Air Dryers Eliminate Dust in Electrical Cabinets and Enclosures

Market Application Publication

Background:

Electrical Cabinets and Enclosures and Electric Motors are often located in dust areas. A specific example is in food processing plants that produce a powdered substance such as whey or flour. Usually this leads to dust inside the electrical cabinets, which causes over heating, electrical shorts, and premature failure of components.

One way of combating the dusty environment is to install a dust collection system. These systems can be single or multistep, but can prove very costly and require a large installation space. These systems can also increase the risk of fire and explosion if not properly maintained.

Another attempted solution is to clean the cabinets on a fixed schedule. Cabinets may be vacuumed out, wiped down, or even blow out using compressed air. These methods require man power and are time consuming since they must be done regularly to minimize dust accumulation.

Many plants just live with the problem by managing downtime emergencies. Emergencies divert limited maintenance personnel and disrupt production at the cost of thousands of dollars per hour. The Cabinet Dryer reduces these maintenance and lost production costs by 80% or more. It does this while freeing up valuable maintenance personnel that are better devoted to important routine maintenance work rather than daily emergency response.

Features and benefits:

- Designed specifically for dusty environments
- Positive pressure keeps dust out
- Protects motors, touch screens, drives, and other critical components
- Protects electrical cabinet components from damage caused by accumulated dust
- Requires no electricity, lower operating costs
- Easy to install and maintain
- Quiet operation
- Recognized by Rockwell Automation as an Encompass Product Partner

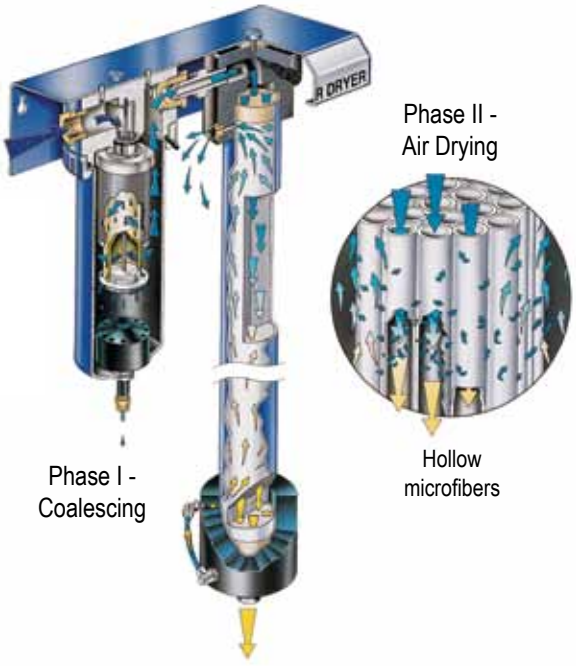
Parker Balston

ENGINEERING YOUR SUCCESS.

Case Study:

A whey processing plant in Iowa, wasn't addressing dust accumulation in their electrical cabinets. The maintenance foreman observed starters and connections in the electrical cabinets burned out quickly and over heated. He and his team were replacing parts in their two cabinets at the rate of at least 1 every 6 months per cabinet. During scheduled monthly down time, the foreman and his team spent valuable time and manpower cleaning out the cabinets. They also tested and preemptively replaced parts in their systems to make sure the parts did not fail during production runs. Now that they've installed the Cabinet Dryer, all of these issues have been eliminated. The foreman is seeing virtually no failures. This allows him and his team time to devote maintenance resources where they are intended; routine and scheduled maintenance.

Principle of Operation



Specifications:

Model Number	CD0005	CD0010	CD0030
Cabinet Size Range	0 - 4 FT (0 - 0.11m)	4 - 12 FT (0.11m - 0.34m)	12 - 36 FT (0.34m - 1m)
Min/Max Inlet Air Temp	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)
Min/Max Ambient Air Temp	35°F/120°F (2°C/49°C)	35°F/120°F (2°C/49°C)	35°F/120°F (2°C/49°C)
Air Consumption	0.6 SCFM (17 slpm)	1.25 SCFM (35.4 slpm)	3.5 SCFM (99 slpm)
Min/Max Air Pressure	60 psi/150 psi (4.1 BAR/10.3 BAR)	60 psi/150 psi (4.1 BAR/10.3 BAR)	60 psi/150 psi (4.1 BAR/10.3 BAR)
Delivered Dew Point	-7°F(-22°C)	-7°F(-22°C)	-7°F(-22°C)
Inlet and Outlet Port Size	1/4" NPT	1/4" NPT	1/4" NPT
Electrical Requirements	None	None	None
Dimensions	3"w x 9.2"h x 2"d (7.6cm x 2.34cm x 5cm)	3"w x 15.2"h x 2"d (7.6cm x 38.6cm x 5cm)	4.6"w x 15.3"h x 2.9"d (11.7cm x 38.9cm x 7.4cm)
Shipping Weight	1.5 lbs (0.68 kg)	2 lbs (0.9 kg)	2.5 lbs (1.1 kg)

Notes: Delivered dewpoint is specified for saturated inlet air at 100°F (38°C) and 100 psig.

* If the cabinet is not tightly sealed, consider upsizing to the next module size.

Filtration efficiency: 99.99% at 0.01micron.

For heavily contaminated air lines, install additional prefiltration.

Ordering Information

Model Number	CD0005	CD0010	CD0030
Replacement Filter Elements	070-063-BX	070-063-BX	070-063-BX
Replacement Auto Drain	CO2-2392	CO2-2392	CO2-2392

Rockwell Automation Encompass™ Product Partner Americas

Parker Balston

Parker Hannifin Corporation
Filtration and Separation Division
242 Neck Road
Haverhill, MA 01835
phone 800 343 4048 or 978 858 0505
fax 978 556 7501
www.balstonfilters.com