

**BULLETIN
CA-400**

Horizontal Air Flow Cabinet Ovens

These units, backed by years of experience, quality construction and precise engineering, provide exceptional temperature uniformity. Horizontal air flow passes heated air across each shelf level. Six sizes from 4.6 to 72.3 cubic feet. For closely controlled production work at temperatures up to 850°F.

STANDARD FEATURES

- **UL LISTED CONTROL PANEL**
- **Standard Cabinet Ovens from Grieve meet the requirements of National Fire Protection Association Standard 86, Industrial Risk Insurers, Factory Mutual and OSHA standards. For some applications, such as those involving flammable solvents or hazardous locations, the above organizations require additional safety devices.**
- **Controls**
 - Digital, microprocessor based, thermocouple actuated, indicating temperature controller.
 - Modulating burner on gas ovens.
 - Motor control push buttons and on-off heat switch
 - LED pilot lights
- **Safety Equipment — Electric Oven**
 - Adjustable, thermocouple actuated, manual reset excess temperature interlock
 - Separate heating element control contactors
 - Recirculating blower air flow safety switch
- **Safety Equipment — Gas Oven**
 - Adjustable, thermocouple actuated, manual reset excess temperature interlock
 - Electronic flame safeguard protection
 - 325 CFM powered forced exhauster for combustion venting
 - Exhauster air flow safety switch
 - Recirculating blower air flow safety switch
 - Purge timer
 - High gas pressure switch
 - Low gas pressure switch
 - Two pilot safety shutoff valves with leak test stations
 - Two main safety shutoff valves with leak test stations
 - Valve position indicator on main safety shutoff valves
- **Construction**
 - Adjustable opposed louvers on full coverage supply and return duct work
 - 304 stainless steel interior
 - Aluminized steel exterior with enamel finish
 - Brushed stainless steel control panel face
 - Built-in baffles prevent radiant heat
 - Exceptionally heavy duty doors and door frame with explosion venting latches
 - High temperature door gasket with stainless steel spring insert
 - Two (2) nickel plated wire shelves
 - Channel shelf supports prevent shelves tipping
 - Adjustable fresh air intake and exhaust dampers
 - High pressure recirculating blower
 - All welded construction
 - 10 lbs/cf density industrial rockwool insulation
 - 1 year limited warranty
- **Every oven fully assembled and individually factory tested**

Specifications Subject to Change Without Notice
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HEAVY DUTY ELECTRIC AND GAS HORIZONTAL AIR FLOW CABINET OVENS



MODEL HA-700 GAS
WITH STANDARD MODULATING BURNER SYSTEM



MODEL HC-850 ELECTRIC
WITH OPTIONAL PROGRAMMING TEMPERATURE
CONTROLLER AND RECORDING THERMOMETER

SPECIFICATIONS

CAUTION: OVENS PROCESSING COMBUSTIBLE MATERIAL ARE REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 86 TO HAVE A FIRE SUPPRESSION SYSTEM. IF FLAMMABLE SOLVENTS OR VAPORS ARE PRESENT IN AN OVEN, OSHA REQUIRES CONFORMANCE WITH NFPA 86 WHICH DEFINES OVENS FOR THESE APPLICATIONS AS CLASS A OVENS. A POWERED FORCED EXHAUSTER AND OTHER NON-STANDARD SAFETY EQUIPMENT MUST BE ADDED. SEE BULLETIN TC-940 AND CONSULT FACTORY.

Model	Work Space		Outside Dimensions* (WxDxH)	Max Temp	Blower		Insulation	Doors	Heat Input		Operating Characteristics†				Approx Shipping Weight
	Dimensions (WxDxH)	Volume Cu Ft			CFM	HP			KW	BTU/HR	Control Accuracy	Oven Uniformity	Rise Time		
													Electric	Gas	
HA-550	20" x 20" x 20"	4.6	40" x 36" x 58"	550°F	400	1/3	6"	Single	6	50,000	±0.3%	±4°F	20 min	12 min	805 lbs
HA-700	20" x 20" x 20"	4.6	44" x 40" x 62"	700°F	400	1/3	8"	Single	8	50,000	±0.3%	±5°F	22 min	15 min	970 lbs
HA-850	20" x 20" x 20"	4.6	44" x 40" x 62"	850°F	600	1/2	8"	Single	10	75,000	±0.3%	±7°F	40 min	25 min	1030 lbs
HX-550	38" x 20" x 26"	11.4	58" x 36" x 64"	550°F	600	1/2	6"	Double	8	50,000	±0.3%	±4°F	37 min	24 min	1375 lbs
HX-700	38" x 20" x 26"	11.4	62" x 40" x 68"	700°F	600	1/2	8"	Double	10	75,000	±0.3%	±5°F	33 min	21 min	1505 lbs
HX-850	38" x 20" x 26"	11.4	62" x 40" x 68"	850°F	600	1/2	8"	Double	15	125,000	±0.3%	±7°F	45 min	27 min	1555 lbs
HB-550	38" x 26" x 38"	21.7	58" x 42" x 76"	550°F	600	1/2	6"	Double	10	75,000	±0.3%	±4°F	38 min	22 min	1590 lbs
HB-700	38" x 26" x 38"	21.7	62" x 46" x 80"	700°F	600	1/2	8"	Double	15	125,000	±0.3%	±5°F	40 min	24 min	1900 lbs
HB-850	38" x 26" x 38"	21.7	62" x 46" x 80"	850°F	800	3/4	8"	Double	20	150,000	±0.3%	±7°F	45 min	30 min	1950 lbs
HZ-550	38" x 26" x 50"	28.6	58" x 42" x 88"	550°F	800	3/4	6"	Double	15	100,000	±0.3%	±4°F	40 min	24 min	1975 lbs
HZ-700	38" x 26" x 50"	28.6	62" x 46" x 92"	700°F	800	3/4	8"	Double	20	150,000	±0.3%	±5°F	42 min	27 min	2305 lbs
HZ-850	38" x 26" x 50"	28.6	62" x 46" x 92"	850°F	1000	1	8"	Double	30	175,000	±0.3%	±7°F	44 min	36 min	2455 lbs
HY-550	38" x 38" x 38"	31.8	58" x 54" x 76"	550°F	800	3/4	6"	Double	15	100,000	±0.3%	±4°F	42 min	25 min	2180 lbs
HY-700	38" x 38" x 38"	31.8	62" x 58" x 80"	700°F	800	3/4	8"	Double	20	150,000	±0.3%	±5°F	44 min	29 min	2540 lbs
HY-850	38" x 38" x 38"	31.8	62" x 58" x 80"	850°F	1000	1	8"	Double	30	175,000	±0.3%	±7°F	46 min	38 min	2710 lbs
HC-550	50" x 50" x 50"	72.3	74" x 66" x 90"	550°F	2450	1 1/2	6"	Double	30	150,000	±0.3%	±4°F	25 min	24 min	3485 lbs
HC-700	50" x 50" x 50"	72.3	76" x 68" x 92"	700°F	2450	1 1/2	8"	Double	40	200,000	±0.3%	±5°F	30 min	29 min	3905 lbs
HC-850	50" x 50" x 50"	72.3	78" x 70" x 94"	850°F	3300	2	8"	Double	60	350,000	±0.3%	±7°F	30 min	25 min	4230 lbs

*All Models—Control panel overhang 9" right side. Blower motor overhang 10" right side, except HB-850, HZ & HY Series 14" and HC Series 19".
Gas Models—Burner overhang 15" left side.

†Accuracy as percent of controller span. Uniformity at 50°F below maximum temperature. Rise Time in minutes to 50°F below maximum temperature. Tests run with empty oven and minimum exhaust. Performance will vary with load and application. See Bulletin TC-920 for additional details.

STANDARD EQUIPMENT

• All Models

- 208 volts, 3-phase, 60 Hz
- 230 volts, 3-phase, 60 Hz
- 460 volts, 3-phase, 60 Hz
- Other electrical characteristics available

Two (2) reinforced 200 lbs uniformly distributed load capacity, nickel plated wire shelves; shelf support channels on 3" centers (6" on HC Series).

304 stainless steel interior with carbon steel blower and plated hardware. Trilite Green enamel painted aluminized steel exterior.

These electric or gas models come in six sizes. They feature full horizontal air flow for shelf processing at temperatures to 850°F. Commonly used where work is shelf loaded and least restriction to free air passage is in the horizontal direction.

- **HA Series** - 4.6 cubic feet, holds 6 shelves
- **HX Series** - 11.4 cubic feet, holds 8 shelves
- **HB Series** - 21.7 cubic feet, holds 12 shelves
- **HZ Series** - 28.6 cubic feet, holds 16 shelves
- **HY Series** - 31.8 cubic feet, holds 12 shelves
- **HC Series** - 72.3 cubic feet, holds 8 shelves

• Electric Models

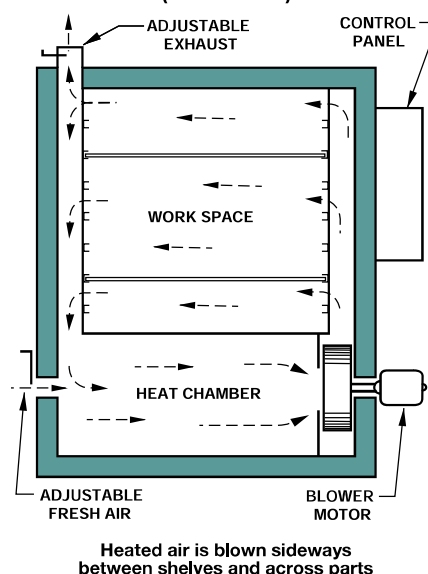
Each features completely wired, side access UL listed control panel enclosing terminals for incoming power, temperature controllers, push buttons and pilot lights. Motor starter and heating element contactors electrically interlocked to shut off heaters if power to blower is interrupted and to permit operation of blower without heat for cooling. Incoloy sheathed tubular heating elements. Exhaust outlet 4" diameter.

• Gas Models

- 1,000 BTU natural gas at 6" water column pressure, 1" NPT inlet
- Other gas characteristics available

Control panel as detailed above and safety devices as listed on the front of this bulletin. Automatic pre-ignition purge period and push button electric ignition contributes to ease of operation. Modulating gas burner is protected with electronic flame safety relay.

Circulation Diagrams (Front View)



ADDITIONAL EQUIPMENT AVAILABLE*

- **Additional Shelves**, 200 lbs distributed load per shelf, 800 lbs maximum oven load, specify oven model when ordering.
- **Programmable Temperature Controller**, microprocessor based, digital indicating, thermocouple actuated, in lieu of standard controllerPTC3
- **Recording Thermometer**, thermocouple actuated, 24-hour, 10" diameter circular chart used in conjunction with standard controllerRT
- **Digital Timing Temperature Controller**, microprocessor based, digital indicating, incorporates 99 hour 59 minute timer, starts timing when temperature reaches set point and shuts down oven at end of set timeDTS3

- **Digital Shut Down Timer**, with continuous "hold" featureSDT
- **Digital Batch Timer**, for uniformly timing batch operations. Continuous alarm with door interlock; alarms at end of preset time period until door is opened or timer resetBT
- **304 Stainless Steel Components**, including blower wheel, hardware and two stainless steel expanded metal shelves, specify oven model when ordering.
- **Automatic Door Switch**, turns off blower and heat when door is opened. Restores blower and heat on electric models, blower only on gas models, when door is closedADS

- **Roof Mounted Powered Forced Exhausters** with exhauster air flow safety switch†

Capacity	HP	Outlet Diameter	Height
80 CFM‡	1/8	4"	16"
130 CFM	1/3	4"	20"
325 CFM	1/3	6"	23"
650 CFM	1/2	6"	23"

†Gas ovens include 325 CFM exhauster. Electric ovens may require additional heat input. ‡550°F Models only



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*See Bulletin TC-960 for modifications and other optional equipment.