



Dry Air Saves Money

Wet compressed air is damaging to tools, instruments, controls and machinery. Moving parts and small orifices are particularly susceptible to damage from dirt and corrosion. This results in erratic operation, reduced productivity, and downtime.

Air/Tak Refrigerated Air Dryers remove water and contaminants before they can damage your equipment or disrupt operations. The dryers supply clean, dry air with a low-pressure dew point so:

- Machines work better
- Operations run more efficiently
- Equipment last longer with less maintenance

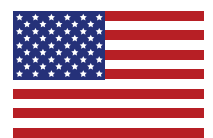
Air/Tak is a family-owned company with over 35 years of experience as a manufacturer of compressed air system products. We offer a broad range of products as well as customized engineered solutions.



Our Warranty Ensures Lasting Satisfaction

Air/Tak dryers are all made in the USA and are of the highest quality and reliability. SD and BDA Series dryers have an all-inclusive warranty policy of five (5) years from date of shipment (excluding drain valves, fan motors, and unusual circumstances). D Series dryers are backed by a twelve (12) month warranty from date of shipment on parts and labor (excluding drain valves) and for parts only for a period of two (2) years (excluding drain valves and fan motors). Our field-proven heat exchangers are backed by a five (5) year pro-rated warranty.

Made in



All dryers are American made in our manufacturing facility in Worthington, PA.



SD & BDA Series Refrigerated Air Dryers

All SD & BDA models have a compact design, enclosed in a high-quality, powder-coated, welded metal cabinet. They are engineered with a float type (automatic) mechanical separator to separate the condensed fluid from the compressed air circuit at the coldest point. All heat exchangers are fully-insulated to maximize heat transfer and prevent condensation within the cabinet.

SD Series dryers are offered in sizes 10 to 40 SCFM and are designed for smaller flows. They use a direct heat transfer method using copper tube evaporators or pre-cool/re-heat heat exchangers. In models 10 and 20 SCFM, a fluted tube acts as the compressed air cooler. In models 30 and 40 SCFM, the copper-fluted tube air-to-air heat exchangers pre-cools and reheats the air to reduce refrigeration capacity. All SD series heat exchangers are packaged using tightly-foamed insulation.

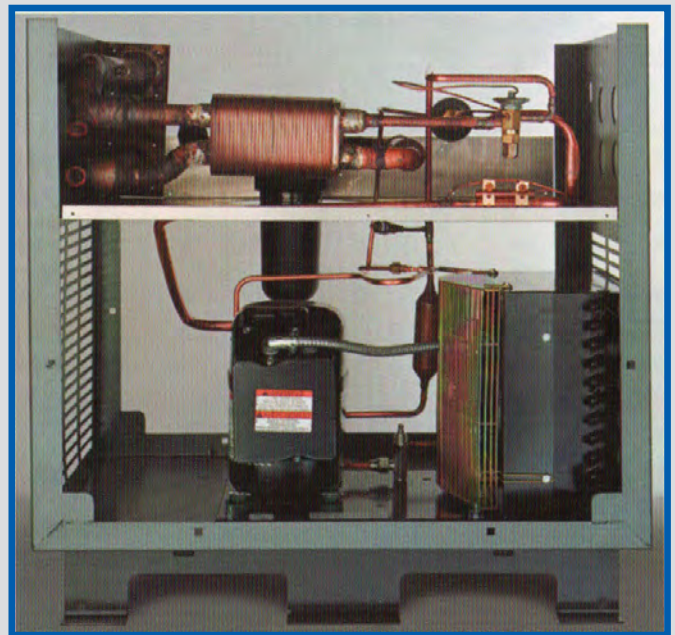
Standard Equipment:

- On/Off Switch
- Power On Indicator Light
- Moisture Separator/Automatic Drain
- Refrigerant Suction Pressure Gauge (**SD-30-A to BDA-200**)
- Six-foot Power Cord (*SD-10-A to BDA-100*)
- Electrical Terminal Block (*BDA-150 to BDA-200*)
- Air-to-Refrigerant Tube-in-Tube Copper Heat Exchanger, no reheat (*SD-10-A & SD-20-A*)
- Air-to-Air and Air-to-Refrigerant Tube-in-Tube Copper Heat Exchanger, with reheat (*SD-30-A & SD-40-A*)
- Air-to-Air and Air-to-Refrigerant Brazed Plate Stainless Steel Heat Exchanger (*BDA-50 to BDA-200*)

Optional Equipment:

- Ambient Air Filter
- Solenoid Drain Valve
- Inlet Air Temperature Gauge
- Outlet Air Temperature Gauge
- Coalescing Prefilters and Afterfilters
- Refrigerant Suction Pressure Gauge (*SD-10-A & SD-20-A*)

BDA Series dryers are also designed for smaller flows. The BDA model is offered in sizes 50 to 200 SCFM. They incorporate a direct heat transfer method using 316 stainless steel brazed plate heat exchangers. These models have a precool/reheat feature to maximize and optimize heat transfer.



Brazed Plate Heat Exchanger

SD-10 to BDA-200 Size and Specifications

Specifications ¹				Dimensions (inches) ¹				Electrical Data			Filters ⁴	
Model No.	Comp. HP	Rated Capacity (SCFM) ²		Inlet Outlet Conn.	Width	Depth	Height	Main Power ³	Control Power	Run Load Amps (RLA)	Prefilter	Afterfilter
		Pressure Dew Point										
		38°F	50°F									
SD-10-A	1/6	10	12	3/8	15 1/4	12	14	115/60/1	115/60/1	3.36	F03-GP30	F03-C30
SD-20-A	1/5	20	24	1/2	16 1/4	15	14	115/60/1	115/60/1	4.85	F04-GP60	F04-C60
SD-30-A	1/5	30	36	3/4	17 3/4	19	18 1/2	115/60/1	115/60/1	4.85	F06-GP120	F06-C120
SD-40-A	1/4	40	50	3/4	17 3/4	19	18 1/2	115/60/1 230/60/1	115/60/1	5.76 3.03		
BDA-50	1/4	50	60	3/4	17 3/4	19	18 1/2	115/60/1 230/60/1	115/60/1	5.76 3.03		
BDA-75	1/2	75	90	3/4	17 3/4	19	18 1/2	115/60/1 230/60/1	115/60/1	10.03 5.07	F10-GP150	F10-C150
BDA-100	1/2	100	120	1	17 3/4	19	18 1/2	115/60/1 230/60/1	115/60/1	10.03 5.07		
BDA-150	3/4	150	180	2	20 1/4	25	24	115/60/1 230/60/1	115/60/1 230/60/1	14.4 7.7	F12-GP300	F12-C300
BDA-200	1	200	240	2	20 1/4	25	24	230/60/1	230/60/1	8.1		

1) Subject to change without notice.
 2) Capacities are based on 100°F Inlet Air and Ambient Air Temperatures, and 100 PSIG Inlet Air Pressure.
 3) Consult factory for other Main Power applications.
 4) Filter codes: GP - General Purpose, C - Coalescing.

Selecting the Right Model

Using the specifications columns, read down the column to the nearest SCFM capacity that exceeds the required flow. The number indicates rated capacity in SCFM at standard rated conditions. "A" in the dryer model number indicates air-cooled units. For conditions other than standard rated, use correction factor charts below. The standard conditions for rated capacities comply with ANSI/CAGI ADF 100 (*Refrigerant Compressed Air Dryers-Methods for Testing and Rating*).

For inlet air temperature, apply the following correction factors to rated capacity:

• 90°F inlet air	1.20
• 100°F inlet air	1.00
• 110°F inlet air	0.80
• 120°F inlet air	0.70

For ambient air temperature, apply the following correction factors to rated capacity:

• 80°F ambient air	1.10
• 90°F ambient air	1.05
• 100°F ambient air	1.00
• 110°F ambient air	0.95

For inlet air pressure, apply the following correction factors to rated capacity:

• 50 PSIG	0.85
• 100 PSIG	1.00
• 125 PSIG	1.05
• 150 PSIG	1.10



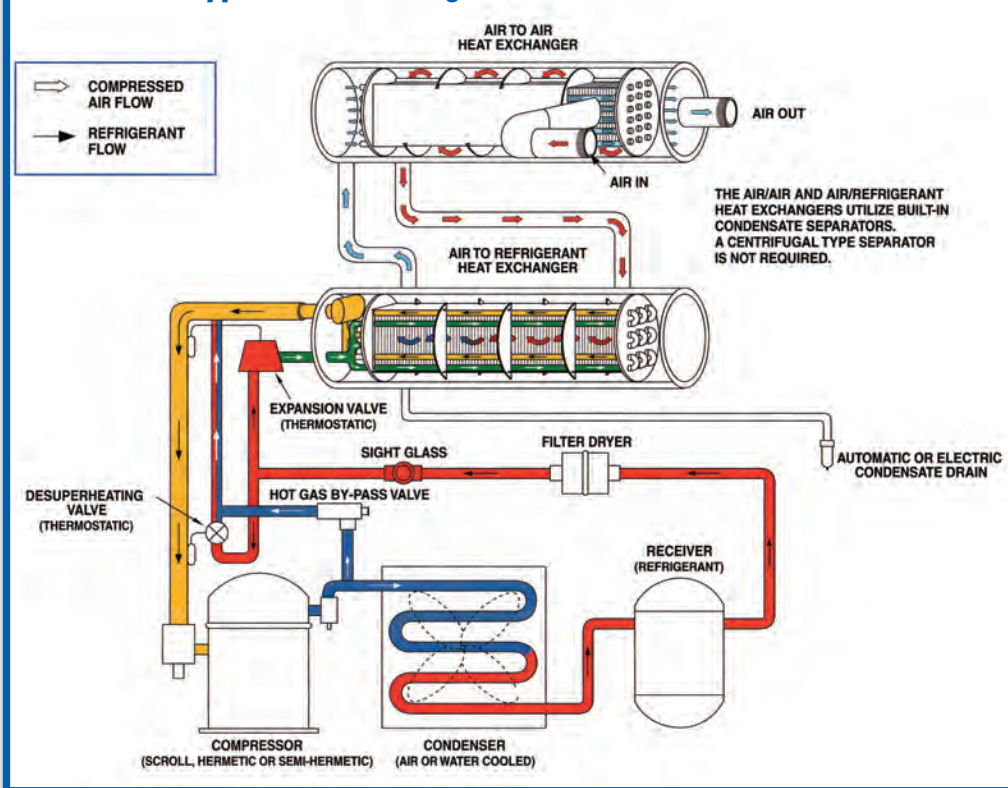
Filter Elements

D Series Refrigerated Air Dryer

D Series dryers come in a wide range of models, rated for capacities from 300 to 7500 SCFM, with air-cooled or water-cooled units to meet your installation requirements for operating pressures and temperatures.

Our direct-expansion heat exchanger provides very low pressure drop and superior dew point performance because of the copper tube aluminum-finned design. This design incorporates both primary and secondary heat transfer surface areas, which eliminates the need for a mechanical separator. All of this translates into one of the most efficient and cost-saving products on the market, with one of the lowest pressure drops in the industry.

Typical Airflow Diagram • D-300 to D-7500



Compressed Air Circuit

Initial cooling... Hot, wet compressed air enters the shell of the air-to-air heat exchanger. This air is cooled as it circulates around the aluminum finned copper tubes that contain cool air from the air-to-refrigerant heat exchanger.

Final cooling... This pre-cooled compressed air then enters the shell of the air-to-refrigerant heat exchanger. It circulates around the aluminum finned copper tubes that contain cool liquid refrigerant. The compressed air temperature is again reduced as additional heat is absorbed by the cold refrigerant in the copper tubes.

Moisture separation... Moisture condensed during cooling is separated from the compressed air and is discharged through the drain valve(s).

Reheating... Cool, dry air returns through the tube side of the air-to-air exchanger for reheating. This prevents sweating on distribution piping.

Standard Equipment:

- Power On Light
- High Suction Temperature Light
- On/Off Switch
- Compressor Motor Thermal Overload Protection
- Crankcase Heater
- High/Low Refrigerant Pressure Control
- Low Ambient Fan Controls
- Air Inlet Temperature Gauge
- Refrigerant Analyzer Gauge (suction pressure)
- Water Regulating Valve (D-300 to D-2250-W)
- Solenoid Drain Valve (D-300 to D-2250)
- Full cabinet design (D-300 to D-1000)
- Open Frame Design (D-1250 to D-7500)

Optional Equipment:

- Air Inlet and Outlet Pressure, Air Outlet Temperature and Refrigerant Head Pressure Gauge
 - Low or High Refrigerant Pressure Alarm Light
 - NEMA 4 and NEMA 12 Wiring (excludes compressor and fan motors)
 - Alarm Bell (various functions)
 - Hour Meter
 - Compressor Run Light (D-300 to D-2250)
 - Ambient Air Filter (D-300 to D-2000)
 - Remote Condenser (D-1250 to D-2000)
 - Zero Air Loss Drain Valve (D-300 to D-2250)
 - Shell and Cupro-Nickel Water-Cooled Condenser
- If other equipment is required, contact the factory for complete information.*



D-300 to D-2250 Size and Specifications

Specifications ¹						Dimensions (inches) ²				Electrical Data		Filters ⁵	
Model No.	Comp. HP	Rated Capacity (SCFM) ³		Pressure Drops (PSID)	Inlet Outlet Conn. (NPT)	Width	Depth	Height	Weight	Main Power ⁴	Run Load Amps (RLA)	Prefilter	Afterfilter
		Pressure Dew point											
		38°F	50°F										
D-300-A	1 3/4 2	300	360	1.1	2	26	41	35	475	230-60-3 460-60-3	10.4 7.08	F14-GP350	F14-C350
D-400-A	2	400	480	1.5	2	26	41	35	475	230-60-3 460-60-3	12.6 6.94	F20-GP700	F20-C700
D-400-W	2 1/4	435	520	1.8	2	26	41	35	500	460-60-3	5.4		
D-500-A	3	500	600	2.5	2	26	41	35	475	230-60-3 460-60-3	16.4 7.04		
D-500-W	3	550	660	3.0	2	26	41	35	500	460-60-3	6.5		
D-600-A	3 1/2	600	720	1.0	3	36	48	46	1250 1000	230-60-3 460-60-3	16.4 9.74		
D-600-W	3 1/4	630	755	1.1	3	36	48	46	1250	460-60-3	6.9		
D-800-A	5	800	960	2.0	3	36	48	46	1300 1100	230-60-3 460-60-3	23.1 11.4	F24-GP900	F24-C900
D-800-W	4	850	1020	2.3	3	36	48	46	1300	460-60-3	6.9	F30-GP1300	F30-C1300
D-1000-A	6	1000	1200	3.0	3	36	48	46	1400 1200	230-60-3 460-60-3	26.7 11.4		
D-1000-W	5	1050	1260	3.3	3	36	48	46	1400	460-60-3	9.6	F30K-GC* FT30K-GC	FT30K-TC* FT40L-TC FF40L-TC
D-1250-A	8	1250	1500	1.6	4	51	68	58	1925	460-60-3	20.2		
D-1250-W	7 1/2	1250	1500	1.6	4	51	68	58	1925	460-60-3	14.1		
D-1500-A	9	1500	1800	2.0	4	51	68	58	1950	460-60-3	21.1		
D-1750-A	10	1750	2100	2.8	4	51	68	58	2075	460-60-3	23.8		
D-1750-W	7 1/2	1750	2100	2.8	4	51	68	58	2075	460-60-3	14.1		
D-2000-A	12(2x6)	2000	2400	3.5	4	51	68	58	2125	460-60-3	22.2	FT40L-GC FF40L-GC	FT60M-TC FF60M-TC
D-2250-W	10	2250	2700	4.4	4	51	68	58	2250	460-60-3	20.0	FT60M-GC FF60M-GC	

1) Subject to change without notice. Other specifications: Maximum Working Pressure - 150 psig, Drain Connections - 1/2 NPT (m).
 2) For Air-Cooled models only, subject to change without notice. Consult factory for dimensions on Water-Cooled or Air-Cooled Remote Condenser models.
 3) Capacities are based on 100°F Inlet Air and Ambient Air Temperatures, and 100 PSIG Inlet Air Pressure.
 4) Consult factory for other Main Power applications.
 5) Filter codes: GP - General Purpose, GC - General Coalescing, TC - Total Coalescing, FT - Flanged Inline T, FF - Floor Mount, *Dryers D-1250 and above are ASME Flanged Filters.

Selecting the Right Model

Using the specifications columns, read down the column to the nearest SCFM capacity that exceeds the required flow. "A" in the dryer model number indicates air-cooled units, and "W" indicates water-cooled. The number indicates rated capacity in SCFM at standard rated conditions. For conditions other than standard rated, use correction factor charts to the right.

The standard conditions for rated capacities comply with ANSI/CAGI ADF 100 (*Refrigerant Compressed Air Dryers-Methods for Testing and Rating*).

For inlet air temperature, apply the following correction factors to rated capacity:

• 90°F inlet air	1.20
• 100°F inlet air	1.00
• 110°F inlet air	0.80
• 120°F inlet air	0.70

For ambient air temperature, apply the following correction factors to rated capacity:

• 80°F ambient air	1.10
• 90°F ambient air	1.05
• 100°F ambient air	1.00
• 110°F ambient air	0.95

For inlet air pressure, apply the following correction factors to rated capacity:

• 50 PSIG	0.85
• 100 PSIG	1.00
• 125 PSIG	1.05
• 150 PSIG	1.10



D-2500 to D-7500 Size and Specifications

Specifications ¹											
Model No.	Rated SCFM Capacity ² PDP		PSID PDP		Heat Rejected to Cooling Water BTUH ³	Heat Rejected to Ambient BTUH	Total Condensing Fan Air Flow CFM	Cooling Tower Water GPM ⁴	City Water GPM ⁵	Comp kW ⁶	Air Conn. In/Out 150# Flg.
	38°F	50°F	38°F	50°F							
D-2500-W	2500	3000	1.5	2.2	154,320	11,615	n/a	27	11	10.34	6
D-2500-A	2500	3000	1.5	2.2	n/a	186,875	8,574	n/a		16.47	6
D-3200-W	3200	3840	2.5	3.6	195,732	14,733	n/a	37	15	12.67	6
D-3200-A	3200	3840	2.5	3.6	n/a	233,386	12,000	n/a		19.38	6
D-4000-W	4000	4800	2.8	4.0	246,357	18,543	n/a	41	17	16.37	8
D-4000-A	4000	4800	2.8	4.0	n/a	293,014	20,818	n/a		24.60	8
D-5000-W	5000	6000	4.2	6.0	309,685	23,310	n/a	63	25	21.01	8
D-5000-A	5000	6000	4.2	6.0	n/a	372,723	18,000	n/a		32.64	8
D-6250-W	6250	7500	4.5	6.5	400,505	30,146	n/a	73	29	30.48	8
D-6250-A	6250	7500	4.5	6.5	n/a	478,270	25,200	n/a		44.43	8
D-7500-W	7500	9000	6.5	8.6	483,670	36,405	n/a	95	38	37.54	8
D-7500-A	7500	9000	6.5	8.6	n/a	582,519	29,355	n/a		55.82	8

Specifications ¹ (cont.)					Dimensions (inches) ¹					ASME Flanged Filters ⁷	
Model No.	Water Connections (for water-cooled only)				Width	Depth	Height	Height To Flange	Net Weight (lbs)	Prefilter	Afterfilter
	City		Cooling Tower								
	Inlet	Outlet	Inlet	Outlet							
D-2500-W	1	1	2@1	1 ¼	84 ¼	40 ½	89 ¾	79 ¼	2800	FF60M-GC FF60M-GC	FF60M-TC FF60M-TC
D-2500-A	n/a				84 ¼	40 ½	89 ¾	79 ¼	3100		
D-3200-W	1 ¼	1 ¼	2@1 ¼	1 ½	84 ¼	40 ½	89 ¾	79 ¼	2900		
D-3200-A	n/a				84 ¼	40 ½	89 ¾	79 ¼	3200	FF60K-GC	FF60K-TC
D-4000-W	1 ¼	1 ¼	2@1 ¼	1 ½	100	41	92	80 ½	3300		
D-4000-A	n/a				100	41	92	80 ½	3300		
D-5000-W	1 ½	1 ½	2@1 ¼	2	100	41	92	80 ½	3600	FF80K-GC	FF80K-TC
D-5000-A	n/a				100	41	92	80 ½	3600		
D-6250-W	1 ½	1 ½	2@1 ¼	2	100	50	103 ¾	91 ¾	4400		
D-6250-A	n/a				100	50	103 ¾	91 ¾	4400	FF100K-GC	FF100K-TC
D-7500-W	-	-	2 ¼	2 ¼	100	50	103 ¾	91 ¾	4500		
D-7500-A	n/a				100	50	103 ¾	91 ¾	4500		

1) Subject to change without notice. Other specifications: Maximum Working Pressure – 150 psig, Drain Connections – ½" NPT (m).

2) Capacities are based on 100°F Inlet Air and Ambient Air Temperatures, and 100 PSIG Inlet Air Pressure.

3) Approximately 7% of the total heat load is rejected to ambient air, the balance to the water-cooled condenser.

4) Based on 85°F cooling tower water to condenser, 95° out of condenser, 78°F ambient wet bulb temperature.

5) Based on 60°F city water to condenser, 85°F out of condenser.

6) Supplied with semi-hermetic or scroll compressor.

7) Filter codes: GP – General Purpose, GC – General Coalescing, TC – Total Coalescing, FT – Flanged Inline T, FF – Floor Mount.

Full Line of Compressed Air Products

- Heatless Regenerative Compressed Air Dryers
- Heated Regenerative Compressed Air Dryers
- Refrigerated Air Dryers
- Deliquescent Dryers
- Aftercoolers
- Chillers and Fluid Cooling Systems
- Filters and Drain Valves

From small point-of-use dryers, to large, custom engineered compressed air dryers for the most demanding industrial applications, let an AIR/TAK dryer specialist assist in meeting your air drying requirements. We have the capabilities to customize products for even the most unique applications.

Made in



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Heatless Regenerative Compressed Air Dryers

Compressed Air System Products

Made in America



AIR/TAK Heatless Regenerative Air Dryers

Compressed Air System Products That Save Energy & Improve Operations. Super Dry, Clean Air for Sensitive Equipment.

AIR/TAK Heatless Regenerative Air Dryers deliver the dry, clean air that keeps sensitive pneumatic equipment in peak operating condition.

Engineered to deliver a continuous supply of dry air, -40°F pressure dew point.

Water, lubricant vapors and condensate can wreak havoc on your equipment. Over time, this results in high operating and maintenance costs.

AIR/TAK's HLDs help keep your equipment in prime operating condition. You lose less energy, save in operating costs, and maintain the investment in your equipment for a significantly longer period of time.

AIR/TAK HLDs efficiently deliver a continuous supply of super dry air to downstream point-of-use, utilizing the fundamental and dynamic relationship between desiccant adsorption and regeneration in a twin-tower design.



HLD-200-A

ON-LINE TOWER DRYING FUNCTION:

Wet compressed air enters the on-line tower and passes through the desiccant bed. AIR/TAK's adsorbent desiccant has a low vapor pressure and a high surface area. The desiccant attracts and holds the water vapor. Enough water vapor is adsorbed so that the outlet air dew point is -40°F (or better) at line pressure.

OFF-LINE TOWER PURGE FUNCTION:

A small amount of dried purge air from the first tower is diverted to the off-line tower. Here, the "purge air" is expanded to atmospheric pressure. This expansion increases the air's capacity to remove the adsorbed moisture from the desiccant, therefore regenerating the off-line tower.

AUTOMATIC PRECISION TIMING SYSTEM CONTROL PANEL

To ensure that you will have a constant supply of dry air, a programmable solid-state controller accurately controls the switching valves to sequence the desiccant towers through drying, depressurization, regeneration and repressurization. Indicator lights and the two line digital display clearly show the operation state of each tower and the elapsed time of the function in progress.