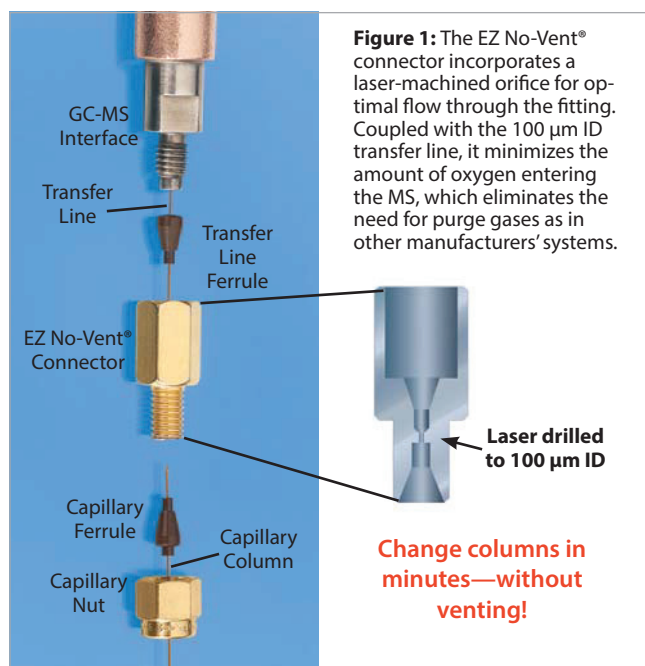


### EZ No-Vent® GC Column-Mass Spectrometer Connector for Agilent GCs with 5971/5972, 5973, or 5975 GC-MS

- Change GC-MS columns in minutes without venting—100 µm transfer line maintains vacuum and eliminates the need to vent.
- Easy to install and maintain—no special tools or plumbing required.
- Gold-plated body for inertness.
- High-temperature polyimide ferrules eliminate leaks at the problematic transfer line fitting.
- Lower cost than other “no-vent” fittings.

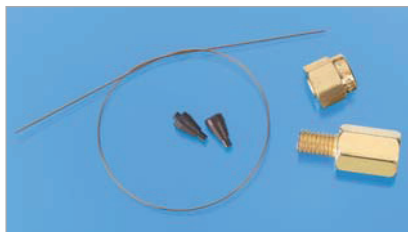
We designed the EZ No-Vent® GC column-mass spectrometer connector to be simple and easy to use. A critical orifice in the EZ No-Vent® connector minimizes the amount of oxygen allowed into the MS source, eliminating the need for purge gas as is required for other manufacturers’ vent systems. This enables you to skip the lengthy vent and pump-down cycle otherwise required when you make a column change, saving nearly a day of down-time with each column change. The EZ No-Vent® connector easily attaches to the MS source without special tools or extra plumbing.



**Figure 1:** The EZ No-Vent® connector incorporates a laser-machined orifice for optimal flow through the fitting. Coupled with the 100 µm ID transfer line, it minimizes the amount of oxygen entering the MS, which eliminates the need for purge gases as in other manufacturers’ systems.

### Restek innovation!

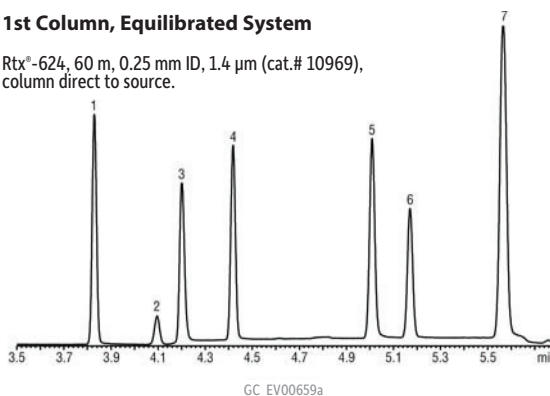
Kit installs easily, without special tools or plumbing.



**Figure 2:** Sharp, symmetric peaks for gases show the EZ No-Vent® connector does not add dead volume and allows rapid column changes.

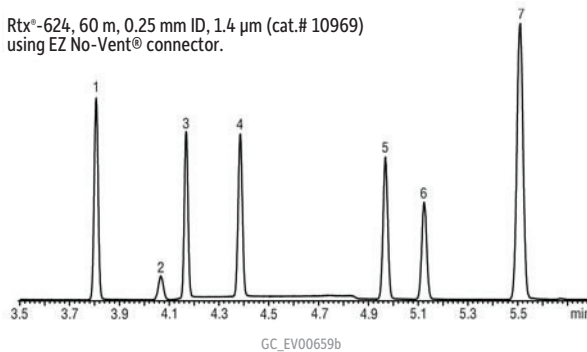
#### 1st Column, Equilibrated System

Rtx®-624, 60 m, 0.25 mm ID, 1.4 µm (cat.# 10969), column direct to source.



#### Acquired 76 Minutes After Installing 2nd Column

Rtx®-624, 60 m, 0.25 mm ID, 1.4 µm (cat.# 10969) using EZ No-Vent® connector.



#### Peaks

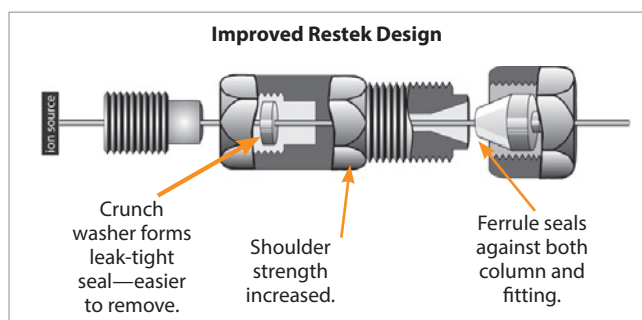
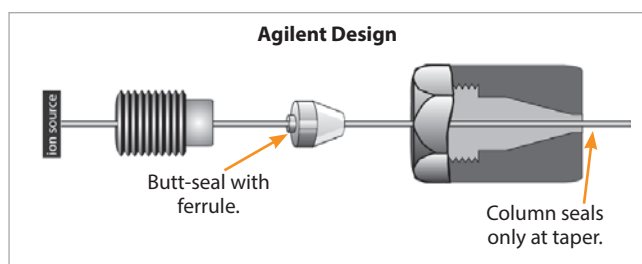
1. Dichlorodifluoromethane
2. 1,2-dichlorotetrafluoroethene (Freon® 114)
3. Chloromethane
4. Vinyl chloride
5. Bromomethane
6. Chloroethane
7. Trichlorofluoromethane

<b>Column</b>	Rtx®-624, 60 m, 0.25 mm ID, 1.40 µm (cat.# 10969)	<b>Detector</b>	Agilent 5973 GC-MS
<b>Sample</b>	502.2 Calibration mix #1 (gases) (cat.# 30042)	<b>Transfer Line</b>	
<b>Injection</b>	purge and trap split	<b>Temp.:</b>	280 °C
<b>Inj. Temp.:</b>	300 °C	<b>Analyzer Type:</b>	Quadrupole
<b>Oven</b>		<b>Tune Type:</b>	BFB
<b>Oven Temp.:</b>	60 °C	<b>Ionization</b>	
<b>Carrier Gas</b>	He, constant flow	<b>Mode:</b>	EI
<b>Flow Rate:</b>	1.0 mL/min	<b>Scan Range:</b>	35-550 amu
		<b>Instrument</b>	Agilent/HP6890 GC

Description	qty.	cat.#
<b>EZ No-Vent Connector Kit</b> Includes: EZ No-Vent Connector, two 0.4 mm ID adaptor ferrules for capillary column, two 0.4 mm ID ferrules for transfer line, 100 µm deactivated transfer line (3 ft.), column plug, column nut	kit	21323
<b>Replacement ferrules for connecting capillary column to EZ No-Vent Connector:</b>		
0.30±0.40 mm Tubing OD (Virgin Polyimide)	2-pk.	21015
0.40±0.50 mm Tubing OD (Virgin Polyimide)	2-pk.	21016
<b>Replacement Ferrules (polyimide) for connecting transfer line to EZ No-Vent connector: 0.4 mm ID</b>	2-pk.	21043
Replacement 100 µm Deactivated Transfer Line	3 ft.	21018
Replacement EZ No-Vent Column Nut	20-pk.	23100
Replacement EZ No-Vent Plug	5-pk.	23112
Open-End Wrenches, 1/4" x 5/16"	2-pk.	20110

### MSD Conversion Fitting

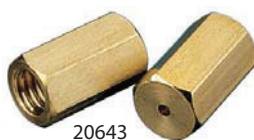
- A flat, soft aluminum sealing ring deforms and butt-seals against the MSD interface.
- A standard Vespe<sup>l</sup>® ferrule seals the column and 1/16-inch stainless steel nut.
- Fitting is constructed of nickel-plated brass for longevity and softness.
- Use any standard Vespe<sup>l</sup>® or Vespe<sup>l</sup>®/graphite 1/16-inch ferrule.
- Includes a 1/16-inch stainless steel nut and two replacement sealing rings. Order ferrules separately.
- Improved design reduces chance of leaks.



Description	qty.	cat.#
MSD Conversion Fitting	ea.	21314
Replacement Ring Seal for MSD Conversion Fitting	2-pk.	21313

### MSD Source Nut

- 1.2 mm nut bore permits easy removal of ferrules with a standard tapered-needle file (cat.# 20106).
- Made of brass to prevent thread-stripping on the transfer line.
- Design enhances ease of threading onto the transfer line and improves overall lifetime.



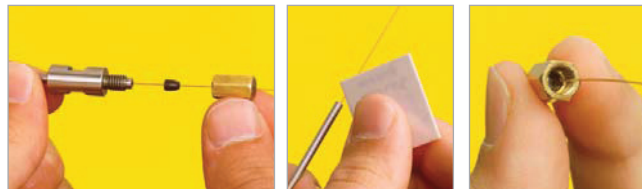
Description	Similar to Agilent Part #	qty.	cat.#
(Detector) MSD Source Nut	05988-20066	2-pk.	20643

### Restek innovation!



#### Capillary Installation Gauge for Agilent 5973/5975 MS

- Seats ferrules onto column for consistent installations.
- Made from high-quality stainless steel.



Install the nut and ferrule onto the column, then insert the column through the installation tool, exposing several centimeters at the exit end. Tighten the nut (not depicted).

Score and remove the exposed end of the column.

Loosen the nut.

Description	Similar to Agilent Part #	qty.	cat.#
Capillary Installation Gauge for Agilent 5973/5975 MS	G1099-20030	ea.	21894

### Gold Tip Transfer Line

- For use with Agilent 5971/5972 MS systems.
- Gold-plated for inertness.
- Meets or exceeds original manufacturer's performance.



Description	Similar to Agilent Part #	qty.	cat.#
Gold Tip Transfer Line	05971-20305	ea.	24699

### Ion Source Cleaning Powder

Use this aluminum oxide powder to clean surfaces that contact the sample or ion beam when you encounter poor sensitivity and inadequate abundances at high masses.



Description	Similar to Agilent Part #	qty.	cat.#
Ion Source Cleaning Powder	8660-0791	1 kg	22685

### Inland 45 Pump Oil

Recommended for most mass spectrometers.

- Ease at cold start.
- Low vapor pressure  $10^{-7}$  torr.
- Nontoxic and noncorrosive.
- Compatible with buna-N, neoprene, and Viton® seals.
- Optimum vacuum pump performance.
- Lowest mass spectrometer background.
- Recommended for optimum mass spec performance.



24819

Description	Similar to		cat.#
	Agilent Part #	qty.	
Inland 45 Pump Oil	6040-0834, 6040-0798	1 liter	24819

### Rough Pump Oil #19 for MSD Pumps, Oil Vacuum Pump

- Formulated from crude oil stocks known for their durability and line-lubricating qualities.
- Use in Agilent 5973/5972/5971 and GCD mass spec systems, or in other manufacturers' MSD systems that require rough pump oil.
- Under average use, the oil in the foreline rough pump should be replaced every six months.



22687

Description	qty.	cat.#
Rough Pump Oil for MSD Pumps	1 liter	22687



27194

### GC-MS Cleaning Kit

Poor sensitivity, loss of sensitivity at high masses, or high multiplier gain during an auto tune are all indicators that your mass spectrometer source may need to be cleaned. Restek has assembled all of the necessary components for cleaning and polishing your ion source.

**The Restek GC-MS Cleaning Kit (cat.#s 27194, 27195) Includes:**

- Lint-free nylon gloves (small, 2 pair)
- Lint-free nylon gloves (large, 2 pair)
- Lint-free cotton cloth, 9 x 9 (10-pk.)
- Micro mesh 4 x 6 sheet (4-pk.)
- Aluminum oxide (1-kg jar)
- Cotton tip applicators
- Tweezers, large
- Tweezers, small
- Septum puller
- Dremel® tool, battery-operated (optional, 27194)
- Tool kit bag

**Reorder Kit (cat.# 27196) Includes:**

- Lint-free nylon gloves (small, 2 pair)
- Lint-free nylon gloves (large, 2 pair)
- Lint-free cotton cloth, 9 x 9 (10-pk.)
- Micro mesh 4 x 6 sheet (4-pk.)

Description	qty.	cat.#
Mass Spec Cleaning Kit with Dremel Tool	kit	27194
Mass Spec Cleaning Kit without Dremel Tool	kit	27195
Mass Spec Cleaning Kit Replacement Parts Kit	kit	27196
Includes: cloths, micro mesh sheets, small and large gloves		

### ETP Electron Multipliers

for Mass Spectrometry

- Proprietary specialized surface material resulting in very high secondary electron emission.
- Air stable.
- 2-year shelf life guarantee.
- Discrete dynode design results in extended operating life.



23074

The electron multipliers manufactured by ETP use a proprietary dynode material. This material has a number of properties that make it very suitable for use in an electron multiplier. It has very high secondary electron emission, which allows exceptional gain to be achieved from each dynode. This material is also very stable in air. In fact, an ETP multiplier can be stored for years before being used. As a direct result of the high stability of the active materials used in ETP multipliers, they come with a 2-year shelf life warranty (stored in original sealed package). Many testing laboratories take advantage of this long shelf life by keeping a replacement ETP multiplier on hand, ready for immediate installation. This keeps instrument downtime to a minimum.

### did you know?

For a typical ETP electron multiplier for GC-MS, the total active dynode surface area is ~1,000 mm<sup>2</sup>. This can be compared to a standard continuous dynode multiplier that has a total channel surface area of only around 160 mm<sup>2</sup> (for a channel with 1 mm diameter and 50 mm length). This increased surface area spreads out the workload of the electron multiplication process over a larger area, effectively slowing the aging process and improving operating life and gain stability.

Description	qty.	cat.#
<b>Electron Multipliers for Agilent GC-MS and LC-MS</b>		
For Agilent 5970 GC-MS	ea.	23072
For Agilent 5971, 5972, GC GC-MS	ea.	23073
For Agilent 5973 & 5975 GC-MS (includes mount for initial installation)*†	ea.	23074
For Agilent 5973 & 5975 GC-MS and LC-MSD (Replacement Multiplier)*†	ea.	23075

\*Note: The electron multipliers have been specifically developed to retrofit the original manufacturer's equipment. The detector incorporates a modular design to facilitate ease of replacement and additional innovations intended to enhance performance. First-time installation requires a mount that includes the mechanical housing. After initial installation, only the replacement electron multiplier is required.

†This unit is designed for use in the 5975, 5973 GC, and the LC-MSD (not for 5975C Triple Axis Detector).