

Microwave Ovens offer a low cost, efficient method of heating liquids and other materials quickly. Using "electromagnetic" radiation; waves of electrical and magnetic energy..... **1011**

Gravity Convection Ovens provide a low-cost alternative to mechanical convection ovens when temperature uniformity is not essential to the process. Ideal for applications in which a powder or substance that needs to be heated or dried could be disturbed by a fan-generated airflow. **1012-1015**

Mechanical Convection Ovens utilize a motorized fan to force air across heating elements and into the warming chamber. The fan allows for a more consistent distribution of air and is designed for applications in which good temperature uniformity or faster heatup/drying time are needed..... **1016-1022**



Cleanroom Ovens are mechanical convection ovens designed for such cleanroom applications as electronic parts curing, semiconductor chip cleaning, and wafer baking. These ovens are typically available with or without HEPA filters. ISO Class 5 (formerly Class 100) air standards are met when using a cleanroom oven that is equipped with a HEPA filter for maximum contamination protection.....**1023**



Safety Ovens are mechanical convection ovens that have a blow-out back panel to protect the user from injury in the event of an explosion within the oven. Safety ovens are not explosion-proof and will not prevent volatiles from combusting. However, in the event of an explosion, the blow-out panel is designed to direct the force of the blast away from the user.....**1023**



Vacuum Ovens are used when lack of atmosphere or inert atmosphere is desired. Because heating must occur in a vacuum, where there is no convection of air, it is accomplished by placing the sample on the shelving in the unit so heat is conducted from the side walls to the sample via the metal shelf. These units require a separate vacuum pump. Applications include vacuum drying, desiccating, embedding, outgassing, plating, and quality control.....**1024-1025**



GO to page(s) 653-664

For a wide selection of furnaces.



05015-01



05015-02

New

Commercial Microwave Ovens

Heat liquids and other general-purpose items fast and efficiently!

- Stainless steel cavity for easy cleaning
- Interior oven light and see-through door allow easy viewing of the heating chamber

These commercial-grade microwave ovens are easy to clean and operate. Internal chamber is made of stainless steel for durability—won't pit, chip, scratch or corrode, even with tough everyday use.

Light-duty model 05015-01 offers 1000 watts of power with a cool gray cabinet and stainless steel door. Set heating time with a convenient six-minute illuminated dial timer. Times are clearly marked in 10, 15, and 30 second increments for easy-to-set, easy-to-read convenience. Sturdy grab handle withstands daily demands and offers easy access.

Heavy-duty model 05015-02 offers 1600 watts of power and ten variable power levels. Dual magnetrons ensure that if one fails, oven continues to operate at half power. Microwaves are distributed evenly throughout the top and bottom of the oven. Ovens are stackable and may be secured to another oven by use of the included mounting plate. Ten microprocessor-controlled memory keypads provide one-second increment timing for flexible operation that is easy and dependable. Keypads may be customized for each menu item and easily converted to 20 memories. Choice of two sound tones to signal the end of the heating cycles.

What's included: 4-ft power cord with plug. Model 05015-02 also includes a mounting plate for stacking units.

Specifications & Ordering Information



Catalog number	Capacity (cu ft)	Dimensions (W x H x D)		Power				Shpg wt lb (kg)	Price
		Chamber	Overall	VAC	Hz	Amps	Watts		
KH-05015-01	0.95	13 ⁷ / ₈ " x 12 ¹ / ₈ " x 16"	20 ¹ / ₂ " x 12 ¹ / ₈ " x 16"	120	60	14	1000	44 (20)	
KH-05015-02	0.7	13" x 7 ¹ / ₈ " x 13"	20 ¹ / ₈ " x 13 ¹ / ₄ " x 18 ¹ / ₂ "	230	60	13	1600	69 (31.3)	

Ovens

Gravity Convection

Barnstead|Thermolyne Hot-Plate Oven

Turn your Barnstead® hot plate into a basic gravity convection oven!

- Heat to 250°C
- Double-wall construction, baked-on enamel steel exterior, and aluminum inner chamber are easy to clean
- Thermometer port on top accommodates standard laboratory thermometers

These compact cast-aluminum hot plates allow you to have a basic gravity convection oven positioned in a small space on your benchtop—no more than 9½ inches on either side. Ideal for general drying, baking, preheating and curing applications. Oven requires heat from a separate Barnstead hot plate; order separately below.

What's included: Oven includes one removable shelf. Hot plates include a 6-ft power cord.

New



03412-00

Oven shown with hot-plate; order separately below.



03400-00

Specifications & Ordering Information for Oven

Max temperature: 250°C

Construction: aluminum interior, baked-on enamel steel exterior

Catalog number	Capacity (cu ft)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	Price
			Chamber	Overall		
KH-03412-00	0.01	2	6" x 6" x 6"	8½" x 7¾" x 9½"	6.8 (3.0)	

Specifications & Ordering Information for Hot Plates

Catalog number	Top plate dimensions	Temperature range	Overall dimensions (W x H x D)	Power				Certification	Price
				VAC	Hz	Amps	Watts		
EK-03400-00	6¼" x 6¼"	100 to 700°F (38 to 371°C)	6¾" x 4¾" x 7¾"	120	50	6.2	750	UL-listed CSA-certified	
EK-03400-10				120	50	6.2	750		
EK-03400-02		300 to 900°F (150 to 482°C)		240	60	3.3	750	None	
EK-03418-10				120	50/60	6.2	750		



Hot Hand® Rubber Mitt

Protect your hands from hot labware. This silicone rubber mitt fits any glove size. Gripping surfaces are studded for positive grip; hole tabs on either end are for hanging. Maximum temperature is 500°F (260°C).

[EK-06910-00](#) Hot Hand® rubber mitt



GO to page(s) 1666–1675

For a complete selection of thermometers, see pages 1666–1675.

StableTemp Economical Gravity Convection Ovens

Economical choice for basic drying and baking applications

- Durable powder-coated cold-rolled steel exterior
- Double-wall aluminum interior with 1"-thick silica-based insulation
- Compact 0.7-cu ft model is ideal for benchtop placement

These economical gravity convection ovens are designed for the budget-conscious laboratory needing to perform basic drying and baking applications. Temperature is controlled via a bimetallic thermostat from ambient 5 to 210°C. All models feature a pilot light to indicate when the oven is in operation and a preset high temperature limit safety thermostat.

What's included: two adjustable chrome-plated wire shelves, one fixed shelf, 120 VAC models have a three-wire cord and plug, 240 VAC models have a three-wire cord only.

Specifications & Ordering Information

Temperature range: ambient ±5°C to 210°C

Temperature accuracy: ±9°C at 100°C

Control type: bimetallic thermostat

Temperature display: glass thermometer*

New



52120-00



2 year warranty

Construction: aluminum interior, powder-coated cold-rolled steel exterior

Capacity (cu ft)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
		Chamber	Overall		Cat no.	Price	Cat no.	Price
0.7	3	10" x 11¾" x 11½"	12½" x 18" x 13½"	35 (16)	KH-52120-00		KH-52120-01	
1.7	3	16" x 16¼" x 11½"	18½" x 22½" x 13½"	57 (26)	KH-52120-02		KH-52120-03	
3.1	3	18" x 22" x 13½"	20½" x 28½" x 15¼"	80 (36)	KH-52120-04		KH-52120-05	
5.7	3	28" x 22" x 18"	31¾" x 28¾" x 20¾"	140 (64)	KH-52120-06		KH-52120-07	

*Recommended thermometer is not included with oven; order separately on pages 1972–1982.

Accessories

[KH-52120-90](#) Additional shelf for 0.7 cu ft models

[KH-52100-50](#) Additional shelf for 1.7 cu ft models

[KH-52100-52](#) Additional shelf for 3.1 cu ft models

[KH-52120-93](#) Additional shelf for 5.7 cu ft models

StableTemp Microprocessor-Controlled Gravity Convection Ovens

Microprocessor-PID temperature control provides superior accuracy and repeatability

- Heats up to a maximum temperature of 275°C in 30 minutes—saves you valuable time in drying and aging applications

These ovens are ideal for a wide variety of applications in which precise control, good temperature uniformity, and excellent recovery times are important. Microprocessor-PID controller makes it easy to achieve and maintain the exact temperature desired.

A built-in backup controller automatically takes over if the actual temperature reaches 5°C or more above the set point. The alarm indicator lets you know when the overtemperature value has been exceeded and the back up controller is in use. Battery backup memory lets you run consecutive tests eliminating the need to reset the temperature before each run.

What's included: chrome-plated steel shelves and a 6-ft power cord. The 2.5 cu ft 120 VAC models have a standard U.S. plug; 3.75 and 5.0 cu ft 120 VAC models have a NEMA 5-20P plug; 240 VAC models have a European plug.



52301-10

Specifications & Ordering Information



Temperature range: 50 to 275°C
Control type: microprocessor PID

Temperature display: 3-digit LED
Resolution: 1°C

Construction: stainless steel interior and powder coated steel exterior

Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (to max)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
KH-52301-40 KH-52301-45	2.5	±4°C at 200°C	30 minutes to 275°C	5	18" x 13½" x 18"	25¾" x 26" x 23½"	120, 60 240, 50/60	11 5.5	115 (52.2)	
KH-52301-00 KH-52301-05	3.75			8	18" x 20" x 18"	25¾" x 33" x 23½"	120, 60 240, 50/60	15 7.5		
KH-52301-10 KH-52301-15	5.0			11	18" x 26½" x 18"	25¾" x 39¼" x 23½"	120, 60 240, 50/60	15 7.5		

[KH-52301-80](#) Additional shelf

Precision Economy Gravity Convection Ovens

Reliable performance at an affordable price!

- Temperatures up to 210°C with ±0.5°C sensitivity
- Easy-to-clean, rugged stainless steel construction
- 0 to 250°C glass thermometer included

These precision economy ovens offer reliable performance and value—suitable for most general-purpose heating and drying needs while conserving precious bench space. Ovens come equipped with everything you need to begin operating immediately. Ovens offer analog control with either hydraulic or electronic thermostat.

What's included: 0 to 250°C glass thermometer, power cord, and vent cap. Model 05012-02 includes one non-tip shelf, all other models include two shelves.



05012-06

05012-08

05012-02

Specifications & Ordering Information



Control type: analog

Temperature display: 0 to 250°C glass thermometer (included)

Construction: stainless steel chamber, steel exterior

Capacity (cu ft)	Temp range	Sensitivity	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
				Chamber	Overall		Cat no.	Price	Cat no.	Price
1.4	65 to 250°C	±0.5°C	5	12½" x 13¾" x 14"	18" x 28" x 19½"	79 (35.8)	KH-05012-03		KH-05012-04	
2.5	65 to 200°C		6	18½" x 15" x 15½"	24" x 28" x 21½"	145 (65.7)	KH-05012-02		—	—
2.5	65 to 250°C	±0.3°C	6	18½" x 15" x 15½"	24" x 28" x 21½"	117 (53.0)	KH-05012-06		KH-05012-07	
4.5	50 to 210°C		10	18½" x 27" x 15½"	24" x 40" x 21½"	145 (65.8)	KH-05012-08		KH-05012-09	

Ovens

Gravity Convection



52450-00

Gravity Convection Ovens

Temperature control accuracy of $\pm 0.3\%$ of set point, temperature range up to 260°C

- Use in a variety of baking, drying, conditioning, preheating, and curing applications

These ovens feature analog control instrumentation with separate LED indicator for accurate, dependable temperature control. The 3"-thick fiberglass insulated walls and silicone door gaskets help prevent heat loss. An independent overtemperature protection device disables the heating element and activates audible and visual warnings if the temperature range is exceeded, protecting the work process and load. Choose from enameled steel or stainless steel exteriors.

What's included: two shelves and a 10-ft power cord with plug.



Specifications & Ordering Information

Temperature range: 40 to 260°C	Temperature control accuracy: Models 05015-00, -04: $\pm 5\%$ of set point Models 52450-00 to -50: $\pm 0.3\%$ of set point	Control type: Models 05015-00, -04: hydraulic thermostat Models 52450-00 to -50: single set point programmable (SSP)	Resolution: 0.1°C/1°C depending on temperature Construction: polished 304 SS interior, heavy-gauge steel exterior
Temperature display: LED			

Capacity (cu ft)	Temperature uniformity	Rise time to 260°C (minutes)	Shelf positions	Dimensions (W x H x D)		Power			Shpg wt lb (kg)	Enameled steel exterior		Stainless steel exterior	
				Chamber	Overall	VAC	Hz	Amps		Cat. no.	Price	Cat. no.	Price
1.0	$\pm 5\%$ of set point	24	16	12" x 12" x 12"	16" x 20 ³ / ₁₆ " x 17 ¹ / ₂ "	120	50/60	4.6	51 (23.2)	KH-05015-00			
2.0			24	17" x 17" x 12"	21" x 23 ¹ / ₂ " x 17 ¹ / ₂ "	120	50/60	4.6	64 (29.1)	KH-05015-04			
3.0	$\pm 3\%$ at 100°C	24	16	19" x 18" x 15"	29" x 31" x 22"	120	50/60	13.3	185 (83.9)	KH-52450-00			KH-52450-30
						208/240	50/60	6.7	185 (83.9)	KH-52450-10			KH-52450-40
						230	50	7	185 (83.9)	KH-52450-20			KH-52450-50

KH-33910-00 RS-485 digital communications port. Factory installed; must be ordered with the oven

KH-52450-60 Additional shelf, nickel plated. For models with enameled steel exterior

KH-52450-70 Additional shelf, stainless steel. For models with stainless steel exterior



52200-06

Memmert® Warm-Wall Gravity Convection Ovens

Our best temperature uniformity in gravity ovens

- High-efficiency, rib-type heating elements on the top, bottom, and sides provide excellent heat uniformity

Overtemperature protection keeps samples and lab safe. Stainless steel (SS) casing protects heating elements from spills. Insulation and tight-fitting seals maximize heat retention. Sliding exhaust port door lets you adjust air intake to maximize performance.

Basic Ovens feature an LED that displays actual temperature and 99 hour 59 min. shut off timer.

Programmable Ovens feature an LED that lets you toggle between the actual temperature and set point. Include a 7-day programmable, RS-232 interface, and Celsius for Windows® software. Store thermostating programs, control up to three devices via RS-232, analyze and transfer data, print log documentation in accordance with GLP standards.

What's included: two 304 SS shelves (one with the 1.1 cu ft model), a 6-ft power cord with plug (230 VAC models have a NEMA Type 6-15P plug). The 9.0 cu ft model features double doors that are ideal for large sample trays.

Specifications & Ordering Information

Temperature range: 30 to 250°C
Temperature control accuracy (at 150°C) $\pm 0.5^\circ\text{C}$
Temperature display: 4-digit LED

Resolution: 0.5°C

Construction: 304 SS interior and exterior



Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
				Chamber	Overall		Cat. no.	Price	Cat. no.	Price
Basic ovens										
1.1	$\pm 2.7^\circ\text{C}$ at 150°C	44	3	15 ⁵ / ₈ " x 12 ¹ / ₂ " x 9 ³ / ₄ "	21 ³ / ₄ " x 23 ³ / ₄ " x 15 ³ / ₄ " x 6"	101 (45.8)	KH-52200-01			KH-52200-02
3.8	$\pm 2.4^\circ\text{C}$ at 150°C	43	5	21 ¹ / ₈ " x 18 ¹ / ₈ " x 15 ⁵ / ₈ "	28 ¹ / ₈ " x 30" x 21 ³ / ₄ "	178 (80.7)	KH-52200-03			KH-52200-04
Programmable ovens with RS-232 interface										
3.8	$\pm 2.4^\circ\text{C}$ at 150°C	34	5	21 ¹ / ₈ " x 18 ¹ / ₈ " x 15 ⁵ / ₈ "	28 ¹ / ₈ " x 30" x 21 ³ / ₄ "	178 (80.7)	KH-52200-06			KH-52200-07
9.0	$\pm 2.7^\circ\text{C}$ at 150°C	48	7	31 ¹ / ₂ " x 25" x 19 ⁵ / ₈ "	37 ¹ / ₂ " x 36 ¹ / ₄ " x 25 ⁵ / ₈ "	286 (130)	KH-52200-08			KH-52200-09

KH-39100-50 Additional shelf for 1.1 cu ft model

KH-39101-50 Additional shelf for 3.8 cu ft models

KH-52200-90 Additional shelf for 9.0 cu ft model

Deluxe Gravity Convection Ovens

Temperature control accuracy of $\pm 0.5\%$ of set point; uniformity of $\pm 5\%$ of set point

- Use in a variety of baking, drying, conditioning, preheating, and curing applications

The hydraulic thermostat and analog control instrumentation with separate LED indicator provide accurate, dependable temperature control. The 3"-thick insulation and silicone door gasket prevent heat loss. An adjustable exhaust vent on the top of unit lets you control the amount of air entering and leaving the oven chamber. Air inlet ports are located at bottom of unit—air passes heating elements as it enters chamber. Shielded elements protect the oven against damage from sample spills and keep your lab safe.

What's included: two shelves and a 10-ft cord (the 120 VAC models include a plug).
Order the Autoformer® package below to convert 120 VAC ovens for 240 VAC operation.

Specifications & Ordering Information



Temperature range: 40 to 260°C
Temp control accuracy: $\pm 0.5\%$ of set point
Control type: hydraulic thermostat

Temperature display:
3 1/2-digit LED
Resolution: 1°C

Construction: polished 304 stainless steel interior and painted heavy-gauge steel exterior

Catalog number	Capacity (cu ft)	Temperature uniformity	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
				Chamber	Overall	VAC	Amps		
KH-05081-00	1.0	$\pm 3\%$ at 100°C	12	12" x 12" x 12"	18" x 30" x 18 1/2"	120	5.4	105 (47.7)	
KH-05081-10	2.1	$\pm 3\%$ at 100°C	12	18 1/2" x 12 1/2" x 16"	25" x 33 1/2" x 22 1/2"	120	8.3	165 (74.9)	
KH-05081-20	3.0	$\pm 3\%$ at 100°C	18	18 1/2" x 17 1/2" x 16"	25" x 38 1/2" x 22 1/2"	120	15.8	175 (79.4)	
KH-05081-30	4.5	$\pm 3\%$ at 100°C	18	28" x 17 1/2" x 16"	34" x 38 1/2" x 22 1/2"	120	17.5	230 (104)	
KH-05081-35						208/240	7.9	240 (109)	
KH-05081-40	7.0	$\pm 3\%$ at 100°C	28	28" x 27" x 16"	34" x 48" x 22 1/2"	120	17.5	270 (123)	
KH-05081-45						208/240	7.9		

Note: Ovens are not suited for use with hazardous vapors.



05081-00

High-Temperature Gravity Convection Ovens

Outstanding drying results due to optimal air conduction without a fan

- 5°C above room temperature to 300°C
- Microprocessor controller with LED display and integrated 0 to 99-hr timer
- Patented APT.Line® preheating chamber ensures accurate and reproducible results

These natural convection ovens are suitable for all drying, sterilization, and precise warm storage tasks that do not require increased drying rates or special time factors. The particularly high air exchange rate (approximately 1/3 higher than comparable models) substantially increases the efficiency of the drying processes. The internal 304 stainless steel chamber has rounded edges for easy cleaning. The integrated electronic timer may be set for up to 99 hours and 59 minutes or for continuous operation.

The ovens are microprocessor controlled, with an LED display of time and temperature. Binder ovens feature the patented Absolutely Precise Temperature (APT.Line) technology that has become the standard in precision temperature chambers—achieve temperature accuracy from 5°C above room temperature to 300°C. Only Binder offers this temperature range with such precision, providing remarkably short heating and recovery times.

An independently adjustable ISO Class 2 safety thermostat with visual alarm provides full protection against chamber overtemperature. These ovens can be stacked to conserve valuable lab space. Ovens are customizable; optional access ports of 10-, 30-, or 50-mm diameter may be added to the units allowing connection of external measuring equipment. The 115 VAC models are UL listed. The 230 VAC models are CE marked.

What's included: two chrome-plated shelves, APT-COM® Data Control System software, and a 4-ft power cord with plug.

Specifications & Ordering Information

Temperature range: ambient +5°C to 300°C
Temperature control accuracy: $\pm 0.3^\circ\text{C}$

Control type: DS controller with integrated timer 0 to 99 hours, ramp function
Temperature display: 4 LEDs

Resolution: 0.1°C

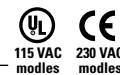
Construction: powder-coated stainless steel

Capacity (cu ft)	Temp uniformity	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
			Chamber	Overall		Cat no.	Price	Cat no.	Price
Ovens									
0.7	$\pm 2.5^\circ\text{C}$ at 150°C	3	8.7" x 13" x 10.9"	17" x 19 1/2" x 20.3"	55 (25)	KH-05012-11		KH-05012-12	
1.9	$\pm 3.2^\circ\text{C}$ at 150°C	5	15 3/4" x 15 3/4" x 13"	25" x 24 9/16" x 22 5/8"	93 (42)	KH-05012-13		KH-05012-14	
Ovens with RS-422 interface									
1.9	$\pm 3.2^\circ\text{C}$ at 150°C	5	15 3/4" x 15 3/4" x 13"	25" x 24 9/16" x 22 5/8"	93 (42)	KH-05012-16		KH-05012-17	
4.1	$\pm 2.5^\circ\text{C}$ at 150°C	6	23 3/4" x 18 1/8" x 15 1/16"	32 3/4" x 27 5/8" x 25 3/8"	126 (57)	KH-05012-18		KH-05012-19	

[KH-05012-37](#) Additional chrome-plated shelf for 0.7-cu ft oven

[KH-05012-38](#) Additional chrome-plated shelf for 1.9-cu ft ovens

[KH-05012-39](#) Additional chrome-plated shelf for 4.1-cu ft ovens



115 VAC models

230 VAC models



05012-16

Ovens

Mechanical Convection

StableTemp Economical Mechanical Convection Ovens

Mechanical convection ovens at affordable prices

- Built to provide years of trouble-free operation—perfect for the budget-conscious lab

The ovens feature double wall construction and 1" silica-based insulation for good heat retention. Temperature is controlled by a bimetallic thermostat; high-temperature cut-off prevents overheating. An LED displays actual temperature while in operation.

What's included: three shelves (one fixed and two adjustable), and a 6-ft, three-wire cord (120 VAC models include a plug). Order additional shelves from below table.



52100-00



Specifications & Ordering Information

Temperature range: 40° to 210°C **Display:** 3-digit LED **Construction:** stainless steel interior and enameled steel exterior
Control type: bimetallic thermostat **Resolution:** 1°C

Capacity (cu ft)	Temperature uniformity	Rise time to 100°C (minutes)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
				Chamber	Overall		Cat. no.	Price	Cat. no.	Price
1.7	±7.0 at 100°C	30	5	16" x 16" x 11½"	18½" x 24¾" x 13¾"	84 (38.2)	KH-52100-00		KH-52100-05	
3.1	±7.0 at 100°C	30	5	18" x 22" x 13½"	20½" x 30¾" x 16"	106 (48.1)	KH-52100-10		KH-52100-15	

KH-52100-50 Additional shelf for 1.7-cu ft models

KH-52100-52 Additional shelf for 3.1-cu ft models

KH-52100-53 Shelf clip, four required for each additional shelf ordered

Conflikt® Detergent Disinfectant

Clean and decontaminate oven surfaces effectively and easily. This prediluted, ready-to-use quaternary ammonium disinfectant cleans hard surfaces that may harbor viruses, bacteria, and fungi. Detergent can be rinsed or wiped away.

EK-86115-40 Conflikt detergent disinfectant, 32-oz spray bottle



GO to

For additional cleaning supplies, see pages 259–262.

StableTemp Microprocessor-Controlled Mechanical Convection Ovens

Proportional-integral-derivative (PID) controller provides precise temperature control

- Battery backup saves your last temperature setting—excellent for labs where testing procedures are repeated

These mechanical convection ovens heat up to a maximum temperature of 275°C to save you valuable time in drying and aging applications. All models have a PID microprocessor controller that is easy to set and monitor making them perfect for a variety of uses in which precise control and good uniformity are important.

Safety features include a built-in backup controller and a circuit breaker. Backup controller automatically takes over the control if the actual temperature reaches 5°C above the set point. The circuit breaker protects the oven from power surges. The alarm indicator lets you know when the overtemperature value has been exceeded and the backup controller is in use.

What's included: shelves and a 6-ft power cord with three-prong plug. The 120 VAC models have a NEMA Type 5-20P plug; the 240 VAC models have a European-style plug.



52301-20



Specifications & Ordering Information

Temperature range: 50 to 275°C **Temperature display:** 3-digit LED **Construction:** stainless steel interior and powder-coated steel exterior
Control type: PID microprocessor **Resolution:** 1°C

Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
KH-52301-50 KH-52301-55	2.5	±3°C at 200°C	80 to 275°C	5	18" x 13½" x 18"	25¾" x 26" x 23½"	120, 60 240, 50/60	11 5.5	120 (54.5)	
KH-52301-20 KH-52301-25	3.75	±3°C at 200°C	80 to 275°C	8	18" x 20" x 18"	26" x 33" x 23½"	120, 60 240, 50/60	15 7.5	127 (57.6)	
KH-52301-30 KH-52301-35	5.0	±3°C at 200°C	80 to 275°C	11	18" x 26½" x 18"	26" x 39" x 23½"	120, 60 240, 50/60	15 7.5	135 (61.3)	

KH-52301-80 Additional shelf

StableTemp Programmable Mechanical Convection Ovens

Program up to 12 ramp and 12 soak periods or use for continuous heating

- Temperatures up to 325°C

Menu options and touchpad entry simplify your work. Select desired temperature for each stage, heat-up and cool-down rates, and the length of time the oven is to remain at each temperature. A lithium battery backup saves parameters when oven is turned off and an automatic restart feature continues the program after a power interruption.

Ovens are safe to operate and maintain. Indicator lights remain on as program is executing—observe at a glance when oven is heating. Display shows set and actual temperature. A 2½" layer of mineral wool insulation maintains a touchable exterior temperature. Safety backup controller limits temperature to a selectable alarm value. A yellow alarm indicator light alerts you to overtemperature conditions. The built-in circuit breaker protects the oven from power surges.

What's included: wire-frame shelf(s); three-wire cord; models 52303-00, -10, and -20 include a U.S. standard plug; models 52303-05, -15, and -25 include a European plug.



52303-00

Specifications & Ordering Information

Temperature range: 50 to 325°C

Temperature display: 3-digit LED

Construction: stainless steel interior, enameled-steel exterior, and chrome-plated steel shelves



2 year warranty

Control type: programmable PID

Resolution: 1°C

Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
KH-52303-00 KH-52303-05	2.5	±2.0°C at 200°C	50	5	18" x 13½" x 18"	25¾" x 26" x 23½"	120, 60 240, 50/60	15 7.5	115 (52.2)	
KH-52303-10 KH-52303-15	3.75	±2.0°C at 200°C	40	8	18" x 20" x 18"	25¾" x 33" x 23½"	240, 50/60 240, 50/60	14 14	130 (59.0)	
KH-52303-20 KH-52303-25	5.0	±2.0°C at 200°C	30	11	18" x 26½" x 18"	25¾" x 39¼" x 23½"	240, 50/60 240, 50/60	14 14	145 (66.0)	

[KH-52301-80](#) Additional shelf**Mechanical Convection Ovens**

Microprocessor controller has push-button digital temperature set with three-digit LED and a 99-hour digital timer with hold function

- Tested according to ASTM E145 guidelines
- Interior light and 99-hour timer for added convenience

Ovens also feature an RTD temperature sensor and a balanced centrifugal blower for uniform air distribution. Sturdy construction provides safety and convenience. The digital high-limit safety temperature controller prevents thermal runaway. The solid chamber floor contains spills and cleans up easily.

What's included: two stainless steel shelves and a 6-ft, three-wire cord with plug (NEMA 5-15P on models 52501-00 and -05; NEMA 5-20P on models 52501-10 and -15; NEMA 6-15P on model 52501-25).

Oven 52501-03 shown with optional thermometer 08012-07



Specifications & Ordering Information

Temperature range: 40 to 250°C

Resolution: 0.1°C



Control type: microprocessor

Construction: stainless steel interior

Temperature display: 3-digit LED

and epoxy powder-coated steel exterior

Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
KH-52501-01 KH-52501-02	2.5	±2.0°C at 100°C	70 to 250°C	6	18½" x 15" x 15½"	24" x 28" x 21½"	115, 50/60 230, 50/60	11.3 5.6	160 (72.6)	
KH-52501-03 KH-52501-04	4.5			12	18½" x 27" x 15½"	24" x 40" x 21½"	115, 50/60 230, 50/60	15.6 7.8	194 (88.0)	
KH-52501-06	5.5			15	18½" x 33" x 15½"	24" x 46" x 21½"	230, 50/60	9.1	205 (93.0)	

[KH-52500-55](#) Shelf kit contains one shelf and two shelf supports[KH-08012-07](#) Optional thermometer, -10 to 260°C

Ovens

Mechanical Convection

Mechanical Convection Ovens

Top-mounted controls keep electronics at eye level and away from spills

- Variable-speed fan lets you control chamber environment

Tailor the internal environment of your oven for use in a variety of applications! These microprocessor-controlled ovens feature a vertical air flow pattern that minimizes disruption of sample material. The variable-speed fan lets you adjust the airflow for better uniformity and more consistent heating of samples. Decrease airflow to reduce the amount of airborne sample material. Separate adjustable overtemperature control protects your samples in case of temperature run-away.

For applications requiring one constant temperature, choose ovens with single set point and 3-digit LCD timer. For applications requiring two heating stages, choose programmable ovens with two ramp/dwell segments.

Oven construction provides safety and versatile use of lab space. Three inches of fiberglass insulation separate and protect your temperature controller from excess heat. Reversible door hinges allow you to open the door from the left or right. Ovens are stackable allowing you to maximize your lab space.

What's included: two wire shelves and a 4-ft power cord with plug.



52000-11

Specifications & Ordering Information

Temperature range: 10° above ambient to 250°C	Temperature display: 4-digit LED	Construction: stainless steel interior and powder-coated steel exterior
Control type: microprocessor	Resolution: 0.1°C	

ISO9001:2000
SUPPLIER CERTIFIED

Capacity (cu ft)	Temperature uniformity	Rise time to 200° (minutes)	Air exchanges (per hour)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	120 VAC, 60 Hz			240 VAC, 50/60 Hz		
					Chamber	Overall		Cat. no.	Amps	Price	Cat. no.	Amps	Price
Single set point ovens with digital timer													
1.9	±1.5°C at 100°C	38	129	14	17" x 14" x 14"	23" x 32" x 19 1/4"	168 (76.2)	KH-52000-11	10.7			KH-52000-16	5.4
2.9		46	112	16	21" x 16" x 16"	27" x 34" x 21 1/4"	200 (90.7)	KH-52000-41	14.0			KH-52000-46	7.0
5.0		45	64	18	26" x 18" x 18"	33" x 36" x 23 1/4"	260 (118)	KH-52000-71	18.4			KH-52000-76	7.0
Programmable ovens with two ramp/dwell segments and digital timer													
1.9	±1.5°C at 100°C	38	129	14	17" x 14" x 14"	23" x 32" x 19 1/4"	272 (124)	KH-52000-21	10.7			KH-52000-26	5.4
2.9		46	112	16	21" x 16" x 16"	27" x 34" x 21 1/4"	210 (95.3)	KH-52000-51	14.0			KH-52000-56	7.0
5.0		45	64	18	26" x 18" x 18"	33" x 36" x 23 1/4"	270 (123)	KH-52000-81	18.4			KH-52000-86	7.0

Microprocessor-Controlled Mechanical Convection Ovens

Multifunctional—ideal for optimal uniformity and time-controlled applications

- Microprocessor controller with LED display and integrated 0 to 99-hr timer
- Powerful air turbine offers fast and uniform drying of large quantities of samples

These forced convection ovens have a specially developed high-performance fan—offering around 20% higher performance than comparable models. Temperature accuracy is 5°C above room temperature to 300°C. Air exchange rate can be adjusted continuously from 0% to 100%.

Inner chamber is constructed of 304 stainless steel and features rounded edges and internally welded seams for easy cleaning. The specially developed two-point door-lock mechanism ensures a secure seal, even at the highest temperatures.

These ovens feature a microprocessor PID controller, digital timer, one ramp function, and a LED temperature/time display. Increased air circulation is available in models 05012-25, -26, -27, and -28 through the use of a powerful yet quiet, digitally adjustable air turbine. These models also feature an RS-422 interface port for APT-COM[®] communication software, to satisfy GLP and GMP documentation requirements.

What's included: two chrome-plated shelves and a 4-ft power cord with plug.



05012-23

Specifications & Ordering Information:

Temperature range: ambient +5°C to 300°C	Control type: DS controller	Resolution: 0.1 deg C
Temperature control accuracy: ±0.3°C	Temperature display: 4 LEDs	Construction: powder-coated stainless steel



Capacity (cu ft)	Temp uniformity	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
			Chamber	Overall		Cat. no.	Price	Cat. no.	Price
Ovens									
0.7	±2.2°C at 150°C	3	8 1/16" x 13" x 10 5/8"	17" x 19 5/8" x 20 1/4"	55 (25)	KH-05012-21		KH-05012-22	
1.9	±2°C at 150°C	5	15 3/4" x 15 3/4" x 13"	25" x 24 5/16" x 22 5/8"	93 (42)	KH-05012-23		KH-05012-24	
Ovens with adjustable air turbine and RS-422 interface									
1.9	±2°C at 150°C	5	15 3/4" x 15 3/4" x 13"	25" x 24 5/16" x 22 5/8"	93 (42)	KH-05012-25		KH-05012-26	
4.1	±1.8°C at 150°C	6	23 5/8" x 18 1/8" x 15 13/16"	32 3/4" x 27 5/8" x 25 5/8"	126 (57)	KH-05012-27		KH-05012-28	

[KH-05012-37](#) Additional chrome-plated shelf for 0.7-cu ft oven

[KH-05012-38](#) Additional chrome-plated shelf for 1.9-cu ft ovens

[KH-05012-39](#) Additional chrome-plated shelf for 4.1-cu ft ovens

Salvis Thermocenter® Mechanical Convection Ovens

Fully automate your routine drying procedures—
microprocessor-controlled ovens store up to 50 programs with 15 program steps

- Uniformity of $\pm 0.7^{\circ}\text{C}$ ensures consistently even heating
- Rounded corners and a removable door seal for easy cleaning

High-quality insulation and airtight design prevent heat loss—these ovens heat your samples, not your lab. Mechanical convection ovens feature an oversized heat ring and adjustable-speed fan to ensure excellent uniformity.

In addition to cool-touch operation, these ovens have an insulated silicone door seal that prevents the escape of harmful fumes. The heater and blower stop as soon as you open the oven door. Overtemperature shutoff sounds an audible alarm to ensure that your samples will never overheat. Rounded interior corners and removable door seal make cleanup simple.

Microprocessor controller features a digital display with easy-to-operate keypad, menu prompts in five selectable languages, intelligent fan speed control, real-time clock, timer, and RS-232 output.

Ovens with Door-Mounted Components feature extremely compact construction. Perform routine maintenance without moving the oven—door easily detaches by removing only four screws. Stack two ovens to save space—order the exhaust air adapter and stacking adapter under “Accessories” below.

Ovens with Rear-Mounted Components feature a fan outlet designed to ensure excellent air flow. Temperature ramp is fully controlled by heating and fan speed control, eliminating the need for adjustable air flaps.

What's included: the 115 VAC models include a 6-ft cord with U.S. standard plug; 230 VAC models include a 6-ft cord with European plug.



52403-00

ISO 9001:2000
CERTIFIED SUPPLIER

CE 2 year warranty

Specifications & Ordering Information

Temperature range

Ovens with door-mounted components:
20 to 200°C

Ovens with rear-mounted components:
20 to 300°C

Temperature control accuracy: $\pm 0.1^{\circ}\text{C}$

Control type: microprocessor

Temperature display:
alphanumeric LCD

Resolution: 0.1°C

Timer: 1 min to 999 hr 59 min

Construction:
stainless steel interior and
powder-coated steel exterior

Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz			240 VAC, 50/60 Hz		
			Chamber	Overall		Cat. no.	Amps	Price	Cat. no.	Amps	Price
Ovens with door-mounted components											
1.4	$\pm 0.7^{\circ}\text{C}$ at 150°C	25	13 $\frac{3}{8}$ " x 14 $\frac{5}{8}$ " x 15"	18 $\frac{1}{4}$ " x 19 $\frac{1}{4}$ " x 20 $\frac{3}{4}$ "	80 (36.3)	KH-52403-00	9.1		KH-52403-05	4.8	
3.5		47	17 $\frac{3}{4}$ " x 19 $\frac{3}{4}$ " x 20 $\frac{1}{8}$ "	22 $\frac{3}{8}$ " x 24 $\frac{3}{4}$ " x 25 $\frac{3}{4}$ "	122 (55.4)	KH-52403-10	9.1		KH-52403-15	4.8	
Ovens with rear-mounted components											
5.6	$\pm 0.7^{\circ}\text{C}$ at 150°C	33	21" x 22 $\frac{1}{2}$ " x 18 $\frac{3}{4}$ "	30 $\frac{3}{8}$ " x 28 $\frac{3}{8}$ " x 26 $\frac{3}{4}$ "	161 (73.1)	KH-52403-20	11.2		KH-52403-25	6.5	
8.5		25	24 $\frac{1}{8}$ " x 26 $\frac{3}{4}$ " x 20 $\frac{1}{4}$ "	33 $\frac{1}{8}$ " x 32 $\frac{1}{4}$ " x 36 $\frac{1}{4}$ "	190 (86.2)	KH-52403-30	14.3		KH-52403-35	8.7	
14.0		32	28 $\frac{1}{2}$ " x 30 $\frac{3}{4}$ " x 27 $\frac{3}{8}$ "	37 $\frac{1}{8}$ " x 36 $\frac{1}{4}$ " x 35 $\frac{3}{8}$ "	291 (132)	KH-52403-40	14.3		KH-52403-45	8.7	

Accessories

KH-52400-70 Exhaust air adapter for 1.4-cu ft models. Required for proper air ventilation when stacking two ovens using the stacking adapter below

KH-52400-71 Exhaust air adapter for 3.5-cu ft models. Required for proper air ventilation when stacking two ovens using the stacking adapter below

KH-52400-80 Stacking adapter for 1.4- and 3.5-cu ft models. Lets you stack two ovens. Requires an exhaust air adapter (sold above) to maintain proper air ventilation

KH-52400-81 Fresh air filter for 1.4- and 3.5-cu ft models, 300 μm . Connects to oven fan, filters incoming air

Additional Shelves

Cat. no.	Description	Price
KH-52400-60	For 1.4 cu ft ovens	
KH-52400-61	For 3.5 cu ft ovens	
KH-52400-62	For 5.6 cu ft ovens	
KH-52400-63	For 8.5 cu ft ovens	
KH-52400-64	For 14.0 cu ft ovens	

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Go to our “Crucibles” section for a wide selection of crucibles.

Protect your hands

The Hot Hand® silicone rubber mitt protects your hands from hot labware. Gripping surfaces are studded for positive grip; hole tabs on either end are for hanging. Maximum temperature is 500°F (260°C). Fits any glove size.

EK-06910-00 Scienceware®
Hot Hand rubber mitt



Ovens

Mechanical Convection

Memmert® Warm-Wall Mechanical Convection Ovens

304 stainless steel interior and exterior—built to last!

- Eye-level controls makes reading the display easy

High-efficiency, rib-type heating elements on the top, bottom, and sides of these mechanical convection ovens provide excellent heat transfer and temperature uniformity. The air inlet lets you adjust the amount of fresh air entering the oven to optimize performance. Overtemperature protection keeps samples and lab safe.

Basic Ovens have a 4-digit LED that shows actual oven temperature, and 99 hour 59 minute shut off timer.

Programmable Ovens provide faster heating with an excellent control accuracy. Electronic

control ovens feature two 4-digit LEDs (one each for the set point and actual temperature), a built-in 7-day programmable timer, RS-232 interface, and Celsius for Windows® software. Celsius for Windows lets you store thermostating programs, control up to three devices via RS-232, analyze and transfer data, print log documentation in accordance with GLP standards, and more.

What's included: two 304 SS shelves and a 6-ft three-wire power cord and plug (230 VAC models* have a NEMA Type 6-15P plug). The 9.0 and 14.5 cu ft models have double doors.



52200-23

ISO9001:2000
CERTIFIED SUPPLIERCE
52200-22,
-24, -27, and
-28 only

Specifications & Ordering Information

Temperature range: 30 to 250°C

Temperature control accuracy (at 150°C) 0.5°C

Temperature display: 4-digit LED

Resolution: 0.5°C

Construction: 304 SS interior and exterior

Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Air exchange (per hour)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz			230 VAC, 50/60 Hz		
					Chamber	Overall		Cat. no.	Amps	Price	Cat. no.	Amps	Price
Basic ovens													
3.8	±2.3°C at 150°C	39 to 220°C	97	5	21½" x 18½" x 15½"	28½" x 30" x 21¾"	178 (80.8)	KH-52200-21	17.4		KH-52200-22	8.7	
Programmable ovens RS-232 interface and software.													
3.8	±2.3°C at 150°C	29 to 220°C	97	5	21½" x 18½" x 15½"	28½" x 30" x 21¾"	178 (80.8)	KH-52200-23	17.4		KH-52200-24	8.7	
9.0	±1.5°C at 150°C	38 to 220°C	55	7	31½" x 25" x 19½"	37½" x 36¼" x 25½"	286 (130)	KH-52200-26	20.9		KH-52200-27	10.4	
14.5	±1.6°C at 150°C	28 to 220°C	45	9	41" x 31½" x 19½"	46½" x 42½" x 25½"	425 (193)	—	—		KH-52200-28*	17.4	

*Model 52200-95 is three-phase and is supplied without a plug. All other models are single phase.

KH-39101-50 Additional shelf
for 3.8-cu ft models

KH-52200-90 Additional shelf
for 9.0-cu ft models

KH-52200-91 Additional shelf
for 14.5-cu ft models

Industrial Mechanical Convection Ovens

Drawer ovens keep parts separate and allow individual inspection—limit process interruptions

- Maximum temperatures to 176°C—ideal for industrial pre-heating, curing, and drying processes

Drawer oven
52302-10Bench oven
52302-00

These durable, versatile ovens circulate heated air for component manufacturing processes. On-off panel switch controls power to the unit and a red pilot light indicates that the heater is on. High-density rock wool insulation ensures safe and efficient operation.

Bench Oven is widely used for drying small items, preheating plastics, drying powdered metals, and curing potting compounds. Double doors make it easy to load large parts. Two removable, nickel-plated wire shelves are easily adjustable on 2" centers.

Drawer Oven is designed for processing or drying plastic granules, powdered metal parts, and other small items that must be separated. Eight stainless steel (SS) drawers keep parts separate and allow individual inspection without opening conventional doors—reduced heat loss and limited process interruption lowers operating costs. The bottom and sides of drawers have ¾"-dia perforations on 1¼" staggered centers.

What's included: a 6-ft power cord with three-prong plug on 115 VAC models (no plug on 230 VAC models).

Specifications & Ordering Information

Temperature range: ambient to 176°C

Temperature control accuracy: ±5.5°C

Control type: calibrated regulator, manual reset

Temperature display: analog

Construction: 430 SS interior, baked enamel exterior, silicone rubber door gasket, incoloy-sheathed heating elements; 430 SS drawers (models 52302-10, -15)

Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
Bench oven										
KH-52302-00 KH-52302-05	7.0	±5.5°C at 166°C	17 to 166°C	7	28" x 18" x 24"	41" x 23" x 30"	115, 60 230, 50	17.4 8.7	270 (122.5)	
Drawer oven										
KH-52302-10 KH-52302-15	4.8	±13.9°C at 166°C	20 to 166°C	—	Eight drawers, 11¼" x 25" each with 3½" H total clearance	41" x 23" x 30"	115, 60 230, 50	17.4 8.7	285 (129.3)	

Mechanical Convection Ovens

Excellent temperature uniformity—ideal for sensitive samples

- Triple-wall construction and fiberglass-insulated chamber improve energy efficiency and keep cabinet exterior cool to the touch

Adjustable high-limit protection prevents overtemperature condition in the event of a control failure. Digital display simultaneously shows actual and set temperatures in either °C or °F. Ovens feature a side swing door with a positive sealing latch for convenient one-hand operation. Latch and hinges are adjustable.

What's included: two shelves and a 10-ft cord with plug.
Order additional shelves separately below table.



Specifications & Ordering Information

Temperature range: 40 to 260°C

Resolution: 0.1°C/1°C depending on temperature

Temperature control accuracy: ±0.3% of set point

Construction

Control type: single set point programmable (SSP)

Interior: stainless steel

Temperature display: 4-digit LED

Exterior: enameled steel or stainless steel (see table)



52455-00

Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Air exchange (per hour)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Enameled steel exterior		Stainless steel exterior	
					Chamber	Overall	VAC, Hz	Amps		Cat. no.	Price	Cat. no.	Price
3.0	±1% at 100°C	45 to 260°C	18	16	19" x 18" x 15"	29" x 31" x 22"	120, 50/60	13.3	180 (81.7)	KH-52455-00		KH-52455-30	
							208/240, 50/60	6.7		KH-52455-10		KH-52455-40	
							230, 50	7.0		KH-52455-20		KH-52455-50	

Note: Ovens are not suited for use with hazardous vapors. *These models operate reliably when connected to 208 VAC service; however, a 25% reduction in element power will result.

[KH-52450-60](#) Additional shelf, nickel-plated.
For models with enameled steel exterior

[KH-52450-70](#) Additional shelf, stainless steel.
For models with stainless steel exterior

High-Temperature Mechanical Convection Ovens

Operate continuously at maximum temperature without damage to your heating element

- Double-wall construction and a fully insulated chamber maximize energy efficiency and allow the oven to remain cool to the touch

Built for maximum durability, these ovens are designed for your critical applications. Maximum chamber uniformity is achieved through an air intake vent and an adjustable exhaust vent. Independent overtemperature protection disables the heating elements when set point is exceeded. When overtemperature conditions arise, simply push a button to reset the temperature.

Ovens feature a side swing door with a positive sealing door latch for convenient one-hand operation. The heating elements, located in the chamber floor, are completely shielded protecting them from damage caused by sample spills or overheating.

What's included: two shelves and a 6-ft cord with three-prong plug.



Specifications & Ordering Information

Temperature range: 40 to 300°C

Resolution: 0.1°C/1°C depending on temperature

Temperature control accuracy: ±0.3% of set point

Construction: stainless steel interior and

Control type: single set point programmable (SSP)

enameled steel or stainless steel exterior (see table)

Temperature display: 4-digit LED



05069-00

Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Air exchange (per hour)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Enameled steel exterior		Stainless steel exterior	
					Chamber	Overall	VAC, Hz	Amps		Cat. no.	Price	Cat. no.	Price
1.2	±1% at 100°C	115 to 300°C	180	5	13" x 10" x 16"	25" x 32" x 22½"	120, 50/60	8.3	230 (105)	KH-05068-00		KH-05069-00	
1.8			125	7	13" x 15" x 16"	25" x 37" x 22½"	120, 50/60	10.8	230 (105)	KH-05068-10			
3.0			75	7	22" x 15" x 16"	34" x 37" x 22½"	120, 50/60	15.8	230 (105)	KH-05068-20		KH-05069-20	
			208/240, 50/60*	8.3	230 (105)	KH-05068-25		KH-05069-25					
4.9	46	12	22" x 24" x 16"	34" x 46½" x 22½"	120, 50/60	8.3	230 (105)	KH-05068-30		KH-05069-30			
					208/240, 50/60*	8.3	230 (105)	KH-05068-35					

Note: Ovens are not suited for use with hazardous vapors. *These models operate reliably when connected to 208 VAC service; however, a 25% reduction in element power will result.

Ovens

Mechanical Convection

High-Temperature Industrial Mechanical Convection Ovens

Reach temperatures up to 538°C—our highest temperature mechanical convection ovens

- Double doors allow easy loading of baskets and large parts

These ovens are constructed for high-temperature use. Incoloy® sheathed heating elements and the stainless steel interior are highly resistant to corrosion and oxidation. Industrial rock wool insulation effectively retains heat for improved temperature uniformity. Resilient door gasket contains stainless steel spring inset.

Thermocouple-actuated analog temperature controller provides ±0.5% accuracy. Overtemperature protection turns oven off if unit exceeds maximum temperature; simply press button to reset oven. Red pilot light in front of unit indicates on/off status of heating element.

What's included: models 52300-12 and -14 include two adjustable nickel-plated wire shelves, four inches of insulation; models 52300-18 and -22 include two adjustable stainless steel wire shelves and five inches of insulation. The 115 VAC models include a 6-ft power cord with three-prong plug (no plug on 230 VAC models). Order optional stand separately below table.



52300-22

Specifications & Ordering Information

Temperature range Models 52300-12 and -14: 30 to 427°C Models 52300-18 and -22: 38 to 538°C	Control type: thermocouple actuated Temperature display: analog	Construction: stainless steel interior and baked enamel exterior
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Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (min)	Air exchange (per hour)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
						Chamber	Overall	VAC, Hz	Amps		
KH-52300-12 KH-52300-14	4.3	±8.3°C at 400°C	55 to 400°C	140	6	26" x 13" x 22"	39½" x 30" x 34"	115, 60 230, 50	20.9 10.4	310 (130)	
KH-52300-18 KH-52300-22	4.3	±11.1°C at 510°C	65 to 510°C	140	6	26" x 13" x 22"	41½" x 31" x 35"	115, 60 230, 50	13.0 6.5	335 (152)	

KH-52300-50 Optional metal stand raises oven to a 31" working height

Programmable Mechanical Convection Ovens

Microprocessor program controller allows easy programming of variable temperature and time functions

- 5°C above ambient to 300°C
- Microprocessor controller with LED display and integrated 0 to 99-hr timer
- Patented APT.Line® preheating chamber ensures accurate, reproducible results

These programmable ovens offer electronically controlled APT.line® preheating chamber technology with forced air convection. Microprocessor with two programs of ten sections each, alternatively 1 program with 20 sections. The time interval of single program sections can be adjusted up to a maximum of 99 hours and 59 minutes, applicable to all program sections. Program controller functions: delayed ON, delayed OFF, temperature-dependent delayed OFF.

Additional oven features include adjustable ramp functions via program editor, adjustable fan speed (0 to 100%), elapsed time indicator, and adjustable safety device, Class 2 (DIN 12880), with visual alarm. Ventilation may be adjusted by means of a 50-mm diameter rear exhaust duct with ventilation flap and front side ventilation. RS-422 interface and APT-COM® communications software allow output to computer or printer. Ovens are stackable to conserve valuable lab space.

What's included: two chrome-plated shelves and a 4-ft power cord with plug.

New



05012-29

UL
115 VAC models

CE
230 VAC models

Specifications & Ordering Information

Temperature range: ambient +5°C to 300°C	Control type: microprocessor controller	Resolution: ±0.1°C
Temperature control accuracy: ±0.3°C	Temperature display: 5-digit LEDs, 1 LCD	Construction: powder-coated stainless steel

Capacity (cu ft)	Temp uniformity (@ 150°C)	Shelf positions	Dimensions		Shpg wt lb (kg)	115 VAC, 60 Hz		230 VAC, 50/60 Hz	
			Chamber	Overall		Cat. no.	Price	Cat. no.	Price
1.9	±2°C	5	15¾" x 15¾" x 13"	25" x 24½" x 22½"	102 (46)	KH-05012-29		KH-05012-31	
4.1	±1.8°C	6	23¾" x 18¾" x 15½"	32¾" x 27¾" x 25¾"	137 (62)	KH-05012-32		KH-05012-33	
8.6	±2°C	7	31½" x 23¾" x 19¾"	40¾" x 32¾" x 29½"	216 (98)	—	—	KH-05012-34	

KH-05012-38 Additional shelf for 1.9-cu ft oven

KH-05012-39 Additional shelf for 4.1-cu ft oven

ISO Class 5 Cleanroom Ovens

HEPA filter for maximum contamination protection

- Meets or exceeds ISO Class 5* air standards
- Rapid temperature rise and recovery times

User-friendly PID microprocessor temperature control allows you to repeatedly set operating temperature in the range of ambient +5°C to 250°C. Single program controller comes standard with two ramps and two dwells; ramp is adjustable from as low as 0.01°C per minute, dwell from 0 to 9999 minutes. The adjustable high-limit hydraulic safety thermostat with indicator lamp maintains temperature a few degrees above set point in the event of primary control failure and prevents overtemperature conditions. HEPA filter model is available for maximum contamination protection. The 3"-thick silica-based insulation between oven chamber and exterior walls helps minimize heat radiation to surrounding environment. The drawer-style control panel is protected from spills and easily pulls out for accessibility. Interior chamber is constructed of corrosion-resistant stainless steel for easy cleaning. Exterior is constructed of durable cold-rolled steel with a white powder-coat finish.

New



05012-53

Specifications & Ordering Information



Temperature range: ambient ±5°C to 250°C

Control type: microprocessor PID

Construction: stainless steel chamber, steel exterior

Maximum temperature: 250°C

Temperature display: LED

Catalog number	Capacity (cu ft)	Rise time (ambient to 200°C)	Temperature uniformity (@ 100°C)	Dimensions (W x H x D)		Power			Shpg wt lb (kg)	Price
				Chamber	Overall	VAC	Hz	Amps		
Oven without HEPA filter										
KH-05012-51	2.6	22 min	±1.0°C	13" x 19½" x 18"	26⅝" x 35" x 24¼"	120	50/60	15.8	205 (93)	
KH-05012-52	2.6	18 min				240		7.9		
Oven with HEPA filter										
KH-05012-53	2.8	11 min	±0.2°C	14" x 19½" x 18"	26⅝" x 35" x 24¼"	240	50/60	12.8	235 (107)	

*Formerly Class 100

[KH-05012-54](#) Replacement HEPA filter for 05012-53

[KH-05012-56](#) Additional chrome-plated shelf for model 05012-53

[KH-05012-55](#) Additional chrome-plated shelf for models 05012-51 and -52

[KH-05012-57](#) Exhaust chimney duct for 05012-53

Safety Ovens

Extended temperature range up to 350°C and extremely fast heating times

- Ambient + 5°C to 350°C and high air-exchange rates of 400 L/min
- Inert gas connection with Cross Flow technology
- Safety device (TWB) class 2 (DIN 12880) with acoustic and visual alarms
- Spring-mounted safety glass panel with splinter protection

Symmetrical air conduction throughout the inner chamber and the defined air-flow rates guarantee reproducible data and the exact definition of nonvolatile compounds (NFA according to ISO 3251). The silicone, dust-free inner chamber reliably prevents undesirable changes in paint surfaces. The large-surface filter cartridge attains a considerably higher filtration efficiency than filter fleece and reliably collects suspended particles from the fresh air. It can be replaced easily as a whole unit, with no filter residue penetrating the inner chamber. These safety drying ovens fulfill all the safety regulations for handling substances containing solvents, in accordance with EN 1539 (formerly VBG 24).

Model number 05012-35 reaches temperatures up to 300°C; model 05012-36 reaches temperatures up to 350°C. Both units operate at ambient ±5°C. These ovens are stackable to conserve valuable lab space. Replaceable fresh air filter improves particle-free, standard-compliant drying processes. Timer settings from 0 to 99.99 hours with LED display. The RS-232 interface enables GLP/GMP and FDA guide 21 CFR Part 11 compliance with APT-COM® DataControlSystem software, and adjustable print intervals.

What's included: two chrome-plated shelves and a power cord.

Specifications & Ordering Information



Temperature range: ambient +5°C to 300°C

Control type: model 05012-35: MS controller and integrated 0 to 99-hr timer; model 05012-36: MCS controller with 25 storable programs

Temperature display: model 05012-35: 4 LED displays; model 05012-36: LCD screen

Temperature control accuracy: model 05012-35: ±0.3°C; model 05012-36: ±0.5°C

Resolution: ±0.1°C

Construction: powder-coated stainless steel

Catalog number	Capacity (cu ft)	Temp uniformity	Shelf positions	Dimensions (W x H x D)		Power			Shpg wt lb (kg)	Price
				Chamber	Overall	VAC	Hz	Amps		
KH-05012-35	4.1	2.5 at 150°C	5	23⅝" x 17" x 17"	32⅝" x 31½" x 27"	230	50/60	102 (46)		
KH-05012-36			6			400	50/60	137 (62)		

[KH-05012-39](#) Additional shelf for 4.1-cu ft oven

New



05012-35

Ovens

Vacuum Ovens

StableTemp Vacuum Ovens

Operate at atmospheric pressure or at a vacuum up to 30" Hg

- Polycarbonate shield protects door glass from shattering

Ideal for carefully controlled processes such as desiccating, vacuum embedding, plating, and semiconductor processing. Control vacuum levels between 0 and 30" Hg. Silicone door gasket and positive door latch assure a tight seal at all vacuum levels. A three-way valve allows easy evacuation, purging, and venting. The front-mounted stainless steel vacuum line fittings accept 1/4" ID tubing.

Radiant warm-wall heat provides excellent temperature uniformity of $\pm 4^{\circ}\text{C}$ at 150°C . Use the dial thermometer to monitor the chamber temperature. Insert other types of probes such as gas and humidity into the two rear 1/4" NPT(F) ports to monitor the internal atmosphere. Built-in overtemperature thermostat protects your samples from overheating. Aluminum shelves provide minimal heat retention, reducing hot spots.

What's included: a dial thermometer, one-piece shelf assembly with two aluminum shelves, and a 6-ft three-wire power cord (120 VAC models include plug).



05053-10

CE 2 year warranty

Specifications & Ordering Information

Temperature range: 5°C above ambient to 200°C

Vacuum range: 0 to 30" Hg

Construction: stainless steel chamber and heavy-gauge steel exterior

Control type: hydraulic thermostat

Vacuum display: dial gauge

Temperature display: dial gauge

Catalog number	Capacity (cu ft)	Temperature uniformity	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
				Chamber	Overall	VAC	Amps		
KH-05053-10 KH-05053-12	0.7	$\pm 5^{\circ}\text{C}$ at 100°C	2 (fixed)	10" x 10" x 12"	20" x 16 1/4" x 16"	120 240	5.0 2.5	130 (59.0)	
KH-05053-20 KH-05053-22	2.3	$\pm 5^{\circ}\text{C}$ at 100°C	2 (fixed)	14" x 14" x 20"	25" x 22" x 25"	120 240	13.3 6.7	310 (140)	

KH-06413-20 Tygon® vacuum tubing, 1/4" (6.4 mm) ID. Pack of 10 ft

Salvis® Vacucenter® Ovens

Microprocessor-controlled temperature regulation and jacket heating system provide excellent precision

- Spring-loaded metal safety catch opens oven door slightly to prevent overpressure conditions
- Double-paned glass door and high-quality insulation keep heat in and the surface cool

Salvis vacuum ovens are built for safety. Overtemperature control shuts off heating when temperature reaches 10°C above set point or when oven door is open. In addition to cool-touch operation, these ovens have an insulated silicone door seal that prevents the escape of harmful fumes. Full-view glass window lets you safely view samples during operation. Rounded interior corners make cleanup simple.

Microprocessor controller features an alphanumeric digital display with easy-to-operate keypad, menu prompts in five selectable languages, ability to store 50 programs with 15 steps, real-time clock, timer, and RS-232 output.

The 4-mm hose barb purge port connects to a needle valve that gently regulates gas or air into the oven without disturbing samples. An electromagnetic valve operates the vacuum connection (6-mm hose barb) at the back of the oven. In case of power failure, this valve closes automatically to protect your samples.

What's included: one shelf and a 5-ft power cord (115 VAC models have a standard U.S. plug; 230 VAC models have a European plug).



52402-00

ISO9001:2000
CERTIFIED SUPPLIER

CE 2 year warranty

Specifications & Ordering Information

Temperature range: 10°C above ambient to 200°C

Vacuum range

Models 52402-00 and -05: 1 bar to 0.48 mbar

Models 52402-10 and -15: 1 bar to 0.60 mbar

Timer:

0 to 999 hours 99 minutes

Construction: 316 stainless steel interior and powder-coated steel exterior

Control type: microprocessor PID

Temperature display: alphanumeric LCD

Vacuum display: dial gauge

Resolution: 0.1°C

Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Shpg wt lb (kg)	115 VAC, 60 Hz			230 VAC, 50/60 Hz		
				Chamber	Overall		Cat. no.	Amps	Price	Cat. no.	Amps	Price
0.7	$\pm 1.7^{\circ}\text{C}$ at 100°C	50 to 200°C	3	9 7/8" x 9 7/8" x 12 5/8"	21 1/2" x 14 5/8" x 16 3/4"	81 (36.8)	KH-52402-00	7.0		KH-52402-05	3.5	
1.8	$\pm 1.7^{\circ}\text{C}$ at 100°C	65 to 200°C	5	13 3/4" x 13 3/4" x 16 1/2"	25 5/8" x 18 1/2" x 20 1/16"	135 (61.3)	KH-52402-10	11.8		KH-52402-15	5.9	

KH-79300-20 Dual-mode vacuum pump; 1.3 cfm free-air capacity; 115 VAC, 50/60 Hz. Cord and plug included

KH-79300-25 Dual-mode vacuum pump; 1.3 cfm free air capacity; 230 VAC, 50/60 Hz. Cord and plug included

KH-52402-50 Additional shelf for 0.7 cu ft models

KH-52402-52 Additional shelf for 1.8 cu ft models

KH-06413-20 Tygon® vacuum tubing, 1/4" ID

StableTemp High-Temperature Vacuum Ovens

Reach temperatures up to 280°C

- Thick insulation ensures temperature uniformity and minimizes exterior surface temperatures



05017-00

05017-10

Simple, safe operation is the hallmark of these high-temperature vacuum ovens. Full-view window permits continuous monitoring.

Electronic-Controlled Oven (models 05017-00 and -05) with wrap-around heating elements ensures even heating. Electronic control back-up prevents overheating. Front panel controls include primary temperature control failure indicators, purge gas and vacuum control valves, vacuum gauge, and temperature control. Gas and vacuum system connectors on the rear panel let you replace air with inert gas. Glance through the window to view temperature on the dial thermometer inside the chamber. Easy-care construction features an enameled-steel cabinet, stainless steel chamber, and a silicone gasket.

Microprocessor-Controlled Oven (models 05017-10 and -15) with self-diagnostic indicators, back-up thermostat, and dual controls prevent damage to samples. Program up to eight on/off cycles per day. Front panel indicators alert you to open thermocouple, shorted triac, open heater, or overtemperature conditions. Easy-care construction features steel cabinet with baked epoxy enamel finish, stainless steel interior, chrome-plated steel shelves, and a silicone gasket.

What's included: two shelves and a power cord with plug (U.S. standard on 120 VAC models; European on 230/240 VAC models).

Specifications & Ordering Information

Temperature range: 10°C above ambient to 280°C

Temperature display
Models 05017-00, -05: dial
Models 05017-10, -15: LED

Vacuum range: 0 to 30"Hg
Vacuum and purge connections:
fit 1/4" ID tubing

Vacuum display
Models 05017-00, -05: dial
Models 05017-10, -15: LED



Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time to 200°C (minutes)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
KH-05017-00	0.67	±1°C at 100°C	<35	2	10" x 10" x 11 1/2"	18" x 22 3/4" x 17 3/4"	120, 50/60	8.5	90 (40.9)	
KH-05017-05							240, 50/60	4.2		
KH-05017-10	1.50	±5°C at 100°C	<30	8	12" x 12" x 18"	26" x 22" x 23"	120, 50/60	14.7	205 (93.0)	
KH-05017-15							230, 50/60	7.4		

KH-06413-20 Tygon® vacuum tubing, 1/4" ID. Pack of 10 ft /pk

Memmert® Thermoshelf-Heated Vacuum Ovens

Unique thermoshelves feature heating elements on the underside resulting in more efficient heat transfer to samples

- Thermoshelves provide rapid heat-up time and high-precision control compared to standard vacuum ovens
- Individually control and monitor each thermoshelf temperature
- Control temperature and vacuum via RS-232 interface and included software

These thermoshelf-heated vacuum ovens reduce heat-up time by more than 70% compared to standard radiant-wall heated vacuum ovens. Localized heating and temperature sensing ensures that set temperatures are reached with unsurpassed speed and accuracy. Ovens feature multi-level control allowing for each thermoshelf to be precisely controlled and monitored via a 100 Ω Pt RTD. Save energy by using only the thermoshelves that are needed. Thermoshelves also feature individual overtemperature protection—in the event of an overtemperature situation, power shuts off only to the affected thermoshelf.

Vacuum control is fully automatic—connections for vacuum, air, and inert gas are digitally controlled through solenoid valves. Program vacuum cycles to accelerate extraction and drying processes. Eye level control panel ensures optimal identification of setpoints and actual readings.

What's included: thermoshelves, Celsius 2000 control software, and a 7-ft power cord with U.S. standard plug.



52201-10

Specifications & Ordering Information

Temperature range: 20°C above ambient to 200°C)

Resolution: 0.5°C

Timer: up to 999 hrs

Control type: microprocessor PID

Vacuum range: 0.3 to 32" Hg

Construction: polished

Temperature display: 4-digit LED

Vacuum display: 5-digit LED

316 SS interior and 304 SS exterior



Catalog number	Capacity (cu ft)	Temperature uniformity	Rise time (minutes)	Shelf positions	Dimensions (W x H x D)		Power		Shpg wt lb (kg)	Price
					Chamber	Overall	VAC, Hz	Amps		
KH-52201-00	1.0	±2.0°C at 100°C	15 to 200°C	3	15" x 12" x 9 1/16"	21 5/8" x 23 5/8" x 15 1/16"	230, 50/60	5.2	121 (55.0)	
KH-52201-10	1.7		22 to 200°C	4	15" x 15" x 13"	21 5/8" x 26 1/16" x 18 3/16"		8.7	165 (75.0)	
KH-52201-20	3.5		29 to 200°C	4	21 3/8" x 18 1/16" x 15 1/16"	28" x 30" x 21 5/8"		10.5	275 (125)	