

Technical Information

Parker Balston® FT-IR Purge Gas Generator Models 75-45, 75-52, and 75-62

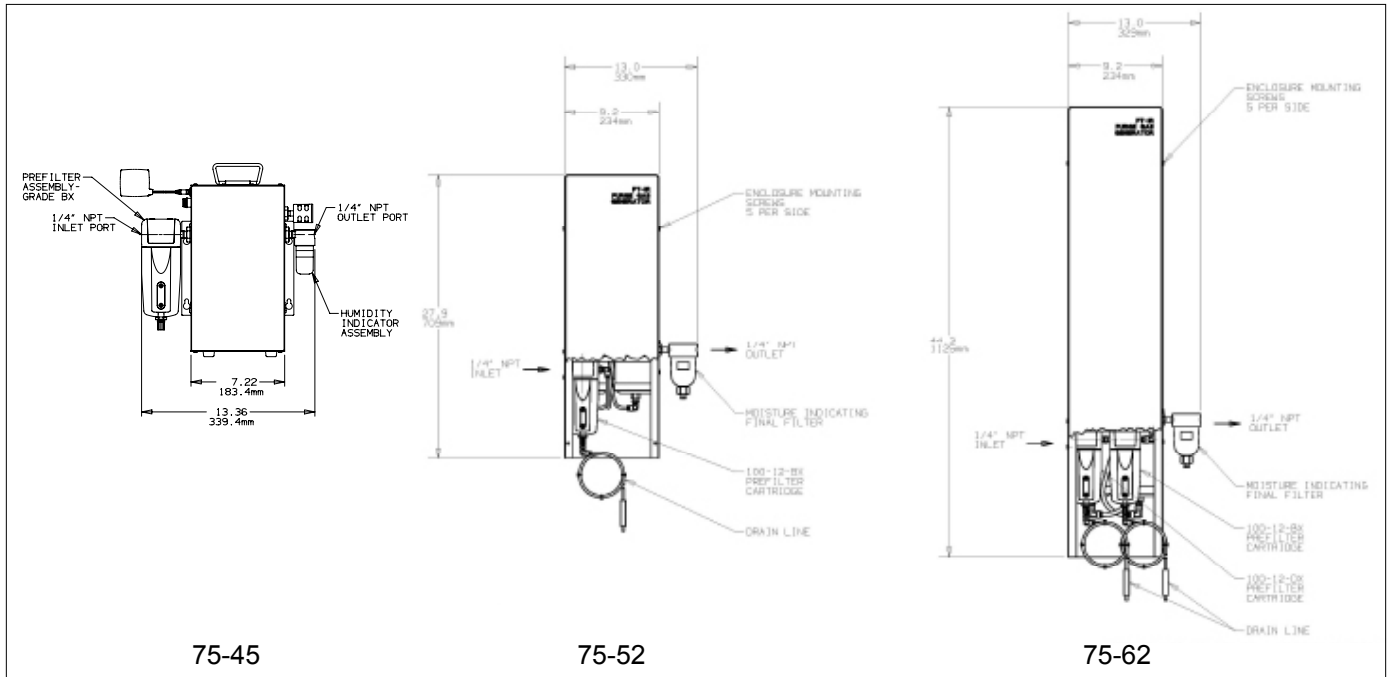


Figure 1 - Overall Dimensions

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

Please save product packaging for future use.

System Description

The Parker Balston 75-45, 75-52, and 75-62 FT-IR Purge Gas Generators deliver clean, dry compressed air with a -100°F (-73°C) dewpoint. The generators also remove carbon dioxide (CO_2) to a concentration of less than 1 ppm. The generators use a combination of coalescing filtration, regenerative pressure swing adsorption, and high efficiency particulate filtration to produce laboratory quality, dry, CO_2 -free air from a standard compressed air supply.

The generators are powered by a 12 VDC power supply. Each unit is shipped with a 12 VDC plug-in transformer for connection to most worldwide standard power supplies.

Installation

All installation, operation, and maintenance procedures for the Parker Balston FT-IR Purge Gas Generator should be performed by suitable personnel using reasonable care.

The Parker Balston 75-45 FT-IR Purge Gas Generator may be table-mounted or wall-mounted. The 75-52 and 75-62 must be wall mounted. If the unit is to be wall-mounted, secure the generator to a wall stud or similar structural member and use hardware adequately sized to support the weight of the generator. The generator should be mounted in compliance with NEC codes and local building regulations (See Figure 2).

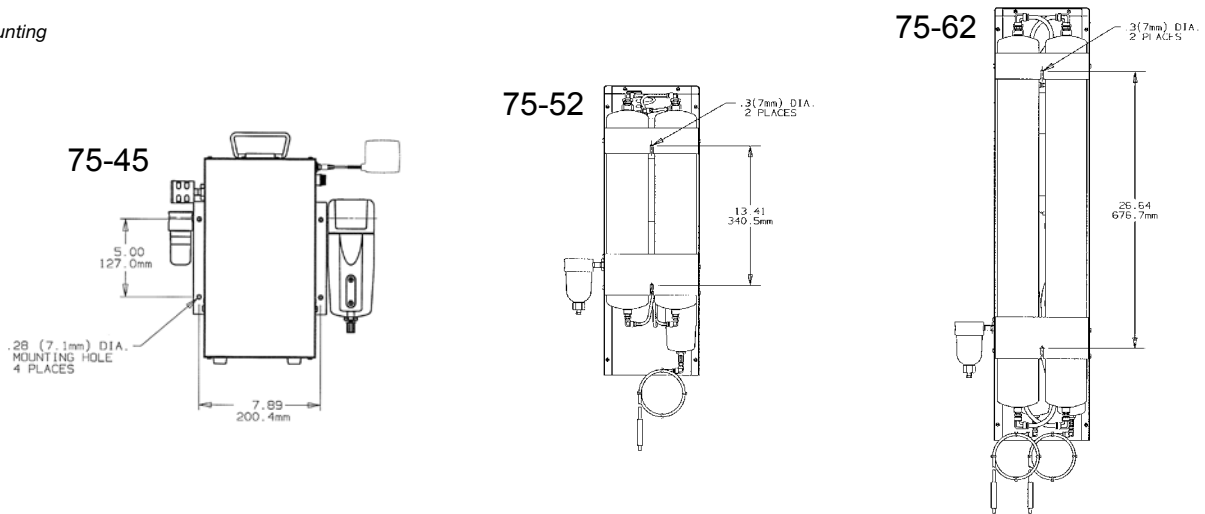
To facilitate routine maintenance and ensure optimal operation, install a shutoff valve and a pressure regulator directly upstream from the generator (see Figure 3). The shutoff valve will allow the user to isolate the generator from the compressed air supply for routine maintenance activities and short or long term shutdowns. The pressure regulator will supply compressed air at a constant pressure to the generator, ensuring consistent operation of the unit.

CELL: DRY

Bulletin TI-7545V



Figure 2 - Mounting Dimensions



For Model 75-62 only, the moisture indicator assembly is provided, but not installed on the generator (see Figure 1). Locate the moisture Indicator Assembly packed in the open end (bottom) of the generator. Identify the outlet port on the right side of the generator, remove the protective red plug and screw in the moisture indicator assembly clockwise. Tighten hand-tight and orient in the final vertical position (see Figure 3). Check for leaks using soapy water when the installation is complete and starting up for the first time.

Installation

The generator should be installed on a compressed air system which contains a properly sized aftercooler. The temperature of the supply air entering the unit should not exceed 78°F (25°C). If the temperature of the inlet compressed air exceeds 78°F (25°C), the dewpoint of the outlet air may exceed the rated dewpoint and the unit may be damaged. A minimum supply air pressure 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. **(Note: If the generator is fed from an overhead compressed air line, install a drip leg upstream from the generator to remove excess water and compressor oil. See Figure 3 for recommended installation and accessories.)**

If the compressed air supply has excess moisture or oil contamination, install a drip leg and an additional prefilter (P/N 2002N-1B1-DX for 75-45 only or 8002N-1B1-DX for 75-52 only) directly upstream from the generator. Pipe the supply air (60 psig - 125 psig / 4.1 barg - 8.6 barg) to the 1/4" female NPT inlet port of the dryer. Downstream from the generator, install a flow control device to prevent the flow demand from exceeding the capacity of the unit. Finally, install a drain line to the bottom of the prefilter (1/8" NPT 75-45 only) to pipe away any liquid waste which accumulates in the bowl of the filter. This waste will contain water and compressor oils, and should be disposed of properly.

Operation

To operate the generator, simply pipe the compressed air supply to the generator, plug the female end of the power cord/transformer into the power receptacle on the unit, and plug the opposite end into a nearby wall outlet. Turn the power switch on (75-45 only; no power switch on the 75-52 or 75-62). Initiate compressed air flow through the dryer by opening the (customer installed) shutoff valve and adjusting the inlet pressure using the (customer installed) pressure regulator. Prior to bringing the Parker Balston Purge Gas Generator on line to the FT-IR, regenerate the unit for at least 12 hours (see Troubleshooting section for details). After regeneration is complete, open the (customer installed) outlet valve and initiate flow to the FT-IR. The moisture indicator may be yellow, but permit the unit to run for at least 30 minutes before reporting this as a malfunction. Humidity indicator will begin to turn green at -15°F ADP and turn solid green at -25°F ADP.* The indicating filter should remain green during normal operation of the unit. It will change to yellow when excess moisture is present in the purge gas (see Troubleshooting section).

*ADP = Atmospheric dewpoint

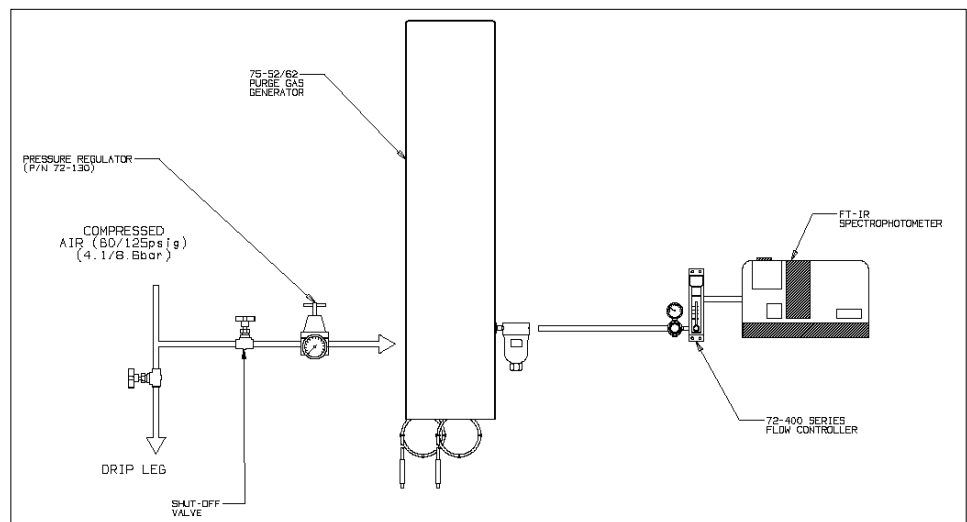


Figure 3 - Recommended Installation

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



Disconnect the electrical power, isolate the generator from the compressed air supply, and depressurize before starting any maintenance procedures.

The only maintenance activity required by the Parker Balston FT-IR Purge Gas Generator is the annual replacement of the coalescing prefilter cartridge (or cartridges), and the occasional replacement of the moisture indicator cartridge. For convenience, prefilters and moisture indicating cartridges are assembled into 1 year maintenance kits for each generator.

To remove a filter cartridge, simply unscrew the filter bowl from the head, lower the bowl, and remove the element retainer disc at the base of the cartridge. Replace the spent cartridge and re-assemble.

Changing the prefilter cartridge(s) and moisture indicating cartridge on the Parker Balston FT-IR Purge Gas Generator takes approximately 10 minutes.

Replacement Parts

Description	75-45	75-52	75-62
Maintenance Kit (1 year)	MK7505	MK7552	MK7520
Moisture Indicator Filter	75805	75800	75800
Silencer	9955-05-DX	75117	75117
Fuse (1.5 amp)	13206	—	—
Transformer	A03-0191	A03-0192	A03-0192

Note: To ensure consistent product performance and reliability, use only genuine Balston replacement parts and filter cartridges.

System Specifications

	75-45	75-52	75-62
Dewpoint	-100°F (-73°C)		
CO ₂ Concentration	< 1 ppm		
Min/Max Inlet Air Pressure	60 psig/125 psig (4.1 barg/8.6 barg)		
Pressure Drop at Max Flow Rate	4 psid (0.3 bar)		
Inlet/Outlet Port Connections	1/4" NPT (female)		
Electrical Requirements (1)	120 VAC/60 Hz, 220 VAC/50 Hz		
Dimensions	13"w x 13"h x 7"d (32cm x 33cm x 18cm)	13"w x 28"h x 9"d (32cm x 71cm x 22cm)	13"w x 44"h x 9"d (32cm x 112cm x 22cm)
Shipping Weight	26 lbs. (12kg)	60 lbs (27 kg)	88 lbs. (40 kg)

(1) 12 VDC transformer supplied with unit.

System Flow Rates

	75-45	75-52	75-62
Inlet Pressure 125 psig (8.6 barg)	17 lpm	34 lpm	102 lpm
Inlet Pressure 100 psig (6.9 barg)	14 lpm	28 lpm	85 lpm
Inlet Pressure 80 psig (5.5 barg)	12 lpm	23 lpm	71 lpm
Inlet Pressure 60 psig (4.1 barg)	9 lpm	17 lpm	57 lpm
Air Loss for Regeneration	14 lpm	14 lpm	57 lpm

Optional Accessories (Request AGS Catalog)

Model Number	Description
W-405-4032-000	Pressure Regulator (outlet)
72-130-V883	Pressure Regulator (inlet)
W-FM Series, 72-400 Series	Flow Controllers
2002N-1B1-DX (Model 75-45)	Auxiliary Coalescing Prefilter Assembly
8002N-1B1-DX (Model 75-52)	Auxiliary Coalescing Prefilter Assembly

All troubleshooting activities should be performed by suitable personnel using reasonable care.



Note: When applicable, disconnect the electrical power before starting any trouble shooting activities.

Symptom	Course of Action
Moisture Indicator Turns Yellow	<p>Check inlet air pressure. Maintain 60 psig (4.1 barg), minimum.</p> <p>Check inlet air temperature. If higher than 78°F (26°C), install aftercooler condenser upstream from the dryer.</p> <p>Check outlet flow rate. If it exceeds dryer capacity, control with a flow controller.</p> <p>Check that the unit is cycling between towers. If not, check power. Replace fuse if necessary (1.5 amp only).</p>
High Pressure Drop Through Dryer (not enough flow)	<p>Check flow demand. Match process flow requirements to dryer capacity.</p> <p>Check inlet filter for particulate clogging; replace if necessary.</p> <p>Examine fittings and process for gross leaks.</p>
No Flow Through Dryer	<p>Check inlet (supply) pressure. Maintain 60 psig (4.1 barg) minimum. At pressures lower than 60 psig (4.1 barg), back pressure regulator will prevent outlet flow from generator.</p> <p>Check supply line source (compressor).</p> <p>Check to make sure all customer installed valves are open.</p> <p>Check prefilter drains to ensure they are sealed.</p>
Logic Box Hum (loud and annoying) or Not Cycling	<p>Consult the Technical Services Department or your local representative to arrange for return.</p>



Note: After the problem has been resolved, the towers must 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 approximately 12 hours to assure complete regeneration.

Don't Forget To:

- 1 Complete and mail your registration card.
- 2 Order an installation kit (P/N IK7572).
- 3 Keep your product certification in a safe place.
- 4 Call the Technical Services Department at 800-343-4048, 8AM to 5PM Eastern Time with any questions or email at balstontechsupport@parker.com. For locations outside North America, please contact your local representative.

Serial Numbers

The serial number for the unit is on the left side panel, near the inlet port. For your own records, and in case service is required, please record the following:

DATE IN SERVICE _____ SERIAL NO. _____

Please have the serial number available when calling for assistance.



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