Thermo Scientific Laboratory Products

Maximizing Productivity for Every Lab, Every Day

Part of Thermo Fisher Scientific

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.*

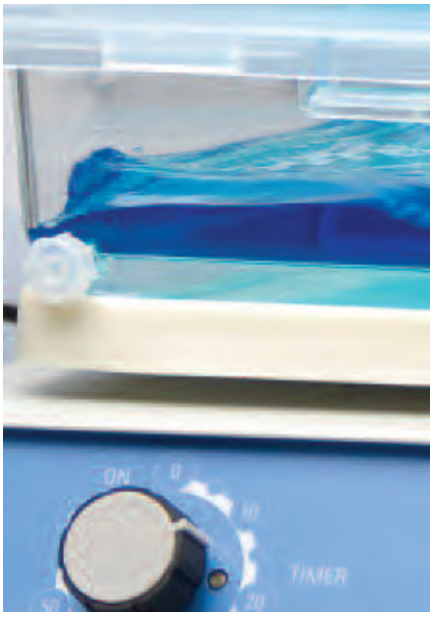
Here is a preview of some of the daily lab essentials featured in this catalog....

▶ Digital Water Baths

Thermo Scientific Precision baths feature the broadest range of bath sizes and models, digital set-it-and-forget-it accuracy, faster heat-up to temperature and easy calibration.

▶ Digital Stirring Hot Plates

Thermo Scientific Cimarec Series of digital stirrers, hot plates and stirring hot plates feature precise stirring control, exceptional safety and superior temperature performance for your routine protocols.



▶ 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 Thermolyne Small Benchtop Muffle Furnaces feature fast heatup and reduced energy consumption. They are ideally suited for ashing most types of organic and inorganic samples, heat treating small steel parts, performing ignition tests, conducting gravimetric analysis and for the determination of volatile and suspended solids.

Ovens

Thermo Scientific Precision Premium ovens feature a choice of mechanical or gravity convection with superior temperature uniformity. Advanced microprocessor controls and temperature stability make these ovens ideal for precise heating applications.

Incubators

Thermo Scientific Precision High-Performance Incubators feature mechanical or gravity convection with advanced microprocessor controls. These incubators are the best choice for incubation or gentle heating applications requiring excellent temperature distribution.

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BATHS

Thermo Scientific* Precision* General-Purpose Water Baths

Thermo Scientific Precision general-purpose water baths consist of eight models, including dual chamber and shallow form, with analog or digital control.

Easy-to-maintain, seamless-stainless steel interior chamber and epoxy powder-coated exterior are resistant to corrosion and chemical damage.

Rugged, high-performance baths maintain water temperature from ambient to 95°C or 99.9°C (depending on model) with ±0.2°C uniformity (at 37°C) and ±0.1°C control resolution (at 37°C) with stainless-steel gable cover.

- Choice of analog or digital temperature control
- Chamber capacities ranging from 1.5 to 43L
- Front-mounted controls simplify operation
- Overtemperature safety circuitry prevents thermal runaway
- Dual-chamber models have independent controls for operating at different temperatures

Analog Baths

- Easy-to-use analog controls and hydraulic thermostat are ideal for applications in which temperature setpoints seldom change
- Backup high-limit safety thermostat
- Illuminated power switch

Digital Baths

- Allow temperature setpoint with ±0.1°C precision at the push of a button
- Microprocessor control with bright three-digit LED temperature readout
- Automatic overtemperature protection

Includes:

- Gable cover: stainless steel for all except Models 181 and 281, which are polypropylene
- Diffuser shelf
- Spirit-filled thermometer (analog baths only)
- Rubber duck

Warranty: One year, parts and labor

Certifications: UL listed

Specifications	
Temperature Control Resolution	±0.1°C†
Temperature Uniformity	±0.2°C†
Temperature Range	Ambient to 95°C or 99°C
Chamber	Stainless steel
Cabinet	Epoxy powder-coated stainless steel

† With stainless-steel gable cover.

Cat. No.	Model	Max. Operating Temperature†	Capacity‡	Interior L x W x D	Exterior L x W x H	Shipping Weight	Electrical Reqts./ Power Consumption
Analog Control, Thermometer Temperature Display							
2823	180 Shallow Chamber	95.0°C	1.5L (0.4 gal.)	15.2 × 29.2 × 5.1cm (6 × 11.5 × 2in.)	22.3 × 35.6 × 17.1cm (8.9 × 14 × 6.7in.)	5.4kg (12 lb.)	120V 50/60Hz/225w
2824	180 Shallow Chamber	95.0°C	1.5L (0.4 gal.)	15.2 × 29.2 × 5.1cm (6 × 11.5 × 2in.)	22.3 × 35.6 × 17.1cm (8.9 × 14 × 6.7in.)	5.4kg (12 lb.)	230V 50/60Hz/225w
2827	181	99.9°C	2.5L (0.70 gal.)	15.2 × 12.7 × 16.2cm (6 × 5 × 6in.)	27.1 × 20.3 × 24.8cm (9.75 × 8 × 9.7in.)	5.4kg (12 lb.)	120V 50/60Hz/225w
2828	181	99.9°C	2.5L (0.70 gal.)	15.2 × 12.7 × 16.2cm (6 × 5 × 6in.)	27.1 × 20.3 × 24.8cm (9.75 × 8 × 9.7in.)	5.4kg (12 lb.)	230V 50/60Hz/225w
2831	182	99.9°C	5.5L (1.5 gal.)	29.2 × 15.2 × 15.2cm (11.5 × 6 × 6in.)	41 × 20.3 × 24.8cm (16.2 × 8 × 9.75in.)	7.3kg (16 lb.)	120V 50/60Hz/300w
2832	182	99.9°C	5.5L (1.5 gal.)	29.2 × 15.2 × 15.2cm (11.5 × 6 × 6in.)	41 × 20.3 × 24.8cm (16.2 × 8 × 9.75in.)	7.3kg (16 lb.)	230V 50/60Hz/300w
2835	183	99.9°C	12L (3.2 gal.)	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	41 × 37.5 × 24.8cm (16.2 × 14.75 × 9.75in.)	9.1kg (20 lb.)	120V 50/60Hz/400w
2836	183	99.9°C	12L (3.2 gal.)	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	41 × 37.5 × 24.8cm (16.2 × 14.75 × 9.75in.)	9.1kg (20 lb.)	230V 50/60Hz/400w
2851	188 Dual Chamber	99.9°C	12L (3.2 gal.)††	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	41 × 73.7 × 24.8cm (16.1 × 29 × 9.75in.)	18.1kg (40 lb.)	120V 50/60Hz/800w
2852	188 Dual Chamber	99.9°C	12L (3.2 gal.)††	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	41 × 73.7 × 24.8cm (16.1 × 29 × 9.75in.)	18.1kg (40 lb.)	230V 50/60Hz/800w
2843	185	99.9°C	18L (4.9 gal.)	49.5 × 29.2 × 15.2cm (19.5 × 11.5 × 6in.)	60.7 × 34.9 × 24.8cm (23.9 × 13.75 × 9.75in.)	13.6kg (30 lb.)	120V 50/60Hz/600w
2844	185	99.9°C	18L (4.9 gal.)	49.5 × 29.2 × 15.2cm (19.5 × 11.5 × 6in.)	60.7 × 34.9 × 24.8cm (23.9 × 13.75 × 9.75in.)	13.6kg (30 lb.)	230V 50/60Hz/600w

Cat. No.	Model	Max. Operating Temperature†	Capacity‡	Interior L x W x D	Exterior L x W x H	Shipping Weight	Electrical Reqts./ Power Consumption
2839	184	99.9°C	19.5L (5.2 gal.)	35.6 × 30.5 × 20.3cm (14 × 12 × 8in.)	49.9 × 40 × 24.8cm (19.7 × 15.75 × 9.75in.)	11.3kg (25 lb.)	120V 50/60Hz/600w
2840	184	99.9°C	19.5L (5.2 gal.)	35.6 × 30.5 × 20.3cm (14 × 12 × 8in.)	49.9 × 40 × 24.8cm (19.7 × 15.75 × 9.75in.)	11.3kg (25 lb.)	230V 50/60Hz/600w
2847	186	99.9°C	43L (11.4 gal.)	40.6 × 71.1 × 16.5cm (16 × 28 × 6.5in.)	55 × 80 × 24.8cm (21.6 × 31.5 × 9.75in.)	25.4kg (56 lb.)	120V 50/60Hz/1200w
2848	186	99.9°C	43L (11.4 gal.)	40.6 × 71.1 × 16.5cm (16 × 28 × 6.5in.)	55 × 80 × 24.8cm (21.6 × 31.5 × 9.75in.)	25.4kg (56 lb.)	230V 50/60Hz/1200w
Digital Control, Digital Temperature Display							
2825	280 Shallow Chamber	95°C	1.5L (0.4 gal.)	15.2 × 29.2 × 5.1cm (6 × 11.5 × 2in.)	20.3 × 35.6 × 17.1cm (8 × 14 × 6.7in.)	5.4kg (12 lb.)	120V 50/60Hz/225w
2826	280 Shallow Chamber	95°C	1.5L (0.4 gal.)	15.2 × 29.2 × 5.1cm (6 × 11.5 × 2in.)	20.3 × 35.6 × 17.1cm (8 × 14 × 6.7in.)	5.4kg (12 lb.)	230V 50/60Hz/225w
2829	281	99.9°C	2.5L (0.70 gal.)	15.2 × 12.7 × 16.2cm (6 × 5 × 6in.)	24.8 × 20.3 × 24.8cm (9.75 × 8 × 9.7in.)	5.4kg (12 lb.)	120V 50/60Hz/225w
2830	281	99.9°C	2.5L (0.7 gal.)	15.2 × 12.7 × 16.2cm (6 × 5 × 6in.)	24.8 × 20.3 × 24.8cm (9.75 × 8 × 9.7in.)	5.4kg (12 lb.)	230V 50/60Hz/225w
2833	282	99.9°C	5.5L (1.5 gal.)	29.2 × 15.2 × 15.2cm (11.5 × 6 × 6in.)	38.7 × 20.3 × 24.8cm (15.25 × 8 × 9.75in.)	7.3kg (16 lb.)	120V 50/60Hz/300w
2834	282	99.9°C	5.5L (1.5 gal.)	29.2 × 15.2 × 15.2cm (11.5 × 6 × 6in.)	38.7 × 20.3 × 24.8cm (15.25 × 8 × 9.75in.)	7.3kg (16 lb.)	230V 50/60Hz/300w
2837	283	99.9°C	12L (3.2 gal.)	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	38.7 × 37.5 × 24.8cm (15.25 × 14.75 × 9.75in.)	9.1kg (20 lb.)	120V 50/60Hz/400w
2838	283	99.9°C	12L (3.2 gal.)	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	38.7 × 37.5 × 24.8cm (15.25 × 14.75 × 9.75in.)	9.1kg (20 lb.)	230V 50/60Hz/400w
2853	288 Dual Chamber	99.9°C	12L (3.2 gal.)††	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	38.7 × 73.7 × 24.8cm (15.2 × 29 × 9.75in.)	18.1kg (40 lb.)	120V 50/60Hz/800w
2854	288 Dual Chamber	99.9°C	12L (3.2 gal.)††	29.2 × 31.7 × 15.2cm (11.5 × 12.5 × 6in.)	38.7 × 73.7 × 24.8cm (15.2 × 29 × 9.75in.)	18.1kg (40 lb.)	230V 50/60Hz/800w
2845	285	99.9°C	18L (4.9 gal.)	49.5 × 29.2 × 15.2cm (19.5 × 11.5 × 6in.)	58.4 × 34.9 × 24.8cm (23.9 × 13.75 × 9.75in.)	13.6kg (30 lb.)	120V 50/60Hz/600w
2846	285	99.9°C	18L (4.9 gal.)	49.5 × 29.2 × 15.2cm (19.5 × 11.5 × 6in.)	58.4 × 34.9 × 24.8cm (23.9 × 13.75 × 9.75in.)	13.6kg (30 lb.)	230V 50/60Hz/600w
2841	284	99.9°C	19.5L (5.2 gal.)	35.6 × 30.5 × 20.3cm (14 × 12 × 8in.)	47.6 × 40 × 24.8cm (18.75 × 15.75 × 9.75in.)	11.3kg (25 lb.)	120V 50/60Hz/600w
2842	284	99.9°C	19.5L (5.2 gal.)	35.6 × 30.5 × 20.3cm (14 × 12 × 8in.)	47.6 × 40 × 24.8cm (18.75 × 15.75 × 9.75in.)	11.3kg (25 lb.)	230V 50/60Hz/600w
2849	286	99.9°C	43L (11.4 gal.)	40.6 × 71.1 × 16.5cm (16 × 28 × 6.5in.)	52.7 × 80 × 24.8cm (20.7 × 31.5 × 9.75in.)	25.4kg (56 lb.)	120V 50/60Hz/1200w
2850	286	99.9°C	43L (11.4 gal.)	40.6 × 71.1 × 16.5cm (16 × 28 × 6.5in.)	52.7 × 80 × 24.8cm (20.7 × 31.5 × 9.75in.)	25.4kg (56 lb.)	230V 50/60Hz/1200w

† With gable cover in place. Maximum temperature with chamber uncovered is approximately 65°C. ‡ Chamber capacity measured with bath filled to 1in. (2.5cm) from top. †† Each chamber.

Thermo Scientific* Gable Covers for Precision* Baths

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

Cat. No.	For Use with
3161572	2.5L Precision General Purpose Water Bath Models 181, 281
3166202	1.5L and 5.5L Precision General Purpose Water Bath Models 180, 280, 182, 282
3166203	12L Precision General Purpose Water Bath Models 183, 283, 188, 288
3166206	19.5L Precision General Purpose Water Bath Models 184, 284
3166217	8L Precision General Purpose Water Baths Models 185, 285
3166218	43L Precision General Purpose Water Bath Models 186, 286

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 × 8.75 × 6.25in. (24.8 × 22.2 × 15.9cm)
- Holds 80 x 50mm or 30 x 90mm Petri dishes

Test Tube Rack

- Measures 10 × 8.5 × 5.5in. (25.4 × 21.6 × 14cm)
- Openings are 1in. (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* Glass Thermometers for Precision* Water Baths

These glass thermometers are 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
3175998	0° to 105°C	165mm (6.5in.)	Models 180 and 280 General-Purpose Water Baths
3166220	0° to 100°C	305mm (12in.)	Models 181/281 through 188/288; 260/253/265/270 circulating baths; 25/50/Dubnoff/Shallow Form baths

Thermo Scientific* Concentric Ring Cover for Precision* General-Purpose Water Baths

Thermo Scientific Precision Concentric Ring Cover converts the Model 184 or 284 bath for use as a steaming bath.

- Stainless steel
- Five openings (3 small, 2 large) accommodate glassware ranging in diameter from 2 to 10cm (0.8 to 4in.) in 2.5cm (1in.) increments
- Openings enlarge as rings are removed

Cat. No.	Description
3161593	Concentric Ring Cover

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						
18050AQ	2L (0.5 gal.)	±0.2°C at 37°C	13 × 15 × 15cm (5.3 × 5.9 × 6in.)	25 × 27 × 19cm (9.9 × 10.8 × 7.6in.)	3.3kg (7 lb.)	120V 50/60Hz
18050A-1CEQ	2L (0.5 gal.)	±0.2°C at 37°C	13 × 15 × 15cm (5.3 × 5.9 × 6in.)	25 × 27 × 19cm (9.9 × 10.8 × 7.6in.)	3.3kg (7 lb.)	230V 50/60Hz
18020AQ	2L (0.5 gal.) Shallow Chamber	±0.5°C at 37°C	15 × 30 × 6cm (5.9 × 11.8 × 2.5in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.5in.)	4kg (9 lb.)	120V 50/60Hz
18020A-1CEQ	2L (0.5 gal.) Shallow Chamber	±0.5°C at 37°C	15 × 30 × 6cm (5.9 × 11.8 × 2.5in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.5in.)	4kg (9 lb.)	230V 50/60Hz
18000AQ	5L (1.3 gal.)	±0.2°C at 37°C	15 × 30 × 15cm (6 × 11.8 × 6in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.6in.)	4.5kg (10 lb.)	120V 50/60Hz
18000A-1CEQ	5L (1.3 gal.)	±0.2°C at 37°C	15 × 30 × 15cm (6 × 11.8 × 6in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.6in.)	4.5kg (10 lb.)	230V 50/60Hz
18800AQ	5/10L (1.3/2.6 gal.)	±0.2°C at 37°C	30 × 15 × 15cm/30 × 33 × 15cm (11.8 × 5.9 × 6in./11.8 × 12.9 × 6in.)	42 × 62 × 23cm (16.4 × 24.2 × 8.9in.)	11.1kg (24.5 lb.)	120V 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 × 6in./11.8 × 12.9 × 6in.)	42 × 62 × 23cm (16.4 × 24.2 × 8.9in.)	11.1kg (24.5 lb.)	230V 50/60Hz
18005AQ	10L (2.6 gal.)	±0.2°C at 37°C	33 × 30 × 15cm (12.9 × 11.8 × 6in.)	42 × 39 × 23cm (16.4 × 15.4 × 8.9in.)	7.5kg (16.5 lb.)	120V 50/60Hz
18005A-1CEQ	10L (2.6 gal.)	±0.2°C at 37°C	33 × 30 × 15cm (12.9 × 11.8 × 6in.)	42 × 39 × 23cm (16.4 × 15.4 × 8.9in.)	7.5kg (16.5 lb.)	230V 50/60Hz
18100AQ	20L (5.3 gal.)	±0.2°C at 37°C	30 × 50 × 15cm (11.8 × 19.8 × 6in.)	42 × 62 × 23cm (16.4 × 24.2 × 8.9in.)	10.1kg (22.3 lb.)	120V 50/60Hz
18100A-1CEQ	20L (5.3 gal.)	±0.2°C at 37°C	30 × 50 × 15cm (11.8 × 19.8 × 6in.)	42× 62 × 23cm (16.4 × 24.2 × 8.9in.)	10.1kg (22.3 lb.)	230V 50/60Hz
18900AQ	28L (7.4 gal.)	±0.2°C at 37°C	30 × 50 × 20cm (11.7 × 19.7 × 8in.)	42 × 62 × 28cm (16.4 × 24.4 × 10.9in.)	12kg (26 lb.)	120V 50/60Hz
18900A-1CEQ	28L (7.4 gal.)	±0.2°C at 37°C	30 × 50 × 20cm (11.7 × 19.7 × 8in.)	42 × 62 × 28cm (16.4 × 24.4 × 10.9in.)	12kg (26 lb.)	230V 50/60Hz
Digital Control						
18052AQ	2L (0.5 gal.)	±0.24°C at 37°C	13 × 15 × 15cm (5.3 × 5.9 × 6in.)	25 × 27 × 19cm (9.9 × 10.8 × 7.6in.)	3.3kg (7 lb.)	120V 50/60Hz

Thermo Scientific Laboratory Products

Cat. No.	Capacity	Temperature Uniformity	Interior L x W x D	Exterior L x W x H	Shipping Weight	Electrical Requirements
18052A-1CEQ	2L (0.5 gal.)	±0.24°C at 37°C	13 × 15 × 15cm (5.3 × 5.9 × 6in.)	25 × 27 × 19cm (9.9 × 10.8 × 7.6in.)	3.3kg (7 lb.)	230V 50/60Hz
18022AQ	2L (0.5 gal.) Shallow Chamber	±0.5°C at 37°C	15 × 30 × 6cm (5.9 × 11.8 × 2.5in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.5in.)	4kg (9 lb.)	120V 50/60Hz
18022A-1CEQ	2L (0.5 gal.) Shallow Chamber	±0.5°C at 37°C	15 × 30 × 6cm (5.9 × 11.8 × 2.5in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.5in.)	4kg (9 lb.)	230V 50/60Hz
18002AQ	5L (1.3 gal.)	±0.24°C at 37°C	15 × 30 × 15cm (6 × 11.8 × 6in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.6in.)	4.5kg (10 lb.)	120V 50/60Hz
18002A-1CEQ	5L (1.3 gal.)	±0.24°C at 37°C	15 × 30 × 15cm (6 × 11.8 × 6in.)	27 × 37 × 19cm (10.5 × 14.5 × 7.6in.)	4.5kg (10 lb.)	230V 50/60Hz
18802AQ	5/10L (1.3/2.6 gal.)	±0.24°C at 37°C	30 × 15 × 15cm/30 × 33 × 15cm (11.8 × 5.9 × 6in./11.8 × 12.9 × 6in.)	42 × 62 × 23cm (16.4 × 24.2 × 8.9in.)	11.1kg (24.5 lb.)	120V 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 × 6in./11.8 × 12.9 × 6in.)	42 × 62 × 23cm (16.4 × 24.2 × 8.9in.)	11.1kg (24.5 lb.)	230V 50/60Hz
18007AQ	10L (2.6 gal.)	±0.24°C at 37°C	33 × 30 × 15cm (12.9 × 11.8 × 6in.)	42 × 39 × 23cm (16.4 × 15.4 × 8.9in.)	7.5kg (16.5 lb.)	120V 50/60Hz
18007A-1CEQ	10L (2.6 gal.)	±0.24°C at 37°C	33 × 30 × 15cm (12.9 × 11.8 × 6in.)	42 × 39 × 23cm (16.4 × 15.4 × 8.9in.)	7.5kg (16.5 lb.)	230V 50/60Hz
18102AQ	20L (5.3 gal.)	±0.24°C at 37°C	30 × 50 × 15cm (11.8 × 19.8 × 6in.)	42 × 62 × 23cm (16.4 × 24.4 × 8.9in.)	10.1kg (22.3 lb.)	120V 50/60Hz
18102A-1CEQ	20L (5.3 gal.)	±0.24°C at 37°C	30 × 50 × 15cm (11.8 × 19.8 × 6in.)	42 × 62 × 23cm (16.4 × 24.4 × 8.9in.)	10.1kg (22.3 lb.)	230V 50/60Hz
18902AQ	28L (7.4 gal.)	±0.24°C at 37°C	30 × 50 × 20cm (11.7× 19.7 × 8in.)	42 × 62 × 28cm (16.4 × 24.4 × 10.9in.)	12kg (26 lb.)	120V 50/60Hz
18902A-1CEQ	28L (7.4 gal.)	±0.24°C at 37°C	30 × 50 × 20cm (11.7× 19.7 × 8in.)	42 × 62 × 28cm (16.4 × 24.4 × 10.9in.)	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 ±0.05°C uniformity at 37°C and control resolution of ±0.05°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 listed

Specifications	
Temperature Range	Ambient + 5°C to 99.9°C†
Temperature Control Resolution	±0.05°C
Temperature Uniformity	±0.5°C
Control	Microprocessor
Display	Digital LED
Chamber	Stainless steel
Cabinet	Expoxy 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
2864	260	19L (5.1 gal.)	30.5 × 38.1 × 19cm (12 × 15 × 7.5in.)	35.6 × 62.2 × 24.1cm (14 × 24.5 × 9.5in.)	20.4kg (45 lb.)	120V 50/60Hz, 8.3A
2865	260	19L (5.1 gal.)	30.5 × 38.1 × 19cm (12 × 15 × 7.5in.)	35.6× 62.2 × 24.1cm (14 × 24.5 × 9.5in.)	20.4kg (45 lb.)	230V 50/60Hz, 4.3A
2866	265	34.5L (9.1 gal.)	30.5 × 68.6 × 19cm (12 × 27 × 7.5in.)	35.6 × 92.7 × 24.1cm (14 × 36.5 × 9.5in.)	30.8 kg (68 lb.)	120V 50/60Hz, 12.9A
2867	265	34.5L (9.1 gal.)	30.5 × 68.6 × 19cm (12 × 27 × 7.5in.)	35.6 × 92.7 × 24.1cm (14 × 36.5 × 9.5in.)	30.8 kg (68 lb.)	230V 50/60Hz, 6.7A
2868	270	89L (23.8 gal.)	46 × 91 × 24cm (18 × 36 × 9.5in.)	51 × 114 × 30cm (20 × 45 × 12in.)	38.5kg (85 lb.)	120V 50/60Hz, 12.9A
2869	270	89L (23.8 gal.)	46 × 91 × 24cm (18 × 36 × 9.5in.)	51 × 114 × 30cm (20 × 45 × 12in.)	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 × 8.75 × 6.25in. (24.8 × 22.2 × 15.9cm)
- Holds 80 x 50mm or 30 x 90mm Petri dishes

Test Tube Rack
- Measures 10 × 8.5 × 5.5in. (25.4 × 21.6 × 14cm)
- Openings are 1in. (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) 0.25in. 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 (12in.)	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

Thermo Scientific* Precision* Digital Coliform Water Baths

Thermo Scientific Precision Digital Coliform Water Baths are designed specifically for fecal coliform determination.

Baths feature factory-preset temperatures for easy use, even by untrained operators.

- Temperature controller provides ±0.05°C uniformity and ±0.05°C control resolution with stainless-steel gable cover
- Microprocessor control with digital LED display
- Water pump gently directs water flow around bath perimeter for nonturbulent agitation
- Overtemperature protection capability
- Rugged stainless-steel chamber with easy to clean epoxy powder-coated exterior

Includes: Stainless-steel gable cover, diffuser shelf and duck

Warranty: One year, parts and labor

Certifications: UL listed

Specifications	
Temperature Range	35° to 45.5°C†
Temperature Presets	35°C, 41.5°C, 44.5°C, 45.5°C†
Temperature Control Resolution	±0.05°C
Temperature Uniformity	±0.05°C
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
2860	251	17.5L (4.8 gal.)	35.6 × 30.5 × 20.3cm (14 × 12 × 8in.)	47 × 39.4 × 24.1cm (18.5 × 15.5 × 9.5in.)	15.8kg (35 lb.)	115V 50/60Hz
2861	251	17.5L (4.8 gal.)	35.6 × 30.5 × 20.3cm (14 × 12 × 8in.)	47 × 39.4 × 24.1cm (18.5 × 15.5 × 9.5in.)	15.8kg (35 lb.)	230V 50/60Hz
2862	253	34.5L (9.1 gal.)	30.5 × 68.6 × 19cm (12 × 27 × 7.5in.)	35.6 × 91.4 × 24.1cm (14 × 36 × 9.5in.)	27.2kg (60 lb.)	115V 50/60Hz
2863	253	34.5L (9.1 gal.)	30.5 × 68.6 × 19cm (12 × 27 × 7.5in.)	35.6 × 91.4 × 24.1cm (14 × 36 × 9.5in.)	27.2kg (60 lb.)	230V 50/60Hz

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 × 8.75 × 6.25in. (24.8 × 22.2 × 15.9cm)
- Holds 80 x 50mm or 30 x 90mm Petri dishes

Test Tube Rack

- Measures 10 × 8.5 × 5.5in. (25.4 × 21.6 × 14cm)
- Openings are 1in. (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) 0.25in. 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 (12in.)	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
3166219	17.5L Small Coliform Water Bath Model 251

Thermo Scientific* Lindberg/Blue M* Refrigerated Circulating Baths

Thermo Scientific advanced circulating water baths offer a combination of contemporary cabinet design, advanced microprocessor control and a range of accessories to suit a variety of laboratory or process applications.

High-strength cabinet construction with 304 stainless-steel interior tanks withstand the most critical applications in demanding laboratory environments. The refrigerated water bath is comprised of two independent units: a bath chamber and a refrigeration system module with identical dimensions.

- Microprocessor with RTD probe provides simple, accurate and repeatable temperature control while optimizing control parameters during operation
- Digital temperature display, simultaneously reads setpoint and water temperature
- Recessed control module protects against dirt and moisture
- Single-stage, centrifugal pump with independent supply/return ports for maximum circulation
- Reversible stainless-steel rack allows for optional reduction of working depth by 2in. (5cm)

Adjustable High-Limit Control

- Prevents critical process overtemperature conditions at any point over the bath operating range
- Protects bath and its load
- Interrupts heat and flashes visual warning
- Automatically resets when temperature returns to normal
- Fixed overtemperature safety, factory set 105°C, shuts off bath power; push-button manual reset

Construction

- Integrated industrial-strength pump for internal circulation maintains precise temperature uniformity throughout the liquid medium
- Rounded corners for better water circulation, improved uniformity and easier cleaning
- With built-in drain with ON/OFF valve
- Moisture-proof blanketed fiberglass insulation surrounding water chamber improves temperature stability and energy efficiency
- 304 stainless-steel construction resists chemicals, simplifies cleaning
- Long-life heating elements for quick response to controller
- Protective nonskid rubber feet protect the lab bench
- Attractive front panel bezel for easy cleaning
- Mounting clip for immersion glass thermometer (thermometer sold separately)

Refrigeration System

- Allows accurate control at temperatures near or below ambient conditions
- Quiet-running, hermetically sealed refrigeration system
- High volume heat removal capacity rated at 3000 BTU/hr. at 27°C (nominal)
- Ideal for use with 60%/40% ethylene glycol/water mixture to prevent icing at temperatures below 10°C
- Independent ON/OFF switch—system can be switched OFF for operation above ambient temperatures

Includes: Two 10ft. (8m) power cords with plugs; independent power cords for bath and refrigeration system (chiller). Two 5ft. hoses with worm gear clamps are included for connection of bath to chiller.

Warranty: One year, parts; 90 days, labor

Certifications: UL, cUL

Specifications	
Capacity	26.5L (7.0 gal.)
Temperature Range	0°C to +100°C
Temperature Uniformity	±0.1°C
Heatup Time	100 min.
Heat Removal	3000 BTU/hr. at 27°C (nominal)
Cooling Capacity	1095w
Reservoir L x W x D	45.7 × 30.5 × 19.1cm (18 × 12 × 7.5in.)
Exterior L x W x H	73.7 × 35.6 × 31.75cm (29 × 14 × 12.5in.)
Power Consumption	2535w (including cooling)
Shipping Weight	73kg (160 lb.)

Cat. No.	Heatup Time	Electrical Requirements
RWB3220A-1	100 min.	120V 60Hz, 21.2A
RWB3220CY-1	100 min.	240V 50Hz, 10.6A
RWB3220NY-1	100 min.	220V 50Hz, 10.6A

Thermo Scientific* Lindberg/Blue M* General-Purpose Circulating Water Baths

Thermo Scientific Lindberg/Blue M Circulating Baths combine a contemporary cabinet design with advanced microprocessor control.

High-strength cabinet construction with 304 stainless-steel interior tanks withstand the most critical applications in demanding laboratory environments. A range of accessories are available to suit a variety of laboratory or process applications.

- Microprocessor with RTD probe provides simple, accurate and repeatable temperature control while optimizing control parameters during operation
- Digital temperature display simultaneously reads setpoint and water temperature
- Recessed control module protects against dirt and moisture
- Single-stage centrifugal pump with independent supply/return ports for maximum circulation
- Reversible stainless-steel rack allows for optional reduction of working depth by 2in. (5cm)

Adjustable High-Limit Control

- Prevents critical process overtemperature conditions at any point over the operating range
- Protects bath and load
- Interrupts heat and flashes visual warning
- Automatically resets when temperature returns to normal
- Fixed overtemperature safety, factory set 105°C, shuts off bath power; push–button manual reset

Construction

- Integrated industrial-strength pump for internal circulation maintains precise temperature uniformity throughout the liquid medium
- Rounded corners for better water circulation, improved uniformity and easier cleaning
- Built-in drain with ON/OFF valve
- Moisture-proof blanketed fiberglass insulation surrounds water chamber—improves temperature stability and energy efficiency
- 304 stainless-steel construction resists chemicals, simplifies cleaning
- Long-life heating elements for quick response to controller
- Nonskid rubber feet protect the lab bench
- Attractive front panel bezel for easy cleaning

Includes: Reversible stainless-steel rack, temperature probe, 10ft. (3m) power cord with plug, and mounting clip for immersion glass thermometer (thermometer sold separately).

Warranty: One year, parts; 90 days, labor

Certifications: UL, cUL

Specifications	
Control	Microprocessor
Temperature Range	5°C above ambient to 100°C
Temperature Control Resolution	0.1°C
Temperature Uniformity	±0.1°C
Display	Digital
Pump	Centrifugal

Cat. No.	Capacity	Heatup Time	Interior L x W x D	Exterior L x W x H	Power Consumption	Electrical Requirements	Shipping Weight
WB1110A-1	11L (2.9 gal.)	78 min.	30 × 19 × 19cm (12 × 7.5 × 7.5in.)	46 × 36 × 32cm (18 × 14 × 12.5in.)	840w (2729 BTU/hr.)	120V 50/60Hz, 7A	17kg (39 lb.)
WB1110C-1	11L (2.8 gal.)	78 min.	30 × 19 × 19cm (12 × 7.5 × 7.5in.)	46 × 36 × 32cm (18 × 14 × 12.5in.)	840w (2729 BTU/hr.)	208/240V 50/60Hz, 3.5A	17kg (39 lb.)
WB1120A-1	26.5L (7 gal.)	100 min.	46 × 30 × 19cm (18 × 12 × 7.5in.)	74 × 36 × 32cm (29 × 14 × 12.5in.)	1440w (4776 BTU/hr.)	120V 50/60Hz, 12A	23kg (50 lb.)
WB1120C-1	26.5L (7 gal.)	100 min.	46 × 30 × 19cm (18 × 12 × 7.5in.)	74 × 36 × 32cm (29 × 14 × 12.5in.)	1440w (4776 BTU/hr.)	208/240V 50/60Hz, 6A	23kg (50 lb.)
WB1130A-1	56L (14.8 gal.)	132 min.	51 × 46 × 24cm (20 × 18 × 9.5in.)	76 × 51 × 37cm (30 × 20 × 14.5in.)	2490w (8188 BTU/hr.)	120V 50/60Hz, 21A	36kg (79 lb.)
WB1130C-1	56L (14.8 gal.)	132 min.	51 × 46 × 24cm (20 × 18 × 9.5in.)	76 × 51 × 37cm (30 × 20 × 14.5in.)	2490w (8188 BTU/hr.)	208/240V 50/60Hz, 10.5A	36kg (79 lb.)
WB1140A-1	100.7L (26.6 gal.)	234 min.	91 × 46 × 24cm (36 × 18 × 9.5in.)	117 × 51 × 37cm (46 × 20 × 14.5in.)	2490w (8188 BTU/hr.)	120V 50/60Hz, 21A	48kg (105 lb.)
WB1140C-1	100.7L (26.6 gal.)	234 min.	91 × 46 × 24cm (36 × 18 × 9.5in.)	117 × 51 × 37cm (46 × 20 × 14.5in.)	2490w (8188 BTU/hr.)	208/240V 50/60Hz, 10.5A	48kg (105 lb.)

Thermo Scientific* Gable Covers for Lindberg/Blue M* Baths

Thermo Scientific bath covers prevent cross-contamination by diverting condensation to sides for return to bath medium.

- Reduce moisture loss and water accumulation on the bench
- Stainless steel or semi-transparent polycarbonate
- Can be attached to side of bath
- With handle

Cat. No.	For Base Bath Model(s)	Type
118107	WB1110	Polycarbonate
118108	WB1120	Polycarbonate
118109	WB1130	Polycarbonate
118110	WB1140	Polycarbonate
38576G01	WB1110	Stainless steel
38576G02	WB1120	Stainless steel
38576G03	WB1130	Stainless steel
38576G04	WB1140	Stainless steel

Thermo Scientific* Flat Stainless-Steel Bath Covers forLindberg/Blue M* Baths

Thermo Scientific flat stainless-steel covers minimize heat loss and maintain bath temperature until ready for next application.

- Protect the medium when bath is not in use
- Covers include handles

Cat. No.	For Base Bath Model
118081	WB1110
118082	WB1120
118083	WB1130
118084	WB1140

Thermo Scientific* Concentric Ring Covers for Lindberg/Blue M* Multi-Purpose Circulating Baths

Thermo Scientific 2-, 6- or 8-ring concentric-ring covers are for use with Lindberg Blue/M baths.

Cat. No	Description	For Base Bath Model
118091	2 rings	WB1110
118092	6 rings	WB1120, RWB3220
118093	8 rings	WB1130
118094	8 rings	WB1140

Thermo Scientific* Water Level Regulator Kit for Lindberg/Blue M* Baths

The Thermo Scientific Water Level Regulator Kit is for use with Lindberg/Blue M water baths.

- Low-water safety cut-off turns bath off if level falls below setpoint
- Adjustable electric float switch maintains level at preset depth setpoint

Cat. No.	For Base Bath Model
WB1110WLFC-1	WB1110, WB1120, WB1130, WB1140, RWB3220, RWB3220

Thermo Scientific* Glass Thermometer for Lindberg/Blue M* Shaking Circulating Baths

This glass thermometer is for use with Thermo Scientific SWB1122 and RSWB3222 Lindberg/Blue M baths.

- Temperature range: -10°C to +110°C
- With 1°C graduations

Cat. No.	Description
C01C-6	33cm (13in.) long

Thermo Scientific* Lindberg/Blue M* Shaker Baths

Thermo Scientific Lindberg/Blue M shaking water baths are two baths in one for operation with or without the shaker function.

Designed to meet industrial research, environmental, biotech and general laboratory applications which require close temperature control with a reciprocating motion. Choose from heated only or heated and refrigerated models.

Microprocessor Controller
- With RTD probe for simple, accurate and repeatable operation
- Digital temperature display, simultaneously reads setpoint and water temperatures
- Recessed control module protects against dirt and moisture
- Long-life, low-watt density heating elements for quick response to controller

Dual Independent Overtemperature Safety System
- Adjustable high-limit control prevents overtemperature conditions, protecting both bath and load; interrupts heat, flashes visual warning and automatically resets when temperature returns to normal
- Fixed overtemperature safety (factory-set 105°C) shuts off bath power; push-button manual reset

Shaker Control
- Independent ON/OFF switch for shaker operation
- Reciprocating action, adjustable over a range up to 200 strokes/min.
- Speed control dial with illuminated power switch for variable motion adjustment
- Adjustable stroke from 0.875 to 1.5in.

Cabinet and Tank Construction
- Integrated industrial-strength pump for internal circulation; maintains precise temperature uniformity throughout the medium
- Single-stage, centrifugal pump with independent supply/return ports for maximum circulation
- Rounded corners for better water circulation, improved uniformity and easier cleaning; includes a built-in drain
- Corrosion-resistant 304 stainless-steel interior tank withstands demanding laboratory environments
- Independent shaker carriage, welded 304 stainless steel on high impact nylon rollers; removable
- Insulated chamber walls improve temperature stability and energy efficiency
- Protective nonskid rubber feet to protect the lab bench
- Mounting clip for immersion glass thermometer (thermometer sold separately)

Heated Baths
- Temperature range from 5°C above ambient to +100°C
- Temperature uniformity ±0.1°C

Refrigerated Baths
- Two independent units: bath chamber and refrigeration system module with identical dimensions
- Temperature range 0° to +100°C; uniformity ±0.1°C
- Refrigeration system allows accurate control at temperatures near or below ambient conditions
- Quiet-running, hermetically sealed refrigeration system
- High-volume heat removal capacity rated at 3000BTU/hr. at 27°C (nominal)
- Independent ON/OFF switch for refrigeration system; system can be switched OFF for operation at above ambient temperatures

Includes: 10ft. power cord with plug. Refrigerated model includes independent power cords for bath and refrigeration system (chiller). Two 5ft. hoses with worm gear clamps are provided for customer connection of bath to chiller unit.

Warranty: One year, parts; 90 days, labor

Certifications: UL, cUL

Specifications	
Temperature Uniformity	±0.1°C
Capacity	26.5L (7 gal.)
Shaking Motion	Reciprocating
Shaking Speed	Up to 200 strokes/min. (adjustable 0.875 to 1.5in.)
Interior L x W x D†	45.7 × 30.5 × 19.1cm (18 × 12 × 7.5in.)
Exterior L x W x H	73.7 × 35.6 × 31.75cm (29 × 14 × 12.5in.)
Chamber	Stainless steel
Cabinet	Stainless steel

†Reversible rack will reduce depth 5cm (2in.).

Cat. No.	Model	Temperature Range	Power Consumption	Electrical Requirements	Shipping Weight

SWB1122A-1	Heated	5°C above ambient to +100°C	1460w	120V 50/60Hz, 12.2A	28kg (60 lb.)
SWB1122C-1	Heated	5°C above ambient to +100°C	1460w	208/240V 50/60Hz, 6.1A	28kg (60 lb.)
RSWB3222A-1	Refrigerated	0°C to +100°C	2575w	120V 60Hz, 21.5A	73kg (160 lb.)
RSWB3222CY-1	Refrigerated	0°C to +100°C	2575w	240V 50Hz, 10.7A	73kg (160 lb.)
RSWB3222NY-1	Refrigerated	0°C to +100°C	2575w	220V 50Hz, 10.7A	73kg (160 lb.)

Thermo Scientific* Flask Holders for Lindberg/Blue M* Shaking Circulating Baths

Thermo Scientific stainless-steel flask holders accommodate a range of flasks.

Cat. No.	Holds	For Use with
M20-C1	200 x 10mL flasks	Tray No: 118077
M20-C2	35 x 25mL flasks	Tray No: 118077
M20-C3	22 x 50mL flasks	Tray No: 118077
M20-C4	11 x 125mL flasks	Tray No: 118078
M20-C5	8 x 250mL flasks	Tray No: 118078
M20-C6	6 x 500mL flasks	Tray No: 118078
M20-C7	3 x 1000mL flasks	Tray No: 118078

Thermo Scientific* Sample Racks for Lindberg/Blue M* Shaking Circulating Baths

Thermo Scientific Sample Racks are for use with SWB1122 and RSWB3222 Lindberg/Blue M Circulating Water Baths.

Cat. No.	Description	Holds
118077	Flask tray	35 x 25mL or 23 x 50mL flasks
118078	Flask tray	11 x 125mL, 8 x 250mL, 6 x 500mL, 3 x 1000mL flasks
118465	Plastic test tube rack	90 x 13mm tubes
118466	Plastic test tube rack	24 x 95mm tubes

Thermo Scientific* Water Level Regulator Kit for Lindberg/Blue M* Baths

The Thermo Scientific Water Level Regulator Kit is for use with Lindberg/Blue M water baths.

- Low-water safety cut-off turns bath off if level falls below setpoint
- Adjustable electric float switch maintains level at preset depth setpoint

Cat. No.	For Base Bath Model
WB1110WLFC-1	WB1110, WB1120, WB1130, WB1140, RWB3220, RWB3220

Thermo Scientific* Covers for Lindberg/Blue M* Baths

Thermo Scientific bath covers prevent cross-contamination by diverting condensation to sides for return to bath medium.

- Reduce moisture loss and water accumulation on the bench
- Stainless steel or semi-transparent polycarbonate
- Can be attached to side of bath
- With handle

Cat. No.	Type	For Base Bath Model(s)
118111	Polycarbonate	SWB1122, RSWB3222
38576G05	Stainless Steel	SWB1122, RSWB3222

Thermo Scientific* Glass Thermometer for Lindberg/Blue M* Shaking Circulating Baths

This glass thermometer is for use with Thermo Scientific SWB1122 and RSWB3222 Lindberg/Blue M baths.

- Temperature range: -10°C to +110°C
- With 1°C graduations

Cat. No.	Description
C01C-6	33cm (13in.) long

Thermo Scientific* Flat Stainless-Steel Bath Covers for Lindberg/Blue M* Baths

Thermo Scientific flat stainless-steel covers minimize heat loss and maintain bath temperature until ready for next application.

- Protect the medium when bath is not in use
- Covers include handles

Cat. No.	For Base Bath Model
118085	SWB1122, RSWB3222

Thermo Scientific* Precision* Reciprocating Shaker Baths

Thermo Scientific Precision Reciprocating Shaker Baths are designed for life science and QA/QC applications.

Push-button input of desired temperature and shaking speed help to make the baths easy to use, while meeting the stringent standards for laboratory testing.

- Microprocessor control with digital LED display and shaker control
- Set temperature (in increments of 0.1°C) and oscillation speed via control-panel touchpad for entry of temperature and shaking speed
- Shaking frequency: 30 to 200 oscillations/min.
- Stroke length adjustable at 0.5, 1.0 or 1.5in. (13, 25 or 38mm)
- Microprocessor-controlled proportional integral temperature control and solid-state sensing probe provide excellent temperature sensitivity
- Overtemperature protection capability
- Automatic motor shutdown capability
- With adjustable high-limit thermostat and indicator light
- Rugged stainless-steel interior with easy to clean epoxy powder-coated exterior

Includes: Stainless-steel chamber and duck

Warranty: One year, parts and labor

Compliance: Meet ASTM* Method E 715 Class IIA standards

Certifications: UL listed

Specifications	
Temperature Range	Ambient to +99.9°C†
Temperature Control Resolution	±0.05°C
Display	Digital LED
Shaking Agitation Rate	30 to 200 oscillations/min.
Shaking Motion	Reciprocating
Stroke Length	1.3 to 3.8cm (0.5 to 1.5in.)
Chamber	Stainless steel
Cabinet	Epoxy-polyester-coated, stainless-steel
† With cover.	

Cat. No.	Model	Capacity†	Temperature Uniformity	Interior L x W x D	Exterior L x W x H	Shipping Weight	Electrical Requirements
2870	25	14.5L (3.9 gal.)	±0.05°C at 37°C	30 × 38 × 19cm (12 × 15 × 7.5in.)	36 × 62 × 24cm (14 × 24.5 × 9.5in.)	22.2kg (48 lb.)	120V 50/60Hz, 1000W, 8.8A
2871	25	14.5L (3.9 gal.)	±0.05°C at 37°C	30 × 38 × 19cm (12 × 15 × 7.5in.)	36 × 62 × 24cm (14 × 24.5 × 9.5in.)	22.2kg (48 lb.)	230V 50/60Hz, 1000W, 4.4A
2872	50	26.5L (7.1 gal.)	±0.10°C at 37°C	30 × 69 × 19cm (12 × 27 × 7.5in.)	36 × 93 × 24cm (14 × 36.5 × 9.5in.)	27.2kg (62 lb.)	120V 50/60Hz, 1550W, 12.9A
2873	50	26.5L (7.1 gal.)	±0.10°C at 37°C	30 × 69 × 19cm (12 × 27 × 7.5in.)	36 × 93 × 24cm (14 × 36.5 × 9.5in.)	27.2kg (62 lb.)	230V 50/60Hz, 1550W, 6.5A
† Filled to 3.5in. (89mm) from top of bath.							

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) 0.25in. Tygon* tubing, nylon fittings, clamps and adjustable mounting bracket

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

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 × 8.75 × 6.25in. (24.8 × 22.2 × 15.9cm)
- Holds 80 x 50mm or 30 x 90mm Petri dishes

Test Tube Rack

- Measures 10 × 8.5 × 5.5in. (25.4 × 21.6 × 14cm)
- Openings are 1in. (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* 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 (12in.)	Models 181/281 through 188/288; 260/253/265/270 circulating baths; 25/50/Dubnoff/Shallow Form baths

Thermo Scientific* Test Tube Tray for Precision* Baths

Thermo Scientific Test Tube Tray is for use with Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

Measures 5 × 10.2in. (12.7 × 25.9cm).

Cat. No.	Holds No. of Tubes
3161597	10 × 13-25mm test tubes

Thermo Scientific* Flask Trays for Precision* Baths

Thermo Scientific Flask Trays are for use in Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

Measures 12.7 × 25.9cm (5 × 10.2in.).

Cat. No.	Holds No. of Flasks
3161599	18 x 25mL flasks
3166228	10 x 50mL flasks

Thermo Scientific* Test Tube Clips for Precision* Baths

Thermo Scientific Test Tube Clips are for use in Precision Reciprocal, Dubnoff and Shallow-Form Shaking Water Baths.

- Stainless steel
- Hold 13mm to 25mm tubes
- Each requires one fastener

Cat. No.	Description	Holds No. of Tubes
3166216	Test tube clip	13mm to 25mm tubes
3166189	Clip fastener	N/A

Thermo Scientific* Flask Clips and Fasteners for Precision* Baths

Thermo Scientific Flask Clips and Fasteners are for use in Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

- Secure various size flasks to bath platform
- Stainless steel
- Each requires one fastener

Cat. No.	Description	Capacity
3166227	Flask Clip	20 x 25mL (Model 25), 48 x 25mL (Model 50) Flasks
3166198	Flask Clip	15 x 50mL (Model 25), 36 x 50mL (Model 50) Flasks
3166221	Flask Clip	9 x 125mL (Model 25), 24 x 125mL (Model 50) Flasks
3166566	Flask Clip	6 x 250mL (Model 25), 14 x 250mL (Model 50) Flasks
3166199	Flask Clip	4 x 500mL (Model 25), 12 x 500mL (Model 50) Flasks

3166200	Flask Clip	2 x 1000mL (Model 25), 5 x 1000mL (Model 50) Flasks
3166189	Clip fastener	NA

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
3166565	Precision Model 260 circulating and Model 25 shaking baths

Thermo Scientific* Precision* Shallow-Form Reciprocal Shaking Baths

Thermo Scientific Precision shallow-form water baths offer push-button convenience for entry of temperature and shaking speed.

Baths provide excellent performance and reliability for a variety of laboratory applications.

- Microprocessor temperature and shaker control with digital LED display
- Adjustable shaking speed from 30 to 200 oscillations per minute
- Push-button convenience for entry of temperature and shaking speed
- Overtemperature protection capability
- Automatic motor shutdown capability
- One-piece, easy-to-remove tray for easy use and maintenance
- Corrosion-resistant, stainless-steel interior and exterior

Ordering Information: Optional accessories include flowmeter and gassing hoods.

Includes:
- Stainless-steel gable cover
- 230V model includes European-style 50Hz power cord; standard 220V 60Hz power cord (3176836) available separately
- Duck

Warranty: One year, parts and labor

Compliance: ASTM* Method E 715 Class IIA standards

Certifications: UL listed

Specifications	
Temperature Range	Ambient to +99.9°C
Temperature Control Resolution‡	±0.05°C
Temperature Uniformity‡	±0.05°C at 37°C
Capacity†	14.5L (3.9 gal.)
Control	Microprocessor
Shaking Motion	Reciprocating
Oscillations/Min.	30 to 200
Stroke Length	1.3 to 3.8cm (0.5 to 1.5in.)
Interior L x W x D	30.5 × 38.1 × 19cm (12 × 15 × 7.5in.)
Removable Tray L x W x H	29.2 × 27.9 × 8.9cm (11.5 × 11 × 3.5in.)
Exterior L x W x H	35.6 × 62.2 × 24.1cm (14 × 24.5 × 9.5in.)
Net Weight	24.9kg (55 lb.)

† Filled 80mm (3.5in.) from top of chamber. ‡ With gable cover.

Cat. No.	Electrical Requirements
2874	120V 50/60Hz, 8.3A
2875	230V 50/60Hz, 4.3A

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) 0.25in. 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 (12in.)	Models 181/281 through 188/288; 260/253/265/270 circulating baths; 25/50/Dubnoff/Shallow Form baths

Thermo Scientific* Oxygen/Nitrogen/CO_2 Flowmeter for Precision* Baths

Thermo Scientific Precision Oxygen/Nitrogen/CO_2 Flowmeter is for use with Dubnoff and Shallow-Form Shaking Water Baths.

- Independent controls regulate flow of gas to sample environment
- Permits flowrates from 0 to 10CFH (0 to 4719 cc/min.)

Cat. No.	Description	For Use With
3166181	Oxygen/Nitrogen/CO_2 Flowmeter	Precision Dubnoff and Shallow Form Shaking Baths

Thermo Scientific* Gassing Hoods for Precision* Baths

Thermo Scientific Gassing Hoods are for use with Precision Dubnoff and Shallow-Form Shaking Water Baths.

- Permit control over the atmosphere surrounding the sample
- Improve temperature uniformity and reduce energy consumption
- Polished stainless steel with plastic gas fitting
- Each bath will accommodate 1 large hood or 2 small hoods

Cat. No.	Size
3162639	Small: 142 × 290mm (5.6 × 11.4in.)
3162640	Large: 284 × 290mm (11.2 × 11.4in.)

Thermo Scientific* Microcentrifuge Test Tube Racks for Precision* Baths

Thermo Scientific Precision Microcentrifuge Test Tube Rack is for use with Dubnoff or Shallow-Form Shaking Water Baths.

- Requires Clip Fastener
- Measures 127 × 101 × 39mm (5 × 4 × 1.5in.)

Cat. No.	Holds No. of Tubes
3166184	63 × 0.5mL tubes
3166185	30 × 1.5mL tubes

Thermo Scientific* Test Tube Tray for Precision* Baths

Thermo Scientific Test Tube Tray is for use with Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

Measures 5 × 10.2in. (12.7 × 25.9cm).

Cat. No.	Holds No. of Tubes
3161597	10 × 13-25mm test tubes

Thermo Scientific* Flask Trays for Precision* Baths

Thermo Scientific Flask Trays are for use in Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

Measures 12.7 × 25.9cm (5 × 10.2in.).

Cat. No.	Holds No. of Flasks
3161599	18 x 25mL flasks
3166228	10 x 50mL flasks

Thermo Scientific* Test Tube Clips for Precision* Baths

Thermo Scientific Test Tube Clips are for use in Precision Reciprocal, Dubnoff and Shallow-Form Shaking Water Baths.

- Stainless steel
- Hold 13mm to 25mm tubes
- Each requires one fastener

Cat. No.	Description	Holds No. of Tubes
3166216	Test tube clip	13mm to 25mm tubes
3166189	Clip fastener	N/A

Thermo Scientific* Flask Clips and Fasteners for Precision* Baths

Thermo Scientific Flask Clips and Fasteners are for use in Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

- Secure various size flasks to bath platform
- Stainless steel
- Each requires one fastener

Cat. No.	Description	Capacity
3166227	Flask Clip	20 x 25mL (Model 25), 48 x 25mL (Model 50) Flasks
3166198	Flask Clip	15 x 50mL (Model 25), 36 x 50mL (Model 50) Flasks
3166221	Flask Clip	9 x 125mL (Model 25), 24 x 125mL (Model 50) Flasks
3166566	Flask Clip	6 x 250mL (Model 25), 14 x 250mL (Model 50) Flasks
3166199	Flask Clip	4 x 500mL (Model 25), 12 x 500mL (Model 50) Flasks
3166200	Flask Clip	2 x 1000mL (Model 25), 5 x 1000mL (Model 50) Flasks
3166189	Clip fastener	NA

Thermo Scientific* High-Wall Tray for Precision* Baths

Thermo Scientific High-Wall Tray is for use with Precision Shallow-Form, Dubnoff and Shaking Bath Model 25.

Measures 286 × 318 × 191mm (11.25 × 12.5 × 7.5in.)

Cat. No.	For Use with
3164716	Precision Shallow-Form, Dubnoff and Shaking Bath Model 25

Thermo Scientific* Gable Cover for Precision* Baths

Gable cover ensures temperatures are maintained in Thermo Scientific Precision water baths.

Cat. No.	For Use with
3166238	14.5L Precision Shallow Form Reciprocal Shaking Water Bath Models 2874, 2875

Thermo Scientific* Precision* Dubnoff Reciprocal Shaking Baths

Thermo Scientific Precision Dubnoff Baths are designed specifically for applications that require samples to be incubated in a controlled atmosphere.

Provides excellent performance and reliability for a variety of laboratory applications.

- Equipped with one large and two small gassing hoods
- Microprocessor temperature and shaker control with digital LED display
- Adjustable shaking speed from 30 to 200 (OPM) oscillations/min.
- Push-button convenience for entry of temperature and shaking speed
- Overtemperature protection capability
- Automatic motor shutdown capability
- One-piece, easy-to-remove tray for easy use and maintenance

Ordering Information: Optional $O_2/N_2/CO_2$ flowmeter available

Includes:
- One large and two small gassing hoods
- Stainless-steel gable cover
- Duck

Warranty: One year, parts and labor

Compliance: ASTM* Method E 715 Class IIA standards

Certifications: UL listed.

Specifications	
Capacity†	14.5L (3.9 gal.)
Temperature Range	Ambient to 99.9°C
Temperature Control Resolution‡	±0.05°C
Temperature Uniformity‡	±0.05°C at 37°C
Control	Microprocessor
Shaking Motion	Reciprocating
Oscillations/Min.	30 to 200
Stroke Length	1.3 to 3.8cm (0.5 to 1.5in.)
Interior L x W x D	30.5 × 38.1 × 19cm (12 × 15 × 7.5in.)
Removable Tray L x W x H	29.2 × 27.9 × 16.5cm (11.5 × 11 × 6.5in.)
Exterior L x W x H	35.6 × 62.2 × 24.1cm (14 × 24.5 × 9.5in.)
BTU Output	3415
Power Consumption	1000w
Net Weight	24.9kg (55 lb.)

† Filled 80mm (3.5in.) from top of chamber. ‡ With gable cover.

Cat. No.	Electrical Requirements
2876	120V 50/60Hz, 8.2A
2877	230V 50/60Hz, 4.3A

Thermo Scientific* Oxygen/Nitrogen/CO_2 Flowmeter for Precision* Baths

Thermo Scientific Precision Oxygen/Nitrogen/CO_2 Flowmeter is for use with Dubnoff and Shallow-Form Shaking Water Baths.

- Independent controls regulate flow of gas to sample environment
- Permits flowrates from 0 to 10CFH (0 to 4719 cc/min.)

Cat. No.	Description	For Use With
3166181	Oxygen/Nitrogen/CO_2 Flowmeter	Precision Dubnoff and Shallow Form Shaking Baths

Thermo Scientific Laboratory Products

Thermo Scientific* Gassing Hoods for Precision* Baths

Thermo Scientific Gassing Hoods are for use with Precision Dubnoff and Shallow-Form Shaking Water Baths.

- Permit control over the atmosphere surrounding the sample
- Improve temperature uniformity and reduce energy consumption
- Polished stainless steel with plastic gas fitting
- Each bath will accommodate 1 large hood or 2 small hoods

Cat. No.	Size
3162639	Small: 142 × 290mm (5.6 × 11.4in.)
3162640	Large: 284 × 290mm (11.2 × 11.4in.)

Thermo Scientific* Microcentrifuge Test Tube Racks for Precision* Baths

Thermo Scientific Precision Microcentrifuge Test Tube Rack is for use with Dubnoff or Shallow-Form Shaking Water Baths.

- Requires Clip Fastener
- Measures 127 × 101 × 39mm (5 × 4 × 1.5in.)

Cat. No.	Holds No. of Tubes
3166184	63 × 0.5mL tubes
3166185	30 × 1.5mL tubes

Thermo Scientific* Test Tube Tray for Precision* Baths

Thermo Scientific Test Tube Tray is for use with Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

Measures 5 × 10.2in. (12.7 × 25.9cm).

Cat. No.	Holds No. of Tubes
3161597	10 × 13-25mm test tubes

Thermo Scientific* Flask Trays for Precision* Baths

Thermo Scientific Flask Trays are for use in Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

Measures 12.7 × 25.9cm (5 × 10.2in.).

Cat. No.	Holds No. of Flasks
3161599	18 x 25mL flasks
3166228	10 x 50mL flasks

Thermo Scientific* Test Tube Clips for Precision* Baths

Thermo Scientific Test Tube Clips are for use in Precision Reciprocal, Dubnoff and Shallow-Form Shaking Water Baths.

- Stainless steel
- Hold 13mm to 25mm tubes
- Each requires one fastener

Cat. No.	Description	Holds No. of Tubes
3166216	Test tube clip	13mm to 25mm tubes
3166189	Clip fastener	N/A

Thermo Scientific* Flask Clips and Fasteners for Precision* Baths

Thermo Scientific Flask Clips and Fasteners are for use in Precision Reciprocal, Dubnoff, and Shallow-Form Shaking Water Baths.

- Secure various size flasks to bath platform
- Stainless steel
- Each requires one fastener

Cat. No.	Description	Capacity
3166227	Flask Clip	20 x 25mL (Model 25), 48 x 25mL (Model 50) Flasks
3166198	Flask Clip	15 x 50mL (Model 25), 36 x 50mL (Model 50) Flasks
3166221	Flask Clip	9 x 125mL (Model 25), 24 x 125mL (Model 50) Flasks
3166566	Flask Clip	6 x 250mL (Model 25), 14 x 250mL (Model 50) Flasks
3166199	Flask Clip	4 x 500mL (Model 25), 12 x 500mL (Model 50) Flasks
3166200	Flask Clip	2 x 1000mL (Model 25), 5 x 1000mL (Model 50) Flasks
3166189	Clip fastener	NA

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 (12in.)	Models 181/281 through 188/288; 260/253/265/270 circulating baths; 25/50/Dubnoff/Shallow Form baths

Thermo Scientific* High-Wall Tray for Precision* Baths

Thermo Scientific High-Wall Tray is for use with Precision Shallow-Form, Dubnoff and Shaking Bath Model 25.

Measures 286 × 318 × 191mm (11.25 × 12.5 × 7.5in.)

Cat. No.	For Use with
3164716	Precision Shallow-Form, Dubnoff and Shaking Bath Model 25

Thermo Scientific* Gable Cover for Precision* Baths

Gable cover ensures temperatures are maintained in Thermo Scientific Precision water baths.

Cat. No.	For Use with
3166210	Precision Dubnoff Shaking Water Bath Models 2876, 2877

Thermo Scientific* Precision* Concentric Ring Electrical Steaming Baths

Thermo Scientific Precision Concentric Ring Electrical Steaming Baths are designed to gently warm samples, make concentrates, and melt solids such as agar.

Baths accommodate various sizes of glassware and evaporating dishes, including round-bottom flasks. Flange-formed stainless-steel rings nest smoothly and become progressively larger as each concentric ring is removed. Copper-clad immersion heaters provide bath temperatures up to 100°C.

- 4- and 8-hole models enlarge from 0.88in. (2.2cm) to maximum opening diameters of 5 and 6in. (12.7 and 15.2cm), respectively
- Copper-clad immersion heaters provide bath temperature up to 100°C
- Center ring cover is 1in.(2.5cm) in diameter
- Easy to operate with a four-position switch and three different heat settings
- Adjustable water level regulator maintains bath depth at the desired level
- Stainless-steel cabinets with flanged cabinet top for tabletop installations
- Rugged epoxy-coated, corrosion-resistant stand
- Accommodates most laboratory glassware

Ordering Information: Baths may also be flush-mounted in benchtop. Wiring of switch must be completed onsite.

Includes: Precision ring sets, constant water level device (with 0.5in. inlet for water supply), adjustable drain tube, and welded angle-iron support frame with hot-rolled steel legs, fasteners and lockwashers

Required Accessories: Hardwire installation by a qualified electrician and hook-up to a continuous water source

Warranty: One year, parts and labor

Specifications	
Maximum Temperature	100°C
Minimum Opening Dia. (with cover removed)	122mm (0.88in.)
Material	Stainless steel

Cat. No.	No. of Holes	Time to 100°C	Heater Settings (Low, Medium, High)	Minimum Opening Diameter (All Rings Removed)	Exterior L x W x H (Without Support)	Exterior L x W x H (With Support)	Electrical Requirements
2896	4-Hole	63 min.	275w, 550w, 1100w	4 at 125mm (5in.)	38 × 38 × 10.2cm (15 × 15 × 4in.)	38 × 38 × 33cm (15 × 15 × 13in.)	120V 50/60Hz, 9.2A
2897	4-Hole	63 min.	275w, 550w, 1100w	4 at 125mm (5in.)	38 × 38 × 10.2cm (15 × 15 × 4in.)	38 × 38 × 33cm (15 × 15 × 13in.)	230V 50/60Hz, 4.6A
2898	8-Hole	65 min.	500w, 1000w, 2000w	2 at 100mm (4in.); 4 at 125mm (5in.); 2 at 150mm (6in.)	39.4 × 73.7 × 11.4cm (15 × 29 × 4.5in.)	39.4 × 73.7 × 34.3cm (15.5 × 29 × 13.5in.)	120V 50/60Hz, 16.7A
2899	8-Hole	65 min.	500w, 1000w, 2000w	2 at 100mm (4in.); 4 at 125mm (5in.); 2 at 150mm (6in.)	39.4 × 73.7 × 11.4cm (15 × 29 × 4.5in.)	39.4 × 73.7 × 34.3cm (15.5 × 29 × 13.5in.)	230V 50/60Hz, 8.3A

Thermo Scientific* Ring Sets for Precision* Steaming Baths

Thermo Scientific Precision Ring Sets are for use with steaming baths.

- Stainless steel
- Nest smoothly and become progressively larger as rings are removed
- Three ring sizes available: 10 cm (4in.), 12.5cm (5in.), and 15cm (6in.)

Cat. No.	Diameter
3166186	10cm (4in.)
3166187	12.5cm (5in.)
3166215	15cm (6in.)

FURNACES

Thermo Scientific* Thermolyne* Small Benchtop Muffle Furnaces

Thermo Scientific Thermolyne Small Benchtop Muffle Furnaces feature fast heatup and reduced energy consumption.

The Thermo Scientific Thermolyne Small Benchtop Muffle Furnace is ideal for ashing most types of organic and inorganic samples, heat treating small steel parts, performing ignition tests, conducting gravimetric analysis and for the determination of volatile and suspended solids.

The Thermo Scientific Thermolyne Small Benchtop Muffle Furnace is available in two capacities and reaches a maximum temperature of 1100°C.

- Digital single setpoint temperature control to 1100°C
- Single display shows actual temperature or setpoint
- Ceramic fiber insulation permits faster heatup, reducing energy consumption
- Embedded heating element on top and both sides improves temperature uniformity
- Drop-down door doubles as a shelf for loading and unloading
- Door safety switch stops power to heating elements when door is opened
- Thermocouple break protection cuts power to heating elements, preventing a thermocouple failure runaway condition
- 0.95cm (0.38in.) dia. port in chamber rear for monitoring temperatures with independent measuring devices

Ordering Information: Accessory heating elements and thermocouples available separately.

Includes: Thermocouple, line cord and plug

Warranty: 12 months

Certifications: All units CSA approved; -33 units also CE marked

Specifications	
Temperature Range	100° to 1100°C

Cat. No.	Capacity	Temperature Stability (Uniformity)	Interior D x W x H	Exterior L x W x H	Electrical Requirements	Power Consumption	Shipping Weight
FB1315M	1.3L (0.04 cu. ft.)	±0.3°C at 1000°C (±7.8°C at 1000°C)	13 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	120V 50/60Hz	1060w	9kg (20 lb.)
FB1318M	1.3L (0.04 cu. ft.)	±0.3°C at 1000°C (±7.8°C at 1000°C)	13 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	208V 50/60Hz	1060w	9kg (20 lb.)
FB1310M	1.3L (0.04 cu. ft.)	±0.3°C at 1000°C (±7.8°C at 1000°C)	13 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	240V 50/60Hz	1060w	9kg (20 lb.)
FB1310M-33	1.3L (0.04 cu. ft.)	±0.3°C at 1000°C (±7.8°C at 1000°C)	13 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	240V 50/60Hz	1060w	9kg (20 lb.)
FB1415M	2.1L (0.07 cu. ft.)	±0.5°C at 1000°C (±5.0°C at 1000°C)	15.2 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	120V 50/60Hz	1450w	12.7kg (28 lb.)
FB1418M	2.1L (0.07 cu. ft.)	±0.5°C at 1000°C (±5.0°C at 1000°C)	15.2 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	208V 50/60Hz	1520w	12.7kg (28 lb.)
FB1410M	2.1L (0.07 cu. ft.)	±0.5°C at 1000°C (±5.0°C at 1000°C)	15.2 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	240V 50/60Hz	1520w	12.7kg (28 lb.)
FB1410M-33	2.1L (0.07 cu. ft.)	±0.5°C at 1000°C (±5.0°C at 1000°C)	15.2 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	240V 50/60Hz	1520w	12.7kg (28 lb.)

Thermo Scientific* Hearth Trays for Thermolyne* Small Benchtop Muffle Furnaces

For use with Thermo Scientific Thermolyne Small Benchtop Muffle Furnaces.

Cat. No.	For Use with
PH44X1	FB1300 furnace
PH48X1	FB1400 muffle furnace

Thermo Scientific* Thermolyne* Industrial Benchtop Muffle Furnaces

The rugged Thermo Scientific Thermolyne Benchtop Industrial Furnace is designed with multiple safety features and includes a choice of two temperature control options.

Thermo Scientific Thermolyne Benchtop Industrial Furnaces reach a 1200°C maximum temperature. Heavy-duty firebrick insulation surrounds the opening for added durability.

- Adjustable Alarm or Overtemperature Protection (OTP) setting can be used to protect the furnace or loaded chamber from excessive heat
- Thermocouple break protection cuts power to the heating elements, preventing a thermocouple failure runaway condition
- Counter-weighted door swings upward, directing heat away from operator
- Heavy-duty firebrick insulation surrounds chamber opening for added durability
- Four individual embedded elements in special refractory cement permit excellent heat distribution in the chamber
- Door safety switch protects operator by removing power to the heating elements upon opening the door
- Rear-mounted 0.38in. (0.95cm) diameter port for monitoring chamber temperatures with independent measuring devices
- LED display simultaneously shows both setpoint and actual furnace temperatures in either °C or °F (programmable models only)

Single-setpoint Controller (B1)

- Single ramp to setpoint and a dwell
- Single display shows actual temperature or setpoint

8-step Programmable Controller (C1)

- Ramps to vary heat-up rate and dwell cycles to hold temperature at set levels from 0.1 to 999.9 minutes
- "Holdback" feature "holds" program until furnace temperature heats up or cools down to preprogrammed parameters—program will never outrun furnace performance

Includes: Oven, Platinel* II thermocouple and a ceramic hearth plate to protect the bottom heating element.

Warranty: 12 months

Certifications: All units cUL, UL listed; -33 units also CE marked.

Notes: 120V models require fixed wiring and are not supplied with a power cord.

Specifications	
Temperature	100° to1200°C
Capacity	2.2L (0.08 cu. ft.)
Interior D x W x H	22.8 × 10.1 × 9.5cm (9 × 4 × 3.75in.)
Exterior L x W x H	45.7 × 27.9 × 41.9cm (18 × 11 × 16.5in.)
Shipping Weight	23.5kg (52 lb.)

Cat. No.	Control	Electrical Requirements	Amperage	Power Consumption
FD1535M	Digital single setpoint	120V 50/60Hz	18.6A	2230w
FD1530M	Digital single setpoint	240V 50/60Hz	9.3A	2230w
FD1545M	Digital programmable 1 program/8 segments	120V 50/60Hz	18.6A	2230w
FD1540M	Digital programmable 1 program/8 segments	240V 50/60Hz	9.3A	2230w
FD1530M-33	Digital single setpoint	240V 50/60Hz	6.5A	1560w
FD1540M-33	Digital programmable 1 program/8 segments	240V 50/60Hz	6.5A	1560w

Thermo Scientific* Hearth Trays for Thermolyne* Muffle Furnaces

For use with Thermo Scientific Thermolyne Premium Large Muffle Furnaces.

Cat. No.	D x W x H
PHX1	8.2 x 10.1 x 1.27cm (3.25 x 4 x 0.5in.)
PHX2	20.3 x 9.6 x 1.9cm (8 x 3.8 x 0.75in.)

Thermo Scientific* Thermolyne* Benchtop Muffle Furnaces

The Thermo Scientific Thermolyne Benchtop Muffle Furnace is ideal for general laboratory use, including gravimetric analysis, sintering, quantitative analysis and heat treating.

The Thermo Scientific Thermolyne Benchtop Muffle Furnace reaches a 1200°C maximum temperature and is available in two capacities for added flexibility. The built-in vent port removes contaminants and moisture to extend the life of the heating element and furnace.

- For added protection, the door safety switch stops power to heating elements when door opens
- Thermocouple break protection cuts power to heating elements, preventing a thermocouple failure runaway condition
- Two open coil heating elements on chamber sides assure fast heat-up with minimum temperature gradient
- Thermal-efficient ceramic insulation surrounds chamber for maximum energy efficiency
- 0.95cm (0.38in.) dia. port for monitoring chamber temperatures with independent measuring device at rear of chamber

F47900 Models
- 2L (0.07 cu. ft.) of heating area

F48000 Models
- 5.9L (0.20 cu. ft.) of heating area
- Includes ceramic shelf (SH480X1) that doubles furnace load capacity

A1 Controller
- Digital single setpoint control
- Single display shows actual temperature or setpoint

B1 Controller
- Digital single setpoint control with a single ramp to setpoint and a dwell
- Single display shows actual temperature or setpoint
- Furnaces with this control also use a mechanical Overtemperature Protection relay

C1 Controller
- Digital programmable control with one stored program of eight segments
- Furnaces with this control also use a mechanical Overtemperature Protection relay

D1 Controller
- Digital programmable control with four stored programs, 16 segments per program
- With RS-232 communications interface
- Furnaces with this control also use a mechanical Overtemperature Protection relay

Includes: Power cord

Warranty: 12 months

Certifications: CSA approved, CE marked as indicated.

Specifications	
Temperature Range	100° to 1200°C (212° to 2192°F)
Display	Digital, actual or setpoint

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Control	Electrical Requirements	Power Consumption	Shipping Weight
F47910-26	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	A1 - digital single setpoint	240V 50/60Hz	1000w	18.5kg (41 lb.)
F47910-33†	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	A1 - digital single setpoint	240V 50/60Hz	1000w	18.5kg (41 lb.)
F48010‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1 - digital single setpoint	240V 50/60Hz	1800w	27.2kg (60 lb.)
F48010-33†	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1 - digital single setpoint	240V 50/60Hz	1560w	27.2kg (60 lb.)
F48015-60‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1 - digital single setpoint	120V 50/60Hz	1800w	27.2kg (60 lb.)
F48018‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1 - digital single setpoint	208V 50/60Hz	1560w	27.2kg (60 lb.)
F47920‡	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	B1 - digital single setpoint with 1 ramp	120V 50/60Hz	1000w	18.5kg (41 lb.)
F47920-33†	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	B1 - digital single setpoint with 1 ramp	240V 50/60Hz	1000w	18.5kg (41 lb.)
F48020-33†	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1 - digital single setpoint with 1 ramp	240V 50/60Hz	1560w	27.2kg (60 lb.)
F48020‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1 - digital single setpoint with 1 ramp	240V 50/60Hz	1800w	27.2kg (60 lb.)
F47920-33-80†	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	C1 - programmable with 1 program, 8 segments	240V 50/60Hz	1000w	18.5kg (41 lb.)

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Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Control	Electrical Requirements	Power Consumption	Shipping Weight
F48025-60‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1 - digital single setpoint with 1 ramp	120V 50/60Hz	1800w	27.2kg (60 lb.)
F48020-33-80†	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1 - programmable with 1 program, 8 segments	240V 50/60Hz	1800w	27.2kg (60 lb.)
F48025-60-80‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1 - programmable with 1 program, 8 segments	120V 50/60Hz	1800w	27.2kg (60 lb.)
F48028-80	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1 - programmable with 1 program, 8 segments	208V 50/60Hz	1560w	27.2kg (60 lb.)
F47950‡	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	D1 - Programmable with 4 programs, 16 segments	240V 50/60Hz	1000w	18.5kg (41 lb.)
F47950-33†	2L (0.07 cu. ft.)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	D1 - Programmable with 4 programs, 16 segments	240V 50/60Hz	1000w	18.5kg (41 lb.)
F48050-33†	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1 - Programmable with 4 programs, 16 segments	240V 50/60Hz	1800w	27.2kg (60 lb.)
F48050‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1 - Programmable with 4 programs, 16 segments	240V 50/60Hz	1800w	27.2kg (60 lb.)
F48055-60‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1 - Programmable with 4 programs, 16 segments	120V 50/60Hz	1800w	27.2kg (60 lb.)
F48058‡	5.8L (0.2 cu. ft.)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1 - Programmable with 4 programs, 16 segments	208V 50/60Hz	1560w	27.2kg (60 lb.)
† CE marked. ‡ CSA approved.							

Thermo Scientific* Accessories for Thermolyne* Benchtop Muffle Furnaces

For use with Thermo Scientific Thermolyne Benchtop Muffle Furnaces.

Cat. No.	Description	For Use With
PH479X1	Hearth Tray, 15.2 x 14.3 x 0.95cm	F47900 muffle furnace
SH480X1	Ceramic Shelf, 17.4 x 17.3 x 1.2cm	F48000 muffle furnace
PH480X1	Hearth Tray, 25.4 x 19.3 x 0.95cm	F48000 muffle furnace
AY408X1A	Exhaust Tubing Kit	Atmosphere Controlled Ashing and Muffle Furnaces

Thermo Scientific* Thermolyne* Premium Large Muffle Furnaces

Thermo Scientific Thermolyne Premium Large Muffle Furnace features a robust design and a choice of four temperature controller models, making it perfect for industrial applications.

This furnace provides a spacious 14L (0.5 cu. ft.) capacity and reaches a maximum of 1200°C, making it ideal for ashing organic and inorganic samples and conducting gravimetric analysis.

- Four heating elements are located on the chamber top, bottom and sides for enhanced temperature uniformity
- Built-in vent port removes undesirable contaminants and moisture to extend the life of the element and unit
- Rear of the chamber incorporates a 0.95cm (0.38in.) dia. port for monitoring chamber temperatures with independent measuring devices
- Optional stainless-steel shelf doubles load capacity (maximum temperature of 900°C)
- Door safety switch stops power to heating elements when door opens
- Thermocouple break protection cuts power to the heating elements, preventing a thermocouple failure runaway condition
- Furnaces with B1, C1, and D1 control also use a mechanical overtemperature protection relay

Choice of Temperature Controllers

- Digital single setpoint control (A1): Single display shows actual temperature or setpoint
- Digital single setpoint control with single ramp to setpoint and a dwell (B1): Single display shows actual temperature or setpoint
- Digital programmable control with one stored program of eight segments (C1)
- Digital programmable control with four stored programs, 16 segments per program (D1): Controller includes RS-232 communications

Includes: Models F6010 and F6018 include a cord and plug set.

Required Accessories: All except Models F6010 and F6018 require a conduit connection.

Warranty: 12 months

Certifications: All units CSA approved; -33 units also CE marked.

Specifications	
Temperature Range	100° to 1200°C (212° to 2192°F)
Temperature Stability	±0.3°C at 1000°C
Temperature Uniformity	±2.2°C at 1000°C
Capacity	14L (0.5 cu.ft.)
Interior D x W x H	25 x 33 x 18cm (10 x 12.8 x 6.8in.)
Exterior L x W x H	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)
Shelf	Stainless steel
Shipping Weight	60.8kg (134 lb.)

Cat. No.	Control	Temperature Stability	Temperature Uniformity	Electrical Requirements	Amperage	Power Consumption
F6018	Digital single setpoint (A1)	±0.3°C at 1000°C	±2.2°C at 1000°C	208V 50/60Hz	11.2A	2325w
F6010	Digital single setpoint (A1)	±0.3°C at 1000°C	±2.2°C at 1000°C	240V 50/60Hz	12.9A	3095w
F6028C	Digital single setpoint with ramp and dwell (B1)	±1.5°C at 1000°C	±4.5°C at 1000°C	208V 50/60Hz	19.2A	4000w
F6020C	Digital single setpoint with ramp and dwell (B1)	±1.5°C at 1000°C	±4.5°C at 1000°C	240V 50/60Hz	18.3A	4400w
F6020C-33	Digital single setpoint with ramp and dwell (B1)	±1.5°C at 1000°C	±4.5°C at 1000°C	240V 50/60Hz	18.3A	4400w
F6028C-80	Digital programmable with 4 programs (C1)	±1.5°C at 1000°C	±4.5°C at 1000°C	208V 50/60Hz	19.2A	4000w
F6020C-80	Digital programmable with 4 programs (C1)	±1.5°C at 1000°C	±4.5°C at 1000°C	240V 50/60Hz	18.3A	4400w
F6020C-33-80	Digital programmable with 4 programs (C1)	±1.5°C at 1000°C	±4.5°C at 1000°C	240V 50/60Hz	18.3A	4400w
F6038CM	Digital programmable with 4 programs, 16 segments each (D1)	±1.5°C at 1000°C	±4.5°C at 1000°C	208V 50/60Hz	19.3A	4000w
F6030CM	Digital programmable with 4 programs, 16 segments each (D1)	±0.2°C at 1000°C	±2.2°C at 1000°C	240V 50/60Hz	18.3A	4400w
F6030CM-33	Digital programmable with 4 programs, 16 segments each (D1)	±1.5°C at 1000°C	±4.5°C at 1000°C	240V 50/60Hz	18.3A	4400w

Thermo Scientific* Accessories for Thermolyne* Premium Large Muffle Furnaces

For use with Thermo Scientific Thermolyne Premium Large Muffle Furnaces.

Thermo Scientific Laboratory Products

Cat. No.	Description
JSX16	Shelf Pegs
PH177X1	Hearth Tray, 22.9 x 27.3 x 1.9cm
PHX1	Hearth Tray, 8.2 x 10.1 x 1.27cm
SH408X1	Stainless-steel Shelf

Thermo Scientific* Thermolyne* Largest Tabletop Muffle Furnaces

The Thermo Scientific Thermolyne Largest Tabletop Muffle Furnace provides triple the usable working area with two supplied accessory refractory shelves.

Designed for safe operation, these furnaces are available in three temperature control models. They are ideal for annealing glass, determinations of volatiles, catalyst research and ashing organic and inorganic samples.

- Advanced LED digital-set/digital-display temperature controller is microprocessor-controlled
- LED display simultaneously shows both setpoint and actual furnace temperatures in °C or °F
- User-selectable overtemperature protection
- Open thermocouple protection
- Adjustable power output from 1 to 100%

Safety and Design Features

- Heating elements are on chamber top, bottom and sides for enhanced temperature uniformity
- Built-in vent port removes undesirable contaminants and moisture to extend the life of the element and unit
- Rear of chamber incorporates a 0.95cm (0.38in.) diameter port for monitoring chamber temperatures with independent measuring devices
- Critical electronic components and heating elements are protected by a 35A circuit breaker
- Door safety switch stops power to the heating elements when door opens

Choice of Temperature Controllers

- Furnaces that use B1, C1 or D1 control also use a mechanical Overtemperature Protection relay
- **B1**: Digital single setpoint control with a single ramp to setpoint and dwell; single display shows actual temperature or setpoint
- **C1**: Digital programmable control with one stored program of 8 segments
- **D1**: Digital programmable control with 4 stored programs, 16 segments per programl, and RS-232 communications interface

Applications: Annealing glass, determinations of volatiles, catalyst research and ashing organic and inorganic samples.

Includes: Two refractory shelves

Required Accessories: Electrical connection requires fixed wiring (no power cord).

Warranty: 12 months

Certifications: All units CSA approved; -33 units also CE marked.

Specifications	
Temperature Range	100° to 1093°C
Temperature Stability	±1.2°C at 1000°C
Temperature Uniformity	±3.45°C
Capacity	45L (1.6 cu. ft.)
Interior D x W x H	36 × 36 × 36cm (14 × 14 × 14in.)
Exterior L x W x H	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)
Shipping Weight	117.9kg (260 lb.)
Power Consumption	5500w

Cat. No.	Control	Electrical Requirements	Amperage
F30428C	Digital single setpoint w/ramp and dwell (B1)	208V 50/60Hz	26.4A
F30420C	Digital single setpoint w/ramp and dwell (B1)	240V 50/60Hz	22.9A
F30420C-33	Digital single setpoint w/ramp and dwell (B1)	240V 50/60Hz	22.9A
F30428C-80	Digital programmable w/1 program, 8 segments (C1)	208V 50/60Hz	26.4A
F30420C-80	Digital programmable w/1 program, 8 segments (C1)	240V 50/60Hz	22.9A
F30420C-33-80	Digital programmable w/1 program, 8 segments (C1)	240V 50/60Hz	22.9A
F30438CM	Digital programmable w/4 programs, 16 segments each (D1)	208V 50/60Hz	26.4A
F30430CM	Digital programmable w/4 programs, 16 segments each (D1)	208V 50/60Hz	22.9A
F30430CM-33	Digital programmable w/4 programs, 16 segments each (D1)	208V 50/60Hz	22.9A

Thermo Scientific* Accessories for Thermolyne* Largest Tabletop Muffle Furnaces

For use with Thermo Scientific Thermolyne Largest Tabletop Muffle Furnaces.

Cat. No.	Description	D x W x H
PH146X1	Hearth Tray	17.1 x 14.9 x 1.9cm (6.75 x 5.9 x 0.75in.)

Thermo Scientific Laboratory Products

Cat. No.	Description	D x W x H
SH412X1	Shelf	35.2 x 25.4 x 1.27cm (13.87 x 10 x 0.56in.)
AY408X1A	Exhaust Tubing Kit	----

Thermo Scientific* Thermolyne* Atmosphere Controlled Ashing Furnaces

Thermo Scientific Thermolyne Atmosphere Controlled Ashing Furnace is ideal for coal and coke ashing procedures.

The Thermo Scientific Thermolyne Atmosphere Controlled Ashing Furnace reaches 975°C with the standard stainless-steel manifold and 1093°C with the optional inconel manifold.

- Adjustable gas flowmeter/valve (0-80L/min.) on front for easy access when adjusting the airflow rate
- Stainless-steel manifold at rear chamber prewarms incoming gases, provides a maximum temperature gradient of only ±3°C at 750°C
- Chamber rear has a 0.95cm (0.38in.) dia. port for monitoring chamber temperatures with independent measuring devices
- With 0.64cm (0.25in.) I.D. or 0.96cm (0.375in.) O.D. hose barb (in chamber rear) for inert gas line

Type F6000

- With two dual-purpose stainless-steel trays and handle to accommodate 24 (30mL) porcelain crucibles or 38 (10mL) quartz crucibles

Type F6000-60

- Meets ASTM* D3174 specifications: 3 to 4 air exchanges per min.
- Heating rate of 8°C/min. to 500°C, 6°C/min. from 500° to 750°C
- Holds at 750°C for two hours, then turns off

Required Accessories: Electrical connection requires fixed wiring (power cord not provided).

Warranty: 12 months

Certifications: CSA certified, CE marked as indicated.

Specifications	
Max. Temperature	975°C
Holds	24 (30mL) porcelain or 38 (10mL) quartz crucibles

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Control	Electrical Requirements	Amperage	Power Consumption
F6020C-33-60†‡	14L (0.5 cu.ft.)	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital single setpoint w/ramp and dwell (B1)	240V	18.3A	4400w
F6028C-60†	14L (0.5 cu.ft.)	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital single setpoint w/ramp and dwell (B1)	208V	19.2A	4000w
F6020C-33-60-80†‡	14L (0.5 cu.ft.)	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital programmable w/1 program, 8 segments (C1)	240V	18.3A	4400w
F6028C-60-80	14L (0.5 cu.ft.)	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital programmable w/1 program, 8 segments (C1)	208V	19.2A	4000w
F6030CM-33-60†‡	14L (0.5 cu.ft.)	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital programmable w/4 programs, 16 segments each (D1)	240V	18.3A	4400w
F30420C-60-80†	45L (1.6 cu.ft.)	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5 x 21.5 x 29.5in.)	Digital programmable w/1 program, 8 segments (C1)	240V	22.9A	5500w
F30420-33-60-80‡	45L (1.6 cu.ft.)	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5 x 21.5 x 29.5in.)	Digital programmable w/1 program, 8 segments (C1)	240V	22.9A	5500w
F30428C-60-80†	45L (1.6 cu.ft.)	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5 x 21.5 x 29.5in.)	Digital programmable w/1 program, 8 segments (C1)	208V	23.4A	5500w
F30430CM-60†	45L (1.6 cu.ft.)	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5 x 21.5 x 29.5in.)	Digital programmable w/4 programs, 16 segments each (D1)	240V	22.9A	5500w
F30430CM-33-60†‡	45L (1.6 cu.ft.)	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5 x 21.5 x 29.5in.)	Digital programmable w/4 programs, 16 segments each (D1)	240V	22.9A	5500w
F30438CM-60†	45L (1.6 cu.ft.)	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5 x 21.5 x 29.5in.)	Digital programmable w/4 programs, 16 segments each (D1)	208V	23.4A	5500w

† CSA approved. ‡ CE marked.

Thermo Scientific* Accessories for Thermolyne* Atmosphere Controlled Ashing Furnaces

For use with Thermo Scientific Thermolyne Atmosphere Controlled Ashing Furnaces.

Cat. No.	Description	For Use with
TY408X2A	Crucible Trays	Atmosphere Controlled Ashing Furnace
SH408X1	Stainless-steel Shelf	F6000-60 Atmosphere Controlled Ashing Furnace; Premium large muffle furnaces
HN408X2A	Shelf Handle	Atmosphere Controlled Ashing Furnaces
SH304X1	Refractory Shelf for F30400-60	F30400-60 atmosphere controlled ashing furnaces

Thermo Scientific Laboratory Products

AY408X1	Inconel Manifold	F6000 furnace
AY408X1A	Exhaust Tubing Kit	Atmosphere Controlled Ashing and Muffle Furnaces
AY718X1	Inconel Manifold	F30400 furnace

Thermo Scientific* Lindberg/Blue M* Moldatherm* Box Furnaces

Thermo Scientific Lindberg/Blue M product line offers a versatile selection of chamber box furnaces suitable for a variety of industrial and laboratory applications.

Available in several popular chamber sizes to meet the most demanding laboratory applications, these furnaces include unique insulation and heating element composites to minimize outer surface temperatures while maintaining uniform heat distribution within the chamber.

Advanced engineering and specialized construction techniques include variable density insulation, double shell cabinets, long-life heating elements and vertical, horizontal side swing or swing down doors.

Microprocessor-based Control

- Selectable self-tuning feature sets best control parameters for the thermal process
- PID control (proportional, integral, derivative) prevents overshoot
- Main power ON/OFF switch on control panel
- Controlled heat-up rate eliminates thermal shock to materials
- Quick heat-up and cool-down rates
- Adjustable high-limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- Can be configured to display temperature in either °C or °F

Construction

- Unique double wall minimizes exterior surface temperatures for operator safety and energy efficiency
- Side-hinge door for convenient operation and full chamber access
- Long-life Type K thermocouple
- Air vent (1in. dia., top) and air inlet (0.375in. dia., rear) for inert atmosphere exchange; will experience some leakage at door
- Removable and replaceable Moldatherm hearth plate supports load and prevents damage due to spillage
- Energy efficient Moldatherm insulation with embedded heating elements
- Safety door switch to interrupt power to heating element when door is opened; protects heating element and minimizes exposure to end-user

Digital, Single-Setpoint Controller

- Single segment, single setpoint, one ramp to setpoint

Digital Single-Program, Multiple-Segment Programmable Controller

- Single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control

Ordering Information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace. Up to 30 units can be connected to one PC.

Includes: 10ft. power cord except 1.5 cu. ft. models which require customer-supplied power cord or hardwiring.

Warranty: 12 months

Certifications: UL

Specifications	
Temperature Range	100° to 1100°C
Display	LED: actual vs. setpoint (in °C or °F)

Cat. No.	Capacity	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Control	Electrical Requirements	Power Consumption	Shipping Weight
BF51748A	1.99L (0.07 cu. ft.)	20.3 × 10.2 × 10.2cm (4 × 8 × 4in.)	50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.)	Digital/OTP	120V 50/60Hz	1800w	25kg (55 lb.)
BF51748C	1.99L (0.07 cu. ft.)	20.3 × 10.2 × 10.2cm (4 × 8 × 4in.)	50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.)	Digital/OTP	208/240V 50/60Hz	1800w	25kg (55 lb.)
BF51848A	1.99L (0.07 cu. ft.)	20.3 × 10.2 × 10.2cm (4 × 8 × 4in.)	50.8 x 38.1 x 44.4cm (20x 15 x 17.5in.)	Multiple Seg/1 Prog/OTP	120V 50/60Hz	1800w	25kg (55 lb.)
BF51848C	1.99L (0.07 cu. ft.)	20.3 × 10.2 × 10.2cm (4 × 8 × 4in.)	50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.)	Multiple Seg/1 Prog/OTP	208/240V 50/60Hz	1800w	25kg (55 lb.)
BF51766A	5.3L (0.19 cu. ft.)	22.9 × 15.2 × 15.2cm (9 × 6 × 6in.)	53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.)	Digital/OTP	120V 50/60Hz	1800w	50kg (110 lb.)
BF51766C	5.3L (0.19 cu. ft.)	22.9 × 15.2 × 15.2cm (9 × 6 × 6in.)	53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.)	Digital/OTP	208/240V 50/60Hz	1800w	50kg (110 lb.)
BF51866A	5.3L (0.19 cu. ft.)	22.9 × 15.2 × 15.2cm (9 × 6 × 6in.)	53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.)	Multiple Seg/1 Prog/OTP	120V 50/60Hz	1800w	50kg (110 lb.)
BF51866C	5.3L (0.19 cu. ft.)	22.9 × 15.2 × 15.2cm (9 × 6 × 6in.)	53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.)	Multiple Seg/1 Prog/OTP	208/240V 50/60Hz	1800w	50kg (110 lb.)

Thermo Scientific Laboratory Products

Cat. No.	Capacity	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Control	Electrical Requirements	Power Consumption	Shipping Weight
BF51794C	18.4L (0.65 cu. ft.)	35.6 × 22.9 × 22.9cm (14 × 9 × 9in.)	65.4 x 53.3 x 66cm (25.75 x 21 x 26in..)	Digital/OTP	208/240V 50/60Hz	3500w	59kg (130 lb.)
BF51894C	18.4L (0.65 cu. ft.)	35.6 × 22.9 × 22.9cm (14 × 9 × 9in.)	65.4 x 53.3 x 66cm (25.75 x 21 x 26in.)	Multiple Seg/1 Prog/OTP	208/240V 50/60Hz	3500w	59kg (130 lb.)
BF51728C	42.5L (1.5 cu. ft.)	45.7 × 30.5 × 30.5cm (18 × 12 × 12in.)	76.2 x 60.9 x 71.1cm (30 x 24 x 28in.)	Digital/OTP	208/240V 50/60Hz	5600w	84kg (185 lb.)
BF51828C	42.5L (1.5 cu. ft.)	45.7 × 30.5 × 30.5cm (18 × 12 × 12in.)	76.2 x 60.9 x 71.1cm (30 x 24 x 28in.)	Multiple Seg/1 Prog/OTP	208/240V 50/60Hz	5600w	84kg (185 lb.)

Thermo Scientific* Lindberg/Blue M* LGO Box Furnaces

Thermo Scientific LGO Series Box Furnaces feature the latest technical advances in heating elements, insulation and temperature control, all integrated into a self-contained cabinet.

Furnaces feature patented LGO (light gauge overbend) heating elements and Moldatherm* insulation for efficient and economical transfer of heat to chamber, with low exterior temperatures.

- Variable heat-up rate eliminates thermal shock to materials with quick heat-up and cool-down rates
- Choice of side hinge or vertical lift door
- Air vent (1in. dia., top) and air inlet (0.375in. dia., rear) for inert atmosphere exchange (may experience some leakage at door)
- Self-tuning, digital instrumentation for precise temperature setpoint and display
- Platinel II* thermocouple for long-term stability
- 0.6 cu. ft. models feature vertical lift door; 2 cu. ft. models feature horizontal side swing door, hot side facing away from operator for protection

Microprocessor Control

- Microprocessor-based self-tuning PID control (proportional, integral, derivative) provides optimum thermal process, prevents overshoot
- Control panel designed for easy access and maintenance
- Main power ON/OFF switch on control panel
- Adjustable high-limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- Can be configured to display temperature in either °C or °F
- Safety door switch interrupts power to heating element when door is opened; protects heating elements and minimizes exposure to end-user
- Removable shelves for versatility
- Moldatherm* hearthplate supports load and prevents damage due to spillage

Digital, Single-Setpoint Controller

- Single segment, single setpoint, one ramp to setpoint

Digital Single-Program, Multiple-Segment Programmable Controller

- Single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control

Digital Multiple-Program, Multiple-Segment Programmable Controller

- Available on models with **P** designation
- Multiple programs and segments for ramp (up and down) and dwell (timed hold) temperature control

Overtemperature Control (OTC)

- Adjustable digital overtemperature control, available on selected models with **B** suffix designation
- Protects furnace and load in the event of primary control circuit failure
- Overrides main controller and shuts off power to furnace if high limit is reached
- Manual reset required for safety
- Operates via magnetic contacts through signal from independent thermocouple

Flowmeter Option (FM) (Inert Atmosphere Only)

- Available on selected models with **FM** designation
- Gas flowmeter, adjustable, located on front control panel
- Adjustable flowrate, range 1.0 to 10.0 cu. ft./hr. standard
- Suitable for inert gas or airflow to chamber
- Allows fresh air exchange for ashing applications
- Not suitable for combustible or volatile gases

Ordering Information: Required power cord and hardwiring not included. Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC.

Includes: One two-part shelf (0.6 cu. ft. models have one shelf position at center position; 2.0 cu. ft. models have three shelf positions)

Warranty: 12 months

Specifications	
Temperature Range	100° to 1200°C
Display	LED temperature vs. setpoint (simultaneous)
Volts	208/240
Hertz	50/60

Thermo Scientific Laboratory Products

Cat. No.	Capacity	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Control	Power Consumption	Shipping Weight
BF51731C	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital	4500w	75kg
BF51731BC	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital/OTC	4500w	75kg
BF51732C	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital Mutli Seg/1 Prog	4500w	75kg
BF51732BC	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Multi Seg/1 Prog/OTC	4500w	75kg
BF51732PC	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital Multi Seg/Multi Prog	4500w	75kg
BF51732PBC	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital Multi Seg/ Multi Prog/OTC	4500w	75kg
BF51732PFMC	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital Multi Seg/ Multi Prog/FM	4500w	75kg
BF51732PBFMC	16.4L (0.6 cu. ft.)	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	Digital Multi Seg/ Multi Prog/OTC/FM	4500w	75kg
BF51841C	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital	5800w	127kg
BF51841BC	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital/OTC	5800w	127kg
BF51842C	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital Mutli Seg/1 Prog	5800w	127kg
BF51842BC	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital Multi Seg/1 Prog/OTC	5800w	127kg
BF51842PC	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.	Multi Seg/Multi Prog	5800w	127kg
BF51842PBC	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital Multi Seg/ Multi Prog/OTC	5800w	127kg
BF51842PFMC	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital Multi Seg/ Multi Prog/FM	5800w	127kg
BF51842PBFMC	55.3L (2.0 cu. ft.)	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	Digital Multi Seg/ Multi Prog/OTC/FM	5800w	127kg

Thermo Scientific* Lindberg/Blue M* Heavy-Duty 1200°C Box Furnaces

Thermo Scientific Lindberg/Blue M furnaces feature a unique internal construction and outer shell design that reduces external surface temperatures without compromising interior temperature uniformity.

Furnaces feature individual heating elements at chamber top, bottom and sides for uniform heat distribution. Unique Moldatherm* ceramic fiber insulation to allow rapid heatup, recovery and cooldown rates.

- Swing-down door provides convenient loading platform
- Helically coiled, high-temperature alloy wire elements for extended service life
- High-temperature insulation in vestibule and floating plug door to minimize heat loss and improve temperature control
- Spring-loaded door holds door securely shut; door rests in horizontal position when open
- Sight glass for convenient observation of heated load during operation
- Refractory plate heating unit
- Long-life Platinel II thermocouple with 10ft. compensated lead wire and polarized plug
- Rugged, heavy-duty Inconel* hearthplate supports load and protects the furnace from damage due to spillage (Model BF51542C)
- Heating element imbedded in Moldatherm insulation (Model BF51542C)

1200°C Digital, Single Setpoint Controller

- Control console is fully wired and includes advanced microprocessor-based digital control, a solid-state power module, ON/OFF circuit breaker and thermocouple input jack
- Includes microprocessor-based PID control (proportional, integral, derivative), single segment, single setpoint, one ramp to setpoint
- Built-in adjustable high limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- Can be configured to display temperature in either °C or °F

Ordering Information: Choice of controllers available, including 1200°C digital single-program/multiple-segment programmable controller and overtemperature control.

Required Accessories: Independent control console CC58114C

Warranty: 12 months

Specifications	
Temperature Range	100° to 1200°C
Volts	208/240
Hertz	50/60

Cat. No.	Capacity	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Description	Power Consumption	Shipping Weight
BF51442C	9L (0.32 cu. ft.)	35.6 × 19.5 × 13.3cm (14 × 7.5 × 5.25in.)	50.8 × 50.8 × 62.2cm (20 × 20 × 24.5in.)	With refractory plate heating element	4800w	66kg (145 lb.)
BF51542C	23L (0.81 cu. ft.)	36.8 × 26.7 × 24.1cm (14.5 × 10.5 × 9.5in.)	78.7 × 71.1 × 72.4cm (31 × 28 × 28.5in.)	With Moldatherm Heating Element (Four Sides)	6200w	152kg (335 lb.)

Thermo Scientific* Controllers for Lindberg/Blue M* Heavy-Duty 1200°C Box Furnaces

Thermo Scientific controllers ensure temperature accuracy and offer options for overtemperature control and multiple segment configuration.

Thermo Scientific controllers are designed to work with Lindberg/Blue M heavy-duty box furnaces.

- Fully wired with advanced microprocessor-based digital control, solid-state power module, ON/OFF circuit breaker and thermocouple input jacks for each zone
- Built-in adjustable high-limit overtemperature protection
- LED simultaneously displays actual temperature vs. setpoint in °C or °F
- Designed for operation on 120, 208, or 240V 50/60Hz, single-phase line

Overtemperature Control on selected control consoles with "B" suffix designation

- Adjustable digital control is factory installed
- Protects furnace and load in the event of primary control circuit failure
- Overrides main controller and shuts off power to furnace if high limit is reached
- Must be manually reset for safety
- Operates via magnetic contacts through a signal from an independent thermocouple

Specifications	
Display	Digital
Electrical Requirements	208/240V 50/60Hz
Amperage	30A

Thermo Scientific Laboratory Products

Cat. No.	Description
CC58114C	Single-Setpoint
CC58114PC	Single-zone Console, Digital, Programmable
CC58114BC	Single Setpoint with Over Temperature Control
CC58114PBC	Single-zone Console, Digital, Programmable, with Over Temperature Control

Thermo Scientific* Lindberg/Blue M* Multipurpose 1500°C Box Furnaces

These Thermo Scientific Lindberg/Blue M multipurpose furnaces feature integral control to 1500°C.

Furnaces have double-wall construction with Moldatherm* insulation for rapid heatup and cooldown, energy efficiency and cooler exterior surface temperatures.

- Adjustable high-limit overtemperature protection
- Microprocessor-based PID control
- Choice of two controllers: Single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control or multiple program with up to 300 segments
- Optional adjustable digital overtemperature control (OTC) protects furnace and load in the event of primary control circuit failure
- Simultaneous LED display of actual and setpoint temperatures in either °C or °F
- Silicon carbide heating elements for long-life, safety and reliable service with maximum energy savings
- Safety door switch interrupts power to heating elements when door is opened; protects elements and minimizes exposure to operator
- Moldatherm hearthplate supports load and protects interior from spillage and mishandling
- Type "R" thermocouple is integrated into chamber backwall

Warranty: 12 months

Specifications	
Max. Temperature	1500°C
Display	LED actual vs. setpoint temperature in °C or °F
Electrical Requirements	208/240V 50/60Hz

Cat. No.	Capacity	Controller	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Power Consumption
BF51433C	6L (0.21 cu. ft.)	Multi Seg/1 Prog	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	6400w
BF51433BC	6L (0.21 cu. ft.)	Multi Seg/1 Prog/OTC	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	6400w
BF51433PC	6L (0.21 cu. ft.)	300 Seg/30 Prog	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	6400w
BF51433PBC	6L (0.21 cu. ft.)	300 Seg/30 Prog/OTC	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	6400w
BF51643C	25L (0.88 cu. ft.)	300 Seg/30 Prog	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	14800w
BF51643BC	25L (0.88 cu. ft.)	300 Seg/30 Prog/OTC	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	14800w

Thermo Scientific* Lindberg/Blue M* 1700°C Box Furnaces, Large Chamber, Integral Control

Thermo Scientific Lindberg/Blue M 1700°C furnaces are designed for efficient, high-temperature use with minimal maintenance.

These furnaces feature fast heatup to high temperatures, unique door design and control sophistication ranging from solid-state, single setpoint to more versatile microprocessor-based systems with programming and communications options.

- Designed for efficient high-temperature use with minimal maintenance
- Choice of single setpoint or programmable control
- Side swing door provides full and easy access to chamber, protects user from heat surge
- Atmosphere port, 0.375in. diameter, for fresh air or inert gas inlet (located at back wall, bottom)
- Solid-state power module with ammeter, circuit breaker, transformer and front panel indicator lights for "Ready Element" and "Main Power Applied"
- Safety power disconnect switch cuts power to heating elements when door is opened
- Moldatherm* high-temperature ceramic fiber insulation with advanced graded design for fast heat-up and resistance to thermal shock
- Moldatherm hearthplate supports load and protects chamber from spills or mishandling
- High-volume cooling fans move air between inner and outer chamber to reduce exterior shell temperatures and improve energy efficiency and operator safety
- Long-life type "B" thermocouples with 10ft. compensated lead wire and polarized plug for accurate high-temperature measurement
- Removable panels for easy access to replaceable heating elements and thermocouples

Smart Heating Elements

- Molybdenum disilicide elements with unique right-angle bend and sidewall mounting reduce maintenance usually associated with element termination and mounting
- Designed for easy replacement without matching resistance values
- Fast heat-up and recovery with excellent uniformity and energy efficiency
- Increased resistance to thermal shock, ideal for rapid cycling over extended periods

Overtemperature Control (OTC)†

- Adjustable digital overtemperature control protects furnace and load in the event of primary control circuit failure
- Overrides main controller and shuts off power to furnace if high limit is reached
- Manual reset required for safety
- Operates via signal from independent thermocouple

Programmable Controller With Communications (COM Models)

- With RS-485 data port (communications card and port) for connection to remote computer
- Enables modification, interrogation and data transfer of instrument control and configuration parameters
- Up to 30 units can be connected to one PC
- Software not included (available as an option)

Digital Multiple Program, Multiple Segment Programmable Controller

- Microprocessor-based PID control (proportional, integral, derivative) prevents overshoot
- Multiple programs and segments for ramp (up and down) and dwell (timed hold) temperature control
- Simultaneous digital LED display of actual temperature vs. setpoint in either °C or °F

Digital Single-Setpoint Controller

- Microprocessor-based PID control (proportional, integral, derivative) prevents overshoot
- Single segment, single setpoint, one ramp to setpoint
- Adjustable high limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint in either °C or °F

Ordering Information: Required power cord, hardwiring not included.

Required Accessories: Power cord, hardwiring wiring

Warranty: 12 months

Specifications	
Max. Temperature	1700°C
Electrical Requirements	208/240V 50/60Hz

Cat. No.	Capacity	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Controller	Power Consumption	Shipping Weight
BF51634C	17L (0.6 cu. ft.)	26.7 × 27.9 × 22.9cm (10.5 ×11 × 9in.)	61 × 71.1 × 78.7cm (24 × 28 × 31in.)	Digital/1 setpoint	5900w	159kg (350 lb.)

Cat. No.	Capacity	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Controller	Power Consumption	Shipping Weight
BF51634PC	17L (0.6 cu. ft.)	26.7 × 27.9 × 22.9cm (10.5 ×11 × 9in.)	61 × 71.1 × 78.7cm (24 × 28 × 31in.)	Multisegment/multiprogram	5900w	159kg (350 lb.)
BF51634PCOMC	17L (0.6 cu. ft.)	26.7 × 27.9 × 22.9cm (10.5 ×11 × 9in.)	61 × 71.1 × 78.7cm (24 × 28 × 31in.)	Multisegment/ multiprogram/ communications	5900w	159kg (350 lb.)
BF51664C	25.5L (0.9 cu. ft.)	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	76.2 × 71.1 × 78.7cm (30 × 28 × 31in.)	Digital/1 setpoint	7100w	168kg (370 lb.)
BF51664PC	25.5L (0.9 cu. ft.)	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	76.2 × 71.1 × 78.7cm (30 × 28 × 31in.)	Multisegment/multiprogram	7100w	168kg (370 lb.)
BF51664PCOMC	25.5L (0.9 cu. ft.)	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	76.2 × 71.1 × 78.7cm (30 × 28 × 31in.)	Multisegment/ multiprogram/ communications	7100w	168kg (370 lb.)

*† Specify Option **B** when ordering.*

Thermo Scientific* Lindberg/Blue M* Mini-Mite* Tube Furnaces

Thermo Scientific Lindberg/Blue M Mini-Mite single-zone tube furnace is compact and portable.

Mini-Mite tube furnaces are insulated with Moldatherm* for quick heatup and cooldown. Microprocessor-based self-tuning PID control provides optimal thermal processes without overshoot.

- Single segment, single setpoint, one ramp to setpoint
- Adjustable high-limit overtemperature protection
- Simultaneous LED display of temperature and setpoint in °C or °F
- Split-hinge design simplifies loading and unloading
- Safety switch disconnects power when furnace is opened
- Type K long-life thermocouple

Includes: 9ft. (3m) power cord

Warranty: 12 months

Specifications	
Temperature Range	100° to 1100°C
Display	LED
Heating Zone	30.5cm (12in.)
Outside Dia. [Tube]	2.54cm (1in.)
Overall L x W x H	28 × 41 × 38cm (11 × 16 × 15in.)
Power Consumption	800w
Shipping Weight	16kg (35 lb.)

Cat. No.	Control Temperature	Electrical Requirements
TF55030A	Digital, Single Segment	120V 50/60Hz
TF55030C	Digital, Single Segment	208/240V 50/60Hz
TF55035A	Digital, Multisegment Programmable	120V 50/60Hz
TF55035C	Digital, Multisegment Programmable	208/240V 50/60Hz

Thermo Scientific* Lindberg/Blue M* 1100°C Tube Furnaces

Thermo Scientific Lindberg/Blue M Tube Furnaces are designed for use with a variety of process tubes including alumina, mullite, quartz and metallic.

Design techniques such as double-shell construction and variable density insulation combine to enhance performance over conventional furnaces. Durable, high-strength hardware and a variety of control systems offer both convenience and versatility over a range of sophistication.

These three-zone 1100°C tube furnaces, with Moldatherm* ceramic fiber insulation, feature excellent temperature uniformity, fast heatup and cooldown, and quick recovery with optimum power consumption. The furnace comes with three independent, programmable controllers, one for each zone.

Performance Features

- Three zones, three programmable controllers (one for each zone)
- Microprocessor-based self-tuning PID control (proportional, integral, derivative) provides optimum thermal process without overshoot
- Single program with multiple segments for ramp (up/down) and dwell (timed hold) temperature control
- Adjustable high-limit overtemperature protection
- Simultaneous LED display of temperature and setpoint in °C or °F

Design Features

- Flexible design—can be used for a variety of applications
- Innovative use of venting and insulating air spaces create lower exterior surface temperatures
- Moldatherm* insulation for quick heatup and cooldown
- Long-life Type K thermocouple
- Accepts an array of tube adapters; one set of (2) tube adapters included
- RS485 digital communications port available as an option; allows controller to be connected to a PC for remote monitoring and control

Includes: One set of two tube adapters

Required Accessories: Power cord and hardwiring

Warranty: 12 months

Specifications	
Controller	Three-zone programmable controllers - single program w/16 segments
Temperature Range	100° to 1100°C (212° to 2012°F)
Display	LED; temperature and setpoint in °C or °F
Volts	208/240
Hertz	50/60
Includes	Two tube adapters

Cat. No.	Heated Length	Heated Zone	Process Tube Diameter	Exterior L x W x H	Power Consumption	Shipping Weight
STF55346C	61cm (24in.)	15.2/30.4/15.2cm (6/12/6in.)	2.5–7.5cm (1–3in.)	43.2 × 88.9 × 53.3cm (17 × 35 × 21in.)	3800w	102kg (225 lb.)
STF55666C	91.4cm (36in.)	22.3/45.7/22.3cm (9/18/9in.)	7.5–15.2cm (3–6in.)	55.9 × 137.2 × 66cm (22 × 54 × 16in.)	11,000w	115kg (255 lb.)

Thermo Scientific* Tube Adapters/Sleeves for 1100°C Lindberg/Blue M* Tube Furnaces

For use with Thermo Scientific Lindberg/Blue M Tube Furnaces.

Cat. No.	Description	For Use with
59541	1in. Adapter	STF55346C Tube Furnace
59543	2in. Adapter	STF55346C Tube Furnace
59545	3in. Adapter	STF55346C Tube Furnace
59555	3in. Adapter	STF55666C Tube Furnace
59556	4in. Adapter	STF55666C Tube Furnace
59557	5in. Adapter	STF55666C Tube Furnace
59558	6in. Adapter	STF55666C Tube Furnace
59549	Blank (solid) Adapter	STF55346C Tube Furnace
59559	Blank (Solid) Adapter	STF55666C Tube Furnace

Thermo Scientific* Lindberg/Blue M* 1200°C Split-Hinge Tube Furnaces

Thermo Scientific Lindberg/Blue M 1200°C Split-Hinge Tube Furnaces offer ease of observation and operation.

These Thermo Scientific Lindberg/Blue M 1 split-hinge tube furnaces are configurable for horizontal or vertical use. Furnaces use independent digital temperature control modules (ordered separately) which are available in standard or programmable options.

- Patented Moldatherm* LGO* heating element modules for superior radial and linear temperature uniformity and fast heatup and cooldown
- Long-life, energy-efficient elements require little or no maintenance
- Unique cabinet design achieves lower exterior surface temperature
- Heat-reflecting element support assembly creates two highly effective insulating air spaces
- Compact cabinet with high temperature-resistant painted finish
- Accepts interchangeable Moldatherm tube adapters
- Long-life Platinel* II thermocouple(s) with 10ft. compensated lead wire and polarized plug

Three Zone Models

- Three independent power circuits (zones) with independent thermocouples for control references
- Full adjustment of each zone over entire operating range to 1200°C
- Center zone uniformity achieved and operating length maximized through adjustable profiling of end zones by independent controller
- Temperature uniformity achieved with independent setpoint of end zones higher or lower than center

Required Accessories: Independent digital temperature control module

Warranty: 12 months

Specifications	
Temperature Range	100° to 1200°C
Display	LED
Hertz	50/60

Cat. No.	Controller	Heated Zone	Exterior L x W x H	Tube O.D.	Shipping Weight	Electrical Requirements
Single Zone						
HTF55122A	Independent CC58114A	30.5cm (12in.)	33.0 × 53.3 × 30.5cm (13 × 21 × 12in.)	1.9 to 2.54cm (0.75 to 1in.)	28kg (60 lb.)	120V 50/60Hz
HTF55322A	Independent CC58114A	30.5cm (12in.)	43.2 × 58.4 × 40.6cm (17 × 23 × 16in.)	2.54 to 7.62cm (1 to 3in.)	55kg (120 lb.)	120V 50/60Hz
HTF55322C	Independent CC58114C	30.5cm (12in.)	43.2 × 58.4 × 40.6cm (17 × 23 × 16in.)	2.54 to 7.62cm (1 to 3in.)	55kg (120 lb.)	208/240V 50/60Hz
HTF55342C	Independent CC58114C	61.0cm (24in.)	43.2 × 88.9 × 40.6cm (17 × 35 × 16in.)	2.54 to 7.62cm (1 to 3in.)	80kg (175 lb.)	208/240V 50/60Hz
Three Zone						
HTF55347C	Independent CC58434C	61.0cm (24in.)	43.2 × 88.9 × 40.6cm (17 × 35 × 16in.)	2.54 to 7.62cm (1 to 3in.)	89kg (195 lb.)	208/240V 50/60Hz
HTF55667C	Independent CC58434C	91.4cm (36in.)	53.3 × 124.5 × 50.8cm (21 × 49 × 20in.)	76.2 to 152.4cm (3 to 6in.)	141kg (310 lb.)	208/240V 50/60Hz

Thermo Scientific* Accessories for Lindberg/Blue M* 1200°C Split-Hinge Tube Furnaces

For use with Thermo Scientific Lindberg/Blue M Tube Furnaces.

Cat. No.	Description	For Use with
59510	0.75in. Adapter	HTF55122 Tube Furnace
59511	1in. Adapter	HTF55122 Tube Furnace
59522	1.5in. Adapter	HTF55322, HTF55342, HTF55347 Tube Furnaces
59523	2in. Adapter	HTF55322, HTF55342, HTF55347 Tube Furnaces
59524	2.5in. Adapter	HTF55322, HTF55342, HTF55347 Tube Furnaces
59525	3in. Adapter	HTF55322, HTF55342, HTF55347 Tube Furnaces
59535	3in. Adapter	HTF55667 Tube Furnace
59536	4in. Adapter	HTF55667 Tube Furnace
59537	5in. Adapter	HTF55667 Tube Furnace
59519	Blank (solid) Adapter	HTF55122 Tube Furnace
59529	Blank (solid) Adapter	HTF55322, HTF55342, HTF55347 Tube Furnaces
VFS551	Floor Stand	HTF55112A Tube Furnace
VFS553	Floor Stand	HTF55322A, HTF55322C, HTF55342C and HTF55347C Tube Furnaces
VFS556	Floor Stand	HTF55667C Tube Furrnace

Thermo Scientific* Controllers for Lindberg/Blue M* 1200°C Tube Furnaces

Thermo Scientific controllers ensure temperature accuracy and offer options for overtemperature control and multiple segment configuration.

Thermo Scientific controllers are designed to work with Lindberg/Blue M 1200°C split-hinge and 1500°C box furnaces.

- Fully wired with advanced microprocessor-based digital control, solid-state power module, ON/OFF circuit breaker and thermocouple input jacks for each zone
- Built-in adjustable high-limit overtemperature protection
- LED simultaneously displays actual temperature vs. setpoint in °C or °F
- Designed for operation on 120, 208, or 240V 50/60Hz, single-phase line

Overtemperature Control

- Adjustable digital control is factory installed
- Protects furnace and load in the event of primary control circuit failure
- Overrides main controller and shuts off power to furnace if high limit is reached
- Must be manually reset for safety
- Operates via magnetic contacts through a signal from an independent thermocouple

Specifications	
Display	Digital

Cat. No.	Description	For Use with	Electrical Requirements
CC58114A	Single-zone Console, Digital	1200°C Furnaces	120V 50/60Hz
CC58114C	Single-Setpoint	1200°C Furnaces	208/240V 50/60Hz
CC58114BA	Single-zone Console, Digital, with Over Temperature Control	1200°C Furnaces	120V 50/60Hz
CC58114PA	Single zone, Multiple Segment	1200°C Split-hinge Tube Furnace	120V 50/60Hz
CC58114PBA	Single zone, Multiple Segment	1200°C Split-hinge Tube Furnace	120V 50/60Hz
CC58114BC	Single-zone Console, Digital, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC58114PBC	Single-zone Console, Digital, Programmable, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC58114PC	Single-zone Console, Digital, Programmable	1200°C Furnaces	208/240V 50/60Hz
CC58434C	Three zone	1200°C Split-hinge Tube Furnace	208/240V 50/60Hz
CC58434BC	Three-zone Console, Digital, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC58434PC	Three-zone Console, Digital, Programmable Controller for Center Zone, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC584343PBC	Three-zone Console, Programmable, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC584343PC	Three-zone Console, Digital, Programmable	1200°C Furnaces	208/240V 50/60Hz
CC58434PBC	Three zone, 16 Segment	1200°C Split-hinge Tube Furnace	208/240V 50/60Hz

Thermo Scientific* Lindberg/Blue M* 1500°C General-Purpose Tube Furnaces

Thermo Scientific Lindberg/Blue M 1500°C General-Purpose Tube Furnaces are designed for a range of applications requiring flexibility with fast heatup and recovery.

These Thermo Scientific Lindberg/Blue M General-purpose Tube Furnaces feature integral control designed for a range of applications which require processing flexibility with fast heatup and recovery. Energy-efficient Moldatherm* insulation increases temperature uniformity, improves energy efficiency and helps to maintain low exterior cabinet temperatures during operation.

- Accommodate 1in., 2in. and 3in. O.D. process tubes (customer supplied)
- Silicon carbide heating elements positioned above and below tube works with Type "R" thermocouple to stabilize temperature
- Microprocessor-based PID programmable control (proportional, integral, derivative) prevents overshoot
- Available with Single Program/Multiple Segment or Multiple Program/Multiple Segment Programmable Controller
- Program(s) and segment(s) for ramp (up and down) and dwell (timed hold) temperature control
- Adjustable high limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- Temperature display in °C or °F
- Optional Overtemperature Control (OTC) on Multi-Program/Multi-Segment model

Warranty: 12 months

Specifications	
Temperature Range	500° to 1500°C
Temperature Control	Integral
Display	LED
Heating Zone	30.5cm (12in.)
Tube O.D.	2.54 to 7.62cm (1 to 3in.)
Insulation	Moldatherm
Electrical Requirements	208/240V 50/60Hz

Cat. No.	Type
STF55433C	Multisegment/single program
STF55433PC	Multisegment/multiprogram
STF55433PBC	Multisegment/multiprogram/OTC

Thermo Scientific* Tube Adapters for 1500°C Lindberg/Blue M* Tube Furnaces

For use with Thermo Scientific Lindberg/Blue M 1500°C Tube Furnaces.

Cat. No.	Description	For Use with
7100-2444-070	2.5cm (1in.)	STF55433C, STF55433PC, STF55433PBC
7100-2444-068	5cm (2in.)	STF55433C, STF55433PC, STF55433PBC
7100-2444-069	7.6cm (3in.)	STF55433C, STF55433PC, STF55433PBC

Thermo Scientific* Lindberg/Blue M* 1700°C Tube Furnaces

Thermo Scientific Lindberg/Blue M 1700°C High-Temperature Tube Furnaces provide rapid heatup, recovery and cooldown.

These furnaces feature heating elements with unique right-angle bend and sidewall mounting to deliver exceptional energy release, reduced thermal process cycle time, and cost savings through quicker throughput and energy efficiency. Moldatherm* graduated-density insulation adds to safety and performance and provides superior radial and linear temperature uniformity with resistance to thermal shock.

- Heating elements tolerate rapid cycling over extended periods; elements are easily replaceable without the need to match resistance values
- Type "B" thermocouples assure accurate temperature measurement and long thermocouple life; 10ft. compensated lead wire with polarized plug included
- Moldatherm graduated density insulation adds to safety and performance by forming enhanced insulation protection between the high-temperature chamber and exterior cabinet surface
- Double shell construction and convection cooling design reduces exterior surface temperature
- Removable louvered panels provide easier access to heating elements and thermocouple
- Temperature range: 500°C to 1700°C

Required Accessories: Independent digital temperature control module, available separately.

Warranty: 12 months

Specifications	
Temperature Range	500° to 1700°C
Temperature Control	Independent
Tube O.D.	7.6cm (3in.)
Hertz	50/60
Volts	208/240

Cat. No.	Heated Zone	Exterior L x W x H	Power Consumption	Shipping Weight
STF54434C	30.5cm (12in.)	40.6 × 55.9 × 48.3cm (16 × 22 × 19in.)	5000w	43kg (95 lb.)
STF54454C	61.0cm (24in.)	40.6 × 86.4 × 48.3cm (16 × 34 × 19in.)	10,000w	75kg (165 lb.)

Thermo Scientific* Tube Adapters/Sleeves for Lindberg/Blue M* Tube Furnaces

For use with Thermo Scientific Lindberg/Blue M 1700°C Tube Furnaces.

Cat. No.	Description	For Use with
7219-2134-001	1in. Sleeve	STF54434C Tube Furnace
7219-2134-002	2in. Sleeve	STF54434C Tube Furnace
7219-2134-003	3in. Sleeve	STF54434C Tube Furnace
7219-2134-011	3in. Sleeve	STF54454C Tube Furnace
7219-2134-012	2in. Sleeve	STF54454C Tube Furnace
7219-2134-013	1in. Sleeve	STF54454C Tube Furnace
7219-2147-002	2in. Adapter	STF54434C Tube Furnace
7219-2147-003	3in. Adapter	STF54434C Tube Furnace
7219-2147-012	2in. Adapter	STF54454C Tube Furnace
7219-2147-013	1in. Adapter	STF54454C Tube Furnace

Thermo Scientific* Controllers for Lindberg/Blue M* 1700°C Tube Furnaces

Thermo Scientific controllers ensure temperature accuracy and offer options for overtemperature control and multiple segment configuration.

Thermo Scientific controllers are designed to work with Lindberg/Blue M 1700°C tube furnaces.

- Multiple programs and multiple segments for ramp (up and down) and dwell (timed hold) temperature control
- Controller visually displays ramp rate, dwell time, program segment and percent power output
- Holdback feature allows the operator to set a "process vs. setpoint" temperature value which, when exceeded, holds the program to allow the process to catch up
- RS485 data port for connection to remote computer, allowing modification, interrogation and data transfer of all instrument control and configuration parameters
- Up to 30 units can be connected to one PC (software not included)

Specifications	
Display	Digital
Electrical Requirements	208/240V 50/60 Hz

Thermo Scientific Laboratory Products

Cat. No.	Description	For Use with
CC59256PCOMC	Digital, with Programmer	1700°C box and tube furnaces
CC59256PBCOMC	Digital, with Programmer and Over Temperature Control	1700°C box and tube furnaces

HEATING MANTLES

Thermo Scientific* Electromantles with Insulated Heater and Controller

Thermo Scientific Electromantles feature a durable, chemically resistant, polypropylene outer housing that minimizes damage from spills.

Thermo Scientific Electromantles feature maximum heat transfer with minimum risk of flask breakage.

- Element temperature 450°C (842°F)
- Use with round-bottom flasks from 50mL to 5L
- Built-in energy regulator
- Insulated material in removable heater cartridge
- Pilot lamps for power and heater operation
- Model EM5000/CE has two circuits

Includes: Clamps for 0.5in. diameter (1.3cm) support rods, grounded line cord

Warranty: One year parts and labor

Certifications: CE

Specifications	
Material	Polypropylene Case
Max. Element Temperature	450°C (842°F)

Cat. No.	Capacity	Electrical Requirements
EM0050/CE	50mL (0.01 gal.)	230V 50/60Hz, 60w
EM0050/CEX1	50mL (0.01 gal.)	115V 50/60Hz, 70w
EM0050/CEX6	50mL (0.01 gal.)	230V 50/60Hz, 60w EU Plug
EM0100/CE	100mL (0.02 gal.)	230V 50/60Hz, 60w
EM0100/CEX1	100mL (0.02 gal.)	115V 50/60Hz, 70w
EM0100/CEX6	100mL (0.02 gal.)	230V 50/60Hz, 60w, EU Plug
EM0250/CE	250mL (0.06 gal.)	230V 50/60Hz, 150w
EM0250/CEX1	250mL (0.06 gal.)	115V 50/60Hz, 150w
EM0250/CEX6	250mL (0.06 gal.)	230V 50/60Hz, 150w, EU Plug
EM0500/CE	500mL (0.13 gal.)	230V 50/60Hz, 200w
EM0500/CEX1	500mL (0.13 gal.)	115V 50/60Hz, 200w
EM0500/CEX6	500mL (0.13 gal.)	230V 50/60Hz, 200w, EU Plug
EM1000/CE	1000mL (0.26 gal.)	230V 50/60Hz, 300w
EM1000/CEX1	1000mL (0.26 gal.)	115V 50/60Hz, 300w
EM1000/CEX6	1000mL (0.26 gal.)	230V 50/60Hz, 300w, EU Plug
EM2000/CE	2000mL (0.53 gal.)	230V 50/60Hz, 500w
EM2000/CEX1	2000mL (0.53 gal.)	115V 50/60Hz, 500w
EM2000/CEX6	2000mL (0.53 gal.)	230V 50/60Hz, 500w, EU Plug
EM3000/CE	3000mL (0.79 gal.)	230V 50/60Hz, 500w
EM3000/CEX1	3000mL (0.79 gal.)	115V 50/60Hz, 500w
EM3000/CEX6	3000mL (0.79 gal.)	230V 50/60Hz,500w, EU Plug
EM5000/CE	5000mL (1.32 gal.)	230V 50/60Hz, 800w
EM5000/CX1	5000mL (1.32 gal.)	115V 50/60Hz, 800w
EM5000/CEX6	5000mL (1.32 gal.)	230V 50/60Hz, 800w, EU Plug

Thermo Scientific* Spillproof and V-Shaped Mantles

Thermo Scientific Spillproof Mantle and V-Shaped Mantles fit snugly against pear-shaped or round-bottom flasks.

Accepts a large range of flask and funnel sizes for added flexibility.

- Element temperature 450°C (842°F)
- Patented airflow through ventilation slots beneath and around the rim of the case ensure a low, cool temperature to the touch
- Coiled heating element, suspended within a thermal insulating cartridge, provides maximum heat transfer and support
- Heating element can be turned on or off
- Bottom outlet accommodates 60° funnels of various diameters
- Chemical-resistant polypropylene housing
- Built-in electronic controller

EMX Models

- Stainless-steel liner on all EMX models provides electrical and mechanical protection against spills and ensures easy cleaning

EMV Models

- Stainless-steel screen on all EMV models covers the heated elements to protect you from shock hazards due to spills or flask breakage

Includes: One bracket for 1.3cm (0.5in.) support rods (5000mL size has three)

Warranty: One year, parts and labor

Certifications: CE

Specifications	
Material	Polypropylene Case
Max. Element Temperature	450°C (842°F)

Cat. No.	Capacity	Electrical Requirements
V-Shaped		
EMV0050/CE	10 to 50mL (0.001 to 0.01 gal.)	230V 50/60Hz, 60w
EMV0050/CEX1	10 to 50mL (0.001 to 0.01 gal.)	115V 50/60Hz, 75w
EMV0050/CEX6	10 to 50mL (0.001 to 0.01 gal.)	230V 50/60Hz. 60w, EU Plug
EMV0250/CE	100 to 250mL (0.02 to 0.06 gal.)	230V 50/60Hz, 150w
EMV0250/CEX1	100 to 250mL (0.02 to 0.06 gal.)	115V 50/60Hz, 150w
EMV0250/CEX6	100 to 250mL (0.02 to 0.06 gal.)	230V 50/60Hz, 150w, EU Plug
EMV1000/CE	500 to 1000mL (0.13 to 0.26 gal.)	230V 50/60Hz, 300w
EMV1000/CEX1	500 to 1000mL (0.13 to 0.26 gal.)	115V 50/60Hz, 300w
EMV1000/CEX6	500 to 1000mL (0.13 to 0.26 gal.)	230V 50/60Hz, 300w, EU Plug
EMV5000/CE	2000 to 5000mL (0.53 to 1.32 gal.)	230V 50/60Hz, 800w
EMV5000/CEX6	2000 to 5000mL (0.53 to 1.32 gal.)	230V 50/60Hz, 800w, EU Plug
EMV5000/CEX1	2000 to 5000mL (0.53 to 1.32 gal.)	115V 50/60Hz, 800w
Spillproof		
EMX1000/SCE	500 to 1000mL (0.13 to 0.26 gal.)	230V 50/60Hz, 240w
EMX1000/SCEX1	500 to 1000mL (0.13 to 0.26 gal.)	115V 50/60Hz, 240w
EMX1000/SCEX6	500 to 1000mL (0.13 to 0.26 gal.)	230V 50/60Hz, 240w, EU Plug
EMX5000/SCE	2000 to 5000mL (0.53 to 1.32 gal.)	230V 50/60Hz, 600w
EMX5000/SCEX1	2000 to 5000mL (0.53 to 1.32 gal.)	115V 50/60Hz, 600w
EMX5000/SCEX6	2000 to 5000mL (0.53 to 1.32 gal.)	230V 50/60Hz, 600w, EU Plug

Thermo Scientific* Heating and Stirring Mantles

The Thermo Scientific Heating and Stirring Mantle with built-in electronic controller has a resilient, chemical-resistant polypropylene outer housing that minimizes damage from spills, making it ideal for a broad range of applications.

Designed to stir and heat liquid. Stirring can be single or bi-directional.

- Vented case creates a unique airflow that allows housing to be safe to the touch when in use
- Grounding screen provides additional safety should liquids spill or flasks break
- Heating cartridge can be quickly and easily replaced
- Mantles are double fused for added safety
- Automatic capture catches the stir bar to start stirring if stirring is disrupted
- Two indicator lights signal power on and heater on

Warranty: One year parts and labor

Certifications: CE

Specifications	
Material	Polypropylene
Max. Element Temperature	450°C (842°F)

Cat. No.	Capacity	Electrical Requirements
EMA0050/CEB	50mL (0.01 gal.)	230V 50/60Hz, 80w
EMA0050/CEBX1	50mL (0.01 gal.)	115V 50/60Hz, 96w
EMA0050/CEBX6	50mL (0.01 gal.)	230V 50/60Hz, 80w, EU Plug
EMA0100/CEB	100mL (0.02 gal.)	230V 50/60Hz, 80w
EMA0100/CEBX6	100mL (0.02 gal.)	230V 50/60Hz, 80w, EU Plug
EMA0100/CEBX1	100mL (0.02 gal.)	115V 50/60Hz, 96w
EMA0250/CEB	250mL (0.06 gal.)	230V 50/60Hz, 170w
EMA0250/CEBX1	250mL (0.06 gal.)	110V 50/60Hz, 210w
EMA0250/CEBX6	250mL (0.06 gal.)	230V 50/60Hz, 170w, EU Plug
EMA0500/CEB	500mL (0.13 gal.)	230V 50/60Hz, 220w
EMA0500/CEBX1	500mL (0.13 gal.)	115V 50/60Hz, 270w
EMA0500/CEBX6	500mL (0.13 gal.)	230V 50/60Hz, 220w, EU Plug
EMA1000/CEB	1000mL (0.26 gal.)	230V 50/60Hz, 320w
EMA1000/CEBX1	1000mL (0.26 gal.)	115V 50/60Hz, 400w
EMA1000/CEBX6	1000mL (0.26 gal.)	230V 50/60Hz, 320w, EU Plug
EMA2000/CEB	2000mL (0.53 gal.)	230V 50/60Hz, 520w
EMA2000/CEBX1	2000mL (0.53 gal.)	110V 50/60Hz, 595w
EMA2000/CEBX6	2000mL (0.53 gal.)	230V 50/60Hz, 520w, EU Plug

Thermo Scientific* CMU Controlled Mantles

The Thermo Scientific CMU Controlled Mantle features aluminum housing that is tough, chemical-resistant, lightweight and easy to clean.

Available in multiple sizes and temperature ranges.

- Flexible coiled heating elements absorb shock, minimizing the risk of flasks breaking
- Heating element is attached to a rigid thermal insulating cartridge to ensure maximum heat transfer and support
- Heating elements and insulation form an easy-to-replace heating cartridge
- Unique airflow through ventilation slots beneath and around the rim and heating cartridge keep the exterior "cool-to-the-touch"
- Stainless-steel screen covering the heating element is grounded directly to the cable for added protection
- Mantles are double fused for added safety
- Nonskid feet and support clamps add stability

Ordering Information: Controllers are sold separately.

Warranty: One year parts and labor

Certifications: CE, CSA

Specifications	
Material	Aluminium case stove painted
Max. Element Temperature	450°C (842°F)

Cat. No.	Capacity	Electrical Requirements
CMU0050/CE	50mL (0.01 gal.)	230V 50/60Hz, 75w
CMU0050/CEX1	50mL (0.01 gal.)	115V, 50/60Hz, 75w
CMU0050/CEX6	50mL (0.01 gal.)	230V 50/60Hz, 75w, EU Plug
CMU0050/E	50mL (0.01 gal.)	230V 50/60Hz, 75w
CMU0050/EX1	50mL (0.01 gal.)	115V 50/60Hz, 75w
CMU0050/EX6	50mL (0.01 gal.)	230V 50/60Hz, 75w, EU Plug
CMU0100/CE	100mL (0.02 gal.)	230V 50/60Hz, 100w
CMU0100/CEX1	100mL (0.02 gal.)	115V 50/60Hz, 100w
CMU0100/CEX6	100mL (0.02 gal.)	230V 50/60Hz, 100w, EU Plug
CMU0100/E	100mL (0.02 gal.)	230V 50/60Hz, 100w
CMU0100/EX1	100mL (0.02 gal.)	115V 50/60Hz, 100w
CMU0100/EX6	100mL (0.02 gal.)	230V 50/60Hz, 100w, EU Plug
CMU0250/CEX1	250mL (0.06 gal.)	115V 50/60Hz, 200w
CMU0250/CEX6	250mL (0.06 gal.)	230V 50/60Hz, 200w, EU Plug
CMU0250/CE	250mL (0.06 gal.)	230V 50/60Hz, 200w
CMU0250/E	250mL (0.06 gal.)	230V 50/60Hz, 200w
CMU0250/EX1	250mL (0.06 gal.)	115V 50/60Hz, 200w
CMU0250/EX6	250mL (0.06 gal.)	230V 50/60Hz, 200w, EU Plug
CMU0500/CE	500mL (0.13 gal.)	230V 50/60Hz, 280w
CMU0500/CE1	500mL (0.13 gal.)	115V 50/60Hz, 280w
CMU0500/CEX6	500mL (0.13 gal.)	230V 50/60Hz, 280w, EU Plug
CMU0500/E	500mL (0.13 gal.)	230v, 50/60Hz, 280w
CMU0500/EX1	500mL (0.13 gal.)	115v, 50/60Hz, 280w
CMU0500/EX6	500mL (0.13 gal.)	230V 50/60Hz, 280w, EU Plug
CMU1000/CE	1000mL (0.26 gal.)	230V 50/60Hz, 380w
CMU1000/CEX1	1000mL (0.26 gal.)	115V 50/60Hz, 380w
CMU1000/CEX6	1000mL (0.26 gal.)	230V 50/60Hz, 380w, EU Plug
CMU1000/E	1000mL (0.26 gal.)	230V 50/60Hz, 380w
CMU1000/EX1	1000mL (0.26 gal.)	115V 50/60Hz, 380w
CMU1000/EX6	1000mL (0.26 gal.)	230V 50/60Hz, 380w, EU Plug
CMU2000/CE	2000mL (0.53 gal.)	230V 50/60Hz, 500w
CMU2000/CEX1	2000mL (0.53 gal.)	115V 50/60Hz, 500w
CMU2000/CEX6	2000mL (0.53 gal.)	230V 50/60Hz, 500w, EU Plug
CMU2000/E	2000mL (0.53 gal.)	230V 50/60Hz, 500w
CMU2000/EX1	2000mL (0.53 gal.)	115V 50/60Hz, 500w
CMU2000/EX6	2000mL (0.53 gal.)	230V 50/60Hz, 500w, EU Plug
CMU3000/CE	3000mL (0.79 gal.)	230V 50/60Hz, 500w
CMU3000/CEX1	3000mL (0.79 gal.)	115V 50/60Hz, 500w
CMU3000/CEX6	3000mL (0.79 gal.)	230V 50/60Hz, 500w, EU Plug
CMU3000/E	3000mL (0.79 gal.)	230V, 50/60Hz, 500w

CMU3000/EX1	3000mL (0.79 gal.)	115V, 50/60Hz, 500w
CMU3000/EX6	5000mL (1.32 gal.)	230V 50/60Hz, 500w, EU Plug
CMU5000/CE	5000mL (1.32 gal.)	230V 50/60Hz, 800w
CMU5000/CEX1	5000mL (1.32 gal.)	115V 50/60Hz, 800w
CMU5000/CEX6	5000mL (1.32 gal.)	230V 50/60Hz, 800w, EU Plug
CMU5000/E	5000mL (1.32 gal.)	230V, 50/60Hz, 800w
CMU5000/EX1	5000mL (1.32 gal.)	115V, 50/60Hz, 800w
CMU5000/EX6	5000mL (1.32 gal.)	230V 50/60Hz, 800w, EU Plug

Thermo Scientific* CMUA Stirring Mantles

The Thermo Scientific CMUA Stirring Mantles are available in sizes 50 to 5000mL.

Thermo Scientific CMUA Stirring Mantles are designed for stirring and heating of liquid.

- Flexible coiled heating elements absorb shock, minimizing the risk of flasks breaking
- Heating element is attached to a rigid thermal insulating cartridge to ensure maximum heat transfer and support
- Heating elements and insulation form an easy-to-replace heating cartridge
- Unique airflow through ventilation slots beneath and around the rim and heating cartridge keeps the exterior “cool-to-the-touch”
- Stainless-steel screen covering the heating element is grounded directly to the cable for added protection
- Mantles are double fused for added safety
- Nonskid feet and support clamps add stability

Warranty: One year parts and labor

Certifications: CE, CSA

Specifications	
Material	Aluminium case stove painted
Max. Element Temperature	450°C (842°F)

Cat. No.	Capacity	Electrical Requirements
CMUA0050/CE	50mL (0.01 gal.)	230V 50/60Hz, 60w
CMUA0050/CEX1	50mL (0.01 gal.)	115V 50/60Hz, 60w
CMUA0050/CEX6	50mL (0.01 gal.)	230V 50/60Hz, 60w, EU Plug
CMUA0100/CE	100mL (0.02 gal.)	230V 50/60Hz, 75w
CMUA0100/CEX1	100mL (0.02 gal.)	115V 50/60Hz, 75w
CMUA0100/CEX6	100mL (0.02 gal.)	230V 50/60Hz, 75w, EU Plug
CMUA0250/CE	250mL (0.06 gal.)	230V 50/60Hz, 200w
CMUA0250/CEX1	250mL (0.06 gal.)	115V 50/60Hz, 200w
CMUA0250/CEX6	250mL (0.06 gal.)	230V 50/60Hz, 200w, EU Plug
CMUA0500/CE	500mL (0.13 gal.)	230V 50/60Hz, 280w
CMUA0500/CEX1	500mL (0.13 gal.)	115V 50/60Hz, 280w
CMUA0500/CEX6	500mL (0.13 gal.)	230V 50/60Hz, 280w, EU Plug
CMUA1000/CE	1000mL (0.26 gal.)	230V 50/60Hz, 380w
CMUA1000/CEX1	1000ml (0.26 gal.)	115V 50/60Hz, 380w
CMUA1000/CEX6	1000mL (0.26 gal.)	230V 50/60Hz, 380w, EU Plug
CMUA2000/CE	2000mL (0.53 gal.)	230V 50/60Hz, 500w
CMUA2000/CEX1	2000mL (0.53 gal.)	115V 50/60Hz, 500w
CMUA2000/CEX6	2000mL (0.53 gal.)	230V 50/60Hz, 500w, EU Plug
CMUA3000/CEX1	3000mL (0.79 gal.)	115V 50/60Hz, 500w
CMUA3000/CE	3000mL (0.79 gal.)	230V 50/60Hz, 500w
CMUA3000/CEX6	3000mL (0.79 gal.)	230V 50/60Hz, 500w, EU Plug
CMUA5000/CE	5000mL (1.32 gal.)	230V 50/60Hz, 800w
CMUA5000/CEX1	5000mL (1.32 gal.)	115V 50/60Hz, 800w
CMUA5000/CEX6	5000mL (1.32 gal.)	230V 50/60Hz, 800w, EU Plug

Thermo Scientific* CMUV Heating Mantles

The Thermo Scientific CMUV Heating Mantles accept a large range of flask and funnel sizes for added flexibility.

Thermo Scientific CMUV Heating Mantles are available with and without controls.

- Element temperature 450°C (842°F)
- Patented airflow through ventilation slots in base of the case ensure a low,cool temperature to the touch
- Coiled heating element, suspended within a thermal insulating cartridge, provides maximum heat transfer and support
- Heating element can be turned on or off
- Bottom outlet accommodates 60° funnels of various diameters
- Aluminium case stove painted
- Built-in electronic controller models
- Stainless-steel screen on all CMUV models cover the heated elements to protect you from shock hazards due to spills or flask breakage

Includes: One bracket for 1.3cm (0.5in.) support rods (5000mL plus sizes has three)

Warranty: One year parts and labor

Certifications: CE and CSA

Specifications	
Max. Element Temperature	450°C (842°F)
No. of Circuits	2
D x W x H	48.5 x 30.0 x 48.5cm (19.09 x 11.8 x 19.09in.)

Cat. No.	Capacity	Electrical Requirements	With Controller
CMUV10/L	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w	No
CMUV10/LX1	10 to 12L (2.6 to 3.1 gal.)	115V 50/60Hz, 2000w	No
CMUV10/LX6	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w, EU Plug	No
CMUV10/CL	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w	Yes
CMUV10/CLX1	10 to 12L (2.6 to 3.1 gal.)	115V 50/60Hz, 2000w	Yes
CMUV10/CLX6	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w, EU Plug	Yes
CMUV12/CL	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w	Yes
CMUV12/CLX1	10 to 12L (2.6 to 3.1 gal.)	115V 50/60Hz, 2000w	Yes
CMUV12/CLX6	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w, EU Plug	Yes
CMUV12/L	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w	No
CMUV12/LX1	10 to 12L (2.6 to 3.1 gal.)	115V 50/60Hz, 2000w	No
CMUV12/LX6	10 to 12L (2.6 to 3.1 gal.)	230V 50/60Hz, 2000w, EU Plug	No
CMUV22/CL	20 to 22L (5.2 to 5.8 gal.)	230V 50/60Hz, 3000w	Yes
CMUV22/CLX1	20 to 22L (5.2 to 5.8 gal.)	115V 50/60Hz, 3000w	Yes
CMUV22/CLX6	20 to 22L (5.2 to 5.8 gal.)	230V 50/60Hz, 3000w, EU Plug	Yes
CMUV22/L	20 to 22L (5.2 to 5.8 gal.)	230V 50/60Hz, 3000w	No
CMUV22/LX1	20 to 22L (5.2 to 5.8 gal.)	115V 50/60Hz, 3000w	No
CMUV22/LX6	20 to 22L (5.2 to 5.8 gal.)	230V 50/60Hz, 3000w, EU Plug	No

Thermo Scientific* Electric Bunsen Heating Mantles

Thermo Scientific Electric Bunsen heating mantles are corrosion-resistant and include easy-to-replace heating elements.

Combines the advantages of a gas burner with the clean operation and easy control of electric heating.

Radiation from the heater is directed upwards only, so the Bunsen burner is ideal for heating test tubes, crucibles, small flasks and beakers, independent of their shape.

- Burner consumes only 400w of power
- Conical shaped heating element directs radiant heat to the top cavity
- Top cowl deflects heat away from your hand
- Air circulation from the vented housing keeps the base cool enough to hold during operation

Warranty: One year parts and labor

Certifications: CE

Specifications	
Capacity	25mL (0.006 gal.)
Material	Stainless steel
Temperature Range	800° to 1000°C
Flask Volume	25mL
Shipping Weight	0.975kg (2.2 lb.)
Dia. x H	12 × 17.7cm (4.5 × 7in.)

Cat. No.	Electrical Requirements
Without Controller	
BA6101	230V, 50/60hz, 480w
BA6101X1	115V, 50/60hz, 430w
BA6101X2	100V, 50/60hz, 480w
BA6101X3	90V, 50/60hz, 430w
BA6101X6	230V, 50/60hz, 480w, EU Plug
With Controller	
BA6101/C	230V, 50/60hz, 480w
BA6101/CX6	230V, 50/60hz, 480w, EU Plug

Thermo Scientific* Electromantle Extraction Heaters

The Thermo Scientific Electromantle Extraction Heater with three or six recesses has a built-in electronic controller and offers a choice of heater only or heater/stirrer combination.

Unique airflow of vented case ensures the case remains "cool to the touch."

Heater and Heater/Stirrer Models

- Individual built-in solid state electronic controls enable easy regulation of each heater, while removing sparking associated with mechanical switching
- Three 12.7mm (0.5 in.) diameter support rods are included
- Top cover is polypropylene and external surfaces are powder coated and resistant to most chemical solutions
- Coiled heating element is suspended within a thermal insulating cartridge to provide maximum heat transfer and support, while removing sparking associated with mechanical switching
- Heater cartridge is easy to replace
- Earth (ground) screen encloses the heaters for added safety
- Pilot lights indicate when power is on and supplied to heaters and supplied to stirrers

Heater/Stirrer Models

- Stirrer models include a stirring speed range of 50 to 1000rpm
- One stirring control operates each set of three recesses
- Stirring module allows the solution to be stirred and heated simultaneously

Warranty: One year parts and labor

Certifications: CE

Specifications	
Max. Element Temperature	450°C (842°F)
Material	Polypropylene Top on Stove-painted Aluminium

Cat. No.	For Flask Capacity	Interior D x W x H	No. of Circuits	Electrical Requirements	Total Watts	Shipping Weight
Heater/Stirrer Models						
EMEA3 0100/CE	3 x 100mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	220w	7kg (15.4 lb.)
EMEA3 0250/CE	3 x 250mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	490w	7kg (15.4 lb.)
EMEA3 0500/CE	3 x 500mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	640w	8.4kg (18.4 lb.)
EMEA3 1000/CE	3 x 1000mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	940w	8.4kg (18.4 lb.)
EMEA6 0100/CE	6 x 100mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	500w	10kg (22 lb.)
EMEA6 0250/CE	6 x 250mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	980w	10kg (22 lb.)
EMEA6 0500/CE	6 x 500mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	1280w	12.5kg (28 lb.)
EMEA6 1000/CE	6 × 1000mL	26 × 120 × 9cm (10.23 × 24.8 × 3.54in.)	6	230V 50/60Hz	1880w	7.4kg (16 lb.)
EMEA3 0100/CEX1	3 x 100mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	1800w	7.4kg (16 lb.)
EMEA3 0250/CEX1	3 x 250mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	490w	6kg (13 lb.)
EMEA3 0500/CEX1	3 x 500mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	640w	7.4kg (16 lb.)
EMEA3 1000/CEX1	3 x 1000mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	940w	7.4kg (16 lb.)
EMEA6 0100/CEX1	6 x 100mL	26 x 120 x 9cm (10.23 x47.24 x 3.54in.)	6	115V 50/60Hz	500w	10kg (22 lb.)
EMEA6 0250/CEX1	6 x 250mL	26 x 120 x 9cm (10.23 x47.24 x 3.54in.)	6	115V 50/60Hz	980w	10kg (22 lb.)
EMEA6 0500/CEX1	6 x 500mL	26 x 120 x 9cm (10.23 x47.24 x 3.54in.)	6	115V 50/60Hz	1280w	12.5kg (27 lb.)
EMEA6 1000/CEX1	6 x 1000mL	26 x 120 x 9cm (10.23 x 47.24 x 3.54in.)	6	115V 50/60Hz	1880w	12.5kg (28 lb.)
Heater-Only Models						
EME3 0100/CEB	3 x 100mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	180w	6kg (13 lb.)
EME3 0250/CEB	3 x 250mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	450w	7kg (15.4 lb.)
EME3 0500/CEB	3 x 500mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	600w	7.4kg (16 lb.)
EME3 1000/CEB	3 x 1000mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	230V 50/60Hz	900w	7.4kg (16 lb.)
EME6 0100/CEB	6 x 100mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	420w	11.1kg (24.7 lb.)

Thermo Scientific Laboratory Products

EME6 0250/CEB	6 x 250mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	900w	10kg (22 lb.)
EME6 0500/CEB	6 x 500mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	1200w	12.5kg (27 lb.)
EME6 1000/CEB	6 x 1000mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	230V 50/60Hz	1800w	12.5kg (27 lb.)
EME3 0100/CEBX1	3 x 100mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	180w	6kg (13 lb.)
EME3 0250/CEBX1	3 x 250mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	450w	6kg (13 lb.)
EME3 0500/CEBX1	3 x 500mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	600w	7.4kg (16 lb.)
EME3 1000/CEBX1	3 x 1000mL	26 x 63 x 9cm (10.23 x 24.80 x 3.54in.)	3	115V 50/60Hz	900w	7.4kg (16 lb.)
EME6 0100/CEBX1	6 x 100mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	115V 50/60Hz	420w	11.1kg (24.7 lb.)
EME6 0250/CEBX1	6 x 250mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	115V 50/60Hz	900w	10kg (22 lb.)
EME6 0500/CEBX1	6 x 500mL	26 x 120 x 9cm (10.23 x 24.80 x 3.54in.)	6	115V 50/60Hz	1200w	12.5kg (27 lb.)
EME6 1000/CEBX1	6 x 1000mL	26 x 120 x 9cm (10.23 x 47.24 x 3.54in.)	6	115V 50/60Hz	1880w	7.4kg (16 lb.)

Thermo Scientific* Macro-Kjeldahl and Micro-Kjeldahl Extraction Heaters

The Thermo Scientific Macro-Kjeldahl Extraction Heaters and Micro-Kjeldahl Extraction Heaters accept volume sizes from 8mL to 800mL.

Individual built-in controllers regulate quartz fiber heating elements from 550° to 800°C.

Macro-Kjeldahl

- Stainless-steel construction permits operation of the units as required by extraction and distillation processes
- Heater ON light for each recess indicates when power is supplied to the heater
- Back-mounted brackets hold flask rest rods supplied with each unit

Micro-Kjeldahl

- Stainless-steel case minimizes damage from spills
- Six individual recesses at 7.2cm (2.8in.) centers allow single or multiple digestions
- Adjustable clamps accept the standard arms supplied

Warranty: One year, parts and labor

Certifications: CE

Specifications	
Max. Element Temperature	800°C (1400°F)
Material	Stainless Steel

Cat. No.	Description	Capacity	Electrical Requirements	D x W x H
MM2313/E	Micro-Kjeldahl	18 to 50mL	230V 50/60Hz, 600w	16.0 x 52.0 x 16.2cm (6.29 x 20.47 x 6.37in.)
MM2313/EX1	Micro-Kjeldahl	18 to 50mL	115V 50/60Hz, 600w	16.0 x 52.0 x 16.2cm (6.29 x 20.47 x 6.37in.)
MM2313/EX6	Micro-Kjeljahl	18 to 50mL	230V 50/60Hz, 600w, EU Plug	16.0 x 52.0 x 16.2cm (6.29 x 20.47 x 6.37in.)
MQ3822B/E	Macro-Kjeldahl	100 to 300mL	230V 50/60Hz, 600w	26.0 x 97.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3822B/EX1	Macro-Kjeldahl	100 to 300mL	115V 50/60Hz, 600w	26.0 x 32.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3822B/EX6	Macro-Kjeldahl	100 to 300mL	230V 50/60Hz, 600w, EU Plug	26.0 x 32.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3824B/E	Macro-Kjeldahl	500 to 800mL	230V 50/60Hz, 1100w	26.0 x 32.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3824B/EX1	Macro-Kjeldahl	500 to 800mL	115V 50/06Hz, 1100w	26.0 x 32.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3824B/EX6	Macro-Kjeldahl	500 to 800mL	230V 50/60Hz, 1100w, EU Plug	26.0 x 32.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3866B/E	Macro-Kjeldahl	100 to 300mL	230V 50/06Hz, 1800w	26.0 x 97.0 x 16.5cm (10.23 x 38 x 6.49in.)
MQ3866B/EX1	Macro-Kjeldahl	100 to 300mL	115V 50/60Hz, 1800w	26.0 x 97.0 x 16.5cm (10.23 x 38 x 6.49in.)
MQ3866B/EX6	Macro-Kjeldahl	100 to 300mL	230V 50/60Hz, 1800w, EU Plug	26.0 x 97.0 x 16.5cm (10.23 x 38 x 6.49in.)
MQ3868B/E	Macro-Kjeldahl	500 to 800mL	230V 50/60Hz, 3300w	26.0 x 97.0 x 16.5cm (10.23 x 38 x 6.49in.)
MQ3868B/EX1	Macro-Kjeldahl	500 to 800mL	115V 50/60Hz, 3300w	26.0 x 97.0 x 16.5cm (10.23 x 12.6 x 6.49in.)
MQ3868B/EX6	Macro-Kjeldahl	500 to 800mL	230V 50/60Hz, 3300w, EU Plug	26.0 x 97.0 x 16.5cm (10.23 x 38 x 6.49in.)

Thermo Scientific* Controllers

The Thermo Scientific Controllers line includes a range of models for single, double and triple place and percentage off/on.

Controller line includes the ideal controller to pair with your heating mantles, mats and tapes.

Model MC810B

- PTFE-covered platinum resistance thermometer is included for measurements to 270°C (518°F)
- Zinc die-cast outer case is suitable for the bench or can be mounted on a 12.7mm (0.5 in.) support rod
- Programming is done by up/down controls
- Three-digit LED display allows you to set a 1°C resolution over a range of -10° to +800°C (14° to 1472°F)
- A hysteresis range can be set to govern the range of temperature variation in the medium being controlled

Other Models

- Single and double place controllers are also available as percentage off/on or as proportional controllers
- Controller models MC810B and MC810BX1 can be clamped on a support rod or stand

Warranty: One year parts and labor

Certifications: CE

Cat. No.	Description	Volts
MC5	Bunsen Controller	230V
MC5X6	Bunsen Controller	230V EU plug
MC227	Single place percentage on/off, diecast	230V
MC227X1	Single place percentage on/off, diecast	115V
MC227X6	Single place percentage on/off, diecast	230V, EU Plug
MC228X1	Single place percentage on/off, diecast	115V
MC240	Double place percentage on/off	230V
MC240X1	Double place percentage on/off	115V
MC240X6	Double place percentage on/off	230V EU plug
MC242	Single place percentage on/off	230V
MC242X1	Single place percentage on/off	115V
MC242X6	Single place percentage on/off	230V EU plug
MC810B	Digital controller	230V
MC810BX1	Digital controller	115V
MC810BX6	Digital controller	230V EU plug
CMUT1000/CE	Metal Case Mantle Uncontrolled with Built-in Controller	230V
CMUT1000/CEX1	Metal Case Mantle Uncontrolled with Built-in Controller	115V
CMUT1000/CEX6	Metal Case Mantle Uncontrolled with Built-in Controller	230V EU plug
CMUT1000/CEX1KIT	Metal Case Mantle Uncontrolled with Stand-Alone Controller	115V

HOTPLATES AND STIRRERS

Thermo Scientific* Cimarec* Digital Hotplates

Thermo Scientific Cimarec 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 (all models), CE (220-240v models)

Cat. No.	Heating Surface Area	Material	Temperature Range	Overall L x W x H	Electrical Requirements
HP130915Q	10.8 × 10.8cm (4.25 × 4.25in.)	Ceramic	5° to 540°C (41° to 1004°F)	25 × 13 × 10cm (10 × 5 × 3.63in.)	120V 50/60Hz, 385w, 3.8A
HP130910-33Q	10.8 × 10.8cm (4.25 × 4.25in.)	Ceramic	5° to 540°C (41° to 1004°F)	25 × 13 × 10cm (10 × 5 × 3in.)	220-240V, 50/60, 420w, 1.7A
HP131225Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	5° to 540°C (41° to 1004°F)	33 × 21 × 10cm (13 × 8.25 × 3.88in.)	120V 50/60Hz, 1060w, 8.8A
HP131220-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	5° to 540°C (41° to 1004°F)	33 × 21 × 10cm (13 × 8 × 3in.)	240V, 50/60, 1150w, 4.8A
HP141925Q	18.4 × 18.4cm (7.25 × 7.25in.)	Aluminum	5° to 300°C (41° to 572°F)	33 × 21 × 10cm (13 × 8.25 × 3.88in.)	120V 50/60Hz, 660w, 5.5A
HP141920-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Aluminum	5° to 300°C (41° to 572°F)	33 × 21 × 10cm (13 × 8 × 3in.)	220-240V, 50/60Hz, 690w, 2.9A
HP131535Q	26 × 26cm (10.25 × 10.25in.)	Ceramic	5° to 400°C (41° to 752°F)	41 × 29 × 10cm (16.25 × 11.38 × 4in.)	120V 50/60Hz, 1410w, 11.7A
HP131530-33Q	26 × 26cm (10.25 × 10.25in.)	Ceramic	5° to 400°C (41° to 752°F)	41 × 29 × 10cm (16.25 × 11.38 × 4in.)	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, 6in. Type K probe.

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

Specifications	
No. of Positions	1
Material (Base)	Aluminum

Cat. No.	Heating Surface Area	Material (Surface)	Temperature Range	Overall L × W × H	Electrical Requirements
HP131725Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	1° to 370° C (33.8° to 698°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	120V 50/60Hz, 660w, 5.5A
HP131720-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	1° to 370°C (33.8° to 698°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	220-240V 50/60Hz, 690w, 2.9A
HP133425Q	18.4 × 18.4cm (7.25 × 7.25in.)	Aluminum	1° to 300°C (33.8° to 572°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	120V 50/60Hz, 660w, 5.5A
HP133420-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Aluminum	1° to 300°C (33.8° to 572°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	220-240V 50/60Hz, 690w, 2.9A
HP133735Q	26 × 26cm) (10.25 × 10.25in.)	Ceramic	1° to 370° C (33.8° to 698°F)	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4in.)	120V 50/60Hz, 1200w, 10A
HP133730-33Q	26 × 26cm) (10.25 × 10.25in.)	Ceramic	1° to 370°C (33.8° to 698°F)	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4in.)	220-240V 50/60Hz, 1345w, 5.6A

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 versitility needed for every application. Ideal for use in fume hoods
- Cord retention bracket prevents loose power cord connections that can cause electrical arcing

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

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

Specifications	
No. of Heating Places	1
Temperature Range	4° to 350°C (39° to 662°F)
Heating Surface Diameter	13.5cm (5.3in.)
Overall L x W x H	28.4 × 16.5 × 9.9cm (11.2 × 6.5 × 3.9in.)
Shipping Weight	3.4kg (7.6 lb.)

Cat. No.	Electrical Requirements
HP139925Q	120V 50/60Hz
HP139920-33Q	220/240V 50/60Hz

Thermo Scientific* RT Remote Probe Accessories

Cat. No.	Description
TC732X1	Six-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC732X2	10-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC727X2	Seven-inch, PTFE Remote Probe

Thermo Scientific* Nuova* Hotplates

The Thermo Scientific Nuova Hotplate has a compact design, excellent temperature uniformity and a corrosion-resistant top.

Excellent low end temperature control makes this hotplate ideal for warming applications.

- Low-profile design saves valuable bench space
- Durable die-cast aluminum case
- Excellent corrosion resistance with porcelain-coated stainless-steel top
- Accommodates up to 20 lb. (9.1kg) loads
- Integral ring stand holder accommodates a 0.5in. (1.3cm) diameter support rod
- Demand-type thermostatic temperature control provides excellent temperature stability: ±5.0°C (9°F) at 371°C (700°F)
- Embedded heating elements transfer heat evenly and uniformly
- Topside drip edge protects internal components in case of spillage

Warranty: Three years

Compliance: UL listed.

Certifications: cCSAus (all models), CE (220-240V models)

Specifications	
Heating Surface Area	17.7 x 17.7cm (7.0 x 7.0in.)
Temperature Range	38° to 371°C (100° to 700°F)
Dimensions (L × W × H)	21.8 × 29.9 × 11.73cm (8.6 × 11.8 × 4.5in.)
Shipping Weight	4.5kg (10 lb.)

Cat. No.	Electrical Requirements
HP18325Q	120V, 840w, 7.0A
HP18320	220 to 240V, 840w, 3.5A
HP18320-26Q	220 to 240V (supplied with European cord set), 840w, 3.5A

Thermo Scientific* Cimarec* Basic Hotplates

Thermo Scientific Cimarec basic hotplates reach maximum temperature in less than 8 minutes.

Sleek, rugged design and construction reduces the chance of top plate breakage and promotes durability, for economical high performance.

- Solid ceramic top plate cleans easily, resists acids and alkalis
- New top-plate design reduces chance of breakage
- Spillaway design diverts spills away from internal components
- Control knob allows precise temperature control
- Integral ring-stand holder accommodates 0.5 in. (1.3cm) diameter support rod

Warranty: Three years

Certifications: cCSAus

Specifications	
Top Plate Material	Ceramic
Temperature Range	150° to 538°C (302° to 1000°F)

Cat. No.	Heating Surface Area	Overall L x W x H	Electrical Requirements
HP194515	10.8 × 10.8cm (4.25 × 4.25in.)	20 × 14.5 × 12.7cm (7.9 × 5.7 × 5in.)	120V 60Hz, 3.21A, 385w
HP194825	18.4 × 18.4cm (7.25 × 7.25in.)	28.2 × 21.1 × 12.7cm (11.1 × 8.3 × 5in.)	120V 60Hz, 8.96A, 1062w

Thermo Scientific* Student Hotplates

Thermo Scientific Student Hotplates have small diameter heating surfaces, which provide high heat in a small footprint.

Ideal for quick sample testing.

- Compact design
- Quick heatup
- Perforated stainless-steel case allows air to circulate to protect controls and countertop from excess heat
- Recommended for use with glass vessels
- Maximum temperature: 371°C (700°F)
- Aluminum top
- Thermostatic temperature control provides excellent stability of the top plate temperature and the sample
- Hotplate reaches 260°C (500°F) in just 4.5 min.

Warranty: Three years

Certifications: UL listed

Cat. No.	Electrical Requirements
HP2305B	120V 50/60Hz, 325w, 2.7A
HP2310B	240V 50/60Hz, 325w, 1.4A

Thermo Scientific* Explosion-Proof SAFE-T HP6 Hotplates

Thermo Scientific Explosion-Proof SAFE-T HP6 Hotplates are for use in Class I/Group D atmospheres.

For hazardous applications, hotplates feature overtemperature safety monitors, precise thermostatic controls and sealed aluminum housing.

- Thermostatic safety is set at 243°C (469.4°F) for added protection
- Maintains temperature within ±5.5°C (9.9°F)
- Sealed aluminum housing contains and protects controls
- Cast aluminum top plate maximizes heat transfer and uniformity (±6.5°C or 11.7°F)
- Corrosion-resistant steel case for easy cleaning and maintenance
- Accommodates up to 25 lb. (11.3kg) loads and metal vessels/containers

Warranty: Three years

Certifications: UL/cUL listed; Explosion-proof for Class I, D atmospheres

Specifications	
Temperature Range	38° to 22°C (100° to 428°F)
Heating Surface Area	15.6 x 15.6cm (6.13 x 6.13in.)
Power Consumption	600w
Electrical Requirements	120V 50/60Hz
Amps	5A

Cat. No.	Description
HP11515B	SAFE-T HP6 Hotplate

Thermo Scientific* Dial Thermometer for Explosion-Proof Hotplate

Thermo Scientific Dial Thermometer is used to monitor top-plate temperature on an explosion-proof hotplate.

- Temperature range: 0° to 300°C
- Stem dia. x L: 0.64 x 6.4cm (0.25 x 2.5in.)
- Face dia.: 2.5cm (1in.)

Warranty: Three years

Cat. No.	Description
MEX126	Dial Thermometer

Thermo Scientific* Aluminum-Top Hotplates

The Thermo Scientific Aluminum-Top Hotplates fit lab, clinic or classroom budgets.

Aluminum top plate maintains uniform temperature across plate surface.

These durable hotplates are equipped with thermostatic temperature control.

- Uniform temperature (±2.4°C at 100°C)
- Maximum operating temperature: 371°C (700°F)
- Baffle-vented welded stainless-steel case
- Cast-aluminum top for maximum heat transfer, strength and corrosion resistance

Warranty: Three years

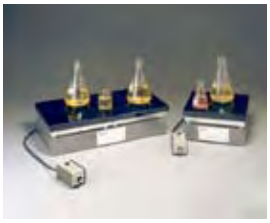
Certifications: UL listed (120V model)

Notes: Recommended for use with glass vessels only.

Specifications	
Heating Surface Area	15.9cm^2 (6.25 sq. in.)
Temperature Range	38° to 371°C (100° to 700°F)
Overall L x W x H	19.4 x 16.8 x 11.1cm (7.63 x 6.63 x 4.38in.)

Cat. No.	Volts
HPA1915BQ	120V
HPA1910MQ	240V

Thermo Scientific* Large External-Controlled Hotplates



Thermo Scientific remote-control hotplates allow for uniform heating of large volumes and multiple vessels.

Ideal for range of applications with acidic or basic aqueous solutions. External controller operates outside fume hoods and corrosive environment.

- Large capacity with excellent temperature stability
- Robust design for safety
- Porcelain-coated, stainless-steel top offers chemical and stain resistance
- Chemical-resistant cover protects line cord
- Stainless-steel case offers maximum resistance to corrosion
- Isolation of controls allows operation in hazardous environments
- Large 12 x 12 in. (30.5 x 30.5cm) and 12 x 24 in. (30.5 x 60.9cm) top plate surfaces accommodate up to 40 lb. (18.1kg) loads
- Temperature stability is ±5°C (9°F) over the operating temperature range
- Embedded heating elements maximize temperature uniformity and evenly transfer heat within ±10°C (18°F) at 150°C (300°F)
- Percentage input controller delivers infinite temperature selection
- Power light indicates when control is operating

Includes: 5ft. (1.5m) 3-wire cord and plug

Warranty: Three years

Specifications	
Temperature Range	150° to 371°C (300° to 700°F)

Cat. No.	Heating Surface	Electrical Requirements
RC2235Q	30.5 x 30.5cm (12 x 12in.)	120V 50/60Hz, 1600w, 13.3A
RC2240Q	30.5 x 60.9cm (12 x 24in.)	240V 50/60Hz, 3200w, 13.3A

Thermo Scientific* 2200 Series Aluminum Top Hotplates

Thermo Scientific 2200 Series Aluminum-top Hotplates are designed for large-volume heating.

Ideal for applications requiring precise temperature stability, including acid/base digestion, sample drying, general reagent heating, heating TLC plates, and evaporations.

- Large, aluminum heating surface and thermostatic controls for superior temperature uniformity and stability
- Thermostatic temperature control provides excellent stability
- Safe and reliable construction
- Cycle light indicates when power is being supplied to heating element
- Stainless-steel case provides optimal strength for heavy loads
- Epoxy-painted surface increases chemical resistance in corrosive environments
- Large 12 x 12 in. (30.5 x 30.5cm) and 12 x 24 in. (30.5 x 60.9cm) top plate surfaces accommodate up to 40 lb. (18.2kg) loads

Warranty: Three years

Certifications: UL listed

Alert: Recommended for use with glass vessels only.

Specifications	
Operating Temperature	38° to 371°C (100° to 700°F)

Cat. No.	Heating Surface Area	Temperature Stability (at 100°C)	Temperature Uniformity (at 100°C)	Overall L x W x H	Electrical Requirements
HPA2235MQ	30.5 x 30.5cm (12 x 12in.)	±3.0°C (5.4°F)	±4.0°C (7.2°F)	33 x 30.5 x 15.6cm (13 x 12 x 6.13in.)	120V 50/60Hz, 1600w, 13.3A
HPA2230MQ	30.5 x 30.5cm (12 x 12in.)	±3.0°C (5.4°F)	±4.0°C (7.2°F)	33 x 30.5 x 15.6cm (13 x 12 x 6.13in.)	240V 50/60Hz, 1600w, 6.7A
HPA2245MQ	30.5 x 60.9cm (12 x 24in.)	±3.5°C (6.3°F)	±10°C (18°F)	34.9 x 60.9 x 15.9cm (13.75 x 24 x 6.25in.)	120V 50/60Hz, 3200w, 26.6A
HPA2240MQ	30.5 x 60.9cm (12 x 24in.)	±3.5°C (6.3°F)	±10°C (18°F)	34.9 x 60.9 x 15.9cm (13.75 x 24 x 6.25in.)	240V 50/60Hz, 3200w, 13.3A

Thermo Scientific* Cimarec* Digital Stirring Hotplates

Thermo Scientific Cimarec 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. × 2 in.L (1 × 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 (all models), CE (220-240V models)

Specifications	
No. of Places	1
Stirring Range	60 to 1200rpm

Cat. No.	Heating Surface Area	Heating Surface	Temperature Range	Overall L× W × H	Shipping Weight	Electrical Requirements
SP131015Q	10.8 × 10.8cm (4.25 × 4.25 in.)	Ceramic	5° to 540°C (41° to 1004°F)	25 × 13 × 10cm (10 × 5 × 3.63 in.)	3.2kg (7 lb.)	120V 50/60Hz
SP131010-33Q	10.8 × 10.8cm (4.25 × 4.25 in.)	Ceramic	5° to 540°C (41° to 1004°F)	25 × 13 × 10cm (10 × 5 × 3.63 in.)	3.2kg (7 lb.)	220/240V 50/60Hz
SP131325Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Ceramic	5° to 540°C (41° to 1004°F)	33 × 21 × 10cm (13 × 8.25 × 3.88 in.)	5kg (11 lb.)	120V 50/60Hz
SP131320-33Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Ceramic	5° to 540°C (41° to 1004°F)	33 × 21 × 10cm (13 × 8.25 × 3.88 in.)	5kg (11 lb.)	220/240V 50/60Hz
SP142025Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Aluminum	5° to 300°C (41° to 572°F)	33 × 21 × 10cm (13 × 8.25 × 3.88 in.)	5kg (11 lb.)	120V 50/60Hz
SP142020-33Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Aluminum	5° to 300°C (41° to 572°F)	33 × 21 × 10cm (13 × 8.25 × 3.88 in.)	5kg (11 lb.)	220/240V 50/60Hz
SP131635Q	26 × 26cm (10.25 × 10.25 in.)	Ceramic	5° to 400°C (41° to 752°F)	41 × 29 × 10cm (16.25 × 11.38 × 4 in.)	6.2kg (13.75 lb.)	120V 60Hz
SP131630-33Q	26 × 26cm (10.25 × 10.25 in.)	Ceramic	5° to 400°C (41° to 1004°F)	41 × 29 × 10cm (16.25 × 11.38 × 4 in.)	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 (all models), CE (220-240V models)

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

Cat. No.	Heating Surface Area	Material (Surface)	Temperature Range	Overall L × W × H	Electrical Requirements
SP131825Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Ceramic	1° to 370°C (33.8° to 698°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8 in.)	120V 50/60Hz, 670w, 5.6A
SP131820-33Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Ceramic	1° to 370°C (33.8° to 698°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8 in.)	220-240V 50/60Hz, 710w, 3.0A
SP133525Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Aluminum	1° to 300°C (33.8° to 572°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8 in.)	120V 50/60Hz, 670w, 5.6A
SP133520-33Q	18.4 × 18.4cm (7.25 × 7.25 in.)	Aluminum	1° to 300°C (33.8° to 572°F)	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8 in.)	220-240V 50/60Hz, 710w, 3.0A
SP133835Q	26 × 26cm (10.25 × 10.25 in.)	Ceramic	1° to 370°C (33.8° to 698°F)	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4 in.)	120V 50/60Hz, 1210w, 10.1A
SP133830-33Q	26 × 26cm (10.25 × 10.25 in.)	Ceramic	1° to 370°C (33.8° to 698°F)	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4 in.)	220-240V 50/60Hz, 1365w, 5.7A

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, 5.38in. 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.

Designed for Stability and Safety

- Redundant temperature control system includes user-selectable overtemperature setpoint
- 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 6in. (15.2cm) PTFE-coated temperature probe

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

Specifications	
No. of Places	1
Stirring Range	50 to 1200rpm
Top Plate Diameter	13.5cm (5.3in.)
Overall L x W x H	28.4 × 16.5 × 9.9cm (11.2 × 6.5 × 3.9in.)
Shipping Weight	4.8kg (10.5 lb.)

Cat. No.	Material Top	Temperature Range	Electrical Requirements
SP136325Q	Aluminum	4° to 350°C (39° to 662°F)	120V 50/60Hz
SP136320-33Q	Aluminum	4° to 350°C (39° to 662°F)	220/240V 50/60Hz
SP138725Q	Stainless Steel	4° to 450°C (39° to 842°F)	120V 50/60Hz
SP138720-33Q	Stainless Steel	4° to 450°C (39° to 842°F)	220/240V 50/60Hz

Thermo Scientific* RT Remote Probe Accessories

Cat. No.	Description
TC732X1	Six-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC732X2	10-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC727X2	Seven-inch, PTFE Remote Probe

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
- Redundant temperature control system includes user-selectable overtemperature setpoint
- 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

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

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

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

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

Specifications	
No. of Places	1
Stirring Range	50 to 1200rpm
Top Plate Diameter	13.5cm (5.3 in.)
Overall L x W x H	28.4 × 16.5 × 9.9cm (11.2 × 6.5 × 3.9 in.)
Shipping Weight	10.4kg (23 lb.)

Cat. No.	Material (Surface)	Temperature Range	Electrical Requirements
SP136425Q	Aluminum	1° to 350°C (34° to 662°F)	120V 60Hz
SP136420-33Q	Aluminum	1° to 350°C (34° to 662°F)	220-240V 50/60Hz
SP138825Q	Stainless-steel	1° to 450°C (34° to 842°F)	120V 60Hz
SP138820-33Q	Stainless-steel	1° to 450°C (34° to 842°F)	220-240V 50/60Hz

Thermo Scientific* RT Remote Probe Accessories

Cat. No.	Description
TC732X1	Six-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC732X2	10-inch, 316ss Remote Probe (Max. Temp: 1100°C)
TC727X2	Seven-inch, PTFE Remote Probe

Thermo Scientific* Nuova* Stirring Hotplates

Thermo Scientific Nuova stirring hotplates are ideal for warming applications requiring stir speeds as low as 100rpm.

These stirring hotplates deliver full stirring and heating capabilities, featuring a compact design, low temperature stability and corrosion-resistant top for a wide range of warming applications.

Reaches maximum temperature in just 8 minutes. Embedded heating element ensures even heat distribution.

- Durable die-cast aluminum case
- Corrosion-resistant porcelain-coated stainless-steel top
- Accommodates up to 20 lb. (9.1kg) load
- Low temperature control as low as 38°C (100°F)
- Demand-type thermostatic temperature control provides reliable temperature stability: ±5.0°C (9°F) at 371°C (700°F)
- Embedded heating elements transfer heat evenly across plate
- Topside drip edge protects internal components if spillage occurs
- For use with glass vessels only

Includes: Integral ring stand holder to accommodate a 0.5in. (1.3cm) diameter support rod

Warranty: Three years

Certifications: UL listed (120V model only); cCSAus (all models), CE (220-240V models)

Alert: Recommended for use with glass vessels only

Specifications	
Stirring Speed Range	100 to 1000rpm
Heating Surface	17.7 x 17.7cm (7.0 x 7.0in.)
Overall L x W x H	21.8 x 29.9 x 11.43cm (8.6 x 11.8 x 4.5in.)
Temperature Range	38° to 371°C (100° to 700°F)
Shipping Weight	5kg (11 lb.)

Cat. No.	Electrical Requirements
SP18425Q	120V, 858w, 7.0A
SP18420Q	240V, 851ww, 3.5A
SP18420-26Q	240V (w/European cord set), 851w, 3.6A

Thermo Scientific* Cimarec* Basic Stirring Hotplates

The sleek, rugged design of the Thermo Scientific Cimarec basic stirring hotplate combines performance and economy.

Ideal for general-purpose stirring at speeds up to 2500rpm.

- Reaches maximum temperature in under 8 minutes
- Control knobs allow precise temperature and speed control
- Solid ceramic top plate cleans easily, resists acids and alkalis
- New top-plate design reduces chance of breakage
- Spillaway design diverts spills away from internal components
- Integral ring-stand holder accommodates 0.5in. (1.3cm) diameter support rod

Includes: TFE-coated stir bar

Warranty: Three years

Certifications: cCSAus

Specifications	
Top Plate Material	Ceramic
Temperature Range	150° to 538°C (302 to 1000°F)
Stirring Range	100 to 2500rpm

Cat. No.	Heating Surface Area	Overall L × W × H	Electrical Requirements
SP194715	10.8 × 10.8cm (4.25 × 4.25in.)	20 × 14.5 × 12.7cm (7.9 × 5.7 × 5in.)	120V 60Hz, 3.45A, 405w
SP195025	18.4 × 18.4cm (7.25 × 7.25in.)	28.2 × 21.1 × 12.7cm (11.1 × 8.3 × 5in.)	120V 60Hz, 9.18A, 1086w

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 heating/stirring positions, ceramic tops and 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, 6in. Type K probe. Stirring models also include stir bar

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

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

Cat. No.	Electrical Requirements
SP135935Q	120V 50/60Hz, 1400w, 11.8A
SP135930-33Q	220-240V 50-60Hz

Thermo Scientific* Explosion-Proof SAFE-T SHP9 Stirring Hotplate

Thermo Scientific Explosion-Proof SAFE-T SHP9 stirring hotplates deliver the highest protection for hazardous applications, including Class I, Group C and D flammable gases or solvent vapors.

Feature thermostatic control, overtemperature safety monitors and precise temperature stability.

UL listed for Class I, Groups C and D hazardous atmospheres in which flammable gases or solvent vapors can produce explosive or ignitable mixtures.

- Optional dial thermometer, with 0° to 300°C range, fits directly into top plate and measures surface temperature
- Large, aluminum top plate surface 9.1 x 9.1in. (23.2 x 23.2cm) provides efficient heat transfer
- Precise electronic heat control maintains temperature stability within ±2°C (±4°F)
- Electronic temperature controls range from 38° to 220°C (100° to 428°F)
- Stir solutions with a viscosity of 1200cp at 400rpm (at 21.5°C)
- Sturdy construction allows maximum load capacity, 25 lb. (11.3kg) on top plate
- Stainless-steel case is easily cleaned and maintained and accommodates a metal vessel

Includes: Stirrer unit and one 2 × 0.38 in. (5 × 1cm) PTFE–coated stir bar

Warranty: Three years

Certifications: UL/cUL listed

Specifications	
Heating Surface	9.1 x 9.1 in. (23.2 x 23.2cm)
Temperature Range	38° to 220°C (100° to 428°F)
Stirring Speed Range	60 to 1200rpm
Overall Dimensions	12.8 x 10 x 8.1 in. (32.4 x 25.4 x 20.8cm)

Cat. No.	Electrical Requirements
SP87325Q	120V 50/60Hz, 1070w, 8.9A

Thermo Scientific* Dial Thermometer for Explosion-Proof Hotplate

Thermo Scientific Dial Thermometer is used to monitor top-plate temperature on an explosion-proof hotplate.

- Temperature range: 0° to 300°C
- Stem dia. x L: 0.64 x 6.4cm (0.25 x 2.5in.)
- Face dia.: 2.5cm (1in.)

Warranty: Three years

Cat. No.	Description
MEX126	Dial Thermometer

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 (0.5in.) dia. support rod

Safety Features

- 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

Aluminum Top Models

- Rugged and chip-resistant for superior durability

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

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

Specifications	
No. of Positions	1
Stirring Speed	60 to 1200rpm

Cat. No.	Stirring Surface Area	Material (Surface)	Overall L × W × H	Electrical Requirements
S130815Q	10.8 × 10.8cm (4.25 × 4.25in.)	Ceramic	25.4 × 12.7 × 9.1cm (10 × 5 × 3.6in.)	120V 60Hz
S130810-33Q	10.8 × 10.8cm (4.25 × 4.25in.)	Ceramic	25.4 × 12.7 × 9.1cm (10 × 5 × 3.6in.)	220-240V 50/60Hz
S131125Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	120V 60Hz
S131120-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	220-240V 50/60Hz
S131435Q	26 × 26cm (10.25 × 10.25in.)	Ceramic	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4in.)	120V 60Hz
S131430-33Q	26 × 26cm (10.25 × 10.25in.)	Ceramic	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4in.)	220-240V 50/60Hz
S142125Q	18.4 × 18.4cm (7.25 × 7.25in.)	Aluminum	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	120V 50/60Hz
S142120-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Aluminum	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	220-240V 50/60Hz

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 (all models), CE (220-240V models)

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

Cat. No.	Stirring Surface Area	Surface Material	Overall L x W x H	Electrical Requirements
S133325Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	120V, 60Hz
S133320-33Q	18.4 × 18.4cm (7.25 × 7.25in.)	Ceramic	33 × 20.8 × 9.7cm (13 × 8.2 × 3.8in.)	220-240V, 50/60Hz
S133935Q	26 × 26cm (10.25 × 10.25in.)	Ceramic	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4in.)	120V, 60Hz
S133930-33Q	26 × 26cm (10.25 × 10.25in.)	Ceramic	41.1 × 28.7 × 10.2cm (16.2 × 11.3 × 4in.)	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

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

Includes: Detachable cord and TFE-coated stir bar.

Warranty: Three years

Certifications: cCSAus (all models), CE (220-240V models)

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

Cat. No.	Electrical Requirements
S138925Q	120V 50/60Hz
S138920-33Q	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
- IP64 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 × 180 × 35mm (8.5 × 7.1 × 1.4in.)

Cat. No.	Description	Stirring Speed	Protection Class	Weight	Power Settings	Voltage/Plug Type
50094711	Mono Direct	130 to 1200rpm	IP32	1.4kg (3 lb.)	1/5W	230V Euro
50095601	Mono Direct	130 to 1200rpm	IP32	1.4kg (3 lb.)	1/5W	115V USA
50094713	Maxi Direct	80 to 2000rpm	IP64	2.5kg (5.5 lb.)	5/10/15/20W	100-240V

Thermo Scientific* General Purpose Low-Profile Stirrer

The Thermo Scientific General Purpose Low Profile Stirrer is stable and easy to clean.

Available with single or multi-place stirring positions.

- Uses Stir Trac* technology-strong magnetic coupling
- Rated for continuous use and sealed to IP65 standards
- Speed Range from 350 to 2000rpm
- Operating temperature 0° to 50°C 0-90% humidity
- Case material is glass molded resin

Includes: 1 stir bar for each stir position

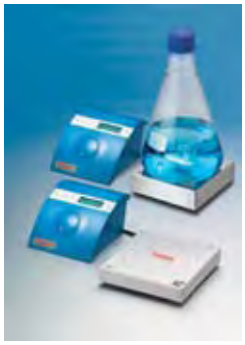
Warranty: Three years

Certifications: CE

Specifications	
Stirring Range	350-2000rpm

Cat. No.	No. of Stirring Positions	Capacity	Overall L x W x H	Weight	Electrical Requirements / Plug Type
PS60040X1	1	2L	15 × 15 × 7cm (6 × 6 × 2.75in.)	0.8kg (1.8 lb.)	115V / US
PS60040X6	1	2L	15 × 15 × 7cm (6 × 6 × 2.75in.)	0.8kg (1.8 lb.)	230V / EU
PS60057X1	1	24L	26 × 26 × 7cm (10 × 10 × 2.75in.)	1.9kg (4.2 lb.)	115V / US
PS60057X6	1	24L	26 × 26 × 7cm (10 × 10 × 2.75in.)	1.9kg (4.2 lb.)	230V / EU
PS60042X1	4	1L per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	2.4kg (5.3 lb.)	115V / US
PS60042X6	4	1L per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	2.4kg (5.3 lb.)	230V / EU
PS60043X1	5	400mL per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	2.7kg (6 lb.)	115V / US
PS60043X6	5	400mL per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	2.7kg (6 lb.)	230V / EU
PS60044X1	9	250mL per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	3.2kg (7 lb.)	115V / US
PS60044X6	9	250mL per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	3.2kg (7 lb.)	230V / EU

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

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	18 × 18 × 3.5cm (7.1 × 7.1 × 1.4in.)	2.3kg (5.1 lb.)	6W	230V Euro
50088147	Maxi w/Standard Telemodul	130 to 1000rpm	18 × 18 × 3.5cm (7.1 × 7.1 × 1.4in.)	2.3kg (5.1 lb.)	6W	115V USA
50088135	Maxi w/Telemodul 20 C	130 to 1400rpm	18 × 18 × 3.5cm (7.1 × 7.1 × 1.4in.)	2.3kg (5.1 lb.)	4.5/13.5/18W	100-240V
50088122	Maxi w/Telemodul 40 C	130 to 2000rpm	18 × 18 × 3.5cm (7.1 × 7.1 × 1.4in.)	2.3kg (5.1 lb.)	3/36W	100-240V
50088152	Compact w/ Standard Telemodul	130 to 1000rpm	12 × 12 × 3.5cm (4.7 × 4.7 × 1.4in.)	1kg (2.2 lb.)	5W	230V Euro
50088142	Compact w/ Standard Telemodul	130 to 1000rpm	12 × 12 × 3.5cm (4.7 × 4.7 × 1.4in.)	1kg (2.2 lb.)	5W	115V USA
50088133	Compact w/Telemodul 20 C	130 to 1400rpm	12 × 12 × 3.5cm (4.7 × 4.7 × 1.4in.)	1kg (2.2 lb.)	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 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
50091720	4-Place Distributor
50091721	8-Place Distributor
50088137	Compact Stirrer w/o Controller
50088127	Maxi Stirrer w/o Controllers

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
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 × 1.9in.)
Weight	0.4kg (0.8 lb.)

Cat. No.	Volts
50119115	230V
50119119	115V

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	
Stirring Speed	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 × 3.7in.)
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	
Stirring 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° at 80% relative humidity
Overall L x W x H	165 × 155 × 95mm (6.4 × 6.1 × 3.7in.)
Weight	0.7kg (1.5 lb.)

Cat. No.	Description
50090774	40 C Controller

Thermo Scientific* Nuova* Magnetic Stirrers

Thermo Scientific Nuova Stirrer with a low profile to save space and a porcelain-coated top plate for chemical resistance is an excellent choice for low speed stirring.

Ideal for culture media preparation and slow speed stirring of culture media.

- Die cast aluminum case provides durability
- Excellent low speed stirring (100rpm) can be achieved by turning the control knob to setting 1
- Topside drip edge protects internal components from spills
- Stirrer accommodates up to 20 lb. (9.1kg) load

Includes: Integral ring stand holder accommodates a 0.5in. (1.3cm) diameter support rod, TFE stirbar

Warranty: Three years

Certifications: CUL

Notes: Recommended for use with glass vessels only.

Specifications	
Stirring Speed Range	100 to 1000rpm
Top Plate L × W	17.8 × 17.8cm (7 × 7in.)
Overall L × W × H	21.8 × 29.9 × 11.43cm (8.6 × 11.8 × 4.5in.)

Cat. No.	Electrical Requirements
S18525Q	120V 50/60Hz, 18w, 0.3A
S18520Q	240V 50/60Hz, 11w, 0.1A
S18520-26Q	240V 50/60Hz, 11w, 0.1A

Thermo Scientific* Cimarec* Basic Stirrers

Thermo Scientific Cimarec basic stirrers are ideal for economical, general-purpose use.

Stirring speeds from 100 to 2500rpm.

- Control knobs allow precise speed setting
- New top-plate design reduces chance of breakage
- Spillaway design directs spills away from internal components
- Integral ring-stand holder accommodates 0.5in. (1.3cm) diameter support rod

Includes: TFE-coated stir bar

Warranty: Three years

Certifications: cCSAus

Specifications	
Top Plate Material	Ceramic
Stirring Range	100 to 2500rpm

Cat. No.	Stirring Surface Area	Overall L x W x H	Electrical Requirements
S194615	10.8 × 10.8cm (4.25 × 4.25in.)	20× 14.5 × 12.7cm (7.9 × 5.7× 5in.)	120V 60Hz, 0.45A, 21w
S194925	18.4 × 18.4cm (7.25 × 7.25in.)	28.2 × 21.1 × 12.7cm (11.1 × 8.3 × 5in.)	120V 60 Hz, 0.48A, 23w

Thermo Scientific* StirBuddy Personal Stirrer

The Thermo Scientific StirBuddy Personal Stirrer has a compact and space-saving design.

The large 6in. diameter stirring surface of the StirBuddy personal stirrer reduces the risk of spills.

- Stir speed is continuously adjustable from 200 to 2500rpm through solid-state speed control
- Direct-drive motor/magnet assembly stir solutions from water to viscous 50% glycerin
- Stirrer is field recalibratable to accommodate viscous liquids and specialized vessels
- Top plate and base are made of molded thermoplastic polyester

Includes: TFE-coated stir bar

Warranty: Three years

Specifications	
Outside Dia.	15.2cm (6in.)
Height	7.6cm (3in.)
Stir Speed	200 to 2500rpm
Electrical Requirements	120V 60Hz, 0.4A, 48w
Weight	1.2kg (2.4 lb.)

Cat. No.	Description
S168515Q	StirBuddy

Thermo Scientific* Cosmo MiniStirrer

Thermo Scientific Cosmo MiniStirrer combines low-cost, personal size design with powerful stirring.

Choose from standard or digital stirrers. Stirs 0.26 gal. (1L) of liquid at 2000rpm.

- Rugged MiniStirrer with tough Hytrel* base and clear, chemically resistant nylon top
- Bright, easy-to-see power-on LED display
- Digital versions have precise readout of rpm

Includes: Stir bar and line adapter/charger

Warranty: Three years

Certifications: CE

Specifications	
No. of Stirring Positions	1
Speed Range	350 to 2000rpm
Top Material	Nylon
Overall L x W x H	14.3 x 14.3 x 6.6cm (5.6 x 5.6 x 2.3in.)

Cat. No.	Model	Electrical Requirements
PS61047X1	Standard	115V 50/60Hz
PS61047X6	Standard	230V 50/60Hz
PS61048X1	Digital	115V 50/60Hz
PS61048X6	Digital	230V 50/60Hz

Thermo Scientific* ABS Top Immersible Stirrers

Thermo Scientific ABS top immersible stirrers are completely sealed for use in immersion or high humidity applications.

Ideal for stirring in water baths, incubators and environmental chambers.

- Control up to six stir pads with one controller
- Stirring capacities from 400mL to 2L
- Case material is molded ABS

Ordering Information: Controllers must be ordered separately. Choose from 2- or 6-channel controllers.

Includes: Oval stir bar

Warranty: Three years

Certifications: CE marked

Specifications	
Speed Range	350 to 2000rpm
Temperature Range	-5° to +50°C

Cat. No.	Load Capacity
PS60002	400mL (13.52 oz.)
PS60003	1000mL (33.81 oz.)
PS60004	2000mL (67.62 oz.)

Thermo Scientific* Remote Control for ABS Top Immersible Stirrers

Thermo Scientific remote control for ABS top immersible stirrers available with two-channel and six-channel controls.

Cat. No.	No. of Channels (w/ Individual Speed Controls)	Volts
PS60006X1	6	115V
PS60006X6	6	230V
PS60029X1	2	115V
PS60029X6	2	230V

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

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 × 48 × 15mm (1.8 × 1.8 × 0.6in.)
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
50088150	Micro w/Telemodul	130 to 1000rpm	3w	115V USA
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
50091720	4-Place Distributor
50091721	8-Place Distributor
50088139	Micro Stirrer w/o Controller

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
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 × 1.9in.)
Weight	0.4kg (0.8 lb.)

Cat. No.	Volts
50119115	230V
50119119	115V

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	
Stirring Speed	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 × 3.7in.)
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

Specifications	
No. of Stirring Positions	1
Capacity	5L
Protection Class	IP68 (stirrer only)
Overall L x W x H	12 × 12 × 5mm (0.47 × 0.47 × 0.19in.)
Weight	0.02kg (0.04 lb.)

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
50088126	Mini w/ Telemodul	130 to 1000rpm	0.1w	100V Japan
50088118	Mini w/ Telemodul	130 to 1000rpm	0.1w	115V USA
50088120	Mini 20 w/ Telemodul 20 C	130 to 1400rpm	0.5/0.1/0.15/0.2w	100-240V
50088140	Mini w/o Telemodul	130 to 1400rpm	0.1w	230V

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
50091720	4-Place Distributor
50091721	8-Place Distributor
50088140	Mini Stirrer w/o Controller

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
50088016	4-Pin Extension Cable	3m	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 × 1.9in.)
Weight	0.4kg (0.8 lb.)

Cat. No.	Volts
50119115	230V
50119119	115V

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	
Stirring Speed	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 × 3.7in.)
Weight	0.6kg (1.3lb.)

Cat. No.	Description
50090773	20 C Controller

Thermo Scientific* Stir Light 7 x 7 Stirrer

The Thermo Scientific Stir Light 7 x 7 Stirrer illuminates hard-to-see titration end points.

Ideal for general laboratory applications including reagent mixing and stirring bacteria cultures.

- Lighted top allows easy viewing of samples while stirring
- Light and stirring functions can be used independently
- Variable stirring speeds from 250 to 2500rpm
- Large 7 × 7in. acrylic top plate surface accommodates 4L flasks
- Cool fluorescent bulbs minimize heat output
- Features built-in indicator light

Includes: TFE-coated stir bar

Warranty: Three years

Certifications: cCSAus

Specifications	
Top Plate Dimensions, L x W	17.8 × 17.8cm (7 × 7in.)
Stir Speed	250 to 2500rpm
Weight	2.7kg (6 lb.)
Electrical Requirements	120V 60Hz, 37w

Cat. No.	Description
SL194325	Stir Light 7 × 7in.

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 striring, 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 (all models), CE (220-240V models)

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

Cat. No.	Electrical Requirements
S136035Q	120V 60Hz
S136030-33Q	220-240V 50/60Hz

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
- 6-, 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

Specifications	
Type	IP 68
Overall L x W x H	420 × 240 × 35mm (16.5 × 9.4 × 1.4in.)
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 (16.5 lb.)	5/10/15/20w
50088078	Telesystem 6 Position w/Telemodul 40 C	6	100 to 2000rpm	8kg (17.6 lb.)	4-40w
50088034	Telesystem 15 Position w/Telemodul 20 C	15	130 to 1400rpm	7.5kg (16.5 lb.)	5/10/15/20w
50088036	Telesystem 15 Position w/Telemodul 40 C	15	100 to 2000rpm	8kg (17.6 lb.)	4-40w
50088009	Telesystem 60 Position w/Telemodul 20 C	60	130 to 1400rpm	7.5kg (16.5 lb.)	5/10/15/20w
50088011	Telesystem 60 Position w/Telemodul 40 C	60	100 to 2000rpm	8kg (17.6 lb.)	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
50087876	Thermostat 60°C	115V
50087884	Thermostat 60°C	230V
50087867	Thermostat 95°C	115V
50087875	Thermostat 95°C	230V

Thermo Scientific* Variomag* Bath Mounts

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

Capacity: 15L (3.9 gal.).

Cat. No.	Material	Dimensions (L x W x H)	Operating Temperature
50087880	Transparent Acrylic	610 × 330 × 185mm (24 × 13 × 7.3in.)	0° to 60°C
50087882	Stainless Steel	520 × 315 × 160mm (20.4 × 12.4 × 6.3in.)	-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
50087957	20mm tubes in Telesystem Series Stirrers
50087955	16mm tubes in Telesystem Series Stirrers

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
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	
Stirring Speed	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 × 3.7in.)
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	
Stirring 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° at 80% relative humidity
Overall L x W x H	165 × 155 × 95mm (6.4 × 6.1 × 3.7in.)
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 × 250mL beakers or 6 × 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

Specifications	
Overall L x W x H	420 × 240 × 35mm (16.5 × 9.4 × 1.4in.)
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* Multi-Position Stirrers with Individual Speed Control

The Thermo Scientific Multi-Position Stirrers offer six individually controlled stirring positions.

These multi-position stirrers control multiple experiments with varied speeds from 350 to 2000rpm.

- Low-profile design is stable and easy to clean
- Each position is controlled independently using an external controller
- Material is molded ABS (high impact)
- Operating temperature: 0° to 40°C 0-50% humidity (noncondensing)

Includes: Stirrer, external controller, and 1 stir bar for each stir position

Warranty: Three years

Certifications: CE

Specifications	
No. of Stirring Positions	6
Capacity	250mL per position
Dimensions, L x W x H	16.5 × 25 × 6.3cm (6.5 × 9.8 × 2.5in.)
Weight	2.5kg (5.5 lb.)

Cat. No.	Electrical Requirements
PS60087X1	115V US
PS60087X6	230V EU

Thermo Scientific* Slow Speed Stirrers with Integral Control

The Thermo Scientific Slow Speed Stirrers are ideal for use with magnetic culture vessels.

Stirrers feature sophisticated, electronically controlled magnetic drivers for precision stirring, which is reproducible to better than 1rpm.

- Splash-proof noncorrosive polymer case
- Low-profile, easy-to-clean design

Warranty: Three years

Certifications: CE

Specifications	
Stirring Speed	0 to 150rpm

Cat. No.	No. of Stirring Positions	Capacity	Dimensions (L x W x D)	Weight	Electrical Requirements
PS60046X1	1	2L	15 × 15 × 7cm (6 × 6 × 2.75in.)	0.8kg (1.8 lb.)	115V US
PS60046X6	1	2L	15 × 15 × 7cm (6 × 6 × 2.75in.)	0.8kg (1.8 lb.)	230V EU
PS60058X1	4	1L per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	2.7kg (6 lb.)	115V US
PS60058X6	4	1L per position	26 × 26 × 7cm (10 × 10 × 2.75in.)	2.7kg (6 lb.)	230V EU
PS60060X1	1	10L	26 × 26 × 7cm (10 × 10 × 2.75in.)	2kg (4.4 lb.)	115V US
PS60060X6	1	10L	26 × 26 × 7cm (10 × 10 × 2.75in.)	2kg (4.4 lb.)	230V EU
PS60055X1	1	24L	26 × 26 × 7cm (10 × 10 × 2.75in.)	2kg (4.4 lb.)	115V US
PS60055X6	1	24L	26 × 26 × 7cm (10 × 10 × 2.75in.)	2kg (4.4 lb.)	230V EU

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/decleration; 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 × 180 × 60mm (7 × 7 × 2.4in.)	3.4kg (7.5 lb.)	1w	230V Euro
50088058	Biosystem 1-Position Direct	180 × 180 × 60mm (7 × 7 × 2.4in.)	3.4kg (7.5 lb.)	1w	115V USA
50088061	Biosystem 4-Position Direct	330 × 330 × 60mm (12.9 × 12.9 × 2.4in.)	11kg (24.3 lb.)	0.05w (×4)	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 CO_2 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 CO_2 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

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

Cat. No.	Model	L x W x H	Weight
50119113	Biosystem w/o Controller	18 × 18 × 6cm (7 × 7 × 2.4in.)	3.4kg (7.5 lb.)
50119114	Biosystem 4-Position w/o Controller	33 × 33 × 6cm (12.9 × 12.9 × 2.4in.)	9.4kg (20.7 lb.)

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.	Volts
50118915	230V Germany
50118918	230V UK
50118916	230V Italy
50118919	230V Switzerland
50087904	115V US
50118917	230V Denmark
50118920	230V Australia

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 (9.8ft.)	Biomodul 40 B

Thermo Scientific* Large Volume Stirrer

The Thermo Scientific Large Volume Stirrer can reach speeds up to 2400rpm.

Polished stainless-steel construction resists corrosion.

- LED speed display
- Digital speed settings
- Stirring capacity up to 200L
- Accommodates stir bars from 1.5 to 6in. (4 to 15cm); sold separately
- 18 x 18in. (46 x 46cm) top surface has ridged non-slip white rubber mat

Warranty: Three years

Specifications	
Speed	Up to 2400rpm
Display	LED
Construction	Polished SS
Top Plate Surface Area	46 x 46cm (18 x 18in.)

Cat. No.	Description
1295Q	Large Volume Stirrer

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

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

Cat. No.	Model	Weight	Protection Class
50119111	Mobil 10 w/o controller	0.7kg (1.5 lb.)	IP66
50119112	Mobil 25 w/o controller	1.7kg (3.7 lb.)	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
500119121	Mobil 10 and Mobil 25	115V US

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
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

Specifications	
Stir Capacity	40L
Stirring Speed	100 to 2000rpm
Protection Class	IP22
Dimensions, L x W x H	295 × 240 × 35mm (11.6 × 9.4 × 1.4in.)
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
- Maximum shaft torque is 30Ncm for the Mobil Direct and 50Ncm for the Mobil 200 and 600

Mobil Direct

- Stir up to 150L
- 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
- Operating conditions are -10° to +56°C at 100%RH
- IP65 protection rated; easily cleaned with running water

Mobil 600

- Stir up to 600L
- 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

Specifications	
Stir Speed	100 to 1000rpm

Cat. No.	Description	Type	Dimensions	Weight	Power Settings	Volts
50088131	Mobil Direct	IP64	330 × 330 × 80mm (13 × 13 × 3.4in.)	16kg	40w	115V USA
50088128	Mobil Direct	IP64	330 × 330 × 80mm (13 × 13 × 3.4in.)	16kg	40w	230V Euro
50119109	Mobil 200 w/o Controller	IP65	180 × 180 × 80mm (7 × 7 × 3.4in.)	6kg	80w	n/a
50119110	Mobil 600 w/o Controller	IP65	330 × 330 × 80mm (13 × 13 × 3.4in.)	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* Explosion-Proof Safe-T S10 Stirrer

Thermo Scientific Explosion-Proof Safe-T S10 stirrer is designed for stirring viscous solutions and suspensions.

Designed with large ceramic top plate.

- Stirring speeds range from 60 to 1200rpm with precise, electronic control within ±3rpm
- Used to stir oils with a viscosity of 1200cp at 400rpm (at 21.5°C)
- Ceramic top plate surface of 10 x 10in. (25.4 x 25.4cm) allows maximum sample capacity
- Accommodates vessels with a capacity of 1.58 gal. (6L)
- Sturdy construction to handle a maximum load of 25 lb. (11.3kg) on the top plate
- Corrosion-resistant, stainless-steel case for easy cleaning and maintenance
- Stirrer is designed for sparkless, hardwired connection; 18in. (45.7cm) lead wire and conduit attachment are provided

Includes: PTFE stirbar

Warranty: Three years

Compliance: Meets IEC1010 laboratory standards

Certifications: UL listed. Safe for Class 1, Group C and D flammable gases or solvent vapors that can produce explosive or ignitable mixtures.

Specifications	
Top Plate Dimensions	25.4 x 25.4cm (10 x 10in.)
Stirring Speed	60 to 1200rpm
Overall Dimensions	32.4 x 28.3 x 20cm (12.8 x 11.1 x 7.9in.)
Shipping Weight	13.6kg (30 lb.)

Cat. No.	Electrical Requirements
S108525	120V 50/60Hz; 70w; 0.6A
S108520-33	240V 50/60Hz; 70w; 0.3A

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
50087930	Komet 30, 1 pack	Round	13mm x 30mm
50087924	Komet 15, 1 pack	Round	9mm x 15mm
50093336	Komet Glide-Ring 90, 1 pack	Round, with glide ring	31mm x 90mm
50093335	Komet Glide-Ring 50, 1 pack	Round, with glide ring	26mm x 50mm
50093334	Komet Glide-Ring 30, 1 pack	Round, with glide ring	17mm x 30mm

INCUBATORS

Thermo Scientific* Precision* High-Performance Incubators

Thermo Scientific Precision High-Performance Incubators feature mechanical or gravity convection with advanced microprocessor controls.

Thermo Scientific Precision High-Performance Incubators with mechanical or gravity convection are ideal for applications requiring excellent temperature distribution or gentle sample heating between 5°C above ambient to 75°C.

Mechanical convection provides uniform heating, precise temperature control and fast drying. A blower circulates heated air in a horizontal airflow pattern for efficient heat distribution with tight temperature tolerances of up to ±0.5°C. Gravity convection offers gentle drying with heat-generated convection to move the air vertically through the chamber to heat samples.

Advanced Microprocessor PID Controls

- Sophisticated microprocessor PID controls with easy-to-view digital LED readout
- Temperature is displayed on large, three-character screen; can be easily set from 5°C above ambient to up to 75°C (depending on model) in 0.1°C increments using touch-sensitive arrow keys
- Fixed setpoints on control panel eliminate need for tuning
- Offset feature enables easy calibration

Built-In Safety

- Built-in safety back-up maintains control at 3°C above setpoint if primary heater control fails
- Visual alarm indicates when temperature exceeds 3°C setpoint

Robust Construction

- Inner glass door permits viewing of samples without disturbing chamber environment
- Silicone gasket on outer door and 7.6cm (3in.)-thick fiberglass insulation prevents heat loss, ensures excellent temperature uniformity
- Circuit breaker protects against power surges
- Durable, enamel-coated steel exterior
- Interior chamber is easy-to-clean stainless steel
- Low-watt density heater elements are designed for long life
- Internal electrical outlet allows operation of a shaker, stirrer or other lab apparatus (849.6L unit has two outlets)
- Large capacity units (317L) with double-door design

Warranty: One year, parts and labor

Certifications: UL/cUL listed, except for large capacity units.

Specifications	
Chamber	Stainless steel
Insulation	7.6cm (3in.)-thick fiberglass
Cabinet	Enamel-coated steel

Cat. No.	Capacity	Interior Dimentions (D × W × H)	Exterior Dimensions (L × W × H)	Control	Temperature Range	No. of Shelves	Electrical Requirements
Gravity Convection							
PR205045G	71L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 64 × 66cm (23.5 × 25 × 26in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/5 max.	120V 60Hz (260w/2.2A)
PR205040G	71L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 64 × 66cm (23.5 × 25 × 26in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/5 max.	240V 50/60Hz (260w/1.1A)
PR205055G	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 64 × 84cm (23.5 × 25 × 33in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/5 max.	120V 60Hz (260w/2.2A)
PR205050G	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 64 × 84cm (23.5 × 25 × 33in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/5 max.	240V 50/60Hz (260w/1.1A)
PR205065G	142L (5.0 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 64 × 99cm (23.5 × 25 × 39in.)	Microprocessor PID	Ambient +5° to 75°C	2 supplied/11 max.	120V 60Hz (320w/2.7A)
PR205060G	142L (5.0 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 64 × 99cm (23.5 × 25 × 39in.)	Microprocessor PID	Ambient +5° to 75°C	2 supplied/11 max.	240V 50/60Hz (320w/1.4A)
PR205075G	317L (11.2 cu. ft.)	53 × 94 × 64cm (21 × 37 × 25in.)	64 × 101 × 88cm (25 × 40 × 35in.)	Microprocessor PID	Ambient +5° to 65°C	6 supplied/36 max.	120V 60Hz (450w/3.8A)
PR205070G	317L (11.2 cu. ft.)	53 × 94 × 64cm (21 × 37 × 25in.)	64 × 101 × 88cm (25 × 40 × 35in.)	Microprocessor PID	Ambient +5° to 65°C	6 supplied/36 max.	240V 50/60Hz (450w/1.9A)
Mechanical Convection							
PR205045M	62.3L (2.2 cu. ft.)	46 × 46 × 32cm (18 × 18 × 12.5in.)	60 × 64 × 66cm (23.5 × 25 × 26in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/3 max.	120V 60Hz (330w/8.3A)
PR205040M	62.3L (2.2 cu. ft.)	46 × 46 × 32cm (18 × 18 × 12.5in.)	60 × 64 × 66cm (23.5 × 25 × 26in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/3 max.	240V 50/60Hz (330w/6.6A)
PR205055M	96L (3.4 cu. ft.)	46 × 46 × 48cm (18 × 18 × 19in.)	60 × 64 × 84cm (23.5 × 25 × 33in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/6 max.	120V 60Hz (330w/8.3A)

PR205050M	96L (3.4 cu. ft.)	46 × 46 × 48cm (18 × 18 × 19in.)	60 × 64 × 84cm (23.5 × 25 × 33in.)	Microprocessor PID	Ambient +5° to 75°C	1 supplied/6 max.	240V 50/60Hz (330w/6.6A)
PR205065M	127L (4.5 cu. ft.)	46 × 46 × 65cm (18 × 18 × 25.5in.)	60 × 64 × 99cm (23.5 × 25 × 39in.)	Microprocessor PID	Ambient +5° to 75°C	2 supplied/10 max.	120V 60Hz (410w/8.9A)
PR205060M	127L (4.5 cu. ft.)	46 × 46 × 65cm (18 × 18 × 25.5in.)	60 × 64 × 99cm (23.5 × 25 × 39in.)	Microprocessor PID	Ambient +5° to 75°C	2 supplied/10 max.	240V 50/60Hz (410w/7.0A)
PR205075M	317L (11.2 cu. ft.)	53 × 94 × 64cm (21 × 37 × 25in.)	64 × 101 × 88cm (25 × 39.8 × 34.5in.)	Microprocessor PID	Ambient +5° to 75°C	6 supplied/36 max.	120V 60Hz (520w/4.3A)
PR205070M	317L (11.2 cu. ft.)	53 × 94 × 64cm (21 × 37 × 25in.)	64 × 101 × 88cm (25 × 39.8 × 34.5in.)	Microprocessor PID	Ambient +5° to 75°C	6 supplied/36 max.	240V 50/60Hz (520w/2.2A)
3971	849.6L (30 cu.ft.)	61.6 × 72.2 × 182.9cm (24.25 × 30 × 72in.)	74.3 × 91.4 × 224.5cm (31.5 × 36 × 88.5in.)	Hydraulic Thermostat	Ambient +5° to 70°C	6 supplied/30 max.	120V 50/60Hz (1450w/12.1A)
3973	849.6L (30 cu.ft.)	61.6 × 72.2 × 182.9cm (24.25 × 30 × 72in.)	74.3 × 91.4 × 224.5cm (31.5 × 36 × 88.5in.)	Hydraulic Thermostat	Ambient +5° to 70°C	6 supplied/30 max.	120V 50/60Hz (1450w/12.1A)

Thermo Scientific* Shelf Kits for Precision* High-Performance Incubators

Additional shelf kits increase the flexibility of Thermo Scientific Precision High-Performance Incubators.

Cat. No.	Description	For Use with
13247S	Shelf Kit	2.5 to 5 cu. ft. units
AY2076X1	Shelf Kit	High-Performance Incubator; Double-door 11.2 cu. ft. units
3166190	Shelf Kit	30 cu. ft. units

Thermo Scientific* Precision* Standard Incubators

Thermo Scientific Precision Standard Incubators are ideal for everyday applications that require temperatures between 5°C above ambient to 65°C.

Thermo Scientific Precision Standard Incubators feature gravity convection for uniform heat distribution and reduced air movement to protect samples.

Uniform Temperature

- Gravity convection permits heat to enter from all points on the wall and floor of incubator for uniform heat distribution and reduced air movement to prevent drying out
- Adjustable hydraulic thermostat reacts quickly to temperature changes
- Superior heat distribution eliminates hot spots and provides temperature uniformity of up to ±1.3°C at 37°C

Built-In Safety

- Radiant wall heaters outside chamber eliminate safety hazards of exposed heaters
- Environmentally friendly, mercury-free thermometer
- Pilot light indicates when heaters are energized for safe operation

Durability and Easy Cleaning

- Corrosion-resistant aluminum chamber
- Powder-coated steel exterior
- Perforated shelves for optimized temperature transfer to samples

Includes: Two adjustable aluminum shelves. Additional shelves available separately.

Warranty: 12 months

Certifications: 120V units are UL/cUL listed.

Specifications	
Capacity	144L (5.1 cu.ft.)
Temperature Range	Ambient +5° to +65°C
Control	Hydraulic Thermostat
Display	Thermometer
Material (Cabinet)	Powder-coated painted steel
Material (Chamber)	Aluminum
No. of Shelves	2 supplied (adjustable)/9 max.
Interior D × W × H	46 × 46 × 69cm (18 × 18 × 27in.)
Exterior L × W × H	53 × 53 × 84cm (21 × 21 × 33in.)

Cat. No.	Electrical Requirements
PR205165G	120V 60Hz (400w/3.3A)
PR205160G	240V 50/60Hz (400w/1.7A)

Thermo Scientific* Shelves for Precision* Standard Incubators

Additional shelf kits increase the flexibility of Thermo Scientific Precision Standard Incubators.

Cat. No.	Description	For Use with
403-8Q	Shelf Kit	5.1 cu.ft. Precision Standard Incubator

Thermo Scientific* Precision* Compact Gravity-Convection Incubators

Thermo Scientific Precision Compact Incubators feature a space-savings footprint—ideal for small clinics and laboratories for basic applications.

Featuring a space-savings footprint for maximizing workspace, these Precision compact incubators are ideal for small clinics and laboratories that require temperatures between 5°C above ambient up to 40°C.

Temperature Uniformity

- Easily adjustable bimetallic thermostat controls and aluminum chamber ensure temperature uniformity
- Rugged metal door with positive latch provides excellent seal for temperature stability
- 1in. (2.5cm)-thick fiberglass insulation prevents heat loss

Safe Operation

- Shielded heating elements eliminate safety hazards caused by spills
- Pilot light indicates when heaters are energized for safe operation
- Environmentally safe, mercury-free thermometer included

Durability and Easy Cleaning

- Corrosion-resistant aluminum chamber is easy to maintain and clean
- Powder-coated paint and exterior steel construction ensure durability

Includes: Thermometer and one fixed shelf

Warranty: 12 months

Certifications: 120V units are UL/cUL listed.

Specifications	
Capacity	19L (0.67 cu.ft.)
Temperature Range	Ambient +5° to +40°C
Temperature Uniformity	±1°C
Control	Bimetallic thermostat
Material (Cabinet)	Powder-coated painted steel
Material (Chamber)	Aluminum
No. of Shelves	1 fixed supplied/1 max.
Interior D × W × H	30 × 30 × 20cm (12 × 12 × 8in.)
Exterior L × W × H	37 × 34 × 30cm (14.5 × 13.5 × 11.8in.)

Cat. No.	Electrical Requirements
PR205215G	120V 60Hz (100w/0.8A)
PR205210G	230V 50Hz (100w/0.4A)

Thermo Scientific* Precision* Refrigerated Incubators

Thermo Scientific Precision Refrigerated Incubators are ideal for applications that require temperatures ranging from -15°C to +60°C with excellent stability.

Thermo Scientific Precision Refrigerated Incubators feature microprocessor controls and forced-air circulation for excellent temperature uniformity in an efficient, dependable design.

Temperature Uniformity

- Microprocessor control with easy-to-read display shows actual temperature within 0.1°C
- Push-button controls for temperature setpoint selection
- Forced-air circulation delivers excellent temperature stability
- CFC-free, foamed polyurethane insulation prevents heat loss
- RTD temperature probe and protected setpoint mode prevent accidental temperature change
- Door key lock protects samples from unauthorized access

Efficient Design

- Easy-to-clean, corrosion-resistant construction
- Compressor relay conserves energy

173L (6.1 cu. ft.) Unit

- Economical undercounter design
- High/low safety thermostat backups
- Three cooling modes simplify operation: high precision with cooling; high precision without cooling; and frost-free with variable cooling
- Four adjustable leveling feet for stable setup
- 2A outlet easily supports apparatus inside the unit

566L (20 cu. ft.) Unit

- Ideal for BOD applications and temperature settings at or below ambient
- Holds up to 333 BOD bottles (300mL)
- Temperature setpoint selection with high- and low-temperature protection and simple calibration
- Available with dual lamp fluorescent lighting for plant growth studies and day/night cycles, programmable lighting conditions
- Safety relay and alarm LED alert to over/undertemperature conditions
- Access port for independent sensors/connection of equipment inside unit
- RS-232 and recorder jacks for datalogging

849.5L (30.0 cu. ft.) Unit

- Temperature range: 5° to 70°C
- Hydraulic thermostat with analog temperature control
- Choice of solid door or glass door for viewing of samples; no door lock
- Easy-to-clean, corrosion- and chemical-resistant aluminum chamber
- Requires hardwire installation by qualified electrician

Warranty: One year, parts and labor

Certifications: 115V units are cCSAus listed

Specifications	
Insulation	CFC-free, foamed polyurethane

Cat. No.	Capacity	Interior Dimensions (D × W × H)	Exterior Dimensions (L × W × H)	Temperature Range	Door	Electrical Requirements (Amps)
PR205745R	173L (6.1 cu. ft.)	50.8 × 67.3 × 144.8cm (20 × 26.5 × 57in.)	62 × 61 × 88cm (24.5 × 24 × 34.5in.)	-10° to +60°C	Solid	115V 60Hz (9.5A)
PR205740R	173L (6.1 cu. ft.)	70 × 52 × 53cm (20.5 × 20.5 × 28in.)	62 × 61 × 88cm (24.5 × 24 × 34.5in.)	-10° to +60°C	Solid	230V 50Hz (5.8A)
3721	566L (20.0 cu. ft.)	70 × 52 × 53cm (20.5 × 20.5 × 28in.)	74 × 82 × 191cm (29 × 32 × 75in.)	-10° to +50°C	Solid	120V 60Hz (7.0A)
3722	566L (20.0 cu. ft.)	50.8 × 67.3 × 144.8cm (20 × 26.5 × 57in.)	80 × 91.4 × 237.5cm (31.5 × 36 × 93.5in.)	-10° to +50°C	Solid	230V (2.3A)
3975	849.5L (30.0 cu. ft.)	61.6 × 76.2 × 182.9cm (24.25 × 30 × 72in.)	80 × 91.4 × 237.5cm (31.5 × 36 × 93.5in.)	+5° to 70°C	Solid	120V 60Hz (17.9A)
3977	849.5L (30.0 cu. ft.)	61.6 × 76.2 × 182.9cm (24.25 × 30 × 72in.)	80 × 91.4 × 237.5cm (31.5 × 36 × 93.5in.)	+5° to 70°C	Glass	120V 60Hz (17.9A)

Thermo Scientific* Precision* Plant-Growth Incubators

The Thermo Scientific Precision Plant-Growth Incubator supports a broad temperature range.

This Plant Growth Chamber is ideal for applications requiring night/day simulation, precise temperature control and uniformity over a broad temperature range.

- Programmable heating and lighting cycles: 7-day program with 2 light cycles per day
- Dual-lamp fluorescent lighting provides 300-foot candles for uniform illumination
- Easy-to-read display shows actual temperature within 0.1°C
- Push-button controls feature temperature setpoint selection
- Forced-air circulation delivers excellent temperature stability
- RTD temperature probe and protected setpoint mode prevent accidental temperature change
- Compressor relay conserves energy
- Easy-to-clean, corrosion-resistant construction
- CFC-free, foamed polyurethane insulation prevents heat loss
- Door key lock protects samples from unauthorized access

Warranty: 12 months

Certifications: 120V unit is cCSAus listed.

Specifications	
Capacity	504L (17.8 cu.ft.)
Temperature Control	Microprocessor
Temperature Display	LED
No. of Shelves	6 supplied; 6 max.
Temperature Range	-10° to +50°C/10° to 50°C (illuminated)
Temperature Uniformity	±1.5°C at 20°C
Temperature Sensitivity	±0.2°C
Interior (D × W × H)	67.3 x 144.8 x 50.8cm (26.5 x 57 x 20in.)
Exterior (L × W × H)	82 x 191 x 74cm (32 x 75 x 29in.)

Cat. No.	Electrical Requirements
3759	120V 60Hz
3758	230V 50Hz

Thermo Scientific* Shake 'n' Stack Hybridization Ovens

Thermo Scientific Shake 'n' Stack Hybridization Ovens are specifically designed for safe stacking, conserving space in the lab.

Each unit has the capability of operating either rotisserie or shaking platform for additional functionality. One compact triple-oven tower can be set up for three distinct functions at different temperatures. Space-saving design and excellent uniformity is ideal for molecular biology labs.

- Accurate temperature control for improved experimental results
- Excellent temperature uniformity for reproducible results with low backgrounds
- Multiple rotisserie fittings for flexible choice of consumable
- Interchangeable rotisserie/shaking platform for hybridization and washing procedures
- Stackable format allows better utilization of laboratory space
- Variable speed settings for protocol optimization

Warranty: 12 months

Specifications	
Capacity	10 medium bottles
Control	Digital
Display	LED
Temperature Range	Ambient plus 8° to 85°C
Temperature Uniformity	±0.25°C within bottle
Shaking Motion	Up/Down
Rotisserie Speed Range	5 to 15rpm
Interior D x W x H	24 × 35 × 24.5cm (9.5 × 13.8 × 9.7in.)
Platform L x W	25 × 18cm (9.8 × 7in.)
Max. Platform Load	1kg (2.2 lb.)
Exterior L x W x H	38 × 42.5 × 43.5cm (15 × 17.1 × 16.7ft.)
Power Consumption	250w

Cat. No.	Electrical Requirements	Includes
6243	110V	10-bottle capacity rotisserie, adjustable feet, drip tray, manual
6242	220V	10-bottle capacity rotisserie, adjustable feet, drip tray, manual
6241	110V	Shaker platform, 10-bottle capacity rotisserie, adjustable feet, drip tray, manual
6240	220V	Shaker platform, 10-bottle capacity rotisserie, adjustable feet, drip tray, manual

Thermo Scientific* Accessories for Shake 'n' Stack Hybridization Ovens

Thermo Scientific Shake 'n' Stack Hybridization Ovens accessories increase the versatility of this incubator.

Cat. No.	Description	For Use with
Rotisseries		
222032	Delrin* Plastic Rotisserie	Shake 'n' Stack ovens
222033	Stainless-steel Rotisserie	Shake 'n' Stack ovens
222041	Stainless-steel Rotisserie	Shake 'n' Stack ovens
222042	Delrin Plastic Rotisserie	Shake 'n' Stack, Maxi-14 ovens
222043	Delrin Plastic Rotisserie	Shake 'n' Stack, Maxi-14 ovens
222044	Delrin Plastic Rotisserie	Shake 'n' Stack, Maxi-14 ovens
Other Accessories		
222051	Drip Tray	Shake 'n' Stack ovens
222000	Shaking Platform	Shake 'n' Stack ovens

Thermo Scientific* Maxi 14 Hybridization Ovens

Thermo Scientific Maxi 14 Hybridization Ovens increase the hybridization capacity of any laboratory.

This ideal hybridization workstation features excellent temperature uniformity for reproducible results with low backgrounds; high capacity for increased volume of hybridization; dual-action shaker for optimization of washing/staining protocols; and simultaneous operation of shaking platform and rotisserie for performing fast, efficient washing protocols.

Ovens have a capacity of 6 or 14 bottles, a rotisserie and a dual-action (linear or orbital) shaking platform. The additional space provided in this oven allows hybridization to be performed in the bottles while simultaneously performing washing steps on the shaking platform.

- Digital temperature control, settable in 0.1°C increments
- Overtemperature control protects samples by pulsing power as temperature approaches setpoint
- Slipping clutch mechanism allows rotisserie to be stopped by hand, so bottles can be removed and inserted without switching off rotisserie
- Dual-action shaking platform offers choice of linear or orbital motion for optimization of washing and staining protocols
- Variable-axis motion for additional end-to-end fluid movement

Model 6246
- Capacity: 14 bottles
- Supplied with 2 medium bottles, 35mm stainless-steel rotisserie, 1 large bottle gripper, shaking platform and drip tray
- 110V

Model 6247
- Capacity: 14 bottles
- Supplied with 2 medium bottles, 35mm stainless-steel rotisserie, 1 large bottle gripper, shaking platform and drip tray
- 220V

Models 6249
- Capacity: 6 bottles
- Supplied with 6 position rotisserie, 70mm clips, accessory pack
- 220V

Includes: Stainless-steel rotisserie for 35mm bottles, two 35 × 250mm bottles and one bottle gripper, shaking platform, drip tray

Warranty: 12 months

Specifications	
Control	Digital
Shaking Motion	Orbital and Linear
Speed	Variable 5 to 15rpm
Temperature Range	Ambient plus 8° to 85°C
Temperature Uniformity	±0.25°C within bottle
Display	LED
Interior D x W x H	32 × 35 × 51cm (13 × 14 × 12in.)
Platform L x W	33 × 30cm (13 × 11.8in.)
Max. Platform Load	4kg (8.8 lb.)
Exterior L x W x H	45.6 × 45 × 69cm (27.6 × 18 × 18.1in.)
Power Consumption	250w

Cat. No.	Electrical Requirements	Capacity
6246	110V	14 × 35mm bottles
6247	220V	14 × 35mm bottles
6249	220V	6 × 70mm bottles

Thermo Scientific* Rotisseries for Maxi 14 Hybridization Ovens

Stainless-steel rotisseries with clips increase the flexibility of the Thermo Scientific Maxi 14 Hybridization Oven.

Cat. No.	Description	For Use with
222034	Rotisserie; 35mm clips, 14 positions	Maxi 14 ovens
222035	Rotisserie; 70mm clips, 6 positions	Maxi 14 ovens

Thermo Scientific* Hybridization Bottle & Mesh System

Thermo Scientific hybridization bottles are manufactured using thick walled borosilicate glass to ensure safe and easy handling.

Mesh improves the flow of probe solution around and through membranes for optimal results.

Designed to exacting standards, these bottles have screw caps containing flat PTFE seals to ensure leak-free hybridization. A full range of bottles accommodates every size of membrane and the use of mesh enables multiple blots to be processed simultaneously in one 35mm diameter bottle without direct overlap. Using mesh also eases handling of membranes and improves hybridization results.

- Safe and easy handling
- Bottles designed to exacting safety standards
- Optional mesh system for easy membrane handling

Includes: Bottle gripper for safe and easy handling of bottles. Additional grippers can be purchased separately (Cat. No. 222055 to -057).

Cat. No.	Description	Dimensions
Bottles and Rack		
110103	Bottle Rack	For up to six 35mm bottles
110113	Bottle; Large	300 × 35mm
110115	Bottle; Medium	250 × 35mm
110116	Bottle; Small	150 × 35mm
110094	Bottle; Extra large	300 × 70mm
Bottle Caps and O-Rings		
110108	Bottle cap and seal	35mm
110105	Bottle cap and seal	70mm
110109	Washer seal; For small, medium and large bottle caps	35mm
110107	Washer seal; For extra large bottle caps	70mm
Bottle Grippers		
222055	Bottle gripper; For extra large 70mm bottles	Length: 300mm
222056	Bottle gripper; For large and medium 35mm bottles	Length: 300mm
222057	Bottle gripper; For small 35mm bottles	Length: 150mm
Oven Mesh		
222054	Roll of mesh	5m × 25cm
222052	Oven mesh sheets; Small; Pack of 5	10 × 15cm
222053	Oven mesh sheets; Large; Pack of 5	23 × 23cm
222058	Oven mesh sheets; Small; Pack of 20	10 × 15cm
222059	Oven mesh sheets; Large; Pack of 20	23 × 23cm
Accessory Pack		
222060	Includes two medium bottles, one bottle gripper, one mesh and hybridization guide	250 × 35mm

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 the laboratory environment

Analog Units

- deal for fixed temperature applications
- Temperature control at 37°C: ±3.5°C, with uniformity of ±0.5°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: ±0.5°C, with uniformity of ±0.4°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 Control Resolution	Temperature Uniformity	Overall L x W x H	Amperage	Watts	Shipping Weight
Digital Models							
2000Q	1	±0.5° at 37°C	±0.4° at 37°C	28.4 × 22.1 × 9cm (11.2 × 8.7 × 3.6in.)	0.83A	100w	2kg (5 lb.)
2000-1CEQ	1	±0.5° at 37°C	±0.4° at 37°C	28.4 × 22.1 × 9cm (11.2 × 8.7 × 3.6in.)	0.42A	100w	2kg (5 lb.)
2001Q	2	±0.5° at 37°C	±0.4° at 37°C	36 × 22.1 × 9cm (14.2 × 8.7 × 3.6in.)	1.25A	150w	3kg (6 lb.)
2001-1CEQ	2	±0.5° at 37°C	±0.4° at 37°C	36 × 22.1 × 9cm (14.2 × 8.7 × 3.6in.)	0.63A	150w	3kg (6 lb.)
2002Q	3	±0.5° at 37°C	±0.4° at 37°C	30.4 × 27.4 × 9cm (12 × 10.8 × 3.6in.)	1.67A	200w	4kg (8 lb.)
2002-1CEQ	3	±0.5° at 37°C	±0.4° at 37°C	30.4 × 27.4 × 9cm (12 × 10.8 × 3.6in.)	0.80A	200w	4kg (8 lb.)
2003Q	4	±0.5° at 37°C	±0.4° at 37°C	35.5 × 27.4 9cm (14.1 × 10.8 × 3.6in.)	2.5A	300w	4kg (8 lb.)
2003-1CEQ	4	±0.5° at 37°C	±0.4° at 37°C	35.5 × 27.4 9cm (14.1 × 10.8 × 3.6in.)	1.25A	300w	4kg (8 lb.)
2004Q	6	±0.5° at 37°C	±0.4° at 37°C	43 × 27.4 × 9cm (17 × 10.8 × 3.6in.)	3.33A	400w	5kg (10 lb.)
2004-1CEQ	6	±0.5° at 37°C	±0.4° at 37°C	43 × 27.4 × 9cm (17 × 10.8 × 3.6in.)	1.67A	400w	5kg (10 lb.)
Analog Models							
2050Q	1	±3.5° at 37°C	±0.5° at 37°C	19 × 16 × 9cm (7.6 × 6.2 × 3.4in.)	0.83A	100w	2kg (5 lb.)
2050-1CEQ	1	±3.5° at 37°C	±0.5° at 37°C	19 × 16 × 9cm (7.6 × 6.2 × 3.4in.)	0.42A	100w	2kg (5 lb.)
2052Q	2	±3.5° at 37°C	±0.5° at 37°C	22 × 21 × 9cm (8.6 × 8.4 × 3.4in.)	1.25A	150w	3kg (6 lb.)
2052-1CEQ	2	±3.5° at 37°C	±0.5° at 37°C	22 × 21 × 9cm (8.6 × 8.4 × 3.4in.)	0.63A	150w	3kg (6 lb.)
2053Q	3	±3.5° at 37°C	±0.5° at 37°C	23 × 29 × 9cm (9.1 × 11.25 × 3.4in.)	1.67A	200w	4kg (8 lb.)
2053-1CEQ	3	±3.5° at 37°C	±0.5° at 37°C	23 × 29 × 9cm (9.1 × 11.25 × 3.4in.)	0.83A	200w	4kg (8 lb.)

Cat. No.	No. of Blocks Accommodated	Temperature Control Resolution	Temperature Uniformity	Overall L x W x H	Amperage	Watts	Shipping Weight
2054Q	4	±3.5° at 37°C	±0.5° at 37°C	31 × 21 × 9cm (12.4 × 8.3 × 3.4in.)	2.5A	300w	4kg (8 lb.)
2054-1CEQ	4	±3.5° at 37°C	±0.5° at 37°C	31 × 21 × 9cm (12.4 × 8.3 × 3.4in.)	1.25A	300w	4kg (8 lb.)
2056Q	6	±3.5° at 37°C	±0.5° at 37°C	33 × 29 × 9cm (12.9 × 11.25 × 3.4in.)	3.3A	400w	5kg (10 lb.)
2056-1CEQ	6	±3.5° at 37°C	±0.5° at 37°C	33 × 29 × 9cm (12.9 × 11.25 × 3.4in.)	1.67A	400w	5kg (10 lb.)

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 2.9in.)

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

Cat. No.	Type	No. of Wells	Tube Diameter	For Use with
Blocks				
2070Q	Test Tubes; 6mm	30	0.79cm (0.31in.)	Digital 2000 series; Analog 2050 series
2071Q	Test Tubes; 10mm	24	1.02cm (0.4in.)	Digital 2000 series; Analog 2050 series
2072Q	Test Tubes; 12 to 13mm	22	1.35cm (0.53in.)	Digital 2000 series; Analog 2050 series
2073Q	Test Tubes; 15 to 16mm	12	1.73cm (0.68in.)	Digital 2000 series; Analog 2050 series
2081Q	Test Tubes; 17 to 18mm	12	1.9cm (0.75in.)	Digital 2000 series; Analog 2050 series
2074Q	Test Tubes; 20mm	8	2.06cm (0.81in.)	Digital 2000 series; Analog 2050 series
2075Q	Test Tubes; 25mm	6	2.62cm (1.03in.)	Digital 2000 series; Analog 2050 series
2076Q	Test Tubes Combination; Three 25mm, five 12 to 13mm, six 6mm	14	2.62cm (1.03in.); 1.35cm (0.53in.); 0.79cm (0.31in.)	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 (0.24in.) taper	Digital 2000 series; Analog 2050 series
2068Q	Microcentrifuge; 0.5mL	30	0.74cm (0.29in.) taper	Digital 2000 series; Analog 2050 series
2069Q	Microcentrifuge; 1.5mL	20	1.04cm (0.44in.) taper	Digital 2000 series; Analog 2050 series
2058Q	Microcentrifuge Combination; Thirty 0.5mL; Nineteen 0.2mL	49	0.74cm (0.29in.) taper; 0.61cm (0.24in.) 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
Cuvette				
2066Q	Cuvette; 12.5mm	12	n/a	Digital 2000 series; Analog 2050 series

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.

Provides 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: 120V model is cCSAus approved; 240V model is 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 × W	36 × 36cm (14.19 × 14.19in.)
Load Capacity	4.5kg (10 lb.)
Exterior L × W × H with cover	41 × 42 × 34.7cm (16 × 16.5 × 13.5in.)
Shipping Weight	11kg (25 lb.)

Cat. No.	Electrical Requirements
4637Q	120V 50/60Hz (3.3A)
4637-1CEQ	240V 50/60Hz (1.7A)

MELTING POINT APPARATUS

Thermo Scientific* Digital 9000 Series Melting Point Apparatus

Thermo Scientific Digital 9000 Series Melting Point Apparatus eliminates subjective interpretation and makes stored temperature data available at a glance.

Digital 9000 Series consists of an adjustable 8X viewing magnifier arm that folds and a large LCD display. Its heating chamber is an aluminum heating block, which avoids hazards and mess associated with oil baths.

Performance

- Digital microprocessor with 0.1°C resolution provides fast warmup and accurate temperature control
- Operates without need for a mercury thermometer
- Three beeps indicate oven temperature is stable and ready for sample
- Simple push-button controls are conveniently located so you can easily record temperatures without looking away from your sample
- Interface with optional PR2000S printer (Models IA9200 and IA9300 only)
- Units can be calibrated in field or at factory

Safety and convenience

- Adjustable extension arm ensures comfortable viewing and reduces fatigue
- Viewing head rotates for easier viewing and folds flat for compact storage
- Adjustable object lens for sharp focus
- Safety eyepiece reduces glare and protects eyes from hot zone
- Integral light and 8X wide angle viewing magnifier enhance sample observation—allow all three samples to be viewed

Warranty: One year parts and labor

Certifications: CE

Specifications	
D x W x H	35.5 × 20 × 8cm (14 × 8 × 3.3 in.)
Shipping Weight	2.5kg (5.5 lb.)

Cat. No.	Description	Electrical Requirements
IA9100	Fixed Ramp Rate Model	230V
IA9100X1	Fixed Ramp Rate Model	115V
IA9200	Programmable Ramp Rate Model	230V
IA9200X1	Programmable Ramp Rate Model	115V
IA9300	Beginning/Ending Recording Model for Pharmacopeia Requirements	230V
IA9300X1	Beginning/Ending Recording Model for Pharmacopeia Requirements	115V
IA9100X6	Fixed Ramp Rate Model	230V, EU Plug
IA9200X6	Programmable Ramp Rate Model	230V, EU Plug
IA9300X6	Beginning/Ending Recording Model for Pharmacopeia Requirements	230V, EU Plug

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 4in. 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 (PT167X2), 3-wire power cord and plug

Warranty: 90 days on labor and one year on parts

Certifications: 120V model is CSA approved, 240V model is CE approved

Specifications	
Speed Range	3000rpm
Tube Capacity	1 to 4
Platform, Foam Pad	10.1cm (4in.)
Exterior L x W x H	13.9 × 13.9 × 10.6cm (5.5 × 5.5 × 4.2in.)
Shipping Weight	1.5kg (3.5 lb.)

Cat. No.	Electrical Requirements
M16715Q	120V 50/60Hz, 0.5A
M16710-33Q	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

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

Warranty: 90 days on labor and one year on parts

Certifications: 120V model is CSA approved, 230V model is CE marked

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

Cat. No.	Electrical Requirements
M37615Q	120V 50/60Hz, 0.75A
M37610-33Q	120V 50Hz, 0.30A

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 × 5.5in. (15.8 × 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: CSA listed (120V models only) and CE listed (240V models only)

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

Cat. No.	Electrical Requirements
M65825Q	120V 50/60Hz, 0.4A
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 × 250mL flasks

OVENS

Thermo Scientific* Precision* High-Performance Ovens

Thermo Scientific Precision high-performance ovens are built for drying applications requiring high temperatures, ultra-precise temperature stability and reproducibility with a very broad temperature range of ambient +15° to 325°C.

High-quality construction and high-efficiency insulation provide temperature uniformity as precise as ±0.5°C with excellent stability and air exchange within the chamber.

Mechanical convection provides uniform heating, precise temperature control and fast drying using a blower that circulates heated air in a horizontal airflow pattern.

Advanced Microprocessor PID Controls

- Bright LED display of actual and setpoint temperatures
- Built-in 12-hour mechanical timer along with user-adjustable safety thermostat allows for power cut-out in case of overtemperature
- Highly responsive RTD sensor provides temperature sensitivity of ±0.1°C or better
- High efficiency insulation ensures uniformity ±0.5° at 100°C
- RS-422 capability for computer control and datalogging

Energy- and Safety-Efficient Construction

- Turbo blowers for efficient drying are side-mounted within stainless-steel chamber
- All stainless-steel interior
- Stainless-steel exterior door with fiberglass gasket for secure, tight seal
- Cold-rolled, chemical-resistant steel cabinet with powder-coated finish
- High-limit safety with built-in circuit breaker protects oven from power surges
- Fiberglass door gasket prevents heat loss
- Low-density heating elements ensure long life
- Nontip shelves spaced 4cm (1.6in.) apart quickly, easily remove for thorough cleaning

Includes: Two nickel-plated nontip shelves

Warranty: 12 months, parts and labor

Compliance: ASTM* E145 Type IIA, ASTM D-2436, and UL 746B performance/uniformity standards

Certifications: All models are UL listed

Notes: Requires hardwired installation by a qualified technician

Specifications	
Temperature Range	Ambient +15° to 325°C
Temperature Control	Microprocessor
Temperature Display	2-line, 4-digit LED
Temperature Sensitivity	±0.1°C
Uniformity	±0.5° at 100°C; ±1.0° at 200°C; ±2.5° at 300°C

Cat. No.	Model	Capacity	Interior D x W x H	Exterior L x W x H	Electrical Requirements	Heatup Time to 325°C	Output Power
6050	605	39.6L (1.4 cu. ft.)	33 × 36 × 33cm (13 × 14 × 13in.)	61 × 97.8 × 63.5cm (24 × 38.5 × 25in.)	120V 50/60Hz, 2500w/20.8A	60 min.	8538 BTU/hr.
6051	605	39.6L (1.4 cu. ft.)	33 × 36 × 33cm (13 × 14 × 13in.)	61 × 97.8 × 63.5cm (24 × 38.5 × 25in.)	208/230V 50/60Hz, 2500w/10.9A	60 min.	8538 BTU/hr.
6052	605P	39.6L (1.4 cu. ft.)	33 × 36 × 33cm (13 × 14 × 13in.)	61 × 97.8 × 63.5cm (24 × 38.5 × 25in.)	120V 50/60Hz, 2500w/20.8A	60 min.	8538 BTU/hr.
6053	605P	39.6L (1.4 cu. ft.)	33 × 36 × 33cm (13 × 14 × 13in.)	61 × 97.8 × 63.5cm (24 × 38.5 × 25in.)	208/230V 50/60Hz, 2500w/10.9A	60 min.	8538 BTU/hr.
6054	625	113.3L (4.0 cu. ft.)	48.3 × 48.3 × 48.3cm (19 × 19 × 19in.)	71.1 × 114.3 × 73.7cm (28 × 45 × 29in.)	208/230V 50/60Hz 3700w 16.1A	50 min.	12,636 BTU/hr.
6055	625S	113.3L (4.0 cu. ft.)	48.3 × 48.3 × 48.3cm (19 × 19 × 19in.)	71.1 × 114.3 × 73.7cm (32 × 45 × 29in.)	208/230V 50/60Hz 3700w 16.1A	50 min.	12,636 BTU/hr.
6056	645	269L (9.5 cu. ft.)	91.4 × 61 × 48.3cm (36 × 24 × 19in.)	78.7 × 165.1 × 91.4cm (31 × 65 × 36in.)	208/230V 50/60Hz 4800w 20.9A	45 min.	16,393 BTU/hr.

Thermo Scientific* Shelves for Precision* High-Performance Ovens

Thermo Scientific Shelves for Precision High-Performance ovens are sturdy, chromium-plated steel wire and feature a special nontipping design to simplify oven loading and unloading.

Cat. No.	For Use with	No. of Shelves
3166188	Precision High-Performance Ovens Models 605/605P	2 supplied, 7 max.
3166179	Precision High-Performance Ovens Models 625/625S	2 supplied, 11 max.
3166180	Precision High-Performance Oven Model 645	2 supplied, 12 max.

Thermo Scientific* Precision* Premium Heating and Drying Ovens

Thermo Scientific Precision ovens feature mechanical or gravity convection with advanced microprocessor controls and temperature stability.

Ideal for precise heating applications with a temperature range of 50° to 275°C.

Advanced microprocessor controls and temperature stability make these ovens ideal for precise heating applications.

Intuitive Microprocessor Controls

- Deliver detailed information on current temperature setpoints and heaters "on" indicators via LED display
- Setting the oven temperature is simple
- No tuning required to set oven
- Memory stores settings when oven is off
- Visual overtemperature alarms and built-in safety backup maintain temperature control at 5°C above setpoint should primary control fail

Energy-Efficient, Safe Design

- Circuit breaker protects oven from power surges
- Silicone door gasket prevents heat loss
- Thick wall and door insulation maintain safe exterior temperature to prevent burns
- Low-density heating elements ensure long life
- Enamel-painted steel exterior and stainless-steel interior are easy to clean
- Doors open 180° for unhindered access

Ordering Information: Additional shelves with clips sold separately (13247S).

Warranty: 12 months, parts and labor

Certifications: All 120V units are UL, cUL listed

Specifications	
Control	Microprocessor
Temperature Range	50° to 275°C
Temperature Sensitivity	±0.5°C
Temperature Uniformity	±3°C at 200°C
Display	LED
Cabinet	Enamel-painted steel
Chamber	Stainless steel

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Power Consumption	Electrical Requirements	Shipping Weight
Gravity Convection						
PR305045G	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	1300w	120V 60Hz, 11A	52kg (115 lb.)
PR305040G	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	1300w	240V 50/60Hz, 5.5A	52kg (115 lb.)
PR305055G	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	1800w	120V 60Hz, 15A	59kg (130 lb.)
PR305050G	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	1800w	240V 50/60Hz, 7.5A	59kg (130 lb.)
PR305065G	141.6L (5.0 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	1800w	120V 60Hz, 15A	66kg (145 lb.)
PR305060G	141.6L (5.0 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	1800w	240V 50/60Hz, 7.5A	66kg (145 lb.)
Mechanical Convection						
PR305045M	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	1300w	120V 60Hz, 11A	54kg (120 lb.)
PR305040M	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	1300w	240V 50/60Hz, 5.5A	54kg (120 lb.)
PR305055M	106.2L (3.75 cu. ft.)	46 × 51 × 46cm (18 × 20 × 18in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	1800w	120V 60Hz, 15A	58kg (127 lb.)
PR305050M	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	1800w	240V 50/60Hz, 7.5A	58kg (127 lb.)
PR305065M	141.6L (5.0 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	1800w	120V 60Hz, 15A	61kg (135 lb.)
PR305060M	141.6L (5.0 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	1800w	240V 50/60Hz, 7.5A	61kg (135 lb.)

Thermo Scientific* Shelf for Precision* Premium Ovens

Versatile shelf fits all Thermo Scientific Precision premium and standard ovens.

Cat. No.	Description
13247S	Shelf Kit

Thermo Scientific* Precision* Standard Heating and Drying Ovens

Thermo Scientific Precision standard heating and drying ovens with gravity convection feature vertical air circulation patterns that ensure even heating and accurate temperature.

Built-in safety backup maintains temperature control at 5°C above setpoint.

- Electronic controls with indicator lights
- Port on top for inserting monitoring sensors
- Thick fiberglass insulation maintains interior heat, keeps exterior and door handle at a safe temperature
- Circuit breaker protects against power surges
- Door opens 180° with two grabber-type latches
- Fast temperature recovery in minutes after oven door is opened
- Durable, powder-coated steel exterior and stainless-steel interior are easy to clean and corrosion resistant
- Black synthetic rubber feet keep the oven from slipping and aid ventilation by raising the oven off the benchtop

Applications: Drying samples such as fine powders that require low turbulence airflow.

Ordering Information: Additional shelves are sold separately.

Warranty: 12 months, parts and labor

Certifications: UL/cUL listed (120V models only)

Specifications	
Control	Electronic
Temperature Range	50° to 225°C
Temperature Uniformity at 200°C	±5°C
Temperature Sensitivity	±0.5°C
Display	LED
Cabinet	Powder-coated steel
Chamber	Corrosion-resistant stainless steel

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Output Power	Electrical Requirements	Shipping Weight
PR305145G	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 x 13.5 x 18in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	1325 BTU	120V 60Hz, 1300w, 11A	52kg (115 lb.)
PR305140G	70.8L (2.5 cu. ft.)	46 × 46 × 34 cm (18 x 13.5 x 18in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	1325 BTU	240V 50/60Hz, 1300w, 5.5A	52kg (115 lb.)
PR305150G	106.2L (3.75 cu. ft.)	46 × 46 × 51 cm (18 x 20 x 18in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	2025 BTU	240V 50/60Hz, 1300w, 5.5A	57kg (125 lb.)
PR305155G	106.2L (3.75 cu. ft.)	46 × 46 × 51 cm (18 x 20 x 18in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	2025 BTU	120V 50/60Hz, 1300w, 11A	57kg (125 lb.)
PR305165G	141.6L (5.0 cu. ft.)	46 × 46 × 67 cm (18 x 26.5 x 18in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	2140 BTU	120V 50/60Hz, 1300w, 11A	64kg (140 lb.)
PR305160G	141.6L (5.0 cu. ft.)	46 × 46 × 67 cm (18 x 26.5 x 18in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	2140 BTU	240V 50/60Hz, 1300w, 5.5A	64kg (140 lb.)

Thermo Scientific* Shelf for Precision* Premium Ovens

Versatile shelf fits all Thermo Scientific Precision premium and standard ovens.

Cat. No.	Description
13247S	Shelf Kit

Thermo Scientific* Precision* Compact Heating and Drying Ovens

Thermo Scientific Precision compact heating and drying ovens conserve valuable benchtop space.

Feature mechanical or gravity convection models that provide the ideal choice for any application.

- Double-wall interior with 2.5cm (1in.) silica-based insulation and powder-coated cold-rolled steel exterior
- Pilot light visually indicates oven operation status

Gravity-Convection Models

- Gentle drying with low turbulence: air is moved vertically through chamber to heat samples
- Preset high-temperature safety bimetallic thermostat ensures overtemperature protection

Mechanical-Convection Models

- Uniform heating, precise temperature control and fast drying
- Hydraulic thermostat
- LED display
- Stainless-steel chamber

Applications: Drying and baking

Ordering Information: Additional shelves are sold separately.

Includes: One fixed and two adjustable shelves.

Warranty: 12 months, parts and labor

Certifications: UL/cUL listed

Specifications	
Temperature Range	Ambient +5° to 210°C

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Temperature Control	Chamber Material	Electrical Requirements	Shipping Weight
Gravity Convection							
PR305225G	48.1L (1.7 cu. ft.)	41× 41 × 29cm (11.5 x 16 x 16.2in.)	34 × 47 × 57cm (13.5 × 18.5 × 22.5in.)	Bimetallic thermostat	Aluminum	120V 60Hz, 800w	26kg (57 lb.)
PR305220G	48.1L (1.7 cu. ft.)	41 × 41 × 29cm (11.5 x 16 x 16.2in.)	34 × 47 × 57cm (13.5 × 18.5 × 22.5in.)	Bimetallic thermostat	Aluminum	240V 50/60Hz, 800w	26kg (57 lb.)
Mechanical Convection							
PR305225M	48.1L (1.7 cu. ft.)	29 × 41 × 41cm (11.5 x 16 x 16in.)	47 × 64 × 40cm (18.4 × 25 × 15.6in.)	Hydraulic Thermostat	Stainless steel	120V 60Hz, 1200w	36kg (80 lb.)
PR305220M	48.1L (1.7 cu. ft.)	29 × 41 × 41cm (11.5 x 16 x 16in.)	47 × 64 × 40cm (18.4 × 25 × 15.6in.)	Hydraulic Thermostat	Stainless steel	240V 50/60Hz, 1200w	36kg (80 lb.)

Thermo Scientific* Shelves for Precision* Compact Ovens

Add or replace a shelf in Thermo Scientific Precision compact ovens.

Cat. No.	Capacity	Type
3511-8Q	48.1L (1.7 cu. ft.)	Gravity Convection
3515M-8Q	48.1L (1.7 cu. ft.)	Mechanical Convection

Thermo Scientific* Lindberg/Blue M* Deluxe Heating and Drying Ovens

Thermo Scientific Lindberg/Blue M Ovens deliver the advanced performance, innovative functionality and superior accuracy required for a host of demanding applications.

Ideal for highly sensitive drying and heating processes that require temperature sequences and exceptional accuracy with a temperature range from 50° to 325°C.

Mechanical convection provides uniform heating, precise temperature control and fast drying using a blower that circulates heated air in a horizontal airflow pattern.

Advanced Programmable Controls

- Programmable microprocessor controls feature detailed settings, intuitive menu, visible indicator lights and automatic restart
- Set temperature ramps according to defined process specs with up to 12 ramp and 12 soak programs
- Excellent temperature recovery time of 1.5 to 2.5 min., depending on model
- High rate of air changes per hour for fast removal of humidity

Safety and Protection

- Alarm indicator warns of overtemperature
- Built-in safety backup keeps temperature at 5°C above setpoint if primary control fails
- Thin wall and door insulation maintains safe exterior temperature on outer door and handle—prevents burns, saves energy
- Fiberglass gasket with stainless-steel mesh core prevents heat loss
- Circuit breaker protects oven from power surges

Robust, Reliable Construction

- Durable, enamel-painted steel exterior and corrosion-resistant stainless-steel interior clean easily
- Doors open 180° for unhindered access
- Nonslip black synthetic rubber feet for optimum stability and low-density heating elements ensure long life

Warranty: 24 months

Certifications: UL/cUL listed

Specifications	
Control	Advance Microprocessor, Programmable
Temperature Range	50° to 325°C
Temperature Sensitivity	±0.25°C
Temperature Uniformity at 200°C	±2°C
Cabinet	Enamel-painted steel
Type	Mechanical Convection
Chamber	Stainless steel

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	No. of Shelves	Recovery Time	Electrical Requirements	Shipping Weight
LB305745M	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	2 supplied, 5 max.	1.5min. (door open 1 minute at 200°C)	120V 60Hz, 1800w, 15A	52kg (115 lb.)
LB305750M	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	2 supplied, 8 max.	1.5min. (door open 1 minute at 200°C)	240V 50/60Hz, 3300w, 14A	59kg (130 lb.)
LB305760M	141.6L (5 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	4 supplied, 11 max.	2.5min. (door open 1 minute at 200°C)	240V 50/60Hz, 3300w, 14A	66kg (145 lb.)

Thermo Scientific* Lindberg/Blue M* Performance Heating and Drying Ovens

Thermo Scientific Lindberg/Blue M Performance ovens are ideal for gentle heating and drying applications that require minimal air turbulences and temperatures of 50° to 275°C.

Built-in safety backup maintains temperature control at 5°C above setpoint if the primary control fails.

These ovens provide uniform heating, precise temperature control and fast drying using a blower that circulates heated air in a horizontal airflow pattern.

Advanced Microprocessor Controls

- Easy-to-read microprocessor control panel displays current temperature, setpoint, heater condition and overtemperature alarms
- Set oven temperature in 1°C increments; no tuning required
- Memory stores settings when oven is off

Safety and Protection

- Circuit breaker protects oven from power surges
- Efficient wall and door insulation maintain safe exterior temperature—prevents burns, saves energy
- Silicone gasket on the oven door prevents heat loss, ensures energy efficiency
- Doors open 180° for unhindered access

Reliable Construction

- Enamel-painted steel exterior and corrosion-resistant stainless-steel interior ensure easy cleaning and durability
- Low-density heating elements ensure long life

Ordering Information: Additional shelves are sold separately

Warranty: 24 months

Certifications: UL/cUL listed

Specifications	
Control	Advanced Microprocessor
Temperature Range	50° to 275°C
Temperature Sensitivity	±0.5°C
Temperature Uniformity at 200°C	±3 (4)°C for mechanical convection models (gravity convection models)
Chamber	Stainless steel
Cabinet	Enamel-painted steel

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	No. of Shelves	Recovery Time	Electrical Requirements	Shipping Weight
Gravity Convection							
LB305545G	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	2 supplied, 5 max.	2 min. (door open 1 min. at 200°C)	120V 60Hz, 1300w	52kg (115 lb.)
LB305555G	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	2 supplied, 8 max.	3 min. (door open 1 min. at 200°C)	120V 60Hz, 1300w	59kg (130 lb.)
LB305565G	141.6L (5 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	4 supplied, 11 max.	4 min. (door open 1 min. at 200°C)	120V 60Hz, 1800w	66kg (145 lb.)
Mechanical Convection							
LB305645M	70.8L (2.5 cu. ft.)	46 × 46 × 34cm (18 × 18 × 13.5in.)	60 × 65 × 66cm (23.5 × 25.8 × 26in.)	2 supplied, 5 max.	2 min. (door open 1 minute at 200°C)	120V 60Hz, 1800w	54kg (120 lb.)
LB305655M	106.2L (3.75 cu. ft.)	46 × 46 × 51cm (18 × 18 × 20in.)	60 × 65 × 84cm (23.5 × 25.8 × 33in.)	2 supplied, 8 max.	2 min. (door open 1 minute at 200°C)	120V 60Hz, 1800w	58kg (127 lb.)
LB305665M	141.6L (5 cu. ft.)	46 × 46 × 67cm (18 × 18 × 26.5in.)	60 × 65 × 100cm (23.5 × 25.8 × 39.3in.)	4 supplied, 11 max.	2.5 min. (door open 1 minute at 200°C)	120V 60Hz, 1800w	61kg (135 lb.)

Thermo Scientific* Shelf for Lindberg/Blue M* Ovens

Versatile shelf fits all Thermo Scientific Lindberg/Blue M ovens.

Cat. No.	Description
13247S	Shelf Kit

Thermo Scientific* Lindberg/Blue M* Vacuum Ovens

Thermo Scientific Lindberg/Blue M ovens include digital electronic control, built-in overtemperature protection, and a fully flexible vacuum/purge/release system for a range of uses.

Ovens are designed for drying, curing, outgassing, aging, process control and other applications that require elevated temperature in reduced atmospheres or vacuum/purge with nonflammable and inert atmospheres.

Single-Setpoint Digital Microprocessor Control

- Maximum temperature: 260°C (500°F) with nominal uniformity of ±3.5% of setpoint
- Simultaneous LED display of setpoint and actual temperature with push-button view; resolution to within 1°C
- Keypad data entry and pull-out control module for easy service
- Independent overtemperature safety system factory set with reset push-button

Vacuum System

- 1in. (2.54cm) manifold, chamber rear, exterior, connects to pump or in-house vacuum source
- With inert gas injection valve, fresh air inlet, vacuum exhaust port, controllable vacuum release vent port
- 1000 microns (1torr) capacity
- Vacuum gauge, vacuum, gas and inlet valves located on front

Construction

- Corrosion-resistant stainless-steel cabinet includes three aluminum shelves with painted or stainless-steel finish
- Rear-mounted vacuum manifold connects to pump (not included) or in-house vacuum source
- Low-watt heating element extends oven life
- Heavy-gauge steel, dual-wall construction with fiberglass insulation for minimum heat loss in walls and door
- High-temperature silicone gasket is specially molded for a positive seal
- Magnetic latch for positive door seal (4.5 cu. ft. capacity models include mechanical latches)
- Viewing windows: 0.5in. (1.3cm) thick in two smaller capacity models or 0.75in. (1.9cm) thick in 4.5 cu. ft. model; permit observation of work in progress without loss of heat
- Stainless-steel exterior models come with double door—a solid outer door over inner window door

Includes: Power cord and aluminum shelves (number of shelves based on model; see ordering table)

Warranty: 12 months

Certifications: UL listed (VO914A, VO914SA, VO1218A, VO1218SA only)

Alert: Ovens are not suitable for use with hazardous vapor. For use with nonflammable, noncorrosive inert gases only.

Specifications	
Control	Digital Microprocessor Control
Vacuum	1 × 10-2; torr (10 microns)
Temperature Range	6° above ambient to 260°C
Temperature Resolution	±1°C
Temperature Uniformity	±3.5°C
Display	LED
Safety Features	Overtemperature Safety System
Chamber	Corrosion-resistant stainless steel
Ports	Inert gas port, vacuum port and vent port

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	No. of Shelves	Finish	Electrical Requirements	Shipping Weight
VO914C	18.6L (0.65 cu. ft.)	36 × 23 × 23cm (14 × 9 × 9in.)	58 × 46 × 66cm (23 × 18 × 26in.)	3	Painted Steel	208/240V 50/60Hz, 750w	68kg (150 lb.)
VO1218C	42.5L (1.5 cu. ft.)	46 × 31 × 31cm (18 × 12 × 12in.)	66 × 53 × 74cm (26 × 21 × 29in.)	3	Painted Steel	208/240V 50/60Hz, 1250w	113kg (250 lb.)
VO1824C	127.4L (4.5 cu. ft.)	61 × 46 × 46cm (24 × 18 × 18in.)	81 × 69 × 89cm (32 × 27 × 35in.)	2	Painted Steel	208/240V 50/60Hz, 1500w	147kg (325 lb.)
VO1824A	127.4L (4.5 cu. ft.)	61 × 46 × 46cm (24 × 18 × 18in.)	81 × 69 × 89cm (32 × 27 × 35in.)	2	Painted Steel	120V 50/60Hz, 1500w	147kg (325 lb.)
VO914A	18.6L (0.65 cu. ft.)	36 × 23 × 23cm (14 × 9 × 9in.)	58 × 46 × 66cm (23 × 18 × 26in.)	3	Painted Steel	120V 50/60Hz, 750w	68kg (150 lb.)
VO1824HPC	127.4L (4.5 cu. ft.)	61 × 46 × 46cm (24 × 18 × 18in.)	81 × 69 × 89cm (32 × 27 × 35in.)	1	Painted Steel	208/240V 50/60Hz, 3000w	147kg (325 lb.)
VO914SA	18.6L (0.65 cu. ft.)	36 × 23 × 23cm (14 × 9 × 9in.)	58 × 46 × 66cm (23 × 18 × 26in.)	3	Stainless Steel	120V 50/60Hz, 750w	68kg (150 lb.)

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	No. of Shelves	Finish	Electrical Requirements	Shipping Weight
VO1218A	42.5L (1.5 cu. ft.)	46 × 31 × 31cm (18 × 12 × 12in.)	66 × 53 × 74cm (26 × 21 × 29in.)	3	Painted Steel	120V 50/60Hz, 1250w	113kg (250 lb.)
VO1218SA	42.5L (1.5 cu. ft.)	46 × 31 × 31cm (18 × 12 × 12in.)	66 × 53 × 74cm (26 × 21 × 29in.)	3	Stainless Steel	120V 50/60Hz, 1250w	113kg (250 lb.)
VO1824SA	18.6L (0.65 cu. ft.)	61 × 46 × 46cm (24 × 18 × 18in.)	81 × 69 × 89cm (32 × 27 × 35in.)	2	Stainless Steel	120V 50/60Hz, 1500w	147kg (325 lb.)

Thermo Scientific* Accessories for Lindberg/Blue M* Vacuum Ovens

A variety of accessories allow customization of Thermo Scientific Lindberg/Blue M vacuum ovens.

Cat. No.	Description	For Use with
6718	White Floor Stand	All Lindberg/Blue M vacuum ovens
6723	Stainless-steel Floor Stand	All Lindberg/Blue M vacuum ovens
6826	Vacuum Pump	For VO914 Series
6827	Vacuum Pump	Vacuum pumps
6831	Vacuum Pump Oil	Vacuum pumps
6832	Mist Filter Element	Vacuum pumps
6834	Activated Alumina	All Lindberg/Blue M vacuum ovens
118961	Connection Kit	VO914 Series
118974	Buna-N	VO1218 Series
118977	Buna-N	VO1218 Series
305992H01	Silicone (red)	VO1824 Series
305993H01	Silicone (red)	VO914 Series
305994H01	Silicone (red)	VO1824 Series
34637H01	Buna-N	VO914 Series

Thermo Scientific* Vacuum Ovens

Thermo Scientific Vacuum Oven offers maximum flexibility, with a maximum temperature of 220°C (428°F), two control configurations and display options.

Radiant warm-wall heating system optimizes uniformity and conserves chamber space for drying, curing, vacuum embedding and plating applications.

These ovens feature independent vacuum and purge needle valves.

- 3in. (7.6cm) glass wool insulation prevents heat loss
- Silicone door gasket and positive latch door maintain seal at all vacuum levels
- Polycarbonate safety shield protects door glass
- Vacuum level is displayed on gauges from 0 to 30in.Hg
- Vacuum and air lines are corrosion-resistant stainless-steel tubing for optimum chamber cleanliness and long-term performance
- With two removable stacking aluminum shelves
- Easy-to-clean Type 304 stainless-steel interior chamber
- Powder-coated heavy-gauge steel exterior for durability
- Front-mounted three-way valve for evacuation, venting and purging of inert gases (e.g., Nitrogen or Argon) with vacuum fittings on the front of the unit

3606 Models

- Hydraulic thermostat temperature control ±1.5°C with a uniformity of ±5°C at 100°C, 25in.Hg
- Built-in overtemperature protection
- Top-mounted independent evacuation and venting vacuum fittings

3608 Models

- Hydraulic thermostat temperature control ±1.5°C with a uniformity of ±5°C at 100°C, 25in.Hg
- Built-in overtemperature protection
- Front-mounted three-way valve for evacuation, venting and purging of inert gases (e.g., Nitrogen or Argon) with vacuum fittings on the front of the unit

Model 3618P Models

- Programmable microprocessor-based PID temperature control
- Regulates to ±0.2°C with uniformity of ±2.4°C at 100°C, 25in.Hg
- Runs at a single setpoint or uses a 24-step program of ramps and dwells
- 0.25in. compression fittings on left side, require 0.25in. O.D. copper or stainless-steel tubing
- Front-mounted three-way valve for evacuation, venting and purging of inert gases (e.g., nitrogen or argon) with vacuum fittings on the front of the unit

Ordering Information: Digital Units in Torr and Microns available separately (must be factory installed)

Required Accessories: Vacuum fittings require 0.25in. (0.6cm) I.D. tubing.

Warranty: 12 months

Specifications	
Max. Temperature	220°C
Temperature Range	Ambient +10° to 220°C
Vacuum Range	0 to 30in.Hg
Cabinet	Powder-coated heavy-gauge steel
Chamber	Stainless steel
Shelves	2, Aluminum

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Temperature Resolution	Temperature Stability	Electrical Requirements	Shipping Weight
Hydraulic thermostat							
3606	12.5L (0.44 cu. ft.)	30 × 20 × 20cm (12 x 8 x 8in.)	41 × 43 × 44cm (16 × 17 × 17in.)	±1.5°C	±2.2°C at 100°C 25in.Hg	120V 50/60Hz, 600w, 5A	50kg (110 lb.)
3606-1CE	12.5L (0.44 cu. ft.)	30 × 20 × 20cm (12 x 8 x 8in.)	41 × 43 × 44cm (16 × 17 × 17in.)	±1.5°C	±2.2°C at 100°C 25in.Hg	240V 50/60Hz 600w 2.5A	50kg (110 lb.)
3608	19.8L (0.7 cu. ft.)	30 × 25 × 25cm (12 x 10 x 10in.)	40 × 50 × 41cm (16 × 19.8 × 16.25in.)	±1.0°C	±6.0°C at 100°C 25in.Hg	120V 50/60Hz, 600w, 5A	59kg (130 lb.)
3608-1CE	19.8L (0.7 cu. ft.)	30 × 25 × 25cm (12 x 10 x 10in.)	40 × 50 × 41cm (16 × 19.8 × 16.25in.)	±1.0°C	±6.0°C at 100°C, 25in.Hg	240V 50/60Hz 600w 2.5A	59kg (130 lb.)
3618	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±1.0°C	±5.0°C at 100°C 25in.Hg	120V 50/60Hz, 1600w, 13.3A	134kg (295 lb.)
3618-1CE	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±1.0°C	±5.0°C at 100°C 25in.Hg	240V 50/60Hz 1600w 6.7A	134kg (295 lb.)
36185	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±1.0°C	±5.0°C at 100°C 25in.Hg	120V 50/60Hz, 1600w, 13.3A	134kg (295 lb.)
3618-6CE	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±1.0°C	±5.0°C at 100°C 25in.Hg	240V 50/60Hz 1600w 6.7A	134kg (295 lb.)
Microprocessor							

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Temperature Resolution	Temperature Stability	Electrical Requirements	Shipping Weight
3618P	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±0.5°C	±4.5°C at 100°C 25in.Hg	120V 50/60Hz, 1600w, 13.3A	134kg (295 lb.)
3618P1	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±0.5°C	±4.5°C at 100°C 25in.Hg	240V 50/60Hz, 1600w, 6.7A	134kg (295 lb.)
36181PDT	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±1.0°C	±5.0°C at 100°C 25in.Hg	240V, 1600w, 6.7A	134kg (295 lb.)
3618PDT	65.1L (2.3 cu. ft.)	51 × 36 × 36cm (20 x 14 x 14in.)	64 × 64 × 56cm (25 × 25 × 22in.)	±1.0°C	±5.0°C at 100°C 25in.Hg	120V, 1600w, 13.3A	134kg (295 lb.)

Thermo Scientific* Hi-Temp Vacuum Ovens

Thermo Scientific Hi-Temp Vacuum Oven features overtemperature protection for peace of mind.

A built-in safety controller prevents temperature runaway with a back-up thermostat.

Operation

- Digitally controlled temperature
- Two LED displays show oven conditions
- Vacuum control and relief valves on front for convenient monitoring

Construction

- Radiant warm wall heaters mounted on the outside conserve chamber working space and eliminate hazards of open wire heaters
- Compression fittings on the sidewall accept 0.6cm (0.25in.) O.D. hard tubing for pump and air connections
- Durable exterior is powder-coated heavy-gauge steel
- Glass window in the door allows sample viewing
- Two adjustable chrome-plated shelves improve heat conduction to samples; remove easily for cleaning
- Stainless-steel interior resists corrosion
- Vacuum and air lines of corrosion-resistant stainless-steel tubing optimize chamber cleanliness and long-term performance

Model 3625A

- Has a seven-day programmable timer that cycles oven on or off up to eight times per day
- Runs on a single setpoint controller
- Accepts up to eight shelves

Warranty: 12 months

Specifications	
Max. Temperature	280°C
Display	LED (2)
Cabinet	Powder-coated heavy-gauge steel
Chamber	Stainless steel
Shelf	2, Chrome-plated

Cat. No.	Capacity	Interior D x W x H	Exterior L x W x H	Temperature Range	Temperature Uniformity	Electrical Requirements	Shipping Weight
3625A	18.4L (0.65 cu. ft.)	29 × 25.4 × 25.4cm (11.5 × 10 × 10in.)	44 × 46 × 58cm (17.5 × 18 × 23in.)	Ambient +10° to 280°C	±0.1°C at 100°C 25ft.Hg	120V 50/60Hz, 1700w, 8.5A	48kg (90 lb.)
3625A-1	18.4L (0.65 cu. ft.)	29 × 25.4 × 25.4cm (11.5 × 10 × 10in.)	44 × 46 × 58cm (17.5 × 18 × 23in.)	Ambient +10° to 280°C	±0.1°C at 100°C, 25ft.Hg	240V 50/60Hz, 1700w; 4.2A	48kg (90 lb.)
3628A	42.4L (1.5 cu. ft.)	46 × 30 × 30cm (18 × 12 × 12in.)	66 × 58 × 56cm (26 × 23 × 22in.)	50° to 280°C	±5°C at 100°C 25ft.Hg	120V 50/60Hz, 1400w, 12A	92.9kg (205 lb.)
3628A-1	42.4L (1.5 cu. ft.)	46 × 30 × 30cm (18 × 12 × 12in.)	66 × 58 × 56cm (26 × 23 × 22in.)	50° to 280°C	±5°C at 100°C 25ft.Hg	240V 50/60Hz. 1400w 6A	92.9kg (205 lb.)

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 Scientifc 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		

Cat. No.	For Use with
3490M-8	3490M, 3490M-1, 3492M, 3492M-1 Cleanroom Ovens
3495M-8	3495M-1, 3494M-1 Cleanroom Ovens
3497M-8	3497M-1, 3496M-1 Cleanroom Ovens
3499M-8	3499M-1, 3498M-1 Cleanroom Ovens

Thermo Scientific* Rack for Class 100 Cleanroom Ovens

Thermo Scientific Rack for Class 100 Cleanroom Ovens safely stack two ovens of the same size.

Cat. No.	For Use with
3485-2	Models 3495M-1 and 3494M-1 (3.6 cu. ft.)

Thermo Scientific* Accessories for Class 100 Cleanroom Ovens

These accessories can optimize performance of Thermo Scientific cleanroom ovens.

Cat. No.	Description
3491	Exhaust Chimney (O.D. x H x D: 5.1 x 23 x 7.6cm [2 x 9 x 3in.])
3497	Replacement HEPA Filter for models 3496M-1, 3497M-1

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 Scientifc 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

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

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 4.5in.)

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.)
Tygon LFL		
96429-18	0.51mm	30.4m (100ft.)
96429-26	0.89mm	30.4m (100ft.)
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.)
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.)
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 Dia.
Silicone Platinum		
6421-13	13	0.8mm
6421-14	14	1.6mm
6421-16	16	3.2mm
6421-25	25	4.8mm
Tygon R-3603		
6416-13	13	0.8mm
6416-14	14	1.6mm
6416-16	16	3.2mm
6416-25	25	4.8mm
BioPharm Plus Silicone		
96116-13	13	0.8mm
96116-14	14	1.6mm
96116-16	16	3.2mm
96116-25	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
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
- Maximum pressure: 2 bar
- Supplied 7.6m (25ft.) per pack

Tygon* R-3603
- Ideal for general transfer applications
- Economical
- Nontoxic, nonaging, and nonoxidizing
- Maximum pressure 2 bar
- Supplied 15.2m (50ft.) 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: 2.5 bar
- Supplied 7.6m (25ft.) 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 7.6m (25ft.) per pack

Required Accessories: Use with FH15 or FH 30 pump systems

Cat. No.	Tubing Size	Tubing Inside Dia.
Silicone Platinum		
96420-13	13	0.8mm
96420-14	14	1.6mm
96420-16	16	3.2mm
96420-25	25	4.8mm
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

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

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 in.)
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
73-750-000	Foot Switch
7595-45	DB9 Connector
73-055-590	Dispensing Wand
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.)

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.	Type	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 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 classicifications	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* 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 alkalies
- 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 Inside Dia.	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 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 Inside Dia.	Tubing Size	Wall Thickness
72-310-014	Tygon	FH100	2.0 to 150mL/min.	1.6mm	14	1.6mm
72-310-016	Tygon	FH100	6.5 to 550mL/min.	8.0mm	36	1.6mm
72-310-017	Tygon	FH100	24 to 2000mL/min.	8.0mm	35	1.6mm
72-310-018	Tygon	FH100	36 to 3000 mL/min.	4.8mm	25	1.6mm
72-310-024	Tygon	FH100X	24 to 2000mL/min.	6.4mm	24	2.4mm
72-310-025	Tygon	FH100	14 to 1200mL/min.	8.0mm	18	1.6mm
72-310-035	Tygon	FH100X	36 to 3000mL/min.	6.4mm	17	2.4mm
72-310-036	Tygon	FH100X	48 to 4000mL/min.	3.2mm	16	2.4mm

Thermo Scientific* BioPharm Silicone Precision Tubing for FH100 and FH100X Pumps

Thermo Scientific BioPharm Silicone Tubing offers 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 7.6m (25ft.) per pack

Specifications	
Advantages	Ultra-smooth inner surface minimizes particle entrapment. Lower absorption; excellent biocompatibility; no leachable additive, DOP, or plasticizersl 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 Inside Dia.	Wall Thickness
75-300-013	Silicone (Platinum-cured)	FH100	0.50 to 40mL/min.	0.8mm	1.6mm
75-300-014	Silicone (Platinum-cured)	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
75-300-015	Silicone (Platinum-cured)	FH100X	6.5 to 550mL/min.	4.8mm	2.4mm
75-300-016	Silicone (Platinum-cured)	FH100	16 to 1200mL/min.	3.2mm	1.6mm
75-300-017	Silicone (Platinum-cured)	FH100	24 to 2000mL/min.	6.4mm	1.6mm
75-300-018	Silicone (Platinum-cured)	FH100	368 to 3000mL/min.	8.0mm	1.6mm
75-300-024	Silicone (Platinum-cured)	FH100X	14 to 1200mL/min.	6.4mm	2.4mm
75-300-025	Silicone (Platinum-cured)	FH100	24 to 2000mL/min.	4.8mm	1.6mm
75-300-035	Silicone (Platinum-cured)	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
75-300-036	Silicone (Platinum-cured)	FH100X	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* Norprene* Food Precision Tubing for FH100 and FH100X Pumps

Thermo Scientific Norprene Food Tubing offers 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 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	Sterilze by autoclave. Repeated autoclaving will not affect overall life.

Cat. No.	Material	For Use with	Flowrate	Tubing Inside Dia.	Wall Thickness
75-305-013	Norprene	FH100	0.50 to 40mL/min.	0.8mm	1.6mm
75-305-014	Norprene	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
75-305-015	Norprene	FH100X	14 to 1200mL/min.	4.8mm	2.4mm
75-305-016	Norprene	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
75-305-017	Norprene	FH100	24 to 2000mL/min.	6.4mm	1.6mm
75-305-018	Norprene	FH100	368 to 3000mL/min.	8.0mm	1.6mm
75-305-024	Norprene	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
75-305-025	Norprene	FH100	16 to 1200mL/min.	4.8mm	1.6mm
75-305-035	Norprene	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
75-305-036	Norprene	FH100X	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* Tygon* Lab Precision Tubing for FH100 and FH100X Pumps

Thermo Scientific Tygon Lab Tubing offers 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
- Suppled 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 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/cm2 (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 Inside Dia.	Wall Thickness
75-310-013	Tygon	FH100	0.50 to 40mL/min.	0.8mm	1.6mm
75-310-014	Tygon	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
75-310-015	Tygon	FH100X	14 to 1200mL/min.	4.8mm	2.4mm
75-310-016	Tygon	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
75-310-017	Tygon	FH100	24 to 2000mL/min.	6.4mm	1.6mm
75-310-018	Tygon	FH100	368 to 3000mL/min.	8.0mm	1.6mm
75-310-024	Tygon	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
75-310-025	Tygon	FH100	16 to 1200mL/min.	4.8mm	1.6mm
75-310-035	Tygon	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
75-310-036	Tygon	FH100X	48 to 4000mL/min.	9.5mm	2.4mm

Thermo Scientific* PharMed* BPT Precision Tubing for FH100 and FH100X Pumps

Thermo Scientific PharMed BPT Tubing offers the best performance and repeatability.

Manufactured to exacting specifications to optimize accuracy and provide enhanced tubing life with better performance.

PharMed BPT Tubing

- 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 7.6m (25ft.) per pack

Specifications	
Advantages	Great for tissue and cell work -- nontoxic and nonhemolytic. Long service life minimizes risk of fluid explosure; 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 Inside Dia.	Wall Thickness
75-303-013	PharMed BPT	FH100	0.50 to 40mL/min.	0.8mm	1.6mm
75-303-014	PharMed BPT	FH100	2.0 to 150mL/min.	1.6mm	1.6mm
75-303-015	PharMed BPT	FH100X	14 to 1200mL/min.	4.8mm	2.4mm
75-303-016	PharMed BPT	FH100	6.5 to 1200mL/min.	3.2mm	1.6mm
75-303-017	PharMed BPT	FH100	24 to 2000mL/min.	6.4mm	1.6mm
75-303-018	PharMed BPT	FH100	368 to 3000mL/min.	8.0mm	1.6mm
75-303-024	PharMed BPT	FH100X	24 to 2000mL/min.	6.4mm	2.4mm
75-303-025	PharMed BPT	FH100	16 to 1200mL/min.	4.8mm	1.6mm
75-303-035	PharMed BPT	FH100X	36 to 3000mL/min.	8.0mm	2.4mm
75-303-036	PharMed BPT	FH100X	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 compatability is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. Resulting new high-resilience tubing (HRT) formulations provide exceptional life, and purity while operating at high pressure and 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 (12in.); 2.4mm wall, 355mm (14in.)

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* fluoroelastomer (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.	Material	For Use with	Flowrate	Tubing Inside Dia.	Wall Thickness
6439-15	Style 400 FKM	FH100X	14 to 1200mL/min.	4.8mm	2.4mm
6439-16	Style 400 FKM	FH100	6.5 to 550mL/min.	3.2mm	1.6mm
6439-24	Style 400 FKM	FH100X	24 to 2000 L/min.	6.4mm	2.4mm
6439-35	Style 400 FKM	FH100X	36 to 3000mL/min.	8.0mm	2.4mm

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 compatability is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. Resulting new high-resilience tubing (HRT) formulations provide exceptional life and purity while operating at high pressure and 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 (12in.); 2.4mm wall, 355mm (14in.)

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 Inside Dia.	Tubing Size	Wall Thickness
96211-14	Sta-Pure PCS	FH100	2.0 to 150mL/min.	1.6mm	14	1.6mm
96211-15	Sta-Pure PCS	FH100X	14 to 1200mL/min.	4.8mm	15	2.4mm
96211-16	Sta-Pure PCS	FH100	6.5 to 550mL/min.	3.2mm	16	1.6mm
96211-17	Sta-Pure PCS	FH100	24 to 2000mL/min.	6.4mm	17	1.6mm
96211-18	Sta-Pure PCS	FH100	36 to 3000mL/min.	8.0mm	18	1.6mm
96211-24	Sta-Pure PCS	FH100X	24 to 2000mL/min.	6.4mm	24	2.4mm
96211-25	Sta-Pure PCS	FH100	22 to 1200mL/min.	4.8mm	25	1.6mm
96211-35	Sta-Pure PCS	FH100X	36 to 3000mL/min.	8.0mm	35	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 compatability is a concern.

Thermo Scientific and Gore have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. Resulting new high-resilience tubing (HRT) formulations provide exceptional life and purity while operating at high pressure and 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 (12in.); 2.4 mm wall, 355mm (14in.)

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 Inside Dia.	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 Gores have teamed up to provide you with breakthrough technology for peristaltic pump tubing performance. Resulting new high-resilience tubing (HRT) formulations provide exceptional life and purity while operating at high pressure and 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 (12in.); 2.4mm wall, 355mm (14in.)

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 Inside Dia.	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
50001-68	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)
50001-67	Israel Male Plug

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)	3/8in. I.D. tubing on sizes 0 to 3 and micro to 13 5/8in. I.D. tubing on sizes 4 to 5, and 14 to 15
Connections (Shielded w/ Value)	1/8 in. NPT(M) Sizes 0 to 3, micro to 13 1/4 in. NPT (M) sizes 4 to 5 and 14 to 15
Shipping Weight (Unshielded)	0.3kg (0.5 lb.)
Shipping Weight (Shielded)	1.0 lb. (0.5kg)
Shipping Weight (Shielded w/Value)	1.0 lb. (0.5kg)

Cat. No.	Type	Airflow Rate
GF2000	Unshielded	0.2 to 90, 0.36 to 160mL/min.
GF2060	Shielded	0.2 to 90, 0.36 to 160mL/min.
GF9060	Shielded with Valve	0.2 to 90, 0.36 to 160mL/min.
GF2100	Unshielded	1 to 280, 2 to 500mL/min.
GF2160	Shielded	1 to 280, 2 to 500mL/min.
GF9160	Shielded with valve	1 to 280, 2 to 500mL/min.
GF2200	Unshielded	20 to 2100, 36 to 3700mL/min.
GF2260	Shielded	20 to 2100, 36 to 3700mL/min.
GF9260	Shielded with valve	20 to 2100, 36 to 3700mL/min.
GF2300	Unshielded	200 to 14,000, 360 to 25,000mL/min.
GF2360	Shielded	200 to 14,000, 360 to 25,000mL/min.
GF9360	Shielded with valve	200 to 14,000, 360 to 25,000mL/min.
GF2400	Unshielded	1000 to 36,000, 1800 to 64,000mL/min.
GF2460	Shielded	1000 to 36,000, 1800 to 64,000mL/min.
GF9460	Shielded with valve	1000 to 36,000, 1800 to 64,000mL/min.
GF2500	Unshielded	3000 to 77,000, 5300 to 137,000mL/min.
GF2560	Shielded	3000 to 77,000, 5300 to 137,000mL/min.
GF9560	Shielded with valve	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 ±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)	±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° to +65°C (-15° to +150°F) at full pressure rating. Above 65°C (150°F), max. pressure is 40psig
Connection (Shielded)	0.375 in. I.D. tubing on sizes 0 to 3 and micro to 13 0.625 in. I.D. tubing on sizes 4 to 5, and 14 to 15
Connection (Shielded w/Valve)	0.125 in. NPT(M) Sizes 0 to 3, micro to 13 0.25 in. NPT (M) sizes 4 to 5 and 14 to 15
Shipping Weight (Shielded)	0.5kg (1.0 lb.)
Shipping Weight (Shielded w/Valve)	0.6kg (1.2 lb.)

Cat. No.	Type	Airflow Rate
GF3060	Shielded	0.0002-0.12mL/min.
GF9760	Shielded w/valves	0.0002-0.12mL/min.
GF1060	Shielded	0.002-1.1; 0.004-2.3mL/min.
GF7060	Shielded w/valves	0.002-1.1; 0.004-2.3mL/min.
GF1160	Shielded	0.01-4.0; 0.02-8.6mL/min.
GF7160	Shielded w/valves	0.01-4.0; 0.02-8.6mL/min.
GF1260	Shielded	0.2-36; 0.43-77mL/min.
GF7260	Shielded w/valves	0.2-36; 0.43-77mL/min.
GF1360	Shielded	3-300; 6-640mL/min.
GF7360	Shielded w/valves	3-300; 6-640mL/min.
GF1460	Shielded	10-850; 21-1820mL/min.
GF7460	Shielded w/valves	10-850; 21-1820mL/min.
GF1560	Shielded	30-1900; 64-4100mL/min.
GF7560	Shielded w/valves	30-1900; 64-4100mL/min.
GF1660	Shielded	500-8000; 1,500-20,000mL/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 ±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 6.0in.) 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 ±2% of reading or ±1 division (correlated use); greater of ±5% of reading 2± division of scale (direct reading use)
Repeatability	±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	0.6cm (0.25in.) NPT(F) for 240 and 250 tube sizes; 0.3cm (0.12in.) NPT(F) for all others
Shipping Weight	1.0kg (2 lb.)

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 ±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 PCTFE/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)	±5% of reading or ±2 division of scale, whichever is greater
Accuracy (Correlated)	±2% of reading or ±1 division, whichever is greater
Repeatability	±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 in. NPT(F) for 240 and 250 tube sizes; 0.125 in. NPT(F) for all others
Shipping Weight	0.5kg (1.0 lb.)

Cat. No.	Airflow Rate	Water Flowrate
GF-6340-1100	95 and 230mL/min.	1.1 and 4.9mL/min.
GF-6341-1000	95 and 230mL/min.	1.1 and 4.9mL/min.
GF-6340-1110	280 and 620mL/min.	3.9 and 15mL/min.
GF-6341-1110	280 and 620mL/min.	3.9 and 15mL/min.
GF-6340-1115	1000 and 2000mL/min.	17 and 55mL/min.
GF-6341-1115	1000 and 2000mL/min.	17 and 55mL/min.
GF-6340-1120	2200 and 4200mL/min.	43 and 120mL/min.
GF-6341-1120	2200 and 4200mL/min.	43 and 120mL/min.
GF-6340-1125	6500 and 12,000mL/min.	140 and 360mL/min.
GF-6341-1125	6500 and 12,000mL/min.	140 and 360mL/min.
GF-6340-1130	14,000 and 25,000mL/min.	320 and 800mL/min.
GF-6341-1130	14,000 and 25,000mL/min.	320 and 800mL/min.
GF-6340-1135	25,000 and 46,000mL/min.	590 and 1400mL/min.
GF-6341-1135	25,000 and 46,000mL/min.	590 and 1400mL/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

115V Model

- Capacity: 17L/min.
- Motor Speed: 1550rpm
- Max. Pressure: 1.24 bar
- Max. Vacuum: 508mmHG

230V Model

- Capacity: 14L/min.
- Motor Speed: 1290rpm
- Max. Pressure: 1.24 bar
- Max. Vacuum: 508mmHG

Includes: PTFE sealing tape, two 0.38in. (9.5mm) polyethylene hose bar 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
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 × 10 × 14cm (8 × 4 × 5.5in.)
Shipping Weight	3.2kg (7 lb.)

Cat. No.	Electrical Requirements
420-1901	115V 60Hz
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 (0.37in.) ID Tygon* vacuum tubing for up to 58.4cm (23in.) Hg vacuum.

- Cavity configuration minimizes dead space and air entrapment
- Noryl* pumphead, nitrile diaphragm, valves of PTFE resin, and polyethylene (PE) adapters
- With standard 115 or 230V motor or a hazardous-duty 115V motor

115V Model

- Pumping capacity: 25.5L/min.
- Motor speed: 1550rpm
- Max. Pressure: 1.24 bar
- Max. Vacuum: 508mmHg

230V Model

- Pumping capacity: 22.6L/min.
- Motor speed: 1290rpm
- Max. Pressure: 1.24 bar
- Max. Vacuum: 508mmHg

Includes: Thread tape made of PTFE resin, four polyethylene 9.5mm (0.37in.) NPT(M) x 9.5mm (0.37in.) 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 5.50in.)
Shipping Weight	3.7kg (8 lb.)

Cat. No.	Pumping Speed	Airflow Rate	Electrical Requirements
420-2901	25.5L/min.	0.9cfm/min.	115V 60Hz, 1.7A
420-2902	22.6L/min.	0.8cfm/min.	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 (9in.) 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 8.5in.)
Shipping Weight	5.5kg (12 lb.)

Cat. No.	Motor Speed	Electrical Requirements
420-3901	1550rpm	115V
420-3902	1290rpm	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 (21.3in.) 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

Ordering Information: 115V model features a U.S. standard plug; 230V model features a European-style plug.

Includes: Supplied with a 6ft. power cord.

Warranty: 1 Year

Certifications: UL and CSA listed for 115VAC, 60Hz model; CE approved for 230VAC, 50Hz model

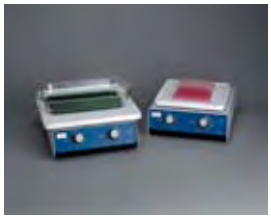
Alert: Do not pump liquids or immerse pump. Avoid organic, basic and acidic vapors.

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 (0.25in.) 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 7.5in.)
Max Temperature	40°C Maximum (104°F Maximum)
Shipping Weight	2.3kg (5 lb.)

Cat. No.	Air Displacement	Electrical Requirements
4003910	11L/min. (0.39cfm)	115V 60Hz, 1.6A
4003912	9.2L/min. (0.32cfm)	230V 50Hz, 0.8A

SHAKERS

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: CE listed (240V models only) and UL listed (120V models only)

Specifications	
Speed Range	40 to 220rpm
Orbit	1.9cm (0.75in.)
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.)
Shipping Weight	7.3kg (16 lb.)

Cat. No.	Platform L x W	Exterior L x W x H	Electrical Requirements
2309Q	23 × 23cm (9 × 9in.)	31 × 27 × 11cm (12.38 × 10.62 × 4.4in.)	120V 50/60Hz, 50w, 0.4A
2309-1CEQ	23 × 23cm (9 × 9in.)	31 × 27 × 11cm (12.38 × 10.62 × 4.4in.)	240V 50/60Hz, 50w, 0.2A
2314Q	30 × 30cm (12 × 12in.)	35 × 32 × 11cm (13.62 × 12.5 × 4.38in.)	120V 50/60Hz, 50w, 0.4A
2314-1CEQ	30 × 30cm (12 × 12in.)	35 × 32 × 11cm (13.62 × 12.5 × 4.38in.)	240V 50/60Hz, 50w, 0.2A

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 pemanently attached.

Warranty: 90 days on labor and one year on parts

Certifications: UL, cUL, CE

Specifications	
Speed Range	40 to 220rpm
Orbit	1.9cm (0.75in.)
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 × 31 × 16cm (13.61 × 12.28 × 6.25in.)
Shipping Weight	8kg (18 lb.)

Cat. No.	Holds No. of Containers	Electrical Requirements
2346Q	9 (250mL) Flasks	120V 50/60Hz, 50w, 0.4A
2346-1CEQ	9 (250mL) Flasks	240V 50/60Hz, 50w, 0.2A
2345Q	13 (125mL) Flasks	120V 50/60Hz, 50w, 0.4A
2345-1CEQ	13 (125mL) Flasks	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

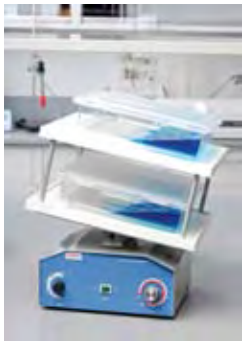
Warranty: 90 days on labor and one year on parts

Certifications: 120V model is CSA approved; 230V model is 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 × 10.6in.)
Load Bearing Capacity	6.8kg (15 lb.)
Exterior L x W x H	30.4 × 39.6 × 18.5cm (12 × 15.6 × 7.3in.)
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
M79735Q	120V 50/60Hz, 0.10A
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 × 10.6in.).

Warranty: 90 days labor, one year parts

Cat. No.	Description	For Use with
AY797X1	Double-Tier Platform	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.

Provides 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: 120V model is cCSAus approved; 240V model is 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 × W	36 × 36cm (14.19 × 14.19in.)
Load Capacity	4.5kg (10 lb.)
Exterior L × W × H with cover	41 × 42 × 34.7cm (16 × 16.5 × 13.5in.)
Shipping Weight	11kg (25 lb.)

Cat. No.	Electrical Requirements
4637Q	120V 50/60Hz (3.3A)
4637-1CEQ	240V 50/60Hz (1.7A)

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 (0.8in.) 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 × 17.8cm (7 × 7in.)
Platform Material	Clear acrylic with nonskid rubber mat
Exterior L x W x H	20.3 × 20.3 × 12.2cm (8 × 8 × 4.8in.)
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* 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

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 continous
Operating Humdity Range	20 to 80% noncondensing
Operating Temperature Range	4° to 40°C (39.2° to 104°F)
Platform L x W	17 × 13cm (6.75 × 5in.)
Platform Load Capacity	1.4kg (3 lb.)
Exterior L x W x H	21 × 17 × 14cm (8.3 × 6.9 × 5.5in.)
Shipping Weight	11kg (25 lb.)

Cat. No.	Electrical Requirements
4630Q	120V 50/60Hz, 60w, 0.3A
4630-1CEQ	240V 50/60Hz, 50w, 0.3A

Thermo Scientific* Large Bidirectional Rotators

Thermo Scientific Large Bidirectional 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
- Bidirectional 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: 3-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 × 16in.)
Platform Load Capacity	1.8kg (4 lb.)
Exterior L x W x H	36 × 41 × 19cm (14 × 16 × 7.5in.)
Shipping Weight	11kg (25 lb.)

Cat. No.	Electrical Requirements
4631Q	120V 50/60Hz, 0.4A
4631-1CEQ	240V 50/60Hz, 0.2A

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.

- Chose from fixed or adjustable speeds
- Reversible pad provides one side (with lip to prevent sliding) for capped tubes 110mm (4.33in.) 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 (240V models only)

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
M71015Q	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 × 4.3in.)	1.4kg (3 lb.)	120V 50/60Hz (0.03A)
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 × 4.3in.)	1.4kg (3 lb.)	240V 50Hz (0.01A)
M48725Q	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 × 4.3in.)	2.6kg (5.8 lb.)	120V 50Hz (0.08A)
M48270-33Q	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 × 4.3in.)	2.6kg (5.8 lb.)	240V 50Hz (0.02A)

Thermo Scientific Laboratory Products

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 10 to 30mm (0.3 to 1.18in.), 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: CSA (120V models); CE (220/240V models)

Specifications	
Hertz	50/60

Cat. No.	Description	Tube Capacity	Rotation	Oscillation	Exterior L x W x H	Shipping Weight	Volts
4002110Q	Clip Bar	8 × 17 to 30mm	360°	Up to 300°	27.9 × 10.2 × 15.2cm (11 × 4 × 6in.)	2.3kg (5 lb.)	120V
4002220Q	Clip Bar	8 × 17 to 30mm	360°	Up to 300°	27.9 × 10.2 × 15.2cm (11 × 4 × 6in.)	2.3kg (5 lb.)	220/240V
400110Q	Clip Bar	14 × 10 to 19mm	360°	Up to 300°	27.9 × 10.2 × 15.2cm (11 × 4 × 6in.)	2.3kg (5 lb.)	120V
400220Q	Clip Bar	14 × 10 to 19mm	360°	Up to 300°	27.9 × 10.2 × 15.2cm (11 × 4 × 6in.)	2.3kg (5 lb.)	220/240V
T400110Q	Double-Deck Tray	22 × 10mL Vacutainer tubes	----	Up to 90°	27.9 × 16.5 × 15.2cm (11 × 6.5 × 6in.)	2.3kg (5 lb.)	120V
T400220Q	Double-Deck Tray	22 × 10mL Vacutainer tubes	----	Up to 90°	27.9 × 16.5 × 15.2cm (11 × 6.5 × 6in.)	2.3kg (5 lb.)	220/240V
C4002110Q	Clip Bar and Double-Deck Tray	8 × 17 to 30mm or 12 × 10mL Vacutainer tubes	360°	Up to 300°	27.9 × 16.5 × 15.2cm (11 × 6.5 × 6in.)	2.3kg (5 lb.)	120V
C4002220Q	Clip Bar and Double-Deck Tray	8 × 17 to 30mm or 22 × 10mL Vacutainer tubes	360°	Up to 300°	27.9 × 16.5 × 15.2cm (11 × 6.5 × 6in.)	2.7kg (6 lb.)	220/240V
C400110Q	Clip Bar and Double-Deck Tray	14 × 10 to 19mm and 22 × 10mL Vacutainer tubes	360°	Up to 300°	27.9 × 16.5 × 15.2cm (11 × 6.5 × 6in.)	2.3kg (5 lb.)	120V
C400220Q	Clip Bar and Double-Deck Tray	14 × 10 to 19mm or 22 × 10mL Vacutainer tubes	360°	Up to 300°	27.9 × 16.5 × 15.2cm (11 × 6.5 × 6in.)	2.7kg (6 lb.)	220/240V
4152110Q	Clip Bar	14 × 17 to 30mm	360°	Up to 300°	46.9 × 10.2 × 15.2cm (18.5 × 4 × 6in.)	2.3kg (5 lb.)	120V
4152220Q	Clip Bar	14 × 17 to 30mm	360°	Up to 300°	46.9 × 10.2 × 15.2cm (18.5 × 4 × 6in.)	2.3kg (5 lb.)	220/240V
415110Q	Clip Bar	32 × 10 to 19mm	360°	Up to 300°	46.9 × 10.2 × 15.2cm (18.5 × 4 × 6in.)	2.3kg (5 lb.)	120V
415220Q	Clip Bar	32 × 10 to 19mm	360°	Up to 300°	46.9 × 10.2 × 15.2cm (18.5 × 4 × 6in.)	2.3kg (5 lb.)	220/240V
T415110Q	Double-Deck Tray	46 × 10mL Vacutainer tubes	----	Up to 90°	46.9 × 11.4 × 15.2cm (18.5 × 4.5 × 6in.)	3.2kg (7 lb.)	120V
T415220Q	Double-Deck Tray	46 × 10mL Vacutainer tubes	----	Up to 90°	46.9 × 11.4 × 15.2cm (18.5 × 4.5 × 6in.)	3.2kg (7 lb.)	220/240V
C4152110Q	Clip Bar and Double-Deck Tray	14 × 17 to 30mm or 45 × 10mL Vacutainer tubes	360°	Up to 300°	46.9 × 11.4 × 15.2cm (18.5 × 4.5 × 6in.)	3.2kg (7 lb.)	120V
C4152220Q	Clip Bar and Double-Deck Tray	14 × 17 to 30mm or 46 × 10mL Vacutainer tubes	360°	Up to 300°	46.9 × 11.4 × 15.2cm (18.5 × 4.5 × 6in.)	3.6kg (8 lb.)	220/240V
C415110Q	Clip Bar	32 × 10 to 19mm and 46 × 10mL Vacutainer tubes	360°	Up to 300°	46.9 × 11.4 × 15.2cm (18.5 × 4.5 × 6in.)	3.2kg (7 lb.)	120V
C415220Q	Clip Bar and Double-Deck Tray	14 × 17 to 30mm or 46 × 10mL Vacutainer tubes	360°	Up to 300°	46.9 × 11.4 × 15.2cm (18.5 × 4.5 × 6in.)	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 1.8cm (0.71in.) 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: 8.5in. x 5in.).

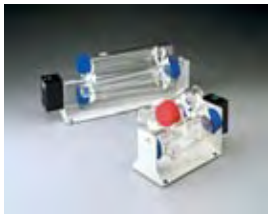
Warranty: 90 days labor, one year parts

Certifications: 120V model is cCSAus approved; 240V model is 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 × 22cm (5.3 × 8.8in.)
Tube Capacity	14 x 7mL, 10mL or 15mL
Platform Load Capacity	1.4kg (3 lb.)
Exterior D x W x H	21 × 22 × 18cm (8.5 × 8.8 × 8.1in.)
Shipping Weight	3.6kg (8 lb.)

Cat. No.	Electrical Requirements
4632Q	120V 60Hz, 0.3A
4632-1CEQ	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 5.9in.) or 300mm (11.8in.) 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: 120V model is CSA approved; 240V model is 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
M90615Q	Four 38 x 150mm bottles/4 x 50mL conical tubes	11.4 × 26.7 × 16.5cm (4.5 × 10.5 × 6.5in.)	0.9kg (2 lb.)	120V 50/60Hz
M90610-33Q	Four 38 x 150mm bottles/4 x 50mL conical tubes	11.4 × 26.7 × 16.5cm (4.5 × 10.5 × 6.5in.)	0.9kg (2 lb.)	220/240V 50/60Hz
M107625Q	Four 38 x 300mm bottles/8 x 50mL conical tubes	11.4 × 47 × 16.8cm (4.5 × 18.5 × 6.6in.)	2.0kg (4.5 lb.)	120V 50/60Hz
M107620-33Q	Four 38 x 300mm bottles/8 x 50mL conical tubes	11.4 × 47 × 16.8cm (4.5 × 18.5 × 6.6in.)	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 0.3cm (0.12in.) 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 0.9cm (0.38in.) 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

Warranty: 90 days labor, one year parts

Certifications: UL and CE listed

Specifications	
Speed Range	40 to 1100rpm
Orbit	0.30cm (0.12in.)
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 × 28 × 18cm (11 × 11 × 7in.)
Shipping Weight	11kg (25 lb.)

Cat. No.	Electrical Requirements
4625Q	120V 60Hz, 1A
4625-1CEQ	240V 50Hz, 0.5A

Thermo Scientific* Cel-Gro Tissue Culture Rotator

Thermo Scientific Cel-Gro Tissue Culture Rotator no-maintenance brushless motor provides a gentle rotating motion that mixes test tube contents for optimum culture results.

The single drum has an adjustable rotating angle and speed, while the dual drum has a fixed rotating angle and speed.

- Rotator operates in standard incubators for cultivation under controlled temperature conditions
- Powder-coated stainless-steel outer body construction is durable and corrosion-resistant
- Drums can be lifted off the rotor without interrupting rotator operation
- Adjusting screw on the base varies elevation angle
- Pilot light indicates when unit is on

Single-Drum Rotator

- Adjustable 5° rotating angle above horizontal to 90°
- Adjustable speed control from 12 to 70rpm

Dual-Drum Rotator

- Fixed rotating angle
- Fixed speed of 0.2rpm

Ordering Information: Drums sold separately (1647Q, 1648Q, 1651Q)

Required Accessories: Single-drum model requires one tissue drum, dual-drum model requires two tissue drums, sold separately.

Warranty: 90 days labor, one year parts

Certifications: 120V models are cCSAus approved

Specifications	
Operating Temperature Range	Up to 40°C (104°F)
Operating Humidity Range	20 to 80% noncondensing
Material	Stainless-Steel Outer Shell

Cat. No.	Description	Speed Range	Rotating Angle	Exterior L x W x H	Shipping Weight	Electrical Requirements
1640Q	Single-Drum Model	12 to 70rpm	Adjustable 5° above horizontal to 90°	38.1 × 35.6 × 57.2cm (15 × 14 × 22.5in.)	9kg (19 lb.)	120V 60Hz, 0.5A
1645Q	Dual-Drum Model	Fixed 0.2rpm	Nonadjustable	46 × 39 × 46cm (18 × 15.5 × 18in.)	13kg (28 lb.)	120V 60Hz, 0.8A

Thermo Scientific* Cel-Gro Tissue Culture Rotator Drums

Thermo Scientific Cel-Gro Tissue Culture Drums are accessories for rotators.

Cat. No.	Tube Capacity
1647Q	142 x 17mm tube diameter
1648Q	76 x 26mm tube diameter
1651Q	60 x 30mm tube diameter

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 0.38in. hose barb connection on each end except D8822, D8950 and D8951, which include tapered straight nippled for 0.38in. 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 (10.2in.); 2/3 Size: 33.8cm (13.3in.); Full Size: 47.5cm (18.7in.)

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* Bantam* Deionizer

Thermo Scientific Bantam Deionizer is an economical way to deionize water.

Easily view resistivity directly from the unit. The Bantam Deionizer is customizable to specific applications by selecting the appropriate cartridge.

- Ideal for applications requiring up to 38L/hr. of purified water
- Point-of-use polishing of pretreated water or single-stage treatment of tap water
- Direct-reading purity monitor
- Inlet pressure range: 5 to 70psi (0.35 to 4.9kg/cm^2)
- Mounts on benchtop or wall
- Select the cartridge best suited to meet your application needs

Applications: Pretreatment and deionization

Includes: 3ft. (91cm) inlet tubing

Required Accessories: Cartridges sold separately

Warranty: One year

Notes: Designed for nonpressurized applications. Output water must be diverted to an atmospherically vented receptacle; no back pressure can be accepted.

Specifications	
Flowrate	Up to 38L/hr.
L x W x H	22 × 15 × 72cm (8.75 × 6 × 28.5in.)
Feedwater Pressure	0.35 to 4.9kg/cm^2 (5 to 70psi)
Resistivity	Reads 25,000 to 18,000,000ohms-cm

Cat. No.	Model	Electrical Requirements
D0800	Bantam Deionizer	120V 50/60Hz
D0805	Bantam Deionizer	240V 50/60Hz

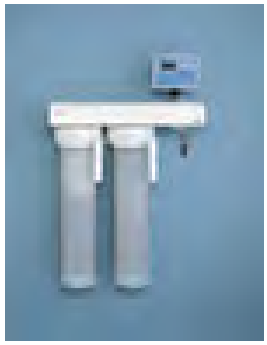
Thermo Scientific* Bantam* Deionizer Cartridges

For use with the Thermo Scientific Bantam Deionizers.

Choose the cartridge based on your application needs.

Cat. No.	Type	Characteristics	Resin	Capacity	Cartridge 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
D0813	Organic Removal	Removes organics and chlorine.	Activated Carbon	5000 gal.	Full
D0809	Ultrapure	Removes ionized impurities to produce high resistivity water with a neutral pH.	Mixed Bed	875 grains	Full
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

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 H_2O 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 (0.5in.) NPTF
Max. Inlet Pressure	100psig

Cat. No.	Model	Maximum Flowrate	L x W x H	Electrical Requirements	Requires
D4505	Half-size holder	2L/min.	17.8 × 17.8 × 38.1cm (7 × 7 × 15in.)	N/A	Half-Size B-Pure Cartridge
D4511	Single holder	4L/min.	17.8 × 17.8 × 61cm (7 × 7 × 24in.)	N/A	Full-Size B-Pure Cartridge
D4521	Double holder module with digital purity meter	4L/min.	17.8 × 38.1 × 68.6cm (7 × 15 × 27in.)	120V	2 Full-Size B-Pure Cartridges
D4522-33	Double holder with Digital Purity Meter	4L/min.	17.8 × 38.1 × 68.6cm (7 × 15 × 27in.)	240V	2 Full-Size B-Pure Cartridges
D4524	Double Holder with Pura-Lite Indicator (50 kΩ)	4L/min.	17.8 × 38.1 × 68.6cm (7× 15 × 27in.)	120V	2 Full-Size B-Pure Cartridges
D5831	Double holder with Pura-Lite Indicator (200 kΩ)	4L/min.	17.8 × 38.1 × 68.6cm (7 × 15 × 27in.)	120V	2 Full Size B-Pure Cartridges
D5833	Double holder with Pura-Lite Indicator (1M Ω)	4L/min.	17.8 × 38.1 × 68.6cm (7 × 15 × 27in.)	120V	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
D0760	Anion Removal	Effective removal of weakly ionized impurities, raises the pH of solutions, recovers precious metal complex	Strong Anion Exchange	1680 grains
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
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

Thermo Scientific Laboratory Products

D0835	Pretreatment	Effectively removes colloids, bacteria, chlorine and organics.	Macroreticular, Activated Carbon	5000 gal.
D0836	Macropure*	Effectively removes collloids, bacteria, chlorine and organics, increases filter life.	Macroreticular, Activated Carbon	2000 gal.
D0813	Organic Removal	Removes organics and chlorine.	Activated Carbon	5000 gal.
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
D0809	Ultrapure	Removes ionized impurities to produce high resistivity water with a neutral pH.	Mixed Bed	875 grains
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.
D8809	Ultrapure and Oxygen Removal	Removes ionized impurities and oxgen to produce high purity water.	Ultrapure, Oxygen Removal	455 grains/30g
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
D50215	Organic Removal	Removes organics and chlorine	Activated Carbon	5000 gal.
D50214	Oxygen Removal	Maintains low oxygen content to prevent corrosion in colling water. The feed water should contain less than 10ppm of ionized solids.	Porous Strong Anion Exchange	18g
D50213	Ultrapure	Removes ionized impurities to produce high resistivity water with a neutral pH	Mixed Bed	550 grains
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.

Thermo Scientific Laboratory Products

Enhance your Productivity with other Thermo Scientific Essential Solutions

Ask about our other laboratory solutions – ideal for maximizing your daily work.

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Our plastic labware products are durable, break-resistant, lightweight, and safer for benchtop use than glass.

Thermo Scientific Finnpipettes and Finntips
The ergonomic design of Finnpipettes® and Finntips® reduces user stress and optimizes pipetting performance and accuracy, so you can focus on your work.

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

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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	6/12
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
1600-0001	30 ml Narrow-Mouth Bottle - FEP	1/8
1600-0002	60 ml Narrow-Mouth Bottle - FEP	1/8
2002-0001	30 ml Narrow-Mouth Bottle - HDPE	12/72
2002-0002	60 ml Narrow-Mouth Bottle - HDPE	12/72
2002-9025	8 ml Narrow-Mouth Bottle - HDPE	12/72
2002-9050	15 ml Narrow-Mouth Bottle - HDPE	12/72
2002-9125	4 ml Narrow-Mouth Bottle - HDPE	12/72
2006-0001	30 ml Narrow-Mouth Bottle - PP	12/72
2006-0002	60 ml Narrow-Mouth Bottle - PP	12/72
2006-9025	8 ml Narrow-Mouth Bottle - PP	12/72
2006-9050	15 ml Narrow-Mouth Bottle - PP	12/72
2006-9125	4 ml Narrow-Mouth Bottle - PP	12/72

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 Finnpipettes – Superior Ergonomics with State-of-the-Art Innovations

Thermo Scientific Finnpipette 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.	Finnpipette F1 Variable Volume
4641010	Finnpipette F1 0.2-2 µl Micro
4641020	Finnpipette F1 0.5-5 µl Micro
4641030	Finnpipette F1 1-10 µl Micro
4641040	Finnpipette F1 1-10 µl
4641050	Finnpipette F1 2-20 µl Micro
4641060	Finnpipette F1 2-20 µl
4641130	Finnpipette F1 5-50 µl Micro
4641140	Finnpipette F1 5-50 µl
4641070	Finnpipette F1 10-100 µl
4641080	Finnpipette F1 20-200 µl
4641090	Finnpipette F1 30-300 µl
4641100	Finnpipette F1 100-1000 µl
4641110	Finnpipette F1 0.5-5 ml
4641120	Finnpipette F1 1-10ml

Cat. No.	Finnpipette F1 Fixed Volume
4651000	Finnpipette F1 Fixed 1 µl Micro
4651010	Finnpipette F1 Fixed 5 µl Micro
4651020	Finnpipette F1 Fixed 10 µl
4651130	Finnpipette F1 Fixed 20 µl
4651030	Finnpipette F1 Fixed 25 µl
4651040	Finnpipette F1 Fixed 50 µl
4651050	Finnpipette F1 Fixed 100 µl
4651140	Finnpipette F1 Fixed 200 µl
4651060	Finnpipette F1 Fixed 250 µl
4651070	Finnpipette F1 Fixed 500 µl
4651080	Finnpipette F1 Fixed 1000 µl
4651090	Finnpipette F1 Fixed 2000 µl
4651100	Finnpipette F1 Fixed 3000 µl
4651110	Finnpipette F1 Fixed 5000 µl
4651120	Finnpipette F1 Fixed 10000 µl

Cat. No.	Finnpipette F1 Multichannel
4661000	Finnpipette F1 8-channel 1-10 µl Micro
4661010	Finnpipette F1 8-channel 5-50 µl ,
4661020	Finnpipette F1 8-channel 10-100 µl
4661030	Finnpipette F1 8-channel 30-300 µl
4661040	Finnpipette F1 12-channel 1-10 µl Micro
4661050	Finnpipette F1 12-channel 5-50 µl
4661060	Finnpipette F1 12-channel 10-100 µl
4661070	Finnpipette F1 12-channel 30-300 µl
4661080	Finnpipette F1 16-channel 1-10 µl Micro
4661090	Finnpipette F1 16-channel 5-50 µl Micro

Thermo Scientific Finnpipette 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.	Finnpipette F2 Variable Volume
4652000	Finnpipette F2 Fixed Volume 1 µl Micro
4652010	Finnpipette F2 Fixed Volume 5 µl Micro
4652020	Finnpipette F2 Fixed Volume 10 µ,
4652130	Finnpipette F2 Fixed Volume 20 µl
4652030	Finnpipette F2 Fixed Volume 25 µl
4652040	Finnpipette F2 Fixed Volume 50 µl
4652050	Finnpipette F2 Fixed Volume 100 µl
4652140	Finnpipette F2 Fixed Volume 200 µl
4652060	Finnpipette F2 Fixed Volume 250 µl
4652070	Finnpipette F2 Fixed Volume 500 µl
4652080	Finnpipette F2 Fixed Volume 1000 µl
4652090	Finnpipette F2 Fixed Volume 2000 µl
4652100	Finnpipette F2 Fixed Volume 3000 µl
4652110	Finnpipette F2 Fixed Volume 5000 µl

Cat. No.	Finnpipette F2 Fixed Volume
4652000	Finnpipette F2 Fixed Volume 1 µl Micro
4652010	Finnpipette F2 Fixed Volume 5 µl Micro
4652020	Finnpipette F2 Fixed Volume 10 µl
4652130	Finnpipette F2 Fixed Volume 20 µl
4652030	Finnpipette F2 Fixed Volume 25 µl
4652040	Finnpipette F2 Fixed Volume 50 µl
4652050	Finnpipette F2 Fixed Volume 100 µl
4652140	Finnpipette F2 Fixed Volume 200 µl
4652060	Finnpipette F2 Fixed Volume 250 µl
4652070	Finnpipette F2 Fixed Volume 500 µl
4652080	Finnpipette F2 Fixed Volume 1000 µl
4652090	Finnpipette F2 Fixed Volume 2000 µl
4652100	Finnpipette F2 Fixed Volume 3000 µl
4652110	Finnpipette F2 Fixed Volume 5000 µl
4652120	Finnpipette F2 Fixed Volume 10000 µl

Cat. No.	Finnpipette F2 Multichannel
4662000	Finnpipette F2 8-channel 1-10 µl Micro
4662010	Finnpipette F2 8-channel 5-50 µl
4662020	Finnpipette F2 8-channel 10-100 µl
4662030	Finnpipette F2 8-channel 30-300 µl
4662040	Finnpipette F2 12-channel 1-10 µl Micro
4662050	Finnpipette F2 12-channel 5-50 µl
4662060	Finnpipette F2 12-channel 10-100 µl
4662070	Finnpipette F2 12-channel 30-300 µl
4662080	Finnpipette F2 16-channel 1-10 µl Micro
4662090	Finnpipette F2 16-channel 5-50 µl Micro

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