Options for Stainless Steel Housings

Inverted Housings

PRODUCT FEATURES / BENEFITS

- No Connections to Break for Service
- Element Stands Vertical
- Ideal for Coalescing
- Compact Installation
- Analyzer Protection
- Pre-Filter for our Guardian Membrane Separators
- Used in Sample Cabinets with Space Constraints
- CNG Dispensers
- Dry Seal Gas Panels

In applications where space is limited and maintenance is critical, our Inverted (IVT) housings provide an ideal solution. All line connections—including inlet, outlet, and drain ports—are in the head of the unit. This design allows all tubing to remain in a single plane within the panel and simplifies element servicing, as no lines need to be removed to replace the element.

The drain port is positioned at the lowest point in the head module to quickly evacuate liquids and reduce entrainment. The element is maintained in a vertical orientation to ensure proper liquid drainage, unlike other head-port drain assemblies that are typically mounted horizontally, which can result in slower drainage and increased downstream carryover.

Applications and Features:

- Quick and easy element service
- Efficient liquid drainage
- Space-saving design for panel-mounted installations
- Optional integration with a membrane separator (as in GMS170)

Ordering Information:

Inverted housings can be ordered with a bowl drain connection (e.g., IV112) or without a bowl drain (e.g., IV116). The traditional drain bowl connection can alternatively be used as a vent or gauge port.

Bubblers

PRODUCT FEATURES / BENEFITS

- Many Sizes to Choose From
- Easy to Service
- Economical
- Wash Out Samples
- Add Humidity to Samples
- Knock Out Harmful Vapors

Many of our filter housings can be converted into **"bubblers"**, enabling a gas sample to pass through a liquid. The standard element retainer is replaced with a hollow stack featuring a small orifice, which bubbles the sample stream through the liquid.

Applications include:

- Scrubbing unwanted components from the sample stream
- Humidifying a sample stream

Ordering Information:

To convert a standard filter to a bubbler, simply add the suffix **"B"** to the housing code. Transparent housings without drain ports are preferred, as they allow continuous liquid level monitoring and eliminate a potential connection point.

Catch Pots

PRODUCT FEATURES / BENEFITS

- Low Pressure Drop
- Cost Effective / Many Sizes to Choose
- No Element to Service
- Can Be Utilized as a T-Type Sight Glass
- Remove Bulk Liquids and Solids
- Protect Coalescing Filters

In compressed gas and sample process applications, large volumes of liquid and high particulate loads can overwhelm filter elements, reducing their life and performance. Flooding of coalescing elements or blinding from particulate can occur if proper prefiltration is not provided.

A simple solution is a **catchpot**, which replaces the filter element with a hollow stack. The stack dramatically changes the airflow direction, acting as a baffle to remove the majority of contaminants. Catchpot housings should be used upstream of a final filter to capture any residual condensation or particulate.

Ordering Information:

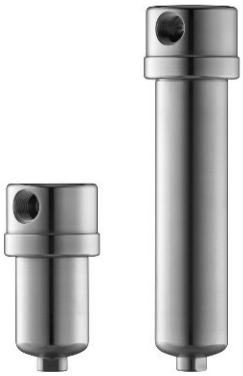
All filter housings can be converted to catchpots by adding the suffix **"CP"** to the housing code.

Exotic Materials

PRODUCT FEATURES / BENEFITS

- Large Range of Material Available
- Some Items In Stock for Quick Delivery
- Hastelloy, Duplex for High Strength / Extreme Conditions
- Titanium for Strength and Light Weight Conditions
- Brass, Nickel, Monel, and Inconel for Chemical Compatibility and Oxygen Service

Our Extensive Material Capabilities for Custom Filtration Solutions
United offers a comprehensive library of exotic materials designed to meet the demands of specialized filtration applications. Our capabilities include the fabrication of custom filter housings and elements from a wide range of metals tailored to suit diverse operating environments.



Whether your application demands corrosion resistance, high-temperature durability, or unique mechanical properties, United provides filtration solutions built to perform under the most challenging conditions.

Filter Elements

- Available in Hastelloy and Monel
- Many sizes in stock for immediate delivery

Material Certifications

- Full certifications are available for all housings and elements upon request.

All standard housing designs are offered in Exotic Materials.

We also can Silconert® (Inert Silicone Coating) our 316L Stainless Steel Filter Housings for H2S, Mercury, Ammonia, and Active Compound Sampling and Transfer.

Silconert® Treated Housings

PRODUCT FEATURES / BENEFITS

- Creates an Inert Flow Paths for Better Sample Process Control
- Fast Accurate Results the First Time
- No Adsorption
- Fast Calibration
- Analytical Sampling and Laboratory Applications
- Process Refinery and Sample Process Applications
- Reliable Flare and Stack Gas Sampling

Stainless steel filters, due to their high adsorptive surface area, can capture H_2S, mercaptans, and other sulfur compounds, potentially compromising analyzer performance. In continuous emission monitoring systems (CEMS), sulfur adsorption can delay accurate measurements by **up to 90 minutes or more**.

SilcoNert® 2000 provides a complete passivation treatment for stainless steel surfaces, including filter housings and elements. This inert coating:

- Penetrates even the smallest pores of stainless steel surfaces
- Prevents adsorption of sulfur compounds and mercury at **parts-per-billion levels**
- Reduces moisture contamination
- Improves overall sample system performance

Disposable filter media are inherently inert and do not require SilcoNert® treatment; however, stainless steel elements should be treated to create a fully inert flow path.

Applications:

- Automotive emissions testing
- CEMS and other high-sensitivity sulfur compound analyses
- High-temperature operations where galling and element sticking may occur

Ordering Information:

Any stainless steel filters supplied by United Filtration Systems/Headline Filters can be **SilcoNert® 2000 treated**, with an estimated delivery time of **2–3 weeks**. The coating also facilitates element removal by creating a smooth surface, particularly beneficial for heatable H-series housings.

SAE, Socket Welds (SW), Tube Stubs (TS), or Flanges

PRODUCT FEATURES / BENEFITS

- SAE Threads for Positive O-Ring Seal
- Socket Weld or Butt Weld Provide 100% Leak Free Installations
- Tube Stubs for Convenient Tube Fitting Installations
- Flanges Available in a Variety of Sizes and Pressure Ratings
- SAE Threads are Ideal When A Housings Needs to be Removed Repeatly
- Tube Stubs Provide Simple, Clean, Leak Tight Installation
- Use of Flanges Provides Easy Access for Cleaning and Inspection

Standard products are supplied with **FNPT connections**. Optional connection types include:

- **SAE**
- **BSPP (British Standard Pipe Parallel)**
- **Socket Weld (SW)**
- **Butt Weld (BW)**
- **Flanged**, including Raised Face (RF), Weld Neck (WN), Butt Weld (BW), Socket Weld (SW), and Tube Stub (TS)

Many SAE configurations are stocked for immediate shipment, and lead times for special connections are typically under **three weeks**.

Additional Services:

- **Hydrostatic testing** is available upon request.