



iDRY[®] HD

Heated Purge Desiccant Dryers



+ Features and Benefits

HIGHEST QUALITY COMPONENTS:
the use of only the best materials and components available guarantees reliability and ensures a sound, long term investment

COMPLETE PACKAGE SOLUTION:
dryers are designed as a complete solution to suit your application needs instead of the more common bit-by-bit approach

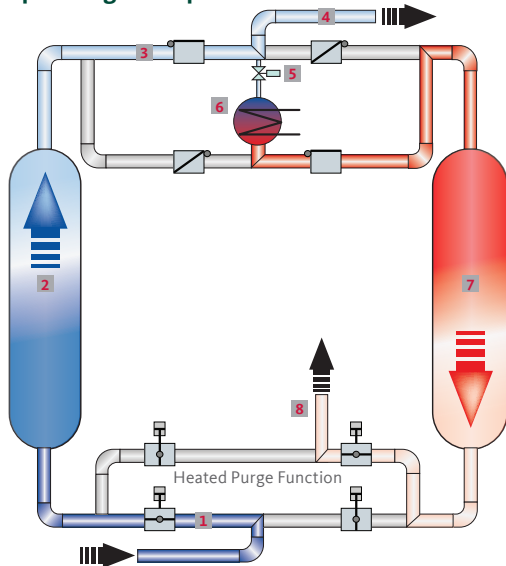
WORLDWIDE APPROVALS:
whether produced in the U.S., Europe or Asia they are built to meet the market specific requirements



INNOVATIVE DESIGNS:
three basic designs are highly configurable into a wide array of variants optimized for the customer's application

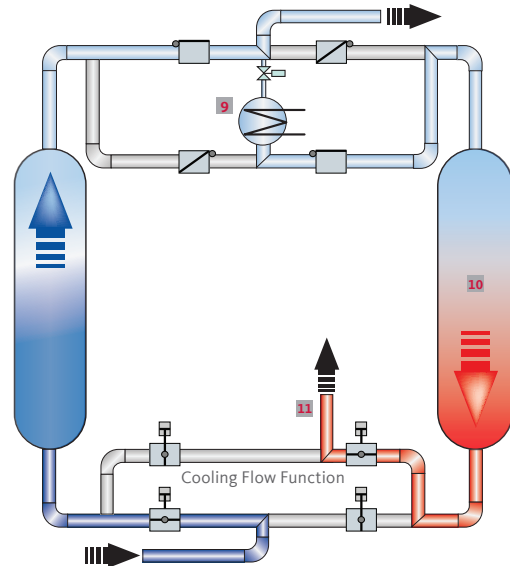
ENERGY OPTIMIZED SOLUTIONS:
dryer technologies ranging from demand controlled zero purge to heat of compression and combination dryer designs

+ Operating Principle



Adsorption Phase

Saturated compressed air enters the dryer through a required coalescing pre-filter (not pictured) and flows through the open inlet valve [1]. Air flows upward through the tower where the desiccant extracts and retains water vapor [2], thereby lowering the dew point, before exiting the top of the tower. The dry air passes through the outlet check valve [3] and passes through the particulate post-filter (not pictured) before exiting the dryer to the air distribution system [4]. A small amount of dry air is diverted from the outlet flow of the drying tower to be used in regenerating the other tower. This diverted air is controlled by the adjustable purge valve [5].



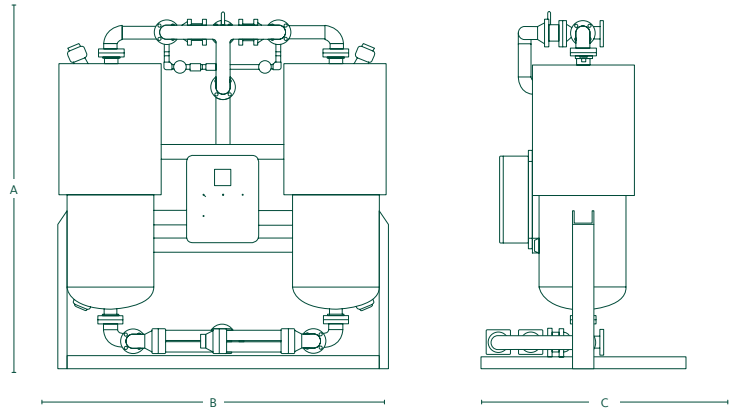
Regeneration Phase

The purge air flows through an in-line heater [6] thereby reducing the amount of purge required to complete the regeneration process. The purge air flows into the regenerating tower at near atmospheric pressure. This heated, dry air flows downward through the tower [7], absorbing water from the moisture laden desiccant, before exiting near the bottom of the tower. This moist purge air passes through the purge exhaust valve and is vented to open atmosphere [8] through the muffler. After a set amount of time, the heater turns off [9], the purge air is cooling the heater and desiccant bed [10]. After a pre-established amount of time the exhaust valve closes [11], re-pressurizes the vessel. The air flow through the dryer will then reverse, turning the drying tower into the regenerating tower.

iDRY® HD Heated Purge Desiccant Dryers

with PLC controller and optional insulation

Standard pressure dew point	-40 °F
Optional pressure dew point	-100 °F (on request)
Approx. purge air consumption	5-7% at 100 psig / -40 °F
Min. / Max. operating pressure	60 / 150 psig
Optional operating pressure	250 psig
Min. / Max. air inlet temperature	40 °F / 130 °F
Min. / Max. ambient temperature	40 °F / 120 °F
Electrical power supply	460 Vac / 3 Ph / 60 Hz



iDRY® HD	iDHD 70	iDHD 130	iDHD 180	iDHD 260	iDHD 355	iDHD 460	iDHD 575
Connection size (NPT)	¾"	1"	1"	1½"	1½"	2"	2"
Flow Rate (scfm)	70	130	180	260	355	460	575
Dimension data							
A (inches)	72	72	90	90	90	96	96
B (inches)	50	54	54	58	54	62	72
C (inches)	22	24	36	24	26	42	30
Weight (lbs)	475	600	700	850	1000	1250	1600
Fill per column (lbs)	50	90	125	180	245	320	400

iDRY® HD	iDHD 720	iDHD 1010	iDHD 1300	iDHD 1725	iDHD 2350	iDHD 3250	iDHD 4050
Connection size (NPT)	2½"	3" Flange	3" Flange	4" Flange	4" Flange	6" Flange	6" Flange
Flow Rate (scfm)	720	1010	1300	1725	2350	3250	4050
Dimension data							
A (inches)	96	96	96	110	111	120	120
B (inches)	68	52	92	92	104	130	144
C (inches)	38	42	56	48	54	56	60
Weight (lbs)	1800	2300	3800	4600	6200	7900	9800
Fill per column (lbs)	500	700	900	1200	1650	2250	2800

Correction Factor

Operating Pressure (psig)	60	70	80	90	100	110	120	130	140	150
Correction Factor	.65	.73	.82	.91	1.00	1.09	1.18	1.27	1.35	1.44
Inlet Air Temperature °F	90	95	100	110	115	120				
Correction Factor	1.15	1.06	1.00	.82	.60	.51				

Subject to technical errors, changes, omissions and/or corrections without prior notice.