

# Filters for HPLC and UHPLC Columns

Provide economical protection from the harmful effects of sample and mobile phase particulates on modern UHPLC and other high resolution HPLC columns.



Direct Connect column Filters



UltraShield Pre-column



ColumnShield Precolumn



Guard Column Hardware



In-Line column Filters

**ASI**



# UltraShield HPLC/UHPLC Precolumn Filters

- Economical protection against micro-particles
- Extends column lifetime
- Negligible effect on column performance
- Universal fit, connects directly to column
- Leak tight to 15,000 PSI



UltraShield Precolumn Filter

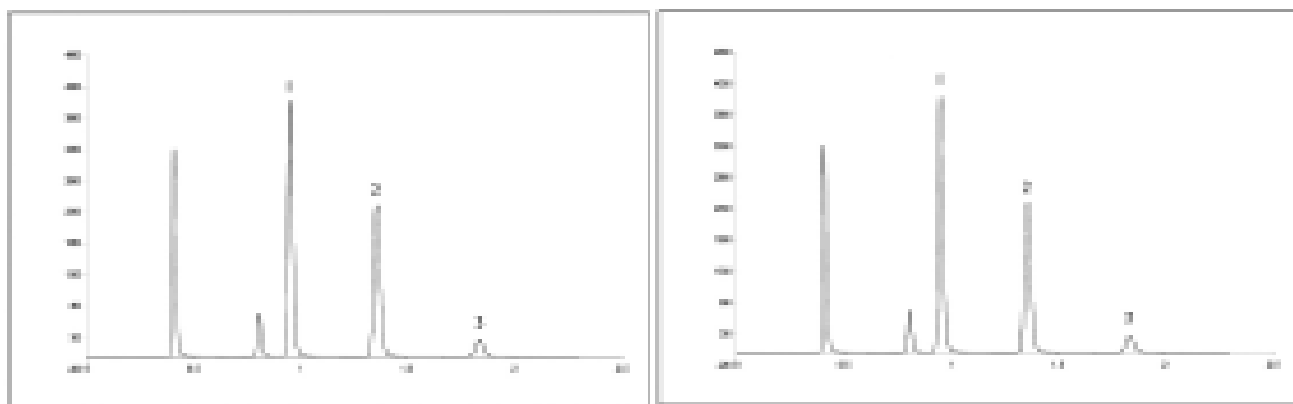
*UltraShield* direct connect precolumn filters provide economical protection from the harmful effects of sample and mobile phase particulates on modern UHPLC and other high resolution HPLC columns. *UltraShield* was engineered specifically for use in fast, high efficiency separations requiring high mobile phase velocities and ultra high pressure. *UltraShield* maintains the efficiency of these high performance columns assuring no loss of critical resolution. With its simple design, *UltraShield* installs in any analytical column in seconds and is leak tight to 15,000 PSI. Simply tighten the filter with a wrench until it is snug, followed by an additional 1/4 turn.

## Specifications

Inlet/Outlet: Female/Male 10-32  
 Port Geometry: Halo, Waters (1/16 CPI)  
 Wetted Material: SST, PEEK

Frit: 0.5 and 2 micron porosity, SST or Titanium  
 Pressure Rating: 15,000 PSI  
 Wrench Flat: 5/16"

## UltraShield Precolumn Filters Maintain Critical Resolution



As the above chromatograms illustrate, UltraShield Precolumn Filters maintain the theoretical plates, N, of very efficient UHPLC columns. Column: 4.6 x 50 mm HALO<sup>®</sup> C18 Fused-Core<sup>®</sup>

|                   | Peak 1 | Peak 2 | Peak 3 |
|-------------------|--------|--------|--------|
| Nw/o UltraShield  | 10,542 | 11,458 | 10,796 |
| Nwith UltraShield | 10,567 | 11,457 | 10,784 |
| % Change          | -2.3%  | 0%     | -0.1%  |

Note: The above performance data applies to both UltraShield and ColumnShield Precolumn Filters

# UltraShield HPLC/UHPLC Precolumn Filters

## *UltraShield Precolumn Filter Assemblies with SST Frit*

| Frit                     | Port Compatibility | Male Compatibility | ASI Part Number |
|--------------------------|--------------------|--------------------|-----------------|
| 0.5 micron x 0.062" dia. | Halo               | Halo               | 850-1010        |
| 0.5 micron x 0.062" dia. | Halo               | Waters             | 850-1010HW      |
| 0.5 micron x 0.062" dia. | Waters             | Waters             | 850-1010WW      |
| 0.5 micron x 0.062" dia. | Waters             | Halo               | 850-1010WH      |
| 2 micron x 0.062" dia.   | Halo               | Halo               | 850-1015        |
| 2 micron x 0.062" dia.   | Halo               | Waters             | 850-1015HW      |
| 2 micron x 0.062" dia.   | Waters             | Waters             | 850-1015WW      |
| 2 micron x 0.062" dia.   | Waters             | Halo               | 850-1015WH      |

## *UltraShield Precolumn Filter Assemblies with Titanium Frit*

| Frit                     | Port Compatibility | Male Compatibility | ASI Part Number |
|--------------------------|--------------------|--------------------|-----------------|
| 0.5 micron x 0.062" dia. | Halo               | Halo               | 850-1010T       |
| 0.5 micron x 0.062" dia. | Halo               | Waters             | 850-1010HWT     |
| 0.5 micron x 0.062" dia. | Waters             | Waters             | 850-1010WWT     |
| 0.5 micron x 0.062" dia. | Waters             | Halo               | 850-1010WHT     |
| 2 micron x 0.062" dia.   | Halo               | Halo               | 850-1015T       |
| 2 micron x 0.062" dia.   | Halo               | Waters             | 850-1015HWT     |
| 2 micron x 0.062" dia.   | Waters             | Waters             | 850-1015WWT     |
| 2 micron x 0.062" dia.   | Waters             | Halo               | 850-1015WHT     |

**Note:** Halo is compatible with most HPLC ports including Agilent.

### **Internal volume**

0.5 micron: 1  $\mu$ L  
2 micron: 1.17  $\mu$ L



# ColumnShield Precolumn Filters

- **Economical protection against micro-particles**
- **Extends HPLC column lifetime**
- **Negligible effect on column performance**
- **Universal fit, connects directly to column**
- **Fingertight to 5,000 PSI**



**UltraShield Precolumn Filter**

*PrimeLine* ColumnShield precolumn filter provides economical protection from the harmful effects of sample and mobile phase particulates on modern HPLC columns. The disposable filter was engineered to maintain the efficiency of high performance columns assuring insuring no loss of critical resolution. With its simple design, the filter installs in any analytical column or guard column in seconds and is leak tight to 5,000 PSI. To install simply hand tighten the filter as you would with any fingertight fitting while holding the column stable.

| Description:                                       | ASI Part Number |
|--|-----------------|
| ColumnShield Precolumn Filter, 0.5 micron          | 850-1050T       |
| ColumnShield Precolumn Filter, 0.5 micron, 5/Pack  | 850-1050T-05    |
| ColumnShield Precolumn Filter, 0.5 micron, 10/Pack | 850-1050T-10    |
| ColumnShield Precolumn Filter, 2 micron            | 850-1051T       |
| ColumnShield Precolumn Filter, 2 micron, 5/Pack    | 850-1051T-05    |
| ColumnShield Precolumn Filter, 2 micron, 10/Pack   | 850-1051T-10    |

## **Specifications**

Inlet/Outlet: Female/Male 10-32  
Wetted Material: PEEK and Titanium

Frit: 0.5 and 2 micron Titanium  
Pressure Rating: 5,000 PSI  
Fingertight: No wrench required

Port Geometry: compatible with most HPLC ports including Agilent and Waters.

# In-Line & Direct Connect HPLC/UHPLC Column Filters

- **Cost effective way to extend column lifetime**
- **Replaceable filter element**
- **Negligible effect on column performance**
- **Universal fit, connects directly to column**
- **Leak tight to 15,000 PSI**
- **Will not shed metal particles**

*PrimeLine* direct connect precolumn filters provide economical protection from the harmful effects of sample and mobile phase particulates on modern HPLC and UHPLC columns. The *PrimeLine* precolumn filter was engineered specifically for use in high throughput and routine HPLC separations where mobile phase and sample contamination cause a decrease in column performance or premature column failure. The low swept volume of the *PrimeLine* filter maintains the efficiency of high performance columns assuring a negligible loss of critical resolution. With its simple design, the *PrimeLine* filter installs in any analytical column in seconds and is leak tight to 15,000 PSI. Simply finger tighten initially, then wrench tighten an additional 1/4 - 1/2 turn.



**In-Line Column Filter**



**Direct Connect Column Filter**

## ***Specifications In-Line Filter***

Inlet/Outlet: Female/Male 10-32  
Port Geometry: Halo (1/16 CPI)  
Wetted Material: SST and Frit material  
Frit: 0.2 to 20 micron SST or Titanium  
Pressure Rating: 15,000 PSI  
Wrench Flat: 3/8"

## ***Specifications Direct Connect Column***

Inlet/Outlet: Female/Male 10-32  
Port Geometry: Halo, Waters (1/16 CPI)  
Wetted Material: SST, Frit material and Ferrule material (SST or PEEK)  
Frit: 0.2 to 20 micron SST or Titanium  
Pressure Rating: 15,000 PSI  
Wrench Flat: 3/8"

# In-Line HPLC/UHPLC Column Filters



Replaceable Filter Assembly

## ***In-Line Column Filter Assemblies with SST Frit***

| Description: SST   | ASI Part Number | Dead Vol. |
|--|-----------------|-----------|
| In-Line Column Filter Assembly, with 0.2 micron x 0.062" dia. Frit | 850-1027        | 1.8 µL    |
| In-Line Column Filter Assembly, with 0.2 micron x 0.125" dia. Frit | 850-1027-125    | 3.5 µL    |
| In-Line Column Filter Assembly, with 0.2 micron x 0.188" dia Frit  | 850-1027-188    | 7.3 µL    |
| In-Line Column Filter Assembly, with 0.5 micron x 0.062" dia Frit  | 850-1025-062    | 1.9 µL    |
| In-Line Column Filter Assembly, with 0.5 micron x 0.125" dia. Frit | 850-1025        | 4.1 µL    |
| In-Line Column Filter Assembly, with 0.5 micron x 0.188" dia. Frit | 850-1025-188    | 8.7 µL    |
| In-Line Column Filter Assembly, with 2 micron x 0.062" dia. Frit   | 850-1026-062    | 2.1 µL    |
| In-Line Column Filter Assembly, with 2 micron x 0.125" dia. Frit   | 850-1026-125    | 5.2 µL    |
| In-Line Column Filter Assembly, with 2 micron x 0.188" dia. Frit   | 850-1026        | 11.3 µL   |
| In-Line Column Filter Assembly, with 5micron x 0.125" dia. Frit    | 850-1028-125    | 5.8 µL    |

## ***In-Line Column Filter Assemblies with Titanium Frit***

| Description: Titanium  | ASI Part Number | Dead Vol. |
|--|-----------------|-----------|
| In-Line Column Filter Assembly, with 0.2 micron x 0.062" dia. Frit | 850-1027T       | 1.8 µL    |
| In-Line Column Filter Assembly, with 0.2 micron x 0.125" dia. Frit | 850-1027-125T   | 3.5 µL    |
| In-Line Column Filter Assembly, with 0.2 micron x 0.188" dia. Frit | 850-1027-188T   | 7.3 µL    |
| In-Line Column Filter Assembly, with 0.5 micron x 0.062" dia. Frit | 850-1025-062T   | 1.9 µL    |
| In-Line Column Filter Assembly, with 0.5 micron x 0.125" dia. Frit | 850-1025T       | 4.1 µL    |
| In-Line Column Filter Assembly, with 0.5 micron x 0.188" dia. Frit | 850-1025-188T   | 8.7 µL    |
| In-Line Column Filter Assembly, with 2 micron x 0.062" dia. Frit   | 850-1026-062T   | 2.1 µL    |
| In-Line Column Filter Assembly, with 2 micron x 0.125" dia. Frit   | 850-1026-125T   | 5.2 µL    |
| In-Line Column Filter Assembly, with 2 micron x 0.188" dia. Frit   | 850-1026T       | 11.3 µL   |
| In-Line Column Filter Assembly, with 5micron x 0.125" dia. Frit    | 850-1028-125T   | 5.8 µL    |

**Note:** For 0.188" diameter filter assembly, the maximum pressure is 10,000 PSI.

Port Geometry is Halo and Halo is compatible with most HPLC ports including Agilent.

# Direct Connect HPLC/UHPLC Column Filters

## **Description: Filter Assemblies with 0.2 micron SST Frit**

| Frit Diameter | Ferrule Material | Port Compatibility | Male Compatibility | ASI Part Number | Dead Vol. |
|---------------|------------------|--------------------|--------------------|-----------------|-----------|
| 0.062"        | SST              | Halo               | Halo               | 850-1022-062    | 1.8 µL    |
| 0.125"        | SST              | Halo               | Halo               | 850-1022        | 3.9 µL    |
| 0.188"        | SST              | Halo               | Halo               | 850-1022-188    | 7.9 µL    |

## **Description: Filter Assemblies with 0.5 micron SST Frit**

| Frit Diameter | Ferrule Material | Port Compatibility | Male Compatibility | ASI Part Number | Dead Vol. |
|---------------|------------------|--------------------|--------------------|-----------------|-----------|
| 0.062"        | SST              | Halo               | Halo               | 850-1020-062    | 1.9 µL    |
| 0.125"        | SST              | Halo               | Halo               | 850-1020        | 4.1 µL    |
| 0.188"        | SST              | Halo               | Halo               | 850-1020-188    | 8.7 µL    |

## **Description: Filter Assemblies with 2 micron SST Frit**

| Frit Diameter | Ferrule Material | Port Compatibility | Male Compatibility | ASI Part Number | Dead Vol. |
|---------------|------------------|--------------------|--------------------|-----------------|-----------|
| 0.062"        | SST              | Halo               | Halo               | 850-1021-062    | 2.1 µL    |
| 0.125"        | SST              | Halo               | Halo               | 850-1021        | 5.1 µL    |
| 0.188"        | SST              | Halo               | Halo               | 850-1021-188    | 10.3 µL   |

## **Description: Filter Assembly with 5 micron SST Frit**

| Frit Diameter | Ferrule Material | Port Compatibility | Male Compatibility | ASI Part Number | Dead Vol. |
|---------------|------------------|--------------------|--------------------|-----------------|-----------|
| 0.125"        | SST              | Halo               | Halo               | 850-1023        | 5.8 µL    |

**Note:** For 0.188" diameter filter assembly, the maximum pressure is 10,000 PSI.  
All sizes are available in Halo or Waters port and male compatibility.

Port compatibility selection: Add H for Halo or W for waters at the end of the part number  
Male compatibility selection: After the port selection add H for Halo or W for waters  
Titanium Frit version also available in all sizes, please simply add 'T' end of the part number  
For the actual P/Ns, please visit [www.hplc-asi.com](http://www.hplc-asi.com).





# In-line & Direct Connect HPLC/UHPLC Column Filter Replacement Filters

**Description: Replacement Filter Assemblies with SST Frit**

| Frit                   | Package | ASI Part Number |
|------------------------|---------|-----------------|
| 0.2 micron 0.062" dia. | 5/pack  | 850-1027-.2     |
| 0.2 micron 0.125" dia. | 5/pack  | 850-1020-.2     |
| 0.2 micron 0.188" dia. | 5/pack  | 850-1026-.2     |
| 0.5 micron 0.062" dia. | 5/pack  | 850-1027-.5     |
| 0.5 micron 0.125" dia. | 5/pack  | 850-1020-.5     |
| 0.5 micron 0.188" dia. | 5/pack  | 850-1026-.5     |
| 2 micron 0.062" dia.   | 5/pack  | 850-1027-2      |
| 2 micron 0.125" dia.   | 5/pack  | 850-1020-2      |
| 2 micron 0.188" dia.   | 5/pack  | 850-1026-2      |
| 5 micron 0.125" dia.   | 5/pack  | 850-1020-5      |

**Description: Replacement Filter Assemblies with Titanium Frit**

| Frit                   | Package | ASI Part Number |
|------------------------|---------|-----------------|
| 0.2 micron 0.062" dia. | 5/pack  | 850-1027-.2T    |
| 0.2 micron 0.125" dia. | 5/pack  | 850-1020-.2T    |
| 0.2 micron 0.188" dia. | 5/pack  | 850-1026-.2T    |
| 0.5 micron 0.062" dia. | 5/pack  | 850-1027-.5T    |
| 0.5 micron 0.125" dia. | 5/pack  | 850-1020-.5T    |
| 0.5 micron 0.188" dia. | 5/pack  | 850-1026-.5T    |
| 2 micron 0.062" dia.   | 5/pack  | 850-1027-2T     |
| 2 micron 0.125" dia.   | 5/pack  | 850-1020-2T     |
| 2 micron 0.188" dia.   | 5/pack  | 850-1026-2T     |
| 5 micron 0.125" dia.   | 5/pack  | 850-1020-5T     |

**Note:** Please refer to Page 7 and 8 for the information of dead volume (internal volume).

## High Capacity HPLC/UHPLC Filters

Placed between the pump and injector, these filters protect the injector from pump seal wear material and extend the life of the column prefilter. All filters are made from 316 stainless steel and are rated to 6,000 PSI. Filters for UHPLC are rated to 15,000 PSI. All male/female ports are compatible with 10-32 compression fittings.

This filter features a clean-swept internal volume and a large 2.2 cm<sup>2</sup> filter area that will provide a long service life. Filter cartridges are available in 0.2micron, 0.5 micron and 2 micron porosity, and are both interchangeable and replaceable.

This filter is a good choice when a long life is important to you.

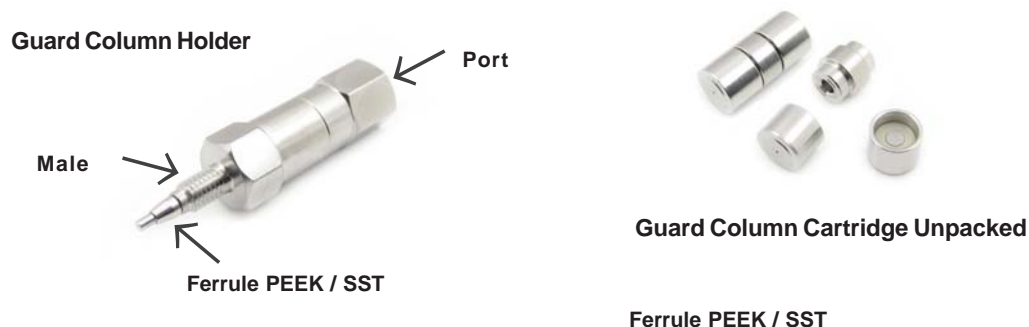


Total internal volume is 90 µL for 0.2 micron filter, 100 µL for 0.5 micron filter, and 120 µL for 2 micron filter.

| Description  | ASI Part Number |
|--|-----------------|
| High Capacity In-Line Filter Assembly, 0.2 micron                | 850-1316        |
| High Capacity In-Line Filter Assembly, 0.2 micron, High Pressure | 850-1316HP      |
| High Capacity In-Line Filter Assembly, 0.5 micron                | 850-1315        |
| High Capacity In-Line Filter Assembly, 0.5 micron, High Pressure | 850-1315HP      |
| High Capacity In-Line Filter Assembly, 2 micron                  | 850-1310        |
| High Capacity In-Line Filter Assembly, 2 micron, High Pressure   | 850-1310HP      |
| 0.2 micron Replacement Filter Cartridge for HC                   | 850-1326        |
| 0.5 micron Replacement Filter Cartridge for HC                   | 850-1325        |
| 2 micron Replacement Filter Cartridge for HC                     | 850-1320        |

## Guard Column HPLC/UHPLC Hardware

The *PrimeLine* direct connect guard column provides economical protection from the harmful effects of sample and mobile phase particulates and soluble contaminants on modern HPLC and UHPLC columns. The low swept volume of the *PrimeLine* guard column maintains the efficiency of high performance columns assuring a negligible loss of critical resolution. With its simple design, the *PrimeLine* guard column installs in any analytical column in seconds and is leak tight to 15,000 PSI.

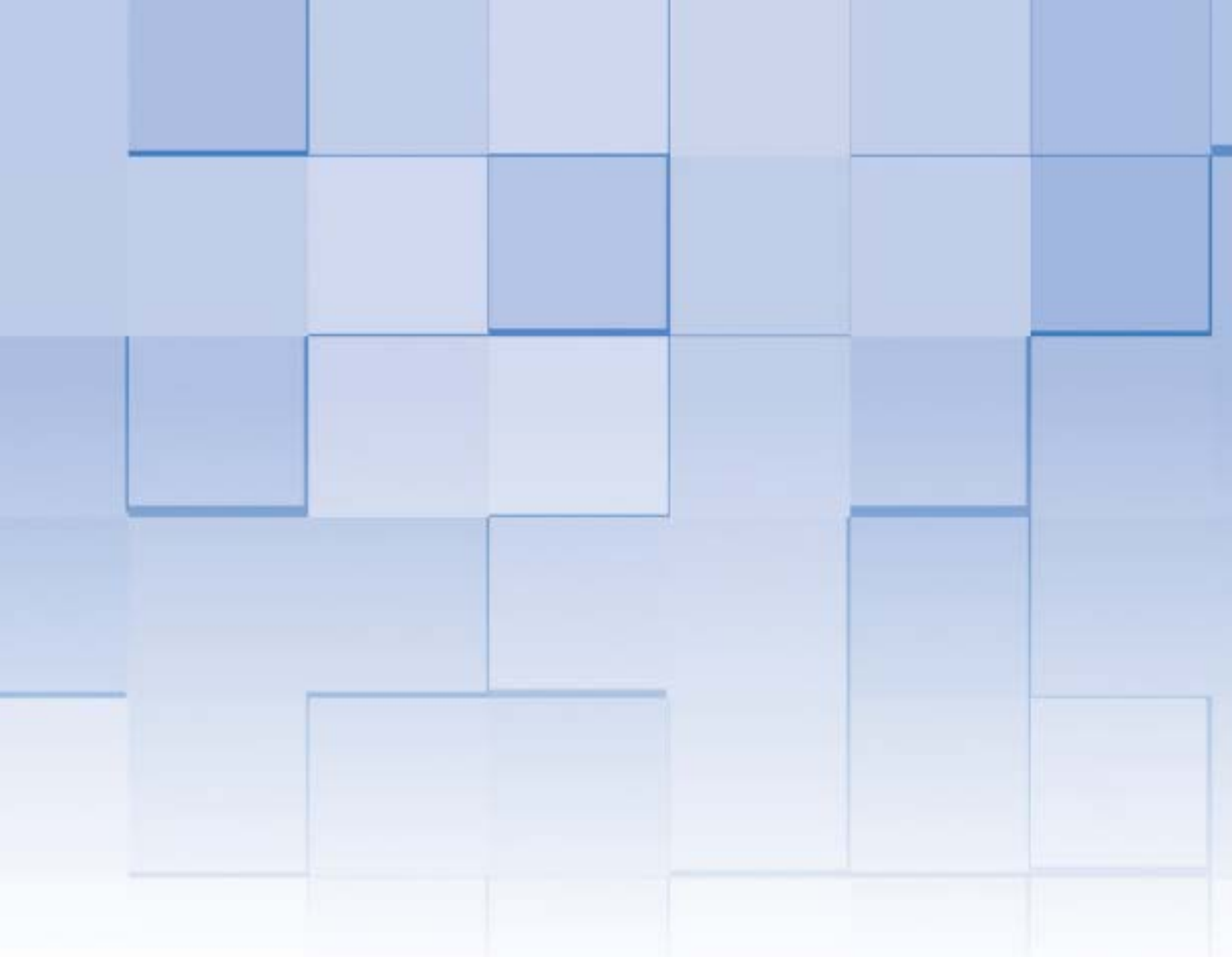


| Description                      | Internal Volume      | ASI Part Number |
|----------------------------------|----------------------|-----------------|
| Guard Column Cartridge, Unpacked | 2mm dia. x 5mm long  | 850-1392-04     |
| Guard Column Cartridge, Unpacked | 2mm dia. x 7mm long  | 850-1392-01     |
| Guard Column Cartridge, Unpacked | 2mm dia. x 10mm long | 850-1392-02     |
| Guard Column Cartridge, Unpacked | 4mm dia. x 5mm long  | 850-1394-04     |
| Guard Column Cartridge, Unpacked | 4mm dia. x 7mm long  | 850-1394-01     |
| Guard Column Cartridge, Unpacked | 4mm dia. x 10mm long | 850-1394-02     |
| Guard Column Cartridge, Unpacked | 4mm dia. x 20mm long | 850-1394-03     |

| Description                                       | Port Compatibility | Male Compatibility | ASI Part Number |
|---|--------------------|--------------------|-----------------|
| Guard Column Housing, 7mm long with SST Ferrule   | Halo               | Halo               | 850-1390        |
| Guard Column Housing, 7mm long with PEEK Ferrule  | Halo               | Halo               | 850-1390HBH     |
| Guard Column Housing, 5mm long with SST Ferrule   | Halo               | Halo               | 850-1390-3HH    |
| Guard Column Housing, 5mm long with PEEK Ferrule  | Halo               | Halo               | 850-1390-3HBH   |
| Guard Column Housing, 10mm long with SST Ferrule  | Halo               | Halo               | 850-1390-1HH    |
| Guard Column Housing, 10mm long with PEEK Ferrule | Halo               | Halo               | 850-1390-1HBH   |
| Guard Column Housing, 20mm long with SST Ferrule  | Halo               | Halo               | 850-1390-2HH    |
| Guard Column Housing, 20mm long with PEEK Ferrule | Halo               | Halo               | 850-1390-2HBH   |

**Note:** All sizes are available in Halo or Waters port and male compatibility.

Port Geometry is Halo and Halo is compatible with most HPLC ports including Agilent.



**Analytical Scientific Instruments US, Inc.  
3023 Research Drive Richmond CA 94806 USA  
[www.hplc-asi.com](http://www.hplc-asi.com)  
Ph:800-344-4340  
Customer Service: [info@hplc-asi.com](mailto:info@hplc-asi.com)**

Copyright © 2014 ASI - Analytical Scientific Instruments US, Inc.  
Rev. 2\_1\_2018