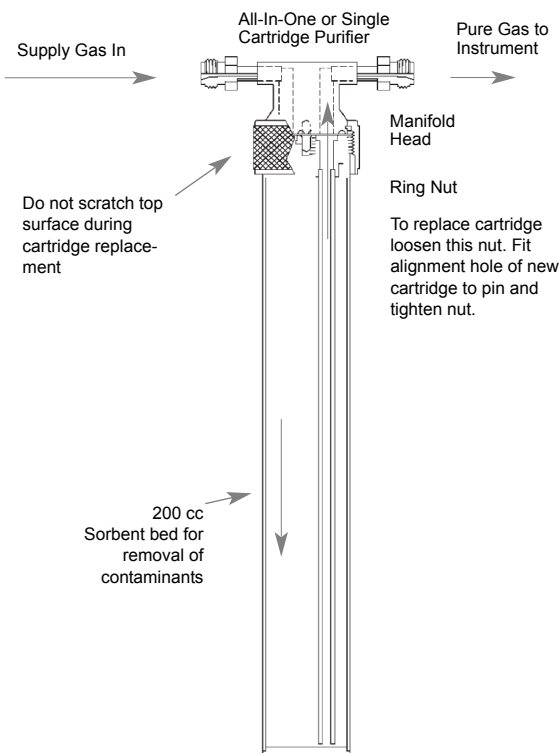




WARNING

- Do not pass air or oxidizing gases in concentrations above 0.1% through this filter! The rapid oxidation of the active adsorbant in this filter can cause the filter bed to become extremely hot, resulting in danger of fire or burn injuries. Limited exposure of the filter to air during installation or cartridge replacement does not result in rapid reaction or dangerous heat generation.
- Maximum pressure 13.6 bar / 1360 kPa (200 psig). Do not exceed the pressure rating of this device! An overpressure condition can result in explosion of one or more of the filter components. Wear eye protection and use caution when working with pressurized systems.



Operation

- The CRS All-In-One or Single Cartridge Gas Purification System removes contamination from many cylinders of carrier gas depending on the purity. For example, using ordinary low-cost laboratory helium (99.997% pure) the cartridges will purify at least 8 tanks of 8.3 m³ (292 cu.ft.) capacity.
- Change cartridges at least once each year if gas use is low.

Installation The Purifier should be located as close as possible to the instrument with which it will be used, with the cartridge readily accessible. The purifier comes complete with the following mounting hardware:

- 4 slotted-head screws, 1 1/4"
- 2 allen-head screws, 3/4"
- 2 metal spacers
- 4 plastic anchors
- 1 optional bench mount bracket
- 4 felt pads
- 1 allen wrench

To mount on wall: The All-In-One or Single Cartridge System comes pre-assembled on a wall mount bracket. Position the purifier against the wall or vertical mounting surface and mark the locations of the four bracket holes. Wear eye protection while drilling. Drill 6.3mm (1/4") diameter holes to a depth of 3 cm (1 1/4") at the four positions and insert the four plastic anchors supplied. Mount the purifier to the wall with the four slotted-head screws provided.



Standard Wall Mount Bracket

To mount on bench: Remove the manifold head from the wall-mount bracket by unscrewing the two allen-head screws. See Figure 1. Attach the manifold head to the bench-mount bracket as follows: Thread the two allen-head screws from underneath the bench mount bracket, through the metal spacers (see photo) and into the manifold head. The spacers will create enough clearance to fit wrenches onto the fittings. Tighten screws. For temporary placement on a bench, attach felt pads to the bottom of the



Figure 1. Bench Mounting the Purifier
Two metal spacers position the manifold head above the bench-mount bracket.

bench-mount bracket. Place the purifier in the desired location. For permanent attachment to a bench, bolt the System to the bench through the holes in the bottom of the bracket.

Gas Connections

The purifier is delivered in the active state, filled with high-purity helium. It is recommended to purge the system with the source gas before instrument operation. Use new, precleaned tubing for the gas line. We recommend that freshly-cut tubing ends and new nuts and ferrules be used for all connection points.

- Set the source gas to a low flow rate (10 - 30 cc/min).
- Remove the brass sealing plugs from the fittings at both ends of the gas purifier system.
- Using the stainless steel ferrules supplied, connect the source gas

- line to the purifier. Tighten the nuts finger-tight.
- While holding the fitting body steady with a backup wrench, use a wrench to turn the nuts an additional ¼ turn past finger-tight (for 1/8" tubing connections) or 1 ¼ turn past finger-tight (for ¼" tube connections).
- Attach the source gas line to the purifier inlet.
- Attach the purifier outlet to the instrument gas inlet.
- Allow 1 - 2 liters of gas to flow through the filter and instrument before operation.

Oxygen-adsorbing cartridges have a high capacity. The momentary exposure of the system to air during installation or gas cylinder changes will not significantly deplete the filter.

Cartridge Replacement

The cartridge should be replaced annually when used with high-purity gas, or more frequently with lower-purity gas. (See figure 2.)

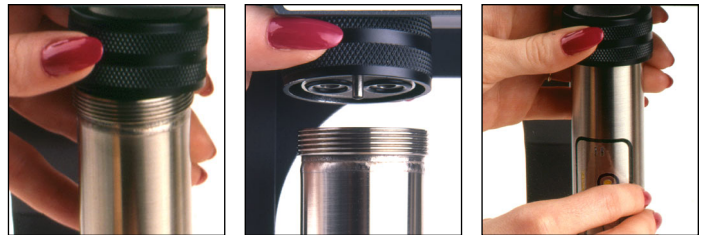


Figure 2. Replacing the cartridge. Loosen the ring nut, then remove the depleted cartridge. To re-install cartridge, locate the alignment pin and hole; place cartridge on the pin. Be careful not to scratch the cartridge top. Tighten the ring nut, hand-tight only.

Depressurize unit. Then unscrew the ring nut, remove the old cartridge, and replace with a new cartridge. If the o-rings in the manifold head appear worn, replace them with new o-rings (provided with each replacement cartridge.)

All-In-One / Individual-Cartridge Purifiers

Individual Purifiers	1/8" Cat. No.	1/4" Cat. No.
All-In-One Gas Purification System	202890	202892
High Capacity Oxygen	202805	202815
Indicating Oxygen	202806	202816
Hydrocarbon/Moisture	202807	202817
Hydrocarbon	202802	202812
Moisture	202803	202813
Carbon Dioxide	202808	202814

Replacement Cartridges / Regeneration

Individual Cartridges	New	Regeneration
All-In-One	202839	202879
High Capacity Oxygen	202810	202871
Indicating Oxygen	202820	202872
Hydrocarbon/Moisture	202830	202873
Moisture	202835	202874
Hydrocarbon	202837	202875
Carbon Dioxide	202838	NA

Covered by U.S. Patents #D357,200; D360,265, D364,809. Other U.S. and International patents applied for.



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