



PB 24 Series

Severe Duty Air Conditioners

with

Room Pressurization
for
Hazardous and Dusty
Locations

APPLICATIONS

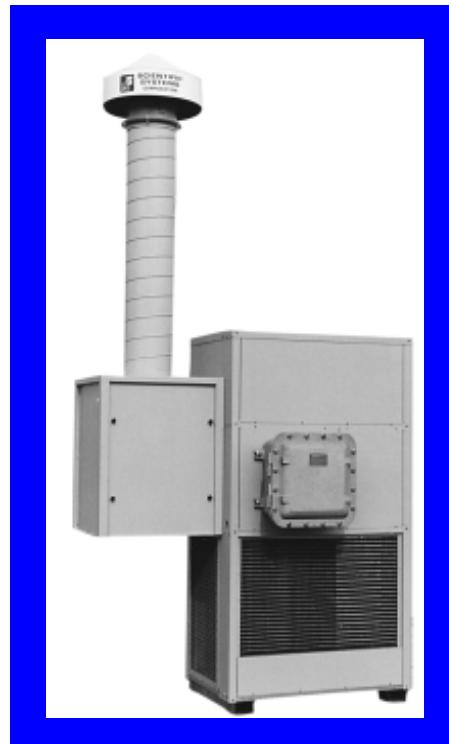
- Industrial Control Rooms
- Process Analyzer Buildings
- Motor Control Centers
- Offshore Oil & Gas Production Platforms
- Gas Pipeline and Compressor Stations
- Chemical and Pharmaceutical Plants
- Grain Transfer and Storage Facilities
- Steel Mills
- Silicon Production and Processing

FEATURES

- Building Pressurization, Air Conditioning, Heating and Air Filtration in one Pretested Module
- Explosion Proof models for Classes I or II, Groups B, C, D, E, F and G in Divisions 1 and 2.
- Compliance with NFPA 496 and API Codes
- Designed for Severe Industrial and Marine Service
- Automatic Room Pressurization System Minimizes Heating and Cooling Loads
- Control Panel with Pressure Readout, Pressure Loss Alarm, and Thermostat
- Cooling Capacities from 3 to 12.5 tons
- Compact Vertical Design has Minimum Footprint
- Steam or Electric Heat *
- Corrosion Resistant Stainless Cabinets and SaveCoil 101 Coil Coatings *
- Three-Year Limited Warranty on Entire System

* Optional

** For Higher Make Up Air Volume or Gas-Phase air filtration the PB 20 Series should be specified.



DESCRIPTION

Industrial buildings in hazardous or dusty locations require both air conditioning and pressurization. Specific pressures and air flow across door openings are dictated by NFPA 496, API and other industrial codes. The **PB 24 Series** is designed to provide the air conditioning and pressurization in one compact, pre-assembled and pretested module.

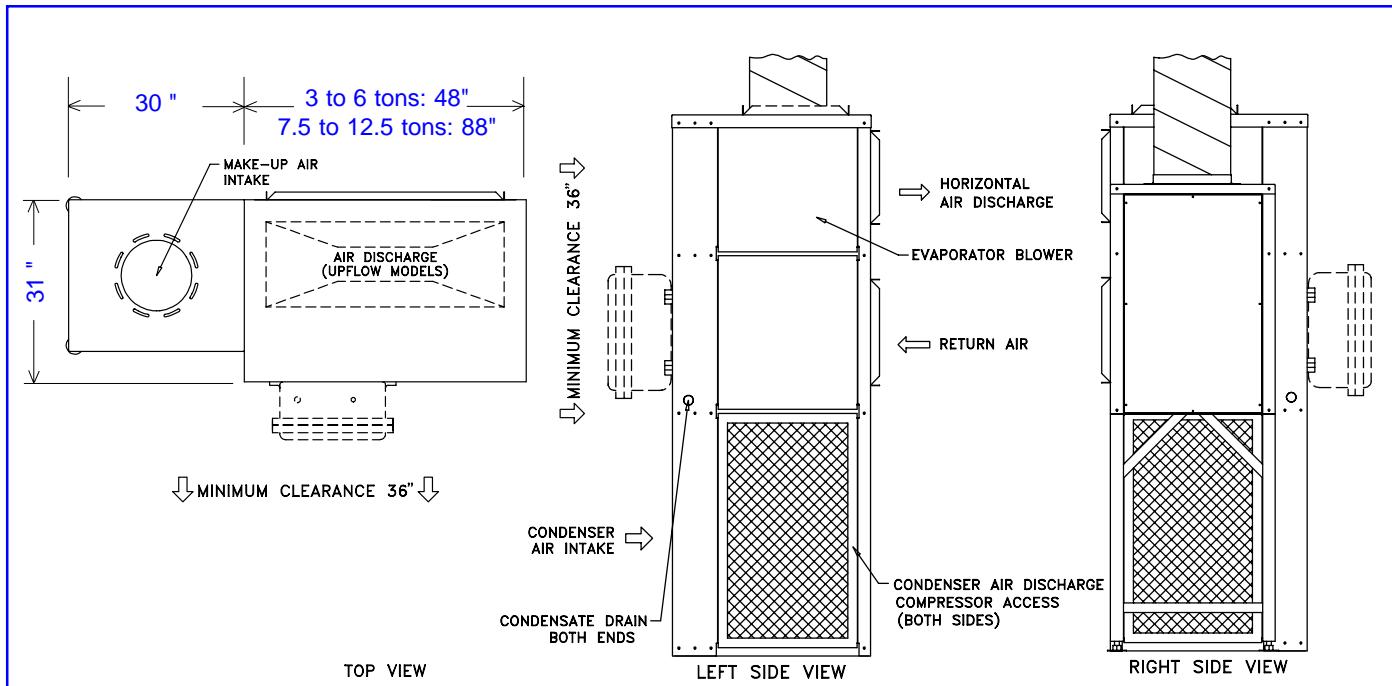
The desired building pressure is automatically maintained. A low noise, Vari-Speed blower supplies the exact volume of clean makeup air required to offset building air leakage and air loss from door openings.

These industrial grade air conditioners are built for ruggedness, performance and reliability. Cabinets are 14 ga galvannealed steel, corrosion protected with a two-part epoxy primer and urethane topcoat. Drain pans are stainless steel. A type 316 stainless steel cabinet is optional. All mechanical and electrical components including switches and annunciator lights are industrial grade. Blowers are belt driven with adjustable speed pulleys. Bearings are pillow block type or permanently lubricated. All motors are totally enclosed (TEFC) with a 1.15 service factor.

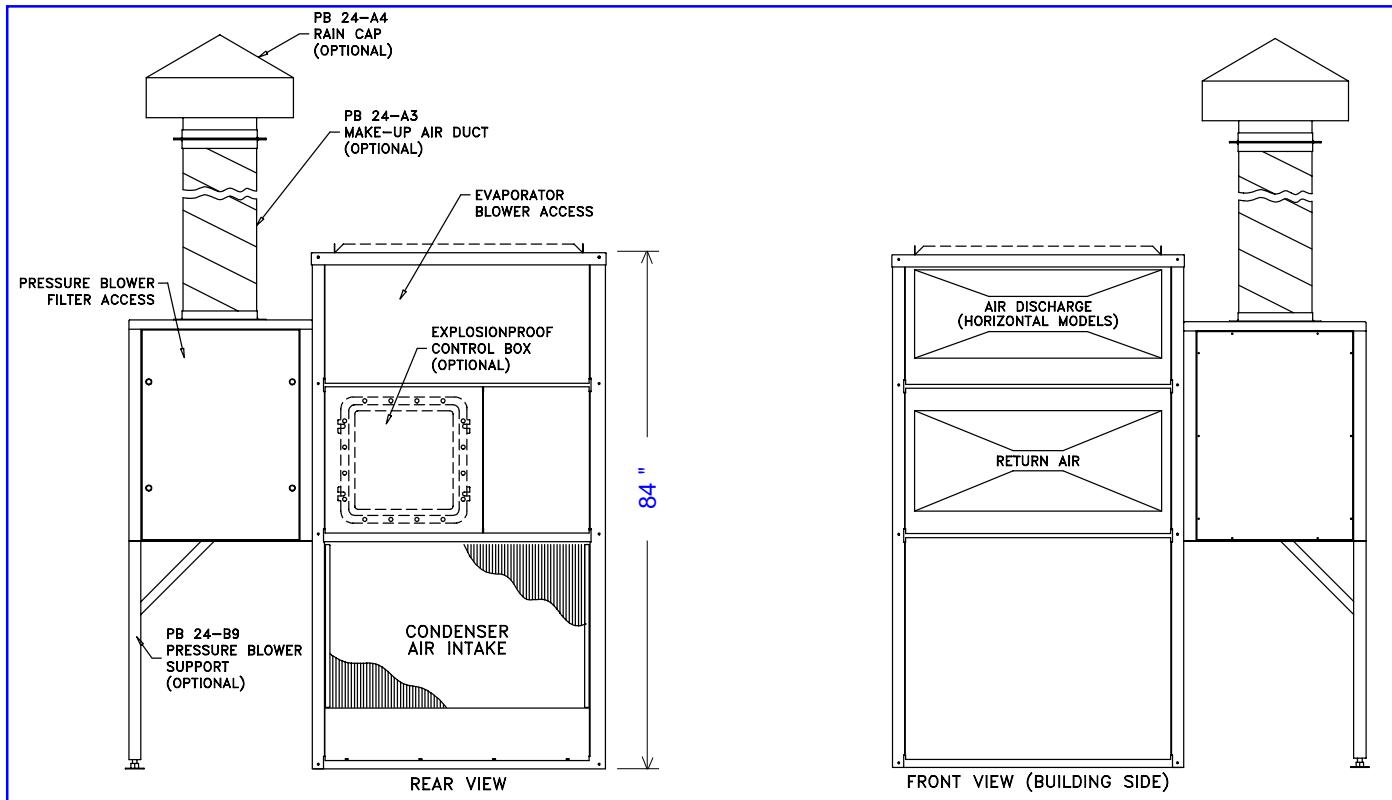
The wide range of options includes redundant pressure blowers, gas and smoke detectors, steam or electric heaters, **SaveCoil 101*** baked phenoxy coil coating and water-cooled condensers.



Top and End Views



Front and Back Views

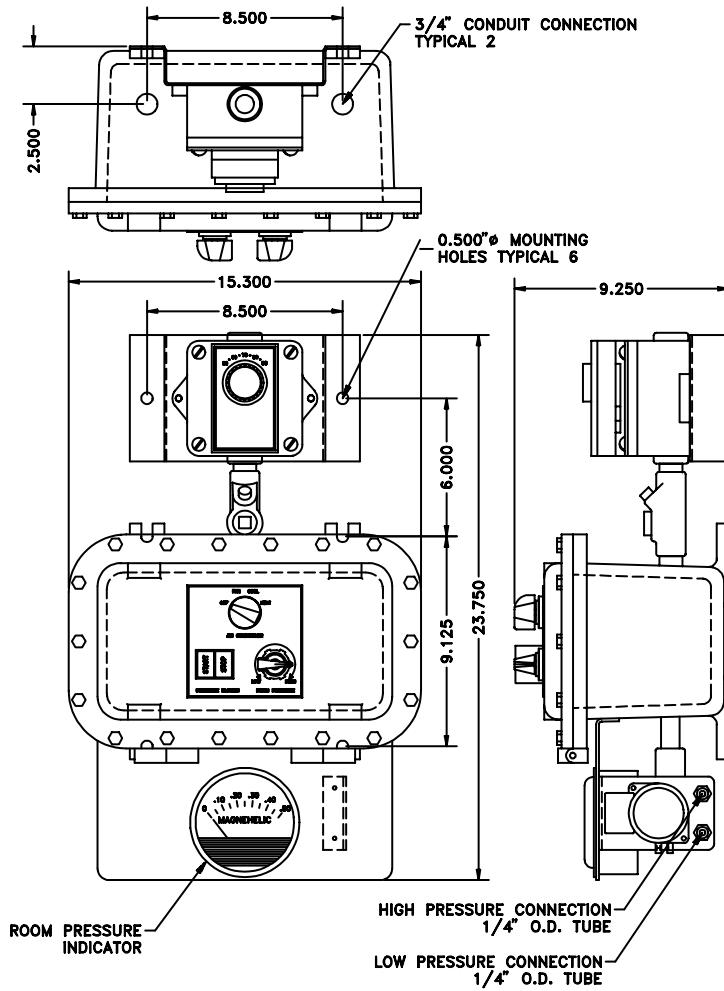




Control System: *Preassembled and Pretested*

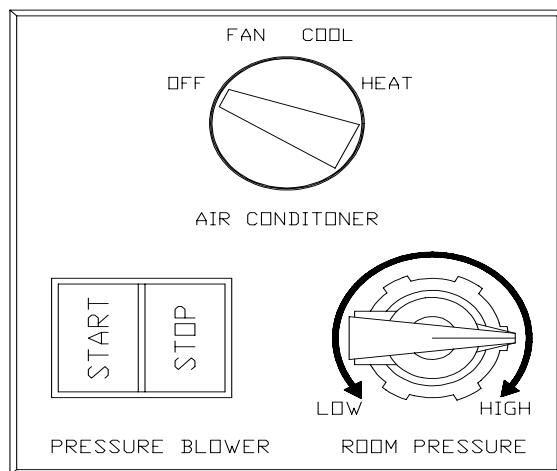
Automatic Pressure and Temperature Controls

The pre-assembled and pretested control panel is located inside the pressurized space. NEMA 7 (hazardous location) control housings are standard for explosion proof models. This design allows safe purging of the conditioned space prior to initial room pressurization. A NEMA 2 (drip proof) housing is standard for non-explosion proof models and optional for explosion proof units. Controls include a thermostat, pressure set, pressure readout, and start/stop controls for the blower. Pressure loss alarm contacts with adjustable alarm delay are standard as are contacts for computer control and monitoring. An optional automatic switch-over controller provides full control redundancy for room pressurization or for both, pressurization and air conditioning.



Operating Convenience

Located inside the pressurized and conditioned space, temperature and pressure can be adjusted or monitored as required. A separate selector switch allows a choice of "Heating", "Cooling" or "Fan Only" operation. Additional control options include humidity control, smoke and gas detectors, time controlled automatic purge, and audible alarms.





AIR CONDITIONING with PRESSURIZATION

PB 24 Air Conditioning with Pressurization

How to Order

- 1.- Determine the **maximum** volume of make-up air required. NFPA 496 specifies a **minimum of 60 feet per minute** across door and other room openings. The same velocity is also suggested for preventing dust infiltration.
- 2.- Select desired control housing of NEMA 2 (Drip proof) or NEMA 7 (Explosion proof).
- 3.- Specify make-up air duct flange, air discharge direction, side for pressure blower installation and power required.
- 4.- Determine cooling and (optional) heating requirements. To request computerized load calculations use Technical Support Bulletin HVLO1FRM.
- 5.- For explosion proof models determine the hazard classification, e.g. NEC Class I, Group D, Division 2.
- 6.- Using the order numbers below, select the required PB(X) 24 base model and options.
- 7.- For additional technical or price information contact company sales engineering department.

Model Number Description

PB 24 - 2600 - 7 - 12 - V - L - 48 - A - D - I D 2

Pressure Blower
Max. Air Flow, CFM

Control Housing
2 = Not Expl. Proof, NEMA 2
7 = Explosion Proof, NEMA 7

Make Up Air Duct Flange
12 = Round, 12" OD (Standard)
SP = Custom (Specify)
RS = Rain Shield only

Supply Air Discharge
V = Upwards
H = Horizontal

Cooling
BTUH x 1000

Condenser
A = Air
W = Water
S = Sea Water

Pressure Blower
Side when Facing
Building:
R = Right
L = Left

Volts/Ph/Hz
B = 230/1/60
C = 208-230/3/60
D = 460/3/60
C(50) = 220/1/50
D(50) = 380/3/50
X = Other

Class
N = Not Expl. Proof
I = Class I
II = Class II

Group
N = Not Expl. Proof
C = Group C
D = Group D
E = Group E
F = Group F
G = Group G

Division
N = Not Expl. Proof
1 = Division 1
2 = Division 2

Options

Model	Description
PB 24-11	Full Corrosion Protection Package: Type 316 stainless steel Cabinet, other Metal Parts Protected with Epoxy Paint; with SaveCoil 101 baked phenoxy coil coating on condenser and evaporator coils
PB EH (kw)	Electric Heat, (specify kw), with pressure interlock, for Division 2 only
PB SH (BTUH)	Steam Heater, (specify BTUH and steam pressure), with control solenoid, less trap
PB 24-DCI	Disconnect Switch with Circuit Breaker, installed
PB 24-ASC-1	Automatic Switchover, Dual Pressure Blowers only, w/ disconnect and circuit breaker, installed
PB 24-A2	Replacement Filters, 4" particulate, for Make-Up Air Filter Housing, Box of 3
PB 24-B9	Make-Up Air Stack Support, for connecting PB 24-A3 Make up Air Ducts higher than 20 ft above ground
PB 24-A3	Make-up Air Duct, 12", flanged 10 ft section, with flange bolts
PB 24-A4	Make-Up Air Stack Rain Cap, with bird screen and hardware, for connection to PB 24-A3
PB 24-A5	Alarm Horn, connects to built-in alarm contacts to signal pressure loss
PB 24-A6	Automatic Purge Control, timed purge provides adjustable delay period
PB-24-98	Smoke Detector, Explosion Proof, installed with system interlock
PB 24-99	Gas Detector (specify gas and concentration), installed with shut-off damper and interlock controls

Your Representative is:



WWW.SEVEREDUTY.COM

7924 Reco Avenue
Baton Rouge, Louisiana 70814 USA
Phone: (225) 926-6950
Toll Free: (800) 654-3857
FAX: (225) 926-6973