

Click-On Inline Super-Clean™ Traps

Fast, simple changes of inline gas purifiers.



Turning Visions into Reality™

www.restek.com

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Click-On Inline Super-Clean™ Traps

- High-purity output ensures 99.9999% pure gas.
- Click-On fittings for easy, leak-tight cartridge changes; brass or stainless steel, 1/4" or 1/8".
- Helium-Specific Triple Trap is ideal for GC/MS.

Click-On Inline Super-Clean™ traps are the latest in in-line gas filtration. Click-On adaptor connectors allow traps to be exchanged without introducing oxygen. Spring-loaded check valves seal when a filter is removed and open only when a new filter has been locked in place. There is no need for loosening and tightening fittings every time a trap is changed, and your system will not become contaminated during the process.

The Triple Trap is ideal for purifying carrier gas—it contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge.

The Fuel Gas Trap is ideal for purifying flame ionization detector (FID) fuel gases, removing both moisture and hydrocarbons.

The Helium-Specific Triple Trap is ideal for purifying helium in GC/MS systems. This trap contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge, and is packed and purged under helium.

Trap replacement depends on the quality of the incoming gas. Use the double connector and install an indicating cartridge after a trap to indicate when the trap should be replaced.

Trap Type	Gas Quality at Outlet	Maximum Pressure	Maximum Flow (L/min.)	Use For	H ₂ O (g)	Capacity O ₂ (mL)	Hydrocarbons (g)	Estimated Lifetime (years)
Moisture cat.#22467	>99.9999	11 bar 160psi	25	Inert carrier gas, helium, air, H ₂	21	NA	NA	>3
Oxygen cat.#22468	>99.9999	11 bar 160psi	25	Inert carrier gas	NA	3000	NA	>3
Hydrocarbon cat.#22466	>99.9999	11 bar 160psi	25	Inert carrier gas, helium, air, H ₂	NA	NA	36 ³	>3
Fuel Gas ¹ cat.#22465	>99.9999	11 bar 160psi	25	Inert carrier gas, helium, air, H ₂	10	NA	18 ³	>2
Triple ² cat.#22464	>99.9999	11 bar 160psi	25	Inert carrier gas	6	1000	12 ³	>2

¹Removes hydrocarbons, moisture.

²Removes hydrocarbons, moisture, oxygen.

³As *n*-butane.

Note: Super-Clean™ Gas Filters are recommended for purifying noncorrosive gases with low concentrations of contaminants. For oxygen purifiers, the maximum concentration of oxygen in the incoming gas stream is 0.5%.

did you know?

Click-On connectors allow you to change traps quickly, without introducing oxygen into your system.



Click-On Inline Super-Clean™ Trap and Connector Kits

Description	qty.	cat.#
Carrier Gas Purification Kit, 1/8" Stainless Steel Includes (2) 1/8" SS connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22456
Carrier Gas Purification Kit, 1/8" Brass Includes (2) 1/8" brass connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22457
Carrier Gas Purification Kit, 1/4" Stainless Steel Includes (2) 1/4" SS connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22458
Carrier Gas Purification Kit, 1/4" Brass Includes (2) 1/4" brass connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22459
Fuel Gas Purification Kit, 1/8" Stainless Steel Includes (4) 1/8" SS connectors and (2) hydrocarbon/moisture traps	kit	22460
Fuel Gas Purification Kit, 1/8" Brass Includes (4) 1/8" brass connectors and (2) hydrocarbon/moisture traps	kit	22461
Fuel Gas Purification Kit, 1/4" Stainless Steel Includes (4) 1/4" SS connectors and (2) hydrocarbon/moisture traps	kit	22462
Fuel Gas Purification Kit, 1/4" Brass Includes (4) 1/4" brass connectors and (2) hydrocarbon/moisture traps	kit	22463



Replacement Click-On Inline Super-Clean™ Traps

Description	qty.	cat.#
Replacement Click-On Super-Clean™ Triple Trap (removes oxygen, moisture and hydrocarbons)	ea.	22464
Replacement Click-On Super-Clean™ Fuel Gas Trap (removes moisture and hydrocarbons)	ea.	22465



Click-On Inline Super-Clean™ Ultra-High Capacity Traps

Description	qty.	cat.#
Ultra-High Capacity Hydrocarbon Trap	ea.	22466
Ultra-High Capacity Moisture Trap	ea.	22467
Ultra-High Capacity Oxygen Trap	ea.	22468



Helium-Specific Click-On Inline Super-Clean™ Trap and Kits

Description	qty.	cat.#
Kits		
Helium-Specific Carrier Gas Cleaning Kit, 1/8" Stainless Steel Includes (2) 1/8" SS connectors and (1) oxygen/moisture/hydrocarbon Helium-Specific Triple Trap	kit	22469
Helium-Specific Carrier Gas Cleaning Kit, 1/8" Brass Includes (2) 1/8" brass connectors and (1) oxygen/moisture/hydrocarbon Helium-Specific Triple Trap	kit	22470
Helium-Specific Carrier Gas Cleaning Kit, 1/4" Stainless Steel Includes (2) 1/4" SS connectors and (1) oxygen/moisture/hydrocarbon Helium-Specific Triple Trap	kit	22471
Helium-Specific Carrier Gas Cleaning Kit, 1/4" Brass Includes (2) 1/4" brass connectors and (1) oxygen/moisture/hydrocarbon Helium-Specific Triple Trap	kit	22472
Replacement Trap		
Replacement Helium-Specific Triple Trap (removes oxygen, moisture and hydrocarbons)	ea.	22473

did you **know?**

Helium-Specific Click-On Inline Super-Clean™ traps and kits are designed specifically for purifying helium in GC/MS systems!



Click-On Inline Super-Clean™ Indicator

- Indicator color change: oxygen: green to grey; moisture: beige to clear

Description	qty.	cat. #
Click-On Inline Super-Clean™ Indicator (oxygen, moisture plus adsorbents and hydrocarbons)	ea.	22474



tech tip

Install an indicator after the Click-On Inline Super-Clean™ trap so there is no confusion about when to replace the traps.

Click-On Inline Super-Clean™ Connectors

Description	qty.	cat. #
1/8" Brass Click-On Inline Super-Clean™ Connectors	2-pk.	22475
1/8" Stainless Steel Click-On Inline Super-Clean™ Connectors	2-pk.	22476
1/4" Brass Click-On Inline Super-Clean™ Connectors	2-pk.	22477
1/4" Stainless Steel Click-On Inline Super-Clean™ Connectors	2-pk.	22478



Click-On Inline Super-Clean™ Double Connector

- Connects any Click-On trap to a Click-On indicator.

Description	qty.	cat. #
Click-On Inline Super-Clean™ Double Connector, stainless steel (connects trap and indicator)	ea.	22479



Wall-Mounting Clamps for Click-On Inline Super-Clean™ Traps

Description	qty.	cat. #
Wall-Mounting Clamps for Click-On Inline Super-Clean™ Traps	4-pk.	22480

Replacement O-Rings for Click-On Inline Super-Clean™ Connectors

Description	qty.	cat. #
Replacement O-Rings for Click-On Inline Super-Clean™ Connectors	10-pk.	22481

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Other Trademarks:
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Lit. Cat.# 580041-INT

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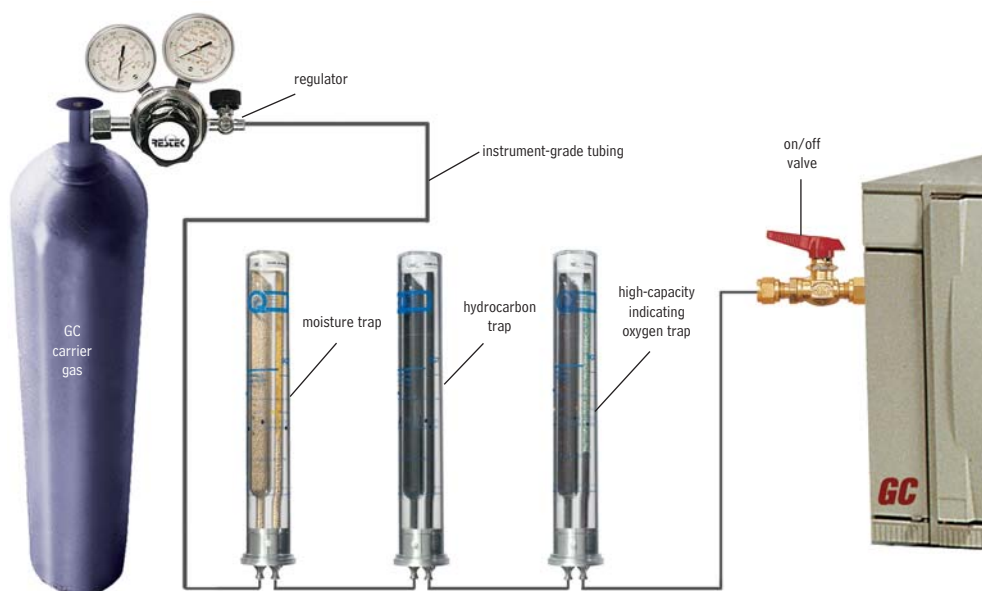
Super-Clean™

Gas Filters from Restek



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Why do I need to use traps and where should I install them?

Carrier gas must contain less than 1ppm of oxygen, water vapor, or any other trace contaminant, to prevent column degradation, shortened column lifetime, and increased stationary phase bleed. Contaminants cause ghost peaks to appear during temperature programming and degrade the validity of analytical data. Make-up gas also should be contaminant-free, or baseline fluctuations and excessive detector noise can occur; detector gases should be free of water and hydrocarbons, or excessive baseline noise can result. Gas purifiers remove these contaminants from gas sources, thereby improving system performance.

tech tip

Carrier Gas Purity

Carrier gas should contain less than 1ppm of oxygen, moisture, or other trace contaminants, to prevent column degradation, increase column lifetime, and decrease stationary phase bleed.

The expense of using high-purity gases in combination with carrier gas line purifiers will be offset by longer column lifetime and less GC maintenance.

Moisture Removal

Moisture in carrier gas lines will prematurely degrade oxygen and hydrocarbon traps and increase detector noise (particularly with ECDs). As a precaution, we highly recommend installing a moisture trap before the hydrocarbon and oxygen traps on all carrier gas lines. Our favorite trap is the Super-Clean™ Ultra-High Capacity Moisture Filter (cat.# 22028).

Hydrocarbon Removal

Use a hydrocarbon trap if your gas has a potential source of hydrocarbon contaminants (e.g., an oil pump in an air compressor) or if you suspect you are observing carrier gas ghost peaks. Install the hydrocarbon trap after the moisture trap, to prevent moisture from degrading the hydrocarbon-trapping ability of the activated carbon in the hydrocarbon trap. We recommend the Super-Clean™ Ultra-High Capacity Hydrocarbon Filter (cat.# 22030).

Oxygen Removal

Oxygen is a column killer. It is present even in UHP gases, as minute leaks at fittings allow oxygen to influx against the concentration gradient. There are many choices for oxygen removal—the Super-Clean™ Ultra-High Capacity Oxygen Filter (cat.# 22029) is popular with Restek chemists. Because oxygen can enter a gas line at any fitting, the oxygen trap should be the last connection before the gas line enters the chromatograph.

did you know?

Trap replacement made simple!

Try the Super-Clean™ Triple Filter Carrier Gas Cleaning Kit (cat.# 22019) that removes moisture, hydrocarbons, and oxygen in one easy-to-change, economical cartridge.

Super-Clean™ Gas Filters

- High-purity output ensures 99.9999% pure gas.
- “Quick connect” fittings for easy, leak-tight cartridge changes.
- Glass inside to prevent diffusion; plastic outside for safety.

Designed for fast, simple cartridge changing

Cartridge systems make changing gas filters quick and easy, and Super-Clean™ gas filters are the latest in cartridge-style gas filtration. A baseplate allows cartridges to be exchanged without introducing oxygen. Spring-loaded check valves seal when a filter is removed and open only when a new filter has been locked in place. There is no longer a need for loosening and tightening fittings every time a trap is changed, and your system will not become contaminated during the process.

With available 2- or 3-position baseplates, you can purify all GC gas streams at one location. Figure 1 shows some possible filter cartridge combinations using these baseplates. Any combination is possible because any Super-Clean™ filter cartridge can be used with any baseplate.

High-purity output for improved sensitivity (Table I)

The Triple Filter cartridge (cat.# 22020) is ideal for purifying carrier gas. This trap contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge. The purity of your carrier gas after flowing through the Triple Filter is better than six-9s (99.9999% pure), which is ideal for sensitive mass spectrometry (MS) or ECD analyses, and for protecting your analytical columns against damage from contaminated carrier gas.

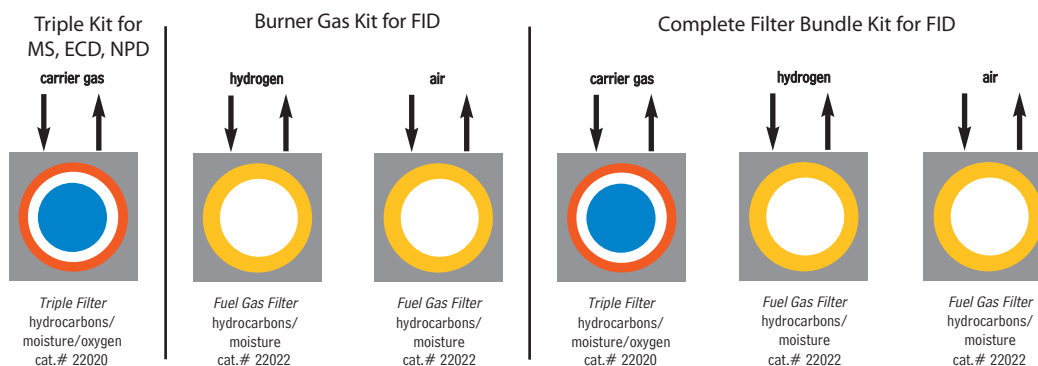
The Fuel Gas Filter cartridge (cat.# 22022) is perfect for purifying flame ionization detector (FID) fuel gases, removing both moisture and hydrocarbons. Using the Fuel Gas Filter for FID hydrogen and air will produce a stable baseline, improving overall reproducibility and sensitivity.



did you know?

All Super-Clean™ filter cartridges (except hydrocarbon filter cat.# 22030) feature easy-to-read indicators. The indicator code is shown on every trap so there is no confusion about when to replace it.

Figure 1 Filter cartridges can be configured for different applications.



tech tip

Oxygen and Moisture Traps

We highly recommend oxygen and moisture traps for make-up gas when operating sensitive detectors such as electron capture detectors (ECD). The hydrogen reaction gas for sensitive electrolytic conductivity detectors (ELCD) also requires a hydrocarbon trap, to remove trace impurities.

Table I Each Super-Clean™ filter provides high-purity outlet gas.

Type of Filter	Outlet Gas Quality (%)	Maximum Pressure/ Maximum Flow Rates	Use for:	Indicator Color Change	Capacity			Estimated Lifetime (years)
					H ₂ O (g)	O ₂ (mL)	Hydrocarbons (g)	
Moisture cat.# 22028	>99.9999	11 bar 159psi/ 7 L/min.	Inert carrier gas Air Hydrogen	Yellow to clear	7.2	—	—	>2
Oxygen cat.# 22029	>99.9999	11 bar 159psi/ 7 L/min.	Inert carrier gas	Green to grey	NA	1000	—	>2
Hydrocarbons cat.# 22030	>99.9999	11 bar 159psi/ 7L/min.	Inert carrier gas Air Hydrogen	No indicator	NA	—	12 ³	>2
Fuel Gas ¹ cat.# 22022	>99.9999	11 bar 159psi/ 7L/min.	Inert carrier gas Air Hydrogen	Yellow to clear	3.5	—	24 ³	>1.5
Triple ² cat.# 22020	>99.9999	11 bar 159psi/ 7L/min.	Inert carrier gas	Yellow to clear Green to grey	1.8	500	4 ³	>1
Helium Specific ² cat.# 21982	>99.9999	11 bar 159psi/ 7L/min.	Helium	Yellow to clear Green to grey	1.8	500	—	>1

¹Removes hydrocarbons, moisture.

²Removes hydrocarbons, moisture, oxygen.

³As *n*-butane.



Super-Clean™ Filter and Baseplate Kits

All traps measure: 10⁵/₈" x 1³/₄"
(27 x 4.4 cm)
Each baseplate unit measures:
4" x 4" x 1⁷/₈"
(10.2 x 10.2 x 4.8 cm)

Description	qty.	cat.#
Carrier Gas Cleaning Kit (includes mounting baseplate, 1 ¹ / ₈ " inlet/outlet fittings, and oxygen/moisture/hydrocarbon Triple Filter)	kit	22019
Fuel Gas Purification Kit (includes mounting baseplate, 1 ¹ / ₈ " inlet/outlet fittings, and hydrocarbon/moisture Fuel Gas Filter)	kit	22021



Replacement Filters

Description	qty.	cat.#
Replacement Triple Filter (removes oxygen, moisture and hydrocarbons)	ea.	22020
Replacement Fuel Gas Filter (removes moisture and hydrocarbons)	ea.	22022



Filter Bundle Kit

- Kit includes two Fuel Gas Filters for FID fuel gases and one Triple Filter for carrier gas.

Description	qty.	cat.#
Filter Bundle Kit	kit	22031



Super-Clean™ Ultra-High Capacity Filters

Description	qty.	cat.#
Ultra-High Capacity Hydrocarbon Filter	ea.	22030
Ultra-High Capacity Moisture Filter	ea.	22028
Ultra-High Capacity Oxygen Filter	ea.	22029



Helium-Specific Super-Clean™ Filter and Kit

- Specifically designed for purification of helium in GC/MS systems.
- Traps are packed and conditioned using helium.
- Uses standard single-position baseplate.

Description	qty.	cat.#
Helium-Specific Carrier Gas Cleaning Kit (includes mounting baseplate, 1 ¹ / ₈ " inlet/outlet fittings, and oxygen/moisture/hydrocarbon Helium-Specific Filter)	kit	21983
Replacement Helium-Specific Filter (removes oxygen, moisture and hydrocarbons)	ea.	21982



Baseplates

- Standard baseplate fittings are 1¹/₈". To adapt to 1¹/₄", order 1¹/₈" to 1¹/₄" tube-end unions (cat. # 21833, next page).

Description	qty.	cat.#
Single-Position Baseplate	ea.	22025
2-Position Baseplate	ea.	22026
3-Position Baseplate	ea.	22027

Wall Mounting Bracket

Baseplates can be mounted by using screws and the mounting holes on the baseplate, or by using this optional wall mounting bracket.

Description	qty.	cat.#
Wall Mounting Bracket for Super-Clean™ Baseplates	ea.	21984



Replacement O-Rings for Cartridge Baseplates

Pack includes 10 large O-rings and 10 small O-rings.

Description	qty.	cat.#
Replacement O-Rings for Cartridge Baseplates	20-pk.	22023



1/8-Inch to 1/4-Inch Tube-End Unions

To adapt 1/8" Super-Clean™ baseplate fittings to 1/4", use 1/8" to 1/4" tube-end unions.

Description	qty.	cat.#
1/8" to 1/4" Tube-End Unions	5-pk.	21833



Super-Clean™ Gas Trapping System for LC/MS

Quick-change cartridge system for removing hydrocarbon impurities from nitrogen

- Changing filters is quick and easy.
- Up to 20L of hydrocarbon-free nitrogen per minute.

The Super-Clean™ Gas Trapping System is the latest technology in cartridge-style gas filtration for purifying nitrogen, and is ideal for use in LC/MS systems. The two-position baseplate (installed in the gas line) allows cartridges to be exchanged without introducing oxygen into the system. Spring-loaded check valves seal when a cartridge is removed and open only when a new cartridge has been locked in place. There is no need for loosening and tightening fittings every time you change cartridges, and your system cannot become contaminated during the changing process.

To meet the high flow needs of the LC/MS system, the charcoal-filled cartridges are positioned and connected in parallel. The incoming gas stream is split equally between the cartridges, and the two streams are rejoined after purification but before the gas exits the baseplate. This approach allows longer contact between the nitrogen and the adsorbent, ensuring higher gas purity and eliminating a potential source of contaminants to your analyses.

A handy date wheel, included with the system, indicates the cartridge installation date and the recommended replacement date.

Table I Super-Clean™ Filters provide high-purity outlet gas

Type of filter	Max. Flow	Outlet Gas Quality %	Maximum Pressure	Estimated Lifetime
Hydrocarbon (charcoal)	20L/min.	99.9999%	11 bar/159psi	3 to 6 months

Description	qty.	cat.#
Super-Clean™ Gas-Trapping System (2-position baseplate, 2 charcoal filters)	ea.	22062
2-Position Baseplate (1/4" Fittings)	ea.	22060
Replacement Hydrocarbon (Charcoal) Filters	2-pk.	22061



20L of purified nitrogen per minute!



Click-On Inline Super-Clean™ Traps

- High-purity output ensures 99.9999% pure gas.
- Click-On fittings for easy, leak-tight cartridge changes; brass or stainless steel, 1/4" or 1/8".
- Helium-Specific Triple Trap is ideal for GC/MS.

Using the same features and benefits as the Super-Clean™ base-plates and filters, SGT designed an inline trap. Click-On adaptor connectors allow cartridges to be exchanged without introducing oxygen. Spring-loaded check valves seal when a filter is removed and open only when a new filter has been locked in place. There is no need for loosening and tightening fittings every time a trap is changed, and your system will not become contaminated during the process.

The Triple Trap is ideal for purifying carrier gas—it contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge.

The Fuel Gas Trap is ideal for purifying flame ionization detector (FID) fuel gases, removing both moisture and hydrocarbons.

The Helium-Specific Triple Trap is ideal for purifying helium in GC/MS systems. This trap is packed and purged under helium and contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge.

Trap replacement depends on the quality of the incoming gas. Use the double connector and install an indicating cartridge after a trap to indicate when the trap should be replaced.

please note

NOTE: Super-Clean™ Gas Filters are recommended for purifying non-corrosive gases with low concentrations of contaminants. The maximum concentration of oxygen in the incoming gas stream for oxygen purifiers is 0.5%.

Filter Type	Gas Quality at Outlet	Maximum Pressure	Maximum Flow (L/min.)	Use For	H ₂ O (g)	Capacity O ₂ (mL)	Hydrocarbons (g)	Estimated Lifetime (years)
Moisture cat.#22467	>99.9999	11 bar 160psi	25	Inert carrier gas, helium, air, H ₂	21	NA	NA	>3
Oxygen cat.#22468	>99.9999	11 bar 160psi	25	Inert carrier gas	NA	3000	NA	>3
Hydrocarbon cat.#22466	>99.9999	11 bar 160psi	25	Inert carrier gas, helium, air, H ₂	NA	NA	36 ³	>3
Fuel Gas ¹ cat.#22465	>99.9999	11 bar 160psi	25	Inert carrier gas, helium, air, H ₂	10	NA	18 ³	>2
Triple ² cat.#22464	>99.9999	11 bar 160psi	25	Inert carrier gas	6	1000	12 ³	>2

¹Removes hydrocarbons, moisture.

²Removes hydrocarbons, moisture, oxygen.

³As *n*-butane.

Click-On Inline Super-Clean™ Traps and Connector Kits

Description	qty.	cat.#
Carrier Gas Purification Kit, 1/8" Stainless Steel Includes (2) 1/8" SS connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22456
Carrier Gas Purification Kit, 1/8" Brass Includes (2) 1/8" brass connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22457
Carrier Gas Purification Kit, 1/4" Stainless Steel Includes (2) 1/4" SS connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22458
Carrier Gas Purification Kit, 1/4" Brass Includes (2) 1/4" brass connectors and (1) oxygen/moisture/hydrocarbon triple trap	kit	22459
Fuel Gas Purification Kit, 1/8" Stainless Steel Includes (4) 1/8" SS connectors and (2) hydrocarbon/moisture traps	kit	22460
Fuel Gas Purification Kit, 1/8" Brass Includes (4) 1/8" brass connectors and (2) hydrocarbon/moisture traps	kit	22461
Fuel Gas Purification Kit, 1/4" Stainless Steel Includes (4) 1/4" SS connectors and (2) hydrocarbon/moisture traps	kit	22462
Fuel Gas Purification Kit, 1/4" Brass Includes (4) 1/4" brass connectors and (2) hydrocarbon/moisture traps	kit	22463

Wall-Mounting Clamps for Click-On Inline Super-Clean™ Traps

Description	qty.	cat.#
Wall-Mounting Clamps for Click-On Inline Super-Clean™ Traps	4-pk.	22480

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Click-On Inline Super-Clean™ Replacement Traps

Description	qty.	cat.#
Click-On Super-Clean™ Replacement Triple Trap (removes oxygen, moisture and hydrocarbons)	ea.	22464
Click-On Super-Clean™ Replacement Fuel Gas Trap (removes moisture and hydrocarbons)	ea.	22465



Click-On Inline Super-Clean™ Ultra-High Capacity Traps

Description	qty.	cat.#
Ultra-High Capacity Hydrocarbon Trap	ea.	22466
Ultra-High Capacity Moisture Trap	ea.	22467
Ultra-High Capacity Oxygen Trap	ea.	22468



Helium-Specific Click-On Inline Super-Clean™ Trap and Connector Kits

Description	qty.	cat.#
Kits		
Helium-Specific Carrier Gas Cleaning Kit, 1/8" Stainless Steel Includes (2) 1/8" SS connectors and (1) oxygen/moisture/hydrocarbon helium-specific triple trap	kit	22469
Helium-Specific Carrier Gas Cleaning Kit, 1/8" Brass Includes (2) 1/8" brass connectors and (1) oxygen/moisture/hydrocarbon helium-specific triple trap	kit	22470
Helium-Specific Carrier Gas Cleaning Kit, 1/4" Stainless Steel Includes (2) 1/4" SS connectors and (1) oxygen/moisture/hydrocarbon helium-specific triple trap	kit	22471
Helium-Specific Carrier Gas Cleaning Kit, 1/4" Brass Includes (2) 1/4" brass connectors and (1) oxygen/moisture/hydrocarbon helium-specific triple trap	kit	22472
Replacement Trap		
Helium-Specific Replacement Triple Trap (removes oxygen, moisture and hydrocarbons)	ea.	22473

did you know?

Helium-Specific Click-On
Inline Super-Clean™ Trap and
Kits are designed specifically
for purification of helium in
GC/MS systems!



tech tip

Install an indicator after the
Click-On inline filter so there is
no confusion about when to
replace the traps.



Click-On Inline Super-Clean™ Indicator

- Oxygen: Green to Grey
- Moisture: Beige to Clear

Description	qty.	cat.#
Click-On Inline Super-Clean™ Indicator (oxygen, moisture)	ea.	22474

Click-On Inline Super-Clean™ Connectors

- Click-On connectors allow you to change traps quickly, without introducing oxygen into your system.

Description	qty.	cat.#
1/8" Brass Click-On Inline Super-Clean™ Connectors	2-pk.	22475
1/8" Stainless Steel Click-On Inline Super-Clean™ Connectors	2-pk.	22476
1/4" Brass Click-On Inline Super-Clean™ Connectors	2-pk.	22477
1/4" Stainless Steel Click-On Inline Super-Clean™ Connectors	2-pk.	22478



Click-On Inline Super-Clean™ Double Connector

- Connects any Click-On trap to a Click-On indicator.

Description	qty.	cat.#
Click-On Inline Super-Clean™ Double Connector, stainless steel	ea.	22479



Replacement O-Rings for Click-On Inline Super-Clean™ Connectors

- Pack includes 10 large o-rings and 10 small o-rings.

Description	qty.	cat.#
Replacement O-Rings for Click-On Inline Super-Clean™ Connectors	20-pk.	22481



also available

We offer a complete line of gas purification and regulation products.

For more information, see our catalog or visit our website at www.restek.com



Specifications for dual-stage regulators:

Outlet pressure: 0 to 100psig
Outlet gauge: 30"-0 to 200psig
Inlet gauge: 0 to 4000psig
Outlet assembly: diaphragm valve, 1/4" tube fitting



Inlet connections: 1/4" FPT
Outlet assembly: 1/4" FPT port



Restek Brass and Stainless Steel Body Ultra-High-Purity Regulators

Restek regulators feature metal-to-metal seals throughout for long-term leak-tightness, and a metal diaphragm outlet valve ensures gas purity. Each regulator is helium leak-test-certifiable to 1x10⁻⁸ scc/sec. and is fully assembled and tested for your convenience. 100psig maximum delivery pressure supports EPC operation. Maximum inlet pressure is 3000psig. Brass bar stock construction minimizes dead volume. Stainless steel construction is more easily purged of atmospheric contaminants, and is more resistant to attack from dry corrosive gases. Use stainless steel regulators in all-stainless steel systems where welded tubing and special fittings are used, and rigorous cleaning and proper gas management are practiced.

Dual-Stage Ultra-High-Purity Brass Regulators

- Oxidation-resistant, chrome-plated.
- Most stable outlet pressure control throughout the life of a high-pressure gas cylinder.
- Secondary pressure regulation not needed.
- Most widely used regulator.
- Less internal volume than stainless steel regulators.

Fitting	qty.	cat.#
CGA 580 (N ₂ , He, Ar)	ea.	21667
CGA 350 (H ₂ , P ₂)	ea.	21668
CGA 590 (Air)	ea.	21669

Dual-Stage Ultra-High-Purity Stainless Steel Regulators

- Most stable outlet pressure control throughout the life of a high-pressure gas cylinder.
- Secondary pressure regulation not needed.

Fitting	qty.	cat.#
CGA 580 (N ₂ , He, Ar)	ea.	20662
CGA 350 (H ₂ , P ₂)	ea.	20663
CGA 590 (Air)	ea.	20664

Ultra-High-Purity Brass Line Regulator

- Oxidation-resistant, chrome-plated.
- Use where you need to reduce the line pressure by 20psi or more.
- Same purity protection as high-pressure cylinder regulators.

Fitting	Outlet Gauge	Outlet Pressure	qty.	cat.#
1/4" female NPT ports*	30" - 0 to 100psig	0-50psig	ea.	21666
1/4" female NPT ports*	30" - 0 to 200psig	0-100psig	ea.	22452

*Order appropriate male connector, pipe-to-tube fittings.

Male Connector, Pipe-to-Tube Fittings

Fitting Type	Size (inches)	Parker #	Similar to Swagelok®	Brass		Stainless Steel	
				qty.	cat.#	qty.	cat.#
A) Male Connector	1/4" to 1/4" NPT	4 MSC 4N	400-1-4	10-pk.	21842	2-pk.	21942
A) Male Connector	1/8" to 1/4" NPT	2 MSC 4N	200-1-4	10-pk.	21844	2-pk.	21944
B) Tube End Reducer	1/4" tube to 1/8"	4 TUR 2	200-R-4	5-pk.	21834	2-pk.	21934

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- ♦ Agilent
- ♦ Beckman
- ♦ Bruker
- ♦ Carlo Erba
- ♦ Chrompack
- ♦ CTC Analytics
- ♦ Dani
- ♦ Dynatech
- ♦ Gilson
- ♦ Hewlett Packard
- ♦ Hitachi
- ♦ Merck
- ♦ Perkin-Elmer
- ♦ Pharmacia
- ♦ Shimadzu
- ♦ Siemens
- ♦ Spark
- ♦ Spectra-Physics
- ♦ Varian

Hydrocarbon Gas Purifier

- Conditions more than ten cylinders of 99.999% purity (200 ft³/ea) to less than 1 ppm Hydrocarbon
- Spherical high capacity materials
- Pressure rating : 250 PSI
- 1/8" Brass Fittings
- Volume: 120cc Size: 1.30" OD x 11.0" L
- Spun Aluminum Chamber



Description	Qty	Part#	Price \$
Hydrocarbon Gas Purifier	1/pk	30001	OEM
	5/pk	30001-5	

H₂O Gas Purifier

- Conditions more than ten cylinders of 99.999% purity (200 ft³/ea) to less than 1 ppm Water
- Spherical high capacity materials
- Pressure rating : 250 PSI
- 1/8" Brass Fittings
- Volume: 120cc Size: 1.30" OD x 11.0" L
- Spun Aluminum Chamber



Description	Qty	Part#	Price \$
100% H ₂ O Gas Purifier	1/pk	30002	OEM
	5/pk	30002-5	

H₂O/Hydrocarbon Gas Purifier

- Conditions more than ten cylinders of 99.999% purity (200 ft³/ea) to less than 1 ppm Water and Hydrocarbon
- Spherical high capacity materials
- Pressure rating : 250 PSI
- 1/8" Brass Fittings
- Volume: 120cc Size: 1.30" OD x 11.0" L
- Spun Aluminum Chamber



Description	Qty	Part#	Price \$
H ₂ O/Hydrocarbon Gas Purifier	1/pk	30003	OEM
	5/pk	30003-5	

Oxygen/Hydrocarbon Gas Purifier

- Conditions six cylinders of 99.999% purity (200 ft³/ea) to less than 1 ppm O₂ and Hydrocarbon
- Spherical high capacity materials
- Pressure rating : 250 PSI
- 1/8" Brass Fittings
- Volume: 120cc Size: 1.30" OD x 11.0" L
- Spun Aluminum Chamber



Description	Qty	Part#	Price \$
Oxygen/Hydrocarbon Gas Purifier	1/pk	30004	OEM
	5/pk	30004-5	

Oxygen/H₂O Gas Purifier

- Conditions five cylinders of 99.999% purity (200 ft³/ea) to less than 1 ppm O₂ and H₂O
- Spherical high capacity materials
- Pressure rating : 250 PSI
- 1/8" Brass Fittings
- Volume: 120cc Size: 1.30" OD x 11.0" L
- Spun Aluminum Chamber



Description	Qty	Part#	Price \$
Oxygen/H ₂ O Gas Purifier	1/pk	30005	OEM
	5/pk	30005-5	

Oxygen Gas Purifier

- Conditions six cylinders of 99.999% purity (200 ft³/ea) to less than 1 ppm O₂
- Spherical high capacity materials
- Pressure rating : 250 PSI
- 1/8" Brass Fittings
- Volume: 120cc Size: 1.30" OD x 11.0" L
- Spun Aluminum Chamber



Description	Qty	Part#	Price \$
100% O ₂ Gas Purifier	1/pk	30006	OEM
	5/pk	30006-5	

Hydrocarbon/Water Gas Purifier w/ Moisture Indicator

- Moisture indicator changes color when saturated
- Removes Moisture & Hydrocarbons
- Made from Clear Lexan®
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 200cc Size: 2" OD x 10.25" L
- Pressure Rating: 100 PSI
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Hydrocarbon/Water Gas Purifier w/ Moisture Indicator	1/pk	30007	OEM
	5/pk	30007-5	

Hydrocarbon Gas Purifier

- Removes Hydrocarbons
- Made from Clear Lexan®
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 200cc Size: 2" OD x 10.25" L
- Pressure Rating: 100 PSI
- Removes: HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Hydrocarbon Gas Purifier	1/pk 5/pk	30008 30008-5	OEM

H₂O Gas Purifier

- Removes Moisture
- Made from Clear Lexan®
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 200cc Size: 2" OD x 10.25" L
- Pressure Rating: 100 PSI
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
H ₂ O Gas Purifier	1/pk 5/pk	30009 30009-5	OEM

H₂O Gas Purifier w/ Moisture Indicator

- Moisture indicator changes color when saturated
- Removes Moisture
- Made from Clear Lexan®
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 200cc Size: 2" OD x 10.25" L
- Pressure Rating: 100 PSI
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
H ₂ O Gas Purifier w/ Moisture Indicator	1/pk 5/pk	30010 30010-5	OEM

PHYSICAL SPECIFICATIONS:

- * **Max. inlet pressure:** 160 psi (11 bar).
- * **Maximum flow:** 25 L / min.
- * **Operating Temperature:** -40° C to 65° C.
- * **Dimensions:** 270 (L) x 32 mm (OD).
- * **Gas Outlet Purity:** > 6.0 grade (purity level > 99.9999 %); rest impurities < 0.1 ppm at Flow of 2 L/min

Ordering Information

CLICK-ON Inline Super Clean™ Purifier

Click-On Inline Super-Clean™ Traps and Connector Kits

- 22456** Carrier Gas Purification Kit, 1/8" Stainless Steel
22457 Carrier Gas Purification Kit, 1/8" Brass
22458 Carrier Gas Purification Kit, 1/4" Stainless Steel
22459 Carrier Gas Purification Kit, 1/4" Brass
22460 Fuel Gas Purification Kit, 1/8" Stainless Steel
22461 Fuel Gas Purification Kit, 1/8" Brass
22462 Fuel Gas Purification Kit, 1/4" Stainless Steel
22463 Fuel Gas Purification Kit, 1/4" Brass

Click-On Inline Super-Clean™ Replacement Traps

- 22464** CLICK-ON Super-Clean™ Replacement Triple Trap
22465 CLICK-ON Super-Clean™ Replacement Fuel Gas Trap

Click-On Inline Super-Clean™ Ultra-High Capacity Traps

- 22466** Ultra-High Capacity Hydrocarbon Trap
22467 Ultra-High Capacity Moisture Trap
22468 Ultra-High Capacity Oxygen Trap

Helium-Specific Click-On Inline Super-Clean™ Traps and Kits

- 22469** Helium-Specific Carrier Gas Cleaning Kit, 1/8" Stainless Steel
22470 Helium-Specific Carrier Gas Cleaning Kit, 1/8" Brass
22471 Helium-Specific Carrier Gas Cleaning Kit, 1/4" Stainless Steel
22472 Helium-Specific Carrier Gas Cleaning Kit, 1/4" Brass
22473 Helium-Specific Replacement Triple Trap

Click-On Inline Super-Clean™ Indicating Cartridge

- 22474** Click-On Inline Super-Clean™ Indicating Cartridge

Click-On Inline Super-Clean™ Connectors

- 22475** 1/8" Brass Click-On Inline Super-Clean™ Connectors (2-pk)
22476 1/8" Stainless Steel Click-On Inline Super-Clean™ Connectors (2-pk)
22477 1/4" Brass Click-On Inline Super-Clean™ Connectors (2-pk)
22478 1/4" Stainless Steel Click-On Inline Super-Clean™ Connectors (2-pk)

Click-On Inline Super-Clean™ Double Connector

- 22479** Click-On Inline Super-Clean™ Double Connector

Wall-Mounting Clamps for Click-On Inline Super-Clean™ Traps

- 22480** Wall-Mounting Clamps for Click-On Inline Super-Clean™ Traps

Replacement O-Rings for Click-On Inline Connectors

- 22481** Replacement O-Rings for Click-On Connectors

RESTEK

CLICK-ON Inline Super Clean™ Purifier



Patent pending
1024083



Restek Corporation
 110 Benner Circle
 Bellefonte, PA 16823
 Phone: 814-353-1300 or 800-356-9753

RESTEK

HROMalytic +61(0)3 9762 2034
ECHnology Pty Ltd

Website NEW : www.chromalytic.net.au E-mail : info@chromtech.net.au Tel: 03 9762 2034 . . . in AUSTRALIA

Australian Distributors
 Importers & Manufacturers
www.chromtech.net.au

CLICK-ON Inline Super Clean™ Purifiers are suited for the purification of non-corrosive gases with low contamination concentrations to a better as 6.0 grade (99,99990%) purity. CLICK-ON Inline Super Clean™ Purifiers are connected to an appropriate genuine CLICK-ON Connector which is only one time connected to the gas line.

CAUTION

- The maximum concentration of **Oxygen** allowed in the as before entering the indicating trap is 0,5%. (Valid only for each purifier packed with O₂-adsorbents and O₂-indicator.)
- Maximum Gas- maximum System pressure must **not exceed 11 Bar** (160 psi).
- Install outlet connector first, than inlet connector.
- Do not install** a purifier system near or in a **hot area** (i.e. the hot-air exhaust at the rear of the GC).
- Never re-condition** ever any trap: for evt. recycling, please contact your local supplier.
- Always install traps in the appropriate position with **the label at the front**.
- Installation of the connector to the gas line should be done by **experienced and/or certified personnel**.
- Please do not forget to perform a reliable **leak test**, especially when installing an indicating trap.
- During installation of a new CLICK-ON Inline Super Clean indicating purifier, torsion on the plastic outer protection tube should **be avoided** at any time; **watch out for cracks** in the inside glass tube after installation (valid only for GLASS CLICK-ON types of traps).
- The **screws** on the outside trap-housing on both sides should **never be removed**; in case these screws should be missing, the cartridge may not be installed, but should be returned to the supplier.
- CLICK-ON Connectors are available as spare parts – do **NOT repair damaged connectors** but replace by new ones.
- Only **use original parts** to avoid mal-performance and loss of warrantee.

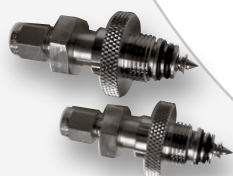
NEVER INSTALL AN OXYGEN PURIFIER IN A GAS LINE FOR AIR: It will result in instant saturation!

1. Installation of a CLICK-ON Connector

A CLICK-ON Connector is available for gas line tubing with OD of 1/4" and 1/8". These instructions are valid for each dimension of tubing; Restek advises to use for gas lines SS- or copper tubing preferably.

- shut off the incoming gas.
- if no trap previously in use: cut the gas line, using an appropriate metal tubing cutter.
- disconnect the gas line from the analytical instrument.
- turn the carrier gas on and **flush the gas line for 10 min.** with pure carrier gas, advised pressure: 90 psi.
- remove the (blue) closing plugs at both ends of the trap and connect the CLICK-ON Connectors tight to both ends of the gas line.
- for SS-tubing: always use SS CLICK-ON Connectors; for copper tubing, you must use brass CLICK-ON Connectors.
- flush the incoming gas line + Connectors for 10 min.** with pure carrier gas, by pushing back the needle valve on the CLICK-ON Connector; **NOTE: SHARP EDGE!!** Advised pressure: 90 psi.
- attach CLICK-ON Trap to both CLICK-ON Connectors, by punching the internal membranes in the traps and tightening the knurled ring clockwise.
- Install outlet connector first, than inlet connector.
- flush the trap/whole system for at least 15 min.** with pure carrier gas, advised pressure: 90 psi. (except He-specific traps, they are already conditioned and need NO FLUSH); **DO NOT CONNECT YET** the gas line to the analytical instrument!
- now mount the outgoing carrier gas line to the analytical system and you are „ready-to-go“: normally the user should not see any notable Argon or Nitrogen peaks in the chromatogram.
- Check whole system for leaks after installation!

Brass CLICK-ON Connectors



SS CLICK-ON Connectors

NOTE:

- Once the purifier is positioned to the CLICK-ON Connector the PTFE seals inside the purifier will be punctured and it is necessary to keep the trap in position by hand to prevent air entering the system.
- After installing the trap to the CLICK-ON Connector, highly pure gas will automatically stream from the purifier into the analytical system.
- Regularly check both the big and small Viton O-rings on the CLICK-ON Connector for hair cracks. The slightest leak may allow moisture, oxygen and hydrocarbons to enter the system and contaminate the system. Also check the GLASS indicating purifier cartridge for cracks with a leak detector.
- Indicator colour change with moisture adsorbents devices acc. EC Directive December 1998.
- All purifiers are packed under Argon, except for the special, He-specific GC-MS filter
- As long as there is no trap connected, the special CLICK-ON Connector will automatically block the gas stream.

NO GAS WILL PASS THROUGH THE GAS LINE!

3. Replacement of a saturated CLICK-ON Purifier

- A purifier cartridge needs to be exchanged when the visual indicators (if applicable) start changing color. **The original indicator color and the color after saturation are printed on the front of the purifier.**
- For metal traps WITHOUT indicator it is strongly recommended to replace the trap ONCE A YEAR.**
- Before installation of a new replacement trap:** make sure that the temperature of the replacement trap is more or less identical to the temperature of the (already installed) CLICK-ON Connectors on your gas line to avoid any leakage in connections. If temperature is not identical, use at least one hour stabilisation time in the same room as the connectors.

Specific Capacities of

CLICK-ON Inline Super Clean™ Purifier types

Purifier-Type	Gas Quality at outlet	Max. Pressure	Max. Flow	Usable for:
Moisture	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas: He *Air *H ₂
Oxygen	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas
Hydrocarbons	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas: He *Air *H ₂
Ind. Triple (moist. + oxygen + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas: He
Combi (moist. + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas: He *Air *H ₂
Triple (moist. + oxygen + hydrocarbons)	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas
Combi (oxygen/ moisture)	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas: He, H ₂
Ind. combi (oxygen/ moisture)	> 6.0	11 bar - 160 psi	25 L/min.	Inert carrier gas: He, H ₂

Purifier-Type	H ₂ O (gr.)	Capacity O ₂ (ml.)	Hydro-Carbos (gr.)	Estimate life time
Moisture	21	n.a.	n.a.	> 3 years
Oxygen	n.a.	3000	n.a.	> 3 years
Hydrocarbons	n.a.	n.a.	36 (as n-butane)	> 3 years
Ind. Triple (moist. + oxygen + hydrocarbons)	3	400	5 (as n-butane)	> 1 year
Combi (moist. + hydrocarbons)	10	n.a.	18 (as n-butane)	> 2 years
Triple (moist. + oxygen + hydrocarbons)	6	1000	12 (as n-butane)	> 2 year
Combi (oxygen/ moisture)	10	1500	n.a.	> 2 year
Ind. combi (oxygen/ moisture)	3	500	n.a.	> 2 year

NOTE: the data given in the table strongly depend on the level of gas purity prior to entering the purifier. Replacement of the metal purifier cartridge without indicator is recommended anyway once a year.

2. Installing a filter cartridge

(see front page picture)

1. Remove the two metal diffusion-proof plugs from the filter cartridge Inlet and Outlet (positioned at the bottom of the filter cartridge).
2. Remove the round, knurled ring (5) from the baseplate and place it around the filter cartridge.
3. Install filter cartridge only under low pressure (0,5 Bar).
4. Place the filter cartridge, including the round, knurled ring on the baseplate making sure all three holes align with the two valves and positioning pin.
5. While pushing the filter own on the baseplate, hand tighten the knurled ring until the filter is firmly connected to the baseplate.

NOTE:

- Once the filter is positioned on the baseplate 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 baseplate, highly pure gas will automatically stream from the filter into the analytical system.
- Before connection of a new baseplate to the inlet gas line of the analytical system, it is recommended to flush the total system for 1/2 hour at min. 90 psi.
- Regularly check both the big and small Viton O-rings on the baseplate for hair cracks. The slightest leak may allow moisture, oxygen and hydrocarbons to enter the system and contaminate the gas.
- Indicator colour change with moisture absorbents devices acc. EC Directive December 1998.
- All filter cartridges are packed under Argon, except for the special, He-specific filter.

3. Replacement of a filter cartridge

A filter cartridge needs to be exchanged when the visual indicators start changing color.

The original indicator color and the color after saturation are printed on the front of the filter.

Specific Capacities of Filter types

Filter-Type	Gas Quality at outlet	Max. Pressure	Max. Flow	Usable for:
Moisture	> 6.0	11 bar	7 L/min.	Inert carrier gas *Air *H2
Oxygen	> 6.0	11 bar	7 L/min.	Inert carrier gas
Hydrocarbons	> 6.0	11 bar	7 L/min.	Inert carrier gas *Air *H2
LC/MS Hydrocarbons	> 6.0	11 bar	20 L/min.	N2 (High Flow)
LC/MS Moisture	> 6.0	11 bar	20 L/min.	Inert carrier gas Air, H2
Combi (moist. + hydrocarbons)	> 6.0	11 bar	7 L/min.	Inert carrier gas *Air *H2
Triple (moist. + oxygen + hydrocarbons)	> 6.0	11 bar	7 L/min.	Inert carrier gas

Filter-Type	H2O (gr.)	Hydrocarbons (gr.)	Estimate life time
Moisture	7.2	n.a.	> 2 years
Oxygen	n.a.	n.a.	> 2 years
Hydrocarbons	n.a.	12 (as n-butane)	> 2 years
LC/MS Hydrocarbons	n.a.	24 (as n-butane)	> 0,4 year
LC/MS Moisture	7.2	n.a.	> 2 years
Combi (moist. + hydrocarbons)	3.5	6 (as n-butane)	> 1,5 years
Triple (moist. + oxygen + hydrocarbons)	1.8	4 (as n-butane)	> 1 year

NOTE: the data given in the table strongly depend on the level of gas purity prior to entering the filter.
Replacement of the filter cartridge is recommended at least once a year, regardless of the saturation level shown by the indicator.

Ordering Information

Baseplates for Super Clean Gasfilters

- 22025** Single-Position Baseplate - 1/8" Brass
22344 Single-Position Baseplate - 1/8" SS
22026 2-Position Baseplate - 1/8" Brass
22345 2-Position Baseplate - 1/8" SS
22027 3-Position Baseplate - 1/8" Brass
22346 3-Position Baseplate - 1/8" SS

Ultra-High Capacity Filters

- 22028** Ultra-High Capacity Moisture Filter
22029 Ultra-High Capacity Oxygen Filter
22030 Ultra-High Capacity Hydrocarbon Filter

Replacement Filters

- 22020** Replacement Triple (O2/Moisture/Hydrocarbon) Filter
22022 Replacement Fuel Gas (Moisture/Hydrocarbon) Filter

Filter and Baseplate Kits

- 22019** Carrier Gas Cleaning Kit (Baseplate and Triple Filter)
22021 Fuel Gas Purification Kit (Baseplate and 1 Fuel Gas Filter)

Filter Bundle Kit

- 22031** Filter Bundle Kit (1 Triple Filter and 2 Fuel Gas Filters)

Super Clean™ Gas Trapping System for LC/MS

- 22062** Super Clean™ Gas Trapping System (Baseplate and 2 Hydrocarbon Filters)
22060 2-Position Baseplate - 1/4" Brass
22061 Replacement Hydrocarbon Filters (2-pk)

Helium-Specific Super Clean™ Filter & Kit

- 21983** Helium-Specific Carrier Gas Cleaning Kit
21982 Replacement Helium-Specific Filter

Parts

- 21833** 1/8" to 1/4" Tube-End Unions Brass (5-pk)
21984 Wall Mounting Bracket for Super Clean™ Baseplates
22023 Replacement O-rings for Cartridge Baseplates (10+10 pieces)

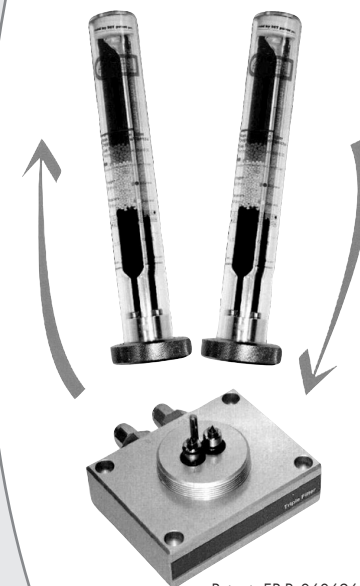
RESTEK

HROMalytic +61(0)3 9762 2034
ECHnology Pty Ltd
 Website NEW : www.chromalytic.net.au E-mail : info@chromtech.net.au Tel: 03 9762 2034 . . . in AUSTRALIA

RE-MANU0202.3

RESTEK

Super-Clean Gas Filters Kit® Instruction for GC- and LC-use



Patent: EP-B-0606960
US-5.478.378



Restek Corporation
 110 Benner Circle
 Bellefonte, PA 16823
 Phone: 814-353-1300 or

Australian Distributors
 Importers & Manufacturers
www.chromtech.net.au

Visalite 6000 Purifiers

Hydrocarbon Large Gas Purifier

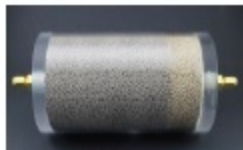
- Lexan® construction
- Removes hydrocarbons
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 825cc Size: 3.75" OD x 7.25" L
- Pressure Rating: 100 PSI
- Removes: HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Hydrocarbon Large Purifier	1/pk	30011	OEM
	5/pk	30011-5	

H₂O Large Gas Purifier

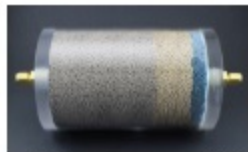
- Lexan® construction
- Removes moisture
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 825cc Size: 3.75" OD x 7.25" L
- Pressure Rating: 100 PSI
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
H ₂ O Large Gas Purifier	1/pk	30012	OEM
	5/pk	30012-5	

H₂O Large Gas Purifier w/ Moisture Indicator

- Lexan® construction
- Removes moisture
- Moisture indicator changes color when saturated
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 825cc Size: 3.75" OD x 7.25" L
- Pressure Rating: 100 PSI
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
H ₂ O Large Purifier w/ Moisture Indicator	1/pk	30013	OEM
	5/pk	30013-5	

Moisture/Hydrocarbon Large Gas Purifier w/ Moisture Indicator

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Spherical high capacity materials
- 1/8" Brass Fitting
- Volume: 825cc Size: 3.75" OD x 7.25" L
- Pressure Rating: 100 PSI
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Moisture/Hydrocarbon Large Gas Purifier w/ Moisture Indicator	1/pk 5/pk	30014 30014-5	OEM

Custom products & bulk pricing available. Email or fax us with your specifications for more information.

Specialty Gas Purifiers

We offer several speciality purifiers for removal of Water, Hydrogen Chloride, Sulphur Dioxide, Hydrogen Sulphide, Carbon Dioxide, Hydrocarbons, Oil, and Small Aliphatics. They have been designed for optimum rate and breakthrough capacity.

Indicating Moisture Removal Tube w/ Bracket

- Teflon tube construction w/ aluminum ends, bracket, & Teflon tubing
- Indicating moisture material
- For small areas where moisture is a concern
- Ambient applications
- Teflon Inlet Tube - 0.085" OD
- Volume: 3.75cc Size: 0.500" OD x 3.25" L



Description	Qty	Part#	Price \$
Indicating Moisture Removal Tube w/ Bracket	1/pk	30015	OEM
	5/pk	30015-5	

Indicating Moisture Removal Tube

- Teflon tube construction w/ aluminum ends & Teflon tubing
- Indicating moisture material
- For small areas where moisture is a concern
- Teflon Inlet Tube - 0.085" OD
- Pressure Rating: 25 PSI
- Volume: 3.75cc Size: 0.500" OD x 3.25" L



Description	Qty	Part#	Price \$
Indicating Moisture Removal Tube	1/pk	30016	OEM
	5/pk	30016-5	

Hydrocarbon/Water Gas Purifier w/ Moisture Indicator

- Moisture indicator changes color when saturated
- Removes Moisture & Hydrocarbons
- Made from Clear Lexan®
- 1/8" Brass Fitting
- Pressure Rating: 100 PSI
- Volume: 200cc Size: 2" OD x 10.25" L
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Hydrocarbon/Water Gas Purifier w/ Moisture Indicator	1/pk	30017	OEM
	5/pk	30017-5	

Indicating Moisture & Hydrocarbon Removal Purifier

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Spherical high-capacity materials
- Chrome-plated brass quick disconnect couplings to connect 1/4" tubes
- Volume: 250cc Size: 2" OD x 8.5" L
- Pressure Rating: 100 PSI
- Other Fitting options available
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Indicating Moisture & Hydrocarbon Removal Purifier	1/pk	30018	OEM
	5/pk	30018-5	

Hydrocarbon/Moisture Removal w/ Indicating Media

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Chrome-plated brass quick disconnect couplings to connect 1/4" tubes
- Volume: 250cc Size: 2" OD x 8.5" L
- Pressure Rating: 100 PSI
- Other fitting options available
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Indicating Moisture & Hydrocarbon Removal Purifier	1/pk	30019	OEM
	5/pk	30019-5	

Hydrocarbon/Moisture Purifier

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Nickel-plated Brass Push to connect fitting: Fits 1/4" Tubing
- Volume: 275cc Size: 2" OD x 9" L
- Pressure Rating: 100 PSI
- Other Fitting options available
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Hydrocarbon/Moisture Purifier	1/pk	30020	OEM
	5/pk	30020-5	

Custom products & bulk pricing available. Email or fax us with your specifications for more information.

Ultra Fine Moisture/Hydrocarbon/Indicating Purifier

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Pre & Post Ultra Fine Balston Particulate Filters
- Removes 99.9999% of all particles over 0.1µm
- Anarak o-ring clip-lok fittings
- Square ends for mounting
- Volume: 625cc Size: 3.25" OD x 8.5" L
- Pressure Rating: 100 PSI
- Other Fitting options available
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Ultra Fine Moisture/Hydrocarbon/Indicating Purifier	1/pk 5/pk	30021 30021-5	OEM

Moisture/Hydrocarbon Large Purifier w/ Ultra Fine Post Particulate Filter

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Ultra fine Balston particulate filter on outlet
- Removes 99.99% of all particles over 0.1µm
- Inlet/Outlet Teflon Tubing
- Volume: 825cc Size: 3.75" OD x 7.25" L
- Pressure Rating: 100 PSI
- Other Fitting options available
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Moisture/Hydrocarbon Large Purifier w/ Ultra-Fine Post Particulate Filter	1/pk 5/pk	30022 30022-5	OEM

Moisture/Hydrocarbon Jumbo Purifier w/ Ultra-Fine Post Particulate Filter

- Lexan® construction
- Removes moisture and hydrocarbons
- Moisture indicator changes color when saturated
- Ultra Fine Balston Particulate Filter on outlet
- Removes 99.99% of all particles over 0.1µm
- Inlet/Outlet Teflon Tubing
- Volume: 1650cc Size per filter: 3.75" OD x 7.25" L (Dual Filters)
- Pressure Rating: 100 PSI
- Other Fitting options available
- Removes: H₂O, HCl, SO₂, NO₂, H₂S, CO₂, Oil, & Small Aliphatics



Description	Qty	Part#	Price \$
Moisture/Hydrocarbon Jumbo Purifier w/ Ultra-Fine Post Particulate Filter	1/pk 5/pk	30023 30023-5	OEM

Super-Clean Gas Filters are suited for the purification of non-corrosive gases with low contamination concentrations to a better as 6.0 grade (99,99990%) purity.

Super-Clean Gas Filter cartridges are connected to an appropriate genuine baseplate which is installed into the gas line.

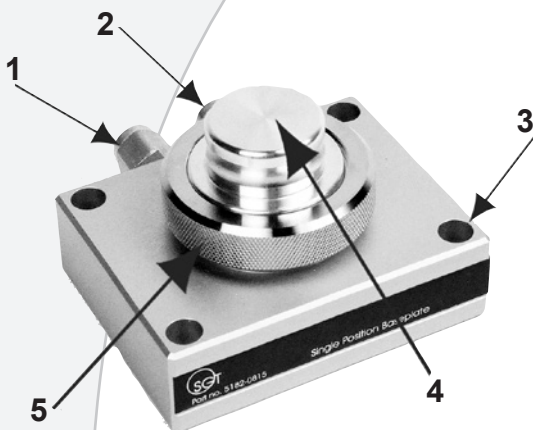
CAUTION

- The maximum concentration of Oxygen allowed in the gas is 0,5%. (Valid only for each filter packed with O₂-adsorbent and O₂-indicator.)
- Maximum Gas-System pressure must **not 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).
- **Never re-condition** any cartridge: for evt. recycling, please contact you local supplier.
- Always install filters in the appropriate position as indicated on the front of the baseplate.
- Installation of the baseplate should be done by certified personnel.
- Never install brass connectors on SS-tubing to avoid leakage.
- Please do not forget to perform a reliable **leak test**, when installing either a baseplate or cartridge or both.
- 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 this housing during installation and keep the cartridge 90° upright. Watch out for cracks in the inside glass tube after installation.
- The white small plastic mounting plugs on the outside housing a bit above the bottom should **never be removed**; in case these plugs should be missing, the cartridge may not be installed, but should be returned to the supplier.
- **Rear end connectors** at the baseplate may never be exchanged by unauthorized personnel.
- **Only use original baseplates** supplier warranty and German TUEV-insurance will be waived with use of non-original baseplate!
- The LC-MS filter system requires special filter cartridges, which allow up to 20 L/min. Mounting a GC Filter cartridge to the LC-MS baseplate and other way around is **not** possible.

NEVER INSTALL AN OXYGEN FILTER IN A BASEPLATE POSITION SUITED FOR AIR
It will result in instant saturation!

1. Installation of a baseplate

A baseplate can have 1, 2 or 3 positions, depending upon the number of gas purification applications. These instructions are valid for each individual position/rear end fitting connection on the baseplate.



1. shut off the incoming gas
2. cut the gas line, using an appropriate metal tubing cutter.
3. connect the gas inlet (1) and outlet (2) as indicated to the rear end fitting-"in" of the baseplate; keep the connection loose!
4. turn the carrier gas on and **flush the gas line for 10 min.** with pure carrier gas, min. 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 (4) is well mounted on the baseplate; push cap down during mounting procedure
7. attach baseplate, using mounting holes (3) or use an optional wall mounting bracket
8. **flush the baseplate for 10 min.** with pure carrier gas, advised pressure: 90 psi
9. remove the flush cap from baseplate; mount a new cartridge on the baseplate
10. **flush the cartridge / whole system for 15 min.** with pure carrier gas, advised pressure: 90 psi
11. now mount the outgoing carrier gas line to the rear end fitting-"out" of the baseplate and your analytical system is "ready-to-go": normally the user should not see any notable Argon or Nitrogen peaks in your chromatogram

NOTE:

As long as there is no filter cartridge connected, the baseplate will automatically block the gas stream.

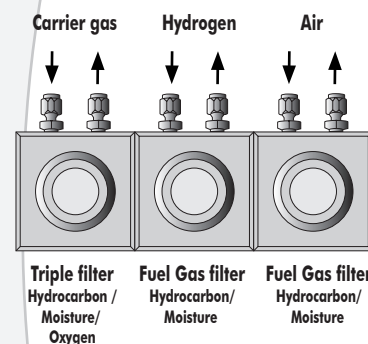
NO GAS WILL PASS THROUGH THE BASEPLATE!

- A Super-Clean Gas Filter can now be installed.
- ALWAYS CHECK FOR POSSIBLE GAS LEAKS BEFORE OPERATION

Four Standard Filter/ Baseplate Combinations

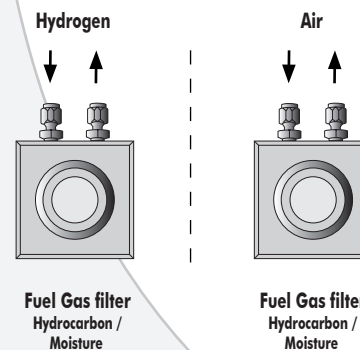
1. 3 positions

Ultra Purity + Ultra Capacity



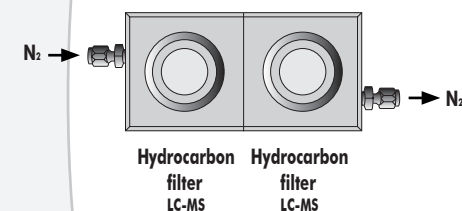
2. Fuel Gas Purification Kit 1 position

Ultra Purity + Ultra Capacity



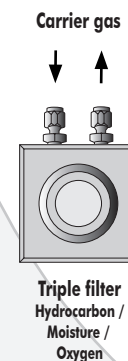
3. Super-Cleaning™ Gas-Trapping System

High Flow (max. 20 L/min)
2 positions Ultra Purity



4. Carrier Gas Cleaning Kit 1 position

Ultra Purity + Ultra Capacity

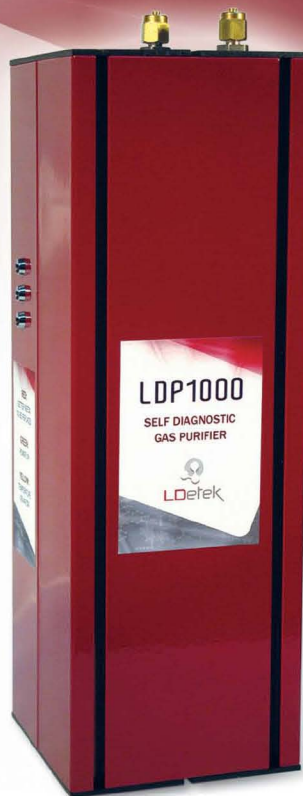


LDP1000

Gas purifier perfect for any trace gas analyzer system

The LDP1000 is sub ppb purifier ideal for calibration gas for online analyzer as well as carrier gas for Chromatograph.

Its two steps purification design ensures that no undesired impurity is released from the purifier.



> FEATURES:

- Compact design
- 2 steps purification
- Interchangeable getter
- Easy-to-use
- Internal heater, insulation and electronics assembly
- Temperature controlled unit for better performance
- Nitrogen version available

> APPLICATIONS:

- Zero calibration gas
- Carrier gas purifier
- Mass spectrometer
- Ideal as reference gas for TCD



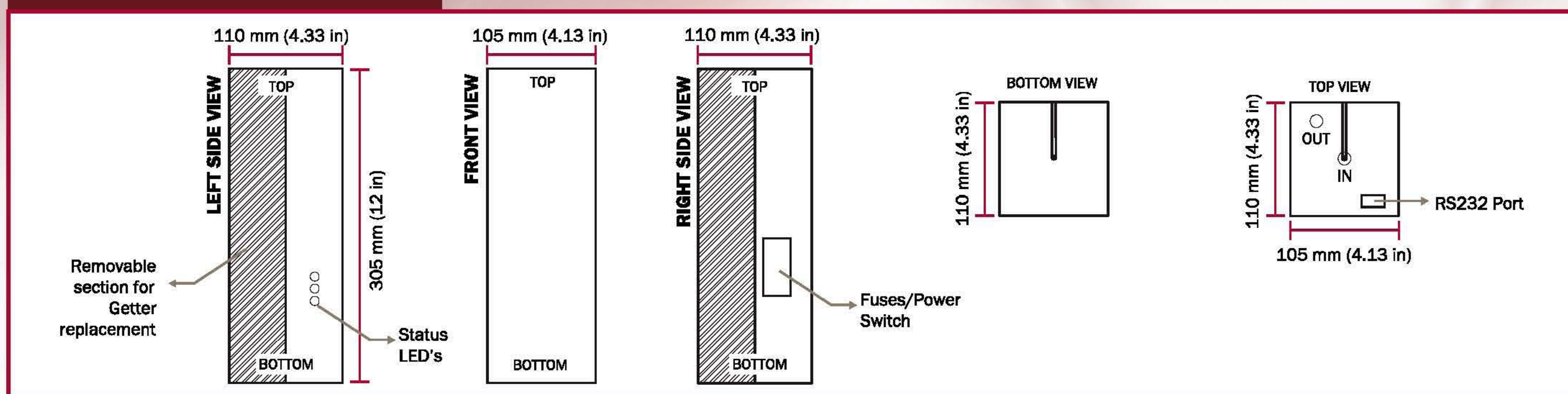
> SPECIFICATIONS:

GETTER TYPE	Alloy of Zr/V/Fe 2 beds (350 and 200 Celsius)
GASES PURIFIED	Ar/He/Ne/Xe/Kr. Nitrogen and hydrogen version available.
IMPURITIES REMOVED	H ₂ O, O ₂ , CO, CO ₂ , N ₂ , THC, H ₂ , CH ₄ (Heated) H ₂ O, O ₂ , CO, CO ₂ , H ₂ (room temperature)
IMPURITY LEVEL	<10ppb and <1 ppb available
FLOW	200 cc/min (nominal)
GAS CONNECTIONS	1/16" – 1/8" – 1/4" compression or VCR®
RECOMMENDED OPERATING PRESSURE	100 PSIG (689 kPAG)
MINIMUM OPERATING PRESSURE	10 PSIG (28 kPAG) optional 1 PSIG (7 kPAG)
SUPPLY	120 VAC, 50 – 60 Hz or 220 VAC, 50 – 60 Hz
POWER CONSUMPTION	Maximum 200 watts
DIMENSIONS	12" (304.8) high, 4.12" (104 mm) deep, 4.25" (108 mm) wide
WEIGHT	5 lbs (2.26 kg)

> PART ORDERING:

LDP1000 OR GETTER	-XXX	-X	-X	-X	-X
	Operating Voltage	Gas type	Connection size	Connection Type	Supporting plate
	120 Volts (-120) 220 Volts (-220)	None: Noble gases N: Nitrogen version H : Hydrogen	1/16" 1/8" 1/4"	Compression (-C) VCR (-V)	None : no plate P : supporting plate with bypass valves

> DIMENSIONS:



QL series Hydrogen Generators convert distilled deionized water into hydrogen gas through world's leading proton exchange membrane technology (PEM). The hydrogen generator generates pure hydrogen directly with electrolytic separation of pure water (deionized water) by a PEM cell. There is no need for an alkali solution to use.

QL Hydrogen Generators--Conventional Models



QL-150/300/500
(CE Certification)

Model	QL-150	QL-300	QL-500
H ₂ Outflow(ml/min)	0-150	0-310	0-510
H ₂ Pressure(MPa)	0.02-0.4 (under regular pressure)		
H ₂ Purity(%)	>99.999		
Power Consumption(W)	<90	<150	<200
Voltage(V)	AC 220 110 50-60Hz		
Dimension (L*W*H mm*mm*mm)	420*227*352		
Water Requirement	Pure water resistivity $\geq 1\text{M}\Omega/\text{cm}$		
Weight(KG)	<15		

QL series Hydrogen Generators convert distilled deionized water into hydrogen gas through world's leading proton exchange membrane technology (PEM). The hydrogen generator generates pure hydrogen directly with electrolytic separation of pure water (deionized water) by a PEM cell. There is no need for an alkali solution to use.

QL Hydrogen Generators--High Purity Models



QL-150A/300A/500A
(CE Certification)

Model	QL-150A	QL-300A	QL-500A
H ₂ Outflow(ml/min)	0-150	0-310	0-510
H ₂ Pressure(MPa)	0.02-0.4 (under regular pressure)		
H ₂ Purity(%)	>99.9999		
Power Consumption(W)	<90	<150	<200
Voltage(V)	AC 220 110 50-60Hz		
Dimension (L*W*H mm*mm*mm)	420*227*352		
Water Requirement	Pure water resistivity ≥ 1M Ω /cm		
Weight(KG)	<15		

QL series Hydrogen Generators convert distilled deionized water into hydrogen gas through world's leading proton exchange membrane technology (PEM). The hydrogen generator generates pure hydrogen directly with electrolytic separation of pure water (deionized water) by a PEM cell. There is no need for an alkali solution to use.

QL Hydrogen Generators--High Purity&High Pressure Models



QL-150B/300B/500B
(CE Certification)

Model	QL-150B	QL-300B	QL-500B
H2 Outflow(ml/min)	0-150	0-310	0-510
H2 Pressure(MPa)	0.02-0.6 (under regular pressure)		
H2 Purity(%)	>99.9999		
Power Consumption(W)	<90	<150	<200
Voltage(V)	AC 220 110 50-60Hz		
Dimension (L*W*H mm*mm*mm)	420*227*352		
Water Requirement	Pure water resistivity $\geq 1M \Omega /cm$		
Weight(KG)	<15		

QL series Hydrogen Generators convert distilled deionized water into hydrogen gas through world's leading proton exchange membrane technology (PEM). The hydrogen generator generates pure hydrogen directly with electrolytic separation of pure water (deionized water) by a PEM cell. There is no need for an alkali solution to use.

QL Hydrogen Generators--Medium Models



QL-1000

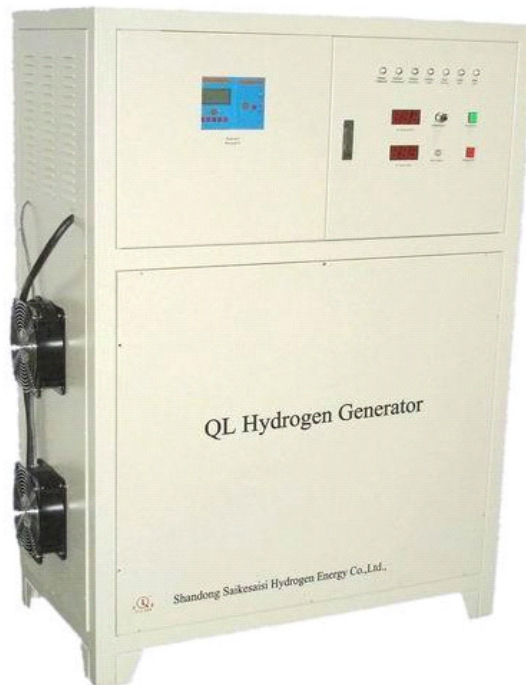


QL-2000/3000

Model	QL-1000	QL-2000	QL-3000
H2 Outflow(ml/min)	0-1020	0-2020	0-3050
H2 Pressure(MPa)	0.02-0.4 (under regular pressure)		
H2 Purity(%)	>99.999		
Power Consumption(KW)	<0.5	<1	<1.5
Voltage(V)	AC 220 110 50-60Hz		
Dimension (L*W*H mm*mm*mm)	458*230*380	500*450*800	
Water Requirement	Pure water resistivity≥1M Ω /cm		
Weight(KG)	<20	<60	

QL series Hydrogen Generators convert distilled deionized water into hydrogen gas through world's leading proton exchange membrane technology (PEM). The hydrogen generator generates pure hydrogen directly with electrolytic separation of pure water (deionized water) by a PEM cell. There is no need for an alkali solution to use.

QL Hydrogen Generators--Large Models



QL-5000/10000



QL-17000/34000/17000HA/17000HB/
34000HA/34000HB

Gas Generators

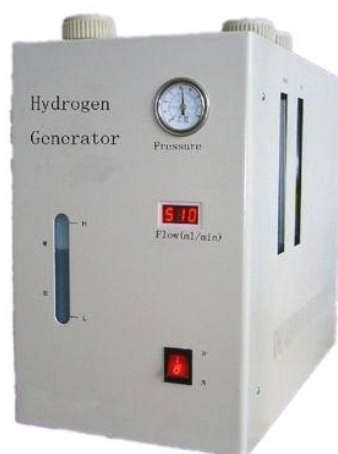
Nitrogen/Oxygen
combi N2, H2, Air

Hydrogen
Nitrogen
Pure Air

Model	QL-5000	QL-10000	QL-17000	QL-34000	QL-17000HA	QL-17000HB	QL-34000HA	QL-34000HB
H2 Outflow (L/min)	0-5	0-10	0-17	0-22	0-17	0-17	0-34	0-34
H2 Pressure (MPa)	0.02-0.4 (under regular pressure)				0.02-1	0.02-2	0.02-1	0.02-2
H2 Purity(%)	>99.999							
Power Consumption (KW)	<2	<4	<7.2	<14	<7.2		<14	
Voltage (V)	AC 220/380 50-60Hz				AC 380 50-60Hz			
Dimension (L*W*H mm*mm*m)	1035*550*1100	1035*550*1500	1650*650*1900					
Water Requirement	Pure water resistivity≥1M Ω /cm							
Weight (KG)	<200	<450	<500	<650	<500		<650	

SHC series Hydrogen Generators convert distilled deionized water into hydrogen gas through traditional method--**adding electrolyte ALKALI**. This type of hydrogen generators is a ideal economi choice for customers.

QL Hydrogen Generators--Conventional Models



SHC-300/500

Model	SHC-300	SHC-500
H2 Outflow(ml/min)	0-300	0-500
H2 Pressure(MPa)	0--0.4	
H2 Purity(%)	>99.999	
Overpressure Protection(MPa)	0.45	
Voltage(V)	AC 220 110, 50-60Hz	
Power Consumption(W)	<150	<300
Dimension(mm)	420*227*350(L*W*H)	
Weight(KG)	<15	<17

QL series Oxy-hydrogen Generators convert distilled deionized water into oxygen and hydrogen gas through world's leading proton exchange membrane technology (PEM). The oxy-hydrogen generator generates pure oxygen and hydrogen directly with electrolytic separation of pure water (deionized water) by a PEM cell. There is no need for an alkali solution to use.

QL Hydrogen Oxygen Generators

Model	QL-150HO		QL-300HO		QL-500HO		QL-1000HO	
Outflow(ml/min)	H2: 0-150	O2: 0-75	H2: 0-300	O2: 0-150	H2: 0-510	O2: 0-255	H2: 0-1000	O2: 0-500
Output Pressure(MPa)	H2: 0.02--0.4				O2: 0--0.2			
Purity(%)	H2: >99.999%				O2: >99%			
Power Consumption (W)	<90		<150		<200		<500	
Voltage(V)	AC 220 110 50-60Hz							
Water Requirement	Pure water resistivity≥1M Ω /cm							



QL-150HO/300HO
/500HO/1000HO

QL Pure Air Generators (Air Pumps) adopt completely enclosed free-oil compressor to purify natural air and remove moisture, oil and impurities. Pure air is output through device. Total hydrocarbon is less than 0.5ppm (methane).

QL Pure Air Generators (Air Pumps)



QL-3/5/10/20/40/50

Model	QL-3	QL-5	QL-10	QL-20	QL-40	QL-50
Outflow(ml/min)	0-3	0-5	0-10	0-20	0-40	50-300
Output Pressure(MPa)	0-0.4					0.07
Power Consumption (W)	<160	<180	<200	<350	<380	<100
Voltage(V)	AC 220 50-60Hz					
Dimension (L*W*H, mm)	430*290*400		500*270*420	400*310*640		480*310*650
Weight (KG)	<26		<30	<34	<36	<50

QL Nitrogen Generators / QL Nitrogen&Air Generators generate pure nitrogen through PSA technology.

QL Nitrogen Generators / QL Nitrogen&Air Generators



QL-N300/N500/NA300

Gas Generators

Nitrogen/Oxygen
combi N2, H2, Air

Hydrogen
Nitrogen
Pure Air

Name	N2 Generator		N2&Air Generator	
Model	QL-N300	QL-N500	QL-NA300	
Outflow(ml/min)	0-300	0-500	N2: 0-300	Air: 0-1000
Output Pressure(MPa)	0-0.4			
Purity(%)	99.99			Three-grade purification Water content 0.0204ppm Co2 content 0.039% Oil content 0.54ppm
Voltage(V)	AC 220 50-60Hz			
Environmental Requirement	Temperature 0--40℃ without dust and corrosion gas			
Power Consumption(W`)	<180		<200	
Weight(KG)	<35		50	
Dimension(mm)	460*290*760(L*W*H)			

QL Nitrogen&Hydrogen&Air Generators generate pure nitrogen through PSA and SPE/PEM technolog.

QL Nitrogen&Hydrogen&Air Generators



QL-NHA300

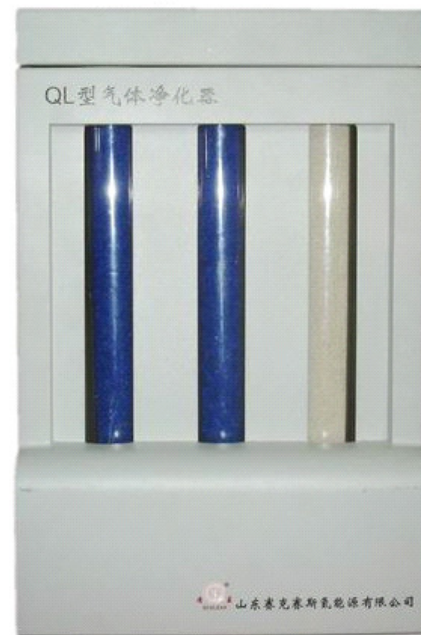
Gas Generators

Nitrogen/Oxygen
combi N2, H2, Air

Hydrogen
Nitrogen
Pure Air

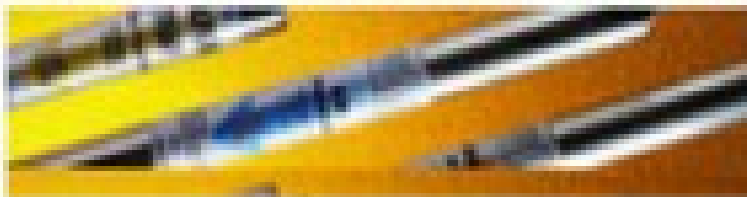
Model	QL-NHA300		
Name of Gas	N2	H2	Air
Outflow(ml/min)	0-300	0-300	0-1000
Output Pressure(MPa)	0-0.4		
Purity(%)	99.99	99.999	Three-grade purification Water content 0.0204ppm Co2 content 0.039% Oil content 0.54ppm
Power Consumption(W)	<350		
Voltage(V)	AC 220 50-60Hz		
Weight(KG)	55		
Dimension(mm)	460*440*460(L*W*H)		

QL Gas Purification is three-grade purification device. It can be used both in series and in parallel.



QL Gas Purification

VICI® GAS PURIFICATION



High Purity GC, GC/MS

- Thermal “getter” Systems N₂ and Helium Purifiers
- Matsen Gas Absorption Purifiers

External PDF Link 

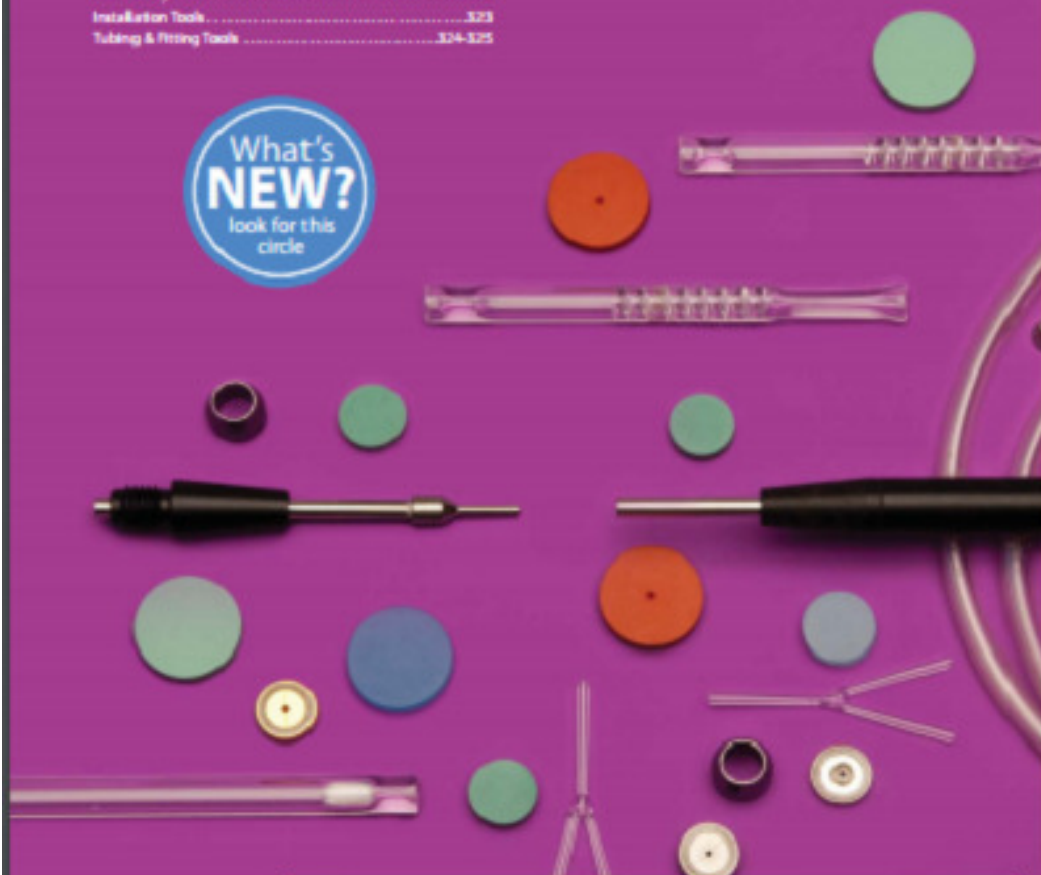
GC ACCESSORIES

GAS PURIFICATION ESSENTIALS

Gas Purification Solutions	295
Gas Purification	296-303
Gas Generation	304-308
Gas Regulators & Accessories	309-312
Fittings	313-317
Tubing & Valves	318-322
VCO Fittings	322
Installation Tools	323
Tubing & Fitting Tools	324-325

**PDF External
Link 31 page**

What's
NEW?
look for this
circle



High Capacity Moisture Trap

$\frac{1}{8}$ -inch tube compression fittings—cat.# 21997

$\frac{1}{4}$ -inch tube compression fittings—cat.# 20638

Maximum Operating Pressure: 250 psi

Maximum Operating Temperature: 100 °C



3. Tighten nut $\frac{3}{4}$ -turn for $\frac{1}{8}$ -inch tubing and one full turn for $\frac{1}{4}$ -inch tubing.
4. Repeat steps 1 through 3 on the other end of the trap.
5. Pressurize the system and leak check with Restek's Electronic Leak Detector (cat.# 22839.)
DO NOT use liquid leak detectors.

Health Hazards

Inhalation: Slightly irritating to the respiratory tract.

Skin Contact: Slightly irritating to the skin.

Eye Contact: Slightly irritating to the eyes. May cause redness and pain.

First-Aid Measures

Inhalation: Remove to fresh air.

Skin: Wash with soap and water. If irritation persists, contact a physician.

Eyes: Flush eyes with plenty of water. Seek medical attention.

Note: This document has been prepared based on a component or components of this product. Exposure to the component(s) is not expected through routine laboratory use.



© 2010 Restek Corporation

**Call Technical Service at 800-356-1688 or 814-353-1300, ext. 4 (or your Restek representative)
if you have any questions about this product or any other Restek product.**



#704-NR [002]
2: 7/10





WARNING

- Maximum pressure 6.8 bar / 680 kPa (100 psig). Wear eye protection and use caution when working with pressurized systems.
- Contains molecular sieve which may become very hot in contact with liquid water. Do not use with liquids
- Do not expose the protective outer plastic tube to solvents.
- Do not use without the protective outer plastic tube in place.
- Special precautions might be required when using hydrogen or hazardous gases. Consult local regulations and your company's safety procedures.

PRODUCT INFORMATION

The Glass Indicating Moisture Trap is designed for use with applications requiring gas with very low levels of water vapor contamination. The adsorbing materials used are CoFree™ indicator and Molecular Sieve 5A, held in a sturdy glass tube. The gas to be purified contacts only glass, metal and the adsorbents. The CoFree™ changes color from yellowish-green to blue at 5-6% relative humidity to signal leaks in the system; the molecular sieve removes moisture to trace levels. The glass tube is sealed with a special dual sealing system to prevent leaks. An internal frit at each end prevents particulate contamination. The inner glass tube in the Restek Glass Indicating Moisture Trap is enclosed in a plastic outer tube, which must not be removed. Dimensions: 3.5 cm x 26 cm.

Installation: The Glass Indicating Moisture Trap is delivered filled with helium. It should be purged with the gas you will be using, before operating any instruments. When connecting to a gas line use two wrenches at each coupling. Tightening the fittings by holding the trap while torquing the nut, or using the wrenches on opposite ends of the trap, can break the glass.

It is generally best practice to mount any gas filter in a vertical orientation to ensure optimal bed packing. The yellow moisture indicator is positioned closer to the inlet side of the filter. Inlet and outlet connections are marked on the label. Warning: If you are using hydrogen or hazardous gas, additional special procedures may be called for. Consult your company's safety procedures.

New Moisture Indicator		
Old	New (as supplied)	
		Before Color Change
		After Color Change

REORDER INFORMATION



+61(0)3 9762 2034

ECHnology Pty Ltd

Website NEW : www.chromalytic.net.au E-mail : info@chromtech.net.au Tel: 03 9762 2034 . . . in AUSTRALIA

Australian Distributors
Importers & Manufacturers
www.chromtech.net.au

Description	Item No.
Glass Indicating Moisture Trap, 1/8" fittings	22014
Glass Indicating Moisture Trap, 1/4" fittings	22015

Restek Corporation • 110 Benner Circle • Bellefonte, PA 16823
 Phone: 800-356-1688 or 814-353-1300
 FAX: 814-353-1309