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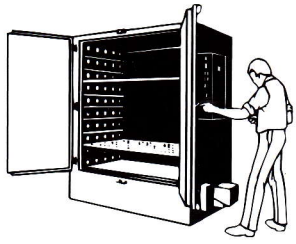


BULLETIN CA-420

Shelf Ovens

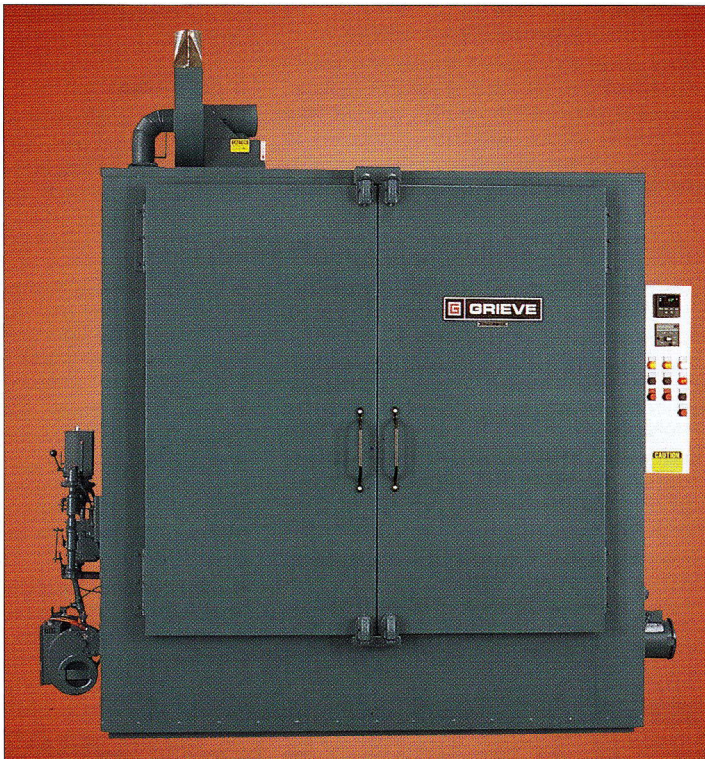
LOW COST ELECTRIC AND GAS OVENS FOR CONVENIENT SHELF LOADING

These compact ovens extend only 42" from a wall yet provide large work space at low cost. Ideal for shelf processing applications such as baking, drying, curing and preheating at temperatures to 550°F.

STANDARD FEATURES

- UL LISTED CONTROL PANEL
- **Standard Shelf 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 controller
  - Separate heating element control contactors
  - Recirculating blower air flow safety switch
- **Safety Equipment—Gas Oven**
  - Adjustable, thermocouple actuated, manual reset excess temperature controller
  - 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**
  - Side-to-side horizontal air flow specifically adapted for shelf processing
  - 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
  - Integrally welded construction
  - Explosion venting latches
  - 6" of 10 lbs/cf density industrial rockwool insulation
  - Built-in baffles prevent radiant heat
  - Silicone rubber door gasket
  - Two (2) nickel plated wire shelves
  - Channel shelf supports prevent shelves tipping
  - Adjustable fresh air intake and exhaust dampers
  - High pressure recirculating blower
  - 1 year limited warranty
- **Every oven fully assembled and individually factory tested**

MODEL SB-550 ELECTRIC
WITH OPTIONAL PROGRAMMABLE TEMPERATURE CONTROLLER AND RECORDING THERMOMETER



MODEL SC-550 GAS
WITH STANDARD MODULATING BURNER SYSTEM

Specifications Subject to Change Without Notice
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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	Rise Time Gas	
SA-400	50" x 30" x 54"	46.9	70" x 46" x 80"	400°F	1000	1	6"	Double	10	50,000	±0.3%	±4°F	35 min	20 min	1675 lbs
SA-550	50" x 30" x 54"	46.9	70" x 46" x 80"	550°F	1000	1	6"	Double	15	75,000	±0.3%	±6°F	60 min	30 min	1875 lbs
SB-400	56" x 30" x 60"	58.3	76" x 46" x 86"	400°F	1000	1	6"	Double	15	75,000	±0.3%	±4°F	40 min	15 min	1875 lbs
SB-550	56" x 30" x 60"	58.3	76" x 46" x 86"	550°F	1000	1	6"	Double	20	100,000	±0.3%	±6°F	60 min	25 min	2085 lbs
SC-400	68" x 30" x 66"	77.9	88" x 46" x 92"	400°F	1000	1	6"	Double	20	100,000	±0.3%	±4°F	20 min	10 min	2650 lbs
SC-550	68" x 30" x 66"	77.9	88" x 46" x 92"	550°F	1000	1	6"	Double	25	125,000	±0.3%	±6°F	35 min	20 min	2760 lbs

*All models — Control panel overhang 9" right side.
Blower motor overhang 10" right side
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 100 lbs uniformly distributed load capacity, nickel plated wire shelves; shelf support channels on 6" centers. 304 stainless steel interior with carbon steel blower and plated hardware. Trilite Green enamel painted aluminized steel exterior.

- **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.

These electric or gas ovens come in three sizes. They feature full horizontal air with adjustable louvers for balanced air flow. These compact ovens extend only 46" from a wall (42" discounting door hardware) so they take up little room in situations where floor space is at a premium.

First shelf support channel is conveniently located at 25" above factory floor.

- **SA Series**

Nearly 47 cubic feet of work space at temperatures to 400°F and 550°F respectively. Accommodates eight (8) shelves on 6" centers.

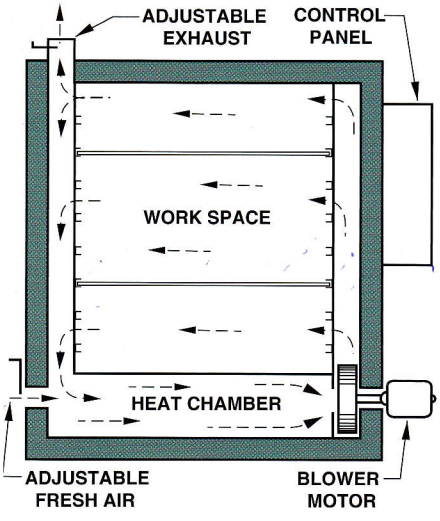
- **SB Series**

Over 58 cubic feet of work space at temperatures to 400°F and 550°F respectively. Accommodates nine (9) shelves on 6" centers.

- **SC Series**

Our largest shelf oven with a work space of nearly 78 cubic feet. Temperature ranges to 400°F and 550°F respectively. Accommodates ten (10) shelves on 6" centers.

Circulation Diagram
(Front View)



Heated air is blown sideways between shelves and across parts

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 . . . . . .**RT**
- **Programmable Recording Temperature Controller,** microprocessor based, thermocouple actuated, digital display, 24-hour, 10" diameter circular chart, in lieu of standard controller **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**
- **Shut Down Timer,** with continuous "hold" feature; 1, 5, 10 or 30 hour range . . . . . .**SDT**
- **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; 1, 5, 10 or 30 hour range . . . . . .**BT**
- **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 closed . . . . .**ADS**
- **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.

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

Ovens and Furnaces For Industry Since 1949
THE GRIEVE CORPORATION