HENRY
TECHNOLOGIES

Suction Accumulators

The SA Series

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SUCTION LINE ACCUMULATORS
SA Series, Vertical, UL

The main purpose of a Suction Line Accumulator is to prevent a sudden surge of liquid refrigerant or oil form returning down the suction line and into a compressor. The suction line accumulator is a temporary reservoir for liquid refrigerant and oil.

The accumulator is designed to meter both the liquid refrigerant and oil back to the compressor at a controlled rate. This prevents compressor damage. By metering the liquid refrigerant and oil back to the compressor, the accumulator also helps maintain system efficiency and proper crankcase oil levels.

Applications

Suction Line Accumulators are installed in air conditioning and refrigeration systems where a sudden return of liquid down the suction line is possible.

Henry Technologies' SA Series Suction Line Accumulators are suitable for use with HFC and HCFC refrigerants and their associated oils, as well as other industrial fluids non-corrosive to steel and copper.

Main Features

- ODS connections
- Prevents liquid slugging
- Controlled liquid return and oil return
- Large flow capacity
- Low pressure drop
- Screen protected orifice
- Solid copper connections
- Powder-coated finish
- Cost effective

How it Works

Refrigerant vapor from the evaporator enters the Suction Line Accumulator, along with any liquid refrigerant and oil. The liquid is held at the bottom of the Accumulator until it is metered back to the compressor. A U-Tube is connected to the outlet of the Accumulator to ensure vapor is returned to the compressor. On Vertical Accumulators, liquid is metered back to the compressor via a screened orifice at the bottom of the U-Tube. This metering only occurs when the compressor is running.

Technical Specifications

Maximum working pressure = 450 PSI (31 Bar)
Allowable operating temperature = -22°F to +122°F (-30°C to +50°C)

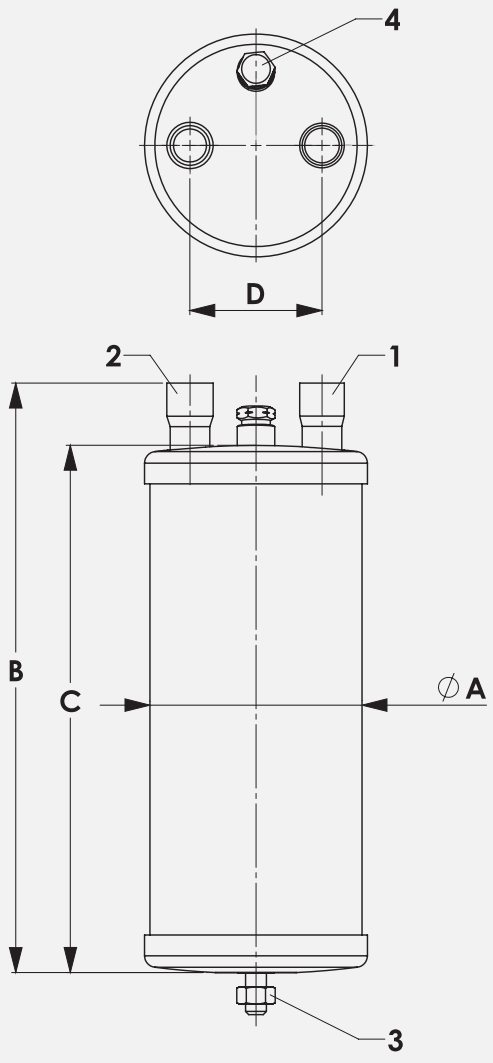
Henry Technologies' Suction Line Accumulators are UL and C-UL Listed by Underwriters Laboratories, Inc.

Materials of Construction

The shell and end caps are made from carbon steel. Branch connections are made from copper.

Part No	ODS (inch)	Dimensions (inch)				CE Cat*	Weight (lbs)
		ØA	B	C	D		
SA-7044	1/2	4.00	6.42	5.43	2.50	SEP	4.41
SA-7045S	5/8	4.00	6.58	5.43	2.50	SEP	4.41
SA-7045	5/8	4.00	10.95	9.80	2.50	Cat I	6.39
SA-7046	3/4	4.00	11.06	9.80	2.50	Cat I	6.39
SA-7056	3/4	5.00	9.92	8.74	2.76	Cat I	7.94
SA-7057S	7/8	5.00	10.08	8.74	2.76	Cat I	7.94
SA-7057	7/8	5.00	14.88	13.54	2.76	Cat I	11.24
SA-7051	1 1/8	5.00	18.74	17.24	2.76	Cat I	13.89
SA-7053	1 3/8	5.00	18.86	17.24	2.95	Cat I	13.89
SA-7065	1 5/8	6.00	26.69	24.92	2.95	Cat II	28.66

❶ Inlet
❷ Outlet
❸ M10 stud & nut
❹ Relief connections, 1/4 FPT



Selection Guidelines

Selection of a Suction Line Accumulator should be made based on three capabilities.

1. The Accumulator should have adequate liquid holding capacity. Normally this should not be less than 50% of the total system charge.
2. The Accumulator should be selected in order to avoid excessive pressure drop in the system.
3. The Accumulator should have the capability of returning liquid at the proper rate under a range of load conditions. The listed minimum tonnage ratings ensure sufficient flow for proper liquid refrigerant and oil return.

Additional Selection Information

Two accumulators can be piped in series to increase holding capacity. Oil will be metered from one accumulator to the next to ensure proper oil flow to the compressors. Adding a second identical accumulator will effectively double the holding capacity of a single accumulator.

Piping two identical accumulators in parallel will double the tonnage capacity. Two identical accumulators must be used.

On low temperature systems (0°F and below) a heater band should be installed to help boil off the liquid refrigerant and aid oil flow. Do not add too much heat or there is a risk of overheating the compressors.

Installation - Notes

1. Install the Accumulator after the Suction Line Filter-Drier.
2. An integral Fusible Rivet is included to protect the Accumulator from over-pressure due to excessive heat. Replace the Receiver immediately if the stamped temperature rating is exceeded.
3. For low temperature applications heat bands should be installed at the bottom of the Vertical Accumulator.
4. Accumulators may be insulated to prevent condensation or frost on the outside of the shell.
5. Full instructions are given in the Product Instruction Sheet, included with each unit.

Part No	Refrigerant Holding Capacity (lbs at 0°F sat).				Recommended Tonnage Rating at Suction Evaporating Temperature (°F)															
					R134a					R22					R404A/R507					
	R134a	R22	R404A/R507		+40°	+20°	0°	-20°	-40°	+40°	+20°	0°	-20°	-40°	+40°	+20°	0°	-20°	-40°
SA-7044	2.2	2.2	2.0	Max	0.7	0.4	0.3	0.2	0.2	1.0	0.7	0.5	0.3	0.2	1.1	0.7	0.5	0.3	0.2
				Min	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.03
SA-7045S	2.2	2.2	2.0	Max	1.4	0.8	0.5	0.3	0.2	1.9	1.3	0.9	0.6	0.4	2.1	1.4	0.9	0.6	0.3
				Min	0.3	0.2	0.1	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.5	0.3	0.2	0.1	0.1
SA-7045	4.6	4.6	4.2	Max	1.4	0.8	0.5	0.3	0.2	1.9	1.3	0.9	0.6	0.4	2.1	1.4	0.9	0.6	0.3
				Min	0.3	0.2	0.1	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.5	0.3	0.2	0.1	0.1
SA-7046	4.6	4.6	4.2	Max	1.9	1.1	0.7	0.4	0.2	2.7	1.8	1.2	0.8	0.5	2.9	1.9	1.2	0.8	0.5
				Min	0.4	0.2	0.2	0.1	0.1	0.6	0.4	0.3	0.2	0.1	0.6	0.4	0.3	0.2	0.1
SA-7056	6.2	6.1	5.5	Max	1.3	0.9	0.6	0.4	0.2	4.1	2.8	1.8	1.1	0.7	2.5	1.7	1.1	0.7	0.4
				Min	0.3	0.2	0.2	0.1	0.1	0.9	0.6	0.4	0.3	0.1	0.4	0.3	0.2	0.2	0.1
SA-7057S	6.0	5.9	5.3	Max	3.2	1.9	1.2	0.7	0.4	4.5	3.1	2.1	1.3	0.8	4.8	3.2	2.1	1.3	0.8
				Min	0.6	0.4	0.2	0.1	0.1	0.9	0.6	0.4	0.3	0.2	0.9	0.6	0.4	0.3	0.2
SA-7057	10.1	10.0	9.0	Max	3.2	1.9	1.2	0.7	0.4	4.5	3.1	2.1	1.3	0.8	4.8	3.2	2.1	1.3	0.8
				Min	0.6	0.4	0.2	0.1	0.1	0.9	0.6	0.4	0.3	0.2	0.9	0.6	0.4	0.3	0.2
SA-7051	13.5	13.3	11.9	Max	4.6	3.2	2.1	1.4	0.8	14.2	9.5	6.3	3.9	2.3	8.9	6.2	3.8	2.4	1.5
				Min	0.6	0.5	0.4	0.3	0.3	2.1	1.4	0.9	0.6	0.3	0.8	0.7	0.6	0.5	0.3
SA-7053	13.5	13.3	11.9	Max	7.9	5.4	3.4	2.2	1.3	23.4	15.7	10.4	6.5	3.8	15.3	10.2	6.2	3.9	2.4
				Min	1.3	1.1	0.9	0.7	0.6	4.5	3.0	2.0	1.3	0.7	1.7	1.4	1.1	0.9	0.7
SA-7065	28.9	28.4	25.4	Max	19.3	11.3	7.0	4.2	2.4	27.2	18.8	12.4	7.9	4.8	29.1	19.1	12.4	7.7	4.6
				Min	3.7	2.1	1.3	0.8	0.5	5.1	3.6	2.4	1.5	0.9	5.5	3.6	2.4	1.5	0.9

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