

HP Stainless Steel Filters

High pressure and low flow rate are suitable for applications such as laboratories and testing equipment

HP Stainless Steel Filters

HP stainless steel filter is designed for critical applications in high-efficiency gas and liquid filtration. Made of 316L stainless steel in accordance with relevant specifications, it is suitable for media with a maximum working pressure of 350 barg (5000 psig). Depending on different application requirements, HP stainless steel filter can be equipped with various filter elements such as metal sintered filter elements, borosilicate fiber filter elements, and PTFE filter elements. The filtration grades range from 0.01 μm to 100 μm .

Customized products can be provided according to customer needs.

Reliable solutions, cost-effective products, and comprehensive services are the core of our work.



Filter Model	Pipe Size	Flow Rate			Dimensions mm				Element size
	NPT	Nm ³ /h	L/min	SCFM	A	B	C	D	mm
HP-351-1232-[]	1/8	8.5	141	5	36	8	70	35	12 x 32
HP-351-1257-[]	1/8	12	198	7	40	10	88	60	12 x 57
HP-352-1257-[]	1/4	29	481	17	40	10	88	60	12 x 57
HP-354-2564-[]	1/2	60	991	35	65	15	103	70	25 x 64
HP-354-2178-[]	1/2	90	1500	53	65	15	250	180	25 x 178
HP-356-2178-[]	3/4	180	4500	159	65	20	255	180	25 x 178

Ordering:

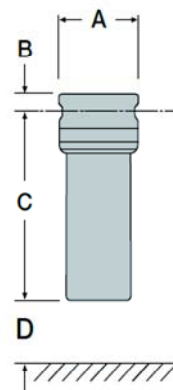
If a PTFE seal is required include suffix [F].

If a drain port is required include suffix [D].

If a PTFE seal and drain connection are both required include suffix [FD].

Filter cartridges sold separately.

Specification		
Model	HP-351,352,354,356	
Filter material	316L Stainless Steel	
Maximum operating pressure	350 barg(5000 psig)	
Seal material	Viton(standard)	PTFE(optional)
Temperature range	-40°C to 200°C(-40°F to 392°F)	-240°C to 260°C(-400°F to 500°F)
Drain connection	Optional	



Technical Notes

1 Flow rates are based on a 7 barg (100 psig), operating pressure. Use the conversion chart below to calculate rates at other pressures.

2 The drain connection size of HP-351 is 1/4" NPT. Other models are 1/4" NPT.

3 For coalescing, recommended direction of flow is from inside to out through the filter element.

For particulate removal, recommended direction of flow is from outside to in through the filter element.

Housing heads are marked with 'P' and 'C' to aid installation.

Flow Conversion													
For maximum flow rate multiply model 'flow rate' in the table by the correction factor closest to the actual working pressure													
Correction factor	barg	1	2	4	7	10	15	20	50	100	150	250	350
	psig	15	30	60	100	150	200	300	750	1500	2000	3500	5000
Operating pressure		0.2	0.3	0.75	1	1.2	1.5	1.7	2.5	3.5	4.5	6	7



Elements

MHP Elements

Stainless steel end caps, high-quality stainless steel double-layer support, high pressure difference, corrosion resistance, no deformation of the filter element. Stainless steel end caps, high-quality stainless steel double-layer support, high pressure difference, corrosion resistance, no deformation of the filter element. Filtration precision ranging from 0.01 μm to 25 μm is available for selection. It is suitable for dust removal and oil removal of various gases.



MFL Stainless Steel Elements

It adopts a five-layer sintered mesh integrated filter element, which is suitable for filtering solid and liquid pollutants from gases, and also suitable for filtering solid impurities from liquids. It is highly corrosion-resistant and can withstand high differential pressure. The filtration grade ranges from 5 μm to 100 μm . When used with PTFE gaskets, it is heat-resistant. It can be repeatedly washed and reused.

MSM Stainless Steel Pleated Elements

The filter element made of stainless steel wire mesh folds is suitable for filtering solid and liquid pollutants from gases, and also suitable for filtering solid impurities from liquids. It is highly corrosion-resistant and withstands high differential pressure. The filtration grade ranges from 5 μm to 100 μm . It provides better permeability for the medium and a smaller differential pressure.



ML Borosilicate Fiber Elements

This Element is a high-efficiency, self-supporting, fluorocarbon resin-bonded, borosilicate glass microfiber filter cartridge. It is suitable for gas and liquid applications. The ML filter element utilizes a two-layer filtration structure to coalesce liquid particles. The inner layer serves as the primary filtration layer, while the coarser outer layer acts as a drainage layer. Typical applications include two-phase separation, such as separating oil mist from air (or gas), separating oil from water, and separating water from oil.

MT Borosilicate Fiber Elements

This Element is a high-performance, self-supporting, fluorocarbon resin-bonded, borosilicate glass microfiber filter cartridge, suitable for industrial, medical and instrumentation applications using air, gas or liquid. This Element can be used for filtration under high pressure, low pressure and vacuum conditions, with a maximum operating temperature of up to 150°C. The filtration efficiency of gas at 0.3 μm is up to 99.9998%.



MSP Powder Sintered Metal Film Element

MSP uses metal powder as raw material, without the need for binders. After axial pressing and forming, it is sintered in a vacuum. By adjusting the particle size of the powder and process parameters, the pore size and distribution can be adjusted to form different precisions. MSP filter elements have very high pressure difference resistance strength, and are resistant to high temperature, corrosion, impact and alternating loads.

Operation and Use Instructions

Cautions

Filters are pressure vessels and must not exceed the maximum working pressure and temperature during use. Ensure that the pipeline connection is reliable and equipped with pressure and temperature alarms, and if possible, provide pressure safety valves. Please note that the pressure resistance of the pipeline decreases with increasing temperature. Users should ensure that the materials of the housing, the sealing ring, and the filter element are suitable for the application to be used. Before each trial use, the surface of the filter should be visually inspected for any damage or corrosion. If you have these issues, please do not continue to use it. Filters cannot be applied to unsuitable fluids. High precision filter cartridges are only suitable for use at gas points or further purification filtration, and require protection from a pre filter. High precision filter cartridges are not suitable for continuously filtering large amounts of polluted gases. Monitoring the service life of filter elements is crucial for proper filtration function.

Installation

The filter is a pressure vessel, and all connection ports must be reliably connected to prevent leakage. We recommend using installation sealing materials, which will make it easier to disassemble next time. As long as it is suitable for the medium, such as PTFE tape, adhesive, or other materials can be used. Please use the appropriate torque to install the filter, otherwise it may cause thread damage. Before installation, please confirm that the threads are not damaged.

T-filter

Filtering solid particles from dry gas

If the filter is used to filter solid particles from gas or liquid, the medium flow direction should be "outside to inside" through the filter element. Most housings are marked with arrows indicating the flow direction. If marked with letters, then enter from port P and exit from port C.

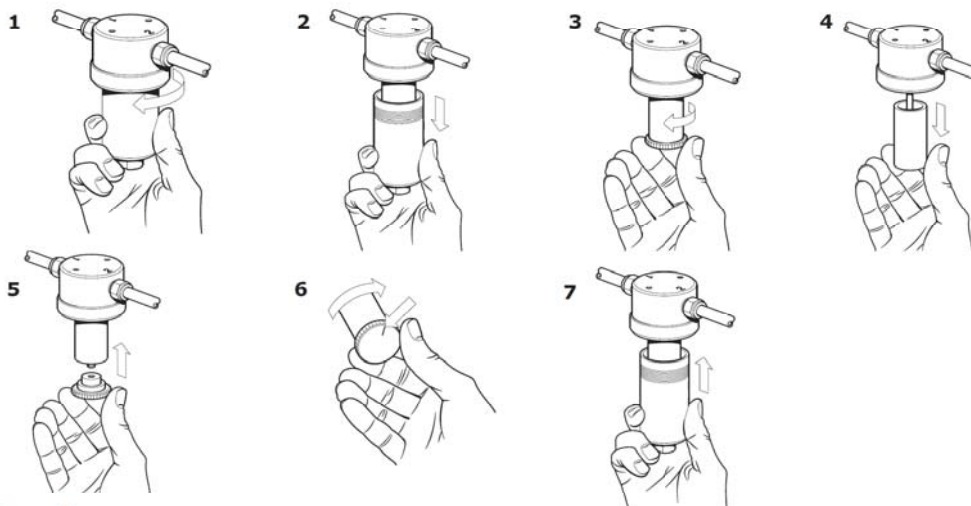
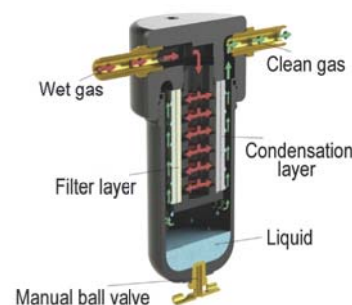
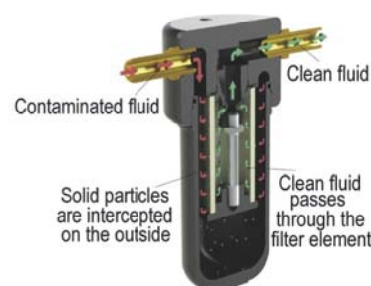
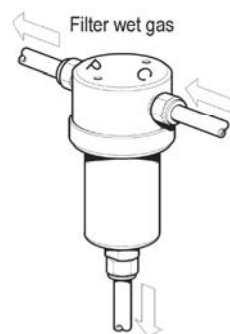
Filtering particles and liquids from wet gas

If it is coalescing filtration (removing liquid from gas), the medium flow direction is from "inside to outside" of the filter element. The liquid will condense in the filter element and drain through the outer layer of the filter element and accumulate at the bottom of the housing for easy discharge from the system. Liquid can be discharged automatically or manually. If indicated by letters, then the liquid enters from port C and exits from port P.

When installing the filter housing and filter element, the original pairing should be kept as far as possible, and the appropriate mounting bracket should be selected to avoid stress and vibration.

Replace the filter element

Ensure there is no pressure inside the filter. Disassemble the lower housing and filter element mounting plate of the filter. Before installing the lower housing, make sure that the threads are clean and undamaged. It is recommended to apply silicone grease to the threads and sealing surfaces. If a PTFE gasket is used for the stainless steel housing, tighten it with the appropriate torque.



Service guide

The initial differential pressure of our coalescing filter element is 2 psig. The differential pressure will increase slowly as the filter element captures solid particles and droplets. Solid particles are retained in the depth filtration layer and cannot be backblown or cleaned. It is recommended to replace the filter element when the differential pressure reaches 10 psig. A differential pressure gauge can be installed to monitor the service life of the filter element. To ensure filtration efficiency and normal system operation, it is necessary to replace the filter element frequently. Make sure to replace the sealing rings and gaskets regularly to prevent leakage from the housing and the filter element.