

## Dry Air for Electronics or Refrigeration Control

### Description:

Designed for the T-AKE Lewis and Clark class, the Model 7974 Mk I dehydrator is a self-contained unit designed to remove water, oil, and solid contaminants from shipboard low-pressure compressed air systems. It is designed for continuous, automatic operation. The air delivered by this dehydrator is suitable for low-temperature systems such as cargo refrigeration control.

Moisture is removed by passing the incoming wet air through a membrane module. The membrane consists of thin hollow fibers made from tough plastic. The fiber walls are coated with an ultra-thin layer of another plastic which allows the passage of water 20,000 times faster than air. Thus the water passes through the fiber walls and is removed, while the air continues through the fiber.

Aerosols and particulate matter are removed by a coalescing and mechanical filter.

### Specifications:

Designed in compliance with American Bureau of Shipping rules for building and classing steel vessels, 2001 edition and USCG rules and regulations 46 CFR, 01 October 2000 edition.

Power Requirements: 115 VAC, 60 Hz, single phase, 5 ampere.

Operating Ambient Temperature: 4.5° - 49° C (40° to 120° F).

Inlet Air Specifications: Pressure: 562 - 865 kPa (80 - 125 psig)

Temperature: 49° C (120° F) maximum

Flow: 0 - 0.084 m<sup>3</sup>/min (3 scfm)

Moisture Content: saturated at 562 kPa (80 psig) and 51.6° C (125° F) [0.004 lb water/lb air] maximum

Oil Content: 5 ppm maximum

Outlet Air Specifications: Pressure Drop, inlet to outlet: 50 kPa (7.2 psig) maximum

Flow: 0.034 m<sup>3</sup>/min (1.2 scfm)

Moisture Content -40° C (-40° F) dew point at 80 psig [0.000015 lb water/lb air] maximum

Dew Point Depression: 89 C° (160 F°) to -40° C (-40° F) reference

Particle Filtration: to 1 micron

Coalescent Filtration: 0.01 micron



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