TRIDENT

Compressed Air Dryers

TH Series Twin Tower Heatless Desiccant Air Dryer

Moisture in compressed air is more than a nuisance, it's a threat. Water vapor can corrode pipelines, damage pneumatic equipment, ruin finished products, and disrupt production. In industries where clean, dry air is essential, even a small amount of moisture can lead to downtime, costly maintenance, or product contamination.

The TH Series heatless twin tower desiccant dryers provide a reliable, energy-efficient way to deliver ultra-dry compressed air. Engineered for performance, they remove water vapor to dew points as low as -40°F (standard) or -94°F (optional), protecting sensitive equipment and processes. With rugged construction, low pressure drop, and proven desiccant technology, TH Series dryers are ideal for critical applications where uptime and air quality matter most.

Benefits

High Quality Valves

The TH range uses pneumatically operated angle-body piston valves with stainless steel internals and Teflon™ seats for reliable, field-proven performance. These two-way valves, found on 70 to 750 scfm models, feature pneumatic actuators that provide precise control and a bubble-tight seal without rubber components. Their rugged stainless steel disks and Teflon™ seats, combined with a low-pressure drop design, ensure efficient and durable operation.

Advanced PLC Control

Housed in a NEMA 4 panel, it offers key indicators like power status, run hours, and service alerts. Built-in memory ensures seamless cycle recovery after power loss, while compressor synchronization reduces energy waste by eliminating purge loss when drying isn't needed. The 1000 scfm model includes a premium controller as standard.

Robust Design

Built from heavy-duty aluminum and steel, the TH Series is designed for tough industrial environments. Each unit features ASME-coded pressure vessels, UL/cUL compliance, and USA-made activated alumina desiccant. Lifting lugs and forklift pockets ensure easy handling and installation.

Energy Savings

The Energy Saving Dew Point Control option uses a built-in sensor to continuously monitor outlet dew point and adjust the drying cycle based on actual moisture levels. This optimizes purge air usage, reducing energy consumption across all dryer styles.

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Product Specifications

Ordering Part No.	Inlet & Outlet (1)	Rated Flow (2)	Dimensions (Inches)			Weight (3)	Recommended Pre Filter	Recommended After Filter
	NPT (F) / (Flg)	SCFM	A	B	C	lbs	Ordering Part No.	Ordering Part No.
8102 4055 00	¾"	70	30.5	22.6	71.5	275	8059 2402 37	8059 2402 36
8102 4065 00	1"	100	34.0	25.5	74.0	300	8059 2402 37	8059 2402 36
8102 4075 00	1"	150	34.0	25.5	74.0	415	8059 2402 37	8059 2402 36
8102 4085 00	1 ½"	200	38.5	32.8	83.5	540	8059 2402 40	8059 2402 39
8102 4095 00	1 ½"	250	38.5	32.8	83.5	590	8059 2402 40	8059 2402 39
8102 4105 00	1 ½"	300	48.0	35.5	84.1	600	8059 2402 40	8059 2402 39
8102 4115 00	2"	350	48.8	42.3	84.4	735	8059 2402 43	8059 2402 42
8102 4125 00	2"	450	48.8	42.3	84.4	1000	8059 2402 43	8059 2402 42
8102 4135 00	2"	500	50.8	42.3	86.4	1100	8059 2402 43	8059 2402 42
8102 4145 00	2"	600	50.8	42.3	86.5	1300	8059 2402 74	8059 2402 73
8102 4155 00	2"	750	53.0	42.3	87.7	1500	8059 2402 46	8059 2402 45
8102 4165 00	3"	1000	66.0	61.0	94.8	2600	8059 2402 46	8059 2402 45

Specifications	Standard	Optional
Maximum particle size (ISO class)	class 2	class 1
Maximum water content (ISO class)	class 2	–
Minimum / design / maximum operating pressure range (psig)	60 / 100 / 180	58 to 250
Minimum / design / maximum ambient temperature (°F)	38 / 100 / 120	20 / 100 / 120
Minimum / design / maximum inlet temperature (°F)	38 / 100 / 120	–
Power supply requirements	115V / 1Ph / 60Hz	230V / 1Ph / 60Hz & 12V DC

Pressure Correction Factors(6)									
Operating pressure (psig)	60	70	80	90	100	110	130	140	150
Correction factor	0.65	0.74	0.83	0.91	1.00	1.04	1.12	1.16	1.20

Temperature Correction Factors (6)								
Inlet temperature (°F)	70	80	90	100	105	110	115	120
Correction factor	1.12	1.10	1.06	1.00	0.93	0.86	0.80	0.75

(1) 2" and below are NPT(F) threaded. 3" and above are flanged. All units with 3" piping and above will be ANSI welded pipe

(2) At inlet conditions of 100 psig and 100°F. For all other conditions refer to the correction factors or Trident Pneumatics at support@airandgassolutions.com.

(3) Approx. weight for all models does not include desiccant installed.

(4) Per ISO 8573.1:2010

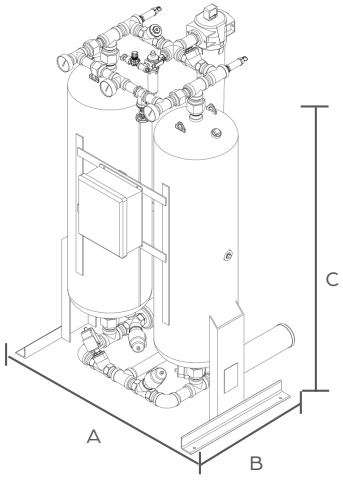
(5) Maximum working pressure for all models is 180 psig. For higher pressures, contact Trident Pneumatics at support@airandgassolutions.com.

(6) To be used as a rough guide only. All applications should be confirmed by Trident Pneumatics. Contact Trident Pneumatics for sizing assistance.

(7) All models are UL/cUL compliant

(8) All models have ASME coded pressure vessels. CRN vessels for models 8102 4165 00, and smaller. For other approvals, consult Trident Pneumatics at support@airandgassolutions.com.

(9) For sizes above 1000 scfm and pressure below 60 psig, please contact Trident Pneumatics at support@airandgassolutions.com.



Charlotte, North Carolina, USA
Phone: +704 897 2182
Email: support@airandgassolutions.com

St. Catharines, Ontario, Canada
Phone: +905 684 6266
Email: canadasupport@airandgassolutions.com

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