

World Class Pressurization

Regulations

Andrew dehydrators described in this catalog, except 40525A Series, have been tested and qualified to meet the following worldwide regulatory electrical safety and interference requirements, where applicable, based upon voltage and power frequency.



Conforms to UL 508, Industrial Control Equipment and UL 1995, Refrigeration and AC Compressor Units as tested by ETL Testing Laboratories, Inc., Cortland, New York, a Nationally Recognized Testing Laboratory (NRTL).



Certified to CSA 22, Heating and Cooling Equipment as tested by ETL Testing Laboratories, Inc., Cortland, New York, a Nationally Recognized Testing Laboratory (NRTL).

CSA C1374, Part 15, Sub-part B and DOC Regulations CRC, C.1374



IEC 801-2 Electrostatic Discharge Susceptibility – Immune to ESA from Severity Level 1 (2 kV) through Severity Level 3 (8 kV).

IEC 801-3 Radiated Susceptibility – Electric Field Immune to RFI at 3 V/m from 27 to 500 MHz.

IEC 801-4 Conducted Transients Susceptibility – Immune to conducted line voltage bursts.

EN50082-1 European Community Generic Immunity

CISPR 11 Group 1, Class A EN55011

CISPR 14 (EN55014)

EN60204-1 European Safety

Types of Dry Gas Supply

Pressurization systems can be classified as static or dynamic.

Static Systems:

In a non-pressurized system, a breathing static desiccator may be utilized. As the system pressure increases, air is forced out through the desiccator. As pressure decreases, make-up air passes through the desiccator which absorbs the moisture before allowing dry air to enter the system. A static desiccator will last many months on a very small, tight system of 1 ft³ (28 liters) or less.

In a pressurized static system, the transmission line is pressured by an external source such as a hand pump or other means and the source removed. Since the system is not hermetically sealed, it will require frequent inspection for recharging. The gas inlet valve must be readily accessible, and the system operation is very labor intensive.



Dynamic Systems:

A dynamic system incorporates a pressurizing source that provides dry gas on demand. The pressurizing source may be nitrogen tanks with a regulator, or an automatic dehydrator. The source is permanently connected to the transmission line system and recharges it to a preset positive pressure as required to compensate for leakage losses. Nitrogen tanks are used for small tight systems where ac power is unavailable. There are no moving parts and they provide a low dewpoint, but the hidden costs of monitoring and tank replacement can be expensive. They are recommended only for systems having low internal and purge volumes. System leaks bleed down tanks rapidly and delivery of nitrogen tanks to site can be undependable.

Manual regenerative dehydrators, which use moisture adsorptive desiccant that can be regenerated by baking in an oven, are also ideal for small, tight systems and are economical. They require small amounts of electrical power and the desiccant must be inspected and regenerated periodically, but they are extremely reliable in operation in many locations and applications.

The newer, fully automatic membrane dehydrators are recommended for low to high system and purge volumes. They are designed to cycle on and off, or run continuously in an emergency, providing a maintenance-free dry air system. Older “pressure swing” automatic dehydrators perform a similar function, but they do not provide the same trouble-free performance, low noise and vibration, and continuous drying capability the membrane units do.

Replace your old or obsolete pressurization system with a state-of-the-art DryLine® dehydrator from Andrew.