



# Options for Stainless Steel Housings for Unique Applications

## Bubblers

### Features / Applications

- 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 to "bubblers", which allows a gas sample to be passed through a liquid. A hollow stack with a small orifice to "bubble" the sample stream through replaces the element retainer. In some applications this will be to scrub out any unwanted component of the sample stream, while in others it will be to humidify a sample stream.

**Simply add the suffix "B" to the housing code to convert a standard filter to a bubbler. Transparent housings without drain ports are the best suited, since they allow continuous monitoring of the liquid level, and the absence of a drain port eliminates a connection point.**



## Catch Pots

### Features / Applications

- 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

A common issue among compressed gas and sample process applications is the removal of large amounts of liquid and particulate contaminants. In both cases the element can become overwhelmed, and the life and performance may be dramatically reduced. Large volumes of liquid can flood a coalescing element and high particulate loading can blind off an element.

A simple solution is a filter housing without the filter element, but rather a hollow stack. The stack causes a dramatic change in the airflow direction and acts as a baffle to knock out the vast majority of contaminants. The catchpot housings should be followed by a final filter to remove any residual condensation and particulate.

**All of our filter housings can be converted to "catchpots" for removing bulk contaminants. Simply add the suffix "CP" to any housing code for a catchpot version of the filter.**



# Inverted Housings

## Features

- No Connections to Break for Service
- Element Stands Vertical
- Ideal for Coalescing
- Compact Installation

## Applications

- Analyzer Protection
- Pre-Filter for our Guardian Membrane Separators
- Used in Sample Cabinets with Space Constraints

In many sample conditioning applications, space is limited, and maintenance is extremely critical for proper protection. Our inverted (IV) housings address both these issues by putting all line connections in the "head" of the unit. This allows for all the tubing to be placed in one plane within the panel, and makes maintenance (element service) easy since no lines need to be removed to replace the element. The inlet, outlet and drain ports are all in the head module, with the drain port being at the lowest point within the module to evacuate liquids quickly and eliminate entrainment. The element is kept in the correct vertical position to allow proper liquid drainage. Other head ported drain assemblies typically are horizontally mounted which does not drain as quickly and can lead to high downstream carry-over.

Pictured to the right are the inverted 127G and the GMS170 which also incorporates a membrane separator.

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



# Exotic Materials

## Features

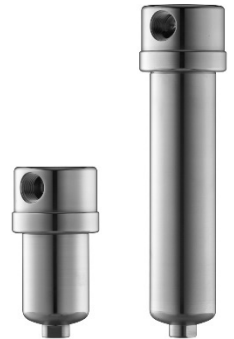
- Hastelloy
- Monel
- Inconel
- Titanium
- Duplex
- Other Materials Available Upon Request

## Applications

- Filter Gases and Liquids
- For Corrosive Service
- Material Test Reports Available

Regardless of your chemical compatibility needs, we can manufacture our product to meet them. Besides, 316L Stainless Steel and PTFE we produce housings in Hastelloy, Monel, Inconel, Titanium, Duplex, and more. Typical lead time is under six weeks, and we stock a few of the more common requests such as 126IL-3 in Hastelloy and Monel, and 112 and 122 in Hastelloy and Monel.

Filter Elements are also available in Hastelloy and Monel and are in stock for immediate delivery. Material Certifications for all items are available 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 H<sub>2</sub>S, Mercury, Ammonia, and Active Compound Sampling and Transfer.**

# Silconert® Treated Housings

## Features

- Creates an Inert Flow Paths for Better Sample Process Control
- Fast Accurate Results the First Time
- No Adsorption
- Fast Calibration

## Applications

- Analytical Sampling and Laboratory Applications
- Process Refinery and Sample Process Applications
- Reliable Flare and Stack Gas Sampling

Since stainless steel filters have a tremendous amount of adsorptive surface area the surface will adsorb or capture H<sub>2</sub>S, mercaptans, and other sulfur compounds; making analyzers like CEMS (continuous emission monitors) ineffective. Sulfur adsorption can hold up accurate CEMS measurements by up to 90 minutes or more.

SilcoNert® 2000 gives the ultimate passivation treatment for stainless steel surfaces. This is not a consideration with our disposable filter media as these offer an inert surface, however, the stainless steel filter elements must be considered for treatment with SilcoNert® to create a completely inert flow path. SilcoNert® technology ensures the treatment penetrates even the smallest pores in the surface of the filter housing, and stainless steel elements. This should be used when analyzing in the parts-per-billion levels of sulfur compounds & mercury. Contamination by moisture is also reduced and overall sample system performance is improved.

Any stainless steel filters supplied by United Filtration Systems/Headline Filters can be SilcoNert® 2000 treated with a estimated delivery of 2-3 weeks. We have many customers that request our H series of heatable housings for automotive emission testing be SilcoNert® coated for the above reasons, but also because the coating helps prevent galling and makes element removal easier. The SilcoNert® creates a "smooth" surface which eliminates element sticking do to the constant high temperature operations.



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

## Features

- 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

## Applications

- SAE Threads are Ideal When A Housing Needs to be Removed Repeatedly
- Tube Stubs Provide Simple, Clean, Leak Tight Installation
- Use of Flanges Provides Easy Access For Cleaning and Inspection

Our standard products are supplied with FNPT connections; however, we also offer optional SAE, Socket Weld (SW), Butt Weld (BW) and Flanged connections. Flanged options include: Raised Face (RF), Weld Neck (WN), Butt Weld (BW) as well as Socket Weld (SW) and Tube Stub (TS).

Many SAE products are in stock for immediate delivery and typically lead time for special connections is under three weeks.

Hydrostatic Testing is also available upon request.

