



*Compressed
Air Dryers*

GENERON® DEHYDRATION MEMBRANE DRYERS



*Point Source
Air Drying*

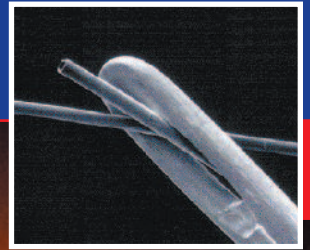
*Cabinet
Series
Air Dryers*

*Large Scale
Integrated
Air Drying
Systems*

***From Concept To Completion,
We Provide Solutions!***

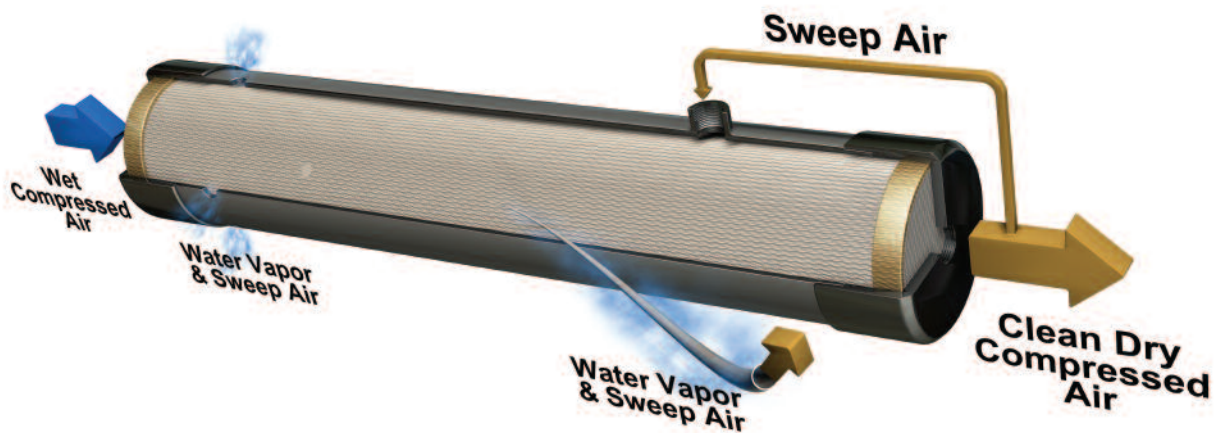
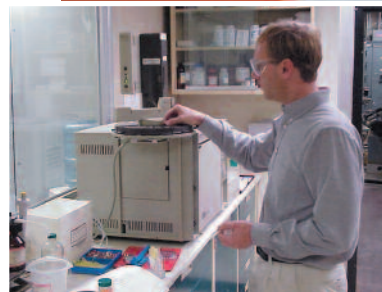


Dehydration Membrane Technology



TECHNOLOGY

- Generon® is an industry leader in Nitrogen and Dehydration Membrane Technology utilizing Specialty Polymer Hollow Fibers
- Generon® has over 41 patents for its innovative polymer/fiber designs
- The Nitrogen and Dehydration Membrane Modules are manufactured in Generon's own manufacturing facility in Pittsburg, CA - U.S.A.
- System Assembly is in Generon® Manufacturing Facilities in Houston, TX; Grosseto, Italy; and Chengdu, China



QUALITY

- All Generon® Manufacturing Facilities are ISO 9001:2000 Certified

Key Features of a Generon® Dehydration Compressor Air Dryer

- Dew Points to -70°F
- No Moving Parts
- Small Footprint
- Low Maintenance
- High Efficiency

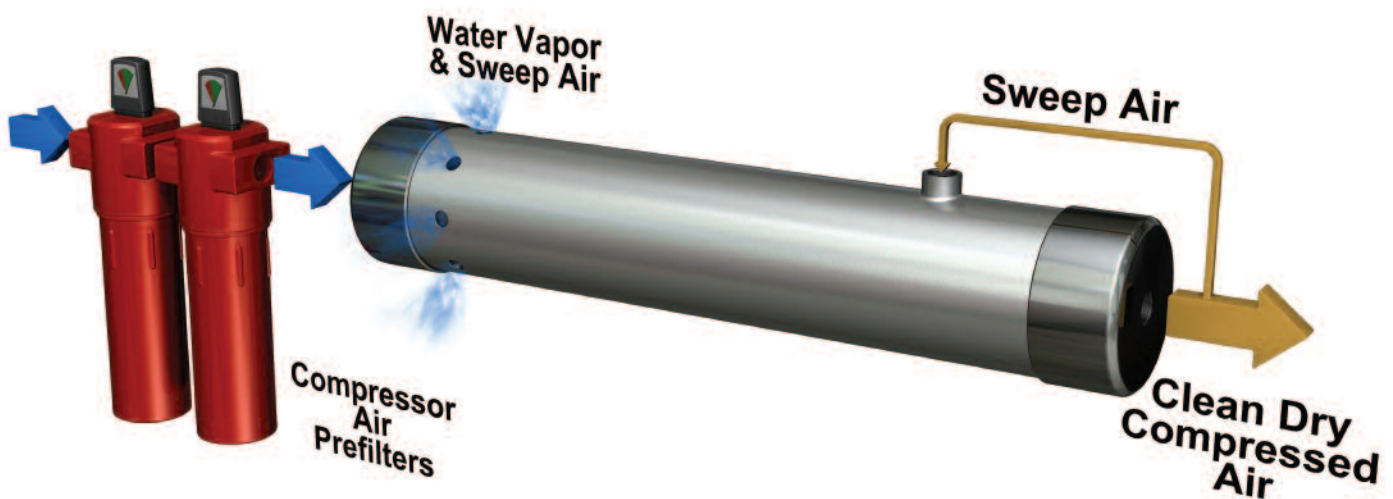
PERFORMANCE

- 35 - 40% savings in operating costs over traditional refrigerant air dryers
- Dew points for standard systems 13% dryer than amount achieved by refrigerant air dryers
- System designs available for -70°F dew points and ultra low hydrocarbon residuals in the compressed air

Generon® Point Source Dryers

APPLICATIONS

- ▲ Pneumatic Controls
- ▲ General Laboratory Air
- ▲ Analytical Equipment
- ▲ Low Dew Point Instrument Air
- ▲ Pneumatic Equipment
- ▲ Precision Pneumatic Instrumentation
- ▲ And Hundreds of Others



Product Flow SCFM at the Following Conditions

Model Number	100 psig 0°F Dew Point	100 psig - 40°F Dew Point	200 psig 0°F Dew Point	200 psig - 40°F Dew Point
GMD211	5.7	3	20.6	7.8
GMD212	11.4	6	41.2	15.6
GMD214	22.8	12	82.4	31.2
GMD216	34.2	18	123.6	46.8
GMD4101	46	24.6	167	63
GMD4102	92	49	334	126
GMD4103	138	74	501	189
GMD4104	184	98	668	252

* Above evaluated at Temperature of 80°F

LIMITATIONS

The use of any membrane dryer is affected by liquids in the air stream. Generon's point source dryers are ideally suited for air streams free of liquids. If heavy liquid contamination exists in the air stream, use Generon's Cabinet or Integrated Series Dryers.

Generon® Dehydration Cabinet Series

APPLICATIONS

Perfect for contaminated air streams with liquids present:

- Laboratories
- Laser Optics
- Print Shops
- Dry Boxes
- Packaging
- CNC Machinery
- Electronics
- Process Controls
- And Hundreds of Others

Optional Oil Vapor Removal Systems available for Applications requiring oil residuals to 10 PPB



Product Flow SCFM at the Following Conditions

Model Number	100 PSIG 0°F Dew Point	100 PSIG - 40°F Dew Point	200 PSIG 0°F Dew Point	200 PSIG - 40°F Dew Point
GMD4101	46	24.6	167	63
GMD4102	92	49	334	126
GMD4103	138	74	501	189
GMD4104	184	98	668	252
GMD4105	230	123	835	315
GMD4106	276	148	1002	378
GMD4107	322	172	1169	441
GMD4108	368	197	1336	504

* Above evaluated at a Temperature of 80°F

Generon® Large Scale Integrated Systems

APPLICATIONS

Same applications as in Point Source Dryers and Dehydration Cabinet Series except designed for larger requirements:

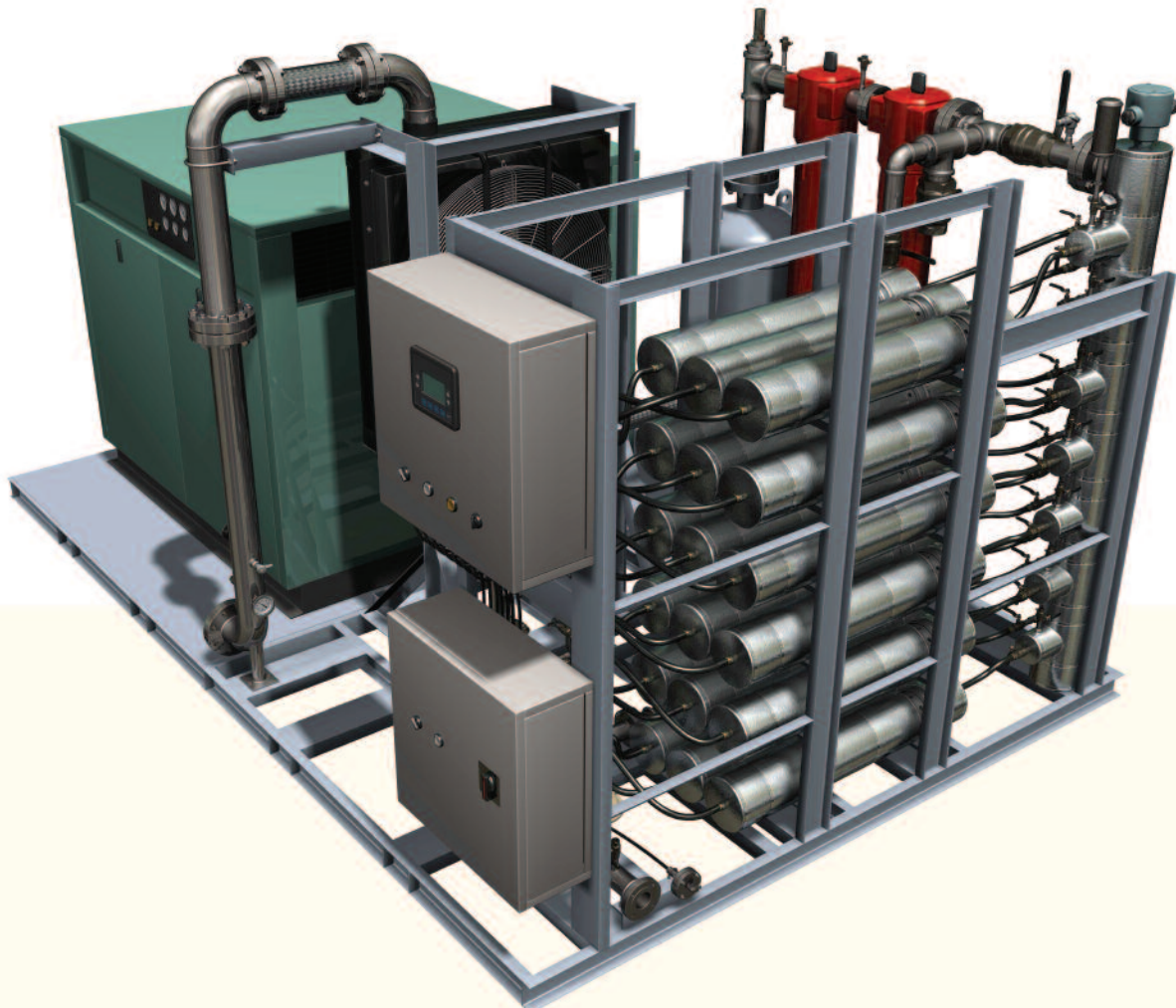
- Offshore Platforms
- Process Plants
- Large Painting Applications
- Food Storage & Packaging
- Pneumatic Conveying
- And Hundreds of Others

SELECTION

Systems are custom designed from 100 scfm to 5000 scfm at dew points to -70°F

Optional Features are:

- Air Compressors
- Aftercoolers
- Air Receivers
- Skid Mounting
- Oil Vapor Removal Systems to 10 PPB
- Hazardous Electrical Classifications



Dryer Design Considerations

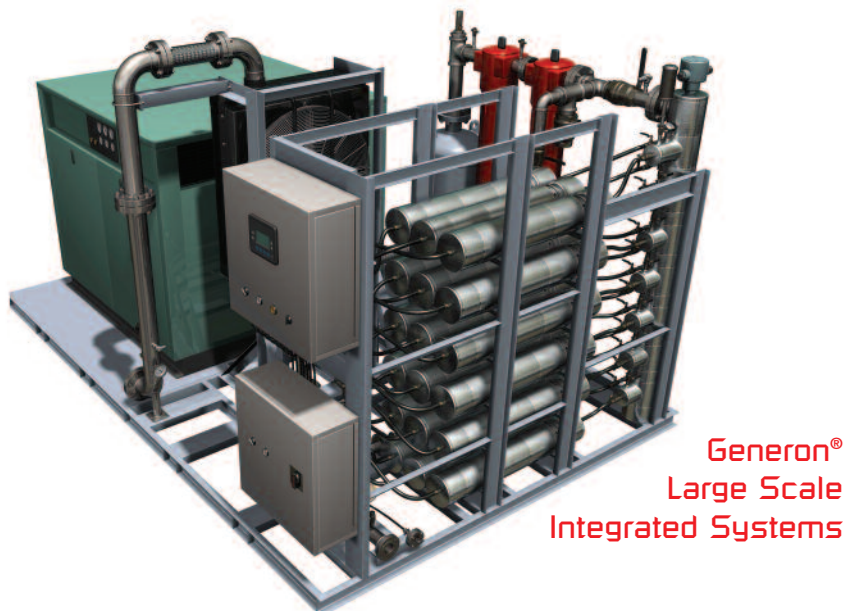
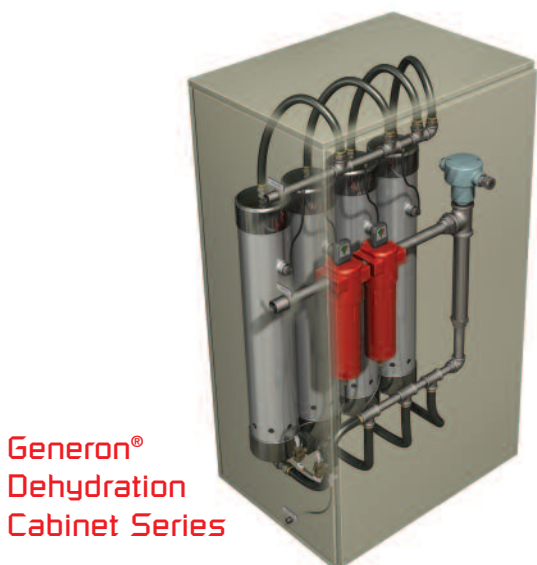
Dryer Attributes

- ▲ Advantages of a Generon® Compressed Air Dryer
 - No Refrigeration Compressor
 - No Complicated Tower Dryers
 - No Moving Parts
 - Small Space Requirement
 - 35 – 40% Savings in Operating Costs over Refrigerant Air Dryers

Design Dew Point

- ▲ The design dew point of the air dryer can be set for different operating conditions. Typical set points would be as follows:
 - 35°F* — This is the dew point achieved by the common refrigerated air dryer. This is a common set point utilized for most industrial settings.
 - 0°F — This dew point is utilized in Process Plants / Industrial settings to avoid freeze-ups in compressed air line.
 - -40°F — This dew point is specified for high quality instrument air.
- ▲ Select the dew point that best matches your requirements. Selecting the standard 35°F dew point over the -40°F dew point saves in sweep air and system sizing.

* Usually specified at operating pressure



IGS Generon® References, Standards and Track Record

Sampling of Customer Reference List

- ▲ ADM
- ▲ Aker Kvaerner
- ▲ Allied Signal
- ▲ AMEC
- ▲ Amerada Hess
- ▲ Aramco
- ▲ BASF
- ▲ Bayer
- ▲ Bechtel
- ▲ Bilnam
- ▲ BJ Services
- ▲ BOC
- ▲ BP
- ▲ Burk Royalty
- ▲ Celanese
- ▲ Chevron/Texaco
- ▲ Chiquita
- ▲ Conoco/Phillips
- ▲ Daewoo
- ▲ Dome Petroleum
- ▲ Dow Chemical
- ▲ Global Santa Fe
- ▲ Halliburton
- ▲ Hamworthy
- ▲ Hibernia
- ▲ Hoek Loos
- ▲ Hutchinson
- ▲ KBR
- ▲ Linde
- ▲ Lubrizol
- ▲ Mitsubishi Heavy Industries
- ▲ Modec
- ▲ Nestle
- ▲ Odra Gas
- ▲ Oilvest
- ▲ Pemex
- ▲ Rexroth
- ▲ Sener Petrol
- ▲ Sinopec
- ▲ Statoil
- ▲ Shell
- ▲ Transocean
- ▲ Unitor
- ▲ Weatherford

Industry Standards

- ▲ ASME
- ▲ CE
- ▲ ATEX/CENELEC
- ▲ DNV
- ▲ Lloyds Register
- ▲ CSA
- ▲ Bureau Veritas
- ▲ ABS
- ▲ Baseefa
- ▲ IEC/NEC
- ▲ NFPA RINA
- ▲ Class I Div 2
- ▲ Zone 2
- ▲ GOST
- ▲ Class NK
- ▲ Germanischer Lloyd
- ▲ NEMA/IP
- ▲ Customer Specifications

System History

- ▲ Over 22,000 Nitrogen/Dehydration Membranes Sold To Date
Including:
 - 100+ NPU Systems
 - 500+ Engineered Systems
 - 189+ Cabinet Systems



IGS INNOVATIVE GAS SYSTEMS

- ❑ Innovative Gas Systems is a global technology company with operational centers in North America, Europe and Asia.
- ❑ Our products are world class with over 75 patents supporting our innovative technology in Nitrogen/Dehydration membranes, Nitrogen PSA and Oxygen PSA/VPSA.
- ❑ Please visit our website for a review of the complete list of products from IGS or contact one of our local sales associates directly.



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