3. Maintenance

3.1 Electronic indicator

If your filter or base plate came bundled with an electronic indicator please follow the instructions in the electronic indicator user guide on how to install and configure this indicator.

Visit **www.phenomenex.com/GasManagement** for more information.

3.2 Replacement of a filter cartridge

A filter cartridge needs to be exchanged when the visual indicators start changing color, or when the electronic indicator displays a percentage of 10% or less.

3.3 Base plate

Regularly check both the big and small O-rings on the base plate for hair cracks. The slightest leak may allow moisture, oxygen and hydrocarbons to enter the system and contaminate the gas.

Rear end connectors at the base plate may never be exchanged by unauthorized personnel.

4. Disposal

Saturated filter cartridges should not be placed in household waste bins. Please check local regulations for information about the disposal of chemical waste in your area.

Never re-condition any filter cartridge: for recycling, please contact you local supplier.

5. Overview

Zebron™ Gas Management Filters are suited for the purification of non-corrosive gases with low contamination concentrations to a better as 6.0 grade (99.99990%) purity.

Zebron™ Gas Management Filters are connected to an appropriate genuine base plate which is installed into the gas line.

6. Technical Specifications

Filter Type	Oxygen	Moisture	Hydrocarbon	Universal
Benefits	Removes oxygen as well as traces of sulfur and chlorine compounds	Removes water and other foreign material	Removes organic compounds	Single filter that removes water, oxygen and hydrocarbons
Indicator color change	Green -> Gray	Yellow -> White	None	Green -> Gray (Oxygen) Yellow -> White (Moisture)
Capacity	150 mL oxygen	7.2 g water	~7 g, depending on impurities	100 mL oxygen 1 g water Organics depending on impurites
Outlet concentration (1-10 L/min flow)	< 50 ppb	< 0.1 ppm	< 0.1 ppm	Oxygen < 50 ppb Moisture < 0.1 ppm Organics < 0.1 ppm

All filter cartridges are packed under Argon, except for the special Helium and Hydrogen specific filters.

Maximum pressure: 11 bar (160 psi)

Maximum flow: 7 L/min

Gas quality at outlet: > 6.0

7. Safety Information

- The maximum concentration of Oxygen allowed in the gas is 0.5%. (valid only for each filter packed with O_2-adsorbent and O_2-indicator)
- Maximum Gas-System pressure should never exceed 11 bar (160 psi).
- Do not install a filter kit near or in a hot area (i.e the hot-air exhaust at the rear of the GC).

8. Ordering Information

Zebron™ Gas Connecting Unit Base Plates	
AG6-2201	Zebron Gas Management 1-position Connecting Unit ⅛", 1/pk
AG6-2101	Zebron Gas Management 1-position Connecting Unit ¼", 1/pk
AG6-2202	Zebron Gas Management 2-position Connecting Unit ⅛", 1/pk
AG6-2102	Zebron Gas Management 2-position Connecting Unit ¼", 1/pk
AG6-2203	Zebron Gas Management 4-position Connecting Unit ⅛", 1/pk
AG6-2103	Zebron Gas Management 4-position Connecting Unit ¼", 1/pk

Zebron™ Gas Management Replacement Filters	
AG6-1010	Zebron Gas Management Oxygen Filter, 1/pk
AG6-1020	Zebron Gas Management Moisture Filter, 1/pk
AG6-1030	Zebron Gas Management Hydrocarbon Filter, 1/pk
AG6-1040	Zebron Gas Management Universal Filter, 1/pk

Zebron™ Gas Management Accessories	
AG6-1060	Zebron Gas Management Ring Nut for Gas Filter, 1/pk
AG6-2206	O-ring Replacement for Gas Filter Base Plate, 10/pk
AG6-4120	Zebron Gas Management Electronic Indicator for Gas Filter, 1/pk

Reorder at www.phenomenex.com/GasManagement

Compliance

RoHS COMPLIANT   CE   QUALITY APPROVED

Terms and Conditions

Patent Pending: PCT/NL2012/050477

IL67760419_W_1

Zebron™
Gas Management

Gas Filter User Guide
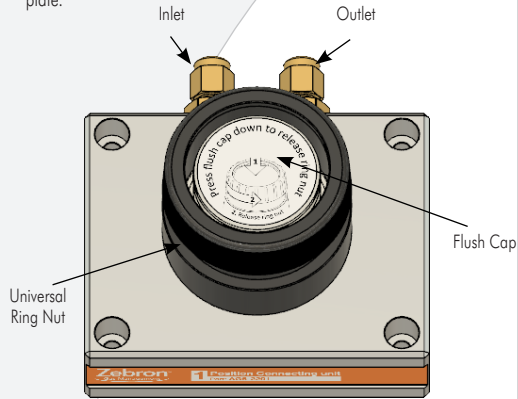
REPLACE. REORDER. RELAX.

www.phenomenex.com

phenomenex
…breaking with tradition®®

1. Installation of a Base Plate

A base plate can have 1, 2, or 4 positions, depending upon the number of gas purification applications. These instructions are valid for each individual position/rear end fitting connection on the base plate.

Inlet   Outlet

Flush Cap

Universal Ring Nut

1.1 Important information before you start

- Never install brass connectors on stainless steel tubing to avoid leakage.
- Installation of the base plate should always be done by certified personnel.
- After installation do not forget to perform a reliable leak test.

1.2 Installation Instructions

1. Switch off the incoming gas.
2. Cut the gas line using an appropriate metal tubing cutter.
3. Hand-tighten the incoming gas line tubing to the rear end-fitting marked IN at the base plate; keep the connection loose!
4. Switch on the incoming gas and flush the gas line for 10 min. with pure carrier gas, minimum pressure: 8 psi.
5. Connect the incoming gas line tight to the rear end-fitting (do not over-tighten).
6. Make sure that the flush cap and universal ring nut are well mounted on the base plate.
7. Fixate the base plate with screws using the mounting holes or use an optional wall mounting bracket.
8. Now mount the outgoing carrier gas line to the rear end-fitting marked OUT at the base plate and your analytical system is "ready-to-go".

1.3 After base plate installation

After connection of a new base plate to the inlet gas line of the analytical system, it is recommended to flush the total system for ½ hour at minimum pressure: 90 psi.

2. Installation of a Filter

2.1 Important information before you start

- Install filter cartridge only under low pressure (1 bar).
- After installation do not forget to perform a reliable leak test. Always use an electronic leak detector to check for leaks. Leak detection fluids or sprays may damage the filter and contaminate your gas line.
- The white small plastic mounting plugs on the outside housing a bit above the bottom should never be removed; in case these plugs are missing, the cartridge may not be installed, but should be returned to the supplier.
- Never install an oxygen filter in a base plate position suited for air. It will result in instant saturation!

### 2.2 Remove the flush cap and universal ring nut

Before installing a filter make sure the base plate is properly connected to the gas line, and the system has been flushed. Remove the universal ring nut and flush cap.
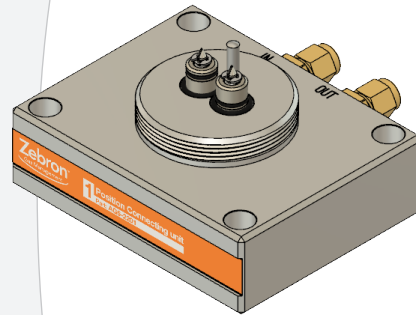
As long as there is no filter cartridge connected, the base plate will automatically block the gas stream.

2.3 Remove the closure plugs

Remove the two metal diffusion-proof plugs from the filter cartridge Inlet and Outlet (positioned at the bottom of the filter cartridge).
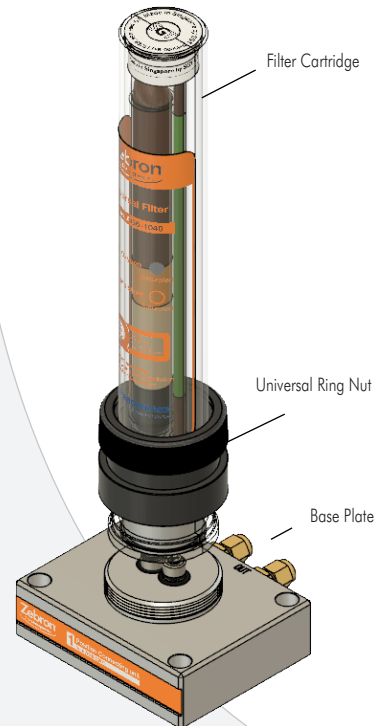

Closure Plugs
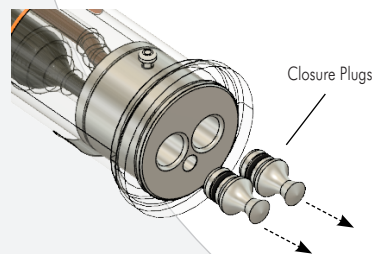
2.4 Align the filter with the base plate

Use the universal ring nut from the base plate and place it around the filter cartridge.

Align the filter cartridge with the base plate, making sure all three holes align with the two valves and positioning pin.


IN   OUT
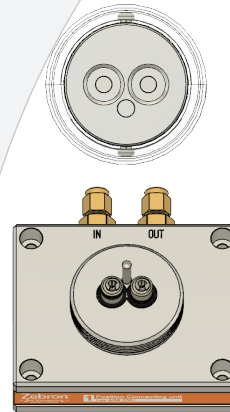
2.5 Position the filter on the base plate

Filter Cartridge

Universal Ring Nut

Base Plate

2.6 Install the filter onto the base plate

While pushing the filter down on the base plate, hand-tighten the universal ring nut until the filter is firmly connected to the base plate.

- During installation of a new cartridge, torsion on the plastic outer protection tube should be avoided at any time; put your hand on top of the filter housing during installation and keep the cartridge 90 degrees upright.
- Once the filter is positioned on the base plate the PTFE seals inside the filter foot will be punctured and it is necessary to keep the filter in position by hand to prevent air entering the system.
- After installing the filter cartridge to the base plate, highly pure gas will automatically stream from the filter into the analytical system.
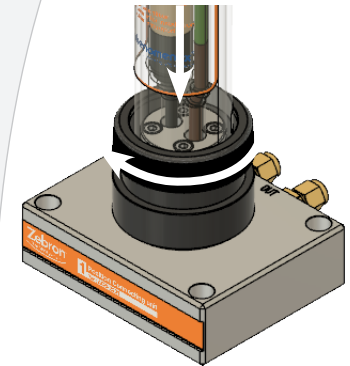
2.7 After filter installation

Important: Perform a reliable leak test. Always use an electronic leak detector to check for leaks. Leak detection fluids or sprays may damage the filter and contaminate your gas line.

Watch out for cracks in the inside glass tube after installation.

Flush the cartridge / whole system for 15 min. with pure carrier gas, advised pressure: 90 psi

Re-adjust the system pressure to the required pressure needed for your analytical application (Max. 11 bar, 160 psi)

2.8 Install the electronic indicator

AG6-4120