



Blower Purge Desiccant Compressed Air Dryers

ZP SERIES

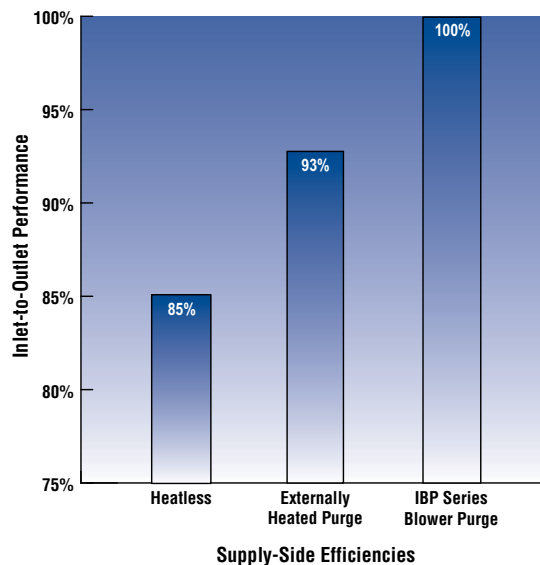


ZP Series Dryers Produce 100% Efficient Air Systems

Since 1948, compressed air users have relied on Hankison to provide compressed air treatment solutions for applications around the world. ZP Series dryers improve air system efficiency by the use a dedicated axial blower, instead of a percentage of dehydrated purge air, to regenerate the off-line desiccant tower. ISO 8573.1 Class 2 (-40°F/-40°C) dew point performance is guaranteed.

Reduce Energy Consumption

As the air compressor is the most costly system component to purchase and, it uses more electrical energy than the rest of system combined, it is wise to ensure that the smallest air compressor is installed. ZP Series dryers are 100% efficient at delivering full supply-side compressor capacity. Therefore, users benefit from the ability to purchase a less expensive air compressor and, a 20% reduction in compressor operating costs.



Eliminate Costly Compressed Air Loss

Global competition, spiraling energy costs and, the challenge to “do more, with less” require manufacturers to closely examine operating costs. Compressed air generation tends to be the most costly utility within a facility. Eliminate air loss to align supply-side equipment with demand-side requirements to optimize your air system.

Demand-Side Impact on Supply-Side Dryer Types

Plant Air Demand	Dryer Types	Air Volume Required to Meet Demand	Air Compressor Needed to Meet Air Volume		Preferred Supply-Side Solution	
(scfm)	(efficiency)	(scfm)	(HP)	(scfm)	(Dollars)	
ZP Series						
Blower Purge (100%) 1000		1,000	200	1,000	\$0	Yes
Heated Purge	(93%)	1,075	250	1250	\$11,436	No
Heatless (85%)		1,176	250	1250	\$24,506	No

* Assumes 5 scfm/HP, 8760 hours of operation per year, 10 cents per kW/h

ISO 8573.1 Quality Classes

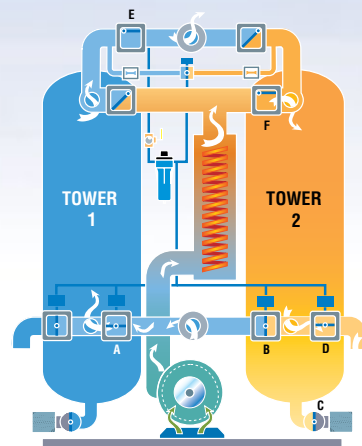
Class	Solid Particles, (d mm)			Pressure Dew Point		Oil, Aerosol, Liquid Vapor	
	0.10 < d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0	°C	°F	mg/m³	ppm w/w
0	As Specified			As Specified		As Specified	
1	100	1	0	≤ -70	-94	≤ 0.01	0.008
2	100,000	1,000	10	≤ -40	-40	≤ 0.1	0.08
3	–	10,000	500	≤ -20	-4	≤ 1	0.8
4	–	–	1,000	≤ +3	38	≤ 5	4
5	–	–	20,000	≤ +7	45	> 5	> 4
6				≤ +10	50		
				Liquid Water g/m³			
7				C _w ≤ 0.5			
8				0.5 < C _w ≤ 5			
9				5 < C _w ≤ 10			
Per ISO 8573-1: 2001(E)							

The Deltech Guarantee

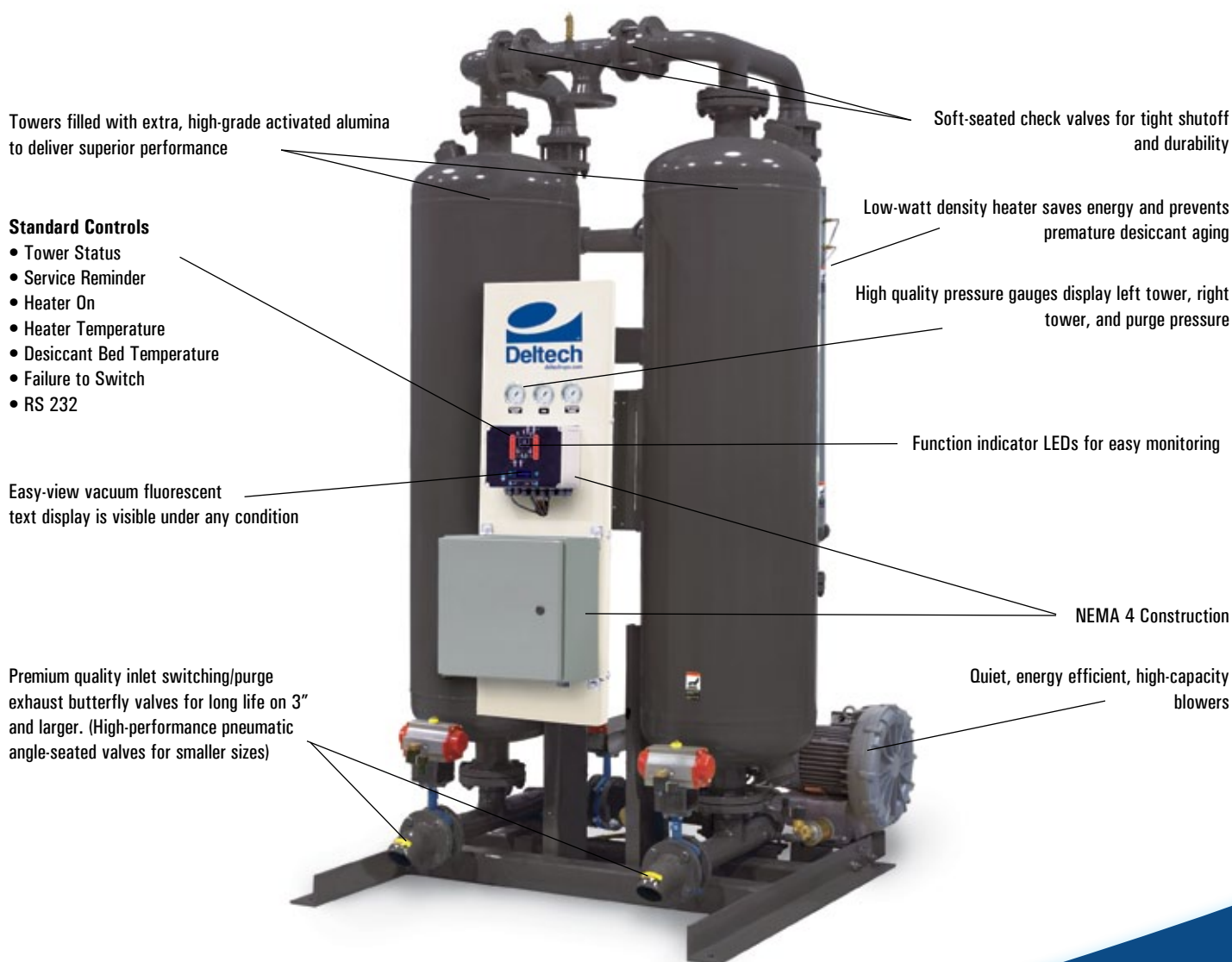
Deltech guarantees that ZP Series dryers will produce the design dew point while operating continuously at maximum rated flow (100% duty cycle) at CAGI ADF 200 inlet standards of 100°F inlet temperature and 100% relative humidity at 100 psig.

How it Works

Filtered compressed air enters on-line desiccant-filled, drying Tower 1 through valve (A). Up-flow drying enables the desiccant to strip moisture from the air stream. Clean, dry compressed air exits through (E) to feed the air system. Tower 2 (shown in regeneration mode) valve (B) closed, depressurizes to atmosphere through muffler (C). Valves (D & F) open and the heater turns on. The high-efficiency blower draws ambient air and feeds it through the heater. The ambient air stream passes through valve (F) and flows downward through the moist desiccant in Tower 2, collecting water vapor before exiting valve (D). Once the desiccant is fully desorbed, the heater turns off. Valve (D) closes and Tower 2 is repressurized. At a fixed time interval, valve (B) will open and Tower 2 will be placed on-line to dry the bed and valve (A) will close. Operations will switch and Tower 1 will be regenerated.



Engineered Efficiency and Performance



Specifications

Product Features

Controller	Pressure	EMS		Vacuum		Languages	Power	Dry	Overlay w/	Circuit Graphics & LED Indicators			Options	
Model	Dew Point	Control		Fluorescent	Text		Recovery	Contacts		Alarm LEDs with Text Display				
	ISO Class 2 -40°F (-40°C)	Automatic Energy Savings	Digital Dew Point Monitoring	High Humidity Alarm	2 Line, 16 Characters (high-visibility in darkness or sunlight)	English Spanish French	Automatic Restart after Power Loss	Remote Indication of Alarm	Tower Status (drying switchover heat, cool, etc.)	Tower Switchover, Failure (low heater temp/ high heater temp)	Sensor Over-range & Under-range	Service Reminder	Vessel Insulation	Mounted Pre- and Afterfilters
Standard	S	—	—	—	S	S	S	S	S	S	S	S	0	0
Option A	S	S	—	S	S	S	S	S	S	S	S	S	0	0
Option B	S	S	S	S	S	S	S	S	S	S	S	S	0	0
S = Standard 0 = Option														

Engineering Data

Model	Inlet Flow @ 100 psig, Blower 100°F	Heater Rated Output	Average	Dimensions (inches)			Approx. Weight	Inlet/Outlet Connections	HF Series Prefilter	HTA Series Afterfilter
	scfm	kW	kW	W	D	H	lb	inches		
ZP500	500	1.6	10	10.1	53	70	105	1866	2" NPT	HF5-44-20-DG HTA600
ZP600	600	2.5	12	12.7	55	71	108	2111	2" NPT	HF5-44-20-DG HTA600
ZP750	750	2.2	14	14.8	60	83	114	2456	3" FLG	HF5-48-20-DG HTA1200
ZP900	900	2.0	16	16.2	60	83	114	2472	3" FLG	HF5-54-24-G HTA1200
ZP1050	1050	2.8	19	19.2	64	84	113	2981	3" FLG	HF5-56-24-G HTA1200
ZP1300	1300	5.3	23	25.7	66	85	118	3576	3" FLG	HF5-60-24-G HTA1800
ZP1500	1500	7.5	28	32.8	80	93	116	5359	3" FLG	HF5-60-24-G HTS1800
ZP1800	1800	7.0	32	35.4	80	93	116	5359	3" FLG	HF5-60-24-G HTA1800
ZP2200	2200	5.6	39	41.9	85	104	124	8018	4" FLG	HF5-64-4F-G HTA2400
ZP2600	2600	10.3	45	50.7	85	104	124	8123	4" FLG	HF5-68-4F-G HTA3000
ZP3200	3200	2.8	53	52.5	97	117	121	9333	6" FLG	HF5-72-6F-G HTA4800
ZP3600	3600	4.0	58	59.4	97	117	128	9833	6" FLG	HF5-72-6F-G HTA4800
ZP4300	4300	4.4	70	70.4	105	130	124	12350	6" FLG	HF5-72-6F-G HTA4800

1 Performance data per CAGI Standard ADF 200 for Dual-Stage 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, and 5 psi (0.35 bar) pressure drop.

* Consult factory for larger models.

Table 1

Pressure psig (bar)	Inlet Temperature °F (°C)					
	60 (15.6)	70 (21.1)	80 (26.7)	90 (32.2)	100 (37.8)	120 (48.9)
60 (4.2)	1.03	1.01	0.99	0.80	0.58	0.32
70 (4.9)	1.10	1.08	1.07	0.94	0.68	0.37
80 (5.6)	1.17	1.15	1.14	1.08	0.79	0.43
90 (6.3)	1.24	1.22	1.20	1.18	0.89	0.49
100 (7.0)	1.30	1.28	1.26	1.24	1.00	0.55
110 (7.7)	1.36	1.34	1.32	1.30	1.11	0.61
120 (8.4)	1.42	1.40	1.38	1.36	1.22	0.67
130 (9.1)	1.48	1.46	1.44	1.42	1.33	0.74
140 (9.8)	1.53	1.51	1.49	1.47	1.44	0.80
150 (10.6)	1.58	1.56	1.54	1.52	1.50	0.87

Inlet Flow

Inlet Flow capacities shown in the Specifications Table have been established at an inlet pressure of 100 psig (7 bar) and a saturated inlet temperature of 100°F (38°C). To determine maximum inlet flow at other conditions, multiply the inlet flow from the Specifications Table by the multiplier from Table 1 that corresponds to your operating conditions.

Dew Point

Outlet pressure dew point at rated inlet conditions of 100 psig (7 bar) and 100°F (38°C) saturated. Dew point varies slightly at other conditions. Consult the factory to determine exact outlet pressure dew point at your operating conditions.

Operating Conditions

ZP Models	max. working press. psig	min. operating press. psig	max. inlet air temp.	min. inlet air temp.	max. ambient temp.	min. ambient temp.
500-4300	150	60	120°F	40°F	120°F	40°F



SPX FLOW TECHNOLOGY
1000 PHILADELPHIA STREET
CANONSBURG, PA 15317-1700 U.S.A.
TEL | 724 | 745 | 8647
FAX | 724 | 745 | 4967
deltech.inquiry@spx.com
www.deltech-spx.com
www.spxft.com

SPX FLOW TECHNOLOGY CANADA
1415 CALIFORNIA AVENUE
BROCKVILLE, ON, CANADA, K6V 7H7
TEL | 800 | 267 | 3884
FAX | 613 | 345 | 7240
salescanada@spx.com
www.deltech-spx.com
www.spxft.com



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Bulletin TC_01/2011

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