

Parker Balston® 75-A20 Compressed Air Dryer

Introduction Balston compressed Air Dryers provide clean, dry air from an existing compressed air supply. The 75-A20 Air Dryer delivers -100°F (-73°C) dewpoint air.

The 75-A20 Compressed Air Dryer is powered by a 12 VDC power supply. Each dryer is equipped with a plug-in transformer for connection to the local power supply.

Installation **These instructions must be thoroughly read and understood before installing and operating this product. If you have any questions or concerns, please call the Technical Services Department at 800-343-4048, 8AM to 5PM Eastern Standard Time (North America only) or email at balston-techsupport@parker.com. For other locations, please contact your local representative.**

The dryer should be fastened securely, in a vertical position, to a wall or similar mounting surface according to National Electrical Code (NEC) and local building code guidelines. All mounting hardware supplied by the customer should be adequately sized to support the weight of the unit in its mounted position.

To facilitate routine maintenance, install a shut-off valve on the supply air line, upstream from the dryer. Pipe the supply air (60 psig-125 psig, 4.1 barg-8.6 barg) to the inlet port of the dryer. (**Note:** Pipe size must match inlet and outlet port sizes or adequate lengths of pipe must be used to reduce/increase pipe size to match ports. Please consult factory for additional assistance.) The air dryer should be installed on a compressed air system which contains a properly sized aftercooler. The temperature of the supply air entering the Balston Air Dryer should not exceed 78°F(25°C). If the temperature of the inlet compressed air exceeds 78°F(25°C), the dewpoint of the air generated by the dryer may exceed the rated dewpoint. If the compressed air supply has excess water and/or oil or is supplied to the dryer from an elevated air line, a drip leg must be installed directly upstream from the dryer to reduce the amount of water and oil which could get into the dryer and associated valves and cause non-warranty damage to the unit (see Figure 2). A minimum supply air pressure to the air dryer of 60 psig (4.1 barg) is required to maintain proper operation of the drying towers and associated valves. The maximum supply pressure should not exceed 125 psig (8.6 barg) or damage to the unit may occur.

It is important to control output pressure and flow from the dryer to avoid exceeding the rated capacity of the dryer. If the maximum flow rate of the dryer is exceeded, the process air may not meet the published dewpoint specifications. The installation of a pressure regulator and flow control valve downstream from the Balston Air Dryer is recommended to control output flow characteristics.

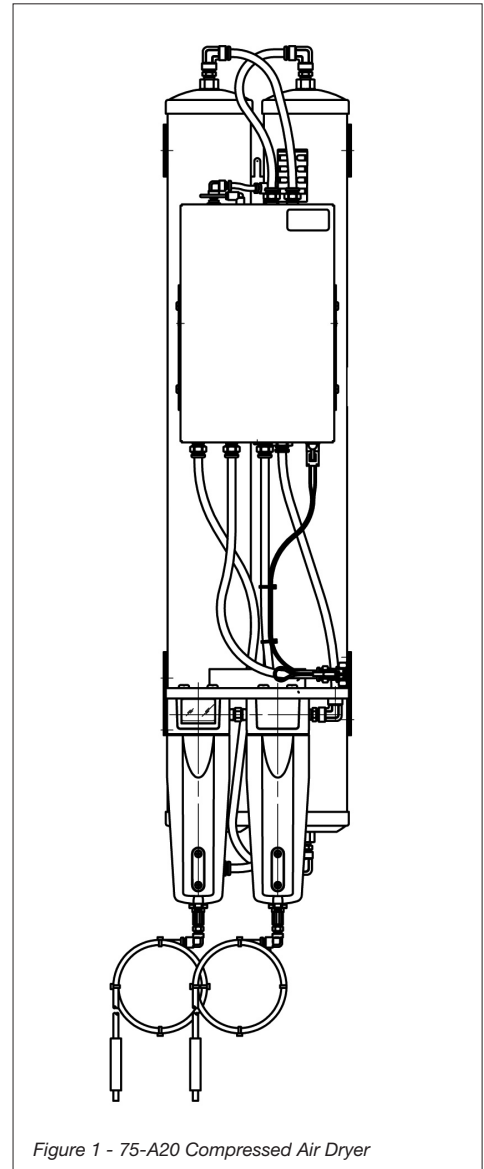


Figure 1 - 75-A20 Compressed Air Dryer

CELL: DRY

Bulletin TI-75A20C



The 75-A20 Compressed Air Dryer is equipped with 2 coalescing prefilters (B2102N-0B1-DX, B2102N-1B1-BX). The prefilters have integral automatic float drains. The 1/8" NPT drain port will pass small quantities of water and oil and should be piped away to a suitable containment device or drain.

The Balston Air Dryers are powered by a 12 VDC power supply through the accompanying 12 VDC transformer. Plug the transformer line cord into the dryer first (see Figure 1), then plug the transformer into the appropriate 120 VAC outlet.

Regenerate the drying towers for 24 hours prior to initial start-up. To regenerate the drying towers, open the inlet air supply, shut off the outlet flow from the dryer, and plug the dryer in. This process will cycle the dryer with 100% purge air.

Recommended Accessories

Parker Balston 72-130 Pressure Regulator - The 72-130 should be used to control the inlet air pressure to the dryer. Eliminating pressure fluctuations from the compressed air supply enhances the operation of the dryer, eases troubleshooting, and minimizes variations from documented specifications which could result from an inconsistent air supply. The 72-130 has 1/2" female NPT inlet and outlet ports, and is assembled with a 0-130 psig (0-9.0 barg) pressure gauge.

Balston 2206N-1B1-DX Coalescing Prefilter - When the compressed air supply to the dryer contains excess water, install an auxiliary prefilter upstream from the dryer. The Balston 2206N-1B1-DX coalescing filter has 3/4" NPT ports and an automatic float drain.

Maintenance

All installation, operation, and maintenance procedures for the compressed air dryers should be performed by suitable personnel using reasonable care.



Disconnect the electrical power and isolate the unit from the compressed air supply before starting any maintenance procedure.

The only required maintenance activity for the Balston 75-A20 Compressed Air Dryer is changing the filter cartridges in the prefilters annually (see Ordering Information at the end of this section for prefilter cartridge part numbers). The 75-A20 is equipped with a differential pressure indicator which monitors the pressure drop across the prefilters. Changing the prefilter cartridges on the Balston Air Dryers requires approximately 15 minutes. Additional coalescing prefilter cartridges and moisture indicating cartridges for the Balston 75-A20 Air Dryer may be ordered through your local Parker Balston representative.

Changing filter cartridges more frequently will translate into direct energy savings and reduced operating costs. Annual electricity costs to operate a typical 100 HP compressor can be as high as \$50,000. Pressure drop in the system adds to this expense. A system operating at 100 psig that is experiencing a 2 psig pressure drop through a filter, requires an additional 1% in operating energy costs or approximately \$500.00+ per year.

The moisture indicator monitors the condition of the air coming out of the dryer. The moisture indicator should be green. If the indicator changes to yellow, follow the trouble shooting procedures on page 4.

Note: Upon start-up, the moisture indicator may be yellow, but the dryer should be permitted to run for at least 30 minutes before reporting this as a malfunction.

Recommended Installation

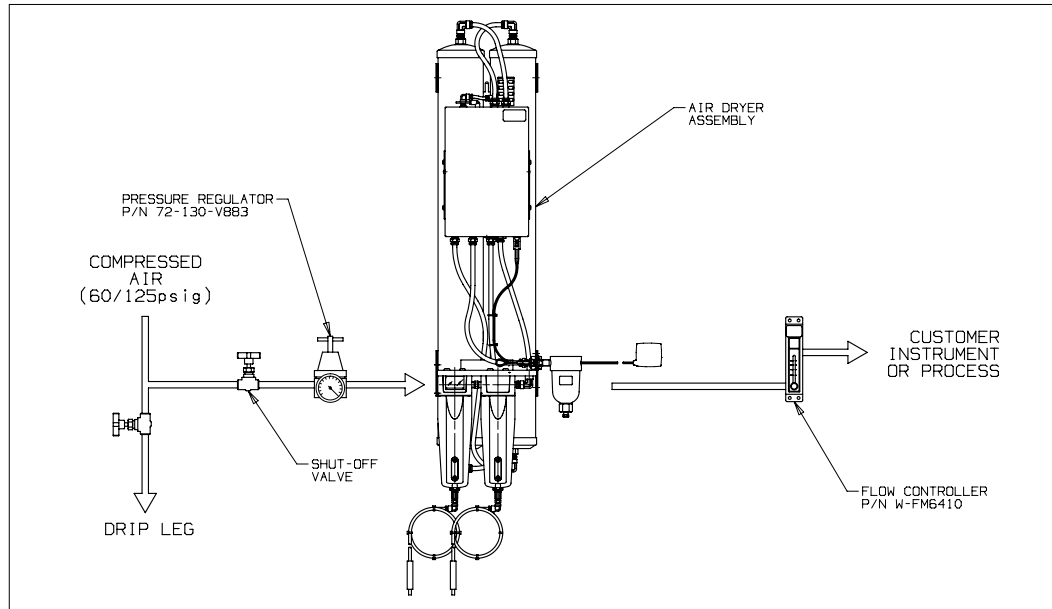


Figure 2 - Recommended Installation (Schematic)

Specifications and Ordering

Principal Specifications

Model Number	75-A20 Compressed Air Dryers
Dew Point	-100°F (-73°C)
Max Dry (outlet) Air Flow Rate for Specified Dew Point: {SCFM, (LPM)}	
Inlet Pressure 125 psig (8.6 barg)	12.0 (340)
Inlet Pressure 100 psig (6.9 barg)	10.0 (283)
Inlet Pressure 80 psig (5.5 barg)	8.3 (235)
Inlet Pressure 60 psig (4.1 barg)	6.5 (184)
Air Loss for Regeneration {SCFM, (LPM)} (1)	2.5 (71)
Min/Max Inlet Air Pressure	60 psig/125psig (4.1 barg/8.6 barg)
Max Inlet Air Temperature (2)	78°F (25°C)
Pressure Drop at Max Flow Rate	8 psi (0.5 bar)
Inlet/Outlet Port Size	1/4" NPT
Electrical Requirements (3)	120 VAC (12 VDC see Note 3)
Shipping Weight	80 lbs. (36 kg)

Notes:

1 Total air required = air loss for regeneration + process demand (up to max. dry air flow rate).

2 Outlet dew point will increase at higher inlet compressed air temperatures.

3 Power consumption less than 10 watts. Each dryer is shipped with a 12 VDC plug-in transformer to connect to the local electrical supply.

Ordering Information

Model Number	75-A20
Replacement Filter Cartridges	
Filter Cartridges; 1st stage (box of 10)	100-18-DX
Filter Cartridges; 2nd stage (box of 10)	100-18-BX
Moisture Indicator Filter (1 each)	75800
Maintenance Kit (1 Year)	MK7525

Accessories

72-130	Pressure Regulator
2206N-1B1-DX	Auxiliary Coalescing Prefilter

Trouble Shooting

All troubleshooting activities should be performed by suitable personnel using reasonable care. To arrange for system service, contact the Technical Services Department at 800-343-4048, 8AM to 5PM Eastern Time (North America only) or email at balstontech-support@parker.com. For other locations, please contact your local representative.



Warning: To avoid electrical shock, disconnect electrical power before servicing this product.

Symptom	Course of Action
Moisture Indicator Turns Yellow	<p>Check Inlet air temperature. If higher than 78°F (26°C), install aftercooler upstream of the dryer.</p> <p>Check inlet air pressure. Dryer requires 60 psig (4.1 barg) minimum.</p> <p>Check flow rate. Do not exceed dryer capacity. Install flow controller downstream.</p> <p>Confirm tower cycling (5 minute cycle time). If not, call factory.</p> <p>Check electric power source.</p>
High Pressure Drop Through Dryer (low flow)	<p>Check flow demand. Must match process flow requirements to dryer capacity.</p> <p>Check inlet filters for particulate clogging; replace if necessary.</p> <p>Check for leaks in downstream piping and process.</p> <p>Check prefilter drain(s) for leaks.</p>
No Flow Through Dryer	<p>Check supply line pressure / 60 psig (4.1 barg) minimum.</p> <p>Check supply line source (compressor).</p> <p>Check to make sure all customer installed valves are open.</p> <p>Check prefilter drain(s) for leaks.</p>
Logic Box Hum (loud and annoying)	<p>Contact your local representative to arrange Logic Box repair. Please have product Serial Number available. The serial number location is shown in Figure 1.</p>

Notes:

After a problem has been resolved, the towers may be regenerated by turning on the inlet air supply, shutting off the outlet flow from the dryer and turning on the power. This will cycle the dryer with 100% purge air. The dryer should purge for at least 12 hours to assure complete regeneration.

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