

# Heatless Regenerative Desiccant Dryers

## *Reliability and Performance*

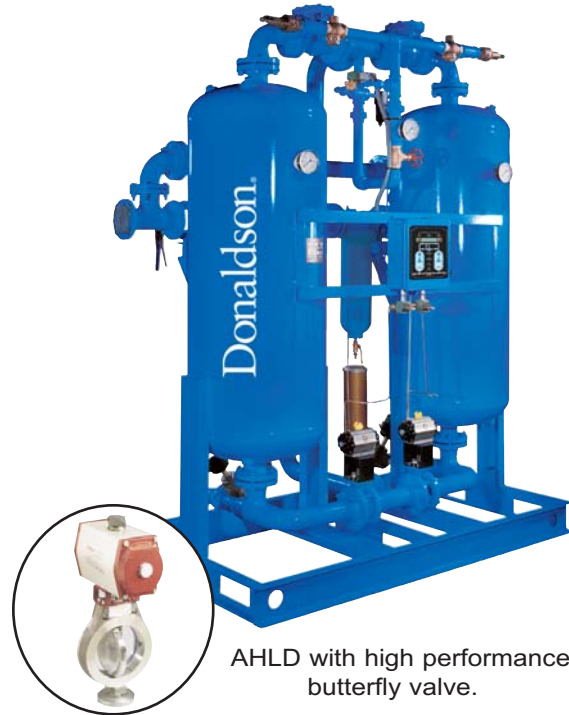
### **The Donaldson AHLD Series Heatless Desiccant Compressed Air Dryer**

is based on the traditional twin-tower concept. Donaldson is one of a few dryer manufacturers with the engineering and manufacturing capability and experience to design dryer systems of any size – with pressures up to 10,000 psig and volumes up to 20,000 scfm.

We can design to NEMA 1, 4, 7, and 12 requirements, as well as to national and special industry codes. One of our specialties is the design of corrosion-resistant stainless steel systems for use in chemical or pharmaceutical applications or for off-shore oil rigs.

### **Features**

- The auxiliary-piloted, two-way, angle-body piston valve carries a 10-year warranty on 80 to 600 scfm models.
- Tower pressure relief valves.
- Purge adjustment valve to control purge flow.
- Purge flow indicator.
- Purge exhaust mufflers for quiet operation.
- Tower pressure gauges.
- Stainless steel desiccant supports and air diffusers to prevent channeling.
- Adjustable (5 min., 10 min.) microprocessor controlled sequence module.
- Controlled repressurization.
- Reliable non-lubricated high-performance butterfly valve ( $\geq 750$  scfm models).
- Fail-safe design: failure of power and/or pilot air causes the purge exhaust valves to close.
- Control pilot air filter.
- Desiccant towers are designed and fabricated according to ASME code (6" vessels and larger).
- Desiccant fill and drain ports for ease of desiccant replacement.
- High quality, soft seat, check valves.
- Tower operating status lights.
- ON/OFF switch and power ON light.



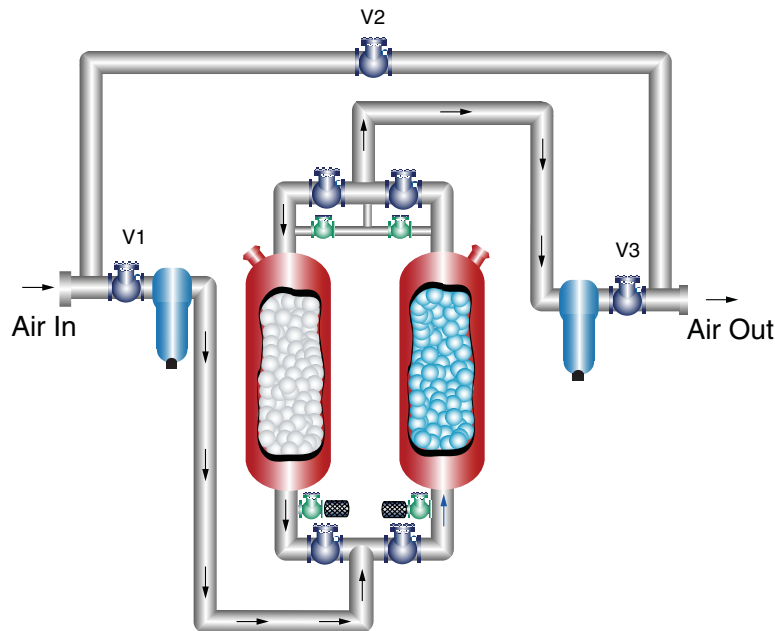
AHLD with high performance butterfly valve.

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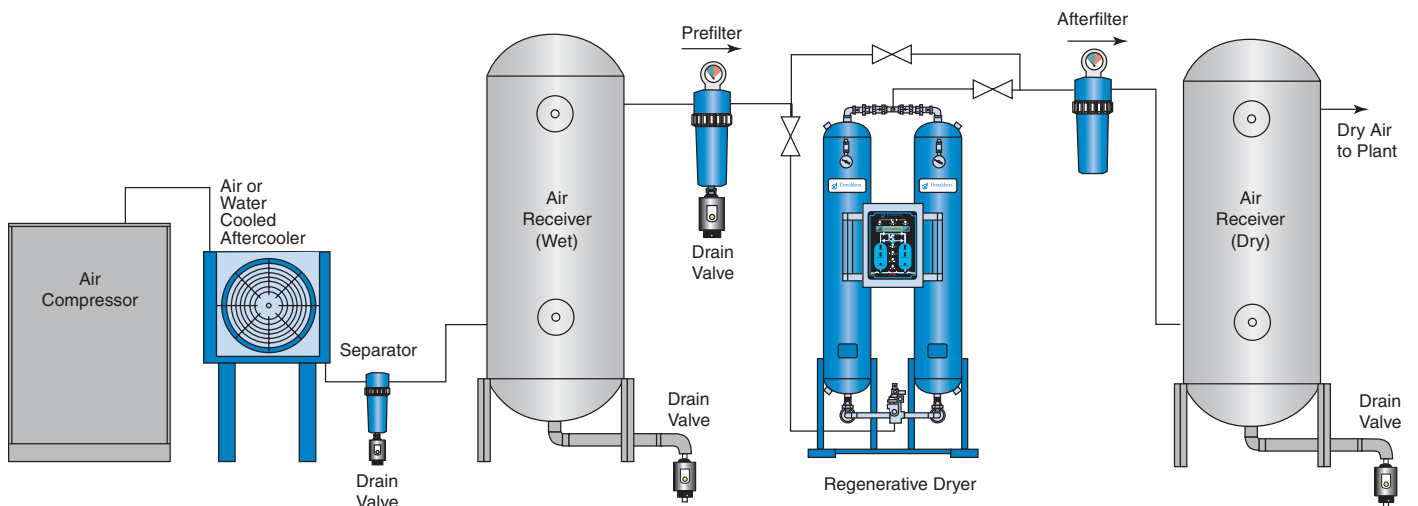
## How The AHLD Series Works

Hot, saturated compressed air is filtered in our 0.01 micron high-efficiency coalescing prefilter (recommended option) before entering the dryer. Our up-flow drying design with counter-current regeneration provides peak performance with the lowest possible energy consumption. The adjustable purge control valve allows for customized set up to minimize purge loss.

Stainless steel piston valves up to 600 scfm ensure long-lasting, trouble-free operation even in harsh conditions. Our high-efficiency particulate is recommended as an afterfilter to prevent any desiccant being carried downstream.



## Recommended Installation



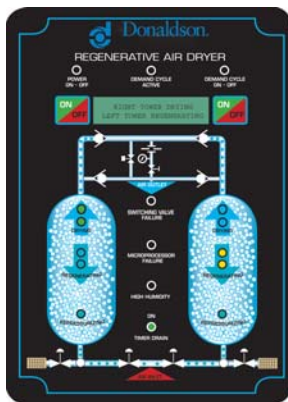
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## Energy-Saver Demand Cycle Control



The **optional energy-saver demand cycle control** reduces purge air consumption and optimizes dryer performance by monitoring the actual dew point at the outlet of the dryer.

- A.C.T. (Advanced Capacitive Transducer)
- Adjustable Demand Cycle Control set point
- Range: -130°C to +20°C dew point
- Accuracy: +/- 2°C
- Repeatability: +/- 0.5°C
- Alarm: SPDT, 1A @ 120 VAC
- Output: 0-10 VDC or 4-20 mA
- Enclosure: NEMA 4



**Microprocessor control panel with built-in timing module** indicates sequence of operation for both towers. Improves reliability and performance.

Dryer sequence indicators for ease of operation and troubleshooting listed below:

- Power ON/OFF switch and light
- Demand cycle ON/OFF switch and light
- Left tower drying light
- Right tower drying light
- Left tower regenerating light
- Right tower regenerating light
- Repressurization lights
- Timer drain light
- Common alarm dry contact
- Switching valve failure alarm (optional)
- Microprocessor failure alarm (optional)
- High humidity alarm (optional)



This **auxiliary-piloted, two-way, angle-body piston valve** features an extra-stable shaft with oversized bearings for extended service life and a pop-up button providing a visual indication of the valve position. They have been tested to over one million cycles and carry a 10-year warranty (80-600 scfm models).\*

\* Refer to warranty manual for details.