



Thermo Scientific Precision Ovens

Heating and drying solutions for a wide range of laboratory and industrial applications

Applications

	Econotherm		Thelco™		Freas™		Vacuum Ovens	
	Mechanical	Gravity	Mechanical Analog	Digital	Gravity Analog	Digital	Standard	Safety
Aerosol Can Testing								■
Aging and Curing Studies		■		■			■	
Agricultural Genetic Studies				■			■	
Asphalt Testing	■	■		■	■	■	■	
Chemical Resistance Studies						■		■
Contamination-Free Storage of Semiconductors and Other Sensitive Electronic Components								■
Curing Studies								■
Degassing Potting Compounds							■	■
Digestion of Proteins and Starches					■		■	
Drug Metabolism Studies					■	■		
Dry Content Analysis		■		■			■	
Dry Sterilization	■	■	■	■	■	■	■	■
Electronic Burn-in					■	■	■	■
Epoxy and Plastic Curing				■	■	■	■	■
Fine Chemical Precipitation					■	■		
Glassware Depyrogenation	■							
Glassware Drying	■	■	■	■	■	■	■	
Heating/drying Where Oxidation is a Problem								■
Moisture Determinations		■		■			■	■
New Chemical Combination and Solvent Elution Studies								■
Ordnance Material Testing						■	■	
Paper Drying		■	■	■	■	■	■	■
Plant Tissue Drying	■				■	■		
QC/Batch Testing				■	■	■		
Rapid Tissue Degradation				■	■		■	
Rubber Drying		■	■	■	■	■	■	
Serum Protein Analysis				■	■	■		
Silicon Wafer Drying								■
Stability Testing					■	■	■	■
Suspended Solids Evaluation					■	■	■	■
Textile Drying	■	■	■	■	■	■	■	
Total Solids Drying		■		■	■	■		
Volatile Resins and Polymers Testing								■
Vulcanization Studies					■	■	■	■

Precision Econotherm Oven



Our Precision Econotherm Oven features reliable day-in and day-out performance at an affordable price. The analog temperature control, with hydraulic thermostat, permits operating temperatures up to 200 °C with a sensitivity of ±0.5 °C. The oven is suitable for most general purpose heating and drying needs while conserving precious bench space. The Econotherm oven comes equipped with everything you need to begin operating immediately, including a line cord and plug, vent cap, 0 – 250 °C non-hazardous glass thermometer and one non-tip shelf.

Features:

- Gravity convection
- Temperatures as high as 200 °C with ±0.5 °C sensitivity
- Free 0-250 °C glass thermometer and a non-tip shelf included
- Analog temperature control
- Easy-to-clean, rugged steel construction
- Top vent for more efficient air venting in tight spaces
- Stainless-steel chamber

Specifications

Chamber Volume	2.5 cu. ft. (70.8 liters)
Convection Technique	Gravity
Temperature Control	Hydraulic
Temperature Display	0 ° to 250 °C glass thermometer
Temperature Range	65 ° to 200 °C
Sensitivity	±0.5 °C
Dimensions (L x W x H)	
Chamber	15.5 x 18.5 x 15 in. (39.3 x 47.0 x 38.1 cm)
Shelf (each)	15.5 x 18 in. (39.3 x 45.7 cm)
Exterior (including vent cap)	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)
Electrical Specs (50/60Hz)	± 1.5 °C
115V	1300 Watts 11.3 Amps
BTU Output	4440
Net Weight	93 lbs. (42.2 kg)
Shelves¹	1 supplied, 6 maximum
Shipping Information	
Dimensions (L x W x H)	25 x 26 x 31.5 in. (63.5 x 66.0 x 80.0 cm)
Weight	145 lbs. (65.7 kg)
Volume	11.7 cu. ft. (0.33 cu. m)
Catalog Number²	6530

¹ Spacing between shelves is 2 in. (50 mm). ² Available in 115V 60Hz only.

Precision Economy Ovens

Features:

- Mechanical or gravity convection
- Hydraulic or electronic control
- Temperatures as high as 210 °C with ± 0.5 °C sensitivity
- Built-in over-temperature safety and indicator light
- Two free non-tip shelves included
- Free 0-250 °C glass thermometer
- Easy-to-clean, rugged steel construction
- UL listed (115V)
- C-UL

Our Precision Economy Ovens are value-packed, yet easy on your budget. They provide the full feature performance needed for general purpose heating and drying applications. There are five different Economy Oven models to choose from, in three different sizes, with either mechanical or gravity convection. Our Precision Economy

Ovens deliver a maximum temperature of 210 °C, with a sensitivity of ± 0.5 °C or better! All Economy Ovens come equipped with everything you need to begin operating immediately, including a line cord and plug, vent cap, 0 - 250 °C non-hazardous glass thermometer, and two non-tip shelves. All models are UL listed.

Precision 25EG (front) and 45EG (back)



Specifications

CModels	25EM	45EM	14EG	25EG	45EG
Chamber Volume	2.5 cu. ft. / 70.8 liters	4.5 cu. ft. / 127 liters	1.4 cu. ft. / 39 liters	2.5 cu. ft. / 70.8 liters	4.5 cu. ft. / 127 liters
Convection Technique	Mechanical	Mechanical	Gravity	Gravity	Gravity
Temperature Control	Electronic	Electronic	Hydraulic	Electronic	Electronic
Temperature Display	0 to 250 °	0 to 250 °	0 to 250 °	0 to 250 °	0 to 250 °
	Thermometer	Thermometer	Thermometer	Thermometer	Thermometer
Temperature Range	50 ° to 210 °C	50 ° to 210 °C	65 ° to 210 °C	65 ° to 210 °C	65 ° to 210 °C
Sensitivity	± 0.3 °C	± 0.3 °C	± 0.5 °C	± 0.3 °C	± 0.3 °C
Dimensions (L x W x H)					
Chamber	15.5 x 18.5 x 15 in. (39.4 x 47.0 x 38.1 cm)	15.5 x 18.5 x 27 in. (39.4 x 47.0 x 68.6 cm)	14 x 12.5 x 13.75 in. (35.6 x 31.7 x 34.9 cm)	15.5 x 18.5 x 15 in. (39.4 x 47.0 x 38.1 cm)	15.5 x 18.5 x 27 in. (39.4 x 47.0 x 68.6 cm)
Shelf (each)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	13.5 x 12.5 in. (34.3 x 31.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)
Exterior ¹	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)	21.5 x 24 x 40 in. (54.6 x 61.0 x 101.6 cm)	19.5 x 18 x 28 in. (49.3 x 45.7 x 71.1 cm)	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)	21.5 x 24 x 40 in. (54.6 x 61.0 x 101.6 cm)
Electrical Specs. (50/60Hz)					
115V	1300 Watts 11.3 Amps	1800 Watts 15.6 Amps	815 Watts 7.1 Amps	1200 Watts 10.4 Amps	1700 Watts 14.8 Amps
230V	1300 Watts 5.6 Amps	1800 Watts 7.8 Amps	800 Watts 3.5 Amps	1200 Watts 5.2 Amps	1700 Watts 7.4 Amps
BTU Output	4439	6147	2730	4439	6147
Net Weight	103 lbs. (46.7 kg)	130 lbs. (59.0 kg)	69 lbs. (31.3 kg)	93 lbs. (42.2 kg)	120 lbs. (54.4 kg)
Shelves²	2 supplied, 6 max	2 supplied, 10 max	2 supplied, 5 max	2 supplied, 6 max	2 supplied, 10 max
Shipping Information					
Dimensions (L x W x H) (in.)	27 x 29.5 x 36.5 in. (68.6 x 74.9 x 92.7 cm)	27 x 29.5 x 48 in. (68.6 x 74.9 x 121.9 cm)	24 x 23 x 30 in. (61.0 x 58.4 x 76.2 cm)	27 x 29.5 x 36.5 in. (68.6 x 74.9 x 92.7 cm)	27 x 29.5 x 48 in. (68.6 x 74.9 x 121.9 cm)
Weight	127 lbs. (57.6 kg)	155 lbs. (70.3 kg)	79 lbs. (35.8 kg)	117 lbs. (53.0 kg)	145 lbs. (65.8 kg)
Volume	11.7 cu. ft. (0.33 cu. m)	16.3 cu. ft. (0.46 cu. m)	9.8 cu. ft. (0.28 cu. m)	11.7 cu. ft. (0.33 cu. m)	16.3 cu. ft. (0.46 cu. m)
Catalog Number					
115V (UL listed)	6526	6528	6520	6522	6524
230V ³ (CSA)	6527	6529	6521	6523	6525

¹ Exterior height includes vent cap and adjustable feet. ² Spacing between shelves is 2 in. (50 mm). ³ NEMA 5-20P Plug *50/60Hz * All units are UL and CUL listed.

Precision Thelco Ovens

Features:

- Choice of digital or analog temperature set and display
- Interior light
- Built-in timer
- 20 different models; microprocessor or electronic control; mechanical or gravity convection
- High-limit safety feature
- Two-inch thick insulation for superior temperature uniformity
- Highly responsive sensors for temperatures up to 250 °C with ±0.3 °C sensitivity
- Top vent for more efficient venting in tight spaces
- Corrosion and contamination resistant stainless steel interior
- Gasketed door with dual-grabber latches for four point positive seal
- Large capacity in a small footprint
- Two free non-tip shelves with supports
- RS 232 option on all microprocessor controlled units
- UL listed – (115V)

Our Precision Thelco Ovens are designed for exceptional performance, selection and value. There are over 20 different models of Thelco Ovens available with your choice of three chamber capacities, mechanical or gravity convection, microprocessor or electronic temperature control and 115V or 230V single-phase operation. Even our largest Thelco Oven will only require 3.5 square feet of bench space.

No matter which Thelco Oven you choose, it will come fully equipped with many standard features. Thelco Ovens are tested according to ASTM E145 guidelines, and provide users with superior temperature uniformity as precise as ±2.0 °C at 100 °C. Thelco Ovens come equipped with everything you need to begin operating immediately, including a line cord and plug, vent cap, 0 – 250 °C non-hazardous glass thermometer for analog models and two non-tip shelves. All models are UL listed.

Specifications						
Model	70	70M	70D	70DM	130	130M
Chamber Volume	2.5 cu.ft. / 71.5 liters	2.5 cu.ft. / 71.5 liters	2.5 cu.ft. / 71.5 liters	2.5 cu.ft. / 129 liters	4.5 cu.ft. / 129 liters	4.5 cu.ft. / 129 liters
Convection	Gravity	Mechanical	Gravity	Mechanical	Gravity	Mechanical
Temperature Control	Electronic	Electronic	Microprocessor	Microprocessor	Electronic	Electronic
Temperature Display	0 ° to 250 °C Thermometer	0 ° to 250 °C Thermometer	3 Digit LED Thermometer	3 Digit LED Thermometer	0 ° to 250 °C	0 ° to 250 °C
Temperature						
Range	65 ° to 250 °C	40 ° to 250 °C	65 ° to 250 °C	40 ° to 250 °C	65 ° to 250 °C	40 ° to 250 °C
Uniformity (at 100 °C)	± 4.0 °C	± 3.0 °C	± 3.5 °C	± 2.0 °C	± 4.0 °C	± 3.0 °C
Sensitivity	± 0.3 °C	± 0.3 °C	± 0.1 °C	± 0.1 °C	± 0.3 °C	± 0.3 °C
Time to Reach 250 °C	60 minutes	70 minutes	60 minutes	70 minutes	60 minutes	70 minutes
Recovery Time (at 200 °C)¹	5 minutes	5 minutes	10 minutes	10 minutes	5 minutes	5 minutes
Timer	12 hour	12 hour	99 hour	99 hour	12 hour	12 hour
Air Changes (Max)	30/hour	52/hour	30/hour	52/hour	23/hour	34/hour
Dimensions (LxWxH)						
Chamber	15.5 x 18.5 x 15 in. (39.4 x 47.0 x 38.0 cm)	15.5 x 18.5 x 15 in. (39.4 x 47.0 x 38.0 cm)	15.5 x 18.5 x 15 in. (39.4 x 47.0 x 38.0 cm)	15.5 x 18.5 x 15 in. (39.4 x 47.0 x 38.0 cm)	15.5 x 18.5 x 27 in. (39.4 x 47.0 x 68.5 cm)	15.5 x 18.5 x 27 in. (39.4 x 47.0 x 68.5 cm)
Shelf (ea)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)
Exterior ²	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)	21.5 x 24 x 28 in. (54.6 x 61.0 x 71.1 cm)	21.5 x 24 x 40 in. (55.0 x 61.0 x 102.0 cm)	21.5 x 24 x 40 in. (55.0 x 61.0 x 102.0 cm)
Electrical Specs (50/60Hz)						
115V	1200 Watts 10.4 Amps	1300 Watts 11.3 Amps	1200 Watts 10.4 Amps	1300 Watts 11.3 Amps	1800 Watts 14.8 Amps	1800 Watts 15.6 Amps
230V	1200 Watts 5.2 Amps	1300 Watts 5.6 Amps	1200 Watts 5.2 Amps	1300 Watts 5.6 Amps	1800 Watts 7.4 Amps	1800 Watts 7.8 Amps
BTU Output	4098	4439	4098	4439	6147	6147
Net Weight	100 lbs. (45.3 kg)	110 lbs. (49.9 kg)	100 lbs. (45.3 kg)	110 lbs. (49.9 kg)	130 lbs. (50.0 kg)	140 lbs. (64.5 kg)
Shelves³						
Supplied	2	2	2	2	2	2
Maximum	6	6	6	6	12	12
Shipping Data						
Dimensions (LxWxH)	25 x 26 x 31.5 in. (63.5 x 66.0 x 88.0 cm)	25 x 26 x 31.5 in. (63.5 x 66.0 x 88.0 cm)	25 x 26 x 31.5 in. (63.5 x 66.0 x 88.0 cm)	25 x 26 x 31.5 in. (63.5 x 66.0 x 88.0 cm)	25 x 26 x 43.5 in. (63.5 x 66.0 x 110.5 cm)	25 x 26 x 43.5 in. (63.5 x 66.0 x 110.5 cm)
Weight	125 lbs. (56.7 kg)	135 lbs. (61.2 kg)	125 lbs. (56.7 kg)	135 lbs. (61.2 kg)	155 lbs. (70.3 kg)	165 lbs. (74.8 kg)
Volume	11.7 cu. ft. (0.33 cu. m)	11.7 cu. ft. (0.33 cu. m)	11.7 cu. ft. (0.33 cu. m)	11.7 cu. ft. (0.33 cu. m)	16.3 cu. ft. (0.46 cu. m)	16.3 cu. ft. (0.46 cu. m)
Catalog No.						
230V (UL listed)	6540 6541	6550 6551	6545 6546	6555 6556	6542 6543	6552 6553

¹ Door open for 30 seconds. ² Exterior height includes vent cap and adjustable feet. ³ Spacing between shelves 1.875" (48 mm). ⁴ Nema 5-20P plug.
⁵ 50/60Hz. All 70 and 130 series ovens supplied with European style 50Hz power cord, standard 230V 60Hz power cord available separately (PN 34400001).
 All 160 series ovens supplied with European style 50Hz power cord and standard 230V 60Hz power cord.

**Precision Thelco 130M (left)
and 160M (right)**



Model	130D	130DM	160	160M	160D	160DM
Chamber Volume	4.5 cu. ft. / 129 liters	4.5 cu. ft. / 129 liters	5.5 cu. ft. / 155.7 liters	5.5 cu. ft. / 155.7 liters	5.5 cu. ft. / 155.7 liters	5.5 cu. ft. / 155.7 liters
Convection	Gravity	Mechanical	Gravity	Mechanical	Gravity	Mechanical
Temperature Control	Microprocessor	Microprocessor	Electronic	Electronic	Microprocessor	Microprocessor
Temperature Display	3 Digit LED	3 Digit LED	0 ° to 250 °C	0 ° to 250 °C	3 Digit LED	3 Digit LED
		Thermometer	Thermometer			
Temperature						
Range	65 ° to 250 °C	40 ° to 250 °C	65 ° to 250 °C	40 ° to 250 °C	65 ° to 250 °C	40 ° to 250 °C
Uniformity (at 100 °C)	± 3.5 °C	± 2.0 °C	± 4.0 °C	± 3.0 °C	± 3.5 °C	± 2.0 °C
Sensitivity	± 0.1 °C	± 0.1 °C	± 0.3 °C	± 0.3 °C	± 0.1 °C	± 0.1 °C
Time to Reach 250 °C	60 minutes	70 minutes	60 minutes	70 minutes	60 minutes	70 minutes
Recovery Time (at 200 °C) ¹	10 minutes	10 minutes	7 minutes	7 minutes	12 minutes	12 minutes
Timer	99 hour	99 hour	12 hour	12 hour	99 hour	99 hour
Air Changes (Max)	23/hour	34/hour	15/hour	19/hour	15/hour	19/hour
Dimensions (LxWxH)						
Chamber	15.5 x 18.5 x 27 in. (39.4 x 47.0 x 68.5 cm)	15.5 x 18.5 x 27 in. (39.4 x 47.0 x 68.5 cm)	15.5 x 18.5 x 33 in. (39.4 x 47.0 x 83.8 cm)	15.5 x 18.5 x 33 in. (39.4 x 47.0 x 83.8 cm)	15.5 x 18.5 x 33 in. (39.4 x 47.0 x 83.8 cm)	15.5 x 18.5 x 33 in. (39.4 x 47.0 x 83.8 cm)
Shelf (ea)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)	15.5 x 18 in. (39.4 x 45.7 cm)
Exterior ²	21.5 x 24 x 40 in. (55.0 x 61.0 x 102.0 cm)	21.5 x 24 x 40 in. (55.0 x 61.0 x 102.0 cm)	21.5 x 24 x 46 in. (55.0 x 61.0 x 116.0 cm)	21.5 x 24 x 46 in. (55.0 x 61.0 x 116.0 cm)	21.5 x 24 x 46 in. (55.0 x 61.0 x 116.0 cm)	21.5 x 24 x 46 in. (55.0 x 61.0 x 116.0 cm)
Electrical Specs (50/60Hz)						
115V	1700 Watts 14.8 Amps	1800 Watts	— 10.4 Amps	— 15.6 Amps	—	—
230V	1700 Watts 7.4 Amps	1800 Watts 7.8 Amps	2000 Watts 8.7 Amps	2100 Watts 9.1 Amps	2000 Watts 8.7 Amps	2100 Watts 9.1 Amps
BTU Output	5805	6147	6830	7171	6830	7171
Net Weight	130 lbs. (50.0 kg)	140 lbs. (64.5 kg)	145 lbs. (65.8 kg)	155 lbs. (70.3 kg)	145 lbs. (65.8 kg)	155 lbs. (70.3 kg)
Shelves ³						
Supplied	2	2	2	2	2	2
Maximum	12	12	15	15	15	15
Shipping Data						
Dimensions (LxWxH)	25 x 26 x 43.5 in. (63.5 x 66.0 x 110.5 cm)	25 x 26 x 43.5 in. (63.5 x 66.0 x 110.5 cm)	25 x 26 x 49.5 in. (63.5 x 66.0 x 125.7 cm)	25 x 26 x 49.5 in. (63.5 x 66.0 x 125.7 cm)	25 x 26 x 49.5 in. (63.5 x 66.0 x 125.7 cm)	25 x 26 x 49.5 in. (63.5 x 66.0 x 125.7 cm)
Weight	155 lbs. (70.3 kg)	165 lbs. (74.8 kg)	170 lbs. (77.1 kg)	180 lbs. (81.6 kg)	170 lbs. (77.1 kg)	180 lbs. (81.6 kg)
Volume	16.3 cu. ft. (0.46 cu. m)	16.3 cu. ft. (0.46 cu. m)	18.5 cu. ft. (0.52 cu. m)	18.5 cu. ft. (0.52 cu. m)	18.5 cu. ft. (0.52 cu. m)	18.5 cu. ft. (0.52 cu. m)
Catalog No.						
230V (UL listed)	6547 6548	6557 6558	— 6544	— 6554	— 6549	— 6559

¹ Door open for 30 seconds. ² Exterior height includes vent cap and adjustable feet. ³ Spacing between shelves 1.875" (48 mm). ⁴ Nema 5-20P plug.
⁵ 50/60Hz. All 70 and 130 series ovens supplied with European style 50Hz power cord, standard 230V 60Hz power cord available separately (PN 34400001).
 All 160 series ovens supplied with European style 50Hz power cord and standard 230V 60Hz power cord.

Precision Freas High Performance Ovens

Features:

- Temperature range to 325 °C with excellent uniformity and air exchange
- Highly responsive RTD sensor provides sensitivity of ± 0.1 °C or better
- 12-hour mechanical timer
- Sophisticated PID temperature controller
- High limit safety with built-in circuit breaker
- Powerful microprocessor
- Woven stainless steel/ fiberglass door gasket
- Side mounted turbo blowers
- Stainless steel interior
- Solid chamber floor
- Non-tip shelving
- Conforms to ASTM E145 Type IIA, ASTM D-2436, and UL 746B performance/uniformity standards
- UL listed



Precision Freas 625S Oven

Our Precision Freas Ovens are ideal for applications where high temperatures and ultra-precise temperature control are essential. The high-quality construction, horizontal mechanical convection and high-efficiency insulation provide temperature uniformity as precise as ± 0.5 °C with excellent uniformity and air exchange. There are five different models available including the Model 605P with an extra baffle that provides low air flow for precise drying and testing of materials with minimal disruption of volatile components. The Model 625S Safety Oven features a rear blowout panel with retaining cage and positive action front-door catches for volatile material testing. These ovens require hardwired installation by a qualified electrician.

Specifications

Models	605	605P	625	625S	645
Chamber Volume	1.4 cu. ft. / 39 liters	1.4 cu. ft. / 39 liters	4.0 cu. ft. / 112 liters	4.0 cu. ft. / 112 liters	9.5 cu. ft. / 268
Temperature Control	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Temperature Display	Two lines, 4-digit LED	Two lines, 4-digit LED	Two lines, 4-digit LED	Two lines, 4-digit LED	Two lines, 4-digit LED
Temperature Range	Amb. ± 15 °C to 325 °C	Amb. ± 15 °C to 325 °C	Amb. ± 15 °C to 325 °C	Amb. ± 15 °C to 325 °C	Amb. ± 15 °C to 325 °C
Uniformity at 100 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C
Uniformity at 200 °C	± 1.0 °C	± 1.0 °C	± 0.9 °C	± 0.9 °C	± 1.0 °C
Uniformity at 300 °C	± 2.5 °C	± 2.5 °C	± 2.2 °C	± 2.2 °C	± 2.1 °C
Sensitivity	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C	± 0.1 °C
Heat-up Time to 325 °C	60 minutes	60 minutes	50 minutes	50 minutes	45 minutes
Recovery Time¹	2.5 minutes	2.5 minutes	4 minutes	4 minutes	4 minutes
Air Changes (Max)	128/hour	128/hour	195/hour	195/hour	155/hour
Dimensions (L x W x H)					
Chamber	13 x 14 x 13 in. (33 x 35.6 x 33 cm)	13 x 14 x 13 in. (33 x 35.6 x 33 cm)	19 x 19 x 19 in. (48.3 x 48.3 x 48.3 cm)	19 x 19 x 19 in. (48.3 x 48.3 x 48.3 cm)	19 x 36 x 24 in. (48.3 x 91.4 x 61 cm)
Shelf (each)	12 x 13 in. (30.5 x 33 cm)	12 x 13 in. (30.5 x 33 cm)	18 x 18 in. (45.7 x 45.7 cm)	18 x 18 in. (45.7 x 45.7 cm)	17.5 x 35.5 in. (44.5 x 90.2 cm)
Exterior	24 x 38.5 x 25 in. (61 x 97.8 x 63.5 cm)	24 x 38.5 x 25 in. (61 x 97.8 x 63.5 cm)	28 x 45 x 29 in. (71.1 x 114.3 x 73.7 cm)	32 x 45 x 29 in. (83.8 x 114.3 x 73.7 cm)	31 x 65 x 36 in. (78.7 x 165.1 x 91.4 cm)
Electrical Specs (50/60Hz)					
115V	2500 Watts, 20.8 Amps	2500 Watts, 20.8 Amps	—	—	—
208/230V	2500 Watts, 10.9 Amps	2500 Watts, 10.9 Amps	3700 Watts, 16.1 Amps	3700 Watts, 16.1 Amps	4800 Watts, 20.9 Amps
BTU Output	753	753	1084	1084	1084
Shelves²	2 supplied, 7 maximum	2 supplied, 7 maximum	2 supplied, 11 maximum	2 supplied, 11 maximum	2 supplied, 11 maximum
Net Weight	230 lbs. (104.3 kg)	230 lbs. (104.3 kg)	252 lbs. (114.3 kg)	292 lbs. (132.5 kg)	415 lbs. (188.2 kg)
Shipping Data					
Dimensions (L x W x H)	31 x 42 x 32 in. (78.7 x 106.7 x 81.3 cm)	31 x 42 x 32 in. (78.7 x 106.7 x 81.3 cm)	36 x 48 x 37 in. (91.4 x 121.9 x 94 cm)	36 x 48 x 37 in. (91.4 x 121.9 x 94 cm)	37 x 68 x 46 in. (94 x 172.7 x 116.8 cm)
Weight	270 lbs. (122.5 kg)	270 lbs. (122.5 kg)	310 lbs. (140.6 kg)	315 lbs. (142.9 kg)	500 lbs. (226.8 kg)
Volume	(23.5 cu. ft. / 0.67 cu. m)	(23.5 cu. ft. / 0.67 cu. m)	(37 cu. ft. / 1.05 cu. m)	(37 cu. ft. / 1.05 cu. m)	(67 cu. ft. / 1.9 cu. m)
Catalog Number					
115V	6050	6052	—	—	—
208/230V ³	6051	6053	6054	6055	6056

¹ At 200 °C with 30-second door opening. ² Spacing between shelves is 1.6 in. (40 mm). ³ 50/60Hz

Precision Vacuum Ovens

Features:

- 35 ° to 200 °C temperature range
- Full-view observation window
- Vacuum/bleed ports permits pressures as low as 1×10^{-4} Torr
- Latched, positive seal door with heat-resistant gaskets
- Two vacuum metering valves included for fine adjustment of vacuum and bleeding
- Stainless steel interior for superior corrosion and contamination resistance
- 115V units UL listed
- All units are CUL listed

Our Precision Vacuum Ovens are designed to provide precise temperature control in heating and drying applications requiring an airless environment. Capable of vacuums as low as 1×10^{-4} Torr, they are ideal for a wide range of industrial and laboratory applications.



Model 19 and Model 29 picture caption.



Specifications

	Model 19	Model 29
Chamber Volume	0.44 cu. ft. (12.6 liters)	1.5 cu. ft. (44.8 liters)
Temperature Control	Analog with graduated dial	Analog with graduated dial
Temperature Display	0 ° to 250 °C Thermometer	0 ° to 250 °C Thermometer
Temperature Range	35 ° to 200 °C	35 ° to 200 °C
Vacuum Range	Atmospheric to 1×10^{-4} Torr	Atmospheric to 1×10^{-4} Torr
Dimensions (L x W x H)		
Chamber	12 x 8 x 8 in. (30.5 x 20.3 x 20.3 cm)	19 x 12 x 12 in. (48.3 x 30.5 x 30.5 cm)
Shelf (each)	10.5 x 7.5 in. (26.7 x 19.1 cm)	17 x 10.5 in. (43.8 x 26.7 cm)
Exterior	16 x 13 x 18 in. (40.6 x 33 x 45.7 cm)	27 x 20 x 23 in. (68.5 x 50.8 x 58.4 cm)
Electrical Specs (50/60Hz)		
115V	500 Watts 4.2 Amps	1000 Watts 8.3 Amps
230V	500 Watts 2.1 Amps	1000 Watts 4.2 Amps
BTU Output	1706	3413
Net Weight	42 lbs. (19.1 kg)	116 lbs. (52.6 kg)
Shelves	2 supplied, 2 max.	2 supplied, 4 max.
Shipping Data		
Dimensions (L x W x H)	17 x 21 x 21 in. (43.8 x 53.3 x 53.3 cm)	30 x 23 x 26 in. (76.2 x 58.4 x 66.0 cm)
Weight	47 lbs. (21.3 kg)	123 lbs. (55.7 kg)
Volume	3.5 cu. ft. (0.1 cu. m)	10.4 cu. ft. (0.3 cu. m)
Catalog Number		
115V (UL listed)	6500	6502
230V (50/60Hz)	6501	6503

All models equipped with line cord and plug, and come with a glass thermometer for monitoring purposes. Vacuum pump and tubing are not included.

Thermo Scientific Precision Ovens Accessories

Accessories

To enhance the performance of your Precision, Freas, Thelco or Vacuum ovens we recommend these accessories.

Oven Shelf Kits

(One shelf and Two supports.) These sturdy chromium plated steel wire shelves feature a special non-tipping design to simplify oven loading and unloading.

FREAS Model 605 <i>Catalog No.</i>	3166188
FREAS Model 625/625S <i>Catalog No.</i>	3166179
FREAS Model 645 <i>Catalog No.</i>	3166180
Economy Oven Model 14EG <i>Catalog No.</i>	3166212
All Other Economy and Thelco Oven Models <i>Catalog No.</i>	3166214
Model 19 Vacuum Oven - Shelf Only <i>Catalog No.</i>	316083
Model 29 Vacuum Oven - Shelf Kit (One shelf and four clips.) <i>Catalog No.</i>	3166194

Glass Thermometers

Non-hazardous glass thermometers 0 °C to 100 °C in 1 °C increments. Precision Economy, High Performance, and Thelco Incubators, 12 in. (305 mm) long. For monitoring purposes only.
Catalog No. 3175996

Precision Model 19 Non-Hazardous Glass Thermometers 0 °C to 250 °C in 1 °C increments. For monitoring purposes only.
Catalog No. 3176001

RS232 Interface Kit

For bi-directional communication for data-logging or remote control. Maximum distance, 50 feet (15.25 meters). Includes D-connector and PCB. For microprocessor controlled Thelco Ovens.
Catalog No. 3166245

Oakite Sanitizer

Safe, effective, quaternary ammonium-type germicide and disinfectant. Available in a 1 quart (0.946 liter) container.
Catalog No. 3166250

Vacuum Oven Door Gaskets Precision Model 19

<i>Type</i>	<i>Catalog No.</i>
Silicone	3174674
Buna N	3173926
Viton	3174683

Vacuum Oven Door Gaskets Precision Model 29

<i>Type</i>	<i>Catalog No.</i>
Silicone	3174675
Buna N	3173927
Viton	3173605

Window Gaskets Precision Model 29

<i>Type</i>	<i>Catalog No.</i>
Silicone	3174674
Buna N	3173926
Viton	3174683