



**WARNING: BECOMES HOT WHEN EXPOSED TO AIR.
USE ONLY WITH INERT, NON-OXYDIZING GASES.**

INSTRUCTIONS FOR THE

ECD Gas Purification System

FROM

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PRODUCT INFORMATION

The CRS ECD Gas Purification System removes oxygen and moisture to better than research grade quality (99.9999%) when starting with standard grade compressed gases. It consists of a high capacity oxygen-removing cartridge in series with a moisture-removing cartridge on a wall mount manifold. The System provides high-capacity oxygen removal; capacity is at least 1000cc of gas phase oxygen at ambient conditions. The moisture-removing cartridge contains 200cc of adsorbent to remove residual water from the gas stream. The cartridges are designed to be regenerated when capacity is depleted. Internal screens prevent fines from entering the gas stream. Maximum pressure is 200psi. The ECD Gas Purification System is designed for wall mounting, with anchors and screws provided. It may also be bench mounted by attaching the included legs to the wall mount bracket with the nuts provided. Dimensions are approximately 26cm W x 30cm H x 8cm D, including fittings; fittings are either 1/8" or 1/4". Weight 1.8kg.

Caution: The active catalyst in the high capacity oxygen-removing cartridge becomes hot when exposed to air. Maximum pressure 200psig.

Wall Mounting: The CRS ECD Gas Purification System is intended to be wall mounted, although it can be used in any orientation. It should be placed or mounted in a safe area where it will not be jostled or bumped. Mounting hardware is included with the System and consists of four screws and four plastic anchors. To wall mount, first hold the System in the desired location against the wall and mark the position of the four pre-drilled mounting holes in the mounting bracket. Wear eye protection during drilling. Drill a 1/4" diameter hole at each marked spot, to a depth of 1 1/4". Insert one plastic anchor into each hole. Mount the Gas Purification System to the wall by screwing it to the anchors, putting the screws through the holes in the System bracket. **Bench Mounting:** Optional legs are included with the Gas Purification System. To bench mount, attach the legs to the wall mount bracket with the included nuts.

Detector Gas Connection: The CRS ECD Gas Purification System is intended for use with argon, nitrogen, or blends with methane. It is delivered in the active state, filled with helium. It is ready for use, but it is recommended that the System be

purged overnight with the detector gas you will be using. This allows the molecular sieve to equilibrate with the ECD gas mixture for a stable baseline. To install, first purge the detector gas line. While maintaining a low purge rate of 10 to 30 cc/min, remove the end plugs from the inlet and outlet fittings of the Gas Purification System, then attach the gas line to the inlet of the cartridge. Attach the outlet end of the System to the instrument, and continue purging the entire system overnight. The high capacity of the CRS ECD Gas Purification System means that less maintenance is required. The System is rated for 18 tanks (292 ft³) of standard-purity (99.997%) gas. As long as the System is attached to the gas line within a few minutes, the loss of contaminant-adsorbing capacity will be negligible.

Regeneration Service: The CRS ECD Gas Purification System can be regenerated numerous times. Please return the cartridges to CRS for regeneration.

Cartridge Replacement: When the System's capacity is depleted after 18 tanks of gas, or annually, cartridges can be easily replaced with fresh ones. There is no need to detach the System from the gas line while changing cartridges. Shut off detector gas flow. Each cartridge is removed by unscrewing its knurled ring nut. To install replacement cartridges, first remove the cap from the replacement cartridges' end. Replace cartridges in the correct location. Alignment pins in the heads assure proper positioning of cartridges in the system. If the o-rings in the manifold head appear worn, replace them with new o-rings (provided with each replacement cartridge.) After replacement, tighten the knurled ring nuts.

REORDER INFORMATION

Description	Cat. No.
ECD Gas Purification System, 1/8" fittings, Complete*	202855
ECD Gas Purification System, 1/4" fittings, Complete*	202856
High Capacity Oxygen Replacement Cartridge	202810
Moisture Replacement Cartridge	202835
Regeneration Service, High Capacity Oxygen Cartridge	202871
Regeneration Service, Moisture Cartridge	202874

* Complete System includes manifold with one cartridge each for high capacity oxygen and moisture removal; fittings; mounting hardware and optional legs. CRS U.S. Patents #D357,200; D360,265 and D364,809. Other U.S. and International patents pending.



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