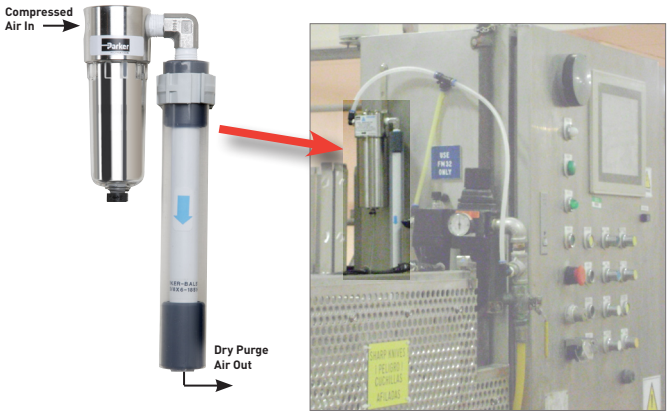
Air Dryers Eliminate Moisture in Electrical Cabinets and Enclosures

Market Application Publication

Background

Electrical Cabinets and Enclosures and Electric Motors are often located in areas that are subject to wash down. A specific example is in meat and dairy plants which routinely wash down an area on a daily basis. Usually this leads to water and condensation inside the electrical cabinets, which leads to corrosion and premature failure of components. The moisture may even give rise to mold and bacterial growth.



A typical Cabinet Dryer installation

Attempted Solutions

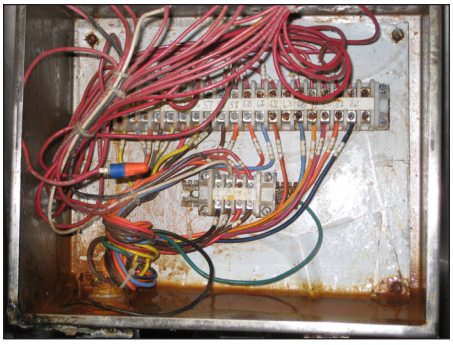
Electricians and maintenance personnel have resorted to various means of remediation without success. Cabinet heaters are commonly used. Cabinet heaters have two problems. One, they do not eliminate the moisture, they merely raise the humidity inside the cabinet. Most electrical components are sensitive to high humidity. Secondly, the heaters are shut off during the wash down period and may not be turned on until hours later, thus allowing moisture and water to remain.

Another attempted solution is the use of vortex coolers. These devices are expensive to buy and operate. They can consume 8 scfm or 2HP of compressor output. This will translate to hundreds of dollars in electrical costs over the course of a year.

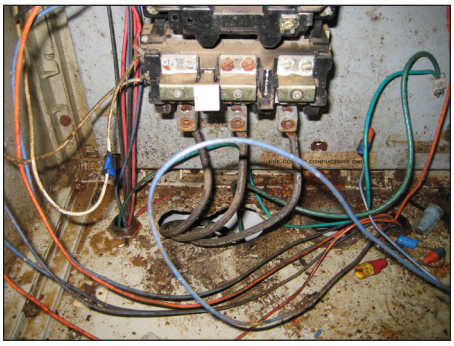
Case Study

Ross Industries, a manufacturer of slicing equipment, had an issue with component failures in their units due to moisture damage. They tried heaters, fans and vortex coolers only to find that the Parker Cabinet Dryer was the only solution that worked.

A prepared foods manufacturer had a problem with moisture and routinely had their weekend service team mop up the inside of all their electrical cabinets, about 30 cabinets. On installing the Cabinet Dryer they were able to free up maintenance resource to work on other, more critical maintenance issues.



Water accumulation in electrical cabinet



Corrosion leads to premature component failure

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Parker Balston Cabinet Dryers

Application Solutions

Product Impact

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.

Principal Specifications

Model Number	CD0005	CD0010	CD0030
Cabinet Size Range*	0 - 4 FT^3	4 - 12 FT^3	12 - 36 FT^3
Min/Max Inlet Air Temp	40°F/120°F	40°F/120°F	40°F/120°F
Min/Max Ambient Air Temp	35°F/120°F	35°F/120°F	35°F/120°F
Air Consumption	0.6 SCFM	1.25 SCFM	3.5 SCFM
Min/Max Air Pressure	60 psi/150 psi	60 psi/150 psi	60 psi/150 psi
Delivered Dew Point (1)	-7°F/-22°C	-7°F/-22°C	-7°F/-22°C
Inlet Port Size	1/4" NPT	1/4" NPT	1/4" NPT
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	3"w x 15.2"h x 2"d	4.6"w x 15.3"h x 2.9"d
Shipping Weight	1.5 lbs	2 lbs	2.5 lbs

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.

Ordering Information **For assistance call toll free at 800-343-4048, 8AM to 5PM EST**

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

Parker Hannifin Corporation
Filtration and Separation Division
242 Neck Road, P.O. Box 8223
Haverhill, MA 01835-0723
phone 800 343 4048 or 978 858 0505
fax 978 556 7501
www.balstonfilters.com