AIRTAK
Compressed Air System Products
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INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS DELIQUESCENT DRYER MODELS DD-48 THRU DD-5000

SPECIFICATIONS:
Maximum Working Pressure: 150 PSIG
Maximum Inlet Temperature: 110°F

SAFETY INFORMATION

DO NOT REMOVE CAP ON FILL PORT UNTIL ALL PRESSURE IS OUT OF DRYER.

DO NOT REMOVE OR ADJUST ANY EQUIPMENT ON DRYER UNTIL ALL PRESSURE IS OUT OF THE DRYER.

DO NOT OPERATE DRYER ABOVE MAXIMUM WORKING PRESSURE.

DO NO ALTER VESSEL IN ANY WAY, SUCH AS WELDING OR GRINDING.

LOCATION

For maximum performance, always locate dryer where the inlet compressed air temperature is lowest. Inlet air temperature to dryer must be no more than 10°F above the lowest temperature in the air system. Outlet dew point (level of dryness) from dryer depends on inlet temperature of the compressed air.

If temperature of air from the compressor is not within this 10°F range, an aftercooler is required to reduce the air temperature before it is processed through the dryer. An air-cooled aftercooler sized for a 10°F approach is recommended for installation before the dryer. The aftercooler compensates for changing atmospheric temperatures by exchanging heat between the atmospheric and compressed air so that inlet compressed air temperature to the dryer is within the 10°F range. A separator is then required on the aftercooler outlet to remove the condensed water.

Where air lines or equipment are located outdoors, install dryer outdoors in coolest location.

In systems where air usage fluctuates or there are sudden demands, protect dryer against air flow surges.

For best efficiency, locate dryer where air pressure is highest in system; more air can be dried at higher pressures.

INSTALLATION

1. Install dryer in an upright (vertical) position on a level surface with fill port on top. On wall-mounted models DD-12 thru DD-48, provide strapping or additional support to prevent stress on piping to dryer.

2. Install by-pass piping with inlet, outlet and by-pass valves to isolate dryer for adding desiccant.

3. Connect inlet air piping to dryer inlet (lower connection) and outlet piping to dryer outlet (top connection). Compressed air must flow through dryer from bottom to top of vessel or air will not be sufficiently dried.

WARNING: ALWAYS INSTALL PARTICULATE FILTER AFTER DRYER TO PREVENT ANY ACCIDENTAL FLOW OF MATERIALS FROM DRYER INTO DOWNSTREAM EQUIPMENT.

4. Connect drain line to coupling on bottom of dryer vessel, and install manual valve at end of line. **Note:** Install motorized drain (optional equipment) as indicated on instructions supplied with automatic drain.

5. Install pressure relief valve to conform to OSHA Standard 1910.169; also check local codes.

6. Remove cap from fill port on top of dryer and pour in recommended amount of Deli-Dry desiccant (see chart below). Check to make sure that vessel is filled to within 1 or 2" of dryer top.

7. Replace cap on fill port, and tighten securely.

8. Close inlet and outlet shutoff valves; also close drain valve.

9. Start compressor: then slowly open dryer inlet valve to pressurize dryer gradually.

10. Open outlet valve slowly; close by-pass valve.

CAUTION!!!!!

MAKE SURE THAT DRYER IS NOT SUBJECTED TO AIR SURGES WHILE IT IS BEING PRESSURIZED.

OPERATION

START-UP: Slowly open outlet shutoff valve and then inlet valve. Close by-pass valve.

SHUT-DOWN: Maintain pressure in dryer during shut-down by following this procedure before shutting off air supply to dryer: Open by-pass valve. Then close dryer inlet and outlet shufoff valves.

MAINTENANCE

***Drain dryer after every 8 hours of operation.**

Open manual drain valve and allow all collected drain solution to discharge from dryer. On dryers equipped with an automatic drain, check periodically by pushing test button to make sure that drain is operating properly.

WARNING

Always drain dryer regularly. If drain solution reaches an abnormally high level, air flow may force solution into system piping and cause damage to downstream equipment.

***Inspect tablet level through sight window regularly.** Add DELI-DRY TABLETS when top of bed is level with sight window. Use the following procedure:

1. Isolate dryer from air system by closing inlet and outlet valves; open by-pass valve.

2. Open drain valve; depressurize dryer completely.

3. After all pressure is out of dryer, unscrew cap on fill port.

4. Add enough tablets so that vessel is filled.

5. Replace cap on fill port and tighten securely.

6. Slowly open outlet valve and allow air to bleed through drain valve.

7. Close drain valve, and open inlet valve slowly to pressurize dryer graduallly.

8. Close by-pass valve.

Dimensions & Weights (inches & pounds)

Model No.	Height	Vessel Diameter	Inlet/Outlet Connections	Height to Inlet	Fill Port (Diameter)	Deliquescent Tablets (Initial fill)	Vessel Weight (LB)
DD-48	37	8	1	5	2	40	85
DD-72	53	14	2	18.5	2	160	210
DD-100	55	14	2	18.5	2	175	220
DD-150	57	14	2	18.5	2	190	230
DD-220	55	20	2	19.5	3 x 4	345	320
DD-370	57	20	2	19.5	3 x 4	370	360
DD-520	67	30	3	22	3 x 4	975	655
DD-740	72	30	3	22	3 x 4	1120	779
DD-970	72	36	4 Flg.	26	4 x 6	1350	985
DD-1250	90	42	4 Flg.	15	11 x 15	1500	1425
DD-1500	102	42	4 Flg.	15	11 x 15	2000	1650
DD-1750	105	48	4 Flg.	15	11 x 15	2450	1800
DD-2000	108	54	6 Flg.	18	11 x 15	2900	2450
DD-2500	110	60	6 Flg.	18	11 x 15	3650	2850

Maximum Capacities (SCFM)

Model No.	70 PSIG	80 PSIG	90 PSIG	100 PSIG	125 PSIG	150 PSIG
DD-48	35	39	43	48	58	68
DD-72	53	59	65	72	87	103
DD-100	73	82	90	100	121	143
DD-150	110	123	135	150	182	215
DD-220	161	180	198	220	267	315
DD-370	270	303	333	370	450	531
DD-520	380	426	468	520	633	746
DD-740	540	607	666	740	901	1062
DD-970	708	795	873	970	1181	1392
DD-1250	925	1032	1141	1250	1522	1794
DD-1500	1107	1238	1369	1500	1826	2153
DD-1750	1292	1444	1597	1750	2131	2512
DD-2000	1477	1651	1825	2000	2435	2871
DD-2500	1846	2064	2282	2500	3044	3589

AIR/TAK WARRANTY POLICY

Air/Tak products will be warranted to be free from defects in materials and workmanship for a period of one year from date of shipment or up to one year from the verified date of installation not to exceed 15 months. Date of installation will be verified upon receipt of the completed Warranty Registration Card. All Air/Tak refrigerated dryers will additionally be warranted on parts only (excluding fan motors and drain valves) for a period of two years from the date of shipment. Also, deliquescent and regenerative air dryer pressure vessels and refrigerated air dryer heat exchangers have a 5-year prorated warranty.

All damaged pressure vessels and heat exchangers returned to AIR/TAK for warranty consideration must be returned freight prepaid. Warranty will be determined after factory inspection. Failure to return a damaged heat exchanger or pressure vessel will result in warranty denial.

Repairs, adjustments, parts, etc. are limited to actual labor cost provided that such defects are promptly reported and approved following AIR/TAK's warranty procedures. In no event shall the cost of repairs exceed the actual cost of materials and labor.

AIR/TAK or its representatives reserve the right to decide which warranty items are authorized. AIR/TAK shall not be liable for incidental or consequential damages which may result from a breach of the warranty described above.

For more information on warranty policies and procedures, contact your authorized AIR/TAK Distributor.

AIR/TAK's line of quality compressed air system products includes:

COMPRESSED AIR SYSTEM FILTERS * AIR-COOLED AFTERCOOLERS
REFRIGERATED AIR DRYERS * CAD COMBINATION AFTERCOOLER DRYER SYSTEMS
RAD-PAK REFRIGERATED AIR DRYER/FILTER PACKAGES * HEATLESS REGENERATIVE AIR DRYERS
HLD-PAK HEATLESS REGENERATIVE AIR DRYER/FILTER PACKAGES
BLOWER PURGE REGENERATIVE AIR DRYERS * EXTERNALLY HEATED REGENERATIVE AIR DRYERS
AIR CHILLERS * FLUID CHILLERS

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