Legendary Heat-Les Pressure-Swing Desiccant Dryers

DHA Series
CDA Series
Since 1946, the world has turned to PNEUMATIC PRODUCTS for the quality and service demanded by the most critical of applications. Global leaders of industry require durable components that deliver unquestionable reliability. Our precision engineered components and designs, deliver outstanding service life and operational longevity. Invest in our experience and gain annuities that will grow for years.

Simplicity and Versatility - Legendary Design
PNEUMATIC PRODUCTS Heat-Les technology is the model of simplicity and the origin of the most common design in use today. DHA Series and CDA Series dryers offer versatility of application as they excel in hostile environments where corrosive, toxic or explosive elements exist.

Everyone knows, heat rises. Our legendary down flow drying process takes advantage of that principle in storing the heat of adsorption. In regeneration mode, a side-stream of dried process air with an affinity for moisture, leverages the heat of adsorption to dry the off-line desiccant chamber. Exceptional dew point stability to -100°F (-73°C) is achieved.

Patented Process Quality Valves - Engineered Simplicity
Standard off-the-shelf valves were not good enough for critical applications so we engineered our own. Tested under adverse conditions without failure in excess of 500,000 cycles, our full port, air-operated Select Series poppet valves feature stainless steel internals. Protected against wear, a friction-free PTFE coating is applied to all wear surfaces. Corrosion resistant and non-lubricated, these valves were engineered to withstand elevated temperatures, clogging, and erosion caused by abrasive desiccant dust. These are the best valves in the industry - period.

Patented Automated Moisture Load Control (AMLOC®)
Today’s air system auditors know that it is rare to find a dryer that operates under full-load conditions. That is why AMLOC® is standard equipment on every DHA Series and CDA Series dryer we build. AMLOC® energy management systems generate tens-of-thousands of dollars in energy saving annuities for industry leaders. Our PTFE coated stainless steel capacitance probes sense the dielectric strength imparted upon the desiccant by the extracted water vapor. Capable of identifying an aging or fouled bed, the heating and purge cycles are managed with precision. AMLOC® reduces cycle frequency to extend component life and ensures consistent dew points.
DHA Series and CDA Series - Key Product Features

Sensory Perception
AMLOC® Probe proven in over 25,000 applications.
Lifetime Warranty.
No calibration required.

Engineered Performance
Non-lubricated Select Series valves.
The ULTIMATE in reliability

AMLOC® Energy Optimizer
Synoptic indication of process phases
RS-232 Communications capable via PLC, computer or modem.
4 line X 80 character information center

PNEUMATIC PRODUCTS
How it Works
Moist, filtered compressed air enters down flow drying Chamber 1 via valve (A). Water vapor is adsorbed onto the desiccant and dry compressed air exits through valve (B) where, abrasive desiccant dust is captured by an afterfilter. In regeneration mode, a side-stream of dried process air (C) with an affinity for moisture, leverages the heat of adsorption to desorb off-line desiccant Chamber 2. Water vapor releases from the desiccant and evacuates through valve (D) where our spring loaded flow restrictor controls the rate of depressurization to prevent bed fluidization. Once desorbed, valve (D) closes and Chamber 2 is repressurized. No further energy will be consumed until AMLOC® determines the on-line bed is fully utilized. Whereupon, operations will switch and Chamber 1 will be regenerated.

AMLOC® governs this process with precision. Patented capacitance probes sense the dielectric strength water vapor imparts on the desiccant. Low moisture loads extend the drying cycle while eliminating energy use. Fewer flow reversals yields longer desiccant and valve life. Serious performance, reliability, and energy savings result as energy consumption mirrors plant air usage.

Product Features

AMLOC®
Probe Desiccant Moisture Indicator

Patented PTFE coated, stainless steel capacitance sensor

Premium grade activated alumina
Aquadex® Visual, Color Change

Energy Management System - Automatic Savings

Extended drying cycles - long component life
RS-232 port - communications capable

Operational History logs 20 events - simplifies troubleshooting

Sympotic display with active path flow illumination LEDs

AMLOC® Control System w/ AMLOC® Intelligence

Information Center

Back-lit LCD visual clarity in diverse lighting conditions
4 categories: Dryer Status, Service, History, Configuration
Warning & Alarm Lights

Alarm Failures: Depressurization, Repressurization, On-line Pressure, Warning: AMLOC® Failure, High Humidity

Service Reminders: Valves, Desiccant, Filters

Engineering Data

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<tr>
<th>Inlet Flow @ 100 psig, 100°F</th>
<th>DHA</th>
<th>CDA</th>
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<td>Approx. Weight, lbs.</td>
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<td>Inlet/Outlet Connections</td>
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<td>Mounted Filtration</td>
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<th>Models</th>
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SS = Standard     O = Option

Performance data per CAGI Standard ADF 200 for Dual Tower Regenerative Desiccant Compressed Air Dryer. Rating conditions are 100°F (37.8°C) inlet, 100 psig (6.9 bar) inlet pressure, 100% relative humidity, 100°F (37.8°C) ambient temperature.

Consult factory for sizing assistance. Larger models available.

Improvements and research are continuous at SPX Pneumatic Products. Specifications may change without notice.

Bulletin PIS-149_d

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SPX PNEUMATIC PRODUCTS

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