

OIL RESERVOIRS

The function of an Oil Reservoir is to provide a holding charge of oil, as part of a Low Pressure Oil Management System. The amount of oil circulating in a system varies depending on the operating conditions. The oil reservoir caters for these fluctuations by providing additional storage capacity.

Rotalock valves are supplied with each reservoir to facilitate easy oil fill and drain. A connection is provided at the top of the unit for fitting a pressure vent valve. Models are provided with either two or three sight glasses for visual indication of oil level.

Applications

The standard range of reservoirs is suitable for HCFC and HFC refrigerants, along with their associated oils. The SH range, with a higher MWP, is also suitable for sub-critical CO₂ applications.

Main Features

- Three sizes available in both standard and high pressure ranges
- Robust construction
- All models supplied with Rotalock valves
- Sight glass with floating ball
- Double seal on sight glass for leak integrity: thread sealant and O-ring
- Premium quality O-ring seals
- Standard models supplied with mounting brackets
- Mounting brackets available on request for high pressure range

Technical Specification

For standard models:

Allowable operating pressure = 0 to 31 barg

Allowable operating temperature = -10°C to +130°C

For SH models:

Allowable operating pressure = 0 to 40 barg

Allowable operating temperature = -10°C to +110°C

Materials of Construction

The shell, end caps and fitting connections are made from carbon steel.



Selection Guidelines

Both ranges of Henry Technologies reservoirs include three different oil holding capacities of approximately 7.5, 11.5 and 15 litres.

The required holding capacity is dependent on a number of system design factors such as oil return piping practice, compressor type, number of compressors, compressor run times, etc.

For single stage parallel systems, a simple selection guide can be used. For other systems, please contact Henry Technologies. The selection guide uses total compressor theoretical displacement, V_h , as an indicator of required oil reservoir capacity.

Example:-

8 compressors each with a theoretical displacement of 17 m³/hr.

Therefore V_h (total) = 136 m³/hr.

The selected model is S-9109-CE, with a V_h rating of up to 150 m³/hr.

Refer to selection table.

Note: It is known that some users select oil reservoir capacity using different rules from the above or from field experience. The method presented above is for guidance purposes only. If in doubt, select a larger capacity reservoir.

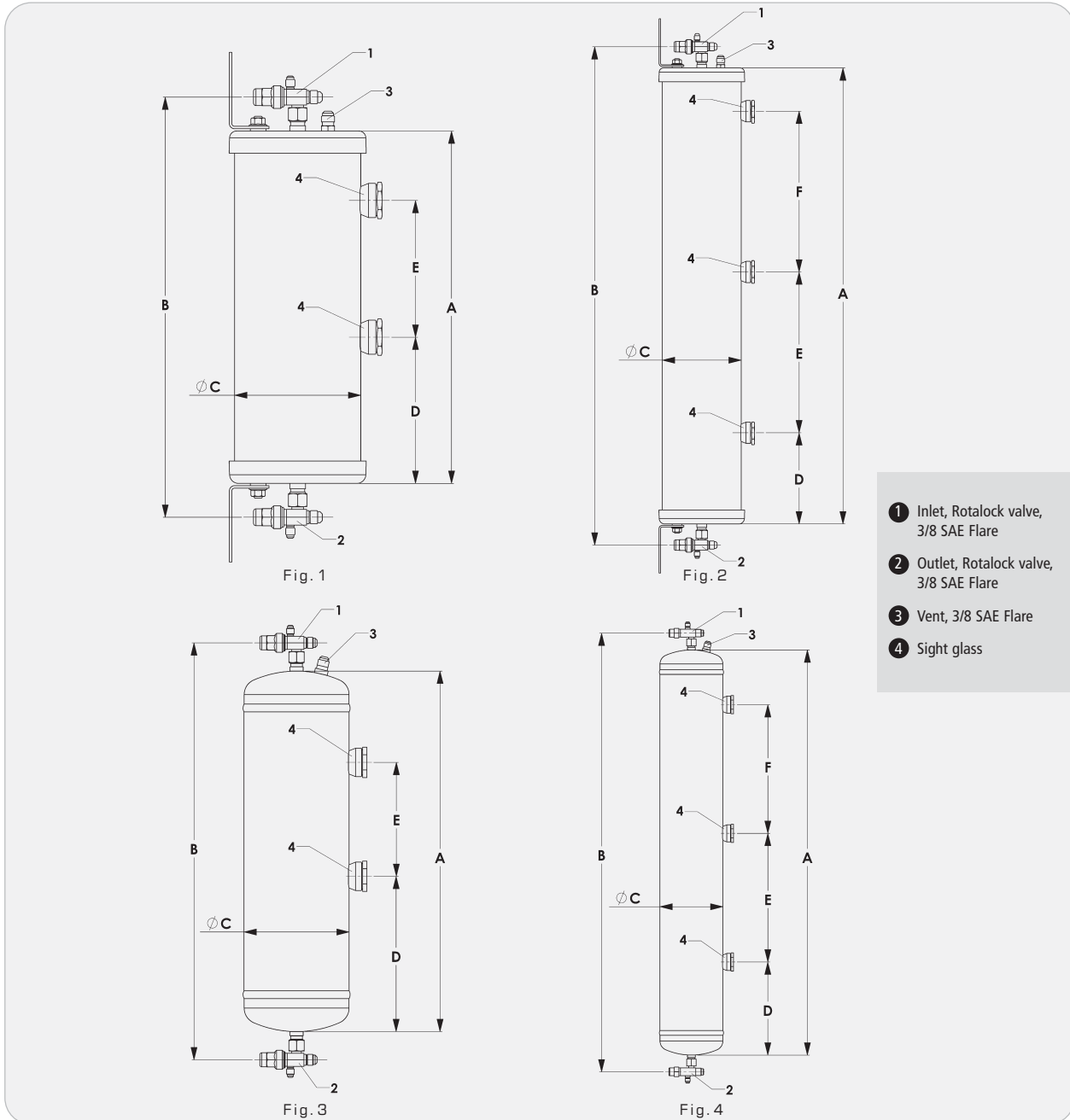
Installation – Main issues

1. Full instructions are given in the Product Instruction Sheet, included with each reservoir.

OIL RESERVOIR CAPACITY TABLE

Part No	Reservoir capacity within dimension shown (litres)			
	D	E	F	A
S-9109-CE	2.8	2.8	N/A	6.9
S-9108U-CE	2.8	6.6	N/A	10.7
S-9108-CE	2.8	5.2	5.2	14.5
SH-9109-CE	3.5	2.8	N/A	8.2
SH-9108U-CE	3.5	6.6	N/A	12
SH-9108-CE	3.5	5.2	5.2	15.8

Part No	Dimensions (mm)						Drawing reference	Weight (kg)	MWP (barg)	CE Cat
	A	B	C	D	E	F				
S-9109-CE	426	507	152	177	165	N/A	fig.1	9	31	Cat II
S-9108U-CE	654	736	152	177	394	N/A	fig.1	12.5	31	Cat II
S-9108-CE	883	965	152	177	311	311	fig.2	15	31	Cat II
SH-9109-CE	522	604	152	225	165	N/A	fig.3	9	40	Cat II
SH-9108U-CE	751	832	152	225	394	N/A	fig.3	12.5	40	Cat II
SH-9108-CE	980	1061	152	225	311	311	fig.4	15	40	Cat II



OIL RESERVOIR SELECTION TABLE		
Part No	Capacity (litres)	V _h , total (m ³ /hr)
S-9109-CE	6.9	up to 150
S-9108U-CE	10.7	150-300
S-9108-CE	14.5	300-400
SH-9109-CE	8.2	up to 150
SH-9108U-CE	12	150-300
SH-9108-CE	15.8	300-400

Note: V_h = Summation of the theoretical displacment for all compressors in system