

# HEATING MANTLES

## 17-1000: STIRMANTLE

The StirMantle adds electromagnetic stirring capability (50-750 rpm) to the Series TM heating mantle for spherical flasks. Heating and stirring are independent; choose either or both. Speed is easily adjusted by a single dial on the StirControl II. The StirControl II creates and synchronizes the magnetic field. Its stirring speed is extremely stable, even at 50 rpm, despite temperature or load. When restarting (as for removal and reinsertion of the flask), Glas-Col's exclusive "Synchrostart" feature maintains linkage between the field and the bar. At restart, the selected speed is reached in approximately 4 seconds. The StirControl II connects to the StirMantle by cord, so it may be placed outside corrosive hood atmospheres and is easily accessible.



Complete System 115V	Complete System 230V	StirMantle Only 115V	StirMantle Only 230V	Flask Capacity (ml)	Watts	Depth (in)	Outside Diameter (in)	Height (in)
100D EMS102	100D EMS103	100D TEM102	100D TEM103	250	180	1.64	6.25	4.75
100D EMS104	100D EMS105	100D TEM104	100D TEM105	300	180	1.70	6.25	4.75
100D EMS106	100D EMS107	100D TEM106	100D TEM107	500	270	2.00	6.25	5.25
100D EMS108	100D EMS109	100D TEM108	100D TEM109	1,000	380	2.56	7.50	5.50
100D EMS110	100D EMS111	100D TEM110	100D TEM111	2,000	500	3.35	10.00	6.50
100D EMS112	100D EMS113	100D TEM112	100D TEM113	3,000	500	3.60	10.00	6.50

### Specifications

Complete System: One StirMantle, one StirControl II, connecting cords, and stir bar. Completely grounded and fused. (Order temperature or power controls separately.)

StirMantle Only: With connecting cords. (Order StirControl II from chart below.)

StirControl II Only: LED relative field speed indication, lighted on/off power switch, fuse protection, 3-wire load receptacle, 3-wire line cord, and molded plug. Receptacles on front for operating two stirring units at once. Rating: 50/60 HZ, 60 VA. Step-less speed, 50-750 rpm. Low-profile housing 8"w x 6"d x 3-3/8"h. Weight: 3.75 lbs.

STIRRING BARS			STIRCONTROL II	
Catalog Number	Size	For Flask Size	Catalog Number	Description
100D M24	1/2" x 1"	250-300 ml	104A EMC4	StirControl II, 120V
100D M25	11/16" x 1-7/8"	500 ml-1 liter	104A EMC424	StirControl II,
100D M26	1" x 2-3/4"	2 liters-5 liters		

**To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137**

# HEATING MANTLES



## 17-1020: SPHERICAL FLASK MANTLE

The Series TM spherical flask mantle covers only the flask's bottom half, letting you see its full contents. Larger sizes have multiple circuits for ease of temperature control when a flask is less than half full. Splash Guards can be used with TM102 through TM117. Poncho Safety Shields can be used with sizes 500 ml (TM106) and larger.

### Specifications

Certification: All 115-volt items are CSA certified. TM122 also CSA certified.

Electrical: TM94 through TM118 detachable 4-ft., 3-wire cord and locking connector. TM120 and TM122-terminal box.

### Options

Series TM mantles are available with a bottom hole for flask drain.

Terminal box models are available with switches and pilot lights.

TM106 through TM122 available sealed and with inert gas purge fitting.

Catalog Number 115 volt	Catalog Number 230 volt	Flask Capacity (ml)	Max. Flask Diameter (mm)	Watts	Inside Depth (in)	Outside Diameter (in)	Outside Height (in)
100B TM94	*	50	48	60	0.94	6.25	4.13
100B TM96	100B TM97	100	60	80	1.19	6.25	4.13
100B TM98	100B TM99	125	70	80	1.38	6.25	4.13
100B TM100	100B TM101	200	76	100	1.5	6.25	4.13
100B TM102	100B TM103	250	83	180	1.63	6.25	4.75
100B TM104	100B TM105	300	86	180	1.69	6.25	4.75
100B TM106	100B TM107	500	101	270	2	6.25	5
100B TM108	100B TM109	1,000	137	380	2.56	7.5	5
100B TM110	100B TM111	2,000	170	500	3.38	10	6
100B TM112	100B TM113	3,000	183	500	3.6	10	6
100B TM114	100B TM115	5,000	220	600	4.31	12	7
100B TM116	100B TM117	12,000	293	2@650	5.77	16.5	9
100B TM118	100B TM119	22,000	347	2@770	6.81	19	10
100B TM120	100B TM121	50,000	456	3@1,000	8.98	24	13

*\* 230 volt not available in these sizes. WARNING: chemical spillage, overheating, overloading, and general misuse will greatly reduce the service life.*

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## HEATING MANTLES

### 17-1040: GRIFFIN BEAKER MANTLE

The Series TM Griffin beaker mantle has a resilient and pliable interior to cradle fragile beakers. Heat is concentrated at the bottom so even small liquid volumes can be heated.



#### Specifications

Certification: All 115-volt items are CSA certified.

Electrical: Detachable 4-ft., 3-wire cord and locking connector.

#### How to order

Specify catalog number corresponding to flask manufacturer and flask size.

Please Call for mantles to fit tall-form Griffin beakers.

Catalog Number 115V	Catalog Number 230V	Beaker Capacity (ml)	Beaker Diameter (in)	Inside Depth (in)	Watts	Outside Diameter (in)	Outside Height (in)
100B TM610	100B TM611	600	3.56	3.75	325	6.25	5.5
100B TM612	100B TM613	800	3.88	4.25	350	7.50	6.0
100B TM614	100B TM615	1,000	4.25	4.50	430	7.50	6.0
100B TM616	100B TM617	2,000	5.13	6.00	550	9.00	8.0
100B TM618	100B TM619	3,000	5.75	6.50	630	9.00	8.0
100B TM620	100B TM621	4,000	6.38	8.00	710	9.00	10.0

**WARNING: Chemical spillage, overheating, overloading, and general misuse will greatly reduce the service life.**

To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137

# HEATING MANTLES



## 17-1060: RESIN REACTION FLASK MANTLES

The Series TM resin reaction flask mantle provides even heat distribution to prevent scorching of clear resinous material. One-circuit heat input simplifies temperature control.

### Specifications

Certification: All 115-volt items are CSA certified.

Electrical: Detachable 4-ft., 3-wire cord and locking connector.

*Heating mantles and tapes must be operated through a power control*

Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Max. Flask Diameter (in)	Mantle Depth (in)	Watts	Outside Diameter (in)	Outside Height (in)
<b>For Kontes Glass K-612000</b>							
100B TM508	100B TM509	500	4.5	3.00	200	7.5	5.0
100B TM512	100B TM513	1,000	4.5	4.50	270	7.5	7.0
100B TM514	100B TM515	1,500	4.5	6.63	330	7.5	9.0
100B TM516	100B TM517	2,000	4.5	7.50	400	7.5	9.0
100B TM518	100B TM519	3,000	4.5	11.00	600	7.5	13.0
<b>For Ace Glass 6476, 6477, and 6497; Lab Glass LG-8010 and LG-8011; Reliance Glass R-4505 and R-4510</b>							
100B TM560	100B TM561	500	4.63	2.50	250	7.5	5.0
100B TM562	100B TM563	1,000	4.63	5.63	300	7.5	7.5
100B TM564	100B TM565	1,500	4.63	6.63	380	7.5	9.0
100B TM566	100B TM567	2,000	4.63	8.88	450	7.5	11.0
100B TM568	100B TM569	3,000	4.63	10.00	600	7.5	12.0
<b>For Reliance Glass, Corning 6947, and Kimble 33700</b>							
100B TM570	100B TM571	500	3.75	4.50	270	7.5	6.5
100B TM572	100B TM573	1,000	4.25	5.25	335	7.5	7.0
100B TM576	100B TM577	2,000	5.50	6.00	470	9.0	8.0
100B TM578	100B TM579	3,000	5.50	9.00	550	9.0	11.0
100B TM580	100B TM581	4,000	5.50	11.00	750	9.0	13.0
100B TM570	100B TM571	500	3.75	4.50	270	7.5	6.5

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# HEATING MANTLES

## 17-1080: MANTLE/CONTROL PACKAGES

Glas-Col offers its standard Series TM mantle for round-bottom flasks with the PowrTrol power control as a special, economical package. The PowrTrol is a solid-state, proportional-voltage control that provides precise manual control of the output range, which is adjustable from 3-100%. The standard Series TM mantle is for round-bottom flasks from 50 ml to 5,000 ml in both 120V and 240V where available. The mantles are designed to withstand an internal operating temperature of 450°C and are CSA approved.



Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Max. Flask Diameter(mm)	Watts
100D TM94PL	*	50	48	60
100D TM96PL	100D TM97PL	100	60	80
100D TM98PL	100D TM99PL	125	70	80
100D TM100PL	100D TM101PL	200	76	100
100D TM102PL	100D TM103PL	250	83	180
100D TM104PL	100D TM105PL	300	86	180
100D TM106PL	100D TM107PL	500	101	270
100D TM108PL	100D TM109PL	1,000	137	380
100D TM110PL	100D TM111PL	2,000	170	500
100D TM112PL	100D TM113PL	3,000	183	500
100D TM114PL	100D TM115PL	5,000	220	600

## 17-1100: LARGE CAPACITY STIRMANTLE

This system has the power to mix volumes as large as 72 liters with a magnetic stir bar, eliminating the need for an overhead stirrer, which could introduce contaminants. The unit is ideal for continuous distillations. The variable-speed control (included) offers total mixing management. DC filtering allows the motor to run cooler, thus promoting longer motor life. Attached 4" feet allow bench clearance and air flow.



Catalog Number 115V	Catalog Number 230V	Beaker Capacity (ml)	Mantle Depth (in)	Watts	Outside Diameter (in)	Height (in)
100D EMS114	100D EMS115	5,000	4.33	600	12.0	7.25
100D EMS116	100D EMS117	12,000	5.77	2@650	16.5	13.00
100D EMS118	100D EMS119	22,000	6.83	2@770	19.0	14.00
100D EMS120	100D EMS121	50,000	8.98	3@1,000	24.0	16.50
	100D EMS122	72,000	10.19	2@2,000	26.0	17.75
<b>For Schott Glassware only</b>						
100D EMS116G	100D EMS117G	10,000	5.77	2@650	16.5	13.00
100D EMS118G	100D EMS119G	20,000	6.83	2@770	19.0	14.00
	100D EMS122G	50,000	10.19	3@1,000	26.0	17.75
<b>Stirring Bar</b>						
R96 419	.75" diameter x 3" long					

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# HEATING MANTLES



## 17-1120: SERIES STM MANTLES

The Series STM mantles perform the same function as Series TM heating mantles, plus operations requiring more heat. With an upper internal operating temperature of 650°C, these mantles resist burnout. STM1400 and STM1500 have 3" legs for cool lab benches, are sealed, and have inert gas purge fittings.

*Series STM mantles are recommended for use with flammable solvents only when used with a Poncho Safety Shield.*

### Specifications

Certification: All 115-volt items are CSA certified except STM400 through STM800.

Electrical: STM400 through STM1300 -detachable 4-ft., 3-wire cord and locking connector. STM1400 and STM1500 -terminal box.

### Options

Sizes smaller than 12-liter also available sealed with inert gas purge fittings.

Sizes 12-liter and larger available with switches and pilot lights.

Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Max. Flask Diameter (mm)	Watts	Outside Depth (in)	Outside Diameter (in)	Outside Height (in)
100B STM400	100B STM401	100	60	230	1.19	6.25	4.13
100B STM500	100B STM501	125	70	230	1.38	6.25	4.13
100B STM600	100B STM601	200	76	300	1.5	6.25	4.13
100B STM700	100B STM701	250	83	470	1.63	6.25	4.75
100B STM800	100B STM801	300	86	470	1.89	6.25	4.75
100B STM900	100B STM901	500	101	470	2.00	6.25	5.00
100B STM1000	100B STM1001	1,000	130	600	2.69	7.50	5.00
100B STM1100	100B STM1101	2,000	170	870	3.38	10.00	6.00
100B STM1200	100B STM1201	3,000	183	970	3.63	10.00	6.00
100B STM1300	100B STM1301	5,000	220	2@700	4.31	12.00	7.00
100B STM1400	100B STM1401	12,000	293	2@1000	5.77	16.50	9.00
100B STM1500	100B STM1501	22,000	347	3@1000	6.81	19.00	10.00

*Heating mantles and tapes must be operated through a power control.*

*To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137*

# HEATING MANTLES

## 17-1120: SERIES M MANTLES

The Series M mantle is the most compact mantle with an aluminum shell that can heat flasks up to 72 liters. Like the Series TM, this mantle has a durable aluminum housing outside and resilient glass fabric inside to support flasks and protect flask walls from thermal strain. Only the bottom of the flask is covered so the contents being heated are fully visible. The mantle is grounded through the aluminum housing and requires a support as shown below.



### Specifications

Internal Operating Temperature: Withstands internal operating temperature of 450°C.

Electrical: Detachable 4-ft., 3-wire cord and locking connector.

Catalog Number 115 volt	Catalog Number 230 volt	Flask Capacity (ml)	Max. Flask Diameter (mm)	Watts	Inside Depth (in)	Outside Diameter (in)	Outside Height (in)
100C M94	*	50	48	60	0.95	5.5	3.34
100C M96	100C M97	100	60	80	1.19	5.5	3.34
100C M98	100C M99	125	70	80	1.38	5.5	3.34
100C M100	100C M101	200	76	100	1.5	5.5	3.34
100C M102	100C M103	250	83	180	1.64	7	4.34
100C M104	100C M105	300	86	180	1.7	7	4.34
100C M106	100C M107	500	101	270	2	7	4.34
100C M108	100C M109	1,000	130	380	2.56	8.25	4.97
100C M110	100C M111	2,000	170	500	3.35	10.75	6.47
100C M112	100C M113	3,000	183	500	3.6	10.75	6.47
100C M114	100C M115	5,000	220	600	4.33	12.75	7.47
100C M116	100C M117	12,000	293	2@650	5.81	18.38	8.31
100C M118	100C M119	22,000	347	2@770	6.83	21	9.5
100C M120	100C M121	50,000	456	3@1,000	8.98	26	12
	100C M122	72,000	522	2@2,000	10.19	28.63	13.25

\* 230 volt not available in these sizes.

**WARNING:** chemical spillage, overheating, overloading, and general misuses will greatly reduce the service life.

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## HEATING MANTLES



### 17-1140: COMBO MANTLES

Glas-Col's combination mantles have always been the mantles of choice for repetitive extracting, refluxing, and distilling procedures in labs of the food, textile fiber, water and waste-water, petroleum, and many other industries. Glas-Col's latest version offers safety and convenience never before available in a multi-place heating mantle.

- Lower profile for space-saving convenience
- Revolutionary heating element container system makes replacing burned-out elements a simple, five minute task
- Element containers act as spill containment chambers to capture chemicals from spillage or boil-over
- Clear anodized aluminum cabinet with black Teflon® resin coated top for chemical resistance
- Offered in two space-saving configurations; six-place for 100-300 ml flasks and three-place for 500-1,000 ml flasks
- Available in low-temperature (450°C RX version) and high-temperature (650°C RJ version) for greater versatility
- The ideal mantle for Kjeldahl, Soxhlet, and other extraction procedures

**Mantle specifications** Size: 29 1/4"w x 9 1/2"d x 5 1/4"h (6-place), 24"w x 11 1/4"d x 6 1/4"h (3-place) Element size: 6 1/2"w x 6 1/2"d x 3 1/2"h (3-place), 4 1/4"w x 4 1/4"d x 2 9/16"h (6-place)

#### **Power control specifications**

Size: 4 1/2"w x 8 1/4"h x 4 1/4"d (3-place unit); 9"w x 8 1/4"h x 4-1/4"d (6-place unit) Equipped with one quick-attach open-face bracket for 1/2" diameter rod. Six-place controls are equipped with two brackets.

Electrical: Three-place control has one 6 ft. (1.8 m) multi-conductor interconnect cord to mantle and one 4 ft. (1.2 m) long, three-wire power cord with grounding plug. Six-place control has two interconnect cords and two power cords.

Finish: Black and silver

Each six-place Combo is furnished with six spring-type glassware clamps, and each three-place unit contains three. The clamps hold glassware from 1-5/8" - 2" in diameter. The clamps attach to one of the horizontal support rods.

Two Series RL control choices are available: percentage timer or proportional voltage. The percentage-timer version pulses full-line voltage to each heating position according to the dial setting. The proportional-voltage version supplies a constant, steady-state voltage to each position. The six-place controls are actually two units that can be mounted together or separately. The cord-connected controls allow placement at a convenient location for the operator.

**How to order** Select the heating mantle from **Table A** based on the flask being used, the power needed for the application, and the operating voltage. Generally, the RX units are used with solvents common to Soxhlet extractions, and the RJ units are for refluxing aqueous solutions. Select the required power control from **Table B** based on mantle configuration (3-place or 6-place) and whether pulsing on-off or constant-input voltage is desired.

**To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137**



# HEATING MANTLES

## 17-1140: COMBO MANTLES , Cont'd



**Table A - COMBO MANTLES & ELEMENTS**

Catalog Number	Flask Size (ml)	Maximum Diameter (in)	Bottom	Rating Per Position	Mantle Weight	Replacement Element Number
<b>Six-Place - low temperature</b>						
100D RX12512	100/125	2.75	Flat	85W, 120V	19	100D RX12512E
100D RX12712	100/125	2.75	Round	85W, 120V	19	100D RX12712E
100D RX30012	250/300	3.41	Flat	125W, 120V	19	100D RX30012E
100D RX30412	250/300	3.39	Round	125W, 120V	19	100D RX30412E
100D RX30024	250/300	3.41	Flat	125W, 240V	19	100D RX30024E
100D RX30424	250/300	3.39	Round	125W, 240V	19	100D RX30424E
<b>Six-Place - high temperature</b>						
100D RJ12512	100/125	2.75	Flat	140W, 120V	19	100D RJ12512E
100D RJ12712	100/125	2.75	Round	140W, 120V	19	100D RJ12712E
100D RJ30012	250/300	3.41	Flat	210W, 120V	19	100D RJ30012E
100D RJ30412	250/300	3.39	Round	210W, 120V	19	100D RJ30412E
100D RJ12524	100/125	2.75	Flat	140W, 240V	19	100D RJ12524E
100D RJ12724	100/125	2.75	Round	140W, 240V	19	100D RJ12724E
100D RJ30024	250/300	3.41	Flat	210W, 240V	19	100D RJ30024E
100D RJ30424	250/300	3.39	Round	210W, 240V	19	100D RJ30424E
<b>Three-Place - low temperature</b>						
100D RX50012	500	4.06	Flat	180W, 120V	20	100D RX50012E
100D RX50212	500	3.98	Round	180W, 120V	20	100D RX50212E
100D RX65012	650	4.25	Round	200W, 120V"	20	100D RX65012E
100D RX80012	800	4.56	Round	225W, 120V	20	100D RX80012E
100D RX100012	1,000	5.12	Round	290W, 120V	20	100D RX100012E
100D RX50024	500	4.06	Flat	180W, 240V	20	100D RX50024E
100D RX50224	500	3.98	Round	180W, 240V	20	100D RX50224E
100D RX65024	650	4.25	Round	200W, 240V	20	100D RX65024E
100D RX80024	800	4.56	Round	225W, 240V	20	100D RX80024E
100D RX100024	1000	5.12	Round	290W, 240V	20	100D RX100024E
<b>Three-Place - high temperature</b>						
100D RJ50012	500	4.06	Flat	300W, 120V	20	100D RJ50012E
100D RJ50212	500	3.98	Round	300W, 120V	20	100D RJ50212E
100D RJ65012	650	4.25	Round	325W, 120V	20	100D RJ65012E
100D RJ80012	800	4.56	Round	375W, 120V	20	100D RJ80012E
100D RJ50024	500	4.06	Flat	300W, 240V	20	100D RJ50024E
100D RJ50224	500	3.98	Round	300W, 240V	20	100D RJ50224E
100D RJ65024	650	4.25	Round	325W, 240V	20	100D RJ65024E
100D RJ80024	800	4.56	Round	375W, 240V	20	100D RJ80024E
100D RJ100024	1,000	5.12	Round	450W, 240V	20	100D RJ100024E
100D RJ50012	500	4.06	Flat	300W, 120V	20	100D RJ50012E

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# HEATING MANTLES



## 11-1140-B: COMBO MANTLE CONTROL

Order the Combo Control to match your application from the chart below.

Catalog Number	Control Type	For Use With	Amps	Volts
104A RL3312	Percentage timer	3-place 120V RJ or RX	12	120
104A RL3324	Percentage timer	3-place 240V RJ or RX	12	240
104A RL3612	Percentage timer	6-place 120V RJ or RX	15	120
104A RL3624	Percentage timer	6-place 240V RJ or RX	15	240
104A RL4312	Proportional voltage	3-place 120V RJ or RX	12	120
104A RL4324	Proportional voltage	3-place 240V RJ or RX	12	240
104A RL4612	Proportional voltage	6-place 120V RJ or RX	15	120
104A RL4624	Proportional voltage	6-place 240V RJ or RX	15	240



## 17-1180: SERIES O - HEMISPHERICAL MANTLE

This Series O mantle is a hemispherical style, meaning it covers only the bottom half of the flask. This allows full view of the flask contents. The mantle accommodates single- and multi-neck flasks. It should be used with the Series O supports below and on the following page.

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### Specifications

Certification: All 115-volt items are CSA certified.  
Electrical: Separable 4-ft., 2-wire cord and locking connector.

Larger size Series O mantles have a silicone impregnated exterior for moisture resistance. Heating mantles and tapes must be operated through a power control.

Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Max. Flask Diameter (mm)	Watts	Inside Depth (in)	Outside Diameter (in)	Outside Height (in)
<b>Glass Fabric Exterior</b>							
100A O394	*	50	48	60	1.20	3.14	1.83
100A O396	*	100	60	80	1.43	3.86	2.18
100A O398	*	125	70	80	1.63	4.25	2.38
100A O400	100A O401	200	76	100	1.75	4.50	2.50
100A O402	100A O403	250	83	180	1.89	4.77	2.64
100A O404	100A O405	300	86	180	1.95	4.89	2.70
100A O406	100A O407	500	101	270	2.24	5.48	2.99
<b>Silicone Impregnated Glass Fabric Exterior</b>							
100A O408	100A O409	1,000	130	380	2.81	7.12	3.81
100A O410	100A O411	2,000	170	500	3.60	8.70	4.60
100A O412	100A O413	3,000	183	500	3.85	9.20	4.85
100A O414	100A O415	5,000	220	600	4.58	10.66	5.58
100A O416	100A O417	12,000	293	2@650	6.27	14.53	7.77

To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137

# HEATING MANTLES

## 17-1200: SERIES O - SPHERICAL MANTLES

This spherical mantle covers both top and bottom of 1-, 2-, or 3-neck spherical flasks for improved safety and efficiency. The circumferential zipper holds the halves snugly together to prevent heat loss, and the side split in top allows removal without disturbing the flask. Series O supports to use with this mantle are shown below and on the following page.



### Specifications

Certification: All 115-volt items are CSA certified.

\* 230 volt not available in these sizes

Electrical: Separable 4-ft., 2-wire cord and locking connector.

Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Wattage Lower Half	Wattage Upper Half	Outside Height (in)
<b>Glass Fabric Exterior</b>					
100A O943	*	50	60	None	3.14
100A O963	*	100	80	None	3.86
100A O983	*	125	80	None	4.25
100A O1003	100A O1013	200	100	None	4.49
100A O1023	100A O1033	250	180	None	4.77
100A O1043	100A O1053	300	180	None	4.89
<b>Silicone Impregnated Glass Fabric Exterior</b>					
100A O1063	100A O1073	500	270	None	5.48
100A O1083	100A O1093	1,000	380	140	7.12
100A O1103	100A O1113	2,000	500	200	8.70
100A O1123	100A O1133	3,000	500	200	9.20
100A O1143	100A O1153	5,000	600	300	10.66
100A O1163	100A O1173	12,000	2@650	590	14.53

*To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137*

# HEATING MANTLES



*Shown with optional slit.*

## 17-1220: SERIES O - RESIN REACTION FLASK MANTLE

This mantle's even heat distribution prevents scorching of clear resinous materials. Its one-circuit heat input simplifies temperature control.

### Specifications

Certification: All 115-volt items are CSA certified.

Electrical: Separable 4-ft., 2-wire cord and locking connector.

**How to order:** Specify catalog number. For flasks not listed, submit a flask sketch specifying outside diameter, height, capacity, bottom shape (hemispherical, dished, etc.), and manufacturer. Resin flask mantles, as well as most other Series O mantles, are available modified to accept vessel drains or other tabulation.

Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Flask Diameter (in)	Inside Depth (in)	Watts	Outside Diameter (in)	Outside Height (in)
100A O570	100A O571	500	3.75	4.50	270	5.75	5.50
100A O572	100A O573	1,000	4.25	5.25	335	6.25	6.25
100A O576	100A O577	2,000	5.50	6.00	470	7.50	7.00
100A O578	100A O579	3,000	5.50	9.00	550	7.50	10.00
100A O580	100A O581	4,000	5.50	11.00	750	7.50	12.00



## 17-1240: SERIES O - GRIFFIN BEAKER MANTLE

A resilient and pliable interior cradles fragile beakers. Even small liquid volumes may be heated in this mantle because its heat is concentrated at the bottom.

### Specifications

Certification: All 115-volt items are CSA certified.

Electrical: Separable 4-ft., 2-wire cord and locking connector.

**How to order:** Specify catalog number. Please call for mantles to fit tall-form beakers.

Catalog Number 115V	Catalog Number 230V	Beaker Capacity (ml)	Beaker Diameter (in)	Mantle Depth (in)	Watts	Outside Diameter (in)	Outside Height (in)
100A O600	*	50	1.63	1.63	40	2.63	2.13
100A O602	100A O603	100	2.00	2.00	100	3.00	2.50
100A O604	100A O605	150	2.25	2.38	100	3.25	2.88
100A O606	100A O607	250	2.69	2.50	140	4.19	3.25
100A O608	100A O609	400	3.00	3.25	240	4.50	4.00
100A O610	100A O611	600	3.56	3.75	325	5.00	4.50
100A O612	100A O613	800	3.88	4.25	350	5.00	4.50
100A O614	100A O615	1,000	4.25	4.50	430	6.25	5.50
100A O616	100A O617	2,000	5.13	6.00	550	7.13	7.00
100A O618	100A O619	3,000	5.75	6.50	630	7.75	7.50
100A O620	100A O621	4,000	6.38	8.00	710	8.25	9.00

**To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137**

# HEATING MANTLES

## 17-1260: SERIES O - SEPARATORY FUNNEL MANTLE

These funnel mantles allow extraction of fluids while hot, preventing solidification of viscous material in cold stopcocks. The thickness of the fiberglass fabric between heating elements and soft glass wall of the separatory funnel prevents thermal strain and the resultant cracking. Viewing is possible in sizes 1-liter and larger through opposite slots near the mantle bottom.



### Specifications

Electrical: Separable 4-ft., 2-wire cord and locking connector.

Catalog Number 115V	Catalog Number 230V	Funnel Type	Funnel Capacity (ml)	Watts	Mantle Depth (in)	Outside Diameter (in)
100A O850	100A O851	Squibb	250	140	5.00	4.88
100A O852	100A O853	Squibb	500	180	7.00	5.63
100A O854	100A O855	Squibb	1,000	190	8.00	6.50
100A O856	100A O857	Squibb	2,000	280	10.00	8.00
100A O860	100A O861	Globe	500	180	3.50	5.94
100A O862	100A O863	Globe	1,000	190	5.00	6.88
100A O864	100A O865	Globe	2,000	250	6.50	8.50
100A O866	100A O867	Globe	4,000	340	6.75	10.00
100A O868	100A O869	Globe	6,000	400	9.25	11.00

## 17-1280: SEIES O – MICRO MANTLES

Glas-Col micro mantles provide precise heat control for small flasks. The mantle is used extensively in analytical work and in purification of research products with only small samples available. Available for spherical flasks from 5 to 35 ml and pear-shaped flasks from 5 to 250 ml. Fits multiple-neck flasks.



### Specifications

Electrical: Separable 3-ft., 2-wire cord and locking connector.

**Note:** Most micro mantles are rated at less than 115 volts and must be operated through a power control (see pages 28-33). Not available for 230 volts.

**How to order:** Little standardization of micro flask shapes and sizes exists. Therefore, specify flask capacity, shape (spherical or pear), manufacturer and catalog number, and flask diameter (maximum if pear-shaped).

Catalog Number 115V	Flask Capacity (ml)	Approx. Dia. (mm)	Wattage/Voltage	Depth (in)	Outside Dia. (in)	Outside Height (in)
<b>For Spherical Flasks</b>						
100A MIC5	5	27	12W-30V max.	0.66	1.56	0.91
100A MIC10	10	32	20W-30V max.	0.81	1.75	1.06
100A MIC20	20	41	27W-60V max.	1.06	2.25	1.31
100A MIC25	25	43	30W-60V max.	1.09	2.19	1.34
100A MIC35	35	46	35W-60V max.	1.22	2.44	1.47
<b>For Pear-Shaped Flasks</b>						
100A MICP5	5	25	12W-30V max.	1.13	1.50	1.38
100A MICP10	10	31	15W-30V max.	1.25	1.69	1.50
100A MICP25	25	45	25W-60V max.	1.50	2.31	1.88
100A MICP50	50	51	35W-60V max.	1.94	2.69	2.31
100A MICP65	65	55	40W-60V max.	1.56	2.92	1.94
100A MICP100	100	59	70W-115V max.	1.88	3.88	2.63
100A MICP150	150	68	90W-115V max.	2.75	4.25	3.50
100A MICP250	250	81	135W-115V max.	2.31	4.69	3.06

To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137

# HEATING MANTLES



## 17-1300: SERIES O – HEATING/INSULATING TOPS

This mantle helps prevent vapor condensation in the upper half of a flask during distillation of high-boiling materials. The tops are designed for use with Series M, TM, or STM mantles. They protect the flask, the solutions, and the laboratory in these ways: 1) from stray drafts, which would disturb the reflux ratio during fractionation; 2) from flying glass of flask implosions in high-vacuum distillations; 3) from falling objects; and, 4) from thermal strain between top and lower half of flask during high-temperature operations. With a glass-fabric construction and laced-side opening, the elliptical hole accommodates 1-, 2-, and 3-neck flasks.

### Specifications

Certification: All 115-volt items are CSA certified. Electrical: Separable 4-ft., 2-wire cord and locking connector.

**How to order:** Specify catalog number for heating or insulating top. Custom tops for 1-, 2-, or multiple-neck flasks are available on special order.

Insulating Top Catalog Number	Heating Top Catalog Number 115V	Heating Top Catalog Number 230V	Flask Capacity (ml)	Flask Diameter (ml)	Heating Top Voltage	Outside Diameter (in)
1100A INS1023	100A MO1023	100A MO1033	250	83	140	4.77
100A INS1043	100A MO1043	100A MO1053	300	86	140	4.89
100A INS1063	100A MO1063	100A MO1073	500	101	140	5.48
100A INS1083	100A MO1083	100A MO1093	1,000	137	140	7.12
100A INS1103	100A MO1103	100A MO1113	2,000	170	200	8.70
100A INS1123	100A MO1123	100A MO1133	3,000	183	200	9.20
100A INS1143	100A MO1143	100A MO1153	5,000	220	300	10.66
100A INS1163	100A MO1163	100A MO1173	12,000	293	590	14.53
100A INS1183	100A MO1183	100A MO1193	22,000	347	650	16.66
100A INS1203	100A MO1203	100A MO1213	50,000	456	1,000	20.95
100A INS1223		100A MO1223	72,000	522	1,000	23.35



## 17-1320: SERIES O – MANTLE CONTROL PACKAGE

Glas-Col offers its standard Series O mantles for round-bottom flasks with the PowrTrol power control as a special, economical package. The PowrTrol is one of the newest power controls from Glas-Col and is ideally suited for accurate control of mantles, tapes, cords, and other resistive loads. The unit is a solid-state, proportional-voltage control that provides precise manual control of the output range, which is adjustable from 3-100%.

*\* 230 volt not available in these sizes.*

Catalog Number 115V	Catalog Number 230V	Flask Cap.(ml)	Max. Flask Dia. (ml)	Watts	Inside Depth (in)	Outside Dia. (in)	Outside Hgt. (in)
<b>Glass Fabric Exterior</b>							
100D O394PL	*	50	48	60	1.20	3.14	1.83
100D O396PL	*	100	60	80	1.43	3.86	2.18
100D O398PL	*	125	70	80	1.63	4.25	2.38
100D O400PL	100D O401PL	200	76	100	1.75	4.50	2.50
100D O402PL	100D O403PL	250	83	180	1.89	4.77	2.64
100D O404PL	100D O405PL	300	86	180	1.95	4.89	2.70
100D O406PL	100D O407PL	500	101	270	2.24	5.48	2.99
<b>Silicone Impregnated Glass Fabric Exterior</b>							
100D O408PL	100D O409PL	1,000	137	380	2.81	7.12	3.81
100D O410PL	100D O411PL	2,000	170	500	3.60	8.70	4.60
100D O412PL	100D O413PL	3,000	183	500	3.85	9.20	4.85
100D O414PL	100D O415PL	5,000	220	600	4.58	10.66	5.58

*To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137*

# HEATING MANTLES

## 17-1340: PREMIER MANTLES

Glas-Col's Premier heating mantle offers many high-quality features that make laboratory heating much more efficient, convenient, and safe.

The Premier mantle comes with a built-in proportional power control for precise control of your operations, and is equipped to accept external controls as well, making the Premier mantle a versatile addition to any laboratory.



Designed with safety in mind, the Premier mantle has a spill-capture system that no other heating mantle can equal. This system includes:

- A removable, replaceable stainless steel foils liner.
- A catch pan (in accordance with NFPA standard #45).

These two features help capture spills so they can be easily and safely contained and removed. This virtually eliminates the danger of damage to the heating elements and mantle control and protects your personnel from hot or caustic solutions. If the heating element must be replaced, it is easy and quick to do in the field.

For added safety, the Premier mantle is encased in a UL fire-rated plastic enclosure which:

- Is chemical resistant.
- Remains cool to the touch during operation.
- Is self supporting on non-skid feet.

### Specifications

Electrical: With integral 4-ft., 3-wire cord. Power-on indicator plus output-level light.

Control: Nearly linear from 2 to 100% of rated voltage.

Premier Mantle					
Catalog Number 115V	Catalog Number 230V	Flask Capacity (ml)	Flask Diameter (mm)	Watts	Dimensions (in)
100M LS2106	100M LS2107	500	108	270	11w x 9.63d x 5.25h
100M LS2108	100M LS2109	1,000	130	380	11w x 9.63d x 5.25h

Premier Mantle Replacement Elements				
Replacement Elements Catalog Number	Flask Capacity (ml)	Flask Diameter (mm)	Electrical Rating	Dimensions (in)
100F LS2106E	500	108	270W, 120V	5.75w x 2.50d x 3.25h
100F LS2107E	500	108	270W, 240V	6.88w x 2.94d x 3.69h
100F LS2108E	1,000	130	380W, 120V	5.75w x 2.50d x 3.25h
100F LS2109E	1,000	130	380W, 240V	6.88w x 2.94d x 3.69h

Premier Mantle Replacement Foil Liners (2 per pack)			
Catalog Number	Flask Capacity (ml)	Flask Diameter (mm)	Dimensions (in)
100F LS2106L	500	108	5.75w x 2.50d x 3.25h
100F LS2108L	1,000	130	6.88w x 2.94d x 3.69h

**To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137**



## HEATING MANTLES



### 17-1360: GROUNDED HEATING TAPE

Providing a new level of safety and convenience for laboratory heating applications, Glas-Col's new tinned-copper over-braided heating tapes:

- Are grounded for increased safety
- Offer wrap-around heating convenience
- Improve heat transfer
- Are usable in high-moisture areas
- Are durable yet flexible

#### Specifications

Electrical: Separate 4-ft., 3-wire cord and locking connector.

Temperature Limit: 480°F.

Catalog Number	Width, Length	Wattage Voltage	Ohms Per Ft.
103A DET0.254G	1/4" x 4 ft.	60W-45V	9.08
103A DET0.256G	1/4" x 6 ft.	90W-70V	9.08
103A DET0.258G	1/4" x 8 ft.	120W-95V	9.08
103A DET0.2510G	1/4" x 10 ft.	150W-115V	9.08
103A DET0.54G	1/2" x 4 ft.	140W-45V	3.77
103A DET0.56G	1/2" x 6 ft.	210W-70V	3.77
103A DET0.58G	1/2" x 8 ft.	280W-95V	3.77
103A DET0.510G	1/2" x 10 ft.	340W-115V	3.77
103A DET0.520G	1/2" x 20 ft.	680W-230V	3.77
103A DET110G	1" x 10 ft.	700W-115V	1.88
103A DET120G	1" x 20 ft.	1,400W-230V	1.88
103A FET0.65G	5/8" x 5 ft.	145W-115V	18.15
103A FET0.66G	5/8" x 6 ft.	120W-115V	18.15
103A FET0.67G	5/8" x 7 ft.	105W-115V	18.15
103A FET0.68G	5/8" x 8 ft.	90W-115V	18.15
103A FET0.69G	5/8" x 9 ft.	80W-115V	18.15
103A FET0.610G	5/8" x 10 ft.	300W-230V	18.15
103A SET13G	1" x 3 ft.	150W-115V	27.25
103A SET14G	1" x 4 ft.	120W-115V	27.25
103A SET15G	1" x 5 ft.	100W-115V	27.25
103A SET16G	1" x 6 ft.	300W-230V	27.25
103A SET17G	1" x 7 ft.	275W-230V	27.25
103A SET18G	1" x 8 ft.	240W-230V	27.25
103A SET19G	1" x 9 ft.	215W-230V	27.25

To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137



# HEATING MANTLES

## 17-1380: HEATING TAPE

In both permanent and temporary applications, this tape heats odd lengths of glass tubes and metal pipes. Ribbon-type heating elements running lengthwise in the tape are encased in durable glass braid and are impregnated and covered with tough silicone rubber, which insulates stranded terminal leads at one end and waterproofs fittings at both ends. Glas-Col heating tapes:

- are ideal for use in high moisture areas
- are resistant to most laboratory environmental
- conditions easily pass a 1,000V test for electrical insulation



Specifications Electrical: Attached cord with 2-blade plug.  
Single end termination.  
Temperature Limit: 480°F.

*Note: Power ratings in the tables are for tapes not covered by insulation when installed. If covered, temperature should be monitored and controlled to avoid exceeding 480°F limit. Short, narrow tapes rated at less than 115 volts must be operated at reduced voltages, which are easily attained with a power control. Consult Glas-Col for information on special lengths of heating tapes.*

Catalog Number	Width, Length	Wattage Voltage	Ohms Per Ft.
103A DET0.254	1/4" x 4 ft.	60W-45V	9.08
103A DET0.256	1/4" x 6 ft.	90W-70V	9.08
103A DET0.258	1/4" x 8 ft.	120W-95V	9.08
103A DET0.2510	1/4" x 10 ft.	150W-115V	9.08
103A DET0.54	1/2" x 4 ft.	140W-45V	3.77
103A DET0.56	1/2" x 6 ft.	210W-70V	3.77
103A DET0.58	1/2" x 8 ft.	280W-95V	3.77
103A DET0.510	1/2" x 10 ft.	340W-115V	3.77
103A DET0.520	1/2" x 20 ft.	680W-230V	3.77
103A DET110	1" x 10 ft.	700W-115V	1.88
103A DET120	1" x 20 ft.	1,400W-230V	1.88
103A FET0.65	5/8" x 5 ft.	145W-115V	18.15
103A FET0.66	5/8" x 6 ft.	120W-115V	18.15
103A FET0.67	5/8" x 7 ft.	105W-115V	18.15
103A FET0.68	5/8" x 8 ft.	90W-115V	18.15
103A FET0.69	5/8" x 9 ft.	80W-115V	18.15
103A FET0.610	5/8" x 10 ft.	300W-230V	18.15
103A SET13	1" x 3 ft.	150W-115V	27.25
103A SET14	1" x 4 ft.	120W-115V	27.25
103A SET15	1" x 5 ft.	100W-115V	27.25
103A SET16	1" x 6 ft.	300W-230V	27.25
103A SET17	1" x 7 ft.	275W-230V	27.25
103A SET18	1" x 8 ft.	240W-230V	27.25
103A SET19	1" x 9 ft.	215W-230V	27.25

*To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137*

# HEATING MANTLES



## 17-1400: HEATING CORDS

The high-temperature, wrap-around Cal-Cord wraps and heats tubes as small as 1/2" diameter. It should be used only in dry or low-moisture areas, on non-metallic surfaces, because of the insulation's high-temperature capabilities. Installation and removal are quick and easy with single end termination.

### Specifications

Electrical: 2-wire locking plug on one end of cord. All heating cords have separable extension cord with 2-blade plug.

Size: 1/4" diameter, varying lengths.

Temperature Limit: See chart.

*Note: For temperature regulation, always operate through controls. Because most laboratory uses are temporary, manual controls (variable transformers, percentage timers) are often used.*

Catalog Number	Length (ft.)	Wattage, Voltage	Ohms Per Ft.
<b>400C Cal-Cord</b>			
103B CC2	2	80W-115V	83.0
103B CC3	3	120W-115V	37.0
103B CC4	4	160W-115V	21.0
103B CC6	6	240W-115V	9.2
103B CC8	8	340W-115V	4.9
103B CC10	10	400W-115V	3.3
103B CC12	12	480W-230V	9.2
103B CC14	14	560W-230V	6.7
103B CC16	16	640W-230V	5.2
<b>600C Super Cal-Cord</b>			
103B SCC2	2	200W-115V	33.0
103B SCC3	3	300W-115V	14.7
103B SCC4	4	400W-115V	8.3
103B SCC6	6	500W-115V	4.4
103B SCC8	8	700W-230V	9.5



## 17-142: POWERROL

The PowrTrol control is a solid-state, proportional-voltage power control that provides precise manual control of heating mantles, tapes, cords, and other resistive loads. The output range is conveniently adjustable from 5-100% of rated voltage.

### Specifications

Lab Bench Case: Low-profile cabinet, 4"w x 4"d x 3-3/8"h.

Electrical: Lighted on/off power switch, circuit breaker protection, 3-wire load receptacle, and 3-wire line cord with molded plug.

Finish: Foxtip gray and charcoal.

Catalog Number	Description	Electrical Rating	Range
104A PL120	Proportional voltage control	10A @120V, 1,200W	from 5-100% of rated voltage
104A PL124	Proportional voltage control	10A @240V, 2,400W	from 5-100% of rated voltage

**To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137**

# HEATING MANTLES

## 17-1440: POWRTWIN

Glas-Col's PowrTwin control is capable of controlling two separate circuits independently. Like the PowrTrol, the PowrTwin is a solid-state, proportional-voltage controller that allows the precise manual control of laboratory heating equipment such as heating tapes, cords, and mantles. The PowrTwin has an output range adjustable from 5-100% of rated voltage. The PowrTwin can be used on the bench top.



### Specifications

Lab Bench Case: Low-profile cabinet, 8"w x 6"d x 3-3/8"h.

Electrical: Lighted on/off power switch, circuit breaker protection, 3-wire load receptacle, and 3-wire line cord with molded plug.

Finish: Foxtip gray and charcoal.

Catalog Number	Description	Electrical Rating	Range
104A PL1202	Proportional voltage control	7A @ 120V, 840W per circuit	from 5-100% of rated voltage

## 17-1460: MANTLEMINDER II

The MantleMinder II is an automatic, time proportioning control used with heating mantles, tapes, cords, small ovens and other resistive heating loads up to 2,400W (240V). Very small loads may be easily protected by changing the fuse. The load and the thermocouple receptacles are located on the front panel for easy accessibility. Furnished with a type J immersion thermocouple with 6"-long stainless steel probe.



### Specifications

Electrical: Lighted on/off power switch with digital temperature indicator, fuse protection, 3-wire load receptacle, and 3-wire line cord with molded plug.

Control Type: Time Proportioning.

Accuracy: +/-1.5% of full scale (+/-11° C).

Power Consumption: 4 watts plus load

Set Point: Calibrated in 20° C increments.

Lab Bench Case: Low profile cabinet, 8"w x 6"d x 3-3/8"h.

Finish: Foxtip gray and charcoal

Catalog Number	Electrical Rating	Range	Thermocouple Type
104A PL512	15A@120V, 1,800W	0-750°C	Type J
104A PL524	10A@240V, 2,400W	0-750°C	Type J

To Order, Call Specialty Glass, Inc. Toll Free 1-800-899-2137

# HEATING MANTLES



## 17-148: DIGITROL II

The DigiTrol II uses a 1/16 DIN microprocessor-based, user-selectable control mode temperature control. The control features a digital dual output display for set point and process temperature indication. The automatic-tuning feature ensures increased temperature accuracy with minimum overshoot. Easy set-up and simple input commands make this control very "user friendly." The load and the thermocouple receptacles are located on the front panel for easy accessibility. Features automatic cold junction compensation and thermocouple break protection. Furnished with an immersion thermocouple with 6" -long stainless steel probe.

### Specifications

Electrical: Lighted on/off power switch with auxiliary LED indication, fuse protection, 3-wire load receptacle, and 3-wire line cord with molded plug.

Control Type: PID parameters with auto/manual mode option.

Accuracy: 0.1% of span.

Ambient Temperature Range: 32-149°F.

Display: Dual, 4-digit LED.

Set Point: Up/down keys. °F or °C display, user selectable.

Lab Bench Case: Low profile cabinet, 8" w x 6" d x 3-3/8" h.

Finish: Foxtip gray and charcoal.

Catalog Number	Electrical Rating	Range	Thermocouple Type
104A PL612	15A@120V, 1,800W	0-750° C	Type J
104A PL612K	15A@120V, 1,800W	-200-1250° C	Type K
104A PL612T	15A@120V, 1,800W	-200-350° C	Type T
104A PL624	10A@240V, 2,400W	0-750° C	Type J
104A PL624K	10A@240V, 2,400W	-200-1250° C	Type K
104A PL624T	10A@240V, 2,400W	-200-350° C	Type T



## 17-1500: RAMP TROL

This microprocessor-based ramping control provides four-file/24-step program capability or easy-to-use non-ramping set-point operation. Ramping operations include four files with six steps each. Programming options include ramp-rate or time-based profiles, guaranteed soak deviation, program looping, and program status selection after power outage. Files may be linked to create a single, 24-step program. Also allows automatic setting of control parameters with little user input. RampTrol automatically sets the PID parameters (proportional band, reset/integral, and rate/derivative) through a "learning" sequence in the auto-tuning mode. The primary analog input is a thermocouple. The back panel features a nine-pin serial port for communication with a PC. A secondary output is available for cooling, along with a 4-20ma retransmit output for temperature recording and an RTD input. Information is stored in non-volatile memory.

### Specifications

Control Mode: Single output. Optional retransmit of set point or process variable. Four-file/24-step ramping or non-ramping, set-point control. Ramp -rate or time-based programming. Selectable control status following power loss.

Operator Interface: Dual, four-digit LED displays: upper, 0.4 inch (10 mm) for process (red); lower, 0.3 inch (8 mm) for set point (green).

Mode, Hold/Run, Display, Up, and Down keys.

Accuracy: 0.1% of span, temperature stability +/-0.2% °F/°F change in ambient.

Input: Factory set for thermocouple; grounded or ungrounded.

Ambient Temperature Range: 32-130°F.

Lab Bench Case: 8" w x 8" d x 4 3/4" h.

Finish: Foxtip gray and charcoal.

Catalog Number	Electrical Rating	Range	Thermocouple Type
104A PL912	15A@120V, 1,800W	0-816°C	Type J
104A PL912K	15A@120V, 1,800W	-200-1371°C	Type K
104A PL912T	15A@120V, 1,800W	-200-399°C	Type T
104A PL924	10A@240V, 2,400W	0-816°C	Type J
104A PL924K	10A@240V, 2,400W	-200-1371°C	Type K
104A PL924T	10A@240V, 2,400W	-200-399°C	Type T

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# HEATING MANTLES

## 17-1520: LIMITROL

Glas-Col's LimiTrol limiting control provides a safety backup for laboratory heating processes. When installed between the primary power or temperature control and the power source, the LimiTrol allows for over-temperature limiting. The operator simply sets the LimiTrol to the maximum temperature for the process. Should the primary power control fail, or the process temperature be exceeded for any reason, the LimiTrol will terminate power to the primary control, thus reducing the chance of damage to samples, expensive equipment, and glassware due to overheating. The unit features a manual reset, which means power will remain off until the operator restores the system. The set-point dial is calibrated in 20° C increments, and the load and thermocouple receptacles are located on the front panel for easy access. Furnished with a type J immersion thermocouple with 6" -long stainless steel probe



### Specifications

Electrical: Lighted on/off power switch with auxiliary LED indication, fuse protection, 3-wire load receptacle, and 3-wire line cord with molded plug.

Set Point Accuracy: ± 3% of span maximum.

Power Consumption: 4 watts.

Ambient Temperature Range: 32-130°F.

Lab Bench Case: 8" w x 6" d x 3 3/8" h.

Catalog Number	Electrical Description	Range	Thermocouple Type
104A PC512	7.5A@120V, 1,200W	0-750°C	Type J
104A PC524	7.5A@240V, 2,400W	0-750°C	Type J

## 17-1540: DIGITAL TIMER

The Glas-Col Digital Timer is a microcontroller-based countdown interval timer with digital display. For use with mantles, heating tapes, ovens, and other resistive loads up to 10 amps. Also can be used with stirrers, vortexers, shakers, and other motor-driven laboratory equipment up to 10 amps load capacity. Four timing ranges may be selected from the front panel. At the completion of the timing cycle, a solid-state alarm will sound for 5 seconds. The power to the load receptacle is terminated at the end of the timing cycle. The timer will then reset to the preset starting time. The timing cycle may be interrupted by pushing the start/stop button. Timing will resume from the stopping point when timing cycle is restarted.



### Specifications

Electrical: Lighted on/off switch, circuit breaker protection, 3-wire grounded receptacle, and 3-wire line cord with molded plug.

Timing Ranges: 000.1 - 999.9 seconds

00:01 - 59:59 minutes : seconds

0001 - 9999 seconds

00:01 - 23:59 hours : minutes

Display: 4-digit, 1/2" LED.

Momentary Buttons: Two for time setting; one for start/stop.

Audible Indicator: Solid state alarm sounds for 5 seconds at the end of the timing cycle.

Lab Bench Case: Low-profile cabinet, 8" w x 6" d x 3-3/8" h.

Finish: Foxtip gray and charcoal.

Catalog Number	Electrical Rating
104A PT612	10A, 120V, 1,200W

Call or Email for a Heating Mantle Quote:

sales@specialtyglassinc.com

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# HEATING MANTLES



## 17-1560: MINTROL

The operator manually adjusts the MiniTrol, which has a percentage-timer design and no sensing element. It regulates mantles, tapes, and cords, as well as small furnaces, ovens, hot plates, dies, and other applications requiring step less control. MiniTrol may also be used on any non-inductive loads to its rated capacity. It proportions the operating voltage to the load from 5-1/2% to 100% of the time according to the preset dial position. When turned off, it affects a positive break. For very small loads, smaller fuses may be used. PL3122 MiniTwin handles two separate circuits. A pilot light is connected across the output side of the control, indicating power to load. With the desired temperature determined on the initial run, a simple dial setting controls repeat operation.

### Specifications

Certification: 115V Units are CSA certified.

Electrical: Pilot light, fuse protection, 3-wire load receptacle, and 3-wire line cord with molded plug.

Case Construction: Anodized aluminum with no-mar rubber feet.

Catalog Number	Number Of Circuits	Volts	Amps Per Circuit	Wattage Capacity	Case Dimensions
104A PL312	1	120	12.0	1,440	2-1/2" x 4-1/4" x 2"
104A PL3122	2	120	7.5	900 per circuit	5" x 4-1/4" x 2"
104A PL324	1	240	10.0	2,400"	2-1/2" x 4-1/4" x 2"



## 17-1580: THERMOCOUPLES

Choose features to match application. These thermocouples, available in a variety of sizes and constructions, are for use with Glas-Col temperature controls and the digital thermometer. Thermocouples are type J unless identified differently in catalog number.

Catalog Number	Recommended Range	Description
104A TC105	0-370°C (0-700°F)	24 gauge. 1/8" dia. x 6" -long stainless steel probe. 48" -long fiberglass insulated duplex lead with stainless steel over-braid With miniature plug. For liquid immersion.
104A TC105K	95-1260°C (200-2300°F)	
104A TC105T	-200-350°C (-330-660°F)	
104A TC110	0-260°C (0-500°F)	24 gauge. 1/8" dia. x 6" -long, Teflon® coated stainless steel probe. 48" -long, Teflon® insulated duplex lead. With miniature plug. For liquid immersion.
104A TC115	0-480°C (0-900°F)	20 gauge. 72" -long, fiberglass-insulated duplex lead wire with welded tip. With miniature plug. Not for liquid immersion.
104A TC120	0-370°C (0-700°F)	24 gauge. 36" -long, fiberglass-insulated duplex lead wire with welded tip. With miniature plug. Not for liquid immersion

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# HEATING MANTLES

## 17-1600: DIGITAL LOGGING THERMOMETER

Glas-Col's newest portable digital thermometer logs up to 1,000 real-time readings and can send them to a printer or computer by infrared output. Accepts up to two thermocouple inputs and provides for two-point field calibration for offset and slope. Allows selection of log interval from one second to one hour and of resolution and input filtering. LCD display can show minimum, maximum, and differential readings simultaneously. Provides field calibration anti-tampering lockout. Has easy-to-use 12-button keypad of sealed silicone rubber.



### Specifications

Display: Three 4-digits: 0.4"H and 0.2"H.  
 Accuracy: Types J, K, T, E, and N:  $\pm 0.4^{\circ}\text{C}$  ( $\pm 0.7^{\circ}\text{F}$ ) above  $-150^{\circ}\text{C}$  ( $-238^{\circ}\text{F}$ ),  $\pm 1^{\circ}\text{C}$  ( $\pm 2^{\circ}\text{F}$ ) below  $-150^{\circ}\text{C}$  ( $-238^{\circ}\text{F}$ ),  $\pm 0.1\%$  of reading. Types R, S, and B:  $\pm 1^{\circ}\text{C}$  ( $\pm 2^{\circ}\text{F}$ ),  $\pm 0.1\%$  of reading.  
 Resolution: Less than or equal to 999.9':0.1'. Greater than 999.9':1".

Battery: Two AA batteries (included).  
 Case Size: 3.3"w x 6.2"h x 1.2"d.  
 Warranty: Three-year limited.  
 Ratings: UL & CUL rated intrinsically safe, certified safe for Class 1, Division 1; Groups A, B, C, and D classified hazardous location.  
 Meets CE requirements for electromagnetic compatibility.

Catalog Number	Range	Thermocouple Type
104A PR2000	-200 to 1000°m C (-328 to 1832° F)	J
	-250 to 1372° C (-418 to 2501° F)	K
	-250 to 400° C (-418 to 752° F)	T
	-250 to 1000° C (-418 to 1832° F)	E
	0 to 1768° C (32 to 3214° F)	R
	0 to 1768° C (32 to 3214° F)	S
	-250 to 1300° C (-418 to 2372° F)	N
	200 to 1800° C (392 to 3272° F)	B

## 17-1620: DIGITAL THERMOMETER

This microprocessor-based, battery-operated thermometer monitors temperatures of furnaces, reactors, baths, appliances, and heating mantles. It can conveniently be hand-held or placed on a bench with the built-in, flip-down stand. The 3-3/4 digit, 1/2"-high LCD display is easy to read, even in direct sunlight. The sealed silicone rubber keypad allows simple, reliable operation. Four buttons control On/Off, C/F scale, Hold, and CAL for single point field calibration. Input is ANSI standard mini-connector, voltage protected. Thermocouples may be interchanged in seconds. Case is ABS/polycarbonate.



**Specifications** Accuracy:  $\pm 0.2\%$  of reading  $\pm 0.5^{\circ}\text{C}$  above  $99^{\circ}$  ( $\pm 1^{\circ}\text{C}$  below  $99^{\circ}$ ).  
 Batteries: Two AA batteries (included).  
 Battery Life: Minimum 500 hours.  
 Thermocouple: Type J Cat. No. TC105 (described below) included.

Case Size: 3.3"w x 6.2"h x 1.2"d  
 Warranty: Three-year limited.  
 Ratings: UL & CUL rated intrinsically safe, certified safe for Class 1, Division 1; Groups A, B, C, and D classified hazardous location.  
 Meets CE requirements for electromagnetic compatibility.

Catalog Number	Range	Thermocouple Type
104A PR1000	-190 to + 1000° C	J
	(-310 to + 1832° F)	

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