black and one red lead

Cat. No.	Description
PSL-5	Power supply leads, 3 ft.

Thermo Scientific* Owl* PSA-2 Bio-Rad* Adapter

Thermo Scientific Owl PSA-2 Bio-Rad Adapter is used to extend Owl power supply leads to fit in the BioRad power supplies.

- Allows all Owl units to fit Bio-Rad power supplies

Cat. No.	Description
PSA-2	BioRad Adaptor

FURNACES

Thermo Scientific* Heraeus* M104 Muffle Furnaces



Thermo Scientific Heraeus furnaces provide excellent contamination protection. Abrasion-resistant ceramic annealing chamber helps protect samples against contamination.

Designed for minimum space requirements and can be set up under a laboratory fume hood. **Not available in North America.**

- Environmentally friendly and economical— asbestos-free insulation minimizes energy consumption and keeps exterior temperature low
- Easy handling and loading via tilting door that also protects users from hot inside surface
- Reaches rated temperature of 1000°C in 110 min.
- Working volume of 3.5L
- Standard model equipped with electronic controller, digital display and upper limit cut-out; deluxe models available with electronic or programmable controller, timer, and exhaust fan
- M104G models feature glazed annealing muffle for use in analytical processes requiring extreme purity

Applications:

- Chemical analysis
- Annealing loss determination
- Materials testing
- Ashing processes

Warranty: 24 months

Certifications: CE marked

Specifications	
Capacity	3.5L (0.12355 cu. ft.)
Max. Temperature	1000°C
Temperature Uniformity	± 10°K
Heatup Time	110 min.
Interior D x W x H	16 x 17 x 13cm (6.3 x 6.7 x 5.1")
Exterior L x W x H	57 x 45.6 x 64.6cm (22.4 x 18 x 25.4")
Heat Output	1040w
Power Consumption	2.5kW
Hertz	50/60
Volts	230
Shipping Weight	51kg (112.4 lb.)

Cat. No.	Description
M 104 Muffle Furnace	
50040485	With electronic controller and upper limit cut-out
50040486	With electronic controller, upper limit cut-out and 24-hour timer
50040487	With electronic controller, upper limit cut-out, 24-hour timer and exhaust fan
50040488	With digital programmable temperature controller and upper limit cut-out
50040489	With digital programmable temperature controller, upper limit cut-out and exhaust fan
50049820	With adjustable fresh air supply for incinerating processes
50040903	With electronic controller
M 104 G Muffle Furnace	
50047438	With electronic controller, upper limit cut-out and 24-hour timer
50047439	With electronic controller, 24-hour timer, and exhaust fan
50051429	With electronic controller and adjustable fresh air supply
50047440	With digital programmable controller
50047441	With digital programmable controller and exhaust fan
50057773	With digital programmable controller and adjustable fresh air supply for incinerating processes

Thermo Scientific* Heraeus* K114 Chamber Furnaces



Thermo Scientific Heraeus K 114 chamber furnaces are ideal for use in crowded laboratories and for common applications such as materials testing, burning, rapid heat processes.

Furnaces feature extremely short heating and recovery times along with accurate temperature control. **Not available in North America.**

- Ideal for routine high temperature laboratory applications such as incinerating, annealing, baking, pre-heating and drying
- Asbestos-free insulation for minimal energy consumption and low exterior temperature
- High temperature accuracy and optimised heating system layout ensure most efficient use of work space
- Easy temperature controls and easy handling and loading via tilting door
- Designed for minimum space requirements and can be set up under a laboratory fume hood

Ordering Information: Available options include choice of automatic upper limit cut-out (TWB), Digicon* controller or Thermicon* programmable controller, and timer

Warranty: 24 months

Certifications: CE marked

Specifications	
Capacity	3.5L (0.12355 cu. ft.)
Max. Temperature	1100°C
Temperature Uniformity	± 6°K
Heatup Time	35 min.
Interior D x W x H	16 x 17 x 13cm (6.3 x 6.7 x 5.1")
Exterior L x W x H	57 x 45.6 x 64.6cm (22.4 x 18 x 25.4")
Heat Output	690w
Power	1.7kW
Volts	230
Hertz	50/60
Shipping Weight	79.4kg (36 lb.)

Cat. No.	Description
50040491	With electronic controller and upper limit cut-out
50040492	With electronic controller, upper limit cut-out, and 24-hr. timer
50040493	With digital programmable temperature controller and upper limit cut-out
50049812	With adjustable fresh air supply for incinerating purposes
50040902	With electronic controller
50047063	With electronic controller and exhaust fan
50051059	With digital programmable controller and exhaust fan

Thermo Scientific* Accessories for Heraeus* High-Temperature Furnaces

For use with Thermo Scientific Heraeus High-Temperature Furnaces.

Cat. No.	Description	For Use with
50040537	Exhaust Flue	For Heraeus K 114 chamber furnace and M 104 muffle furnace
50040950	Tray	For Heraeus K 114 chamber furnace and M 104 muffle furnace

Thermo Scientific* Heraeus* M110 Muffle Furnaces



Thermo Scientific furnaces provide even heat distribution and economical operation in a small footprint.

Two-shell design, outstanding insulation and heating element arrangement give even heat distribution with minimal fluctuation. Units require only 0.41²m of counter. Rugged and flexible—for all types of lab applications, including heating of metals and drying at high temperatures. **Not available in North America.**

- 9L Working volume
- Two-shell design with air pocket between annealing box and outside walls
- Multiple layers of high-quality, asbestos-free ceramic fiber insulation
- Heating elements safely positioned in grooved blocks on side walls of the work space, covered with ceramic plates
- Hinged door designed with parallel forced guidance system—hot surface always faces away from user when door is open
- Adjustable upper limit cut-out protects samples and equipment

Ordering Information: Models available with optional 24 hr. timer, Thermicon* P digital program controller with microprocessor, exhaust fan and/or exhaust flue. Additional exhaust flue (50006394) and tray (50006408) available separately.

Warranty: 24 months

Certifications: CE marked

Specifications	
Capacity	9L
Max. Temperature	1100°C
Temperature Uniformity	±7°K
Heatup Time	100 min.
Interior D x W x H	30 × 20 × 15cm (11.8 × 7.9 × 5.9")
Exterior L x W x H	72 × 57.6 × 75.2cm (28.4 × 22.7 × 29.6")
Heat Output	1400w
Power Consumption	2.9kW
Volts	230
Hertz	50/60
Shipping Weight	78kg (172 lb.)

Cat. No.	Description
51010272	With electronic controller and upper limit cut-out
50057440	With electronic controller, upper limit cut-out and 24-hour timer
51000808	With digital program controller, upper limit cut-out, exhaust fan and flue
50056360	With electronic controller, upper limit cut-out, 24-hour timer and exhaust fan
51000802	With digital program controller and upper limit cut-out
51010808	With electronic controller, upper limit cut-out, exhaust fan and flue

Thermo Scientific* Accessories for Heraeus* M110 Muffle Furnaces

These Thermo Scientific accessories are for use with Heraeus M110 Muffle Furnaces.

Cat. No.	Description	For Use with
50006394	Exhaust Flue	M110 muffle furnace
50006408	Tray	M110 muffle furnace

Thermo Scientific* Options for Heraeus* Furnaces

Thermo Scientific offers factory-installed options for all Heraeus furnaces.

Cat. No.	Description
50044447	Calibration Certificate for 900°C at center of work space
50044188	Calibration, Additional Measuring Point

HOT PLATES AND STIRRERS

Thermo Scientific* RT Hotplates



Thermo Scientific RT Hotplates offer superior performance, smart design and built-in safety features for heating application needs.

For standard heating applications that require digital control and remote probe capabilities.

Feature an integral temperature display, redundant user-defined controls and a Hot Surface Alert system.

Key Features

- Variable temperature control in 2°C increments up to 150°C; 5°C increments above 150°C up to maximum
- Innovative temperature control prevents runaway temperature conditions with user-defined overtemperature setpoint
- Integral temperature display and controller eliminates need for bulky remote controller displays
- Flexible remote temperature probe allows application versatility
- Aluminum top plate heating surface cleans easily

Designed for Stability and Safety

- HOT TOP Warning System eliminates accidental burns with prominent display when heating surface exceeds 50°C (122°F)
- Rugged, low-profile, cast-aluminum base with six nonskid feet for increased stability on benches and lab jacks
- Flexible remote temperature probe included in each unit provides versatility needed for every application. Ideal for use in fume hoods
- Cord retention bracket prevents loose power cord connections that can cause electrical arcing
- Protection Class IP42

Includes: Detachable power cord and 6 " (15.2cm) PTFE-coated temperature probe

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Heating Places	1
Temperature Range	4° to 350°C
Heating Surface Diameter	13.5cm (5.3")
Overall L x W x H	28.4 × 16.5 × 9.9cm (11.2 × 6.5 × 3.9")
Shipping Weight	3.4kg (7.6 lb.)

Cat. No.	Electrical Requirements
HP139920-33Q	220/240V 50/60Hz

Thermo Scientific* RT Remote Probe Accessories

Stainless-steel and PTFE-coated remote probes for the Thermo Scientific RT Series.

Cat. No.	Description
TC727X2	Seven-inch, PTFE Remote Probe
TC732X1	Six-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC732X2	Ten-inch, 316ss Remote Probe (Max. Temp: 1100°C)

Thermo Scientific* Cimatec* Digital Hotplates



Thermo Scientific Cimatec Digital Hotplates deliver a host of capabilities for all sample heating needs, including an easy-to-read digital display and HOT SURFACE warning alerts.

Ideal for labs that require precise temperature stability with digital control for repetitive sample procedures.

Offer digital microprocessor controls, advanced HOT TOP alert for protection, and a durable, low-profile design for general heating applications. Available in three sizes, 4x4, 7x7 and 10x10.

Performance Features

- Digital display and large control knob enable precise temperature control
- Microprocessor controls with feedback technology maintain consistent repeatable temperature settings
- Flat top and high-wattage heating elements combine to provide superior heat transfer and fast time-to-boil
- Various sizes offered to handle different sample volumes
- Integrated ring-stand holder to accommodate 1.3cm (0.5in.) dia. support rod

Safety Features

- Cast-aluminum base diverts spills from internal electronics
- Patented HOT TOP warning system helps prevent accidental burns
- Low-profile design and stable, rugged base prevent tipping and spillage

Ceramic Top Models

- Clean easily and resist alkalis and acids
- Seamless, reflective white surface aids sample visibility
- Heat to higher temperatures than aluminum tops

Aluminum Top Models

- Rugged and chip-resistant for superior durability
- Allow uniform heat distribution across surface

Includes: Detachable line cord and plug

Warranty: Three years

Certifications: cCSAus; CE marked

Cat. No.	Heating Surface Area	Material (Surface)	Temperature Range	Overall L x W x H	Shipping Weight	Electrical Requirements
HP130910-33Q	10.8 × 10.8cm (4.25 × 4.25")	Ceramic	5° to 540°C	25 × 13 × 10cm	3.2kg (7 lb.)	220-240V, 50/60, 420w, 1.7A
HP131220-33Q	18.4 × 18.4cm (7.25 × 7.25")	Ceramic	5° to 540°C	33 × 21 × 10cm	5kg (11 lb.)	240V, 50/60, 1150w, 4.8A
HP141920-33Q	18.4 × 18.4cm (7.25 × 7.25")	Aluminum	5° to 300°C	33 × 21 × 10cm	5kg (25 lb.)	220-240V, 50/60Hz, 690w, 2.9A
HP131530-33Q	26 × 26cm (10.25 × 10.25")	Ceramic	5° to 400°C	41 × 29 × 10cm	6.2kg (13.75 lb.)	220V, 50/60Hz, 1530w, 6.4A

Thermo Scientific* Super-Nuova* Digital Hotplates



Thermo Scientific Super-Nuova Digital Hotplates offer the highest performance, maximum safety and flexible operation for repeatable heating applications.

Ideal for labs that require unmatched performance, safety and controls.

Available in two sizes. Feature unique HOT TOP alert for ultimate protection and sophisticated programmable controls.

Operating Features

- Microprocessor control ensures accurate and stable setpoints for temperature
- Electronic feedback controls monitor either top plate surface or liquid temperature (when using external PTFE-coated probe, included) and adjusts to setpoint
- Single control knob controls heat; lock feature prevents accidental changes
- Digital temperature display
- Temperature adjusts in 1° increments
- Four user-defined temperature memory keys recall settings
- Calibration mode allows remote probe to be calibrated to external standards; probe can be programmed as a system (probe, control, display) at any user-selected temperature
- Can be used in 0 to 27°C, 80% relative humidity, noncondensing environment
- RS-232 port allows output of time count, temperature setpoint, top surface/remote probe temperature

Safety Features

- Cast-aluminum base diverts spills from internal electronics
- Patented HOT TOP warning system helps prevent accidental burns
- Low-profile design and stable, rugged base prevent tipping and spillage
- Walk-away timer allows safe, automatic, unattended operation
- User-adjustable overtemperature protection prevents overheating, short-circuiting and internal damage in case of sample overflow

Ceramic Top Models

- Clean easily and resist alkalis and acids
- Seamless, reflective white surface aids sample visibility
- Heat to higher temperatures than aluminum tops

Aluminum Top Models

- Rugged and chip-resistant for superior durability
- Allow uniform heat distribution across surface

Includes: Detachable line cord and plug, 6" Type K probe.

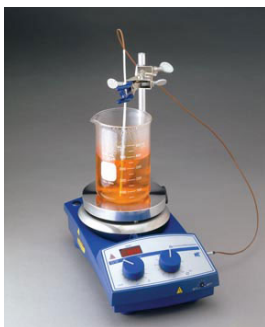
Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Positions	1
Material (Base)	Aluminum

Cat. No.	Heating Surface Area	Material (Surface)	Temperature Range	Overall L x W x H	Shipping Weight	Electrical Requirements
HP131720-33Q	18.4 x 18.4cm (7.25 x 7.25")	Ceramic	1° to 370°C	33 x 20.8 x 9.7cm	5kg (11 lb.)	220-240V 50/60Hz, 690w, 2.9A
HP133420-33Q	18.4 x 18.4cm (7.25 x 7.25")	Aluminum	1° to 300°C	33 x 20.8 x 9.7cm	5kg (11 lb.)	220-240V 50/60Hz, 690w, 2.9A
HP133730-33Q	26 x 26cm (10.25 x 10.25")	Ceramic	1° to 370°C	41.1 x 28.7 x 10.2cm	6.2kg (13.75 lb.)	220-240V 50/60Hz, 1345w, 5.6A

Thermo Scientific* RT Stirring Hotplates



Thermo Scientific RT stirring hotplates combine intelligent performance, safety and design with integral, easy-to-use controls for optimal precision and repeatability.

State-of-the-art temperature control prevents runaway temperature conditions.

Offer simple operation, electronic temperature control, and built-in safety features for superior performance. Choose aluminum or stainless-steel top plate, 5.38" dia. (13.5cm).

Key Features

- StirTrac* system provides improved low-speed stirring, consistent speed control and stronger magnet coupling
- Easy-to-use control knobs for temperature and speed
- Variable temperature control in 1°C increments
- Braking feature brings stir bar to immediate stop for quick flask removal, prevents decoupling
- Integral temperature display and controller eliminates need for a bulky and expensive remote temperature controllers. Ideal for use in fume hoods.
- Protection rating IP42

Designed for Stability and Safety

- Innovative temperature control prevents runaway temperature conditions with user-defined overtemperature setpoint
- Flexible remote temperature probe allows application versatility
- Hot-surface Alert when top plate temperature exceeds 50°C
- Six nonskid feet prevent sliding
- Cord retention bracket prevents loose power cord connections that can cause electrical arcing

Includes: Detachable power cord and 6" (15.2cm) PTFE-coated temperature probe

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Places	1
Stirring Range	50 to 1200rpm
Max. Container Volume	20L
Top Plate Diameter	13.5cm (5.3")
Overall L x W x H	28.4 x 16.5 x 9.9cm (11.2 x 6.5 x 3.9")
Shipping Weight	4.8kg (10.5 lb.)
Electrical Requirements	220/240V 50/60Hz

Cat. No.	Material (Surface)	Temperature Range
SP136320-33Q	Aluminum	4° to 350°C
SP138720-33Q	Stainless Steel	4° to 450°C

Thermo Scientific* RT Remote Probe Accessories

Stainless-steel and PTFE-coated remote probes for the Thermo Scientific RT Series.

Cat. No.	Description
TC727X2	Seven-inch, PTFE Remote Probe
TC732X1	Six-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC732X2	Ten-inch, 316ss Remote Probe (Max. Temp: 1100°C)

Thermo Scientific* RT Elite* Stirring Hotplates



Thermo Scientific RT Elite stirring hotplate offers exceptional performance controls, advanced safety and stirring, and a smart round-top design.

Advanced StirTrac* technology enables optimal slow-speed stirring and control, and stronger magnetic coupling.

Enhanced operating features provide superior precision control and repeatability. Choose aluminum or stainless-steel top plate.

- Single control knob combined with separate LCD displays for temperature, speed and time
- Innovative temperature control prevents runaway temperature conditions with user-defined overtemperature setpoint
- Integral temperature display and controller eliminates need for bulky remote controller displays
- Flexible remote temperature probe allows application versatility
- Walk-away timer shuts off heating, stirring, or both after 1-999 minutes
- RS-232 port outputs time count, temperature and setpoint to external PC
- Protection rating IP42

Stirring Features

- StirTrac* system provides improved low-speed stirring, consistent speed control and stronger magnet coupling
- StirTrac braking feature brings stir bar to immediate stop for quick flask removal; prevents decoupling
- Can stir up to 20L

Safety Features

- HOT TOP warning alerts when top plate temperature exceeds 50°C—even when power is off
- Six nonskid feet prevent sliding
- Cord retention bracket prevents loose power cord connections that can cause electrical arcing

Ordering Information: Accessory remote probes available separately (TC727X2, TC732X2)

Includes: Detachable cord, 6 in. remote temperature probe, TFE-coated stir bar

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Places	1
Stirring Range	50 to 1200rpm
Max. Container Volume	20L
Top Plate Diameter	13.5cm (5.3 in.)
Overall L x W x H	28.4 x 16.5 x 9.9cm (11.2 x 6.5 x 3.9 in.)
Shipping Weight	10.4kg (23 lb.)
Electrical Requirements	220-240V 50/60Hz

Cat. No.	Material (Surface)	Temperature Range
SP136420-33Q	Aluminum	1° to 350°C
SP138820-33Q	Stainless-steel	1° to 450°C

Thermo Scientific* RT Remote Probe Accessories

Stainless-steel and PTFE-coated remote probes for the Thermo Scientific RT Series.

Cat. No.	Description
TC727X2	Seven-inch, PTFE Remote Probe
TC732X1	Six-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC732X2	Ten-inch, 316ss Remote Probe (Max. Temp: 1100°C)

Thermo Scientific* Cimatec* Digital Stirring Hotplates



Thermo Scientific Cimatec Digital Stirring Hotplates offer advanced stirring controls, exceptional safety and superior temperature performance for general heating applications.

Ideal for repetitive procedures demanding precision and safety.

StirTrac* technology optimizes stirring speeds and unique HOT TOP alert provides added protection. Available in three sizes: 4 x 4, 7 x 7 and 10 x 10 in.

Performance Features

- Microprocessor-controlled feedback technology maintains consistent, repeatable temperature settings from 5°C up to maximum
- Digital display and large control knob enable precise temperature control
- Flat top and high-wattage heating elements provide superior heat transfer and fast time-to-boil
- Various sizes offered to handle different sample volumes
- Rugged cast aluminum body is stable and durable
- StirTrac technology allows smooth low-speed stirring, consistent speed control and stronger magnetic coupling
- StirTrac braking brings stir bar to immediate stop for quick flash removal
- Integrated ring stand holder to accommodate 0.5 in. diameter (1.3cm) support rod

Safety Features

- Hot surface alert protects from accidental burns; light activates when heating surface is above 50°C (122°F)
- Unit displays HOT OFF until unit reaches 50°C (122°F) or below, even when heat control is turned off
- Cast-aluminum base diverts spills from internal electronics
- Low-profile design and stable, rugged base prevents tipping and spillage

Ceramic Top Models

- Clean easily and resist alkalis and acids
- Seamless, reflective white surface aids sample visibility
- Heat to higher temperatures than aluminum tops

Aluminum Top Models

- Rugged and chip-resistant for superior durability
- Allow uniform heat distribution across surface

Includes: Detachable line cord. All models supplied with a 0.38 dia. x 2 in.L (1 x 5.1cm) TFE-coated stir bar, except 4 x 4 in., which includes a 1 in. (2.54cm) stir bar.

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Places	1
Stirring Range	60 to 1200rpm
Electrical Requirements	220/240V 50/60Hz

Cat. No.	Heating Surface Area	Material (Surface)	Temperature Range	Overall L x W x H	Shipping Weight	Electrical Requirements
SP131010-33Q	10.8 x 10.8cm (4.25 x 4.25 in.)	Ceramic	5° to 540°C (41° to 1004°F)	25 x 13 x 10cm	3.2kg (7 lb.)	220/240V 50/60Hz
SP131320-33Q	18.4 x 18.4cm (7.25 x 7.25 in.)	Ceramic	5° to 540°C (41° to 1004°F)	33 x 21 x 10cm	5kg (11 lb.)	220/240V 50/60Hz
SP142020-33Q	18.4 x 18.4cm (7.25 x 7.25 in.)	Aluminum	5° to 300°C (41° to 572°F)	33 x 21 x 10cm	5kg (11 lb.)	220/240V 50/60Hz
SP131630-33Q	26 x 26cm (10.25 x 10.25 in.)	Ceramic	5° to 400°C (41° to 1004°F)	41 x 29 x 10cm	6.2kg (13.75 lb.)	220/240V 50/60Hz

Thermo Scientific* Super-Nuova* Single-Position Digital Stirring Hotplates



The Thermo Scientific Super-Nuova single-position digital stirring hotplates deliver top-of-the-line performance, easy operation and sophisticated controls for maximum safety.

Ideal for labs that require unmatched performance, safety and controls.

Two sizes offered. Ceramic- or aluminum-top units have 4-function memory—excellent for labs with multiple users. Low temperature adjustment is ideal for life science and biotechnology applications.

Operating Features

- Microprocessor control ensures accurate and stable setpoints for temperature (and stirring speed for stirring models only)
- Electronic feedback controls monitor either top plate surface or liquid temperature (when using external PTFE-coated probe, included) and adjust to setpoint
- Single control knob controls heat and speed (based on model); lock feature prevents accidental changes
- Separate digital displays for temperature and rpm
- Powerful motor and magnetic system prevents magnetic decoupling
- Temperature adjusts in 1° increments
- Four user-defined temperature/speed memory keys recall settings
- Calibration mode allows remote probe to be calibrated to external standards; probe can be programmed as a system (probe, control, display) at any user-selected temperature
- Can be used in 0 to 27°C, 80% relative humidity, noncondensing environment
- RS-232 port allows output of time count, temperature setpoint, top surface/remote probe temperature, stirring setpoint and actual speed

Safety Features

- Red HOT TOP warning light activates when heating surface is above 50°C (122°F); unit flashes HOT OFF until surface temperature falls to 50°C or below, even when heat control is turned off
- Adjustable overtemperature protection circuit limits top plate temperature
- Rugged low-profile cast aluminum body provides stability and durability
- Unit design protects internal components from accidental spills
- Walk-away timer shuts off heating, stirring or both after preset user-defined interval

Ceramic Top Models

- Clean easily and resist alkalis and acids
- Seamless, reflective white surface aids sample visibility
- Heat to higher temperatures than aluminum tops

Aluminum Top Models

- Rugged and chip-resistant for superior durability
- Allow uniform heat distribution across surface

Includes: Detachable line cord and plug, 6 in. Type K probe. Stirring models also include stir bar.

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Places	1
Stirring Range	50 to 1200rpm

Cat. No.	Heating Surface Area	Material (Surface)	Temperature Range	Overall L x W x H	Shipping Weight	Electrical Requirements
SP131820-33Q	18.4 x 18.4cm (7.25 x 7.25 in.)	Ceramic	1° to 370°C (33.8° to 698°F)	33 x 20.8 x 9.7cm	5kg (11 lb.)	220-240V 50/60Hz, 710w, 3.0A
SP133520-33Q	18.4 x 18.4cm (7.25 x 7.25 in.)	Aluminum	1° to 300°C (33.8° to 572°F)	33 x 20.8 x 9.7cm	5kg (11 lb.)	220-240V 50/60Hz, 710w, 3.0A
SP133830-33Q	26 x 26cm (10.25 x 10.25 in.)	Ceramic	1° to 370°C (33.8° to 698°F)	41.1 x 28.7 x 10.2cm	7.7kg (17 lb.)	220-240V 50/60Hz, 1365w, 5.7A

Thermo Scientific* Super-Nuova* Multi-Position Digital Hotplates and Stirring Hotplates



Thermo Scientific Super-Nuova Multi-Position Digital Stirring Hotplates deliver exceptional flexibility with four-position stirring capability.

Ideal for labs that require high-volume processing with unmatched performance, safety and controls.

Feature four independently controlled stirring positions, on one heated ceramic top. Includes 4-function memory. Suitable for labs with multiple users. Low temperature adjustment is ideal for life science and biotechnology applications.

Operating Features

- Microprocessor control ensures accurate and stable setpoints for temperature and stirring speed
- Electronic feedback controls monitor either top plate surface or liquid temperature (when using external PTFE-coated probe, included) and adjust to setpoint
- Single control knob controls heat and speed; lock feature prevents accidental changes
- Digital display for temperature or rpm
- Powerful motor and magnetic system prevent magnetic decoupling
- Stir Trac* breaking feature brings stir bar to an immediate stop for quick false removal and prevents runaway or decoupled stir bars
- Temperature adjusts in 1° increments
- Four user-defined temperature/speed memory keys recall settings
- Calibration mode allows remote probe to be calibrated to external standards; probe can be programmed as a system (probe, control, display) at any user-selected temperature
- Ceramic tops clean easily, resist chemicals and provide fast boiling time
- Can be used in 0° to 27°C, 80% relative humidity, noncondensing environment
- RS-232 port allows output of time count, temperature setpoint, top surface/remote probe temperature, stirring setpoint and actual speed

Safety Features

- Red HOT TOP warning light activates when heating surface is above 50°C (122°F); unit flashes HOT OFF until surface temperature falls to 50°C or below, even when heat control is turned off
- Adjustable overprotection circuit limits top plate temperature, prevents runaway conditions
- Rugged low-profile cast aluminum body provides stability and durability
- Unit design protects internal components from accidental spills
- Walk-away timer shuts off heating, stirring or both after preset user-defined interval

Includes: Detachable line cord and plug, 6" Type K probe. Stirring models also include stir bar

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Places	4
Stirring Range	50 to 1200rpm
Temperature Range	1° to 370° C (33.8° to 698°F)
Max. Volume	4L (4 x 1L)
Capacity	11.3kg (25 lb.)
Overall L x W x H	41.1 x 28.7 x 10.2cm (16.2 x 11.3 x 4")
Shipping Weight	9.3kg (20.5 lb.)

Cat. No.	Electrical Requirements
SP135930-33Q	220-240V 50-60Hz

Thermo Scientific* RT* Stirrers



Thermo Scientific RT Stirrers with round top plates and StirTrac* technology offer greater performance and control.

Superior stirring performance in a stable, low-profile design.

Microprocessor feedback control provides constant speed despite changes in viscosity.

Key Features

- StirTrac technology offers improved slow-speed stirring, consistent speed control and stronger magnetic coupling
- Braking feature stops stir bar immediately for quick flask removal
- Stainless-steel top plate cleans easily
- Stir up to 20L

Designed for Stability and Safety

- Rugged, low-profile cast aluminum body is stable and durable
- Cabinet design protects internal components from spills
- Six nonsliding feet enhance stability on benchtop and lab jack
- Cord retention bracket prevents loose power cord connections that can cause arching
- Protection Rating IP42

Includes: Detachable cord and TFE-coated stir bar.

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Stirring Positions	1
Stirring Range	50 to 1200rpm
Top Plate Diameter	13.5cm (5.3")
Overall L x W x H	28.4 x 16.5 x 9.9cm (11.2 x 6.5 x 3.9")
Shipping Weight	3.4kg (7.6 lb.)

Cat. No.	Electrical Requirements
S138920-33Q	220/240V 50/60Hz

Thermo Scientific* Cimarec* Stirrers



Thermo Scientific Cimarec Stirrers have microprocessor feedback for precise control even with changes in viscosity.

Delivers precise digital performance at an analog price.

Low-profile design includes three sizes for flexibility from microscale chemistries to larger vessels.

Performance Features

- Microprocessor feedback control provides constant speed regardless of changes in viscosity and prevents runaway and magnetic decoupling
- Direct-drive motor and magnet system permits quiet stirring
- Tight seal and safety trough ensure that accidental spills do not penetrate casing
- Power-on light
- Integrated ring-stand holder to accommodate 1.3cm (0.5") dia. support rod

Safety Features

- Cast-aluminum base diverts spills from internal electronics
- Low-profile design and stable, rugged base prevent tipping and spillage

Ceramic Top Models

- Clean easily and resist alkalis and acids
- Seamless, reflective white surface aids sample visibility

Aluminum Top Models

- Rugged and chip-resistant for superior durability

Includes: Detachable line cord and plug. All models supplied with a 0.38 dia. x 2"L (1 x 5.1cm) TFE-coated stir bar, except 4 x 4", which includes a 1" (2.54cm) stir bar.

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Positions	1
Stirring Speed	60 to 1200rpm
Electrical Requirements	220-240V 50/60Hz

Cat. No.	Stirring Surface Area	Material (Surface)	Overall L x W x H
S130810-33Q	10.8 x 10.8cm (4.25 x 4.25")	Ceramic	25.4 x 12.7 x 9.1cm (10 x 5 x 3.6")
S131120-33Q	18.4 x 18.4cm (7.25 x 7.25")	Ceramic	33 x 20.8 x 9.7cm (13 x 8.2 x 3.8")
S142120-33Q	18.4 x 18.4cm (7.25 x 7.25")	Aluminum	33 x 20.8 x 9.7cm (13 x 8.2 x 3.8")
S131430-33Q	26 x 26cm (10.25 x 10.25")	Ceramic	41.1 x 28.7 x 10.2cm (16.2 x 11.3 x 4")

Thermo Scientific* Super-Nuova* Single-Position Digital Stirrers



Thermo Scientific Super-Nuova single-position digital stirrers are simple to use, with top-of-the-line control and advanced safety features.

Thermo Scientific Super-Nuova single-position digital stirring hotplates deliver top-of-the-line performance, easy operation and sophisticated controls for maximum safety. StirTrac* technology offers improved coupling and stronger magnetic control. Ideal for labs that require unmatched performance, safety and controls.

Ceramic-top general-purpose stirrers with 4-function memory are excellent for labs with multiple users.

Operating Features

- Microprocessor control ensures accurate and stable setpoints for stirring speed
- Single control knob controls speed; lock feature prevents accidental changes
- Digital rpm display
- Seamless, reflective white ceramic surface aids sample visibility
- Stirring adjustable in units of 1rpm
- RS-232 port outputs time count, stir speed (setpoint) directly to PC

Safety Features

- Rugged low-profile cast-aluminum body provides stability and durability
- Unit design protects internal components from accidental spills
- Walk-away timer shuts off stirring after 1, 2, 4, 8, or 12 hrs.

Includes: Detachable line cord and plug

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Stirring Positions	1
Stirring Range	50 to 1200rpm
Material (Top)	Ceramic
Electrical Requirements	220-240V, 50/60Hz

Cat. No.	Stirring Surface Area	Overall L x W x H
S133320-33Q	18.4 x 18.4cm (7.25 x 7.25")	33 x 20.8 x 9.7cm (13 x 8.2 x 3.8")
S133930-33Q	26 x 26cm (10.25 x 10.25")	41.1 x 28.7 x 10.2cm (16.2 x 11.3 x 4")

Thermo Scientific* Super-Nuova* Multi-Position Digital Stirrers



Thermo Scientific Super-Nuova Multi-Position Digital Stirrers offer four individually controlled stirring positions.

Designed for stronger coupling and stirring control, with advanced safety features. Ideal for solubility studies, digestion, titration and enzymatic studies and for labs that require high-volume processing with unmatched performance, safety and controls.

Feature four independently controlled stirring positions, ceramic tops and 4-function memory. Suitable for labs with multiple users.

- Stir Trac* stir control provides improved slow-speed stirring, consistent speed, and strong magnetic coupling — reducing the risk of stir bar decoupling
- Microprocessor control ensures accurate and stable setpoints for stirring speed
- Stir Trac braking feature brings stir bar to an immediate stop for quick flask removal
- Single control knob controls speed; lock feature prevents accidental changes
- Digital rpm display
- Clean easily and resist alkalis and acids
- Seamless, reflective white ceramic surface aids sample visibility
- Stirring adjustable in units of 1rpm
- RS-232 port outputs time count, stir speed (set point) directly to your PC

Safety Features

- Rugged low-profile cast-aluminum body provides stability and durability
- Unit design protects internal components from accidental spills
- Walk-away timer shuts off stirring after 1, 2, 4, 8, or 12 hr.

Includes: Detachable line cord and plug

Warranty: Three years

Certifications: cCSAus; CE marked

Specifications	
No. of Stirring Positions	4
Stirring Range	50 to 1200rpm
Overall L x W x H	41.1 x 28.7 x 10.2cm (16.2 x 11.3 x 4")
Shipping Weight	9.3kg (20.5 lb.)

Cat. No.	Electrical Requirements
S136030-33Q	220-240V 50/60Hz

Thermo Scientific* Variomag* Mono and Maxi Direct Stirrers



Thermo Scientific Variomag Mono and Maxi Direct Stirrers are 100% maintenance- and wear-free.

Reliability, safety and performance for stirring applications.

With powerful magnets and no moving parts, these inductive-drive stirrers are the perfect choice for your general lab needs.

- Large, flat, easy-to-clean work surfaces
- Compact, space-saving design
- Gradual start acceleration is gentle and ensures optimum magnetic coupling
- Adjustable power settings are separate from the speed control—decreasing power consumption and lowering heat output
- Operating conditions are -10° to +40°C at 95%RH

Mono Direct Stirrer

- Easy-to-use rotary knob design
- Rugged powder-coated stainless-steel housing
- Stir speeds up to 1200rpm
- Stir volumes up to 3L
- IP32 protection rated

Maxi Direct Stirrers

- Precise microprocessor control with bright digital display
- Easy-to-clean, chemical resistant, sealed stainless-steel housing
- Easily recall last used settings
- Smooth and even stirring as low as 80rpm
- Stir speeds up to 2000rpm
- Stir volumes up to 5L
- IP62 protection rated; easily cleaned with running water

Includes: 100-240V units contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
Overall L x W x H	215 x 180 x 35mm (8.5 x 7.1 x 1.4")

Cat. No.	Description	Stirring Speed	Protection Class	Weight	Power Settings	Voltage/Plug Type
50094711	Mono Direct	130 to 1200rpm	IP32	1.4kg	1/5W	230V Euro
50096203	Mono Direct	130 to 1200rpm	IP32	1.4kg	1/5W	230V UK
50094713	Maxi Direct	80 to 2000rpm	IP64	2.5kg	5/10/15/20W	100-240V

Thermo Scientific* Variomag* Compact and Maxi Stirrers



Thermo Scientific Variomag Compact and Maxi Stirrers are 100% maintenance- and wear-free, hermetically sealed units designed for challenging stirring environments.

The Variomag Compact and Maxi series stirrers come standard with your choice of controller.

With powerful magnets and no moving parts, these inductive-drive stirrers are designed to go into water baths and incubators.

- Outstanding mechanical, physical, thermal and chemical resistance
- Large, flat, easy-to-clean work surfaces
- Hermetically sealed housing resists dust and microorganisms
- Chemical resistant stainless-steel housing
- All models submersible for use in water baths up to 50°C
- Operating conditions are -10°C to +56°C in air; 0°C to 50°C submerged in water
- Protection class IP68
- Link and Sync up to 8 compact stirrers or 4 Maxi stirrers using one controller with optional distributors and 50088137 compact stirrer or 50088127 Maxi stirrer

Maxi Stirrer with External Control

- Stir speeds up to 2000rpm
- Stir volumes up to 5L
- Adjustable power settings available on the Telemodul 20 C and Telemodul 40 C offer decreased power consumption and lower heat output

Compact Stirrer with External Control

- Stir speeds up to 1400rpm
- Stir volumes up to 1.5L
- Adjustable power settings available on the Telemodul 20 C offer decreased power consumption and lower heat output

Ordering Information: Choose from three different control units (included with stirrer). Choose the standard Telemodul controller with its space-saving design, the Telemodul 20 C with microprocessor controls, adjustable power setting and programmability or the Telemodul 40 C with higher speeds, more power settings and PC control.

Includes: 100-240V units contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
No. of Stirring Positions	1
Material	Stainless Steel
Protection Class	IP68

Cat. No.	Model	Stirring Speed	L x W x H	Weight	Power Settings	Voltage/Plug Type
50088143	Maxi w/Standard Telemodul	130 to 1000rpm	180 x 180 x 35mm	2.3kg	6W	230V Euro
50088145	Maxi w/Standard Telemodul	130 to 1000rpm	180 x 180 x 35mm	2.3kg	6W	230V UK
50088135	Maxi w/Telemodul 20 C	130 to 1400rpm	180 x 180 x 35mm	2.3kg	4.5/13.5/18W	100-240V
50088122	Maxi w/Telemodul 40 C	130 to 2000rpm	180 x 180 x 35mm	2.3kg	3/36W	100-240V
50088152	Compact w/Standard Telemodul	130 to 1000rpm	120 x 120 x 35mm	1kg	5W	230V Euro
50088153	Compact w/Standard Telemodul	130 to 1000rpm	120 x 120 x 35mm	1kg	5W	230V UK
50088133	Compact w/Telemodul 20 C	130 to 1400rpm	120 x 120 x 35mm	1kg	3/6/9/12W	100-240V

Thermo Scientific* Variomag* Benchtop Distributors (Link & Sync)

Thermo Scientific Variomag Benchtop Distributors are for use with Mini, Micro, Compact and Maxi series stirrers.

Benchtop distributors ensure identical operating conditions for multiple stirrer installations.

- Simultaneous control of 2, 4, 6, or 8 Mini, Micro or Compact series stirrers, or 2 or 4 Maxi Series stirrers using a single Telemodul 20 C or Telemodul 40 C external controller
- Even powered distribution for synchronized stirring

Cat. No.	Model
50088127	Maxi Stirrer w/o Controllers
50088137	Compact Stirrer w/o Controller
50091720	4-Place Distributor
50091721	8-Place Distributor

Thermo Scientific* Variomag* Extension Cables

Thermo Scientific Variomag Extension Cables are for use with Variomag Magnetic Stirrers.

Cat. No.	Model	Length	Compatibility
50088016	4-Pin Extension Cable	3m (9.8ft.)	Telemodul 20 C, 40 C and 10 M

Thermo Scientific* Variomag* Standard Telemodul Controller



The Thermo Scientific Variomag Standard Telemodul Controller is included with the Micro, Mini, Compact, and Maxi Variomag Stirrers.

Order as replacement controller only.

- Space saving
- Provides stirring power for small to medium volumes of low-viscosity fluids
- Recommended for single point stirring up to 250mL

Specifications	
Speed Control Range	130 to 1000rpm
Speed Control Accuracy	±3
Rated Power	7w
Stirring Power Relative to Rated Power	100%
Output Voltage	12V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	96 × 63 × 50mm (3.7 × 2.4 × 1.9")
Weight	0.4kg (0.8 lb.)

Cat. No.	Volts
50119115	230V

Thermo Scientific* Variomag* Telemodul 20 C Controller



The Thermo Scientific Variomag Telemodul 20 C Controller is included with the Micro, Mini, Compact, Maxi and Telesystems Variomag Stirrers.

Order as replacement controller only.

Features user-friendly, menu-driven microprocessor controls

- Single-handed operation with straightforward turn and press adjustment wheel
- Three individual program, store and recall keys for rapid start-up
- Last used settings stored in memory
- Rocking/shake mode reverses stir bar direction for a gentle back and forth stirring motion
- Four power settings to decrease power consumption and lower heat output

Specifications	
Speed Control Range	130 to 1400rpm
Speed Control Accuracy	±1
Rated Power	20w
Stirring Power Relative to Rated Power	25/50/75/100 (4 levels)
Starting Times	5 sec. to 60 min.
Pause Times	5 sec. to 60 min.
Output Voltage	20V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	165 × 155 × 95mm (6.4 × 6.1 × 3.7")
Weight	0.6kg (1.3lb.)

Cat. No.	Description
50090773	20 C Controller

Thermo Scientific* Variomag* Telemodul 40 C Controller



The Thermo Scientific Variomag Telemodul 40 C Controller is included with the Maxi and Telesystems Variomag Stirrers.

Order as replacement controller only.

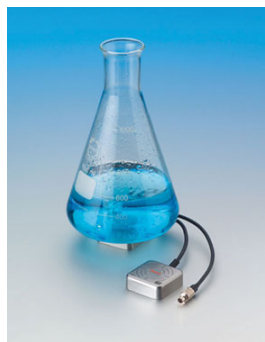
Controller has higher speeds and more power settings than the Standard and Telemodul 20 C controllers.

- Power output booster to 40w to handle more demanding stirring tasks
- 10 power settings to decrease power consumption and lower heat output
- Single-handed operation with straightforward turn and press adjustment wheel
- Three individual program store and recall keys for rapid start-up
- Last used settings stored in memory
- Rocking/shake mode reverses stir bar direction for a gentle back and forth stirring motion
- RS-232 interface for data transfer and PC control

Specifications	
Stir Speed	100 to 2000rpm
Speed Control Accuracy	±1
Rated Power	40w
Stirring Power Relative to Rated Power	10 to 100 (10 levels)
Starting Times	5 sec. to 60 min.
Pause Times	5 sec. to 60 min.
Output Voltage	36V DC
Ambient Temperature Range	0° to 40°C at 80% relative humidity
Overall L x W x H	165 x 155 x 95mm (6.4 x 6.1 x 3.7")
Weight	0.7kg (1.5 lb.)

Cat. No.	Description
50090774	40 C Controller

Thermo Scientific* Variomag* Micro Stirrers



Thermo Scientific Variomag Micro Stirrers are hermetically sealed IP68-protection class stirrers and can be submerged in water.

The Variomag Micro Series stirrers come standard with your choice of controller.

- Hermetically sealed housing resists dust and microorganisms
- Suitable for use in high humidity conditions, and can be fully submerged in water baths up to 95°C
- Up to eight stirrers can be controlled with a single controller using the optional distributor
- Stainless-steel housing has excellent chemical resistance
- Stir speeds up to 1400rpm
- Stir volumes up to 1L
- Operating conditions are -10° to +120°C at 95%RH or 0° to 95°C submerged in water
- Protection Class IP68 (stirrer only)
- Link and Sync up to 8 micro stirrers using one controller with optional distributors and 50088139 stirrers

Ordering Information: Optional accessories: Micro stirrer without controller (#50088139), 4-place distributor (#50091720), 8-place distributor (#50091721)

Includes: 100-240V units contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
No. of Stirring Positions	1
Stir Capacity	1L
Dimensions, L x W x H	48 x 48 x 15mm (1.8 x 1.8 x 0.6")
Weight	0.2kg (0.4 lb.)

Cat. No.	Model	Stirring Speed	Power Settings	Voltage/Plug Type
50088162	Micro w/Telemodul	130 to 1000rpm	3w	230V Euro
50088151	Micro w/Telemodul	130 to 1000rpm	3w	230V UK
50088148	Micro 20 w/Telemodul 20 C	130 to 1400rpm	2/4/6/8w	100-240V

Thermo Scientific* Variomag* Benchtop Distributors (Link & Sync)

Thermo Scientific Variomag Benchtop Distributors are for use with Mini, Micro, Compact and Maxi series stirrers.

Benchtop distributors ensure identical operating conditions for multiple stirrer installations.

- Simultaneous control of 2, 4, 6, or 8 Mini, Micro or Compact series stirrers using a single Telemodul 20 C or Telemodul 40 C external controller
- Simultaneous control of 2 or 4 Maxi Series stirrers using a single Telemodul 20 C or Telemodul 40 C external controller
- Even powered distribution for synchronized stirring

Warranty: Five years

Cat. No.	Model
50088139	Micro Stirrer w/o Controller
50091720	4-Place Distributor
50091721	8-Place Distributor

Thermo Scientific* Variomag* Extension Cables

Thermo Scientific Variomag Extension Cables are for use with Variomag Magnetic Stirrers.

Cat. No.	Model	Length	Compatibility
50088016	4-Pin Extension Cable	3m (9.8ft.)	Telemodul 20 C, 40 C and 10 M

Thermo Scientific* Variomag* Standard Telemodul Controller



The Thermo Scientific Variomag Standard Telemodul Controller is included with the Micro, Mini, Compact, and Maxi Variomag Stirrers.

Order as replacement controller only.

- Space saving
- Provides stirring power for small to medium volumes of low-viscosity fluids
- Recommended for single point stirring up to 250mL

Specifications	
Speed Control Range	130 to 1000rpm
Speed Control Accuracy	±3
Rated Power	7w
Stirring Power Relative to Rated Power	100%
Output Voltage	12V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	96 x 63 x 50mm (3.7 x 2.4 x 1.9")
Weight	0.4kg (0.8 lb.)

Cat. No.	Volts
50119115	230V

Thermo Scientific* Variomag* Telemodul 20 C Controller



The Thermo Scientific Variomag Telemodul 20 C Controller is included with the Micro, Mini, Compact, Maxi and Telesystems Variomag Stirrers.

Order as replacement controller only.

Features user-friendly, menu-driven microprocessor controls

- Single-handed operation with straightforward turn and press adjustment wheel
- Three individual program, store and recall keys for rapid start-up
- Last used settings stored in memory
- Rocking/shake mode reverses stir bar direction for a gentle back and forth stirring motion
- Four power settings to decrease power consumption and lower heat output

Specifications	
Speed Control Range	130 to 1400rpm
Speed Control Accuracy	±1
Rated Power	20w
Stirring Power Relative to Rated Power	25/50/75/100 (4 levels)
Starting Times	5 sec. to 60 min.
Pause Times	5 sec. to 60 min.
Output Voltage	20V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	165 x 155 x 95mm (6.4 x 6.1 x 3.7")
Weight	0.6kg (1.3lb.)

Cat. No.	Description
50090773	20 C Controller

Thermo Scientific* Variomag* Mini Stirrers



Thermo Scientific Variomag Mini Stirrers are designed to work in the tiniest of places.

The Variomag Mini Series stirrers come with your choice of controller.

- No larger than a thumbnail, perfect for stirring cuvettes
- Stir speeds up to 1400rpm
- Stir volumes up to 5mL
- Operating conditions are -10° to +56°C at 95%RH
- Protection class IP 68 (stirrer only)
- Link and Sync up to 8 mini stirrers using one controller with optional distributors and 50088140 stirrers

Ordering Information: Choose from two different control units: the standard Telemodul controller with its space-saving design or the Telemodul 20 C with microprocessor controls, adjustable power setting and programmability.

Includes: 100-240V units contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
Capacity	5L
No. of Stirring Positions	1
Stirring Speed	130 to 1000rpm
Overall L x W x H	0.47 x 0.47 x 0.19" (12 x 12 x 5mm)
Weight	0.02kg

Cat. No.	Model	Stirring Speed	Power Settings	Volts
50088130	Mini w/ Telemodul	130 to 1000rpm	0.1w	230V Euro
50088132	Mini w/ Telemodul	130 to 1000rpm	0.1w	230V UK
50088120	Mini 20 w/ Telemodul 20 C	130 to 1400rpm	0.5/0.1/0.15/0.2w	100-240V

Thermo Scientific* Variomag* Benchtop Distributors (Link & Sync)

Thermo Scientific Variomag Benchtop Distributors are for use with Mini, Micro, Compact and Maxi series stirrers.

Benchtop distributors ensure identical operating conditions for multiple stirrer installations.

- Simultaneous control of 2, 4, 6, or 8 Mini, Micro or Compact series stirrers using a single Telemodul 20 C or Telemodul 40 C external controller
- Simultaneous control of 2 or 4 Maxi Series stirrers using a single Telemodul 20 C or Telemodul 40 C external controller
- Even powered distribution for synchronized stirring

Cat. No.	Model
50088140	Mini w/o Telemodul
50091720	4-Place Distributor
50091721	8-Place Distributor

Thermo Scientific* Variomag* Extension Cables

Thermo Scientific Variomag Extension Cables are for use with Variomag Magnetic Stirrers.

Cat. No.	Model	Length	Compatibility
50088016	4-Pin Extension Cable	3m (9.8ft.)	Telemodul 20 C, 40 C and 10 M

Thermo Scientific* Variomag* Standard Telemodul Controller



The Thermo Scientific Variomag Standard Telemodul Controller is included with the Micro, Mini, Compact, and Maxi Variomag Stirrers.

Order as replacement controller only.

- Space saving
- Provides stirring power for small to medium volumes of low-viscosity fluids
- Recommended for single point stirring up to 250mL

Specifications	
Speed Control Range	130 to 1000rpm
Speed Control Accuracy	±3
Rated Power	7w
Stirring Power Relative to Rated Power	100%
Output Voltage	12V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	96 x 63 x 50mm (3.7 x 2.4 x 1.9")
Weight	0.4kg (0.8 lb.)

Cat. No.	Volts
50119115	230V

Thermo Scientific* Variomag* Telemodul 20 C Controller



The Thermo Scientific Variomag Telemodul 20 C Controller is included with the Micro, Mini, Compact, Maxi and Telesystems Variomag Stirrers.

Order as replacement controller only.

Features user-friendly, menu-driven microprocessor controls

- Single-handed operation with straightforward turn and press adjustment wheel
- Three individual program, store and recall keys for rapid start-up
- Last used settings stored in memory
- Rocking/shake mode reverses stir bar direction for a gentle back and forth stirring motion
- Four power settings to decrease power consumption and lower heat output

Specifications	
Speed Control Range	130 to 1400rpm
Speed Control Accuracy	±1
Rated Power	20w
Stirring Power Relative to Rated Power	25/50/75/100 (4 levels)
Starting Times	5 sec. to 60 min.
Pause Times	5 sec. to 60 min.
Output Voltage	20V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	165 x 155 x 95mm (6.4 x 6.1 x 3.7")
Weight	0.6kg (1.3lb.)

Cat. No.	Description
50090773	20 C Controller

Thermo Scientific* Variomag* Telesystem Multipoint Stirrers



Thermo Scientific Variomag Telesystem Multipoint Stirrers are designed for use with aggressive media, in high humidity environments.

The Variomag Telesystem multipoint stirrers come with choice of controller.

The stirrers are designed for integration with incubators and controlled climate chambers.

- All models submersible for use in water baths up to 50°C
- Inductive drive ensures completely synchronized stirring at all positions
- Six, 15 or 60 position stirrers
- Smooth and even stirring as low as 100rpm
- Stir speeds up to 2000rpm
- Stir volumes up to 2L per multipoint
- External controllers decrease power consumption and lower heat output
- Chemical resistant, sealed stainless-steel housing
- Easy recall of last used settings
- Operating conditions are -10° to +56°C at 100%RH in air; 0° to 50°C submerged in water
- IP 68 protection; easily cleaned with running water

Includes: Cord set with various plugs and choice of controller: the Telemodul 20 C with microprocessor controls, adjustable power setting, and programmability or the Telemodul 40 C with higher speeds, more power settings, and PC control

Warranty: Five years

Certifications: CE marked

Specifications	
Type	IP 68
Overall L x W x H	420 x 240 x 35mm (16.5 x 9.4 x 1.4")
Voltage	100-240V

Cat. No.	Model	No. of Stirring Positions	Stirring Speed	Weight	Power Settings
50088077	Telesystem 6 Position w/Telemodul 20 C	6	130 to 1400rpm	7.5kg	5/10/15/20w
50088078	Telesystem 6 Position w/Telemodul 40 C	6	100 to 2000rpm	8kg	4-40w
50088034	Telesystem 15 Position w/Telemodul 20 C	15	130 to 1400rpm	7.5kg	5/10/15/20w
50088036	Telesystem 15 Position w/Telemodul 40 C	15	100 to 2000rpm	8kg	4-40w
50088009	Telesystem 60 Position w/Telemodul 20 C	60	130 to 1400rpm	7.5kg	5/10/15/20w
50088011	Telesystem 60 Position w/Telemodul 40 C	60	100 to 2000rpm	8kg	4-40w

Thermo Scientific* Variomag* Thermostats



Thermo Scientific Variomag Thermostats are for use with the Telesystem Series Stirrers.

- Equipped with a circulation pump and digital temperature display

Cat. No.	Model	Voltage
50087875	Thermostat 95°C	230V
50087884	Thermostat 60°C	230V

Thermo Scientific* Variomag* Bath Mounts



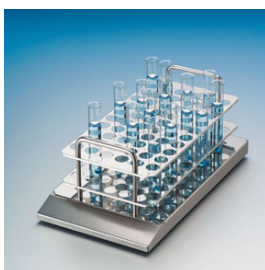
Thermo Scientific Variomag Bath Mounts are for use with Telesystem series stirrers.

Capacity: 15L (3.9 gal.).

- Available in Stainless-steel and transparent acrylic

Cat. No.	Material	Dimensions (L x W x H)	Operating Temperature
50087880	Transparent Acrylic	610 x 330 x 185mm (24 x 13 x 7.3")	0° to 60°C
50087882	Stainless Steel	520 x 315 x 160mm (20.4 x 12.4 x 6.3")	-10 to +200°C

Thermo Scientific* Variomag* Test Tube Racks



Thermo Scientific Variomag Test Tube Racks are for use with Telesystem Series Stirrers.

Stainless-steel test tube racks ensure that test tubes are precisely centered over stirring points.

Cat. No.	For Use With
50087955	16mm tubes in Telesystem Series Stirrers
50087957	20mm tubes in Telesystem Series Stirrers

Thermo Scientific* Variomag* Extension Cables

Thermo Scientific Variomag Extension Cables are for use with Variomag Magnetic Stirrers.

Cat. No.	Model	Length	Compatibility
50088016	4-Pin Extension Cable	3m (9.8ft.)	Telemodul 20 C, 40 C and 10 M

Thermo Scientific* Variomag* Telemodul 20 C Controller



The Thermo Scientific Variomag Telemodul 20 C Controller is included with the Micro, Mini, Compact, Maxi and Telesystems Variomag Stirrers.

Order as replacement controller only.

Features user-friendly, menu-driven microprocessor controls

- Single-handed operation with straightforward turn and press adjustment wheel
- Three individual program, store and recall keys for rapid start-up
- Last used settings stored in memory
- Rocking/shake mode reverses stir bar direction for a gentle back and forth stirring motion
- Four power settings to decrease power consumption and lower heat output

Specifications	
Speed Control Range	130 to 1400rpm
Speed Control Accuracy	±1
Rated Power	20w
Stirring Power Relative to Rated Power	25/50/75/100 (4 levels)
Starting Times	5 sec. to 60 min.
Pause Times	5 sec. to 60 min.
Output Voltage	20V DC
Ambient Temperature Range	0° to 40°C @ 80% relative humidity
Overall L x W x H	165 x 155 x 95mm (6.4 x 6.1 x 3.7")
Weight	0.6kg (1.3lb.)

Cat. No.	Description
50090773	20 C Controller

Thermo Scientific* Variomag* Telemodul 40 C Controller



The Thermo Scientific Variomag Telemodul 40 C Controller is included with the Maxi and Telesystems Variomag Stirrers.

Order as replacement controller only.

Controller has higher speeds and more power settings than the Standard and Telemodul 20 C controllers.

- Power output booster to 40w to handle more demanding stirring tasks
- 10 power settings to decrease power consumption and lower heat output
- Single-handed operation with straightforward turn and press adjustment wheel
- Three individual program store and recall keys for rapid start-up
- Last used settings stored in memory
- Rocking/shake mode reverses stir bar direction for a gentle back and forth stirring motion
- RS-232 interface for data transfer and PC control

Specifications	
Stir Speed	100 to 2000rpm
Speed Control Accuracy	±1
Rated Power	40w
Stirring Power Relative to Rated Power	10 to 100 (10 levels)
Starting Times	5 sec. to 60 min.
Pause Times	5 sec. to 60 min.
Output Voltage	36V DC
Ambient Temperature Range	0° to 40°C at 80% relative humidity
Overall L x W x H	165 x 155 x 95mm (6.4 x 6.1 x 3.7")
Weight	0.7kg (1.5 lb.)

Cat. No.	Description
50090774	40 C Controller

Thermo Scientific* Variomag* Poly 15 and Multipoint Stirrers



Thermo Scientific Variomag Poly 15 and Multipoint Stirrers are ideal for reliable, safe performance for stirring applications.

Thermo Scientific Variomag Poly 15 and Multipoint Stirrers are 100% maintenance- and wear-free.

These Variomag inductive drive stirrers offer renowned maintenance and wear-free features in a fully synchronized multipoint platform.

- Large, flat easy-to-clean work surfaces
- Precise microprocessor control with bright digital display
- Easily recall last used settings
- Gradual start acceleration is gentle and ensures good magnetic coupling
- Inductive drive ensures completely synchronized stirring at all positions
- Operating conditions are -10° to +40°C at 95%RH

Poly 15 Multipoint Stirrer

- Rugged powder-coated stainless-steel housing
- Stir speeds up to 990rpm
- Suitable for 15 x 250mL beakers or 6 x 1L flasks
- IP32 protection rated

Advanced Multipoint 6/15 Stirrers

- Chemical resistant, sealed stainless-steel housing
- Adjustable power settings are separate from the speed control that decreases power consumption and lowers heat output
- Smooth and even stirring as low as 80rpm
- Stir speeds up to 2000rpm
- Stir volumes up to 3L per multipoint
- IP64 protection rated; easily cleaned with running water

Applications: Mass screening applications and other applications requiring multiple stirring points

Includes: All models are 100-240V and contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
Overall L x W x H	420 x 240 x 35mm (16.5 x 9.4 x 1.4")
Voltage	100-240V

Cat. No.	Model	No. of Stirring Positions	Stirring Speed	Protection Class	Weight	Power Settings
50094596	Poly 15	15	130 to 990rpm	IP32	6kg	10w
50093557	Multipoint 6	6	80 to 2000rpm	IP64	7.5kg	5/10/15/20w
50093538	Multipoint 15	15	80 to 2000rpm	IP64	7.5kg	5/10/15/20w

Thermo Scientific* Variomag* Biosystem Direct Stirrers for Cell Culture



Thermo Scientific Variomag Biosystem Direct Stirrers are designed for reliability, safety and performance for demanding cell culture applications.

Low heat output and gentle stir acceleration/deceleration; ideal for thermally sensitive operations.

- Built-in controller
- Heatless operation protects heat-sensitive cell culture
- Stainless-steel housing is easy to clean and resists aggressive media
- Gradual low-shear acceleration on start-up
- Smooth and even stirring as low as 5rpm
- Single position stirrers can stir up to 5L
- Four-position stirrers can stir up to 2L per position
- Operating conditions are -10°C to +40°C at 95%RH
- Protection class IP64

Includes: 100-240V units contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
Stir Speed	5 to 120rpm
Protection Class	IP64

Cat. No.	Model	Dimensions (L x W x H)	Weight	Power Settings	Volts
50088071	Biosystem 1-Position Direct	180 x 180 x 60mm (7 x 7 x 2.4")	3.4kg	1w	230V Euro
50088057	Variomag Biosystem Direct	180 x 180 x 60mm (7 x 7 x 2.4")	3.4kg (7.5 lb.)	1w	230V UK
50088061	Biosystem 4-Position Direct	330 x 330 x 60mm (12.9 x 12.9 x 2.4")	11kg	0.05w (x4)	100-240V

Thermo Scientific* Variomag* Biosystem Stirrers for Cell Culture



Thermo Scientific Variomag Biosystem Stirrers offer gentle stirring and low heat output to protect sensitive cell cultures within CO₂ incubators.

Ideal for stirring thermally sensitive cultures including microcarrier cultures, culture broths and cell suspensions.

- Hermetically sealed housing resists microorganisms — separate external controller ensures that only the hermetically sealed stirrer is exposed to the CO₂ environment
- Heatless operation — protects thermal sensitive cell culture and will not compromise the incubator chamber conditions
- Stainless-steel housing is easy to clean and resists aggressive media
- Gradual low-shear acceleration on start-up
- Controller has adjustable power settings that decrease power consumption and lower heat output
- Smooth and even stirring as low as 5rpm
- Single position stirrers have the power to stir up to 20L
- Four-position stirrers can stir up to 5L per position
- Operating conditions are -10° to +56°C at 100%RH
- Protection class IP 68

Required Accessories: Biomodul 40 B control unit (sold separately)

Warranty: Five years

Certifications: CE marked

Specifications	
Stirring Speed	5 to 120rpm
Type	IP68
Power Setting	0.4 to 4w

Cat. No.	Model	Dimensions (L x W x H)	Weight
50119113	Biosystem w/o Controller	18 × 18 × 6cm (7 × 7 × 2.4")	3.4kg
50119114	Biosystem 4-Position w/o Controller	33 × 33 × 6cm (12.9 × 12.9 × 2.4")	9.4kg

Thermo Scientific* Variomag* Biomodul 40 B Control Unit

Thermo Scientific Variomag Biomodul 40 B Control Units enable synchronized operation of two Biosystem Stirrers.

- High visibility display
- Adjustable stirring and pause times with rotation sense inversion

Cat. No.	Voltage/Plug Type
50118915	230V Germany
50118916	230V Italy
50118917	230V Denmark
50118918	230V UK
50118919	230V Switzerland

Thermo Scientific* Variomag* Extension Cables

Thermo Scientific Variomag Extension Cables are for use with Variomag Magnetic Stirrers.

Length: 3m (9.8ft.).

Cat. No.	Model	Length	Compatibility
50088021	6-Pin Extension Cable	3m	Biomodul 40 B

Thermo Scientific* Variomag* Mobil 10 and Mobil 25 Large Volume Stirrers



Thermo Scientific Variomag Mobil 10 and Mobil 25 Large Volume Stirrers are ideal for hard-to-stir viscous liquids.

Thermo Scientific Variomag Mobil 10 and Mobil 25 Large Volume Stirrers have the power to stir and mix volumes up to 10L. Quick Stop function stops the drive within three seconds, minimizing after runs and reducing the risk of breakage.

Variomag Mobil 10

- Compact space-saving design
- Gradual low-shear acceleration on start-up
- Stir speeds from 100 to 1000rpm
- Operating conditions are -10° to +56°C
- Protection class IP66

Variomag Mobil 25

- Ideal for high temperatures up to 121°C and high pressure applications up to 2bars (29psi)
- Can be used in autoclaves, water baths and climatic chambers
- Perfect for use on sterilized media ensuring even heating and cooling
- Easy to clean, chemical resistant, sealed stainless-steel housing
- Gradual low-shear acceleration on start-up
- Stir speeds from 100 to 1000rpm
- Operating conditions are -10° to +121°C
- Protection Class IP68; easily cleaned with running water

Required Accessories: Telemodul 10 M controller (#500119120 or #500119121)

Warranty: Five years

Certifications: CE marked

Specifications	
Stirring Speed	100 to 1000rpm
Overall Dia. x H	128 x 32mm (5 x 1.3")
Power Settings	10w

Cat. No.	Model	Weight	Protection Class
50119111	Mobil 10 w/o controller	0.7kg	IP66
50119112	Mobil 25 w/o controller	1.7kg	IP68

Thermo Scientific* Variomag* Telemodul 10 M Controller

Thermo Scientific Variomag Telemodul 10 M Controller is an external control unit that is required for use with the Mobil 10 and Mobil 25 stirrers.

- Adjustable speeds from 100 to 1000rpm
- Automatic start-up for safe stirrer acceleration

Specifications	
Stirring Speed	100 to 1000rpm

Cat. No.	For Use	Volts
500119120	Mobil 10 and Mobil 25	230V

Thermo Scientific* Variomag* Extension Cables

Thermo Scientific Variomag Extension Cables are for use with Variomag Magnetic Stirrers.

Cat. No.	Model	Length	Compatibility
50088016	4-Pin Extension Cable	3m (9.8ft.)	Telemodul 20 C, 40 C and 10 M

Thermo Scientific* Variomag* Power Direct Stirrer



Thermo Scientific Variomag Power Direct stirs up to 40L with an integrated controller.

Ideal for high-capacity stirring.

- Quick Stop function stops the drive within two seconds, minimizing after runs and reducing the risk of breakage
- Stir speeds from 100 to 2000rpm
- Integrated controller has an adjustable power setting that decreases power consumption and lowers heat output
- Sealed stainless-steel housing is easy to clean and chemical resistant
- Operating conditions are -10° to +40°C
- Protection Class IP22; easily cleaned with running water

Includes: All models are 100-240V and contain a cord set with various plugs

Warranty: Five years

Certifications: CE marked

Specifications	
Stir Capacity	40L
Stirring Speed	100 to 2000rpm
Protection Class	IP22
Dimensions, L x W x H	295 x 240 x 35mm (11.6 x 9.4 x 1.4")
Weight	2.5kg (5.5 lb.)
Power Settings	5/10/15/20w
Voltage	100-240V

Cat. No.	Model
50098760	Power Direct

Thermo Scientific* Variomag* Mobil Direct, Mobil 200 and Mobil 600 Large Volume Stirrers



Thermo Scientific Variomag Mobil Direct, Mobil 200 and Mobil 600 Large Volume Stirrers have unmatched stirring power for high-volume applications.

The Mobil 200 and 600 require either the Telemodul 40 M or the Telemodul 80 M control unit.

- Quick Stop function stops the drive within three seconds, minimizing after runs and risk of vessel breakage
- Easy to clean, chemical resistant, sealed stainless-steel housing
- Stir speeds from 100 to 1000rpm

Mobil Direct

- Stir up to 150L
- Maximum shaft torque is 30Ncm
- Features an integrated controller with adjustable power settings
- Operating conditions are -10° to +40°C at 95%RH
- IP64 protection rated; easily cleaned with running water

Mobil 200

- Stir up to 200L
- Maximum shaft torque is 50Ncm
- Operating conditions are -10° to +56°C at 100%RH
- IP65 protection rated; easily cleaned with running water

Mobil 600

- Stir up to 600L
- Maximum shaft torque is 50Ncm
- Operating conditions are -10° to +56°C at 100%RH
- IP65 protection rated; easily cleaned with running water

Applications: Use in pilot plant or integrated with process equipment

Required Accessories: The Mobil 200 and 600 require either the Telemodul 40M or 80M controller (order separately). The Mobil Direct includes a built-in controller; no external controller required.

Warranty: Five years

Certifications: CE marked

Specifications	
Stir Speed	100 to 1000rpm

Cat. No.	Description	Type	Dimensions	Weight	Power Settings	Volts
50088128	Mobil Direct	IP64	330 × 330 × 80mm (13 × 13 × 3.4")	16kg	40w	230V Euro
50119109	Mobil 200 w/o Controller	IP65	180 × 180 × 80mm (7 × 7 × 3.4")	6kg	80w	n/a
50119110	Mobil 600 w/o Controller	IP65	330 × 330 × 80mm (13 × 13 × 3.4")	16kg	80w	n/a

Thermo Scientific* Variomag* Telemodul 40 M and 80 M Control Units



Thermo Scientific Variomag Telemodul 40 M and 80 M Control Units are required with the Variomag Mobil 200 and 600 Stirrers.

- Adjustable speeds from 100 to 1000rpm
- Constant speeds, even during viscosity changes
- High visibility digital display
- Adjustable start-up times
- Thermal and electrical overload protection, with fault alert

Telemodul 40 M

- Powerful controller equips Mobil 200 and 600 stirrers for the most demanding mixing tasks

Telemodul 80 M

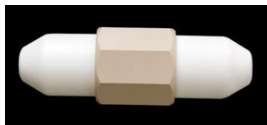
- Offers all the functionality of the Telemodul 40 M, with power output boosted to 80W for more demanding stirring tasks

Warranty: Five years

Specifications	
Stirring Range	100 to 1000rpm

Cat. No.	Voltage
Telemodul 40 M Control Units (40w)	
50118901	230V Germany
50118902	230V Italy
50118903	230V Denmark
50118904	230V UK
50118905	230V Swiss
Telemodul 80 M Control Units (80w)	
50118908	230V Germany
50118909	230V Italy
50118910	230V Denmark
50118911	230V UK
50118912	230V Swiss

Thermo Scientific* Super-Strong Komet Magnetic Stir Bars



Thermo Scientific Super-Strong Komet magnetic stir bars generate over three times the torque of conventional stirring bars.

Significantly enhance stirrer performance and applications versatility.

- High-energy Samarium-Cobalt (SmCo) magnetic core
- Superior mixing action at high speeds, and with viscous media
- Evenly coated PTFE surface prevents residue deposits
- Sterilize with steam to 249.8°F (121°C)

Ordering Information: Available in assorted sizes

Cat. No.	Description	Shape	Outside Dia. x Length
50087902	Komet 90, 1 pack	Round	25mm x 90mm
50087909	Komet 50, 1 pack	Round	21mm x 50mm
50087924	Komet 15, 1 pack	Round	9mm x 15mm
50087930	Komet 30, 1 pack	Round	13mm x 30mm
50093334	Komet Glide-Ring 30, 1 pack	Round, with glide ring	17mm x 30mm
50093335	Komet Glide-Ring 50, 1 pack	Round, with glide ring	26mm x 50mm
50093336	Komet Glide-Ring 90, 1 pack	Round, with glide ring	31mm x 90mm

MIXERS

Thermo Scientific* MaxiMix I Vortex Mixer



The Thermo Scientific compact MaxiMix I Vortex Mixer ensures fast, uniform mixing in continuous operation or touch-on mode.

Ideal for enzymatic and RIA assays, general test tube mixing, biochemical assays, viral dilutions preparations, precipitated assays, cell suspension vortexing and tissue sample mixing. Excellent for single and multiple tubes and small flasks with closed tops.

- Fast, uniform mixing in continuous operation or touch-on mode
- Simultaneously mixes up to four test tubes
- Push-button top-mounted ON/OFF switch
- Vary vortex mixing by simply changing pressure of tube against foam rubber top
- Durable, white plastic case resists acids and alkalis
- Cast-aluminum base with suction-cup rubber feet provides maximum stability
- Compact design with 4" diameter (10.2cm) foam rubber top

Applications: Enzymatic and RIA assays; General test tube mixing; Biochemical assays; Vortexing cell suspensions; Mixing tissue samples; Viral dilution preparations; Precipitated assays

Includes: One extra foam top (12-814-1), three-wire power cord and plug

Warranty: 90 days on labor and one year on parts

Certifications: CE marked

Specifications	
Speed Range	3000rpm
Tube Capacity	1 to 4
Platform, Foam Pad	10.1cm (4")
Exterior L x W x H	13.9 x 13.9 x 10.6cm (5.5 x 5.5 x 4.2")
Shipping Weight	1.5kg (3.5 lb.)
Cat. No.	
M16710-33Q	Electrical Requirements
	230V 50/60Hz, 0.3A

Thermo Scientific* MaxiMix II Vortex Mixer



The Thermo Scientific MaxiMix II mixer features continuous operation and touch-on modes for gentle to vigorous mixing.

Excellent for mixing media in test tubes, mixing cytogenetic suspensions in centrifuge tubes, vortexing cell suspensions and vortexing drug extractions. Ideal for enzymatic and RIA assay applications, atomic absorption sample preparation and Nelson's assay for reducing sugars.

- Continuous-run or touch-activated run modes
- Simultaneously mixes contents of up to four test tubes or small flasks with closed tops
- White, durable plastic housing resists acids and alkalines
- Heavy-duty cast metal base with rubber feet assures stability and eliminates creep during use
- With two mixing devices: Rubber single-cup tube holder and foam pad for mixing flasks or multiple tubes simultaneously

Applications:

- Mixing media in test tubes
- Mixing cytogenetic suspensions in centrifuge tubes
- Enzymatic and RIA assays
- Vortexing cell suspensions
- Drug extractions
- Atomic absorption sample preparation
- Nelson's assay for reducing sugars

Includes: Single-tube cup, foam pad, power cord

Warranty: 90 days on labor and one year on parts

Certifications: CE marked

Specifications	
Speed Range	100 to 3000rpm
Platform, Foam Pad/Cup	Pad: 8.8cm (3.5"); Cup: 2.5cm (1")
Exterior L x W x H	17.7 x 11.4 x 15.2cm (7 x 4.5 x 6")
Shipping Weight	3.6kg (8 lb.)

Cat. No.	Electrical Requirements
M37610-33Q	230V 50Hz, 0.3A

Thermo Scientific* MaxiMix III Vortex Mixer



The Thermo Scientific MaxiMix III mixer performs functions of four separate apparatus, saving valuable bench space in labs and clinics.

Unit features four interchangeable mixing and shaking accessories for large volume mixing, variable speed control, and continuous, trouble-free shaking. Depending on the application, use the foam pad, universal holder, utility tray or flask holder.

- Precise matching of an electronic speed control to a high torque DC type motor provides versatile speed selection ranging from 100 to 2200rpm
- Soft foam rubber top 6.3 x 5.5" (15.8 x 13.9cm) allows vortexing multiple test tubes and small flasks
- Lighted main power switch indicates mixer is operating
- High-torque DC motor for consistent mixing action
- Heavy, cast-aluminum base with counterbalance system for strength and stability
- Spring-dampened feet eliminate "creeping and walking" during large volume mixing
- Continuous trouble-free shaking of loads up to 5 lb. (2.2kg)

Includes: One soft foam rubber pad (PT500X6A)

Warranty: 90 days on labor and one year on parts

Certifications: CE marked

Specifications	
Speed Range	100 to 2200rpm
Platform L x W	15.8 x 13.9cm (6.3 x 5.5")
Load Capacity	2.2kg (5 lb.)
Exterior L x W x H	21.5 x 16.5 x 13cm (8.5 x 6.5 x 5.1")
Base	Heavy cast aluminum
Motor	DC
Shipping Weight	7.7kg (17 lb.)

Cat. No.	Electrical Requirements
M65820-33Q	230V 50/60Hz, 0.2A

Thermo Scientific* Accessories and Replacement Parts for MaxiMix III Vortex Mixer



Thermo Scientific offers a variety of accessories for the MaxiMix III Vortex Mixer for optimum flexibility.

Cat. No.	Description
PT500X6A	Replacement Foam Rubber Pad
PT500X9A	Universal holder for a variety of flasks, beakers, bottles, test tub racks. Two soft rubber bars hold vessels in place.
PT500X7A	Utility Tray
PT500X8A	Flask holder for 4 x 250mL flasks

SELECTION GUIDE > PUMPS



Thermo Scientific Pump Tubing FH10, FH15 and FH30

Innovative solutions for your fluid handling needs

Our peristaltic pumps are known for durability and accuracy. They are ideal for a wide variety of fluid handling applications from research to the production floor.

The tables below provide guidelines for selecting a tubing size (ID) that best fits your flow requirements. Choose the tubing material that best meets your chemical compatibility from the following pages. For tubing material chemical compatibility information, go to www.thermoscientific.com/fluidhandling.

FH10 – Flowrate by tubing size

Catalog Number	rpm	Microbore pump tubing size (ID)							
		0.19 mm	0.25 mm	0.51 mm	0.89 mm	1.14 mm	1.42 mm	2.06 mm	2.79 mm
FH10 (72-310-010)	1.7 to 10	0.002 to 0.013	0.004 to 0.022	0.015 to 0.087	0.041 to 0.25	0.064 to 0.39	0.09 to 0.57	0.18 to 1.05	0.25 to 1.65
FH10 (72-310-080)	13 to 80	0.017 to 0.10	0.03 to 0.18	0.12 to 0.70	0.33 to 2.0	0.52 to 3.1	0.75 to 4.5	1.4 to 8.5	1.8 to 11.0
FH10 (72-310-300)	50 to 300	0.06 to 0.38	0.11 to 0.67	0.43 to 2.6	1.2 to 7.4	1.9 to 11.5	2.8 to 17.0	5.3 to 32	7.2 to 43

FH15 and FH30 – Flowrate by tubing size

Catalog Number	rpm	Thermo Scientific Precision pump tubing			
		Size 13	Size 14	Size 16	Size 25
FH15 (72-315-100)	20 to 100	0.8 to 4.0	2.8 to 14	11 to 54	21 to 105
FH30 (72-330-100)	20 to 100	0.8 to 4.0	2.8 to 14	Not recommended	Not recommended

Thermo Scientific Pump Tubing FH100 and FH100X

Multiple grades of tubing to meet your specific application . . .

Select from three grades of tubing from the following pages: General purpose, Precision or HRT. Select your tubing size from the tables below. For tubing material chemical compatibility information, go to www.thermoscientific.com/fluidhandling.

FH100 and FH100X – Flowrate by tubing size

Catalog Number	rpm	Flowrate (ml/min) for all tubing grades - General Purpose, Precision, and High-resilience (HRT)					
		Size 13 (0.8mm)	Size 14 (1.6mm)	Size 16 (3.2mm)	Size 25 (4.8mm)	Size 17 (6.4mm)	Size 18 (8.0mm)
FH100 (72-320-000)	4 to 400	0.50 – 40	1.9 – 150	6.8 – 550	15 – 1200	25 – 2000	38 – 3000
		Size 15 (4.8mm)	Size 24 (6.4mm)	Size 35 (8.0mm)	Size 36 (9.5mm)		
FH100X (72-320-100)	4 to 400	14 to 1200	24 to 2000	36 to 3000	48 to 4000		

Thermo Scientific* FH10, FH15 and FH30 Peristaltic Tubing Pumps



Thermo Scientific FH10, FH15, and FH30 pumps are ideal for a wide range of fluid handling needs.

These peristaltic pumps—provided as complete pumping systems—are ideal where space is limited. Quality design in a small, compact package, they are complete with pump, motor, and control in a stackable steel housing. Low-maintenance design provides thousands of hours of service.

Wide Range of Performance

- Flowrates less than 3µL/min. to 50mL/min.
- Pressure up to 2 bar (30psig)
- Accurate and repeatable flow delivery

Easy-to-Use Controls

- Mounted on front panel
- Separate single-turn speed control
- Flow direction switch with center OFF position
- Green LED power ON indicator
- PRIME button runs pump at maximum speed to rapidly prime or flush tubing
- Reversible pump direction to purge tubing
- Remote start/stop terminal on back of unit

Easy to Maintain

- Simple, fast tubing changes
- Fixed occlusion eliminates adjustment after tubing changes and assures operation against pressure up to 2 bar (30psig)

High Purity Assured

- Most tubing materials exceed USP Class VI and EP (European Pharmacopeia) standards
- For the highest purity requirements use BioPharm silicone tubing

Applications:

- Chromatography
- Spectroscopy
- Lab analyzers
- Fermenter recirculation
- Reagent metering applications
- Bio-reactor feed and chemistry control
- pH control instruments

Includes: Pump and power supply

Required Accessories: Manufacturer-recommended peristaltic pump tubing for FH10/FH15/FH30 pump systems.

Warranty: One year

Certifications: UL, cUL (Power Supply) CE, RoHS, ISO9001:2008

Specifications	
Max. Pressure	2 bar
Material	Powder-coated steel
Volts	90/130V or 160/260V (autoselected)
Hertz	60/50
L x W x H	16.5 x 13.6 x 11.4cm (6.5 x 5.3 x 4.5")

Cat. No.	Description	Flow Rate	No. of Channels	Tubing
72-310-010	FH10 Peristaltic Pump System, 10rpm	0.015 to 0.08mL/min.	1	Uses microbore auto-analysis tubing size 0.19mm to 2.79mm I.D.
72-310-080	FH10 Peristaltic Pump System, 80rpm	0.12 to 0.7mL/min.	1	Uses microbore auto-analysis tubing size 0.19mm to 2.79mm I.D.
72-310-300	FH10 Peristaltic Pump System, 300rpm	0.48 to 2.9mL/min.	1	Uses microbore auto analysis tubing size 0.19mm to 2.79mm I.D.
72-315-100	FH15 Compact Peristaltic Pump System, 100rpm	0.8 to 105mL/min.	1	Uses size 13, 14, 16 and 25 tubing links
72-330-100	FH30 Compact Peristaltic Pump System, 100rpm	0.8 to 14mL/min. per channel	2	Uses size 13 and 14 tubing links

Thermo Scientific* Microbore* Tubing for FH10 Pump Systems



Thermo Scientific provides a full range of microbore auto-analysis size tubing and tubing links for the FH10 pump systems.

Materials are precision-extruded to provide optimum performance for flow accuracy and repeatability.

Silicone (platinum)

- Slightly greater clarity
- Smooth surface; lower protein binding levels
- Fewer potential leachables
- Ideal for pharmaceutical and biotechnology use
- Maximum pressure 1.3 bar

Tygon* R-3603

- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing
- Maximum pressure 2 bar

Tygon* LFL

- Longest tubing life of all Tygon tubing formulations
- Broad chemical compatibility
- Low gas permeability
- Maximum pressure 2 bar

PharMed* BPT

- Over 10,000 hours of tubing life
- Resists ozone and UV radiation
- Noncytotoxic and nonhemolytic
- Ideal for tissue and cell culture work
- Maximum pressure 2 bar

FDA Viton*

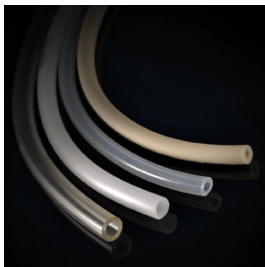
- Meets FDA and NSF standards
- Excellent chemical resistance
- Resists corrosives, solvents, and oils at elevated temperatures
- Maximum pressure 1 bar

Required Accessories: Use with FH10 Microflex peristaltic pump systems

Cat. No.	Tubing Inside Dia.	Quantity per Pack
Silicone (platinum)		
95590-18	0.51mm	15.2m (50ft.)
95590-26	0.89mm	15.2m (50ft.)
95590-30	1.14mm	15.2m (50ft.)
95590-34	1.43mm	15.2m (50ft.)
95590-42	2.06mm	15.2m (50ft.)
95590-48	2.79mm	15.2m (50ft.)
Tygon R-3603		
95609-10	0.19mm	30.4m (100ft.)
95609-12	0.25mm	30.4m (100ft.)
95609-18	0.51mm	30.4m (100ft.)
95609-26	0.89mm	30.4m (100ft.)
95609-30	1.14mm	30.4m (100ft.)
95609-34	1.42mm	30.4m (100ft.)
95609-42	2.06mm	30.4m (100ft.)
95609-48	2.79mm	30.4m (100ft.)
Pharmed BPT		
95809-12	0.25mm	30.4m (100ft.)
95809-18	0.51mm	30.4m (100ft.)
95809-26	0.89mm	30.4m (100ft.)
95809-30	1.14mm	30.4m (100ft.)
95809-34	1.42mm	30.4m (100ft.)
95809-42	2.06mm	30.4m (100ft.)
95809-48	2.79mm	30.4m (100ft.)
Tygon LFL		
96429-18	0.51mm	30.4m (100ft.)
96429-26	0.89mm	30.4m (100ft.)

Cat. No.	Tubing Inside Dia.	Quantity per Pack
96429-30	1.14mm	30.4m (100ft.)
96429-34	1.42mm	30.4m (100ft.)
96429-42	2.06mm	30.4m (100ft.)
96429-48	2.79mm	30.4m (100ft.)
FDA Viton		
97632-26	0.89mm	15.2m (50ft.)
97632-30	1.14mm	15.2m (50ft.)
97632-34	1.42mm	15.2m (50ft.)
97632-42	2.06mm	15.2m (50ft.)
97632-48	2.79mm	15.2m (50ft.)

Thermo Scientific* FH15 and FH30 Tubing Links



Thermo Scientific Tubing Links for use with FH15 and FH30 peristaltic pumps.

Materials are precision-extruded to provide optimum performance for flow accuracy and repeatability.

Silicone (platinum)

- Slightly greater clarity
- Smooth surface; lower protein binding levels
- Fewer potential leachable
- Ideal for pharmaceutical and biotechnology use
- Maximum pressure: 1.3 bar
- Supplied as 8 per pack

Tygon* R-3603

- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing
- Maximum pressure: 2 bar
- Supplied as 8 per pack

PharMed* BPT

- Over 10,000 hours of tubing life
- Resists ozone and UV radiation
- Noncytotoxic and nonhemolytic
- Ideal for tissue and cell culture work
- Maximum pressure: 2 bar
- Supplied as 8 per pack

FDA Viton*

- Meets FDA and NSF standards
- Excellent chemical resistance
- Resists corrosives, solvents, and oils at elevated temperatures
- Maximum pressure: 1 bar
- Supplied as 8 per pack

Required Accessories: Use with FH15 or FH30 pump systems

Cat. No.	Tubing Size	Tubing Inside Diameter
Tygon R-3603		
6416-13	13	0.8mm
6416-14	14	1.6mm
6416-16	16	3.2mm
6416-25	25	4.8mm
Silicone Platinum		
6421-13	13	0.8mm
6421-14	14	1.6mm
6421-16	16	3.2mm
6421-25	25	4.8mm
Pharmed BPT		
96114-13	13	0.8mm
96114-14	14	1.6mm
96114-16	16	3.2mm
96114-25	25	4.8mm
BioPharm Plus Silicone		
96116-13	13	0.8mm

Thermo Scientific Laboratory Products

Cat. No.	Tubing Size	Tubing Inside Diameter
96116-14	14	1.6mm
96116-16	16	3.2mm
96116-25	25	4.8mm
FDA Viton		
96428-13	13	0.8mm
96428-14	14	1.6mm
96428-16	16	3.2mm
96428-25	25	4.8mm

Thermo Scientific* Tubing for FH15 and FH30 Peristaltic Pumps



This Thermo Scientific Tubing is for use with FH15 and FH30 peristaltic pumps.

Materials are precision-extruded to provide optimum performance for flow accuracy and repeatability.

Silicone (platinum)

- Slightly greater clarity
- Smooth surface; lower protein binding levels
- Fewer potential leachables
- Ideal for pharmaceutical and biotechnology use

Tygon* R-3603

- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing

PharMed* BPT

- Over 10,000 hours of tubing life
- Resists ozone and UV radiation
- Noncytotoxic and nonhemolytic
- Ideal for tissue and cell culture work

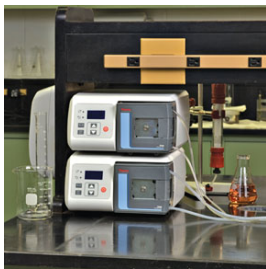
FDA Viton*

- Meets FDA and NSF standards
- Excellent chemical resistance
- Resists corrosives, solvents, and oils at elevated temperatures

Required Accessories: Use with FH15 or FH 30 pump systems

Cat. No.	Use with Tubing Size	Tubing Inside Diameter
Tygon R-3603		
6409-13	13	0.8mm
6409-14	14	1.6mm
6409-16	16	3.2mm
6409-25	25	4.8mm
Pharmed BPT		
6508-13	13	0.8mm
6508-14	14	1.6mm
6508-16	16	3.2mm
6508-25	25	4.8mm
FDA Viton		
96412-13	13	0.8mm
96412-14	14	1.6mm
96412-16	16	3.2mm
96412-25	25	4.8mm
Silicone Platinum		
96420-13	13	0.8mm
96420-14	14	1.6mm
96420-16	16	3.2mm
96420-25	25	4.8mm

Thermo Scientific* FH100 and FH100X General-Purpose Peristaltic Pumps



Thermo Scientific FH100 and FH100X General-Purpose Peristaltic Pumps are ideal for a wide variety of life science and industrial applications.

These durable pumps handle a wide range of fluids from the highest purity to extremely caustic solutions. The FH100 and FH100X general-purpose pumps provide superior pump performance and ease-of-use.

Easy to Maintain

- Easy-to-use fluid handling system—simple control keypad with integrated pumphead
- Low maintenance with minimum downtime—new rapid loading pumphead allows tubing change in less than 30 sec.
- Space efficient—low-profile, stackable design with a small footprint
- Interface with other instrumentation—remote control capability
- Accurate, reliable control of flow and dosing—digital display of rpm for accurate control

Easy-to-Use Controls

- Stop and start from the front panel
- Increase/decrease flow
- Select internal or external remote signal control

Remote Control Capability

- Start/Stop
- Flow direction (CW/CCW)
- Flow control via 4 to 20mA current or 0 to 10VDC
- Remote/local

Applications: Ideal for a wide variety of life science and industrial applications:

- Sample prep
- General dispensing
- Media dispensing
- Dilution blank
- Dispensing reagents
- Biopharmaceuticals
- Agrochemicals
- Oil analysis
- Sampling
- Filling
- Cell culture
- Buffer recirculation
- Chromatography
- Stem cell research
- Chemical feed
- Filtration

Includes: Pump, power cord, quick-start guide and manual on CD

Required Accessories: Tubing to complete system; choose from three tubing grades:

- Thermo Scientific general purpose
- Thermo Scientific high-precision
- Thermo Scientific high-resilience (sold separately)

Warranty: One year

Certifications: ETL, cETL, CE, RoHS, ISO9001:2008

Specifications	
Reversible	Yes
Operating Temperature	0° to 40°C
External Control - Input	4 to 20mA; 0 to 10V; Remote/Local; Dir (CW/CCW); Start/Stop
Voltage (AC) 60/50 (Hz)	90 to 260VAC Universal input
Speed Control	Digital phase-controlled
Speed Regulation (accuracy)	±0.25%
Motor Type	PMDC
Display (rpm)	Seven-segment, 3-digit, Blue LED, 1rpm resolution
Housing and Pumphead Construction	Housing: ABS; Pumphead: GF Nylon, Delrin*, Stainless steel, Cold-rolled steel, Buna N, Polycarbonate
Shipping Weight	7kg (15 lb.)
IP Rating	ETL, cETL, CE, RoHS
Motor Size	1/10 (75w)
Rpm	4 to 400
Dimensions (L x W x H)	31.7 x 27.9 x 15.2cm (12.5 x 11 x 6")
Pump Interlock	Yes
Current	1.6A @ 115V; 1.9A @ 230V

Cat. No.	Description	Flowrate Capacity
72-320-000	FH100 General Purpose Peristaltic Tubing Pump	0.5 to 3000mL/min.
72-320-100	FH100X General Purpose Peristaltic Tubing Pump	14 to 4000mL/min.

Thermo Scientific* Accessories for Peristaltic Pumps



Thermo Scientific Peristaltic Pump Accessories are for use with Peristaltic pumps.

Cat. No.	Description
73-055-590	Dispensing Wand
73-750-000	Foot Switch
75-250-100	Sinker; Set of 2
75-250-102	Sinker, Small 1.57 and 3.17mm (0.0625 in. and 0.125 in.)
75-250-104	Sinker, Large 4.57 and 6.35mm (0.1875 and 0.25 in.)
7595-45	DB9 Connector

Thermo Scientific* Precision Tubing Links for FH100X Precision Pumps



Thermo Scientific Tubing Links offer the best performance and repeatability when used with Thermo Scientific Precision FH100 series pumps.

Available in four formulations for a broad range of chemical compatibility.

- Manufactured to exacting specifications to optimize accuracy, repeatability, and to provide enhanced tubing life
- Tested and quality-assured to operate in Thermo Scientific peristaltic pumps
- Supplied 12 per package

BioPharm Silicone Tubing (platinum-cured)

- Ultra-smooth inner surface minimizes particle entrapment
- Very low extractables with documented biocompatibility for sensitive applications
- Ideal for lab, biotech, and pharmaceutical applications
- Meets USP Class VI, FDA, and European Pharmacopeia standards

PharMed* BPT Tubing

- Over 10,000 hours of tubing life
- Resists ozone and UV radiation
- Noncytotoxic and nonhemolytic
- Ideal for tissue and cell culture work
- Meets USP Class VI, FDA, and European Pharmacopeia standards

Tygon* Tubing

- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing

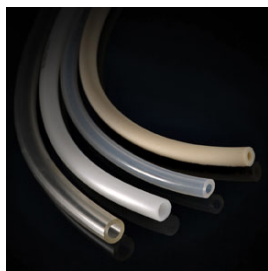
Norprene* Food Tubing

- Ideal for high-temperature food and beverage applications
- Meets FDA and NSF standards
- Up to 10,000 hours of tubing life
- Best choice for pressure/vacuum applications
- Resists heat, ozone, acids, and alkalies
- Heat sealable and bondable
- Nonaging, nonoxidizing
- Bioreactor process lines
- Sterile filling
- Diagnostic test products

Required Accessories: Use with FH100X pumps

Cat. No.	Tubing Size	Tubing Inside Dia.
BioPharm Silicone		
75-300-155	15	4.8mm
75-300-245	24	6.4mm
75-300-355	35	8.0mm
PharMed BPT		
75-301-155	15	4.8mm
75-301-245	24	6.4mm
75-301-355	35	8.0mm
Tygon		
75-310-155	15	4.8mm
75-310-245	24	6.4mm
75-310-355	35	8.0mm

Thermo Scientific* General-Purpose BioPharm Silicone Tubing for FH100 and FH100X Pumps



Thermo Scientific General-Purpose BioPharm Silicone Peristaltic Pump Tubing is suitable for most everyday applications where pressure, accuracy, and long-term pump life are not critical to the process.

Provides good performance at an economical price.

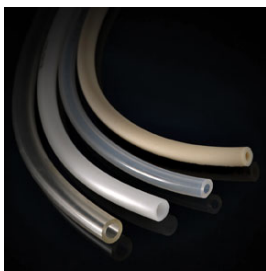
BioPharm Silicone Tubing (platinum-cured)

- Tested to operate in Thermo Scientific peristaltic pumps
- Ultra-smooth inner surface minimizes particle entrapment
- Very low extractables with documented biocompatibility for sensitive applications
- Ideal for lab, biotech and pharmaceutical applications
- Supplied 15.2m (50ft.) per pack

Specifications	
Advantages	Ultra-smooth inner surface minimizes particle entrapment. Lower absorption; excellent biocompatibility; no leachable additive, DOP or plasticizers. Very low extractables. Odorless and nontoxic, fungus-resistant. No taste imparted to transported fluids. Weather, ozone, corona and radiation resistant.
Limitations	Do not use with concentrated solvents, oils, acids. Relatively high gas permeability.
Application Suitability	
Acids	Not recommended
Alkalies	Not recommended
Organic solvents	Not recommended
Pressure	Excellent
Vacuum	Good
Viscous fluids	Good
Sterile fluids	Excellent
Physical characteristics and composition	Thermal set rubber. Siloxane polymers and amorphous silica. Excellent compression strength. Soft material; flexible. Translucent, clear to light amber.
Temperature Range	-60° to +232°C (-75° to +450°F)
Meets classifications	USP Class VI FDA 21 CFR 177.2600 Exceeds 3A sanitary standards European Pharmacopoeia (EP)
Gas Permeability	CO ₂ : 25,147; H ₂ : ----; O ₂ : 4715; N ₂ : 2284
Cleaning/Sterilization	Sterilize by EtO, autoclave or gamma radiation up to 2.5 Mrad. To autoclave: coil loosely in nonlinting cloth or paper; autoclave at 121°C (250°F), 1 bar (15psi) for 30 minutes.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
72-300-014	Silicone (Platinum-cured)	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
72-300-015	Silicone (Platinum-cured)	FH100X	14 to 1200mL/min.	4.8mm	2.4mm
72-300-016	Silicone (Platinum-cured)	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
72-300-017	Silicone (Platinum-cured)	FH100	24 to 2000mL/min.	6.4mm	1.6mm
72-300-018	Silicone (Platinum-cured)	FH100	36 to 3000mL/min.	8.0mm	1.6mm
72-300-024	Silicone (Platinum-cured)	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
72-300-025	Silicone (Platinum cured)	FH100	14 to 2000mL/min.	4.8mm	1.6mm
72-300-035	Silicone (Platinum-cured)	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
72-300-036	Silicone (Platinum cured)	FH100X	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* General-Purpose Tygon* Tubing for FH100 and FH100X Pumps



Thermo Scientific General-Purpose Tygon Peristaltic Pump Tubing is suitable for most everyday applications where pressure, accuracy, and long-term pump life are not critical to the process.

Provides good performance at an economical price.

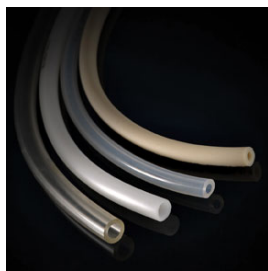
Tygon* Tubing

- Ideal for general transfer applications
- Nontoxic, nonaging and nonoxidizing
- Tested to operate in Thermo Scientific peristaltic pumps
- Supplied 15.2m (50ft.) per pack

Specifications	
Advantages	Inexpensive tubing for general laboratory applications. Clear for easy flow monitoring. Handles virtually all inorganic chemicals. Nonaging, nonoxidizing. Low gas permeability. Good for viscous fluids. High dielectric constant.
Limitations	Limited pumping life. Potential leaching of plasticizer.
Application Suitability	
Acids	Good
Alkalies	Good
Organic solvents	Not recommended
Pressure	Good
Vacuum	Good
Viscous fluids	Excellent
Sterile fluids	Poor
Physical characteristics and components	Thermoplastic. PVC-based material with plastizer. Firm (stiff) material. Transparent, clear.
Temperature Range	-50° to +74°C (-58° to +165°F)
Meets classifications	FDA 21 CFR 175.300
Gas Permeability	CO ₂ : 360; H ₂ : 97; O ₂ : 80; N ₂ : 40
Cleaning/sterilization	Sterilize with EtO or autoclave. To autoclave: Coil tubing loosely in nonlinting cloth or paper, autoclave at 121°C (250°F), 1kg/cm ² (15psi) for 30 minutes (tubing will appear milky); air dry at max 66°C (150°F) for 2 to 2.5 hours until clear.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
72-310-014	Tygon	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
72-310-016	Tygon	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
72-310-017	Tygon	FH100	24 to 2000mL/min.	6.4mm	1.6mm
72-310-018	Tygon	FH100	36 to 3000 mL/min.	8.0mm	1.6mm
72-310-024	Tygon	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
72-310-025	Tygon	FH100	14 to 1200mL/min.	4.8mm	1.6mm
72-310-035	Tygon	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
72-310-036	Tygon	FH100X	48 to 4000mL/min.	8.0mm	2.4mm

Thermo Scientific* General-Purpose Norprene* Food Tubing for FH100 Pumps



Thermo Scientific General-Purpose Norprene Peristaltic Pump Food Tubing is suitable for most everyday applications where pressure, accuracy, and long-term pump life are not critical to the process.

Provides good performance at an economical price.

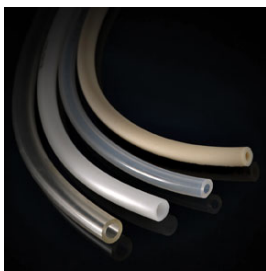
Norprene Food Tubing

- Tested to operate in Thermo Scientific peristaltic pumps
- Ideal for high-temperature food and beverage applications
- Meets FDA and NSF standards
- Up to 10,000 hours of tubing life
- Best choice for pressure/vacuum applications
- Resists heat, ozone, acids, and alkalis
- Heat sealable and bondable
- Nonaging, nonoxidizing
- Bioreactor process lines
- Sterile filling
- Diagnostic test products
- Supplied 15.2m (50ft.) per pack

Specifications	
Advantages	Similar to Norprene (06404) but with FDA approval. Excellent for food/dairy applications. Longest life, good flow consistency. Heat and ozone resistant. Good resistance to acids/alkalies. Heat sealable, nonaging and nonoxidizing. High dielectric constant.
Limitations	Potential leaching of USP mineral oil or blend material
Application Suitability	
Acids	Good
Alkalies	Good
Organic solvents	Not recommended
Pressure	Excellent
Vacuum	Excellent
Viscous fluids	Excellent
Sterile fluids	Good
Physical characteristics and composition	Thermoplastic elastomer. Polypropylene-based material with USP mineral oil. Excellent tensile strength. Firm (stiff) material. Opaque, beige.
Temperature Range	-59° to +135°C (-60° to +270°F)
Meets classifications	FDA 21 CFR 177.2600 NSF-listed (Standard 51)
Gas Permeability	CO ₂ : 1200; H ₂ : ---; O ₂ : 200; N ₂ : 80
Cleaning/Sterilization	Sterilize by autoclave. Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
72-305-014	Norprene Food	FH100	1.9 to 150mL/min.	1.6mm	1.6mm
72-305-016	Norprene Food	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
72-305-017	Norprene Food	FH100	24 to 2000mL/min.	6.4mm	1.6mm
72-305-018	Norprene Food	FH100	36 to 3000mL/min.	8.0mm	1.6mm
72-305-025	Norprene Food	FH100	14 to 1200mL/min.	4.8mm	1.6mm

Thermo Scientific* General-Purpose PharMed* BPT Tubing for FH100 Pumps



Thermo Scientific General-Purpose PharMed BPT Peristaltic Pump Tubing is suitable for most everyday applications where pressure, accuracy, and long-term pump life are not critical to the process.

Provides good performance at an economical price.

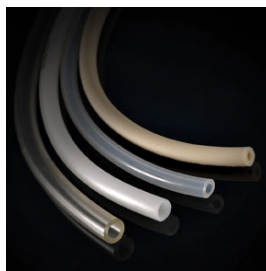
PharMed* BPT Tubing

- Tested to operate in Thermo Scientific peristaltic pumps
- Over 10,000 hours of tubing life
- Resists ozone and UV radiation
- Noncytotoxic and nonhemolytic
- Ideal for tissue and cell culture work
- Supplied 7.6m (25ft.) per pack

Specifications	
Advantages	Great for tissue and cell work—notoxic and nonhemolytic. Long service life minimizes risk of fluid exposure; reduces tubing costs and pump downtime. Opaque to UV and visible light to protect light-sensitive fluids. Low gas permeability. High-pressure (100psi) version available.
Limitations	Potential leaching of USP mineral oil or blend material.
Application Suitability	
Acids	Good
Alkalies	Good
Organic solvents	Not recommended
Pressure	Good
Vacuum	Good
Viscous fluids	Excellent
Sterile fluids	Excellent
Physical characteristics and composition	Thermoplastic elastomer. Polypropylene-based material with USP mineral oil. Excellent tensile strength. Firm (stiff) material. Opaque, beige.
Temperature Range	-51° to +132°C (-60° to +270°F)
Meets classifications	USP VI FDA 21 CFR 177.2600 NSF-listed (Standard 51). European Pharmacopoeia (EP).
Gas Permeability	CO ₂ : 1200; H ₂ : -----; O ₂ : 200; N ₂ : 80
Cleaning/Sterilization	Sterilize by EtO, autoclave or gamma radiation up to 2.5 Mrad. Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
72-303-013	Pharmed BPT	FH100	0.5 to 40mL/min.	0.8mm	1.6mm
72-303-014	Pharmed BPT	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
72-303-016	Pharmed BPT	FH100	6.8 to 550mL/min.	3.2mm	1.6mm
72-303-017	Pharmed BPT	FH100	25 to 2000mL/min.	6.4mm	1.6mm
72-303-018	Pharmed BPT	FH100	38 to 3000mL/min.	8.0mm	1.6mm
72-303-025	Pharmed BPT	FH100	15 to 1200mL/min.	4.8mm	1.6mm

Thermo Scientific* BioPharm Silicone Precision Tubing Links for FH100 and FH100X Pumps



Thermo Scientific BioPharm Silicone tubing links offer the best performance and repeatability.

Platinum-cured and manufactured to exacting specifications to optimize accuracy and provide enhanced tubing life with better performance.

- Tested and quality-assured to operate in Thermo Scientific peristaltic pumps
- Ultra-smooth inner surface minimizes particle entrapment
- Very low extractables with documented biocompatibility for sensitive applications
- Ideal for lab, biotech, and pharmaceutical applications
- Supplied in 41cm (16”) long pieces; 12 per package

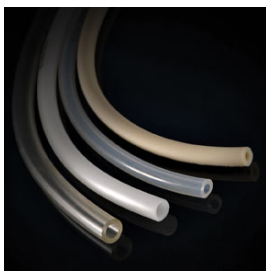
Features/Benefits

- Provides optimized performance for dosing and dispensing applications
- Retention collars ensure tube loading is correct
- Eliminate pull-through in critical high performance applications
- Use tube fittings provided with each pack of links for easy installation

Specifications	
Advantages	Ultra-smooth inner surface minimizes particle entrapment. Lower absorption; excellent biocompatibility; no leachable additive, DOP, or plasticizers! Very low extractables. Odorless and nontoxic, fungus-resistant. No taste imparted to transported fluids. Weather, ozone, corona, and radiation resistant.
Limitations	Do not use with concentrated solvents, oils, acids. Relatively high gas permeability.
Application Suitability	
Acids	Not recommended
Alkalies	Not recommended
Organic solvents	Not recommended
Pressure	Excellent
Vacuum	Good
Sterile fluids	Good
Viscous fluids	Excellent
Physical characteristics and composition	Thermal set rubber. Siloxane polymers and amorphous silica. Excellent compression strength. Soft material; flexible. Translucent, clear to light amber.
Temperature Range	-60° to +232°C (-75° to +450°F)
Meets classifications	USP Class VI FDA 21 CFR 177.2600 Exceeds 3A sanitary standards European Pharmacopoeia (EP)
Gas Permeability	CO ₂ : 25,147; H ₂ : ----; O ₂ : 4715; N ₂ : 2284
Cleaning/sterilization	Sterilize by EtO, autoclave, or gamma radiation up to 2.4 Mrad. To autoclave: coil loosely in nonlinting cloth or paper; autoclave at 121°C (250°F), 1 bar (15psi) for 30 minutes.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
75-300-130	Silicone (Platinum-cured)	FH100 and FH100D	0.50 to 40mL/min.	0.8mm	1.6mm
75-300-140	Silicone (Platinum-cured)	FH100 and FH100D	2.0 to 150mL/min.	1.6mm	1.6mm
75-300-160	Silicone (Platinum-cured)	FH100 and FH100D	6.5 to 550mL/min.	3.2mm	1.6mm
75-300-252	Silicone (Platinum-cured)	FH100 and FH100D	16 to 1200mL/min.	4.8mm	1.6mm
75-300-170	Silicone (Platinum-cured)	FH100 and FH100D	24 to 2000mL/min.	6.4mm	1.6mm
75-300-180	Silicone (Platinum-cured)	FH100 and FH100D	368 to 3000mL/min.	8.0mm	1.6mm
75-300-155	Silicone (Platinum-cured)	FH100X and FH100DX	14 to 1200mL/min.	4.8mm	2.4mm
75-300-245	Silicone (Platinum-cured)	FH100X and FH100DX	24 to 2000mL/min.	6.4mm	2.4mm
75-300-355	Silicone (Platinum-cured)	FH100X and FH100DX	36 to 3000mL/min.	8.0mm	2.4mm
75-300-365	Silicone (platinum-cured)	FH100X and FH100DX	48 to 4000ml/min	9.5mm	2.4mm

Thermo Scientific* PharMed* BPT Precision Tubing Links for FH100 and FH100X Pumps



Thermo Scientific PharMed BPT Tubing links offer the best performance and repeatability.

Manufactured to exacting specifications to optimize accuracy and provide enhanced tubing life with better performance.

- Tested and quality-assured to operate in Thermo Scientific peristaltic pumps
- Over 10,000 hours of tubing life
- Resists ozone and UV radiation
- Noncytotoxic and nonhemolytic
- Ideal for tissue and cell culture work
- Supplied in 41cm (16") lengths; 12 per package

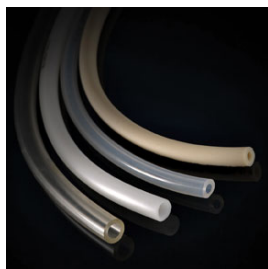
Features/Benefits

- Provides optimized performance for dosing and dispensing applications
- Retention collars ensure tube loading is correct
- Eliminate pull-through in critical high performance applications
- Use tube fittings provided with each pack of links for easy installation

Specifications	
Advantages	Great for tissue and cell work—nontoxic and nonhemolytic. Long service life minimizes risk of fluid exposure; reduces tubing costs and pump downtime. Opaque to UV and visible light to protect light-sensitive fluids. Low gas permeability. High-pressure (100psi) version available.
Limitations	Potential leaching of USP mineral oil or blend material.
Application Suitability	
Acids	Good
Alkalies	Good
Organic solvents	Not recommended
Pressure	Good
Vacuum	Good
Viscous fluids	Excellent
Sterile fluids	Excellent
Physical characteristics and composition	Thermoplastic elastomer. Polypropylene-based material with USP mineral oil. Excellent tensile strength. Firm (stiff) material. Opaque, beige.
Temperature range	-51° to +132°C (-60° to +270°F)
Meets classifications	USP Class VI FDA 21 CFR 177.2600 NSF-listed (Standard 51) European Pharmacopoeia (EP)
Gas Permeability	CO ₂ : 1200; H ₂ : ----; O ₂ : 200; N ₂ : 80
Cleaning/sterilization	Sterilize by EtO, autoclave, or gamma radiation up to 2.5 Mrad. Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
75-303-130	PharMed BPT	FH100 and FH100D	0.50 to 40mL/min.	0.8mm	1.6mm
75-303-140	PharMed BPT	FH100 and FH100D	2.0 to 150mL/min.	1.6mm	1.6mm
75-303-160	PharMed BPT	FH100 and FH100D	14 to 1200mL/min.	4.8mm	2.4mm
75-303-250	PharMed BPT	FH100 and FH100D	6.5 to 1200mL/min.	3.2mm	1.6mm
75-303-170	PharMed BPT	FH100 and FH100D	24 to 2000mL/min.	6.4mm	1.6mm
75-303-180	PharMed BPT	FH100 and FH100D	368 to 3000mL/min.	8.0mm	1.6mm
75-303-155	PharMed BPT	FH100X and FH100DX	24 to 2000mL/min.	6.4mm	2.4mm
75-303-245	PharMed BPT	FH100X and FH100DX	16 to 1200mL/min.	4.8mm	1.6mm
75-303-355	PharMed BPT	FH100X and FH100DX	36 to 3000mL/min.	8.0mm	2.4mm
75-303-365	PharMed BPT	FH100X and FH100DX	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* Norprene* Food Precision Tubing Links for FH100 and FH100X Pumps



Thermo Scientific Norprene Food Tubing Links offer the best performance and repeatability.

Manufactured to exacting specifications to optimize accuracy and provide enhanced tubing life with better performance.

Norprene Food Tubing

- Tested and quality-assured to operate in Thermo Scientific peristaltic pumps
- Ideal for high-temperature food and beverage applications
- Meets FDA and NSF standards
- Up to 10,000 hours of tubing life
- Best choice for pressure/vacuum applications
- Resists heat, ozone, acids, and alkalies
- Heat sealable and bondable
- Nonaging, nonoxidizing
- Bioreactor process lines
- Sterile filling
- Diagnostic test products
- Supplied in 41cm (16”) lengths; 12 per package

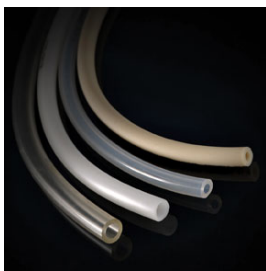
Features/Benefits

- Provides optimized performance for dosing and dispensing applications
- Retention collars ensure tube loading is correct
- Eliminate pull-through in critical high performance applications
- Use tube fitting provided with each pack of links for easy installation

Specifications	
Advantages	Similar to Norprene (06404) but with FDA approval. Excellent for food/dairy applications. Longest life, good flow consistency. Heat and ozone resistant. Good resistance to acids/alkalies. Heat sealable, nonaging, and nonoxidizing. High dielectric constant.
Limitations	Potential leaching of USP mineral oil or blend material.
Application Suitability	
Acids	Good
Alkalies	Good
Organic solvents	Not recommended
Pressure	Excellent
Vacuum	Excellent
Viscous fluids	Excellent
Sterile fluids	Good
Physical characteristics and composition	Thermoplastic elastomer. Polypropylene-based material with USP mineral oil. Excellent tensile strength. Firm (stiff) material. Opaque, beige.
Temperature range	-59° to +135°C (-60° to +270°F)
Meets classifications	FDA 21 CFR 177.2600 NSF-listed (Standard 51)
Gas permeability	CO ₂ : 1200; H ₂ : ----; O ₂ : 200; N ₂ : 80
Cleaning/sterilization	Sterilize by autoclave. Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
75-305-130	Norprene	FH100 and FH100D	0.50 to 40mL/min.	0.8mm	1.6mm
75-305-140	Norprene	FH100 and FH100D	2.0 to 150mL/min.	1.6mm	1.6mm
75-305-160	Norprene	FH100 and FH100D	14 to 1200mL/min.	3.2mm	1.6mm
75-305-250	Norprene	FH100 and FH100D	6.5 to 550mL/min.	4.8mm	1.6mm
75-305-170	Norprene	FH100 and FH100D	24 to 2000mL/min.	6.4mm	1.6mm
75-305-180	Norprene	FH100 and FH100D	368 to 3000mL/min.	8.0mm	1.6mm
75-305-155	Norprene	FH100X and FH100DX	24 to 2000mL/min.	4.8mm	2.4mm
75-305-245	Norprene	FH100X and FH100DX	16 to 1200mL/min.	6.4mm	2.4mm
75-305-355	Norprene	FH100X and FH100DX	36 to 3000mL/min.	8.0mm	2.4mm
75-305-365	Norprene	FH100X and FH100DX	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* Tygon* Lab Precision Tubing Links for FH100 and FH100X Pumps



Thermo Scientific Tygon Lab Tubing Links offer the best performance and repeatability.

Manufactured to exacting specifications to optimize accuracy and provide enhanced tubing life with better performance.

Tygon Tubing

- Tested and quality-assured to operate in Thermo Scientific peristaltic pumps
- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing
- Supplied in 41cm (16") lengths; 12 per package

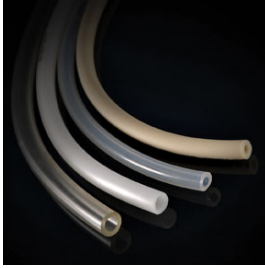
Features/Benefits

- Provides optimized performance for dosing and dispensing applications
- Retention collars ensure tube loading is correct
- Eliminate pull-through in critical high performance applications
- Use tube fitting provided with each pack of links for easy installation

Specifications	
Advantages	Inexpensive tubing for general laboratory applications. Clear for easy flow monitoring. Handles virtually all inorganic chemicals. Nonaging, nonoxidizing. Low gas permeability. Good for viscous fluids. High dielectric constant.
Limitations	Limited pumping life. Potential leaching of plasticizer.
Application Suitability	
Acids	Good
Alkalies	Good
Organic solvents	Not recommended
Pressure	Good
Vacuum	Good
Viscous fluids	Excellent
Sterile fluids	Poor
Physical characteristics and composition	Thermoplastic. PVC-based material with plasticizer. Firm (stiff) material. Transparent, clear.
Temperature Range	-50° to +74°C (-58° to +165°F)
Meets classifications	FDA 21 CFR 175.300
Gas Permeability	CO ₂ : 360; H ₂ : 97; O ₂ : 80; N ₂ : 40
Cleaning/sterilization	Sterilize with EtO or autoclave. To autoclave: Coil tubing loosely in nonlinting cloth or paper, autoclave at 121°C (250°F), 1kg/cm ² (15psi) for 30 minutes (tubing will appear milky); air dry at max. 66°C (150°F) for 2 to 2.5 hours until clear.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
75-310-130	Tygon	FH100X and FH100DX	0.50 to 40mL/min.	0.8mm	1.6mm
75-310-140	Tygon	FH100 and FH100D	2.0 to 150mL/min.	1.6mm	1.6mm
75-310-160	Tygon	FH100 and FH100D	14 to 1200mL/min.	3.2mm	1.5mm
75-310-250	Tygon	FH100 and FH100D	6.5 to 550mL/min.	4.8mm	1.6mm
75-310-170	Tygon	FH100 and FH100D	24 to 2000mL/min.	6.4mm	1.6mm
75-310-180	Tygon	FH100 and FH100D	368 to 3000mL/min.	8.0mm	1.6mm
75-310-155	Tygon	FH100X and FH100DX	24 to 2000mL/min.	4.8mm	2.4mm
75-310-245	Tygon	FH100X and FH100DX	16 to 1200mL/min.	6.4mm	2.4mm
75-310-355	Tygon	FH100X and FH100DX	36 to 3000mL/min.	8.0mm	2.4mm
75-310-365	Tygon	FH100X and FH100DX	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* Gore* Style 400 High-resilience Tubing Elements for FH100 and FH100X Peristaltic Pumps



Thermo Scientific Gore Style 400 High-resilience Tubing Elements offer the best performance where higher pressure and long tubing life are required, or chemical compatibility is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. These new high-resilience tubing (HRT) formulations provide exceptional life, and purity while operating at high pressure and the broadest range of chemical compatibility. HRT materials provide this top-of-line performance at reasonable cost. We offer four formulations of GORE HRT materials.

- Ideal for high-temperature food and beverage applications
- Meets FDA and NSF standards
- Best choice for pressure/vacuum applications
- Resists heat, ozone, acids, and alkalies
- Supplied as tube elements: 1.6mm wall, 305mm (12"); 2.4mm wall, 355mm (14")

GORE STA-PURE* PCS

- Long life at continuous pressure up to 4 ar (60psi)
- Excellent flow stability
- Spallation-free
- Low gas permeability

GORE STA-PURE* PFL

Very similar to STA-PURE PCS, plus:

- Excellent chemical resistance
- Compatible with many inorganic and organic chemicals
- Maximum pressure 4bar

GORE HRT Style 100SC

- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing
- Maximum pressure 4bar

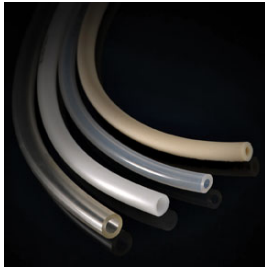
GORE HRT Style 400 FKM

- Ideal for high-temperature food and beverage applications
- Meets FDA and NSF standards
- Best choice for pressure/vacuum applications
- Resists heat, ozone, acids, and alkalies
- Maximum pressure 4bar

Specifications	
Advantages	Excellent chemical resistance. Resistant to corrosives, solvents and oils at elevated temperatures. Low gas permeability.
Limitations	Sold as tube elements only; no continuous lengths available.
Application Suitability	
Acids	Excellent
Alkalies	Excellent
Organic solvents	Variable-test before using
Pressure	Good
Vacuum	Excellent
Viscous fluids	Excellent
Sterile fluids	Excellent
Physical characteristics and composition	Viton® fluor elastomer (FKM) and expanded PTFE. Firm (stiff) material. Opaque, beige.
Temperature Range	0° to 200°C (32° to 392°F)
Meets classifications	RoHS and ADF compliant
Gas Permeability	CO ₂ : 76 to 79; H ₂ : ----; O ₂ : 13 to 15; N ₂ : 4.3
Cleaning/sterilization	Sterilize by EtO, autoclave or SIP (steam in place). Repeated autoclaving will not affect overall life.

Cat. No.	Inside Diameter	Tubing Size
6439-15	4.8mm	15
6439-16	3.2mm	16
6439-24	6.4mm	24
6439-35	8.0mm	35

Thermo Scientific* Gore* Sta-Pure* PCS High-resilience Tubing Elements for FH100 and FH100X Peristaltic Pumps



Thermo Scientific Gore Sta-Pure PCS High-resilience Tubing Elements for FH100 and FH100X Peristaltic Pumps offer the best performance where higher pressure and long tubing life are required, or chemical compatibility is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. These new high-resilience tubing (HRT) formulations provide exceptional life and purity while operating at high pressure and the broadest range of chemical compatibility. HRT materials provide this top-of-line performance at reasonable cost. We offer four formulations of Gore HRT materials.

- Long life at continuous pressure up to 4 bar (60psi)
- Excellent flow stability
- Spallation-free
- Low gas permeability
- Supplied as tube elements: 1.6mm wall, 305mm (12"); 2.4mm wall, 355mm (14")

Specifications	
Advantages	Long life, even under pressures up to 60psi (4 bar). Excellent flow stability; >1% change in flowrate as tubing wears. No break-in period required. Spallation-free. Excellent biocompatibility. Very low extractables.
Limitations	Sold as tube elements only; no continuous lengths available.
Application Suitability	
Acids	Not recommended
Alkalies	Not recommended
Organic solvents	Not recommended
Pressure	Excellent
Vacuum	Good
Viscous fluids	Good
Sterile fluids	Excellent
Physical characteristics and composition	ePTFE (expanded PTFE) and platinum-cured silicone. Excellent tensile strength. Firm (stiff) material. Opaque, white.
Temperature Range	-40° to +200°C (-40° to +392°F)
Meets classifications	USP VI FDA 21 CFR 177.2600 European Pharmacopoeia (EP) RoHS and ADF compliant
Gas Permeability	CO ₂ : 20,132; H ₂ : 6579; O ₂ : 7961; N ₂ : 2763
Cleaning/sterilization	Sterilize by EtO, autoclave or SIP (steam in place). Repeated autoclaving will not affect overall life.

Cat. No.	Formulation	For Use with	Flowrate	Tubing I.D.	Wall Thickness
96211-14	Sta-Pure PCS	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
96211-15	Sta-Pure PCS	FH100X	14 to 1200mL/min.	4.8mm	2.4mm
96211-16	Sta-Pure PCS	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
96211-17	Sta-Pure PCS	FH100	24 to 2000mL/min.	6.4mm	1.6mm
96211-18	Sta-Pure PCS	FH100	36 to 3000mL/min.	8.0mm	1.6mm
96211-24	Sta-Pure PCS	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
96211-25	Sta-Pure PCS	FH100	22 to 1200mL/min.	4.8mm	1.6mm
96211-35	Sta-Pure PCS	FH100X	36 to 3000mL/min.	8.0mm	2.4mm

Thermo Scientific* HRT Gore* Sta-Pure* PFL Tubing Elements for FH100 and FH100X Peristaltic Pumps



Thermo Scientific FH100 and FH100X HRT Gore Sta-Pure PFL Tubing Elements offer the best performance where higher pressure and long tubing life are required, or chemical compatibility is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. These new high-resilience tubing (HRT) formulations provide exceptional life and purity while operating at high pressure and the broadest range of chemical compatibility. HRT materials provide this top-of-line performance at reasonable cost. We offer four formulations of Gore HRT materials.

- Excellent chemical resistance
- Compatible with many inorganic and organic chemicals
- Supplied as tube elements: 1.6mm wall, 305mm (12"); 2.4 mm wall, 355mm (14")

Specifications	
Advantages	Similar to Sta-Pure PCS tubing but with enhanced chemical resistance. Resistant to many organic and inorganic fluids. Long life at pressure up to 60psi (4 bar). Spallation-free. Excellent biocompatibility. Low gas permeability.
Limitations	Sold as tube elements only; no continuous lengths available.
Application Suitability	
Acids	Excellent
Alkalies	Good
Organic solvents	Excellent
Pressure	Excellent
Vacuum	Good
Viscous fluids	Good
Sterile fluids	Excellent
Physical characteristics and composition	ePTFE (expanded PTFE) and per-fluoroelastomer (FFKM). Excellent tensile strength. Firm (stiff) material. Opaque, off-white.
Temperature Range	-80° to +200°C (-112° to +392°F)
Meets classifications	USP Class VI FDA 21 CFR 177.1550 RoHS and ADF compliant
Gas Permeability	CO ₂ : 76 to 79; H ₂ : ----; O ₂ : ----; N ₂ : 4.3
Cleaning/sterilization	Sterilize by EtO, autoclave or SIP (steam in place). Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
96212-14	Sta-Pure PFL	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
96212-15	Sta-Pure PFL	FH100X	14 to 2000mL/min.	4.8mm	2.4mm
96212-16	Sta-Pure PFL	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
96212-17	Sta-Pure PFL	FH100	24 to 2000mL/min.	6.4mm	1.6mm
96212-18	Sta-Pure PFL	FH100	36 to 3000mL/min.	8.0mm	1.6mm
96212-24	Sta-Pure PFL	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
96212-25	Sta-Pure PFL	FH100	14 to 2000mL/min.	4.8mm	1.6mm
96212-35	Sta-Pure PFL	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
96212-36	Sta-Pure PFL	FH100X	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* HRT Gore* Style 100SC Tubing Elements for FH100 and FH100X Peristaltic Pumps



Thermo Scientific FH100 and FH100X HRT Gore Style 100SC Tubing Elements offer the best performance where higher pressure and long tubing life are required, or chemical compatability is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. These new high-resilience tubing (HRT) formulations provide exceptional life and purity while operating at high pressure and the broadest range of chemical compatibility. HRT materials provide this top-of-line performance at reasonable cost. We offer four formulations of Gore HRT materials.

- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing
- Supplied as tube elements: 1.6mm wall, 305mm (12"); 2.4mm wall, 355mm (14")

Specifications	
Advantages	No leachable additives, DOP or plasticizers; phthalate and latex-free; odorless and nontoxic, fungus-resistant. No taste imparted to transported fluids. Extremely good over a wide temperature range. Weather and ozone resistant. Spallation-free. Minimal tendency to take a set.
Limitations	Sold as tube elements only; no continuous lengths available.
Application Suitability	
Acids	Not recommended
Alkalies	Not recommended
Organic solvents	Not recommended
Pressure	Excellent
Vacuum	Good
Viscous fluids	Good
Sterile fluids	Excellent
Physical characteristics and composition	Platinum-cured silicone and expanded PTFE. Excellent tensile strength. Firm (stiff) material. Opaque, white.
Temperature Range	-60° to +232°C (-75° to +450°F)
Meets classifications	RoHS and ADF compliant
Gas Permeability	CO ₂ : 20,132; H ₂ : 6579; O ₂ : 7961; N ₂ : 2763
Cleaning/sterilization	Sterilize by EtO, autoclave or SIP (steam in place). Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing I.D.	Wall Thickness
96200-14	Style 100 SC	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
96200-15	Style 100 SC	FH100X	14 to 2000mL/min.	4.8mm	2.4mm
96200-16	Style 100 SC	FH100	6.5 to 55.mL/min.	3.2mm	1.6mm
96200-17	Style 100 SC	FH100	24 to 2000mL/min.	6.4mm	1.6mm
96200-18	Style 100 SC	FH100	36 to 3000mL/min.	8.0mm	1.6mm
96200-24	Style 100 SC	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
96200-25	Style 100 SC	FH100	14 to 120mL/min.	4.8mm	1.6mm
96200-35	Style 100 SC	FH100X	14 to 120mL/min.	4.8mm	2.4mm
96200-36	Style 100 SC	FH100X	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* Modular Power Cords for FH Series Peristaltic Pumps

Cords permit direct connection of Thermo Scientific FH series peristaltic pumps to local electric power systems around the world.

FH Series peristaltic pumps are provided with an IEC320 electric socket.

Socket accommodates modular power cords that connect directly to local electric power outlets.

Cat. No.	Description
50001-60	Australia/New Zealand Male Plug
50001-62	Denmark Male Plug
50001-64	India Male Plug
50001-67	Israel Male Plug
50001-68	US Standard Male Plug
50001-69	China Male Plug (CCC approved)
50001-70	Europe Male Plug
50001-72	England (UK) Male Plug
50001-74	Switzerland Male Plug
50001-76	Italy Male Plug
50001-78	US (NEMA 230V)

Thermo Scientific* Gilmont* Laboratory Direct-Reading Flowmeters



Thermo Scientific Gilmont laboratory direct-reading flowmeters have excellent chemical compatibility, with glass and PTFE construction.

Flowmeter measurements can be read directly off the flowmeter.

- Take air and water readings directly with these compact meters
- Flowtube: borosilicate glass
- Floats: glass or 316 stainless steel (ruby-micro size only)
- End blocks/stops PTFE
- Inlet/outlet PTFE
- Shield: acrylic
- Shield ends: polypropylene
- Valve: PTFE, PCTFE, glass
- O-rings: Viton*

Shielded Flowmeters

- For higher pressure applications
- Clear polycarbonate shield adds strength and protects tube from damage
- Fluid contacts only borosilicate glass tube, PTFE body, and Viton fluoroelastomer O-rings not the polycarbonate shield
- End bushings are polypropylene with PTFE inserts, order coupling adapters to prevent fluid from contacting the end bushings

Shielded Flowmeters with Valves

- Choose these flowmeters for greater control, micrometer capillary valves ensure precise, reproducible measurement and flow control
- Shields are clear polycarbonate, valve consists of a precision-bore glass tube for the fluid and a precision-ground rod of PCTFE (PTFE for sizes 4, 5, 14, and 15) controlled by a micrometer
- 20-turn micrometer valve can be adjusted from 0.1 to 100% of maximum flow-control is semilogarithmic
- Precise regulation can be obtained through 19.5 turns (0.3 to 60% of maximum flow)
- Interchange flowtubes among valve assemblies of the same size

Warranty: 1 year

Specifications	
Accuracy (Direct Reading)	±5% of reading or 2mm of scale length, whichever is greater
Accuracy (Correlated)	±2% of reading or ± 1 scale division, whichever is greater. For micro: ± 5% of reading or ± 2 scale division (Air); ± 10% of reading or ± 3 scale division (Water)
Repeatability	±1% of reading or ±0.5 scale division, whichever is greater
Turndown Ratio	Better than 25:1
Operating Temperatures	-26°C to +65°C (-15°F to +150°F) at full pressure rating. Above 65°C (150°F), max. pressure is 40psig
Connections (Unshielded)	Use taper joint adapters
Connections (Shielded)	3/8" I.D. tubing on sizes 0 to 3 and micro to 13 5/8" I.D. tubing on sizes 4 to 5, and 14 to 15
Connections (Shielded w/ Valve)	1/8" NPT(M) Sizes 0 to 3, micro to 13 1/4" NPT (M) sizes 4 to 5 and 14 to 15
Shipping Weight (Unshielded)	0.3kg (0.5 lb.)
Shipping Weight (Shielded)	0.5kg (1.0 lb.)
Shipping Weight (Shielded w/Value)	0.5kg (1.0 lb.)

Cat. No.	Airflow Rate
GF2000	0.2 to 90, 0.36 to 160mL/min.
GF2060	0.2 to 90, 0.36 to 160mL/min.
GF2100	1 to 280, 2 to 500mL/min.
GF2160	1 to 280, 2 to 500mL/min.
GF2200	20 to 2100, 36 to 3700mL/min.
GF2260	20 to 2100, 36 to 3700mL/min.
GF2300	200 to 14,000, 360 to 25,000mL/min.
GF2360	200 to 14,000, 360 to 25,000mL/min.
GF2400	1000 to 36,000, 1800 to 64,000mL/min.
GF2460	1000 to 36,000, 1800 to 64,000mL/min.
GF2500	3000 to 77,000, 5300 to 137,000mL/min.
GF2560	3000 to 77,000, 5300 to 137,000mL/min.
GF9060	0.2 to 90, 0.36 to 160mL/min.
GF9160	1 to 280, 2 to 500mL/min.
GF9260	20 to 2100, 36 to 3700mL/min.
GF9360	200 to 14,000, 360 to 25,000mL/min.
GF9460	1000 to 36,000, 1800 to 64,000mL/min.
GF9560	3000 to 77,000, 5300 to 137,000mL/min.

Thermo Scientific* Gilmont* Laboratory Correlated Flowmeters



Thermo Scientific Gilmont laboratory correlated flowmeters have excellent chemical compatibility, with glass and PTFE construction.

High-accuracy correlated flowmeters are available in a wide selection of flow ranges.

- Extremely accurate $\pm 2\%$ of reading or ± 1 scale division, whichever is greater
- Determine flow values for air and water from the computerized calibration table enclosed with each flowmeter
- Tables are included for floats used with both air and water at STP

Shielded Flowmeters

- For higher pressure applications
- Clear polycarbonate shield adds strength and protects tube from damage
- Fluid contacts only borosilicate glass tube, PTFE body, and VITON fluoroelastomer O-rings not the polycarbonate shield
- End bushings are polypropylene with PTFE inserts, order coupling adapters to prevent fluid from contacting the end bushings

Shielded Flowmeters with Valves

- Choose these flowmeters for greater control, micrometer capillary valves ensure precise, reproducible measurement and flow control
- Shields are clear polycarbonate, valve consists of a precision-bore glass tube for the fluid and a precision-ground rod of PCTFE (PTFE for sizes 4, 5, 14, and 15) controlled by a micrometer
- 20-turn micrometer valve can be adjusted from 0.1 to 100% of maximum flow-control is semilogarithmic
- Precise regulation can be obtained through 19.5 turns (0.3 to 60% of maximum flow)
- Interchange flowtubes among valve assemblies of the same size

Warranty: 1 year

Specifications	
Accuracy (Correlated)	$\pm 2\%$ of reading or ± 1 scale division, whichever is greater For micro: $\pm 5\%$ of reading or ± 2 scale division (Air) $\pm 10\%$ of reading or ± 3 scale division (Water)
Repeatability	$\pm 1\%$ of reading or ± 0.5 scale division, whichever is greater
Turndown Ratio	Better than 25:1
Operating Temperatures	-26° to 65°C (-15° to 150°F) at full pressure rating Above 65°C (150°F), max. pressure is 40psig
Connection (Shielded)	0.375 " I.D. tubing on sizes 0 to 3 and micro to 13 0.625 " I.D. tubing on sizes 4 to 5, and 14 to 15
Connection (Shielded w/Valve)	0.125 " NPT(M) Sizes 0 to 3, micro to 13 0.25 " NPT (M) sizes 4 to 5 and 14 to 15
Shipping Weight (Shielded)	0.5 lb (1.0 lb.)
Shipping Weight (Shielded w/Valve)	0.5 lb (1.0 lb.)

Cat. No.	Type	Airflow Rate
GF1060	Shielded	0.2-100, 0.36-180mL/min.
GF1160	Shielded	1-280, 2-500mL/min.
GF1260	Shielded	10-1,900, 20-3,400mL/min.
GF1360	Shielded	200-14,000, 360-25,000mL/min.
GF1460	Shielded	1000-36,000, 1800-64,000mL/min.
GF1560	Shielded	3000-77,000, 5300-137,000mL/min.
GF1660	Shielded	25,000-330,000, 50,000-675,000mL/min.
GF3060	Shielded	0.02-15mL/min.
GF7060	Shielded w/valves	0.2-100, 0.36-180mL/min.
GF7160	Shielded w/valves	1-280, 2-500mL/min.
GF7260	Shielded w/valves	10-1,900, 20-3,400mL/min.
GF7360	Shielded w/valves	200-14,000, 360-25,000mL/min.
GF7460	Shielded w/valves	1000-36,000, 1800-64,000mL/min.
GF7560	Shielded w/valves	3000-77,000, 5300-137,000mL/min.
GF9760	Shielded w/valves	0.02-15mL/min.

Thermo Scientific* Gilmont* Accucal* 150mm Flowmeters



Thermo Scientific Gilmont Accucal 150mm Flowmeters feature correlated and direct reading all in one easy-to-read meter.

Accuracy up to $\pm 2\%$ of reading and very low pressure drops make Thermo Scientific Gilmont Accucal flowmeters ideal for procedures with critical pressure values.

Each meter includes correlation charts for air and water and two direct-reading scales—an air scale and a water scale. Easily change between correlated and direct-reading scales depending on the application.

- Available in 65 and 150mm (2.55 and 6.0”) scale lengths
- Each direct-reading scale indicates flowrates in metric and English units, for both glass and stainless steel under standard operating conditions
- Use the new GF-4000 software to create custom scales
- Quality industrial design ensures use in most tough applications
- Advanced metering valves available with Gilmont flowmeters
- GF-4001 flowmeter base is made of rugged aluminum
- Flowmeter type: Variable-area rotameter
- Flowtube: borosilicate glass
- Floats: glass float and 316 float stainless steel included
- End blocks: 303 stainless steel
- Inlet/outlet: 303 stainless steel
- Valve: PCTTFE/PTFE (303 SS PCTFE/PTFE for tube sizes 240 and 250)
- O-rings: Viton*
- Maximum performance shown below is with glass float and stainless-steel float

Warranty: 1 year

Specifications	
Accuracy	Greater of $\pm 2\%$ of reading or ± 1 division (correlated use); greater of $\pm 5\%$ of reading $2\pm$ division of scale (direct reading use)
Repeatability	$\pm 1\%$ of reading or ± 0.5 scale division, whichever is greater
Turndown Ratio	Better than 25:1
Max. Pressure	250psig at 250°F
Max. Operating Temperature	121°C (250°F)
Connections	0.25” NPT(F) for 240 and 250 tube sizes; 0.12” NPT(F) for all others
Shipping Weight	2 lb. (1.0kg)

Cat. No.	Airflow Rate	Water Flowrate
Without valves		
GF-6540-1200	95 and 230mL/min.	1.1 and 4.9mL/min.
GF-6540-1210	280 and 620mL/min.	3.9 and 1.5mL/min.
GF-6540-1215	1000 and 2000mL/min.	17 and 55mL/min.
GF-6540-1220	2200 and 4200mL/min.	43 and 120mL/min.
GF-6540-1225	6500 and 12000mL/min.	140 and 360mL/min.
GF-6540-1230	14000 and 25000mL/min.	320 and 800mL/min.
GF-6540-1235	25000 and 46000mL/min.	590 and 1400mL/min.
GF-6540-1240	40000 and 73000mL/min.	960 and 2200mL/min.
GF-6540-1250	85000 and 150000mL/min.	2000 and 4700mL/min.
With valves		
GF-6541-1200	95 and 230mL/min.	1.1 and 4.9mL/min.
GF-6541-1210	280 and 620mL/min.	3.9 and 1.5mL/min.
GF-6541-1215	1000 and 2000mL/min.	17 and 55mL/min.
GF-6541-1220	2200 and 4200mL/min.	43 and 120mL/min.
GF-6541-1225	6500 and 12000mL/min.	140 and 360mL/min.
GF-6541-1230	14000 and 25000mL/min.	320 and 800mL/min.
GF-6541-1235	25000 and 46000mL/min.	590 and 1400mL/min.
GF-6541-1240	40000 and 73000mL/min.	960 and 2200mL/min.
GF-6541-1250	85000 and 150000mL/min.	2000 and 4700mL/min.

Thermo Scientific* Gilmont* Accucal* 65mm Flowmeters



Thermo Scientific Gilmont Accucal 65mm Flowmeters feature correlated and direct reading all in one easy-to-read meter.

Accuracy up to $\pm 2\%$ of reading makes Thermo Scientific Gilmont Accucal flowmeters ideal for procedures with critical pressure values.

Each meter includes correlation charts for air and water and two direct-reading scales—an air scale and a water scale.

- Extremely low pressure drops—ideal for procedures with critical pressure values
- Easily change between correlated and direct-reading scales depending on application
- Meters are available in 65mm and 150mm scale lengths
- Each direct-reading scale indicates flowrates in metric and English units, for both glass and stainless steel under standard operating conditions
- Use the new GF-4000 software to create your own custom scales
- Quality industrial design ensures use in most tough applications
- Advanced metering valves are available with Gilmont flowmeters
- GF-4001 flowmeter base is made of rugged aluminum
- Flowmeter type: Variable-area rotameter 303 stainless steel
- Flowtube: borosilicate glass
- Floats: glass float and 316 stainless-steel float included
- End blocks: 303 stainless steel
- Inlet/outlet: 303 stainless steel
- Valve: PCTTFE/PTFE (303 SS PCTTFE/PTFE for tube sizes 240 and 250)
- O-rings: Viton*
- Maximum performance shown below with glass float and stainless-steel float

Warranty: 1 year

Specifications	
Accuracy (Direct Reading)	$\pm 5\%$ of reading or ± 2 division of scale, whichever is greater
Accuracy (Correlated)	$\pm 2\%$ of reading or ± 1 division, whichever is greater
Repeatability	$\pm 1\%$ of reading or ± 0.5 scale division, whichever is greater
Turndown Ratio	Better than 25:1
Maximum Pressure	250psi at 121°C (250°F)
Maximum Operating Temperature	121°C (250°F)
Connections	0.25 " NPT(F) for 240 and 250 tube sizes; 0.125 " NPT(F) for all others
Shipping Weight	0.5kg (1.0 lb.)

Cat. No.	Airflow Rate
Without valves	
GF-6340-1100	95 and 230mL/min.
GF-6340-1110	280 and 620mL/min.
GF-6340-1115	1000 and 2000mL/min.
GF-6340-1120	2200 and 4200mL/min.
GF-6340-1125	6500 and 12,000mL/min.
GF-6340-1130	14,000 and 25,000mL/min.
GF-6340-1135	25,000 and 46,000mL/min.
With precision valves	
GF-6341-1000	95 and 230mL/min.
GF-6341-1110	280 and 620mL/min.
GF-6341-1115	1000 and 2000mL/min.
GF-6341-1120	2200 and 4200mL/min.
GF-6341-1125	6500 and 12,000mL/min.
GF-6341-1130	14,000 and 25,000mL/min.
GF-6341-1135	25,000 and 46,000mL/min.

Thermo Scientific* Air Cadet* Single-Head Vacuum/Pressure Pumps



Thermo Scientific Air Cadet Single-head Vacuum/Pressure Pumps are economically priced and easily handle tough vacuum/pressure applications.

Available in two compact, portable models to best accommodate electrical requirements.

- TEFC, totally enclosed, fan-cooled
- Subfractional, 1/45hp motor
- ON/OFF switch for convenient control
- Pumphead Materials: Dacron*-reinforced Viton*, Valox*, PTFE, and polyethylene components

230V Model

- Capacity: 14L/min.
- Motor Speed: 1290rpm

Applications:

- Filtration
- Evacuation
- Flue-gas sampling
- Gas or air-handling applications

Includes: PTFE sealing tape, two 0.38" (9.5mm) polyethylene hose barb adapters, and 6ft. (1.8m) three-wire cord

Warranty: 1 year

Certifications: UL listed, cUL listed; 230V model is CE marked

Specifications	
Motor Type	TEFC, Totally Enclosed Fan Cooled
Motor HP	Sub-Fractional, 1/45 HP
Control	ON/OFF Switch
Pumphead Materials	Dacron-reinforced Viton, Valox, PTFE and polyethylene
Agency Listings	UL, cUL, and CE (230V only)
Operating Temperature	0° to 40°C (32° to 104°F)
Storage Temperature	-45° to +65°C (-13° to +149°F)
Overall L x W x H	20 x 10 x 14cm (8 x 4 x 5.5")
Shipping Weight	3.2kg (7 lb.)

Cat. No.	Electrical Requirements
420-1902	230V 50Hz

Thermo Scientific* Air Cadet* Dual-Head Air/Vacuum Pump



The Thermo Scientific Air Cadet Dual-head pump offers increased capacity over the single-head Air Cadet pump.

Use the two pumpheads independently or connect them in series with 0.93cm (0.37") ID Tygon* vacuum tubing for up to 58.4cm (23") Hg vacuum.

- Cavity configuration minimizes dead space and air entrapment
- NorylS* pump head, nitrile diaphragm, valves of PTFE resin, and polyethylene (PE) adapters
- Pumps are available with standard 230VAC motor
- Motor type: 1/45hp, TEFC
- Noise rating: 76 dB(A)
- Dimensions: 26.6L x 10.1W x 13.9cm H (10.50 x 4 x 5.50")
- Shipping weight: 3.7kg (8 lb.)

230V Model

- Free air capacity: 0.8 cfm (22.6L/min.)
- Power: 230VAC, 50Hz, 6A

Includes: Thread tape made of PTFE resin, four polyethylene 9.5mm (0.37") NPT(M) x 9.5mm (0.37") hose barb adapters, and a 6ft., three-wire cord with plug

Warranty: 1 year

Certifications: CE marked, ISO9002

Notes: Do not use metal fittings with any Air Cadet pump.

Specifications	
Motor	1/45hp TEFC
Noise Level	76dBA
Overall L x W x H	26.6 x 10.1 x 13.9cm (10.50 x 4 x 5.50")
Shipping Weight	3.7kg (8 lb.)

Cat. No.	Electrical Requirements
420-2902	230V 50Hz, 6A

Thermo Scientific* Air Cadet* Vacuum/Pressure Station



Thermo Scientific Air Cadet Vacuum/Pressure Station features built-in bronze, brass vacuum/pressure gauge and stainless-steel regulator.

This Vacuum/Pressure Station is ideal for filtration, evacuation, flue-gas sampling, and other gas or air handling applications.

- Uses auxiliary port to evacuate or pressurize two systems simultaneously
- With a 22.8cm (9”) piece of vinyl tubing to connect pump to regulator

Warranty: 1 year

Certifications: UL, cUL, and CE (230V only)

Notes: Do not use metal fittings with any Air Cadet pump.

Specifications	
Motor Type	TEFC, Totally Enclosed Fan Cooled
Motor HP	Subfractional, 1/45 hp
Control	ON/OFF Switch, Separate Vacuum and Pressure Regulator, Vacuum/Pressure Gauge
Pumphead Materials	Dacron* Reinforced Viton*, Valox*, PTFE and Polyethylene, 316 Stainless-Steel, Brass and Bronze
Operating Temperature	0 to 40°C (32 to 104°F)
Storage Temperature	-45 to +65°C (-13 to +149°F)
Overall L x W x H	20 x 20 x 21.5cm (8 x 8 x 8.5")
Shipping Weight	5.5kg (12 lb.)

Cat. No.	Electrical Requirements
420-3902	230V

Thermo Scientific* Air Cadet* Portable Vacuum/Pressure Station



Thermo Scientific Air Cadet Portable Vacuum/Pressure Station features lightweight, plastic housing, and an integral handle for easy transport.

Designed for portability and versatility, long-wearing motor delivers performance characteristics suitable for a wide range of applications.

- Vacuum to 54.1cm (21.3") Hg
- Pressure to 35psi intermittent, 10psi continuous
- Free-air capacity 0.39cfm
- Quiet operation
- ON/OFF switch operation
- No vacuum oil required
- Low-friction piston service-free motor
- Convenient power cord compartment

Applications:

- Air/gas sampling
- Pressure/Vacuum Filtration
- Precious Metal Recovery
- Process Control
- Suction Units
- Analysis Instrumentation
- Film Making
- Environmental Safety Monitoring
- Aerating Equipment
- Pneumatic Controls

Ordering Information: 230V model features a European-style plug.

Includes: Supplied with a 6ft. power cord.

Warranty: 1 Year

Compliance: CE approved

Certifications: UL and CSA listed for 115VAC, 60Hz model; CE approved for 230VAC, 50Hz model

Alert: Do not pump liquids or immerse pump. Avoid organic, basic and acidic vapors.

Specifications	
Wetted Parts	Glass-filled polyester piston cup retainer and head, Ryton® cylinder sleeve, Viton® valves, PTFE piston cup, silicone tubing, and Delrin® fittings
Port Size	54.1cm (0.25") Hose Barb
Motor	1/25 hp, Shaded-Pole
Overall L x W x H	11.4 x 19.3 x 19cm (4.5 x 7.62 x 7.5")
Max Temperature	40°C Maximum (104°F Maximum)
Shipping Weight	2.3kg (5 lb.)

Cat. No.	Air Displacement	Electrical Requirements
4003912	0.32cfm (9.2L/min.)	230V 50Hz, 0.8A

SHAKERS

Thermo Scientific* Low-Cost Orbital Benchtop Shakers



Thermo Scientific Low-Cost Orbital Shaker provides dependable, quiet operation and long-term performance, while conserving valuable benchtop space.

The adjustable speed control provides gentle to vigorous agitation, and the built-in timer is ideal for time dependent studies.

Available in two Erlenmeyer flask sizes and complete with platform and clamps. Model 2345Q holds thirteen 125mL flasks and Model 2346Q holds nine 250mL flasks. The platform and clamps are permanently attached to the shaker and cannot be removed.

- Rotary dial controls the variable speed for gentle to vigorous agitation
- Continuous-duty motor provides smooth, quiet rotation
- Built-in timer can be set for continuous or timed shaking up to 60 min.
- Shaker body is made of durable, powder-coated cold-rolled steel
- Can be used in incubators, warm rooms, environmental chambers and refrigerators

Applications: Ideal for growth of bacteria and yeast.

Includes: Platform and clamps which are permanently attached.

Warranty: 90 days on labor and one year on parts

Certifications: UL, cUL, CE

Specifications	
Speed Range	40 to 220rpm
Orbit	1.9cm (0.75")
Timer	1 to 60 min. or continuous
Operating Humidity Conditions	20 to 80% noncondensing
Operating Temperature Conditions	0° to 40°C (32° to 104°F)
Platform Load Capacity	5kg (10 lb.)
Exterior L x W x H	35 x 31 x 16cm (13.61 x 12.28 x 6.25")
Shipping Weight	8kg (18 lb.)

Cat. No.	Holds No. of Containers	Electrical Requirements
2345-1CEQ	13 (125mL) Flasks	240V 50/60Hz, 50w, 0.2A
2346-1CEQ	9 (250mL) Flasks	240V 50/60Hz, 50w, 0.2A

Thermo Scientific* Lab Rotators



Thermo Scientific Lab Rotator can be used in incubators, warm rooms, environmental chambers and refrigerators.

Improved drive eccentrics and an upgraded motor ensures stability, enhanced long-term performance and quiet, dependable operation.

The Lab Rotator is ideal for rotation of flasks, test tube racks, beakers, vials, Petri dishes, microwell plates, culture plates, plastic/glass trays, and slides in microbiological, immunological and general clinical applications.

- Two platform sizes available
- Continuous-duty motor provides smooth, quiet orbit
- Timer makes it easy to perform time studies; set for continuous or timed
- Autoclavable white silicone nonslip platform mat cleans easily
- Variable speed control for gentle or vigorous agitation

Includes: White silicone nonslip platform

Warranty: 90 days labor, one year parts

Certifications: UL, cUL listed; CE marked

Specifications	
Speed Range	40 to 220rpm
Orbit	1.9cm (0.75")
Timer	1 to 60 min. or continuous
Operating Humidity Range	20 to 80% noncondensing
Operating Temperature Range	4° to 40°C (39.2° to 104°F)
Platform Load Capacity	4.5kg (10 lb.)
Electrical Requirements	240V 50/60Hz, 50w, 0.2A
Shipping Weight	7.3kg (16 lb.)

Cat. No.	Platform L x W	Exterior L x W x H	Electrical Requirements
2309-1CEQ	23 x 23cm (9 x 9")	31 x 27 x 11cm (12.38 x 10.62 x 4.4")	240V 50/60Hz, 50w, 0.2A
2314-1CEQ	30 x 30cm (12 x 12")	35 x 32 x 11cm (13.62 x 12.5 x 4.38")	240V 50/60Hz, 50w, 0.2A

Thermo Scientific* Vari-Mix* Platform Rocker



Thermo Scientific Vari-Mix Platform Rocker provides steep angle rocking for applications such as hybridization, blotting and staining or destaining gels.

Variable speed control provides a gentle to vigorous wave motion. The built-in timer makes it easy to perform time-dependent studies.

- Large white nonskid rubber mixing platform easily adjusts angle of motion
- Set timer for continuous or timed operation
- Rocker can be used in many different laboratory applications
- Platform removes easily for autoclaving and allows easy viewing of contents
- All finishes are chemical-resistant and easy to clean
- Optional double-tier platform doubles mixing surface

Includes: 3-wire cord and plug; 240V model also includes European cord set

Warranty: 90 days on labor and one year on parts

Certifications: CE marked

Specifications	
Speed Range	5 to 30rpm variable
Rocking Angle	1° to 48°
Timer	Up to 2 hr. automatic at 60Hz; Up to 3 hr. automatic at 50Hz; Continuous
Platform L x W	32 × 26.9cm (12.6 × 10.6")
Load Bearing Capacity	6.8kg (15 lb.)
Exterior L x W x H	30.4 × 39.6 × 18.5cm (12 × 15.6 × 7.3")
Operating Temperature Range	4° to 40°C (39.2° to 104°F)
Operating Humidity Range	20 to 80% noncondensing
Power Consumption	12w
Shipping Weight	2.7kg (6 lb.)

Cat. No.	Electrical Requirements
M79730-33	240V 50/60Hz, 0.05A

Thermo Scientific* Vari-Mix* Replacement Platform



Thermo Scientific Double-tier platform is for use with Vari-Mix rocker.

Measures 32 × 26.9cm (12.6 × 10.6").

Warranty: 90 days labor, one year parts

Cat. No.	Description	Platform L x W	For Use with
AY797X1	Double-Tier Platform	32 × 26.9cm (12.6 × 10.6")	VariMix Rocker

Thermo Scientific* Thermal Rocker* Incubators



Thermo Scientific Thermal Rocker Incubator accommodates different-size containers and heat-sealed plastic bags; operates with and without heat.

Excellent alternative to higher-priced hybridization incubators for agitation of blotting membranes under controlled temperatures.

Provide smooth, gentle adjustable rocking from 0 to 100 cycles/min. to meet a variety of mixing needs.

- Front-mounted switch allows operation with or without heat
- Temperature is monitored via the large LED display
- Electronic proportional temperature controller maintains temperatures
- Automatic resetting thermal cutoff shuts down power to the heaters in the event of an overtemperature condition
- Platform features a nonskid rubber pad to keep samples in place
- Angle of motion is easily adjusted

Includes: 3-wire line cord and plug

Warranty: 90 days on labor and one year on parts

Certifications: CE marked

Specifications	
Speed Range	0 to 100 cycles/min.
Rocking Angle	10° to 15°
Temperature Control	Electronic Proportional
Temperature Range	Ambient ±5° to 70°C
Temperature Accuracy	±0.5°C
Display	LED temperature display, analog speed display, rotary dial
Platform L x W	36 x 36cm (14.19 x 14.19")
Load Capacity	4.5kg (10 lb.)
Exterior L x W x H with cover	41 x 42 x 34.7cm (16 x 16.5 x 13.5")
Shipping Weight	11kg (25 lb.)

Cat. No.	Description	Electrical Requirements
4637-1CEQ	Thermal Rocker* Incubator	240V 50/60Hz (1.7A)

Thermo Scientific* Small Bidirectional Rotator



Thermo Scientific compact, lightweight small bi-directional rotator conserves valuable bench space in the lab.

Rotator is used for staining and destaining gels, hybridizations, Western blotting, and mixing of small tubes, blood samples and microwell plates.

- Bidirectional rocking angle through 360° rotation
- Mechanical timer acts as ON/OFF switch
- White nonslip rubber mat platform holds two microwell plates, Vacutainer* containers, slides, Petri dishes or tissue culture flasks
- Powder-coated steel body with four nonskid rubber feet
- Small footprint conserves bench space

Applications:

- Gel staining/destaining
- Hybridizations
- Western blotting
- Blood sample mixing

Includes: 3-wire cord and plug

Warranty: 90 days labor, one year parts

Certifications: CE marked

Specifications	
Speed Range	30rpm
Angle	10° through a 360° rotation
Timer	Up to 60 min. or continuous
Operating Humidity Range	20 to 80% noncondensing
Operating Temperature Range	4° to 40°C (39.2° to 104°F)
Platform L x W	17 x 13cm (6.75 x 5")
Platform Load Capacity	1.4kg (3 lb.)
Exterior L x W x H	21 x 17 x 14cm (8.3 x 6.9 x 5.5")
Shipping Weight	11kg (25 lb.)

Cat. No.	Electrical Requirements
4630-1CEQ	240V 50/60Hz, 50w, 0.3A

Thermo Scientific* Large Bidirectional Rotators



Thermo Scientific Large 3-Dimensional Rotators perform gentle horizontal and vertical orbital rotation that allows more rapid exchange of solvents such as in staining and destaining gels, and provide lower backgrounds in blotting techniques.

This low-maintenance rotator has a continuous-duty motor and direct drive assembly without belts or pulleys to replace.

- Stainless-steel platform accommodates two Pyrex* dishes
- Variable rotation solid-state speed control
- 3-dimensional horizontal and vertical orbit rotation through a 6° angle
- Lightweight for easy mobility
- Durable cold-rolled steel body with baked enamel finish
- White, neoprene rubber mat provides a non-skid surface and easy sample viewing

Includes: Three-wire line cord and plug

Warranty: 90 days labor, one year parts

Certifications: CE listed (240V model)

Specifications	
Speed Range	0 to 25rpm
Orbit	6° angle through a 360° rotation
Operating Humidity Range	20 to 80% noncondensing
Operating Temperature Range	4° to 40°C (39.2° to 104°F)
Platform L x W	35.6 × 40.6cm (14 × 16")
Platform Load Capacity	1.8kg (4 lb.)
Exterior L x W x H	36 × 41 × 19cm (14 × 16 × 7.5")
Shipping Weight	11kg (25 lb.)

Cat. No.	Description	Electrical Requirements
4631-1CEQ	Large Bidirectional Rotator	240V 50/60Hz, 0.2A

Thermo Scientific* Sealed Mini Orbital Shaker



Thermo Scientific 3-Dimensional Shakers with adjustable tilt platform and smooth operation are ideal for applications such as gel staining, Western blotting, rinsing membranes or mixing small tubes, vials or blood samples.

The shaker is convenient for use in cell culture incubators, biosafety cabinets and lab refrigerators due to its cool operating motor which does not cause temperature deviations.

- Adjustable tilt platform (via a brass wheel)
- Rubber feet eliminate unwanted movement and vibration

Warranty: One year, parts and labor

Certifications: CE

Specifications	
Orbit	3-Dimensional platform motion: 2cm (0.8") with adjustable tilt via a brass wheel
Speed Range	0 to 60rpm
Operating Temperature Range	0° to 60°C (32° to 140°F)
Platform L x W	17.8 x 17.8cm (7 x 7")
Platform Material	Clear acrylic with nonskid rubber mat
Exterior L x W x H	20.3 x 20.3 x 12.2cm (8 x 8 x 4.8")
Net Weight	2.3kg (5 lb.)
Shipping Weight	3kg (6.5 lb.)
Electrical Requirements	90/240V 50/60Hz, 0.1FLA or less on 115V and 0.05FLA or less on 230V

Cat. No.	Description
194134	Sealed Mini Orbital Shaker

Mat for Thermo Scientific* Mini Orbital Shaker

Small mat for Thermo Scientific Mini Orbital Shaker holds test tubes and vials.

Cat. No.	Description
194135	Mat

Thermo Scientific* Vari-Mix* and Speci-Mix* Test Tube Rockers



Thermo Scientific Vari-Mix and Speci-Mix Test Tube Rockers are compact, precision-controlled platform mixers that provide smooth rocking action for uniform specimen suspension.

All models hold 10 to 30mm diameter tubes and are ideal for blood collection tubes.

- Choose from fixed or adjustable speeds
- Reversible pad provides one side (with lip to prevent sliding) for capped tubes 110mm (4.33") long; other side for longer tubes
- Autoclavable white silicone rubber pad enhances viewing
- Can be used in a noncondensing incubator or coldroom with ambient operating conditions of 4° to 40°C (39.2° to 104°F) and 20 to 80% RH noncondensing

Includes: A white silicon rubber friction grip pad for holding tubes in place

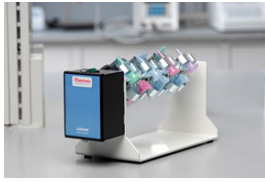
Warranty: 90 days labor, one year on parts

Certifications: CE listed

Specifications	
Operating Humidity Conditions	20 to 80% noncondensing
Operating Temperature Range	4° to 40°C (39.2° to 104°F)

Cat. No.	Description	Tube Capacity	Speed Range	Rocking Angle	Exterior L x W x H	Shipping Weight	Electrical Requirements
M71010-33Q	Speci-Mix Test Tube Rocker	8 (10-20mm); 3 (22-30mm)	18rpm, fixed	Preset 48° tilt of rocker platform	13.9 × 19.1 × 10.7cm (5.5 × 7.5 × 4.3")	1.4kg (3 lb.)	240V 50Hz (0.01A)
M48720-33Q	Vari-Mix Test Tube Rocker	16 (10-20mm); 7 (22-30mm)	2 to 20rpm	Adjustable rocking from 1° to 48° angle	13.9 × 38.1 × 10.7cm (5.5 × 15 × 4.3")	2.6kg (5.8 lb.)	240V 50Hz (0.02A)

Thermo Scientific* Labquake* Tube Shaker/Rotators



Thermo Scientific Labquake Tube Shaker/Rotator provides the ultimate versatility at an affordable price.

These shaker/rotators provide thorough mixing of blood samples, preparation of homogenous dispersions, dialysis under agitation, and liquid-liquid extractions.

The tube shaker/rotator accommodates many tube sizes 0.3 to 1.18" (10 to 30mm), including Vacutainer* tubes and 1.5mL microcentrifuge tubes. Choice of clip bar, double deck or combination models.

- **Clip Bar Models:** Continuous rotation at 8rpm, or oscillating action at 22 to 70 reversals/min. (depending on angle)
- **Double Deck Tray Models:** Oscillating action at 22 to 70 reversals/min. (depending on angle)
- **Combination Models:** Interchangeable removable double deck trays with clip bar

Includes: Clip bar, double deck tray or combination of clip bar and double deck trays.

Warranty: 90 days on labor, one year on parts

Certifications: CE marked (220/240V models)

Specifications	
Hertz	50/60

Cat. No.	Description	Tube Capacity	Rotation	Oscillation	Exterior L x W x H	Shipping Weight	Volts
4002220Q	Clip Bar	8 x 17 to 30mm	360°	Up to 300°	27.9 x 10.2 x 15.2cm (11 x 4 x 6")	2.3kg (5 lb.)	220/240V
400220Q	Clip Bar	14 x 10 to 19mm	360°	Up to 300°	27.9 x 10.2 x 15.2cm (11 x 4 x 6")	2.3kg (5 lb.)	220/240V
T400220Q	Double-Deck Tray	22 x 10mL Vacutainer tubes	----	Up to 90°	27.9 x 16.5 x 15.2cm (11 x 6.5 x 6")	2.3kg (5 lb.)	220/240V
C4002220Q	Clip Bar and Double-Deck Tray	8 x 17 to 30mm or 22 x 10mL Vacutainer tubes	360°	Up to 300°	27.9 x 16.5 x 15.2cm (11 x 6.5 x 6")	2.7kg (6 lb.)	220/240V
C400220Q	Clip Bar and Double-Deck Tray	14 x 10 to 19mm or 22 x 10mL Vacutainer tubes	360°	Up to 300°	27.9 x 16.5 x 15.2cm (11 x 6.5 x 6")	2.7kg (6 lb.)	220/240V
4152220Q	Clip Bar	14 x 17 to 30mm	360°	Up to 300°	46.9 x 10.2 x 15.2cm (18.5 x 4 x 6")	2.3kg (5 lb.)	220/240V
415220Q	Clip Bar	32 x 10 to 19mm	360°	Up to 300°	46.9 x 10.2 x 15.2cm (18.5 x 4 x 6")	2.3kg (5 lb.)	220/240V
T415220Q	Double-Deck Tray	46 x 10mL Vacutainer tubes	----	Up to 90°	46.9 x 11.4 x 15.2cm (18.5 x 4.5 x 6")	3.2kg (7 lb.)	220/240V
C4152220Q	Clip Bar and Double-Deck Tray	14 x 17 to 30mm or 46 x 10mL Vacutainer tubes	360°	Up to 300°	46.9 x 11.4 x 15.2cm (18.5 x 4.5 x 6")	3.6kg (8 lb.)	220/240V
C415220Q	Clip Bar and Double-Deck Tray	14 x 17 to 30mm or 46 x 10mL Vacutainer tubes	360°	Up to 300°	46.9 x 11.4 x 15.2cm (18.5 x 4.5 x 6")	3.6kg (8 lb.)	220/240V

Thermo Scientific* Clips for Labquake* Tube Shaker/Rotators

Thermo Scientific Replacement clips are available in packs of 2.

For use with all Labquake tube shaker/rotators.

Cat. No.	Description	For Use with
4002014	Replacement Clips, Pack of 2	All Labquake Tube Rotator/Shakers

Thermo Scientific* Multi-Tube Rotators



The Thermo Scientific Multi-Tube Rotator has a fixed shaker speed. The circular motion coupled with a rocking pattern keeps liquids and solutions mixed gently without the potential for shearing or other damage.

The three-dimensional rotation of the Thermo Scientific Multi-Tube Rotator is ideal for hematology, blood chemistry and other laboratory applications where a continuous, gentle motion is necessary.

- Compact size makes it easy to transport and use in areas with limited space
- Angle of rotation
- Portable, lightweight metal body is durable and easy to clean
- Four rubber feet provide added stability
- White silicone, nonskid, dimpled platform surface and 0.71" (1.8cm) sides hold tubes firmly in place—no need for racks or clamps
- Removable platform surface can be used to transport tubes

Includes: White silicone, nonskid dimpled platform surface (L x W: 8.5" x 5").

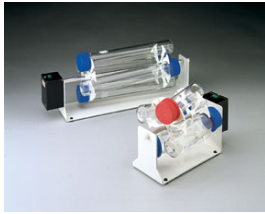
Warranty: 90 days labor, one year parts

Certifications: CE marked

Specifications	
Speed Range	30rpm
Angle	Varies 20° from the horizontal plane
Operating Humidity Range	80% maximum noncondensing
Operating Temperature Range	15° to 40°C
Mix Surface D x W	13 x 22cm (5.3 x 8.8")
Tube Capacity	14 x 7mL, 10mL or 15mL
Platform Load Capacity	1.4kg (3 lb.)
Exterior D x W x H	21 x 22 x 18cm (8.5 x 8.8 x 8.1")
Shipping Weight	3.6kg (8 lb.)

Cat. No.	Description	Electrical Requirements
4632-1CEQ	Multi-Tube Rotators	240V 50Hz, 0.2A

Thermo Scientific* Labquake* Rotisserie Hybridization Rotators



Thermo Scientific Labquake Rotisserie ensures optimal distribution of hybridization materials as it rotates conical tubes or hybridization bottles at a constant 8rpm.

Economical way to convert an existing incubator with outlets into a rotisserie hybridization incubator. Ideal for labs that do infrequent blots and do not require a hybridization oven or for labs that need an additional vehicle for washes.

- Tridirectional rotation assures optimal distribution of a minimal amount of probe solution
- Compact, portable rotisseries hold 50mL conical tubes or 38 x 150mm (1.4 x 5.9") or 300mm (11.8") hybridization bottles, depending on model
- Bottles are easy to place and remove
- Motor can run when loading or removing

Applications:

- Hybridizations
- Western, Southern and Northern blots
- Incubation of cells adhered to beads
- Room-temperature hybridizations

Ordering Information: Bottles and tubes must be purchased separately.

Warranty: 90 days on labor, one year on parts

Certifications: CE marked

Specifications	
Speed	8rpm
Operating Temperature Range	0° to 65°C (32° to 149°F)
Operating Humidity Range	20 to 80% noncondensing

Cat. No.	Capacity	Exterior L x W x H	Shipping Weight	Electrical Requirements
M90610-33Q	Four 38 x 150mm bottles/4 x 50mL conical tubes	11.4 x 26.7 x 16.5cm (4.5 x 10.5 x 6.5")	0.9kg (2 lb.)	220/240V 50/60Hz
M107620-33Q	Four 38 x 300mm bottles/8 x 50mL conical tubes	11.4 x 47 x 16.8cm (4.5 x 18.5 x 6.6")	2.0kg (4.5 lb.)	220/240V 50/60Hz

Thermo Scientific* Titer Plate Shakers



Thermo Scientific shakers provide shaking motion from gentle rotation to vigorous vortexing for ELISA, enzyme immunoassays, protein synthesis, pharmaceutical profiling among other applications.

Vortexing motion thoroughly mixes each well.

- Solid-state, variable speed control from 40 to 1100rpm with a 0.12" (0.3cm) circular orbit
- Electronic timer can be set for continuous operation or timed shaking up to 5 min. (adjustable in 30-second increments)
- Independent start switch activates shaker for preset speed and time for repeatability in tests
- Automatic shutoff
- Platform has 0.38" (0.9cm) sides and holds from one to four 96-well standard or deep-well plates
- Two retaining springs and nonslip rubber mat hold plates securely
- Four platform finger slots for easy plate removal
- Rugged, enameled steel shaker body with four nonskid rubber feet

Applications:

- Protein synthesis
- Pharmaceutical profiling
- Rh factor testing
- ELISA
- Enzyme immunoassays
- Polymerase assays

Warranty: 90 days labor, one year parts

Certifications: UL and CE listed

Specifications	
Speed Range	40 to 1100rpm
Orbit	0.30cm (0.12")
Timer	Continuous or timed from 30 sec. to 5 min., adjustable in 30-sec. increments
Operating Humidity Range	20 to 80% noncondensing
Operating Temperature Range	0° to 40°C (32° to 104°F)
Platform Load Capacity	1kg (2 lb.)
Exterior L x W x H	28 x 28 x 18cm (11 x 11 x 7")
Shipping Weight	11kg (25 lb.)

Cat. No.	Description	Electrical Requirements
4625-1CEQ	Titer Plate Shaker	240V 50Hz, 0.5A

WATER PURIFICATION

Thermo Scientific* Hose Nipple Cartridges



Thermo Scientific Hose Nipple Cartridges are an economical way to purify water volumes up to 75L/hr.

Economical purification option for small volume applications. Constructed of 100% virgin polypropylene cartridge with superior quality resin.

- Color change indicator identifies when resin is exhausted in specific cartridges
- Designed for non-pressurized applications
- Cartridges include 0.38" hose barb connection on each end except D8822, D8950 and D8951, which include tapered straight nipped for 0.38" ID tubing

Applications: Softening, deionization, organic and chlorine removal

Alert: Alcohol-containing samples cannot be used in cartridges containing the color indicator

Specifications	
Flowrate	Up to 75L/hr.
Length	1/2 Size: 25.9cm (10.2"); 2/3 Size: 33.8cm (13.3"); Full Size: 47.5cm (18.7")

Cat. No.	Description	Resin Type(s)	Capacity	Color Indicator†
D50220	1/2 Size Mixed Bed	Ultrapure Ion Exchange	430 grains	No
D8822	1/2 Size Mixed Bed with Oxygen Removal	Ultrapure Mixed Bed with Strong Anion Exchange	280 grains/4.4g	No
D8950	2/3 Size High Capacity	Two Bed Ion Exchange with Strong Cation Exchange	1100 grains	Yes
D8951	2/3 Size Mixed Bed and Organic Removal	Mixed Bed Ion Exchange with Activated Carbon	470 grains/ 2000 gal.	Yes
D8905	Full Size Cation Removal	Cation Exchange	3000 grains	Yes
D8901	Full Size High Capacity	Two Bed Ion Exchange	1650 grains	Yes
D8908	Full Size Macroreticular, Cation Removal	Macroreticular Cation Exchange	n/a	No
D8904	Full Size Organic Removal	Activated Carbon	5000 gal.	No
D8903	Full Size Oxygen Removal	Strong Anion Exchange	30g	No
D8921	Full Size Pretreatment and Scale Eliminator	Mixed Bed and Strong Cation Exchange, Activated Charcoal	1250 grains/1000 gal.	Yes
D8911	Full Size Ultrapure	Ultrapure Ion Exchange	915 grains	No
D8902	Full Size Ultrapure	Ultrapure Mixed Bed Ion Exchange	915 grains	Yes
D8922	Full Size Ultrapure with Organic Removal	Mixed Bed Ion Exchange with Activated Carbon	730 grains/2000 gal.	Yes

†Alcohol-containing samples cannot be used in cartridges containing the color indicator.

Thermo Scientific* Hose Nipple Cartridge Holder

For easy wall mounting of all Thermo Scientific hose nipple cartridges.



Cat. No.	Description
D8900	Hose Nipple Cartridges Holder

Thermo Scientific* B-Pure* Water Purification System



The Thermo Scientific B-Pure Water Purification System is customizable for all pretreatment or deionization needs.

B-Pure water purification system is an economical, laboratory-grade water system that can be customized to meet specific application needs.

Choose from single or double holders.

- Modular design provides ability to add additional holders as needed
- Produces up to 4L/min., depending on model
- Quarter-turn quick-release canisters make cartridge changes easy
- Accepts Thermo Scientific Pura-Lite* indicator or digital purity meter to monitor water quality
- Available in full or half-size cartridge configurations supporting space constraints

Single Module

- Simple system without draw-off valve or purity indicator
- Produces up to 4L/min.

Double Module

- Complete with draw-off valve
- Produces up to 4L/min.
- Choose from models with digital purity meter or Pura-Lite "Go/No Go" resistivity indicator

Half-Size Holder

- Produces up to 2L/min.
- Easily attaches to full-size B-Pure systems
- Small size allows flexibility in mounting location

Applications: Pretreatment, deionization

Required Accessories: Cartridges (sold separately).

Warranty: One year

Certifications: CE, CSA

Notes: The Thermo Scientific H₂O Select Program is available to help select the correct B-Pure system. For details, contact your Sales Representative.

Specifications	
Feedwater Temperature	4° to 49°C (40° to 120°F)
Inlet Connection NPTF	1.3cm (0.5") NPTF
Max. Inlet Pressure	100psig

Cat. No.	Model	Filter	Flowrate	Purified Water Output	Dimensions	Electrical Requirements	Requires
D4505	Half-size holder	N/A	2L/min.	2L/min. (0.53 gal./min.)	7 × 7 × 15" (17.8 × 17.8 × 38.1cm)	N/A	Half-Size B-Pure Cartridge
D4511	Single holder	No	4L/min.	4L/min. (1.1 gal./min.)	7 × 7 × 24" (17.8 × 17.8 × 61cm)	N/A	Full-Size B-Pure Cartridge
D4522-33	Double holder with Digital Purity Meter	0.2µm	4L/min.	4L/min. (1.1 gal./min.)	7 × 15 × 27" (17.8 × 38.1 × 68.6cm)	240V	2 Full-Size B-Pure Cartridges

Thermo Scientific* B-Pure* Deionizer Cartridges

For use with the Thermo Scientific B-Pure Deionizers as indicated.

Choose the cartridge based on your application needs.

Cat. No.	Type	Characteristics	Resin	Capacity	Size
D0760	Anion Removal	Effective removal of weakly ionized impurities, raises the pH of solutions, recovers precious metal complex	Strong Anion Exchange	1680 grains	Full
D0815	Cation Removal	Converts ionized salts to the acid form resulting in a product water that is low in pH, ideal for precious metal or isotope recovery.	Strong Cation Exchange	3170 grains	Full
D0803	High Capacity	Removes ionized impurities, produces a larger quantity of water than that of the Ultrapure (D0809); however, at a lower resistivity.	Two-bed Ion Exchange	1760 grains	Full
D0835	Pretreatment	Effectively removes colloids, bacteria, chlorine and organics.	Macroreticular, Activated Carbon	5000 gal.	Full
D0836	Macropure*	Effectively removes colloids, bacteria, chlorine and organics, increases filter life.	Macroreticular, Activated Carbon	2000 gal.	Full

D0813	Organic Removal	Removes organics and chlorine.	Activated Carbon	5000 gal.	Full
D50215	Organic Removal	Removes organics and chlorine	Activated Carbon	5000 gal.	Half
D0811	Oxygen Removal	Maintains low oxygen content to prevent corrosion in cooling water. The feedwater should contain less than 10ppm of ionized solids.	Porous Strong Ion Exchange	30g	Full
D50214	Oxygen Removal	Maintains low oxygen content to prevent corrosion in cooling water. The feed water should contain less than 10ppm of ionized solids.	Porous Strong Anion Exchange	18g	Half
D0809	Ultrapure	Removes ionized impurities to produce high resistivity water with a neutral pH.	Mixed Bed	875 grains	Full
D50213	Ultrapure	Removes ionized impurities to produce high resistivity water with a neutral pH	Mixed Bed	550 grains	Half
D0832	Ultrapure and Organic Removal	Commonly used as still pretreatment. Removes ionized impurities and has a layer of activated carbon to remove chlorine and organics.	Mixed Bed, Activated Carbon	785 grains/1000 gal.	Full
D50217	Ultrapure and Organic removal	Commonly used as still pretreatment. Removes ionized impurities and has a layer of activated carbon to remove chlorine and organics	Mixed Bed, Activated Carbon	275 grains/2000 gal.	Half
D8809	Ultrapure and Oxygen Removal	Removes ionized impurities and oxygen to produce high purity water.	Ultrapure, Oxygen Removal	455 grains/30g	Full
D8811	Ultrapure, Oxygen and Organic Removal	Removes ionized impurities, oxygen and organics to produce high purity water.	Ultrapure, Oxygen and Organic Removal	365 grains/2000 gal./12g	Full

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Accucal	Nalgene
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AquaBath	Owl
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Lab-Line	Variomag
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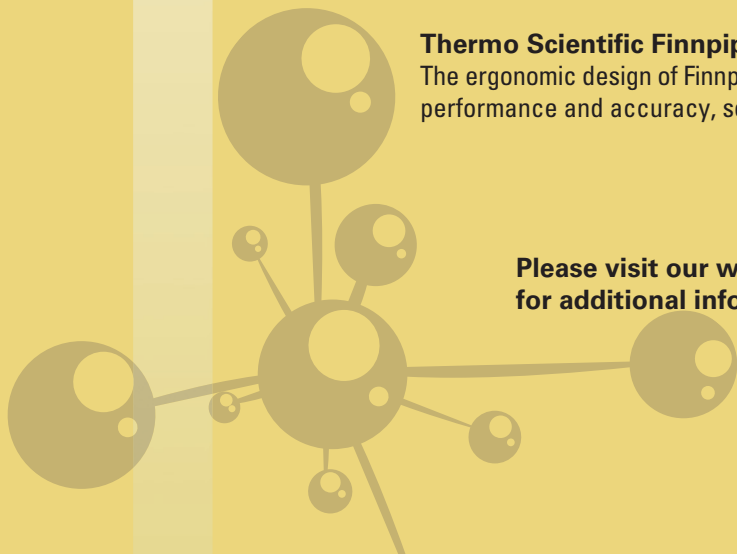
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THERMO SCIENTIFIC NALGENE AND NUNC LABWARE

Nalgene[®] Griffin Low-form Beakers — Flat Bottom Ensures Stability

- Flat bottom for smooth stirring
- Easy-to-read graduations
- Autoclavable



Cat. No.	Description	Pk/Case
Nalgene Griffin Low-form Beakers - PP		
1201-0050	50 ml Griffin Low-form Beakers	12/48
1201-0100	100 ml Griffin Low-form Beakers	12/48
1201-0250	250 ml Griffin Low-form Beakers	6/36
1201-0600	600 ml Griffin Low-form Beakers	4/24
1201-1000	1000 ml Griffin Low-form Beakers	3/12
1201-2000	2000 ml Griffin Low-form Beakers	1/6
1201-4000	4000 ml Griffin Low-form Beakers	1/4
Nalgene Griffin Low-form Beakers - PMP		
1203-0050	50 ml Griffin Low-form Beakers	12/36
1203-0100	100 ml Griffin Low-form Beakers	12/36
1203-0250	250 ml Griffin Low-form Beakers	6/24
1203-0600	600 ml Griffin Low-form Beakers	4/12
1203-1000	1000 ml Griffin Low-form Beakers	3/12
1203-2000	2000 ml Griffin Low-form Beakers	1/4
1203-4000	4000 ml Griffin Low-form Beakers	1/4

Nalgene UnWire Half-Racks — Will Not Float

- Space-efficient
- Autoclavable
- Excellent chemical resistance



Cat. No.	Tube Size	Color	L x W x H, mm	Array	Pk/Case
5972-0013	13 mm	White	102 x 102 x 56	6 x 6	1/8
5972-0016	16 mm	White	126 x 126 x 68	6 x 6	1/8
5972-0020	20 mm	White	128 x 103 x 83	4 x 5	1/8
5972-0025	25 mm	White	122 x 122 x 75	4 x 4	1/8
5972-0030	30 mm	White	109 x 109 x 84	3 x 3	1/8
5972-0313	13 mm	Blue	102 x 102 x 56	6 x 6	1/8
5972-0316	16 mm	Blue	126 x 126 x 68	6 x 6	1/8
5972-0320	20 mm	Blue	128 x 103 x 83	4 x 5	1/8
5972-0325	25 mm	Blue	122 x 122 x 75	4 x 4	1/8
5972-0330	30 mm	Blue	109 x 109 x 84	3 x 3	1/8
5972-0513	13 mm	Red	102 x 102 x 56	6 x 6	1/8
5972-0516	16 mm	Red	126 x 126 x 68	6 x 6	1/8
5972-0520	20 mm	Red	128 x 103 x 83	4 x 5	1/8
5972-0525	25 mm	Red	122 x 122 x 75	4 x 4	1/8
5972-0530	30 mm	Red	109 x 109 x 84	3 x 3	1/8

Nunc[™] EZFlip Conical Centrifuge Tubes — Spin with Confidence

- Hinged-cap prevents loss of closure
- Ergonomic design for easy open and close
- For centrifuge speeds up to 8,500 x G



Cat. No.	Tube Size	Pk/Case
362694	15 ml Bulk Packed	50/500
362695	15 ml Racked	50/500
362696	50 ml Bulk Packed	25/500
362697	50 ml Racked	25/500

THERMO SCIENTIFIC NALGENE AND NUNC LABWARE

Nalgene Wash Bottles – Soft and Easy-To-Squeeze



Economy Wash Bottles

- Leakproof

Vented Unitary™ Safety Wash Bottles

- Color coded
- Printed with chemical name and safety precautions
- Vented to prevent self-dispensing

Cat. No.	Description	Pk/Case
Nalgene Economy Wash Bottles - LDPE		
2401-0125	125 ml	6/48
2401-0250	250 ml	6/36
2401-0500	500 ml	6/24
2401-1000	1000 ml	12
Nalgene Unitary Wash Bottles - LDPE		
2436-0501	500 ml, Acetone, Red	4/24
2436-0502	500 ml, Ethyl Alcohol, White	4/24
2436-0503	500 ml, Methanol, Green	4/24
2436-0504	500 ml, Isopropanol, Yellow	4/24
2436-0505	500 ml, Distilled Water, Natural	4/24
2436-0506	500 ml, Sodium Hypochlorite (Bleach), White	4/24

Nalgene Narrow-Mouth Bottles – When Sample Integrity is Critical



- Leakproof, guaranteed
- Available in a wide range of resins and volumes

Cat. No.	Description	Pk/Case
1600-0004	125 ml Narrow-Mouth Bottle - FEP - 24 mm Closure	1pk/6cs
1600-0008	250 ml Narrow-Mouth Bottle - FEP - 24 mm Closure	1pk/4cs
1600-0016	500 ml Narrow-Mouth Bottle - FEP - 28 mm Closure	1pk/4cs
1600-0032	1000 ml Narrow-Mouth Bottle - FEP - 38 mm Closure	1pk/4cs
1600-0064	2000 ml Narrow-Mouth Bottle - FEP-38-430 mm Closure	1pk/2cs
2002-0004	125 ml Narrow-Mouth Bottle - HDPE - 24 mm Closure	12pk/72cs
2002-0006	175 ml Narrow-Mouth Bottle - HDPE - 24 mm Closure	12pk/72cs
2002-0008	250 ml Narrow-Mouth Bottle - HDPE - 24 mm Closure	12pk/72cs
2002-0016	500 ml Narrow-Mouth Bottle - HDPE - 24 mm Closure	12pk/48cs
2002-9016	500 ml Narrow-Mouth Bottle - HDPE -38-430 mm Closure	12pk/48cs
2002-0032	2000 ml Narrow-Mouth Bottle - HDPE -38-430 mm Closure	6pk/24cs
2006-0004	125 ml Narrow-Mouth Bottle - PP - 24 mm Closure	12pk/72cs
2006-0008	250 ml Narrow-Mouth Bottle - PP - 24 mm Closure	12pk/72cs
2006-0016	500 ml Narrow-Mouth Bottle - PP - 24 mm Closure	12pk/48cs
2006-0032	1000 ml Narrow-Mouth Bottle - PP -38-430 mm Closure	6pk/24cs

Nalgene PC Carboys – Easy Dispensing



- Leakproof
- Graduated
- Autoclavable

Cat. No.	Description	Pk/Case
2317-0020	10 L Transparent Carboy with Spigot, PC	1/4
2317-0050	20 L Transparent Carboy with Spigot, PC	1/4

THERMO SCIENTIFIC HANDHELD PIPETTING

Manual and Multi-channel Finnpiettes – Superior Ergonomics with State-of-the-Art Innovations



Thermo Scientific Finnpiette F1

- Integrated antimicrobial surface protection prevents contamination
- Light pipetting forces significantly reduced RSI (Repetitive Stress Injury) risks
- Set-and-forget pipetting button securely locks volume adjustment
- Adjustable finger rest

Cat. No.	Finnpiette F1 Variable Volume
4641010	Finnpiette F1 0.2-2 µl Micro
4641020	Finnpiette F1 0.5-5 µl Micro
4641030	Finnpiette F1 1-10 µl Micro
4641040	Finnpiette F1 1-10 µl
4641050	Finnpiette F1 2-20 µl Micro
4641060	Finnpiette F1 2-20 µl
4641130	Finnpiette F1 5-50 µl Micro
4641140	Finnpiette F1 5-50 µl
4641070	Finnpiette F1 10-100 µl
4641080	Finnpiette F1 20-200 µl
4641090	Finnpiette F1 30-300 µl
4641100	Finnpiette F1 100-1000 µl
4641110	Finnpiette F1 0.5-5 ml
4641120	Finnpiette F1 1-10ml

Cat. No.	Finnpiette F1 Fixed Volume
4651000	Finnpiette F1 Fixed 1 µl Micro
4651010	Finnpiette F1 Fixed 5 µl Micro
4651020	Finnpiette F1 Fixed 10 µl
4651130	Finnpiette F1 Fixed 20 µl
4651030	Finnpiette F1 Fixed 25 µl
4651040	Finnpiette F1 Fixed 50 µl
4651050	Finnpiette F1 Fixed 100 µl
4651140	Finnpiette F1 Fixed 200 µl
4651060	Finnpiette F1 Fixed 250 µl
4651070	Finnpiette F1 Fixed 500 µl
4651080	Finnpiette F1 Fixed 1000 µl
4651090	Finnpiette F1 Fixed 2000 µl
4651100	Finnpiette F1 Fixed 3000 µl
4651110	Finnpiette F1 Fixed 5000 µl
4651120	Finnpiette F1 Fixed 10000 µl

Cat. No.	Finnpiette F1 Multichannel
4661000	Finnpiette F1 8-channel 1-10 µl Micro
4661010	Finnpiette F1 8-channel 5-50 µl ,
4661020	Finnpiette F1 8-channel 10-100 µl
4661030	Finnpiette F1 8-channel 30-300 µl
4661040	Finnpiette F1 12-channel 1-10 µl Micro
4661050	Finnpiette F1 12-channel 5-50 µl
4661060	Finnpiette F1 12-channel 10-100 µl
4661070	Finnpiette F1 12-channel 30-300 µl
4661080	Finnpiette F1 16-channel 1-10 µl Micro
4661090	Finnpiette F1 16-channel 5-50 µl Micro



Thermo Scientific Finnpiette F2

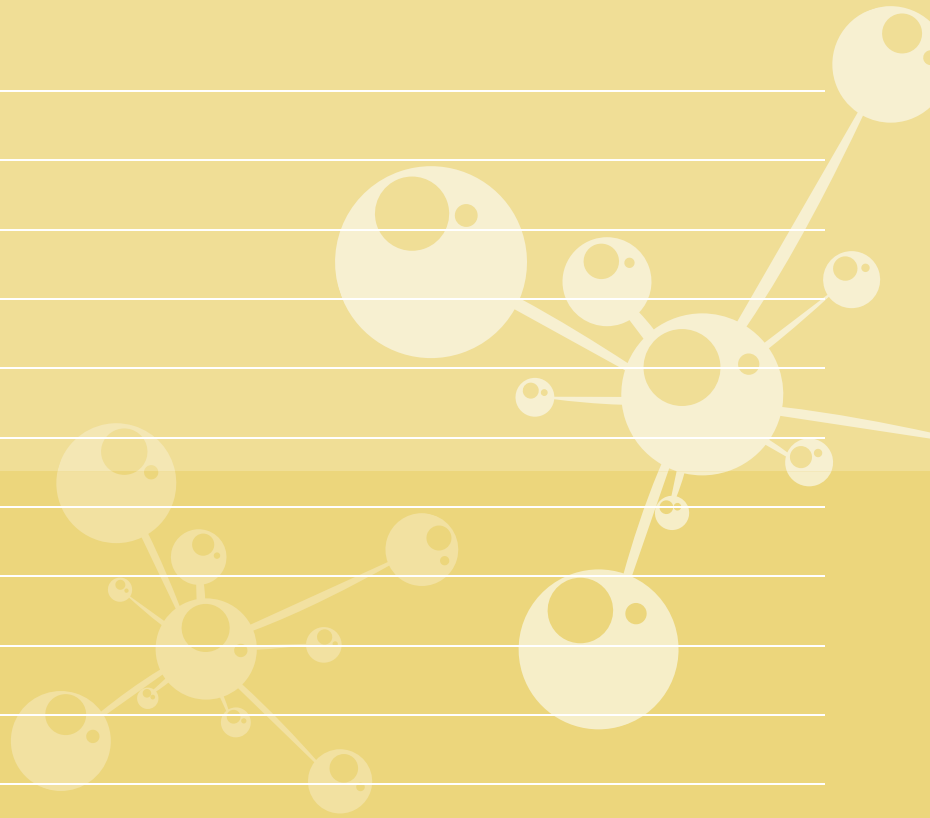
- Advanced Volume Gearing mechanism (AVG) improves accuracy and precision
- Double-action pipetting button for easy and light volume setting
- Easy to open for piston cleaning and service
- Fully autoclavable

Cat. No.	Finnpiette F2 Variable Volume
4652000	Finnpiette F2 Fixed Volume 1 µl Micro
4652010	Finnpiette F2 Fixed Volume 5 µl Micro
4652020	Finnpiette F2 Fixed Volume 10 µl
4652130	Finnpiette F2 Fixed Volume 20 µl
4652030	Finnpiette F2 Fixed Volume 25 µl
4652040	Finnpiette F2 Fixed Volume 50 µl
4652050	Finnpiette F2 Fixed Volume 100 µl
4652140	Finnpiette F2 Fixed Volume 200 µl
4652060	Finnpiette F2 Fixed Volume 250 µl
4652070	Finnpiette F2 Fixed Volume 500 µl
4652080	Finnpiette F2 Fixed Volume 1000 µl
4652090	Finnpiette F2 Fixed Volume 2000 µl
4652100	Finnpiette F2 Fixed Volume 3000 µl
4652110	Finnpiette F2 Fixed Volume 5000 µl

Cat. No.	Finnpiette F2 Fixed Volume
4652000	Finnpiette F2 Fixed Volume 1 µl Micro
4652010	Finnpiette F2 Fixed Volume 5 µl Micro
4652020	Finnpiette F2 Fixed Volume 10 µl
4652130	Finnpiette F2 Fixed Volume 20 µl
4652030	Finnpiette F2 Fixed Volume 25 µl
4652040	Finnpiette F2 Fixed Volume 50 µl
4652050	Finnpiette F2 Fixed Volume 100 µl
4652140	Finnpiette F2 Fixed Volume 200 µl
4652060	Finnpiette F2 Fixed Volume 250 µl
4652070	Finnpiette F2 Fixed Volume 500 µl
4652080	Finnpiette F2 Fixed Volume 1000 µl
4652090	Finnpiette F2 Fixed Volume 2000 µl
4652100	Finnpiette F2 Fixed Volume 3000 µl
4652110	Finnpiette F2 Fixed Volume 5000 µl
4652120	Finnpiette F2 Fixed Volume 10000 µl

Cat. No.	Finnpiette F2 Multichannel
4662000	Finnpiette F2 8-channel 1-10 µl Micro
4662010	Finnpiette F2 8-channel 5-50 µl
4662020	Finnpiette F2 8-channel 10-100 µl
4662030	Finnpiette F2 8-channel 30-300 µl
4662040	Finnpiette F2 12-channel 1-10 µl Micro
4662050	Finnpiette F2 12-channel 5-50 µl
4662060	Finnpiette F2 12-channel 10-100 µl
4662070	Finnpiette F2 12-channel 30-300 µl
4662080	Finnpiette F2 16-channel 1-10 µl Micro
4662090	Finnpiette F2 16-channel 5-50 µl Micro

NOTES



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