

**BULLETIN  
BH-302**

# Industrial Bench Ovens

Model NBS-400 meets the requirements of OSHA and National Fire Protection Association Standard 86 for Class A ovens. Not for use in hazardous locations as defined in the National Electric Code.

These rugged bench ovens are designed for a wide variety of industrial heat processing applications including those where flammable solvents or vapors will be present in the oven.

## STANDARD FEATURES

- Recirculating blower
- 304 stainless steel interior
- Incoloy sheathed tubular heating elements
- Silicone rubber door gasket
- Analog, thermocouple actuated, temperature controller
- Adjustable, thermocouple actuated, manual reset excess temperature controller
- On-off switch
- Red pilot light indicates heater operation
- Sturdy steel construction
- Brushed stainless steel exterior
- 6 lb/cf density industrial rockwool insulation
- Built-in baffles prevent radiant heat
- Fully factory tested
- 1 year limited warranty

## MODEL NBS-400

Fan forced recirculation of heated air throughout 7 cubic foot work space at temperatures to 400°F. Includes two (2) removable nickel plated wire shelves easily adjustable on 2" centers. Holds a maximum of seven (7) shelves. Includes safety equipment required when flammable solvents or vapors are present in an oven.

**RUGGED, VERSATILE  
BENCH OVEN HANDLES  
FLAMMABLE SOLVENTS**



**MODEL NBS-400**  
WITH OPTIONAL DIGITAL MICROPROCESSOR BASED  
PROGRAMMABLE TEMPERATURE CONTROLLER

# SPECIFICATIONS

| Model   | Work Space         |              | Outside Dimensions (WxDxH) | Max Temp | Insulation | Watts | Operating Characteristics† |                 |           | Approx Shipping Weight |
|---------|--------------------|--------------|----------------------------|----------|------------|-------|----------------------------|-----------------|-----------|------------------------|
|         | Dimensions (WxDxH) | Volume Cu Ft |                            |          |            |       | Control Accuracy           | Oven Uniformity | Rise Time |                        |
| NBS-400 | 28" x 24" x 18"    | 7            | 41" x 30" x 39"            | 400°F    | 2"         | 4000  | ±10°F                      | ±10°F           | 17 min    | 300 lbs                |

†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

### ● Standard Electrical Characteristics

- 208 volts, 1-phase, 60 Hz
- 230 volts, 1-phase, 60 Hz
- Other electrical characteristics available

### MODEL NBS-400

Completely wired control panel assembled on the oven enclosing the temperature controller, manual reset excess temperature controller, pilot light to indicate when heaters are energized and on-off switch. Includes additional safety equipment required by OSHA and NFPA 86 for Class A ovens. Will handle a maximum of 3 ounces (0.024 gallons) of flammable solvents or vapors per batch at a maximum temperature of 400°F.

#### ● Manual Reset Excess Temperature Controller

Turns off heat if oven exceeds 400°F

#### ● Back-Up Heating Element Relay

Turns off oven heat on excess temperature controller actuation in the event of failure of the primary heating element relay

#### ● 35 CFM Separately Powered Forced Exhauster

Provides safety ventilation. Exhaust outlet 4" diameter.

#### ● Exhauster Air Flow Safety Switch

Turns off oven heat if exhauster fails

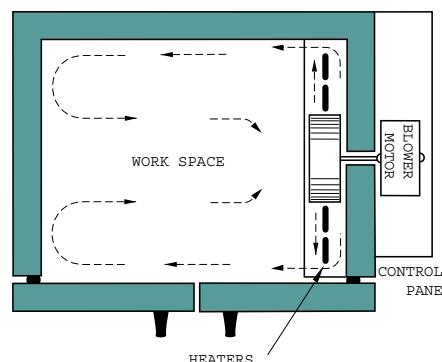
#### ● Recirculating Blower Air Flow Safety Switch

Turns off oven heat if recirculating blower fails

#### ● Purge Timer

Provides time delay to allow exhauster to pull four oven volumes of air through the oven prior to turning oven heat on

Circulation Diagram  
(Top View)



## ADDITIONAL EQUIPMENT AVAILABLE

● **Additional Shelves**, 20 lbs distributed load per shelf, 40 lbs maximum oven load.

● **Set of Eight (8) 430 Stainless Steel Drying Pans**, 11 1/2" W x 20" D x 2" H requires two (2) add'l shelves) . . . **NBPN3**

● **Oven Stand**, to hold oven at convenient 31" working level, shipped separately, requires assembly . . . . . **STNDNB**

● **Dial Thermometer** 10–290°C, 50–550°F dual scale range . . . . **T550F**

● **Digital Indicating Temperature Controller**, microprocessor based, thermocouple actuated, in lieu of standard controller . . . . . **DIG1**

● **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. . . . . **DTS1**

● **Programmable Temperature Controller**, microprocessor based, digital indicating, thermocouple actuated, in lieu of standard controller . . . . . **PTC1**

● **Recording Temperature Controller**, thermocouple actuated, 24-hour, 10" diameter circular chart controller, in lieu of standard controller . . . . . **RTC1**

● **Programmable Recording Temperature Controller**, microprocessor based, thermocouple actuated, digital display, 24-hour, 10" diameter circular chart, in lieu of standard controller . . . . . **PRTC1**

● **Shut Down Timer**, with continuous "hold" feature  
60 minute range . . . . . **BTMR60**  
12 hour range . . . . . **BTMR12**