

FANTASTICS

A Quarterly Industrial Ventilation Newsletter

First Quarter 2012

Electric Motor News

All motor manufacturers continue to update their electric motor prices a few types at a time which causes quotes to have to constantly be altered.

Company News

Hartzell Fan, Inc. has made major corporate executive changes and is promoting aggressive marketing changes which will positively influence shipments, prices and new products.

Ventilation Specialists, Inc. continues to show significant sales growth in the Latin American countries. Arrangements have been made with a number of export companies to handle expedited shipments.

IAP Inc. has refurbished its lines of vane axial and tube axial fans to include new sizes, more accessories and higher static capability.

Mitsubishi Electric continues to offer stock shipments of their un-housed variable frequency drives. These units are some of the highest quality, user-friendly and lowest priced variable frequency drives on the market.

American Coolair introduces fractional, single phase, horsepower fans and blowers utilizing DC energy saver motors which operate at a fraction of the cost of running conventional AC motors. The internal electronics of the DC energy saver motors automatically converts AC power to DC without the need for a variable frequency drive. Manual speed, temperature or variable pressure controls are available options.

Technical Tidbit

The use of variable frequency drives has increased tremendously over the past few years. Utilizing VFDs with non-explosive resistant motors almost has no limitation in turn down or speed up if the motor horsepower is not exceeded. Using VFDs with explosion resistant motors has limitations. The following outlines how to properly select this combination.

1. Most explosion resistant motors have a service factor of 1.0. Do not over speed the fan above the motor horsepower.
2. Baldor Electric standard explosion resistant motors should not be used with VFDs. They recommend their line of EXP-inverter duty motors.
3. Standard 56 frame Baldor and Leeson explosion resistant motors should not be used with VFDs.
4. Baldor, Siemens and Weg integral frame premium efficient, explosion resistant motors might require modification based on the explosive chemical(s) and the ignition temperature of those chemicals.
5. Standard VFD-XP motors are normally provided with a T3C temperature code which provides a maximum motor surface temperature of 160° C (320° F). Nine (9) other T codes are designed for higher maximum motor surface temperature which might be required depending on the VFD turndown required and the types of explosive chemical that will be used.
6. Since hazardous duty motors run hotter with VFDs, make sure the motor meets UL674.

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