

Inert Atmosphere Ovens

FRONT-TO-BACK HORIZONTAL AIR FLOW INERT ATMOSPHERE OVENS

Inert atmosphere ovens for operation at up to 750°F. Protect parts from oxidation using any non-flammable gas such as Nitrogen, Argon or Carbon Dioxide. Front-to-back horizontal air flow completely surrounds work on shelves or large parts placed directly on the optional reinforced work space bottom. Includes cooling jacket which can be equipped with optional cooling blower and automatic dampers. Installation of optional atmosphere purge solenoid, cooling blower and programming temperature controller provides completely automatic sequencing.

STANDARD FEATURES

- **UL LISTED CONTROL PANEL**
- Standard Inert Atmosphere 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 hazardous locations, the above organizations require additional safety devices.
- **Controls**
 - Digital, microprocessor based, thermocouple actuated, indicating temperature controller
 - Motor control push buttons
 - On-off heat switch
 - LED pilot lights
- **Safety Equipment**
 - Adjustable, thermocouple actuated, manual reset excess temperature controller
 - Separate heating element control contactors
 - Recirculating blower air flow safety switch
- **Construction**
 - All interior seams welded gas-tight
 - All wall penetrations welded at inside and fitted with compression fitting at outside of oven
 - Inner oven walls extended through oven throat area to seal directly against silicone rubber door seal
 - 2-point cam action positive latching door hardware
 - Adjustable offset door hinges to guarantee tight closure of door seal
 - Exterior blower shaft seal
 - Inert atmosphere inlet with pressure regulator to maintain positive pressure within oven
 - 0-200 CFH atmosphere flow meter
 - Pressure gauge to indicate interior oven pressure
 - Inert atmosphere outlet with pressure relief
 - Air jacket on inner oven for cooling
 - Front-to-back horizontal air flow
 - 304 stainless steel interior
 - Aluminized steel exterior with enamel finish
 - Brushed stainless steel control panel face
 - 10 lbs/cf density industrial rockwool insulation
 - Built-in baffles prevent radiant heat
 - Two (2) nickel plated wire shelves
 - Channel shelf supports prevent shelves tipping
 - 1 year limited warranty
- **Every oven fully assembled and individually factory tested**

Specifications Subject to Change Without Notice
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MODEL ID-750
WITH OPTIONAL 24" INTEGRAL OVEN LEGS



SPECIFICATIONS

NOT FOR USE WITH FLAMMABLE SOLVENTS, VAPORS OR GASES.

Model	Work Space		Outside Dimensions* (WxDxH)	Max Temp	Blower		Insulation	Doors	KW	Operating Characteristics†			Approx Shipping Weight
	Dimensions (WxDxH)	Volume Cu Ft			CFM	HP				Control Accuracy	Oven Uniformity	Rise Time	
IA-550	24" x 24" x 24"	8	42" x 52" x 38 1/2"	550°F	400	1/3	6"	Single	9	±0.3%	±5°F	23 min	1075 lbs
IA-750	24" x 24" x 24"	8	46" x 56" x 42 1/2"	750°F	400	1/3	8"	Single	12	±0.3%	±8°F	35 min	1250 lbs
IB-550	24" x 36" x 24"	12	42" x 64" x 38 1/2"	550°F	400	1/3	6"	Single	9	±0.3%	±5°F	30 min	1315 lbs
IB-750	24" x 36" x 24"	12	46" x 68" x 42 1/2"	750°F	400	1/3	8"	Single	12	±0.3%	±8°F	57 min	1510 lbs
IC-550	36" x 36" x 36"	27	54" x 62" x 50 1/2"	550°F	600	1/2	6"	Single	12	±0.3%	±5°F	39 min	1700 lbs
IC-750	36" x 36" x 36"	27	58" x 66" x 54 1/2"	750°F	600	1/2	8"	Single	18	±0.3%	±8°F	55 min	2060 lbs
ID-550	36" x 48" x 36"	36	54" x 74" x 50 1/2"	550°F	600	1/2	6"	Single	12	±0.3%	±5°F	52 min	2180 lbs
ID-750	36" x 48" x 36"	36	58" x 78" x 54 1/2"	750°F	600	1/2	8"	Single	18	±0.3%	±8°F	73 min	2540 lbs

*All Models—Control panel overhang 9" right side. Blower motor overhang 18" rear.

†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

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

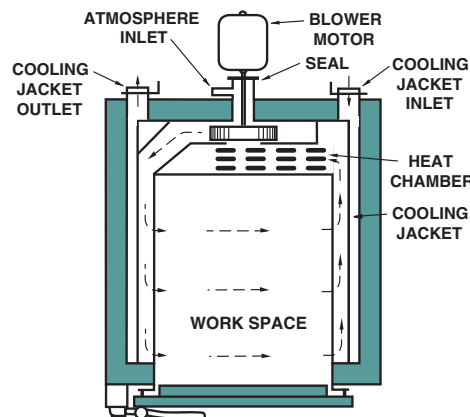
Each features completely wired, top access UL listed control panel enclosing terminals for incoming power, temperature controllers, push buttons and pilot lights. Motor starter and heating element contactors electrically interlocked to shut off heaters if power to blower is interrupted and to permit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

Two (2) reinforced 100 lbs uniformly distributed load capacity, nickel plated wire shelves. Models IA and IB will hold seven (7) shelves on 3" centers; models IC and ID five (5) shelves on 6" centers.

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

Inert atmosphere is introduced at blower shaft (1/2" NPT) and positive oven pressure maintained by inlet pressure regulator. Atmosphere flow indicated on 0-200 CFH flow meter. Oven pressure indicated on 0-5 inch water column pressure gauge. Continuously welded inner oven construction with compression fittings at wall penetrations maintains atmosphere integrity. Atmosphere outlet equipped with pressure relief which can be manually opened to increase inert gas flow for initial purge of air from oven. Adjustable positive latching door hardware and offset hinges assure positive door seal.

Circulation Diagram (Top View)



ADDITIONAL EQUIPMENT AVAILABLE*

- **Additional Shelves**, 100 lbs distributed load per shelf, 400 lbs maximum oven load, specify oven model when ordering.
- **Programmable Temperature Controller**, microprocessor based, digital indicating, thermocouple actuated, in lieu of standard controller **PTC3**
- **Recording Thermometer**, thermocouple actuated, 24-hour, 10" diameter circular chart used in conjunction with standard controller (side mounted) **RT**
- **Programmable Recording Temperature Controller**, microprocessor based, thermocouple actuated, digital display, 24-hour, 10" diameter circular chart, in lieu of standard controller (side mounted) **PRTC3**
- **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 time .. **DTS3**
- **Digital Shut Down Timer**, with continuous "hold" feature **SDT**

- **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 reset .. **BT**
- **Automatic Door Switch**, turns off blower and heat when door is opened. Restores blower and heat when door is closed **ADS**
- **24" Integral Oven Legs**, with 1/8" steel plate shelf. Specify oven model when ordering **ISTND**
- **24" Removable Oven Stand**, with 1/8" steel plate shelf. Specify oven model when ordering **RSTND**
- **500 lbs Capacity Carbon Steel Subway Grating**, oven work space bottom. Reduces work space height by 1". Specify oven model when ordering .. **SUB**
- **304 Stainless Steel Components**, including blower wheel, hardware and two stainless steel expanded metal shelves, specify oven model when ordering.

- **Automatic Purge**, opens oven outlet automatically to purge air from oven, requires installation of optional programmable temperature controller **APS**
- **Cooling Blower** with air flow safety switch, connected to air jacket to provide accelerated cooling, includes two position motorized dampers, requires installation of optional programmable temperature controller **CB**

Oven Model	Capacity	HP	Outlet Dia	Approx Cooling to 250°F from	
				500°F	750°F
IA	130 CFM	1/3	4"	40 min	70 min
IB	325 CFM	1/3	6"	30 min	50 min
IC	650 CFM	1/2	6"	40 min	60 min
ID	650 CFM	1/2	6"	55 min	75 min

- **Modulating Dampers** to regulate cool down rate, replaces 2-position dampers included with cooling blower. Includes heating/cooling programmable temperature controller in lieu of optional programmable temperature controller required with cooling blower **MD**



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