

OIL STRAINERS

The function of an Oil Strainer is to remove system debris from the refrigerant oil. Their purpose is to protect compressors and oil level regulators from damage.

Applications

The Henry Technologies S-91 series oil strainers can be used in both Low and High Pressure Oil Management Systems. The strainers are suitable for HCFC and HFC refrigerants, along with their associated oils.

Although the strainer is compatible with HFC/POE refrigerant/oil combinations, Henry Technologies recommends the use of an oil filter or oil filter-drier. This is due to the scavenging nature of POE oil.

Greater system protection will be achieved using a filter or filter-drier element than with a mesh strainer.

Typically, a strainer is fitted immediately upstream of a mechanical oil level regulator in order to protect the float needle valve from debris. This in turn protects the compressor from damage.

Main features

- Large screen area ensuring maximum capacity and long service
- Low pressure drop
- Stainless steel screen
- SAE or ODS connections available

Technical Specification

Allowable operating pressure = 0 to 34.5 barg

Allowable operating temperature = -10°C to +120°C

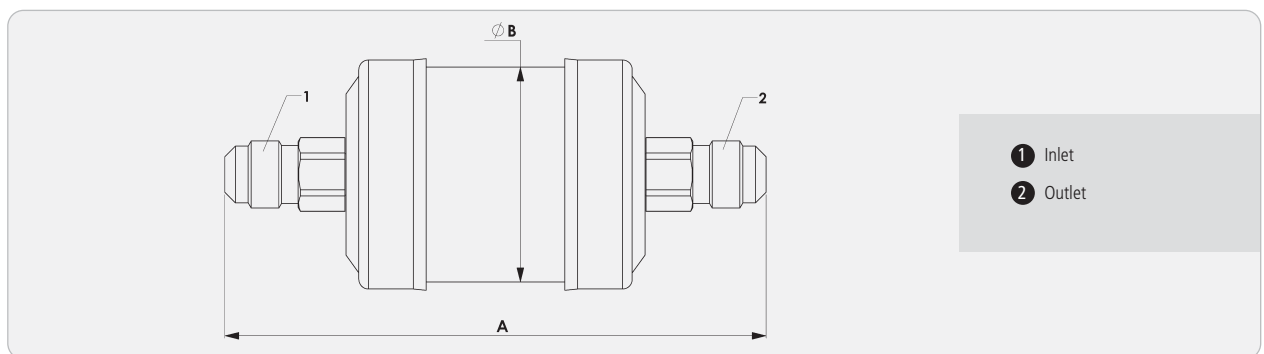
Screen = 100 mesh, 71 cm² filter area

Materials of Construction

The main body and connections are made from carbon steel. The mesh screen is made from stainless steel.



Part No	Conn Size (inch)		Dimensions (mm)		Screen Data		Weight (kg)	CE Cat
	Inlet	Outlet	A	Ø B	Area (mm ²)	Mesh		
S-9105	3/8 SAE Flare	3/8 SAE Flare	129	51	7095	100	0.37	SEP
S-9105X	3/8 ODS	3/8 ODS	103	51	7095	100	0.33	SEP



Installation – Main issues

1. The oil strainer must be installed in accordance with the flow direction arrow.
2. It is recommended to install valves on either side of the unit to ease replacement, in the event that the mesh screen becomes blocked.

OIL FILTERS AND OIL FILTER-DRIERS

The function of an Oil Filter is to remove system debris from the refrigerant oil. The function of an Oil Filter-Drier is to remove both system debris and moisture from the refrigerant oil. Their purpose is to protect compressors and oil level regulators from damage.

Applications

The Henry Technologies S-4004 oil filter and S-4005 oil filter-drier can be used in both Low and High Pressure Oil Management Systems.

Models are suitable for HCFC and HFC refrigerants along with their associated oils.

The unique drying features of the S-4005 model are particularly suited for systems using POE oil. This type of oil is more hygroscopic than mineral oil. This means that POE oil absorbs moisture at a much higher rate. Moisture in a refrigeration system can produce problems and/or harmful conditions.

One S-4004 or S-4005 model can be fitted in the oil return line between the oil separator and oil reservoir, instead of fitting one oil strainer per oil level regulator. These models will also remove more debris than traditional oil strainers.

Main Features

S-4004 model

- High flow capacity with low pressure drop
- Large filter area
- Micronic filtration
- Eliminates the need to fit individual oil return line strainers

S-4005 and SH-4005 models

- High flow capacity with low pressure drop
- Large filter area
- Micronic filtration
- High level of drying
- Eliminates the need to fit individual oil return line strainers

Technical Specification

S-4004 model

Allowable operating pressure = 0 to 31 barg

Allowable operating temperature = -10°C to +100°C

Filter surface area = 3065 cm²

Filter particle retention = 10 micron

S-4005 model

Allowable operating pressure = 0 to 31 barg

Allowable operating temperature = -10°C to +100°C

Filter surface area = 3000 cm²

Filter particle retention = 6 micron

Drier = 131cm³ of XH9 desiccant

SH-4005 model

Same as S-4005, except

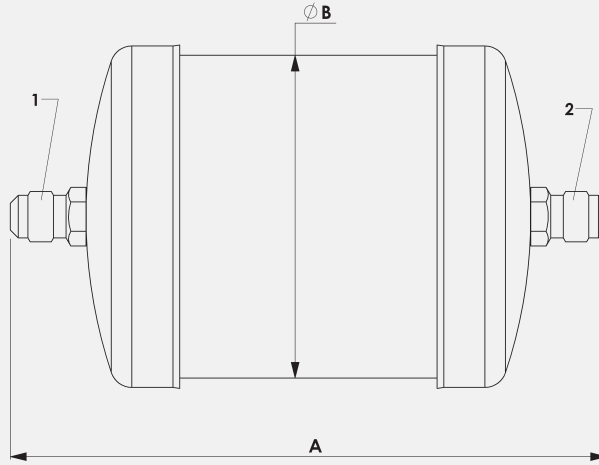
Allowable operating pressure = 0 to 40 barg



Installation – Main issues

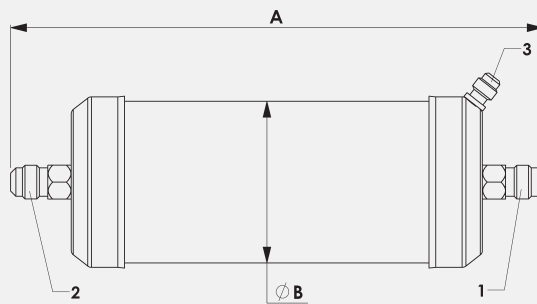
1. The oil filter or filter-drier must be installed in accordance with the flow direction arrow.
2. Units should be replaced after a 1 barg (15 psig) pressure drop has been detected. Pressure drop can be detected by fitting Schrader valves before and after the unit. It is recommended to install valves on either side of the unit to ease replacement, in the event that the filter becomes blocked.
3. For low pressure oil management systems, oil filters and filter-driers should be located between the oil separator and oil reservoir, not between the oil reservoir and the oil regulator.

Part No	Conn Size (inch)		Dimensions (mm)		Weight (kg)	MWP (barg)	CE Cat
	Inlet	Outlet	A	Ø B			
S-4004	3/8 SAE Flare	3/8 SAE Flare	188	102	1.93	31	SEP



S-4004 OIL FILTER

- ① Inlet
- ② Outlet
- ③ Schrader valve (S-4005 model only)



S-4005/SH-4005 OIL FILTER-DRIER

Part No	Conn Size (inch)		Dimensions (mm)		Weight (kg)	MWP (barg)	CE Cat
	Inlet	Outlet	A	Ø B			
S-4005	3/8 SAE Flare	3/8 SAE Flare	251	76	1.55	31	SEP
SH-4005	3/8 SAE Flare	3/8 SAE Flare	251	76	1.55	40	SEP