

FANTASTICS

A Quarterly Industrial Ventilation Newsletter

First Quarter 2013

Company News

- **HARTZELL AIR MOVEMENT** announces the introduction of their new adjustable pitch, medium pressure, tube axial, marine and industrial fans. Sizes will include 12"Ø – 48"Ø. Propellers will vary from 5-16 blades with angles from 20° to 50°. These fans will have AMCA approval for performance and sound and will also meet ABS criteria.
- **HARTZELL AIR MOVEMENT** has completed the High Bay facility for the manufacturer of large centrifugal blowers with wheels up to 98"Ø in class 4 and 5. The target customers for these blowers are power plants, mining operations, paper and pulp mills, and sugar mills.
- **BERNER INTERNATIONAL CORPORATION** air curtains have been proven to be more effective than vestibules at saving space and energy as approved by the International Green Construction Code (IgCC).
- **BERNER INTERNATIONAL CORPORATION** announces the new in-ceiling air curtains for mounting up to 16 feet in height. The design is primarily for front doors to maintain unobstructed entrances.

Company News

- **VENTILATION SPECIALISTS, INC.** now has the availability of portable electric blower heaters. Models range from 34,000 – 102,000 Btu/Hr. Both single and three phase powered units are available.
- **CINCINNATI FAN COMPANY** announces a 4.8% price increase effective 1/1/13. The last price increase was on 5/1/11.
- **NORDFAB DUCTING** – Our new representation of Nordfab Ducting provides us with ductwork and fittings with the following advantages compared to locally fabricated ductwork. Many sheet metal fabricators are taking advantage of Nordfab's Quick Shipment.
 1. While more expensive than standard fabricated ductwork, the installation time man hour-wise results in approximately a 10% cost savings.
 2. The snap-lock design provides an easy way to clean the interior of the ductwork often required by pharmaceutical plants, food product companies, and powder coating operations.
 3. Manufacturing facilities that constantly move or add production equipment can benefit from the snap lock design and the ease of reconfiguring their reusable ductwork and fittings.
 4. Nordfab ductwork and fittings are normally available in four working days, substantially reducing lead times to get up and running.
 5. All Nordfab ductwork and fittings are fabricated in Thomasville, North Carolina. Samples are available at no cost.
 6. Galvanized steel, stainless steel, and aluminum ductwork and fittings are available.
 7. High temperature construction, leak proof gaskets, and abrasive linings are available.

Technical Tidbit

Axial

Occasionally customers want air flow reversibility in order to supply at some times and exhaust at other times. Most axial fans are only designed to run in one direction. With a reversing starter running an axial fan backwards will produce at best a maximum of 60% of the airflow when run forwards.

A few fan manufacturers build axial fans with a twin orifice which provides 100% air movement in either direction. The propeller leading and trailing edges of the blades are identical in either direction of rotation. One manufacturer builds a true reversible, cast aluminum propeller design to operate without an orifice. A number of other axial fan manufacturers utilize a multi-blade propeller where half the blades are angled clockwise and the other half are angled counterclockwise. Although not truly reversible, the performance of half the blades running forwards are 100% and the other half running backwards are at best 60%. The airflow is considerable less than a 100% reversible propeller.

Technical Tidbit

Centrifugal

In order to reverse air flow with a shrouded radial wheel centrifugal, the housing must be reversible by removing the side plates and the wheel taken off and turned around 180°. This only makes sense for a permanent change.

Almost all centrifugal blowers can only run in one direction. This includes the backward curved, backward inclined and forward curved models. The radial or paddle wheel centrifugal can run either clockwise or counterclockwise with the above changes made.

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