



SPX Air Treatment

Legendary Heat-Less Pressure-Swing Desiccant Dryers

DHA Series
CDA Series





The Original Heat-Les Drying Technology

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.

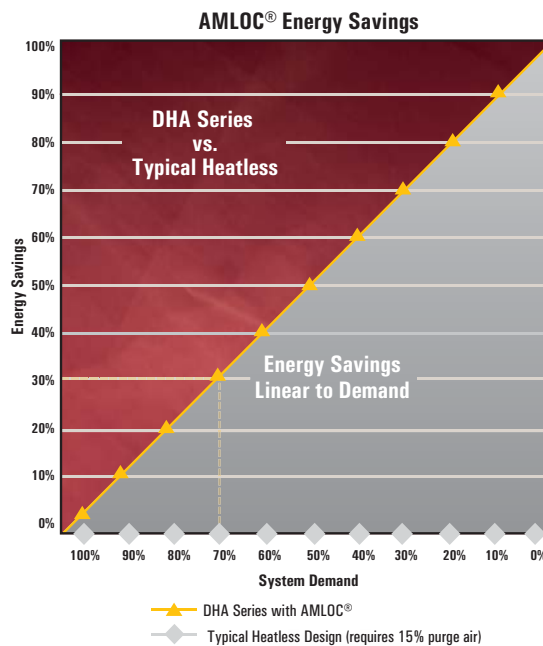
Patented Automated Moisture Load Control (AMLOC®)

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.

Annual Energy Savings

Average Demand	Typical Heatless Design (scfm)	Typical Heatless Design (cost of 15% purge)	DHA Series w/AMLOC® controls (cost of purge)	Energy Savings with DHA Series
100%	1200	\$23,526	\$23,526	
85	1020	23,526	19,997	\$3,529
70	840	23,526	16,468	\$7,058
50	600	23,526	11,763	\$11,763
35	420	23,526	8,234	\$15,292
20	240	23,526	4,705	\$18,821

Assumes 5 scfm per HP, 8760 hours of operation per year, 10 cents per kWh



DHA Series and CDA Series - Key Product Features



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



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

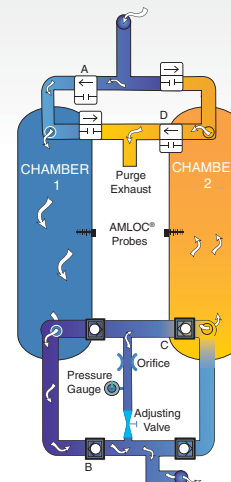


Functions, Features, and Specifications

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	Moisture Desiccant Indicator	ADC Control System w/ AMLOC® Intelligence				Information Center				Alarm Protection Parameters				
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 log stores 20 events - simplifies troubleshooting	Synoptic display with active path flow illumination LEDs	Class 1, Groups C & D, Division II	Back-lit LCD visual clarity in diverse lighting conditions	4 categories: Dryer Status, Service, History, Configuration	Warning & Alarm Lights	Alarm Failures: Depressurization On-line Pressure, Re-pressurization	Warning: AMLOC® Failure, High Humidity	Service Reminders: Valves, Desiccant, Filters
S	S	S	S	S	S	S	S	0	S	S	S	S	S	S
S=Standard O=Option														

Engineering Data

Models	Inlet Flow @ 100 psig, 100°F		Dimensions			Approx. Weight		Inlet/Outlet Connections		Mounted Filtration				
	DHA	CDA	inches			DHA	CDA	DHA	CDA	DHA		CDA		
	-40°F scfm	-100°F scfm	W	D	H	lbs.	lbs.	inches	inches	Prefilter	Afterfilter	Prefilter	Afterfilter	
60	30	60	31	38	30	57	344	1 NPT	½" NPT	100SU	100AF	35SU	35AF	
110	60	110	57	38	30	75	386	1" NPT	¾" NPT	150SU	150AF	60SU	60AF	
130	70	130	68	38	32	61	489	1½" NPT	1 NPT	150SU	150AF	100SU	100AF	
185	100	185	96	40	32	76	595	1½" NPT	1 NPT	275SU	275AF	100SU	100AF	
240	125	240	125	43	33	90	659	1½" NPT	1 NPT	275SU	275AF	150SU	150AF	
270	140	270	140	43	33	88	685	1½" NPT	1 NPT	275SU	275AF	150SU	150AF	
360	190	360	187	43	33	88	755	2 NPT	1½" NPT	400SU	400AF	275SU	275AF	
505	265	505	263	50	34	90	1,063	2½" NPT	1½" NPT	600SU	600AF	275SU	275AF	
630	330	630	328	53	34	91	1,407	2½" NPT	2" NPT	800SU	800AF	400SU	400AF	
760	400	760	395	58	35	91	1,873	2½" NPT	2" NPT	800SU	800AF	400SU	400AF	
900		900		73	45	106	2,022	3 FLG		1000SU	1000AF			
1200		1200		73	45	126	2,500	3 FLG		1200SU	1200AF			
1600		1600		69	72	119	3,200	3 FLG		1800SU	1800AF			
	500		500	53	33	115	1,780		2½" NPT				600SU	600AF
	600		600	55	33	102	2,050		2½" NPT				600SU	600AF
	750		750	55	33	113	2,375		2½" NPT				800SU	800AF
	900		900	55	33	127	2,575		3 FLG				1000SU	1000AF
	1200		1200	58	33	119	2,750		3 FLG				1200SU	1200AF

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.

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