



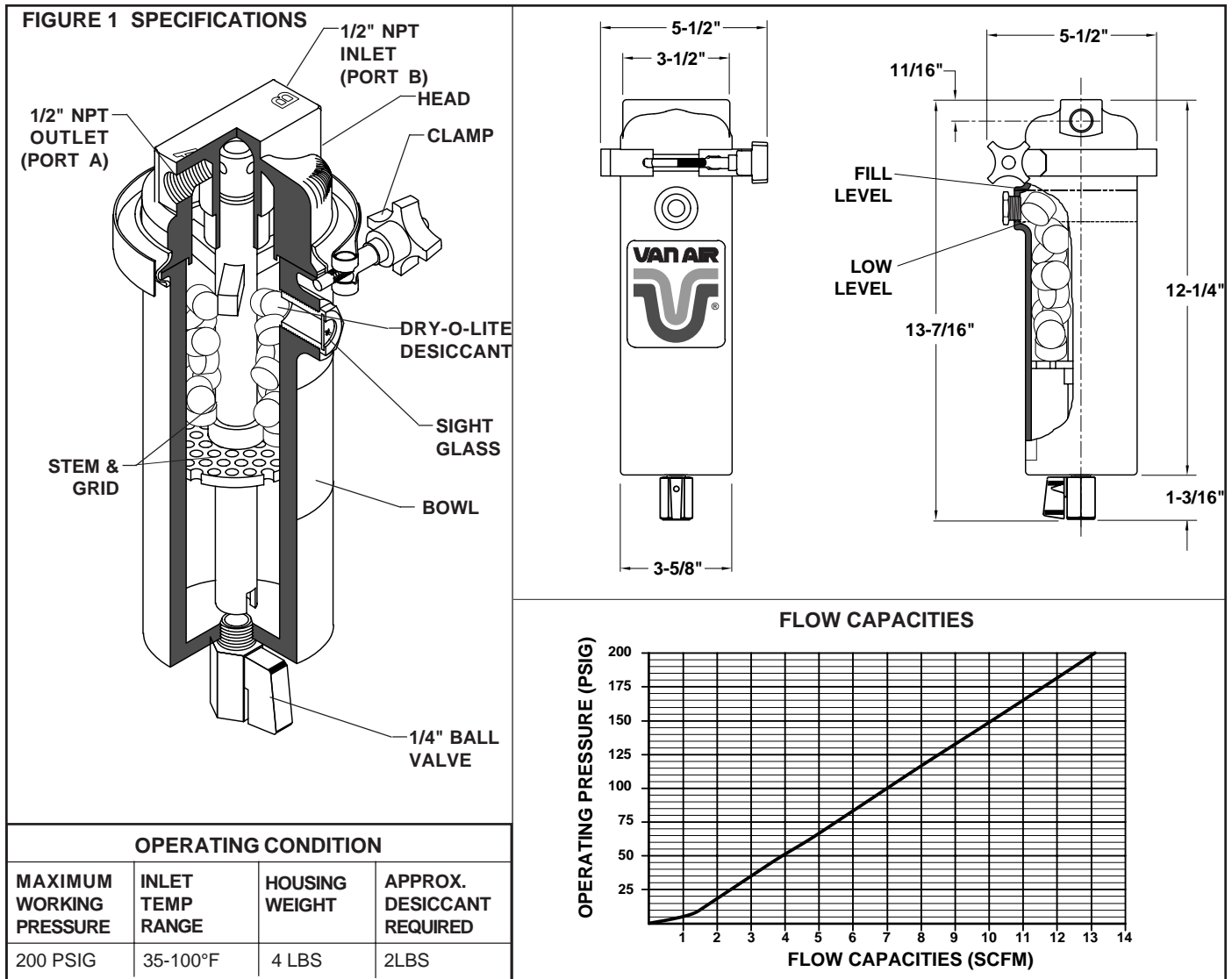
INSTALLATION INSTRUCTIONS

SINGLE TOWER DRYER MODEL D-2

VAN AIR PART NUMBER: 80-0104

PRODUCT PURPOSE & FUNCTION:

Van Air's Single Tower (Delinquent) Dryer model D-2 is designed to remove water vapors from compressed air systems in low flow applications. The housing is made of lightweight cast aluminum and coated with an epoxy powdercoating for corrosion resistance. A PVC plastic support grid promotes efficient drying and drainage. A sight glass provides a visual indication for when to add more Dry-O-Lite desiccant.



WARNINGS

- READ INSTRUCTION CAREFULLY BEFORE INSTALLING DRYER.
- DO NOT REPLACE ANY ITEM ON DRYER UNTIL DRYER IS COMPLETELY DEPRESSURIZED.
- DO NOT OPERATE DAMAGED OR LEAKING DRYER, REMOVE FROM SERVICE IMMEDIATELY.
- DO NOT OPERATE ABOVE MAXIMUM WORKING PRESSURE (MWP) AND/OR MAXIMUM OPERATING TEMPERATURE (°F).
- TAKE PROPER SAFETY PRECAUTIONS FOR THE GAS BEING PROCESSED.

INSTALLATION

The ability of a dryer to provide dry compressed air is dependent on the correct location of the unit. Temperature and pressure are the keys to selecting the proper location.

IMPORTANT

ALWAYS PROCESS AIR THROUGH THE DRYER AT THE LOWEST POSSIBLE TEMPERATURE AND THE HIGHEST PRACTICAL PRESSURE.

INLET AIR TEMPERATURE

The dew point of the outlet air is directly related to the inlet air temperature. The lower the inlet temperature, the lower the dew point of the outlet air. Determine the lowest ambient temperature where the compressed air is used or where the lines are located. Install the dryer where the inlet temperature will not be more than 10°F above the lowest system operating temperature, do not exceed 100°F inlet air temperature.

CAUTION

NEVER LOCATE THE DRYER IN AN AREA OF EXCESSIVE HEAT. THE INLET AIR TEMPERATURE SHOULD NEVER EXCEED 100°F.

OPERATING PRESSURE

More air can be processed through the dryer at higher pressures. Locate the dryer at the highest practical pressure, but do not exceed the maximum rated working pressure of 200 PSIG. Refer to the flow capacity chart on page 1.

PIPING AND ANCILLARY EQUIPMENT

1. Locate dryer as close as possible to equipment to be protected.
2. If large amounts of liquids are present in the air lines, install a separator with drain valve ahead of the dryer.
3. Install bypass piping around dryer to facilitate servicing (**Reference Figure 2**).

4. Check markings on vessel head. Connect inlet pipe to side marked "B" and outlet to side marked "A". Dryer must be installed in a vertical and upright position with the bowl below the head, as shown in Figure 2.
5. Fill bowl with desiccant (with the stem and grid assembly inside) until the desiccant reaches the fill line (as shown in **Figure 1**).
6. Place dryer bowl onto head.
7. Place clamp onto head and bowl and tighten.

ADDING DESICCANT

1. Close dryer inlet and outlet shutoff valves. Slowly open drain on bottom of bowl until vessel is completely depressurized.
2. Grasp bowl in one hand. Loosen clamp with other and slide clamp down off bowl.
3. Twist bowl slightly and pull down off of head. The stem and grid assembly must come loose from o-ring seal in head.
4. Add desiccant until the fill line is reached (**Reference Figure 1**).
5. Position stem on head and push bowl upward so bowl and head meet.
6. Hold bowl in place, reinstall clamp and tighten.

START-UP

1. Close dryer inlet and outlet shutoff valves. Open bypass valve. Close dryer drain valve. See Figure 2 Recommended Installation
2. Slowly pressurize dryer by opening dryer inlet shutoff valve.
3. Open dryer outlet shutoff valve slowly and close bypass valve.

WARNING

MAKE SURE THAT THE DRYER IS NOT SUBJECTED TO SUDDEN SURGES. ALWAYS OPEN VALVES SLOWLY TO PERMIT A GRADUAL EQUALIZATION OF PRESSURE BETWEEN THE DRYER AND THE AIR SUPPLY LINES.

SHUT DOWN

1. Close dryer inlet and outlet shutoff valves. Open bypass valve.
2. Slowly open drain valve to depressurize dryer.

FIGURE 2 RECOMMENDED INSTALLATION

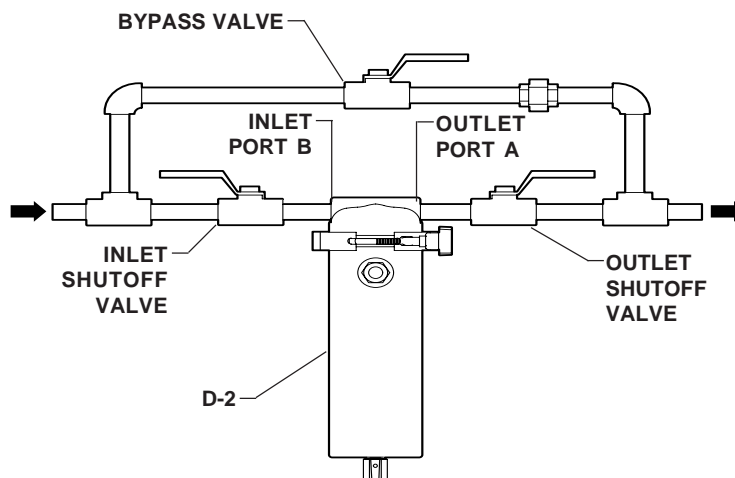
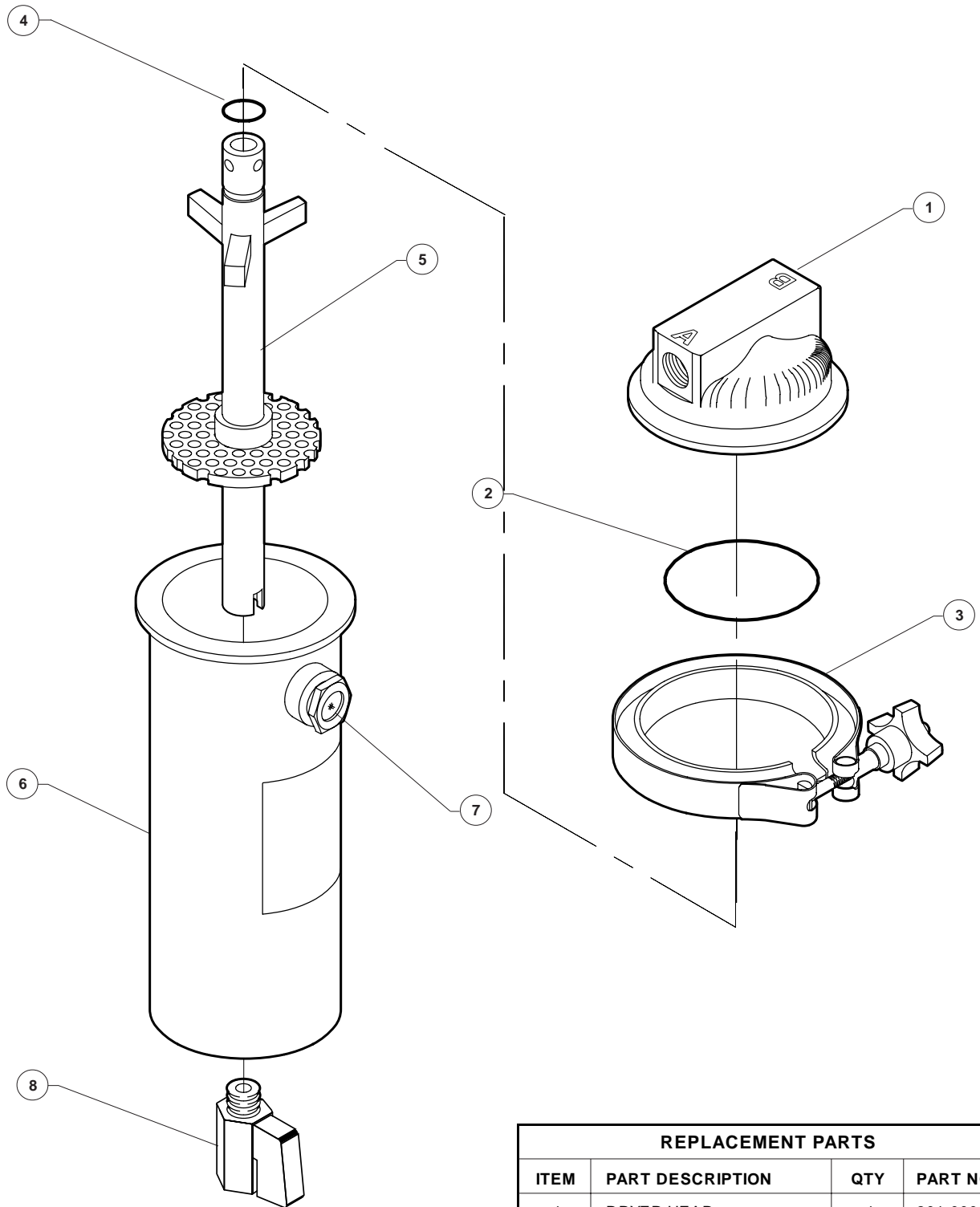


FIGURE 3 REPLACEMENT PARTS



REPLACEMENT PARTS			
ITEM	PART DESCRIPTION	QTY	PART NO.
1	DRYER HEAD	1	201-00050
2	HOUSING O-RING	1	475-00235
3	HOUSING CLAMP	1	471-00100
4	STEM O-RING	1	475-00210
5	STEM & GRID ASSEMBLY	1	180-00001
6	DRYER BOWL	1	201-02000
7	SIGHT GLASS	1	551-00400
8	1/4" NPT BALL VALVE	1	290-00011

MAINTENANCE

1. Drain dryer at least once during each 8-hour shift.
2. Check desiccant bed weekly. Inspect the desiccant bed level by looking through the sight glass window (**Reference Figure 1**). More tablets must be added when bed level falls below low level (**Reference Figure 1**). Use Van Air Dry-O-Lite Desiccant P/N: 33-0313 (50 lb pail).

WARNING

IF UNIT IS NOT DRAINED REGULARLY, FLOODING OF DRYER MAY OCCUR. IF FLOODING OCCURS, ACCUMULATED LIQUID MAY CARRY OVER AND RESULT IN DAMAGE TO DOWNSTREAM EQUIPMENT.

WARNING

DO NOT OPERATE DAMAGED OR LEAKING DRYER, REMOVE FROM SERVICE IMMEDIATELY.

TROUBLE SHOOTING

CONDITION	POTENTIAL CAUSE	RECOMMENDATION
Decreased performance or increased desiccant usage.	High inlet air temperatures.	Check the aftercooler performance to make sure the airstream temperature is under 100°F. Make sure that the aftercooler was properly sized and installed. Check the aftercooler operation manual for further details. If an aircooler was not installed, one may be required.
	High ambient temperatures.	Check the location of the dryer for changes in ambient temperatures. If a piece of equipment or piping installed near the dryer is creating the increase in temperature, relocate the dryer or equipment if possible. If relocation is not possible, correct the increased ambient temperature through insulation or another method.
Liquid downstream of dryer.	Improper draining.	Drain dryer at least once every 8 hours of operation. Check the drain valve and piping for clogs. Repair or replace faulty valves. Clean any clogged piping. If freezing occurs, raise ambient temperature or wrap piping and dryer with heat tracing and/or insulation. Inspect separator. Remove water with better separation. If a separator was not installed, one may be required. Check the compressor capacity or air usage vs. the dryer rating.
	Bypass valve open or faulty	Check the dryer bypass valve. Replace or repair if necessary.
	Low or no desiccant in dryer.	Check dryer desiccant bed level. Fill dryer as needed (Reference Figure 1).
Decreased performance, low desiccant usage.	Contaminated desiccant bed.	Dryer can operate with normal amounts of compressor lubricant. If compressor manufacturer's recommended lubrication rate is exceeded, the desiccant bed can become contaminated with lubricant. Periodically check the desiccant bed. If tablets are discolored (deep yellow or brown), the bed is contaminated. If bed has become contaminated, remove and discard desiccant, clean out dryer and install new desiccant. Remedy contamination problem before opening bypass piping. Check the compressor for proper operation. The compressor may be worn or over lubricated. Check the compressor operator's manual. Check the atmospheric air near the compressor air intake. Heavy concentrations of acid fumes or smoke and dust will cause contamination. Install a filter on the compressor intake. If it is not possible to reduce the amount of lubricants in the air system, install a separator and/or coalescing filter upstream of the dryer.

VAN AIR SYSTEMS

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