

SELECTION GUIDE

Furnaces



THERMOLYNE QUALITY!



RUGGED CONSTRUCTION, SMALL CHAMBER!



FOLD-DOWN DOOR FOR CONVENIENCE AND SAFETY!



HIGH TEMPS? NO PROBLEM!

MUFFLE FURNACES (WITH CONTROLLER)

	Type	Working Temperature Range °C	Chamber Volume cu. ft. (l)	Page
<i>THERMOLYNE QUALITY - LOW PRICE!</i>	FB1300	100-1100	76 (1.3)	66
	FB1400	100-1100	129 (2.1)	
<i>RUGGED CONSTRUCTION, SMALLER CHAMBER!</i>	FD1500	100-1200	136 (2.2)	67
<i>PERFECT FOR GENERAL LABORATORY USE!</i>	F47900	100-1200	120 (2)	68-69
	F48000	100-1200	350 (5.8)	
<i>FOLD-DOWN DOOR FOR CONVENIENCE AND SAFETY! NEW!</i>	F114000	100-1050	203 (3.3) and 375 (6.2)	70-71
<i>OVAL CHAMBER FOR UNIFORM HEATING!</i>	F62700	100-1000	864 (15)	72
<i>DURABLE ELEMENTS AND PLENTY OF ROOM!</i>	F6000	100-1200	864 (15)	73
<i>TWO SHELVES FOR MAXIMUM SPACE!</i>	F30400	100-1093	2764 (46.6)	74
<i>HIGH TEMPS? NO PROBLEM!</i>	F46100	800-1700	234 (3.5)	76-77
	F46200	800-1700	1002 (16.4)	

ATMOSPHERE CONTROLLED ASHING FURNACES (WITH CONTROLLER)

<i>INCLUDES GAS FLOWMETER AND MANIFOLD!</i>	F6000-60	100-975	864 (15)	75
	FB30400-60	100-975	2764 (46.6)	

SELECTION GUIDE

Furnaces



FIREBRICK AND STEEL FOR DEMANDING APPLICATIONS!



OUR LARGEST CHAMBER!



SOLID TUBE, SOLID VALUE!



SPLIT TUBE AND IT TILTS!

HEAVY DUTY MUFFLE FURNACES (WITHOUT CONTROLLER)

	Type	Working Temp. Range °C	Chamber Volume cu. ft. (ℓ)	Page
OUR LARGEST CHAMBER!	F31700	150-1093	9 (254.8)	83
FIREBRICK AND STEEL FOR DEMANDING APPLICATIONS	F1600	150-1093	0.2 (5.9)	84
	F1600 (-1)	150-1177		
	F1730	150-1093	0.63 (17.9)	
	F1730 (-1)	150-1177		
	F1740	150-1093	0.84 (23.8)	
	F1740 (-1)	150-1177		
	F1800	150-1093	1.5 (41.6)	
	F1800 (-1)	150-1260		

TUBE FURNACES (WITH CONTROLLER)

	Type	Working Temp. Range °C	Zone Length Inches (cm)	Number of Zones	Chamber Position H=Horizontal V=Vertical A=Angular	Page
HIGH TEMPERATURE AND IT TILTS!	F54500	800-1500	20 (50.8)	1	H,V, A	78-79
	F59300	800-1700	20 (50.8)	1	H	
SPLIT TUBE FOR CONVENIENCE— THREE ZONES FOR CONTROL!	F79500	100-1200	8 (20.3)	3	H,V	81
SPLIT TUBE FOR EASY ACCESS!	F79600	100-1200	12 (30.5)	3	H,V	81
SOLID TUBE, SOLID VALUE!	F21100	100-1200	12 (30.5)	1	H,V, A	82
	F79300	100-1200	12 (30.5)	1	H,V	
	F79400	100-1200	24 (61)	1	H,V	

Furnaces

SMALL BENCHTOP MUFFLE

Thermolyne

Type FB1400 and FB1300



Thermolyne QUALITY - LOW PRICE!

- — 1100°C maximum temperature
- — Choice of 76 or 129 cubic inch capacities



PRODUCT DESCRIPTION

- Ceramic fiber insulation permits faster heat-up, reduces energy consumption.
- Embedded heating element on top and both sides improves temperature uniformity.
- Drop-down door doubles as a convenient shelf for loading and unloading.

OPERATION

- Analog control offers simple, economical operation at the touch of a button. Temperature is set by depressing "push to set temperature" button and turning knob.
- Display reads chamber temperature or setpoint temperature when "push to set temperature" button is depressed.

SAFETY

- Door safety switch removes power from the heating elements upon opening the door.
- If sensor opens, sensor break protection removes power to heating elements, eliminating run away conditions.

APPLICATIONS

- Ashing organic, inorganic samples.
- Heat treating small steel parts.
- Ignition tests.
- Gravimetric analysis.
- Determination of volatile and suspended solids.

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
FB1300	4 (10.3)	3.8 (9.8)	5.0 (13)	9 (23)	14 (36)	13 (33)	76 (1.3)	16.5 (7.5)
FB1400	4.7 (11.9)	4.9 (12.5)	5.6 (14.3)	10 (25)	14.5 (37)	15.8 (40)	129 (2.1)	26 (11.7)

	Uniformity at 1000°C	Stability at 1000°C
FB1300 (chamber)	± 7.8°C	± 0.3°C
FB1400 (chamber)	± 5.0°C	± 0.5°C

ORDERING INFORMATION

Model #	Volts	Electrical (50/60 Hertz)		Operating Temp Range °C	Temp Control Group	US List Price
		Amps	Watts			
FB1315M	120	8.8	1050	100-1100	A	\$769.00
FB1318M	208	5.0	1050	100-1100	A	\$769.00
FB1310M	240	4.4	1050	100-1100	A	\$769.00
FB1310M-33	240	4.4	1050	100-1100	A	\$831.00
FB1415M	120	12.5	1500	100-1100	A	\$947.00
FB1418M	208	7.2	1500	100-1100	A	\$947.00
FB1410M	240	6.3	1500	100-1100	A	\$947.00
FB1410M-33	240	6.3	1500	100-1100	A	\$1013.00

-33 models CE marked

ACCESSORIES

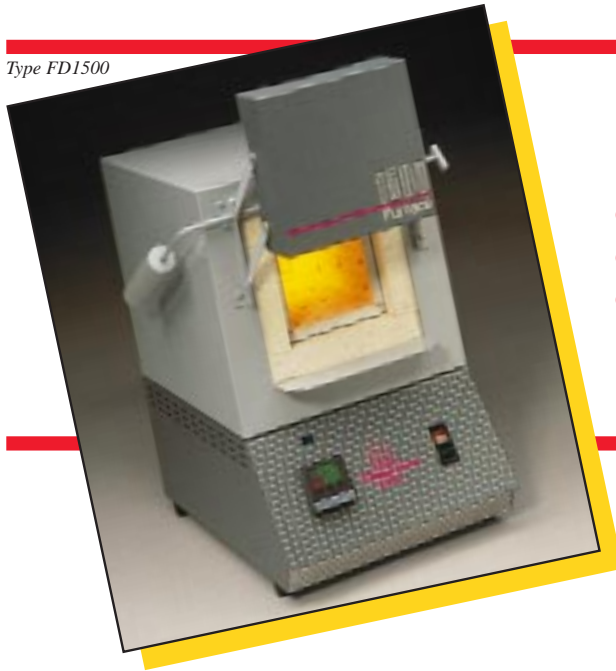
Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
PH44X1	FB1300 Hearth Tray	4 (10.1)	0.4 (1.9)	4.75 (12)	\$13.35
PH48X1	FB1400 Hearth Tray	4.6 (11.7)	0.5 (1.3)	5.4 (13.7)	\$27.15

Furnaces

BENCHTOP INDUSTRIAL

Thermolyne

Type FD1500



RUGGED CONSTRUCTION, SMALLER CHAMBER!

- — 136 cubic inch capacity
- — 1200°C max. temperature
- — Durable fire brick insulation surrounds the opening

PRODUCT DESCRIPTION

- Counter-weighted door swings upward, directing heat away from operator.
- Heavy-duty firebrick insulation surrounds chamber opening for added durability.
- 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.
- Adjustable Alarm or Over Temperature Protection (OTP) setting can be used to protect the furnace or loaded chamber from excessive heat.
- Self-tuning function allows the control to adjust or “tune” itself for superior temperature accuracy.
- Choose from two control options:
Control B) Automatic control regulates furnace operation at one selected temperature.
Control C) 8 segment programmable control allows setting temperature ramps, dwells and steps.

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
FD1500	4 (10.1)	3.75 (9.5)	9 (22.8)	11 (27.9)	25 (63.5)	18 (45.7)	136 (2.2)	52 (23.5)

ORDERING INFORMATION

Model #	Volts	Electrical (50/60 Hertz)		Operating Temp Range °C	Temp Control Group	US List Price
		Amps	Watts			
FD1535M	120	18.6	2240	100–1200	B	\$1648.00
FD1530M	240	9.3	2240	100–1200	B	\$1648.00
FD1538M	208	10.8	2240	100–1200	B	\$1648.00
FD1545M	120	18.6	2240	100–1200	C	\$2010.00
FD1540M	240	9.3	2240	100–1200	C	\$2010.00
FD1548M	208	10.8	2240	100–1200	C	\$2010.00

ACCESSORIES

Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
PHX1	Hearth Tray	4 (10.1)	0.5 (1.3)	3.3 (8.2)	\$15.55
PHX2	Hearth Tray	3.9 (9.6)	0.75 (1.9)	8 (20.3)	\$22.70



*see inside front cover for details

Furnaces

BENCHTOP MUFFLE

Thermolyne

type F47900 and F48000



PERFECT FOR GENERAL LABORATORY USE!

- — 120 or 350 cubic inch capacities
- — 1200°C max. temperature
- — Built in venting system and inert gas injection port



PRODUCT DESCRIPTION

- Two chamber sizes:
Type F47900 offers 120 cubic inches of heating area.
Type F48000 provides 350 cubic inches of heating area; a ceramic shelf is included to double furnace load capacity (SH480X1).
- Open coil heating elements on both sides of chamber assure fast heat-up, with minimum temperature gradient.
- Maximum energy efficiency is achieved by surrounding the chamber with thermal-efficient ceramic insulation.
- The rear of the chamber incorporates a 0.38" (0.95 cm) diameter port for injecting special atmospheres or monitoring chamber temperature with independent measuring device.

OPERATION

- Built-in venting system removes undesirable contaminants and moisture; extends the life span of the element and unit.
- Four temperature controller models:
Control A) Analog Control holds accurately at one temperature. A single digital display indicates chamber temperature or setpoint.
Control B) Single setpoint, digital control reduces overshoot. Includes OTP alarm.

Control C) 8 segment programmable control. Allows programming the rate of temperature increase and decrease (**ramp**), and the length of time the temperature holds at specific levels (**dwell**).

Control D) 16 segment programmable control that includes a RS232 communications port for connecting to printer or computer. Stores up to four programs.

- All units include a thermocouple, grounded three-wire cord, and plug.
* For Calibration Verification System, see Pyrometers.

SAFETY

- Increased operator safety is achieved with a switch that disconnects power to heating elements upon opening the door during operation.
- For safety, an open circuit will trigger the sensor break protection and remove power to heating elements eliminating run-away conditions.

APPLICATIONS

- Organic and inorganic ashing.
- Gravimetric analysis.
- Sintering.
- Quantitative analysis.

Furnaces

BENCHTOP MUFFLE

Thermolyne

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F47900	5 (13.7)	4 (10)	6 (15)	11.3 (28.5)	18.5 (47)	22 (56)	120 (2.0)	41 (18.5)
F48000	7 (18)	5 (13)	10 (25)	13.3 (34)	19 (49)	27 (68.5)	350 (5.8)	60 (27.2)
	Uniformity at 1000°C						Stability at 1000°C	
F47900 (chamber)	± 4.8°C						±0.4°C	
F48000 (chamber)	± 3.6°C						±0.2°C	

SH480X1 - Ceramic shelf for Type
F480000 Furnace



ACCESSORIES

Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
SH480X1	Ceramic Shelf for Type F48000 Furnace				\$35.00
PH479X1	Hearth Tray for F47900	5 (13)	.38 (.95)	6 (15.2)	\$16.00
PH480X1	Hearth Tray for F48000	7 (18)	.38 (.95)	10 (25.4)	\$28.00

For Calibration Verification System, see pyrometers.

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Range Temp		Temp Control Group	US List Price
	Volts	Amps	Watts	°C	°F		
F47915	120	8.3	1000	100-1200	212-2192	A	\$1307.00
F47918	208	3.9	810	100-1200	212-2192	A	\$1307.00
F47910	240	4.2	1000	100-1200	212-2192	A	\$1307.00
F47910-33	240	4.2	1000	100-1200	212-2192	A	\$1339.00
F47925	120	8.3	1000	100-1200	212-2192	B	\$1988.00
F47928	208	3.9	810	100-1200	212-2192	B	\$1988.00
F47920	240	4.2	1000	100-1200	212-2192	B	\$1988.00
F47920-33	240	4.2	1000	100-1200	212-2192	B	\$2075.00
F47925-80	120	8.3	1000	100-1200	212-2192	C	\$2500.00
F47928-80	208	3.9	810	100-1200	212-2192	C	\$2500.00
F47920-80	240	4.2	1000	100-1200	212-2192	C	\$2500.00
F47920-33-80	240	4.2	1000	100-1200	212-2192	C	\$2599.00
F47955	120	8.3	1000	100-1200	212-2192	D	\$3222.00
F47958	208	3.9	810	100-1200	212-2192	D	\$3222.00
F47950	240	4.2	1000	100-1200	212-2192	D	\$3222.00
F47950-33	240	4.2	1000	100-1200	212-2192	D	\$3441.00
F48015	120	15.0	1800	100-1200	212-2192	A	\$1563.00
F48018	208	7.5	1560	100-1200	212-2192	A	\$1563.00
F48010	240	7.5	1800	100-1200	212-2192	A	\$1563.00
F48010-33	240	7.5	1800	100-1200	212-2192	A	\$1638.00
F48025	120	15.0	1800	100-1200	212-2192	B	\$2357.00
F48028	208	7.5	1560	100-1200	212-2192	B	\$2357.00
F48020	240	7.5	1800	100-1200	212-2192	B	\$2357.00
F48020-33	240	7.5	1800	100-1200	212-2192	B	\$2431.00
F48025-80	120	15.0	1800	100-1200	212-2192	C	\$2784.00
F48028-80	208	7.5	1560	100-1200	212-2192	C	\$2784.00
F48020-80	240	7.5	1800	100-1200	212-2192	C	\$2784.00
F48020-33-80	240	7.5	1800	100-1200	212-2192	C	\$2895.00
F48055	120	15.0	1800	100-1200	212-2192	D	\$3495.00
F48058	208	7.5	1560	100-1200	212-2192	D	\$3495.00
F48050	240	7.5	1800	100-1200	212-2192	D	\$3495.00
F48050-33	240	7.5	1800	100-1200	212-2192	D	\$3637.00

-33 Models CE marked.

48 Hour or Sooner
Express Shipping
Guaranteed!* 

*see inside front cover for details

Furnaces

FOLD-DOWN DOOR

Thermolyne

Type F114300 and F114200



FOLD-DOWN DOOR FOR CONVENIENCE AND SAFETY!

- — 203 or 375 cubic inch capacities
- — 1050° C maximum temperature
- — Unique fold-down door can be used as shelf



PRODUCT DESCRIPTION

- Unique fold-down door enables customer to use door as shelf and keeps hot surfaces away.
- A black anodized aluminum plate attached to the exterior of the door becomes a convenient cooling surface.
- Two chamber sizes:
Type F114200 offers 203 cubic inches of heating area.
Type F114300 provides 375 cubic inches of heating area.
- Open coil heating elements for fast heating:
Type F114200 has an element on each side.
Type F114300 has one heating element on each side and another in the back of the chamber.
- Built-in venting system removes undesirable contaminants and moisture which extends the life span of the element and unit.
- A 0.38" (0.95 cm) diameter port is located at the rear of the chamber for injecting special atmospheres and monitoring chamber temperatures with independent measuring devices.

OPERATION

- Four temperature controller models:
Control A) Single Setpoint Analog Control holds accurately at one temperature. A single digital display indicates chamber temperature or setpoint.
Control B) Single setpoint, digital control reduces overshoot. Includes OTP alarm.
Control C) 8 segment programmable control. Allows programming the rate of temperature increase and decrease (ramp), and the length of time the temperature holds at specific levels (dwell).
Control D) 16 segment programmable control that includes a RS232 communications port for connecting to printer or computer. Stores up to four programs.

SAFETY

- Operator achieves increased safety through a switch that disconnects power to heating elements when the door is opened during operation.
- An open circuit will trigger the sensor break protection and remove power to heating elements eliminating run-away conditions.

Furnaces

FOLD-DOWN DOOR

Thermolyne

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F114200	5.9 (14.9)	5.6 (14.3)	6.1 (15.6)	13.3 (33.8)	19.8 (50.1)	15.1 (38.4)	203 (3.3)	56.3 (25.5)
F114300	10.9 (27.6)	5.6 (14.3)	6.1 (15.6)	18.25 (46.4)	19.8 (50.1)	15.1 (38.4)	375 (6.2)	72 (32.6)

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range		Temp Control Group	US List Price
	Volts	Amps	Watts	°C	°F		
F114215	120	8.6	1034	100-1050	212-1922	A	\$1764.00
F114210	240	4.3	1034	100-1050	212-1922	A	\$1764.00
F114210-33	240	4.3	1034	100-1050	212-1922	A	\$1764.00
F114225	120	8.6	1034	100-1050	212-1922	B	\$2413.00
F114220	240	4.3	1034	100-1050	212-1922	B	\$2413.00
F114220-33	240	4.3	1034	100-1050	212-1922	B	\$2413.00
F114225-80	120	8.6	1034	100-1050	212-1922	C	\$2900.00
F114220-80	240	4.3	1034	100-1050	212-1922	C	\$2900.00
F114220-33-80	240	4.3	1034	100-1050	212-1922	C	\$2900.00
F114255	120	8.6	1034	100-1050	212-1922	D	\$3588.00
F114250	240	4.3	1034	100-1050	212-1922	D	\$3588.00
F114250-33	240	4.3	1034	100-1050	212-1922	D	\$3588.00
F114315	120	12	1500	100-1050	212-1922	A	\$2008.00
F114310	240	6.2	1500	100-1050	212-1922	A	\$2008.00
F114310-33	240	6.2	1500	100-1050	212-1922	A	\$2008.00
F114325	120	12	1500	100-1050	212-1922	B	\$2765.00
F114320	240	6.2	1500	100-1050	212-1922	B	\$2765.00
F114320-33	240	6.2	1500	100-1050	212-1922	B	\$2765.00
F114325-80	120	12	1500	100-1050	212-1922	C	\$3170.00
F114320-80	240	6.2	1500	100-1050	212-1922	C	\$3170.00
F114320-33-80	240	6.2	1500	100-1050	212-1922	C	\$3170.00
F114355	120	12	1500	100-1050	212-1922	D	\$3848.00
F114350	240	6.2	1500	100-1050	212-1922	D	\$3848.00
F114350-33	240	6.2	1500	100-1050	212-1922	D	\$3848.00

-33 Models CE marked.

ACCESSORIES

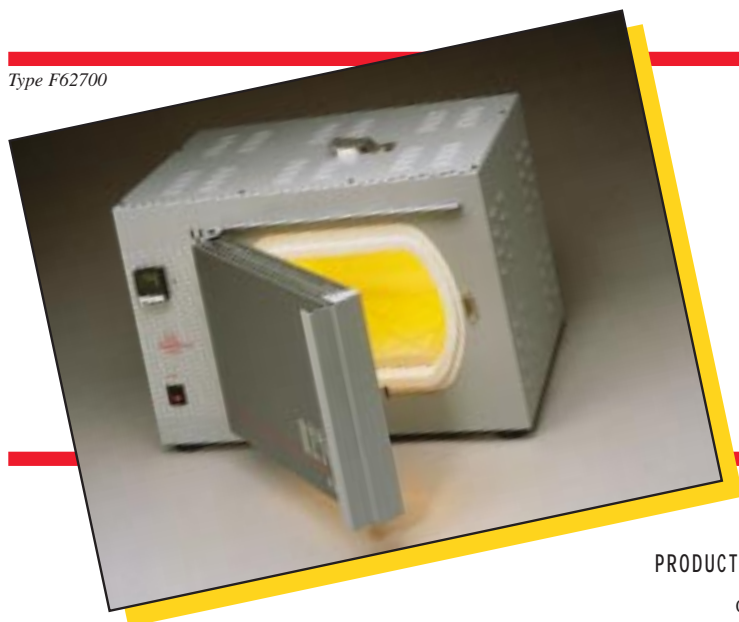
Model #	Quantity Needed	Description	US List Price
PHX3	1 (model F114200), 2 (model F114300)	Ceramic Floor Tray	\$17.00
JSX123	1	Ceramic Vent Tube	\$14.00

Furnaces

LARGE CHAMBER MUFFLE

Thermolyne

Type F62700



OVAL CHAMBER FOR UNIFORM HEATING!

- — 864 cubic inch capacity
- — 1000°C max. temperature
- — Fan-cooled exterior



PRODUCT DESCRIPTION

- Oval-shaped heating element is directly embedded in ceramic fiber insulation for even heat distribution throughout chamber.
- Ventilation port in top of furnace permits venting of some corrosive vapors and smoke from the chamber.

OPERATION

- Self-tuning function allows the control to adjust or “tune” itself for superior temperature accuracy.
- Choose from two control options:
Control B) Single setpoint digital control regulates furnace operation at one selected temperature. Includes over temp alarm.
Control C) An 8 segment programmable control allows programming the rate of temperature increase and decrease (ramp), and the length of time the temperature holds at specific levels (dwell). Includes over temp alarm.

SAFETY

- Adjustable over temperature protection (OTP) setting protects furnace or chamber loads from excess heat.
- For safety, the door switch cuts power to the heating elements when the door is opened.
- Thermocouple break protection cuts power to the heating elements, prevents thermocouple failure and runaway condition.

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F62700	11 (28)	7.5 (19)	11 (28)	21.5 (54.6)	14.25 (36.1)	13.75 (34.9)	864 (15)	47 (21.3)

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range		US List Price
	Volts	Amps	Watts	°C	°F	
F62735	120	12.4	1488	100-1000	212 - 1832	B \$1812.00
F62730	240	6.2	1488	100-1000	212 - 1832	B \$1812.00
F62730-33	240	12.4	1488	100-1000	212 - 1832	B \$1830.00
F62735-80	120	12.4	1488	100-1000	212 - 1832	C \$2271.00
F62730-80	240	6.2	1488	100-1000	212 - 1832	C \$2271.00
F62730-33-80	240	6.2	1488	100-1000	212 - 1832	C \$2271.00

-33 models CE marked.

ACCESSORIES

Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
PH421X1	Hearth Tray	4.1 (10.4)	0.5 (1.2)	9.5 (24.1)	\$11.80

For furnace Calibration Verification System, see pyrometers.

APPLICATIONS

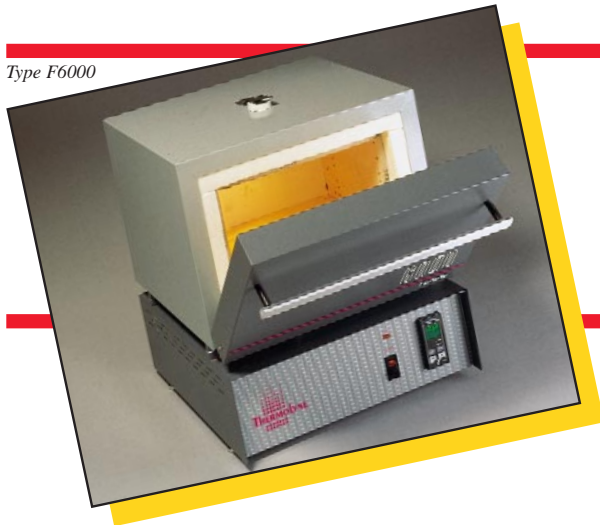
- Drying and firing of coatings.
- Gravimetric analysis.
- Drying and firing decorations on glass.
- Heat treating glass.
- Heat treating ceramics and tiles.
- Ignition tests.

Furnaces

DURABLE BENCHTOP MUFFLE

Thermolyne

Type F6000



DURABLE ELEMENTS AND PLENTY OF ROOM!

- — 1200°C max. temperature
- — 864 cubic inch capacity
- ★ — 24 Month Warranty

PRODUCT DESCRIPTION

- Heating elements are located on top, bottom, and sides of chamber for enhanced temperature uniformity.
- Venting system is located in top of chamber to expel contaminants.
- Atmosphere injection is possible with prepunched ports at rear of furnace.
- Optional stainless steel shelf doubles load capacity (maximum temperature of 900°C).
- All models are equipped with door safety switches to remove power from the heating elements upon opening the door.
- For safety, an open sensor will activate the sensor break protection and remove power to heating elements; eliminates run away conditions.

OPERATION

- Four temperature controller models:
Control A) Analog Control holds accurately at one temperature. A single digital display indicates chamber temperature or setpoint.
Control B) Single setpoint, digital control reduces overshoot. Includes OTP alarm.
Control C) 8 segment programmable control. Allows programming the rate of temperature increase and decrease (ramp), and the length of time the temperature holds at specific levels (dwell).
Control D) 16 segment programmable control that includes a RS232 communications port for connecting to printer or computer. Stores up to four programs.
- Models F6010 and F6018 are supplied with cord and plug set, all others require conduit connection.

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

PRODUCT SPECIFICATIONS



Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F6000	12.8 (33)	6.8 (18)	10 (25)	19.1 (48.5)	21 (53.3)	29.5 (74.9)	864 (14)	110 (49.8)

Type	Uniformity at 1000°C		Stability at 1000°C	
	W	H	W	H
F6000 (chamber)	± 2.2°C		±0.2°C	

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range		Temp Control Group	US List Price
	Volts	Amps	Watts	°C	°F		
F6018	208	11.2	2325	100-1200	212 - 2192	A	\$2040.00
F6010	240	10.0	2400	100-1200	212 - 2192	A	\$2040.00
F6010-33	240	10.0	2400	100-1200	212 - 2192	A	\$2179.00
F6028C	208	19.2	4000	100-1200	212 - 2192	B	\$3402.00
F6020C	240	18.3	4400	100-1200	212 - 2192	B	\$3402.00
F6020C-33	240	18.3	4400	100-1200	212 - 2192	B	\$3490.00
F6028C-80	208	19.2	4000	100-1200	212 - 2192	C	\$3975.00
F6020C-80	240	18.3	4400	100-1200	212 - 2192	C	\$3975.00
F6020C-33-80	240	18.3	4400	100-1200	212 - 2192	C	\$4079.00
F6038CM	208	19.2	4000	100-1200	212 - 2192	D	\$4696.00
F6030CM	240	18.3	4400	100-1200	212 - 2192	D	\$4696.00
F6030CM-33	240	18.3	4400	100-1200	212 - 2192	D	\$4914.00

-33 Models CE marked.

ACCESSORIES

Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
SH408X1	Stainless Steel Shelf				\$34.60
JSX16	Porcelain Pegs for Shelf (4 required)				\$1.05
PH177X1	Hearth Tray	10.75 (27.3)	.75 (1.9)	9 (22.8)	\$76.65
PHX1	Hearth Tray	4 (10.1)	.5 (1.27)	3.25 (8.2)	\$15.55
PHX2	Hearth Tray	3.8 (9.6)	.75 (1.9)	8 (20.3)	\$22.70

Furnaces

LARGE CHAMBER MUFFLE

Thermolyne

Type 30400



TWO SHELVES FOR MAXIMUM SPACE!

- — 2764 cubic inch capacity
- — 1093°C Max. temperature
- ★ — 24 Month Warranty

PRODUCT DESCRIPTION

- Minimum chamber temperature gradient is achieved with heating elements located on both sides, plus top and bottom of chamber.
- Triple the usable working area with two supplied accessory refractory shelves.
- 1-inch diameter vent located on top of furnace removes contaminants and moisture.
- The rear of the chamber is predrilled with a 3/8-inch diameter port to monitor chamber temperature with independent measuring device or to inject an inert atmosphere.
- Critical electronic components and heating elements are protected by a 35 amp circuit breaker.
- A door safety switch removes power to heating element when door is opened, provides operator protection.

OPERATION

- Choose from 3 temperature control models:
 - Control B)** Single setpoint digital control allows simultaneous monitoring of the setpoint and actual chamber temperatures. Includes OTP alarm.
 - Control C)** 8 segment programmable control allows programming the rate of temperature increase and decrease (ramp), and the length of time the temperature holds at specific levels (dwell).
 - Control D)** Multi-programmable 4-stored programs of 16 segments includes a RS232 communications port for connecting to printer or computer.
- Electrical connection requires fixed wiring.

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

PRODUCT SPECIFICATIONS



Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F30400	14 (36)	14 (36)	14 (36)	21.5 (54.6)	29.5 (74.9)	25.5 (64.7)	2764 (46.6)	60 (117.9)
				Uniformity at 1000°C		Stability at 1000°C		
F30400 (chamber)				±3.45°C		±1.2°C		

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range		Temp Control Group	US List Price
	Volts	Amps	Watts	°C	°F		
F30428C	208	26.4	5500	100-1093	212 - 2000	B	\$5282.00
F30420C	240	22.9	5500	100-1093	212 - 2000	B	\$5282.00
F30420C-33	240	22.9	5500	100-1093	212 - 2000	B	\$5210.00
F30428C-80	208	26.4	5500	100-1093	212 - 2000	C	\$5793.00
F30420C-80	240	22.9	5500	100-1093	212 - 2000	C	\$5793.00
F30420C-33-80	240	22.9	5500	100-1093	212 - 2000	C	\$5707.00
F30438CM	208	26.4	5500	100-1093	212 - 2000	D	\$6225.00
F30430CM	240	22.9	5500	100-1093	212 - 2000	D	\$6225.00
F30430CM-33	240	22.9	5500	100-1093	212 - 2000	D	\$6378.00

-33 models CE marked.

ACCESSORIES

Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
PH146X1	Hearth Tray	5.9 (14.9)	.75 (1.9)	6.75 (17.1)	\$35.15
SH412X1	Accessory Shelf				\$88.40

APPLICATIONS

- Annealing glass.
- Determinations of volatiles.
- Catalyst research.
- Ashing pulp and paper samples.

Furnaces

ATMOSPHERE CONTROLLED ASHING

Thermolyne

Type F6000-60 and
Type F30400-60



INCLUDES GAS FLOW METER AND MANIFOLD!

- — 864 & 2764 cubic inch capacities
- — Temperature to 975°C
- — Meets ASTM D3174 Specifications



Stainless steel
crucible tray,
part number
TY408X2A.



PRODUCT DESCRIPTION

- Ideally suited for coal and coke ashing procedures.
- Two popular sizes to choose from.
- All type F6000 units include two dual-purpose stainless steel trays and handle to accommodate 24 (30 ml) porcelain crucibles, or 38 (10 ml) quartz crucibles.

OPERATION

- Model F6000-60 meets ASTM D3174 specifications:
3-4 air exchanges per minute.
Heating rate of 8°C/min.- 500°C, 6°C/min. from 500°C to 750°C.
Holds at 750 °C for two hours, then turns off.
- Adjustable gas flow meter/valve (0-80 l/min.) conveniently located on front allows easy adjustment of airflow rate.
- Stainless steel manifold at rear chamber pre-warms incoming gases; provides maximum temperature gradient of only ±3°C at 750°C.

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Ft. (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F6000-60	12.8 (33)	6.8 (18)	10(25)	19.1 (49)	21 (53)	32 (81)	120 (54.4)	0.5 (14)
F30400-60	14 (36)	14 (36)	14 (36)	21.5 (55)	29.5 (75)	25.5 (65)	270 (122.4)	1.6 (46.6)

Temperature Control Groups:

B) Single setpoint digital controller.

C) Programmable, 8 segments.

D) Multi-programmable, 4 stored programs of 16 segments each plus RS232 digital communications.

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Express Shipping
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*see inside front cover for details

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range		Temp Control Group	US List Price
	Volts	Amps	Watts	°C	°F		
F6020C-60	240	18.3	4400	100-975	212 - 1787	B	\$4032.00
F6020C-33-60	240	18.3	4400	100-975	212 - 1787	B	\$4123.00
F6028C-60	208	19.2	4000	100-975	212 - 1787	B	\$4032.00
F6020C-60-80	240	18.3	4400	100-975	212 - 1787	C	\$4599.00
F6020C-33-60-80	240	18.3	4400	100-975	212 - 1787	C	\$4641.00
F6028C-60-80	208	19.2	4000	100-975	212 - 1787	C	\$4599.00
F6030CM-60	240	18.3	4400	100-975	212 - 1787	D	\$5241.00
F6030CM-33-60	240	18.3	4400	100-975	212 - 1787	D	\$5459.00
F6038CM-60	208	19.2	4000	100-975	212 - 1787	D	\$5241.00
F30420C-60-80	240	22.9	5500	100-975	212 - 1787	C	\$6303.00
F30420C-33-60-80	240	22.9	5500	100-975	212 - 1787	C	\$6311.00
F30428C-60-80	208	23.4	5500	100-975	212 - 1787	C	\$6303.00
F30430CM-60	240	22.9	5500	100-975	212 - 1787	D	\$6799.00
F30430CM-33-60	240	22.9	5500	100-975	212 - 1787	D	\$6962.00
F30438CM-60	208	23.4	5500	100-975	212 - 1787	D	\$6799.00

-33 Models CE marked.

ACCESSORIES

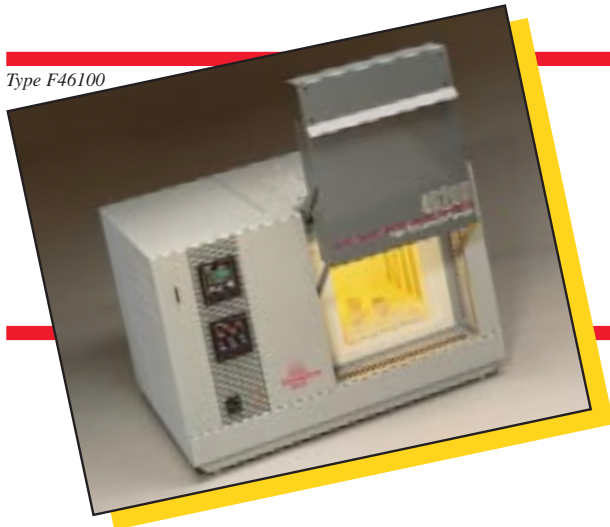
Model #	Description	US List Price
TY408X2A	Additional Dual-purpose Stainless Steel Crucible Trays	\$85.85
SH408X1	Stainless Steel Shelf for F6000-60	\$34.60
HN408X2A	Handle for Shelf	\$23.35
SH304X1	Refractory Shelf for Type F30400-60	\$57.25
AY408X1	Inconel manifold for F6000 furnace for temperatures up to 1093°C	\$566.00
AY408X1A	Stainless Steel Flexible Exhaust Tubing Kit, 2.5" I.D. x 5' long for venting fumes to proper exhaust system, plus mounting hardware.	\$238.50
AY718X1	Inconel manifold for F30400 furnace for temperatures up to 1093°C	\$560.65

Furnaces

HIGH PERFORMANCE 1700 °C

Thermolyne

Type F46100



HIGH TEMPS? NO PROBLEM!

- — Choice of 224 or 1002 cubic inch capacities
- — Temperature to 1700°C - continuously
- — Inert gas injection ports
- ★ — 24 Month Warranty

PRODUCT DESCRIPTION

Unique Door Design

- Unique door mechanism provides safe, easy door operation.
- Door is spring loaded to assist in easy opening and closing. The movement keeps the hot surface of the door away from the operator, avoiding excessive heat upon opening.
- Self-aligning door seal is incorporated to minimize heat loss and increase chamber uniformity.

Interchangeable Control Modules

- Single setpoint and programmable control modules are interchangeable to allow operator flexibility and ease of access if interchanging is needed. Simply remove control module from sleeve and insert the other controller. Requires no rewiring or disassembling.

Fast Heat-up

- The furnace can reach 1600°C in approximately 40 minutes (see graphs).
- Heat-up rate allows for optimum element life. (Faster heat-up rates may endanger SuperKanthal 33 elements.)

Air Ventilation

- Continuous air circulation maintains cool case temperature of 50°C at maximum chamber temperature of 1700°C and ensures longevity of electronic components.

Unitized Controller

- The combination of chamber and controller requires only one electrical hook-up and saves bench space.

Inert Atmosphere

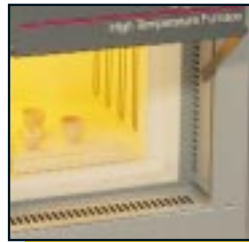
- Two inert gas injection ports: one on top of the unit and one on back. Ports are 0.38" (0.95 cm) diameter and are supplied with plugs.

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

Continuous air circulation



Element replacement is simple



One electrical hook-up



OPERATION

- All controllers have RS232 digital communications as standard feature.
- Extremely reliable control units are backed by a 24 month warranty.
- Choose from three distinctive applications-oriented temperature controllers:
 - Control B)** Single setpoint automatic control allows simultaneous monitoring of the setpoint and actual chamber temperatures.
 - Control D)** Multi-programmable 4-stored programs of 8 ramps and 8 dwells each.
 - Control E)** Multi-programmable 15-stored programs of 8 ramps and 8 dwells each.

APPLICATIONS

This 1700°C furnace is ideally suited for wide variety of high temperature applications:

- Composite research.
- Precious and exotic metals treatment.
- High temperature ceramic research.
- Powder Metallurgy.

Furnaces

HIGH PERFORMANCE 1700 °C

Thermolyne

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber Cubic Inches (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F46100	6 (15)	6 (15)	6 (15)	28 (71.1)	18.5 (46.9)	18 (45.7)	224 (3.4)	165 (74.8)
F46200	10 (25.4)	10 (25.4)	10 (25.4)	34 (86.3)	22.5 (57.1)	22 (55.8)	1002 (16.3)	255 (115.6)

F46240CM (chamber) **Uniformity at 1700°C: ±3.1°C** **Stability at 1700°C: ±.8°C**

ORDERING INFORMATION

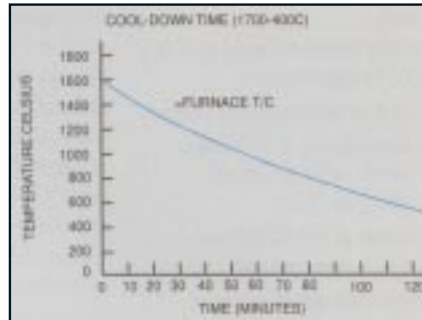
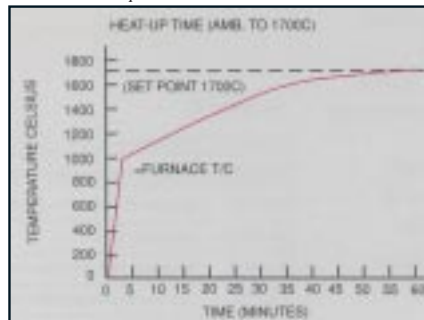
Model #	Volts	Electrical (50/60 Hertz) Amps	Watts	Operating Temp Range °C	Temp Control Group	Stabilization Amps	Watts	US List Price
F46118CM	208	40	8320	800-1700	B	12	2500	\$12,208.00
F46110CM	240	40	9600	800-1700	B	10	2500	\$12,208.00
F46110CM-33	240	40	9600	800-1700	B	10	2500	\$12,007.00
F46128CM	208	40	8320	800-1700	D	12	2500	\$12,012.00
F46120CM	240	40	9600	800-1700	D	10	2500	\$12,012.00
F46120CM-33	240	40	9600	800-1700	D	10	2500	\$12,286.00
F46128CM-75	208	40	8320	800-1700	E	12	2500	\$15,105.00
F46120CM-75	240	40	9600	800-1700	E	10	2500	\$15,105.00
F46120CM-33-75	240	40	9600	800-1700	E	10	2500	\$14,819.00
F46238CM	208	40	8320	800-1700	B	24	5000	\$17,774.00
F46230CM	240	40	9600	800-1700	B	21	5000	\$17,774.00
F46230CM-33	240	40	9600	800-1700	B	21	5000	\$17,467.00
F46248CM	208	40	8320	800-1700	D	24	5000	\$17,637.00
F46240CM	240	40	9600	800-1700	D	21	5000	\$17,637.00
F46240CM-33	240	40	9600	800-1700	D	21	5000	\$18,018.00
F46248CM-75	208	40	8320	800-1700	E	24	5000	\$20,613.00
F46240CM-75	240	40	9600	800-1700	E	21	5000	\$20,613.00
F46240CM-33-75	240	40	9600	800-1700	E	21	5000	\$20,202.00

-33 Models CE marked.

The maximum current is determined by the limiting factor set by the current controller. In the event that 40 amperes is not available, the current controller may be set to limit the current to some similar value at the expense of a somewhat longer heat-up time.

The variation in current is a result of molybdenum disilicide heating elements having a large change in resistance with increasing temperatures.

Furnace Heat-up Time



Furnaces

HIGH TEMPERATURE 1500°C/1700°C TUBE

Thermolyne

Type F54500



HIGH TEMP AND IT TILTS!

- — Rapid heat-up to 1500°C or 1700°C
- — 20 inch heated zone
- — RS232 included on all models

PRODUCT DESCRIPTION

- Choose from 1700°C fixed horizontal chamber or 1500°C adjustable tilt chamber, for operation in horizontal, angular, and vertical positions.
- Furnace accommodates 1, 2 or 3 inch diameter tubes with supplied ceramic collars.
- Utilizes eight super Kanthal 33 Molybdenum Disilicide heating elements for long life and excellent heat-up and uniformity characteristics.
- Forced air circulation between inner and outer walls ensures longevity of electronic components; exterior remains cool.

Heat-up

- Furnace models can reach 1500°C in 30 minutes. This heat-up rate allows for optimum element life.

Unitized Controller

- For ease of installation, the combination of chamber and controller requires only one electrical hook-up.

Tilt Design

- Thermolyne has responded to the demand for operational versatility with a horizontal, angular, or vertical design.
- The innovative tilt design of the 1500°C tube furnace has a quick release lever. The spring loaded mechanism allows ease of positioning with bench top stability.

Unitized Construction

- Control unit is integrated into the furnace housing, assuring maximum furnace performance.
- This integral design feature also conserves bench space.

Interchangeable Temperature Controls

- Microprocessor controls, single setpoint or programmable, allow flexibility in choosing the correct controller for your application
- Built-in controls can be easily interchanged by simply sliding the control module out from the sleeve.

- All controllers have RS232 digital communications as a standard feature.

- Choose from three control options:

Control B) Single setpoint automatic control for simultaneous monitoring of setpoint and actual chamber temperatures.

Control D) Multi-programmable 4-stored programs of 8 ramps and 8 dwells each.

Control E) Multi-programmable 15-stored programs of 8 ramps and 8 dwells each.

Furnaces

HIGH TEMPERATURE 1500°C / 1700°C TUBE

Thermolyne

PRODUCT SPECIFICATIONS

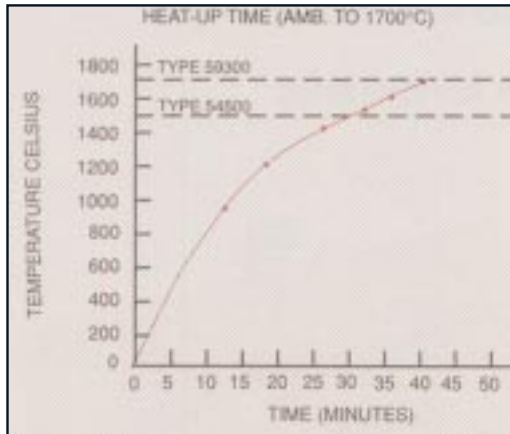
Type	Description	Chamber Process Tube Dia. Inches (cm)	Length Inches (cm) L	W	Overall Dimensions Inches (cm) H	D	Shipping Weight Lb. (kg)
F54500	1500°C	1-3 (2.5-7.62)	20 (50.8)	22.75 (37.7)	28.5 (72.3)	22 (55.8)	212 (96.2)
F59300	1700°C	1-3 (2.5-7.62)	20 (50.8)	22.75 (37.7)	28.5 (72.3)	22 (55.8)	212 (96.2)

ORDERING INFORMATION

Model #	Volts	Electrical (50/60 Hertz) Amps	Watts	Operating Temp Range °C	Temp Control Group	Stabilization Amps	Watts	US List Price
F54538CM	208	40	8320	800-1500	B	9	1875	\$15,134.00
F54530CM	240	40	9600	800-1500	B	10.3	1875	\$15,134.00
F54548CM	208	40	8320	800-1500	D	9	1875	\$15,069.00
F54540CM	240	40	9600	800-1500	D	10.3	1875	\$15,069.00
F59338CM	208	40	8320	800-1700	B	9	1875	\$15,219.00
F59330CM	240	40	9600	800-1700	B	10.3	1875	\$15,219.00
F59348CM	208	40	8320	800-1700	D	9	1875	\$15,179.00
F59340CM	240	40	9600	800-1700	D	10.3	1875	\$15,179.00
F59348CM-75	208	40	8320	800-1700	E	9	1875	\$16,582.00
F59340CM-75	240	40	9600	800-1700	E	10.3	1875	\$16,582.00

The maximum current is determined by the limiting factor set by the current control. In the event that 40 amperes is not available, the current control may be set to limit the current to a smaller value at the expense of a somewhat longer heat up time.

Furnace Heat-up Time



Type F54500 Furnace operates in horizontal, angular or vertical position.



Type F59300 1700°C

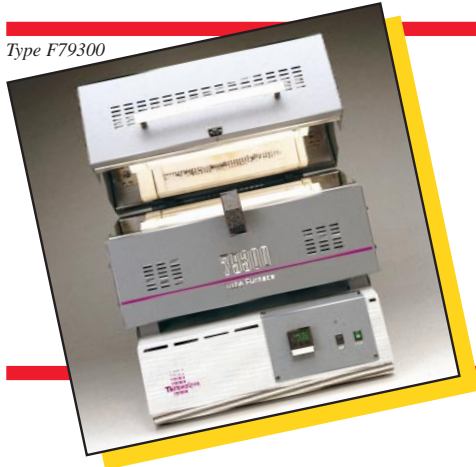


Furnaces

SINGLE ZONE SPLIT TUBE

Thermolyne

Type F79300



SPLIT TUBE FOR EASY ACCESS!

- — 1200°C max. temperature
- — 12" (30 cm) or 24" (60 cm) heated zone
- — Can be operated vertically with optional floorstand

PRODUCT DESCRIPTION

- Our new 12" (30 cm) and 24" (60 cm) split tube furnaces include a built-in temperature controller to conserve valuable bench space.
- Units are flexible enough to be mounted horizontally, remotely, or vertically on our optional floor stand (model AY793X1).
- Single zone split tube furnaces heat to 1200°C in only 20 minutes. With exposed coil heating elements embedded in state-of-the-art ceramic fiber insulation.
- 1, 2, and 3 inch tube chamber collars are included.

OPERATION

- Choose from 3 temperature control models:
Control B: Single setpoint automatic control allows simultaneous monitoring of the setpoint and actual chamber temperatures. Includes OTP alarm.
Control C: 2 ramp and 2 dwell programmable control allows programming the rate of temperature increase and decrease (ramp), and the length of time the temperature holds at specific levels (dwell).
Control D: Multi-programmable 4-stored programs of 8 ramps and 8 dwells includes a RS232 communications port for connecting to printer or computer.

SAFETY

- A door safety switch turns off power to the heating elements each time the chamber is opened for loading or unloading process tubes.
- Over temperature protection safeguards valuable research by permitting you to set the desired maximum temperature.
- Single zone split tube furnaces are guarded with thermocouple break protection. In case of an open circuit, power is cut off to the elements to avoid an over temperature situation.

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

PRODUCT SPECIFICATIONS



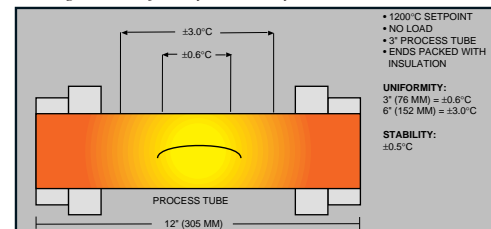
Type	Process Dia. Inches (cm)	L	Overall Dimensions Inches (cm)			Shipping Weight Lb. (kg)
			W	H	D	
F79300	1-3 (2.5-7.6)	12 (30.5)	21.9 (55.6)	23.1 (58.7)	18.9 (47.9)	85 (38.6)
F79400	1-3 (2.5-7.6)	24 (60)	34.9 (88.6)	23.1 (58.7)	18.9 (47.9)	148 (67)

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range °C	Temp Zone	Heating Control	US List Price
	Volts	Amps	Watts				
F79320	240	12	2880	100-1200	12(30.5)	B	\$3578.00
F79320-33	240	12	2880	100-1200	12(30.5)	B	\$3441.00
F79325	120	12	2880	100-1200	12(30.5)	B	\$3578.00
F79330-70	240	12	2880	100-1200	12(30.5)	C	\$4146.00
F79330-33-70	240	12	2880	100-1200	12(30.5)	C	\$3987.00
F79335-70	120	24	2880	100-1200	12(30.5)	C	\$4146.00
F79340	240	12	2880	100-1200	12(30.5)	D	\$4533.00
F79340-33	240	12	2880	100-1200	12(30.5)	D	\$4533.00
F79345	120	24	2880	100-1200	12(30.5)	D	\$4533.00
F79420	240	24	5760	100-1200	24(61.0)	B	\$4061.00
F79420-33	240	24	5760	100-1200	24(61.0)	B	\$3905.00
F79430-70	240	24	5760	100-1200	24(61.0)	C	\$4628.00
F79430-33-70	240	24	5760	100-1200	24(61.0)	C	\$4451.00
F79440	240	24	5760	100-1200	24(61.0)	D	\$4997.00
F79440-33	240	24	5760	100-1200	24(61.0)	D	\$4997.00

-33 Models CE marked.

Heating Zone Uniformity & Stability



Furnaces

THREE ZONE SPLIT TUBE

Thermolyne

Type F79600



SPLIT TUBE FOR CONVENIENCE, THREE ZONES FOR CONTROL!

- — 1200°C max. temperature
- — Available with 3, 8" (20 cm) or 12" (30 cm) zones
- — Can be run vertically with optional stand



PRODUCT SPECIFICATIONS

Type	Process Tube Inches	Heating Zone Length Inches (cm)	Overall Dimensions Inches (cm)			Shipping Weight Lb. (kg)
			W	H	D	
F79500	1-3	8 (20.3)	34.9 (88.6)	23.1 (58.7)	18.9 (47.9)	163 (74)
F79600	1-3	12 (30.5)	48.1 (122.2)	23.1 (58.7)	18.9 (47.9)	140 (63.5)

PRODUCT DESCRIPTION

- Create precise thermal gradients for your process tubes.
- Available with three 8" or three 12" zones.
- Unitized construction design conserves shrinking lab space.
- We've included 1, 2, and 3 inch tube chamber collars to make changing process tubes quick and easy.

OPERATION

- The furnace operates from one main temperature control and two linear setpoint controls to accommodate ramps and dwells across the three zones.
- This furnace offers flexible operation when positioned horizontally, remotely, or vertically on an optional floor stand (model AY793X1).
- Your choice of three controllers allows further customization to suit your research specifications:

Control B) Single setpoint automatic control simultaneously monitors the setpoint and actual chamber temperatures.

Control C) 2 ramp and 2 dwell programmable control allows programming the rate of temperature increase and decrease (ramp), and the length of time the temperature holds at specific levels (dwell).

Control D) Multi-programmable 4-stored programs of 8 ramps and 8 dwells includes a RS232 communications port for connecting to a printer or computer.

SAFETY

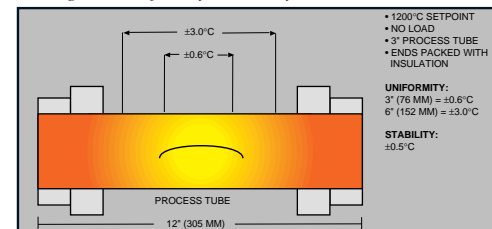
- Safety features such as over temperature protection, door safety switch, and thermocouple break protection safeguard you, your research, and furnace.

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range °C	Control	US List Price
	Volts	Amps	Watts			
F79520	240	24	5760	100-1200	B	\$7042.00
F79520-33	240	24	5760	100-1200	B	\$6771.00
F79530-70	240	24	5760	100-1200	C	\$7832.00
F79530-33-70	240	24	5760	100-1200	C	\$7530.00
F79540	240	24	5760	100-1200	D	\$8792.00
F79540-33	240	24	5760	100-1200	D	\$8792.00
F79620	240	36	8640	100-1200	B	\$7724.00
F79620-33	240	36	8640	100-1200	B	\$7426.00
F79630-70	240	36	8640	100-1200	C	\$8462.00
F79630-33-70	240	36	8640	100-1200	C	\$8136.00
F79640	240	36	8640	100-1200	D	\$9447.00
F79640-33	240	36	8640	100-1200	D	\$9447.00

-33 Models CE marked.

Heating Zone Uniformity & Stability



Furnaces

ECONOMY SOLID TUBE

Thermolyne

Type F21100



SOLID TUBE, SOLID VALUE!

- — 1200°C max. temperature range
- — Operates in horizontal, vertical or regular position
- — 12 inch heated zone



PRODUCT DESCRIPTION

- Chamber includes two interchangeable end pieces to accommodate tubes with 1" and 2" diameters.
- Heating elements embedded in ceramic fiber insulation provide rapid chamber heat-up and cool-down.
- Quartz and porcelain tubes (not supplied by Thermolyne) are commonly used with the tube furnace and can be obtained from your local laboratory supplier.
- Choose two popular control options:

Manual controller provides power to heating elements for a certain percentage of time. Temperature is indicated on a dual scale pyrometer.

Control B) Single setpoint digital control. Includes OTP alarm.

* For Furnace Calibration Verification System, see pyrometer.

PRODUCT SPECIFICATIONS

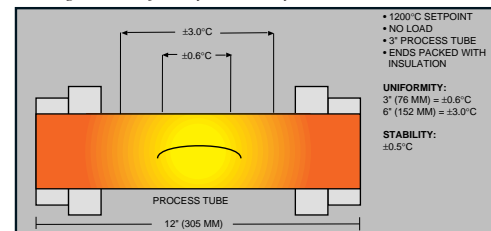
Type	Length	Chamber Dimensions Inches (cm) Accepts Process Tubes		Overall Dimensions Inches (cm)			Shipping Weight Lb. (kg)
		W	H	D			
F21100	12 (30.5)	1 and 2 Dia. (2.5 and 5.1)	16 (40.6)	14.63 (37.1)	12 (30.4)	25.25 (11.4)	

ORDERING INFORMATION

Model #	Volts	Electrical (50/60 Hertz) Amps	Watts	Operating Temp Range °C	Operating Group	US List Price
F21125	120	11.2	1250	370-1100	Manual	\$1338.00
F21120	240	5.6	1250	370-1100	Manual	\$1338.00
F21135	120	11.2	1250	100-1200	B	\$1672.00
F21130-33	230	5.6	1250	100-1200	B	\$1704.00
CS211X6A*	120	11.2	1250			\$955.20
CS211X5A*	240	5.6	1250			\$972.75

* Replacement chamber only, control not included.
-33 models CE marked.

Heating Zone Uniformity & Stability



48 Hour or Sooner
Express Shipping
Guaranteed!*

*see inside front cover for details

Furnaces

LARGEST CHAMBER MUFFLE

Thermolyne

Type F31700



OUR LARGEST CHAMBER!

- — 9 cubic ft. chamber
- — 1093°C max. temperature
- — Supports loads up to 500 lb.
- — Choice of controllers, ordered separately



PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber cu. ft. (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F31700	24 (60.9)	18 (45.7)	36 (91.4)	42.5 (107.9)	61.0 (154.9)	49.5 (125.7)	1400 (635)	9 (254.4)

PRODUCT DESCRIPTION

- High thermal-resistant insulation reduces heat up and recovery times.
- Conventional firebrick in base provides maximum mechanical strength that supports up to 500 pound loads.
- Gas spring actuators assist in opening and closing the door.

OPERATION

- Fast heat-up from ambient to 1600°F/870°C in just 2 hours, unloaded.
- Furnace includes welded steel stand, providing chamber entry at convenient height.
- Silicon Carbide Hearth Plates protect bottom heating element.
- Heating elements recessed in refractory cement for optimum heat transfer and chamber temperature uniformity.
- Furnace modification for injection of inert gas available upon request. Contact Barnstead|Thermolyne, 800-553-0039.

SAFETY

- Door opens upward, keeping hot side away from operator.
- Door safety switch removes power from heating element when door is opened to shield operator.

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temp Range		US List Price
	Volts	Amps	Watts	°C	°F	
F31758	208	48.3	17.4	150–1093	300–2000	\$15,899.00
F31750	240	48.3	20.0	150–1093	300–2000	\$15,899.00
F31756	480	24.1	20	150–1093	300–2000	\$15,899.00

Temperature control sold separately.

ACCESSORIES

Model #	Description	Overall Dimensions Inches (cm)			US List Price
		W	H	D	
PH42X1	Hearth Tray	9.93 (25.2)	.5 (1.2)	11 (27.9)	\$93.00

APPLICATIONS

- Heat treating large metal parts
- Annealing glass.
- Brazing.

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

Furnaces

HEAVY DUTY MUFFLE

Thermolyne

Type F1800, F1600
and F1700



FIREBRICK AND STEEL FOR DEMANDING APPLICATIONS!

- — Up to 1.5 cubic ft. capacity
- — Temperature up to 1260°C
- — Choice of controllers ordered separately

PRODUCT DESCRIPTION

- Heavy-duty firebrick insulation. Hard, abrasion resistant, designed to support heavy loads.
- Heavy duty steel case supports the most demanding requirements.
- Door is filled with refractory cement for long service life
- Heating elements embedded in special refractory cement offer long service life, protection from harmful materials and mechanical shock.
- Heating elements located on all four sides of chamber for maximum heat transfer and chamber uniformity.
- Accessories: Supplied with ceramic hearth try to protect bottom heating element
- Electrical connections made with conduit connectors

SAFETY

- For safety, door is counter-weighted to open upwardly; hot side is away from operation.

APPLICATIONS

- Ashing organics.
- Heat treating tools and ties.
- Heat treating glass.

PRODUCT SPECIFICATIONS

Type	Chamber Dimensions Inches (cm)			Overall Dimensions Inches (cm)			Chamber cu. ft. (liters)	Shipping Weight Lb. (kg)
	W	H	D	W	H	D		
F1600	5.5 (13.9)	5 (12.7)	13 (33)	18 (45.7)	15.5 (39.3)	24 (60.9)	0.2 (5.8)	160 (72.5)
F1700	9.5 (24.1)	8.5 (21.5)	13.5 (34.2)	28 (71.1)	28 (71.1)	34.2 (86.8)	0.6 (17.7)	420 (190.5)
F1700	9.5 (24.1)	8.5 (21.5)	18 (45.7)	28 (71.1)	28 (71.1)	39.4 (100.1)	0.8 (23.7)	480 (209.2)
F1800	10.5 (26.6)	11 (27.9)	22 (55.8)	26 (66)	30 (76.2)	41 (104.1)	1.5 (41.4)	800 (362.8)

ORDERING INFORMATION

Model #	Electrical (50/60 Hertz)			Operating Temperature Range °C		US List Standard Price	US List Hi-Temp Price
	Volts (phase)	Amps	Kilowatts	Standard Models	Hi-Temp Models		
Type 1600							
FA1630 & (-1)	240 (1)	17.0	4100	150-1093	150-1177	\$2017.00	\$2157.00
FA1635 & (-1)	120 (1)	34	4100	150-1093	150-1177	\$2017.00	\$2157.00
FA1638 & (-1)	208 (1)	19.7	5760	150-1093	150-1177	\$2017.00	\$2157.00
Type F1700							
FA1738 & (-1)	208 (1)	27.7	5800	150-1093	150-1177	\$3578.00	\$3806.00
FA1730 & (-1)	240 (1)	24	5800	150-1093	150-1177	\$3578.00	\$3806.00
FA1736 & (-1)	480 (1)	12	5760	150-1093	150-1177	\$3578.00	\$3806.00
FA1748 & (-1)	208 (1)	33	6900	150-1093	150-1177	\$3862.00	\$4090.00
FA1740 & (-1)	240 (1)	33	7900	150-1093	150-1177	\$3862.00	\$4090.00
FA1746 & (-1)	480 (1)	27.7	5800	150-1093	150-1177	\$3862.00	\$4090.00
Type F1800							
FA1850 & (-1)	240 (1)	52	12.50	150-1093	150-1260	\$6701.00	\$7752.00
3FA1858	208 (3)	28	10.1	150-1093	—	\$6701.00	—
3FA1858-1	208 (3)	34	12.2	—	150-1260	—	\$7752.00
3FA1850 & (-1)	240 (3)	28	11.6	150-1093	150-1260	\$6701.00	\$7721.00
3F1856 & (-1)	480 (3)	17	14.1	150-1093	150-1260	\$6701.00	\$7721.00

Temperature controllers must be purchased separately. Three different controllers are available.