

## NEW! Smart "Performance Green" Direct Drive Blowers

Energy Efficient Direct Drive motors with Active Pressure Compensation

We are now offering several of our series, traditionally belt drive, in direct drive versions utilizing Electronically Commutated (EC) motors. Somewhat like having a VFD built in, but there is no programming to do - Just connect the wire color that matches your performance needs.

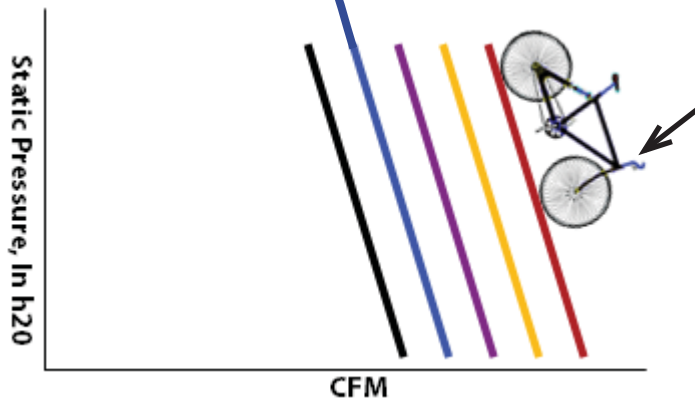


**Efficiencies:** Up to 84%, vs. 65% standard PSC direct drive motors. That typically converts to a 5 year savings of almost \$900 compared to a psc motor. (Based on full time operation and \$.11/kWh)

### What we mean by "Active Pressure Compensation":

The motor will adjust its rpm based on what it senses the system (filters, coils duct systems etc.) to be. So, lets say, from our charts, on a model 209

DD duct blower, the purple wire gives , nominally, 2000 cfm. If the motor senses (by monitoring amp draw) that there is a lot of air flow resistance it will speed up. Conversely, if resistance is low it will slow down.



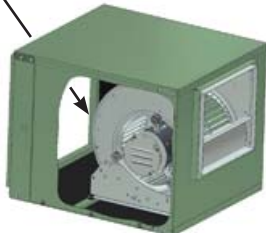
The colored lines correspond to the motor wire colors that yield different performance.

Notice how steep the lines are. That is why you are likely to get the desired CFM even if the system static pressure is not as expected.

Unlike regular direct drive motors, these don't overload when the static pressure is low, opening up a new performance area.

## What products are these motors available for?

(Note to OEM manufacturers - You can get G Series blowers with these motors)



200 & 9200 DD Series  
In line Duct Blowers



700 DD Series  
Filtered Supply Fans



SIS DD Series Side  
Intake Filtered Supply



300 DD Series  
Rooftop Exhausters

## Ranges:

**Model Sizes:** 9, 10, and 12 inch (i.e. 212). Same dimensions as belt drive series.

**Motors:** 1/2, 3/4 and 1 HP. All available in 115 and 208-230V

**CFM:** To 2800 on larger models. Motors can be wired to 50% of max, for ultra quiet, low energy use.

**Static Pressure:** From 0 to 1.75" depending on model size. Do not exceed as CFM declines markedly.

## New! Delhi Direct Drive Plenum Fans



### Why are Direct Drive plenum fans a growing trend?

This is best explained by looking back to pre-VFD days. Before these were economically available to control motor RPM, (hence CFM), the blower wheels were essentially custom sized, diameter and width, to the application. Naturally this was a concern to engineers, who only had estimates of the pressure drops in the system. They felt more comfortable with belt drive systems, (which we have offered for several years) where RPM could be controlled and changed as needed, by changing pulley ratios.

- No belts, pulleys or blower bearings to maintain.
- No belt drive energy waste, typically 5%.

### Why use a plenum fan?

- On a life-cycle cost basis, the higher efficiencies available may make them less expensive than other options such as forward curved blowers.
- They may allow an air handling unit to be shorter in length as there is no fan housing to accommodate and wheels are single rather than double width.
- By pressurizing the plenum space they occupy, they offer duct outlet location flexibility.
- Air flow patterns through downstream coils and filters may be more uniform, improving efficiencies.

### Tidbits:

#### Inverter Duty Motors


It is a popular notion that only Premium Efficiency motors are rated for use with VFD's. However all of our standard 3 Phase "Max Motion" motors are inverter duty rated.

#### Delair - Vista and Windows 7

Our Delair fan selection software installs and runs properly with the above operating systems as well as older ones.

#### Delair - Updates

You can find this option on the main menu bar. Some users may need to turn off their firewall for it to work correctly. Version 8.2.3 is the version at this writing.

If you experience any irregularities we strongly advise you to unistall your current version and download the latest. Its quick and easy, no reports will be lost. Look for "Software" on our web site. 

### Come See Us In Orlando:

ASHRAE - ARI Jan. 25-27 Booth 2937



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