

TECHNICAL INFORMATION

Installation, Operation and Maintenance Parker Balston® HydroGen™ Mate Models 72-230 and 72-231

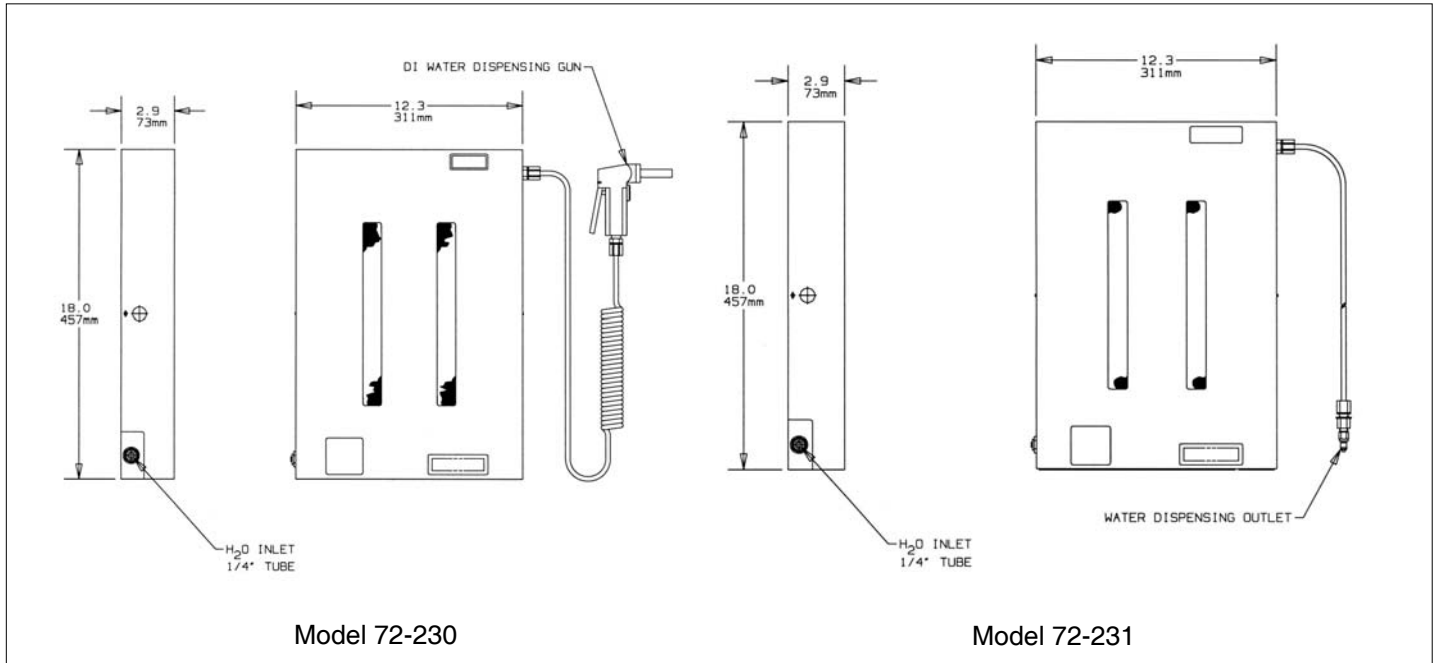


Figure 1 - Overall Dimensions

These instructions must be thoroughly read and understood before installing and operating this product. Failure to operate this product in accordance with these instructions could present a safety hazard to the user and will void the safety certification of this product. Modification of the unit will result in voiding the warranty. If you have any questions or concerns, please call the Technical Services Department at 800-343-4048, 8AM to 5PM Eastern Time (North America only) or email at balstontechsupport@parker.com. For other locations, please contact your local representative.

Note: The purifier is shipped with a press fitting release tool. Keep tool for servicing the purifier.

General Description

The Parker Balston HydroGen Mate is a water purification system specifically designed to provide high purity deionized water for all models of Parker Balston Hydrogen Generators. The HydroGen Mate purifies standard tap water to deliver high quality deionized water with a resistivity greater than 5 Megohm/cm. The water system comes complete with a prefilter (to 25 micron), two deionizing resin cartridges (to 5 Megohm/cm), a final filter (to 20 micron), and a dispensing gun (see Figures 1 and 2). It can deliver purified water at flow rate of 1 lpm.

The Parker Balston HydroGen Mate is a point-of-use water purifier. It should not be considered a main water purification system for any laboratory.

Model 72-231 is designed to attach directly to Parker Balston Hydrogen Generators with the automatic water feed feature.

All installation, operation, and maintenance procedures for the Parker Balston HydroGen Mate deionized water system, should be performed by suitable personnel using reasonable care.

The water supply pressure to the HydroGen Mate must not exceed 50 psig (3.4 barg). Water pressure higher than 50 psig (3.4 barg) and 80°F (26°C) could result in component leaks and system failure.

Remove the cover of the Parker Balston HydroGen Mate prior to installing by grasping the finger holes on both sides and lifting away from the pegs that hold it in place. The plastic will flex with pressure.

Mounting - The Parker Balston HydroGen Mate is designed to be wall-mounted. Fasten the unit securely to a wall or other flush mount vertical surface using mounting hardware that is adequate to support the weight of the purifier and its water content. The mounting hole pattern can be established by removing the cover and tracing the keyhole slots on the mounting surface, or by using the dimensions listed in Figure 2.

Fittings - The HydroGen Mate has a press fitting at the inlet which is designed to accommodate 1/4" OD tubing. Parker Balston recommends the use of semi-rigid tubing that is acceptable for use with deionized water. Such materials include polyethylene and soft copper. (Copper tubing should be free from burrs before connecting to the inlet of the water purifier.) Parker Balston also provides an auxiliary fitting to change the inlet from a 1/4" press fitting to a 1/4" NPT fitting. (**Note:** If this conversion is made, it is permanent. The fitting may not be removed to return to the press fitting port style.)

Cold Water Supply - The cold water should be supplied to the HydroGen Mate at a pressure no higher than 50 psig (3.4 barg) and temperature no higher than 80°F (27°C). Tap into the water supply directly downstream from the water supply valve, using a suitably sized "tee" fitting, and run the (properly sized) tubing to the purifier. **Prior to connecting the water supply to the purifier, run the water through the line for 1-2 minutes to clean out any sediment and ensure a fresh water supply. Make sure inlet valve (see Figure 2) is closed prior to connecting the water supply.** Figure 2 shows the valve in the "Open" position.

Note: As with any water supply system, water hammer can occur with long runs of piping if there are many valves opening and closing on a regular basis. To avoid the effects of water hammer, install the HydroGen Mate as close to the cold water supply as possible.

Dispensing Gun - The HydroGen Mate Model 72-230 is shipped with a bracket for mounting the water-dispensing gun. Mount the gun in a location close to the purifier and convenient to the user.

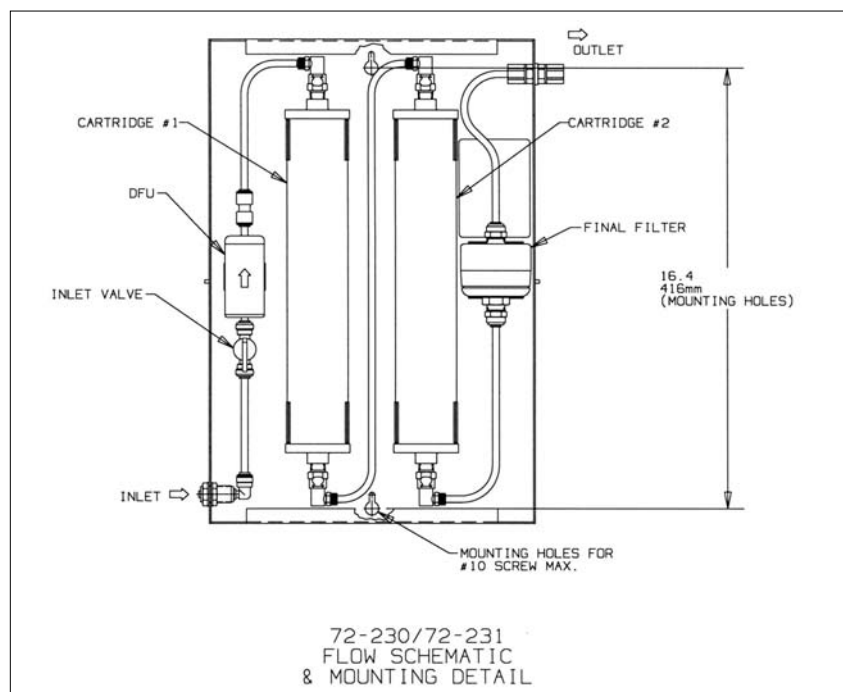


Figure 2 - Mounting Dimensions and Flow Schematic for the 72-230/72-231

After the water supply line has been purged for 1-2 minutes, and the tubing has been connected to the HydroGen Mate, open the valve located below the prefilter to initiate water flow through the purifier. Replace the cover. The HydroGen Mate is now ready to supply high quality deionized water to the Parker Balston Hydrogen Generator. The purifier will process approximately 60 gallons of tap water before it requires servicing. (**Note:** This is only an approximate life estimate. Actual time between filter and resin changes may vary based on the quality of the water supply.) When most of the first resin cartridge (visible through the cover) has changed color (to orange/brown), it is time to service the system, as detailed in the Maintenance section of this bulletin.

Maintenance

Prior to servicing the Parker Balston HydroGen Mate water purifier, remove the cover and close the inlet valve located below the prefilter (see Figure 2). There is no need to drain the unit prior to servicing.

The components in the Parker Balston HydroGen Mate which require servicing are the prefilter, deionizing resin cartridges, and the final filter. When the first resin cartridge has changed color, it is time to service the purifier. The purifier will require servicing approximately 2 times per year, depending on water use, water supply quality, and pressure drop. The prefilter and final filter are changed every second time the resin cartridge is changed.

The replacement parts for routine maintenance are conveniently packaged into a maintenance kit, P/N 72236. The maintenance kit contains the components necessary to service the purifier twice. Parker Balston supplies a press fitting release tool with the purifier to facilitate filter and resin cartridge replacement.

Prefilter

The prefilter on the Parker Balston HydroGen Mate is a Balston® Disposable Filter Unit (DFU). Before changing the DFU, ensure that the water valve (below the filter) is closed. Using the press fitting release tool, disconnect the DFU from the inlet and outlet fittings. (Insert the tool between the DFU and the plastic collar on the fitting. Apply pressure to the plastic collar and pull away from the DFU.) Replace the DFU into the fittings. The flow arrow should point upward. Press the DFU port into the fitting until it “bottoms out”.

Resin Cartridges

Each resin cartridge is equipped with quick-release fittings for easy removal. Simply press the “button” on the inlet and outlet of each cartridge and the tubing will pop off. When re-installing the new cartridges, simply press the tubing fitting into the resin cartridge fitting until it “clicks”. Check the security of the fitting by gently pulling on the tubing. Rotate the resin cartridges at each service interval. Remove cartridge #1, install cartridge #2 into cartridge #1 position, and install the new resin cartridge into cartridge #2 position (see Figure 2). (**Note:** The tie-wraps which hold the resin cartridges in place may be cut and discarded. They need not be replaced.)

Final Filter

The final filter on the HydroGen Mate is held in place by press fittings. Use the press fitting release tool to remove the final filter (as detailed for prefilter removal). Install the replacement filter. Make sure the tubing “bottoms out” in the press fitting.

While the cover is still off, open the water valve (below the prefilter) and check the system for leaks (and repair as needed). Replace the plastic cover and continue use.

Maintenance Kit

Part No.	Description	Contents
72236	Maintenance Kit	1 prefilter, 2 resin cartridges, 1 final filter

Specifications

Principle Specifications

Parker Balston HydroGen Mate	72-230 and 72-231(1)
DI Water Quality	> 5 Megohm/cm
Maximum Flow Rate	1 lpm
Water Inlet Port (2)	1/4" OD Tubing (press fitting)
Maximum Water Supply Pressure	50 psig (3.4 barg)
Maximum Water Supply Temperature	80°F (27°C)
Physical Dimensions	12"w x 18"h x 3"d (31cm x 46cm x 7cm)
Shipping Weight	12 lbs. (5.5 kg)

1 Model 72-231 is designed to attach directly to Parker Balston hydrogen generators with the automatic feed water feature.

2 Also includes fittings for conversion to 1/4" NPT fitting.



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