



# POWERED AIRE INC.

www.poweredaire.com

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## **SUGGESTED AIRE CURTAIN SPECIFICATIONS MODEL BPA**

Aire curtains are to be furnished as factory assembled units manufactured by Powered Aire Inc. Greenville, PA. Each unit consists of casing, motors, centrifugal fans, protective inlet screen and discharge nozzle. Aire curtains will be equipped with access panels for motor and fan assembly. Individual motor and fan assembly can be removed without lowering the unit or lowering the bottom half of the unit. Aire Curtain unit to provide uniform velocity across the entire length of the discharge area. The units will be front or top air intake. Units are universally manufactured for wall mount or top mount.

Units to be constructed with sufficient rigidity to span the length of the opening without intermediate support. Additional mounting holes to be provided on larger units for buildings where structural support is not adequate for supporting the aire curtain from ends only. All weight bearing structural support will be made of formed 11-gauge stainless steel and galvanized steel. Outer casing shall be constructed of 16-gauge stainless steel. Intake screen will be 20 gauge perforated type stainless steel. Casing will be equipped with stainless steel access panels for inspection, cleaning and removal of motor blower assembly. Internal components shall be welded and bolted construction.

Units shall be equipped with dynamically balanced curved double inlet double width galvanized blower wheels with brazed hubs and matched blower housings. Fan scrolls or formed fiberglass air diverters shall not be acceptable.

Motors will be 7.5 horse power Total Enclosed Air Over (TEAO) 1160 RPM 50/60 cycle equipped with sealed ball bearings of equal size at each end and double extended shafts. To prevent a misalignment from occurring, no outboard bearings or flexible couplings will be acceptable. Aire curtain discharge to distribute outlet air evenly at and between blowers for the entire length of aire curtain through the use of a plenum.

Discharge nozzle shall be adjustable to  $\pm 20$  degrees with no dampers or grills to add turbulence and create a pressure drop or a sound pressure increase.

The unit design shall allow for addition of heating sections or filters without altering the base unit.

### **Electric Heat Option**

For electric heating option consult factory.

### **Steam / Hot Water Coil**

For steam or hot water heated aire curtains consult factory.

### **Direct and Indirect Gas Heat**

For direct or indirect gas heated aire curtains see consult factory.

### **Controls**

Standard control panel shall be Nema 12 enclosure with magnetic motor starter, overload relays, control transformer and terminal provisions for field wiring of a remote hand off automatic selector switch and a door switch.

Aire Curtain unit shall be ETL or UL listed. Unheated unit(s) shall have a 24 month warranty on all parts.

**March, 2011**

## Control Options for Model BPA

### Unheated \* Recommended

\***Door Switch/Magnetic** -- A non-mechanical door switch that turns the air curtain on when the door is opened.

\* **Hand/Off/Auto Selector Switch (Panel Mounted)** -- Switches between the unit running constantly in the hand position, off, and auto, which only runs when the door switch is activated.

### Other Options

**Cruise Control Programmable Switch** -- Digital logic controller with an LCD display that takes the place of several individual control components including a Built-in Time Delay Relay, and On/Off/Auto Switch.

**Disconnect-Fused** -- A switch that will disconnect all power from the unit so that the unit can be serviced or inspected and includes fuses for circuit protection.

**Disconnect-Non Fused** -- A switch that will disconnect all power from the unit so that the unit can be serviced or inspected.

**Door Switch/Roller-Plunger** -- A mechanical door switch that turns the air curtain on when the door is opened.

**Motion Detector** -- Turns the air curtain on when the sensors detect motion so that the air curtain turns on before the door is opened.

**On/Off Selector Switch (Panel Mounted)** -- Switches the air curtain on and off.

**Programmable Digital Thermostat** -- A thermostat that is programmable with a digital display (7-day, 1/2 hour increments, specify up to 4 time periods per day).

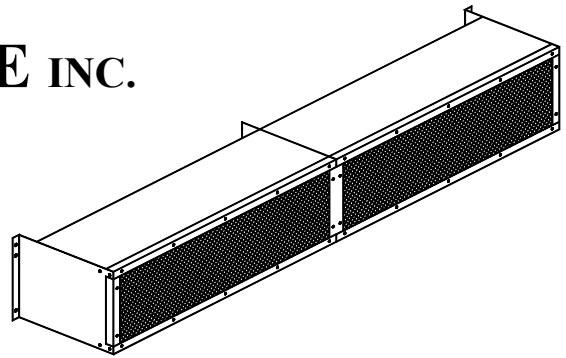
**Built-in Time Delay Relay** -- Provides a delay for shutting off the air curtain after the door is shut. This is useful for doors that see a lot of foot traffic, so the unit is not constantly turning on and off during the day. To be used in conjunction with a door switch.



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**MODEL: BPA Unheated**  
**Big Powered Aire**  
**Door Height: Up to Thirty Feet**



## PRODUCT DATA

Model	BPA 1-60	BPA 1-72	BPA 1-84	BPA 2-120	BPA 2-132	BPA 2-144	BPA 2-156	BPA 2-168	BPA 3-180	BPA 3-192	BPA 3-204	BPA 3-216	BPA 3-228	BPA 3-240	BPA 4-240
Door Width Feet	5	6	7	10	11	12	13	14	15	16	17	18	19	20	20
Nozzle Width Inches	60	72	84	120	132	144	156	168	180	192	204	216	228	240	240
Max FPM at Nozzle	5950	5950	5950	5950	5950	5950	5950	5950	5950	5950	5950	5950	5950	5950	5950
Max CFM at Nozzle	12901	16710	17500	25802	27678	31058	33605	36155	38703	39435	40448	41405	49055	51604	55067
Avg. FPM at Nozzle	3975	4296	3995	4388	4082	4449	4341	4541	4272	4063	3834	3803	4153	4056	4309
CFM at Nozzle	9724	12030	13050	20475	20956	24915	26335	29670	29905	30335	30420	31948	36827	37856	40217
Outlet Velocity Uniformity	94%	94%	92%	94%	95%	95%	92%	92%	94%	95%	94%	95%	94%	92%	95%
Number of Motors	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4
Horse Power per Motor	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Weight (Lbs)	466	490	530	903	930	950	998	1035	1343	1360	1372	1407	1460	1505	1800

Sound level: 73 dba

Sound level measured 10 feet from the unit in a free field based on a one motor unit.

**Three Phase Motor Voltage Available: 208 240 480 575**

**Amp Draw Per Motor: 26.8 23.2 11.6 9.7**

**\*\* Units over 240 inches contact factory**

