

# CHECK VALVES

## MAGNI-CHEK

The function of a Check Valve is to allow fluid flow in one direction only.

### Applications

Henry Technologies' Magni-Chek Valves are used in discharge lines to prevent flow from the Condenser to the Compressor during the "off" cycle, or to prevent flow from an operating Compressor to one that is idle. They are also used in liquid lines to prevent reverse flow through the unused expansion device on heat pump systems, or to prevent backup into the low pressure liquid line of a recirculating system during a defrost period. Henry Technologies' Magni-Chek Valves are suitable for use with HFC and HCFC refrigerants and their associated oils, as well as other industrial fluids non-corrosive to copper, brass, steel, and aluminum.

### Main Features

- Designed for maximum flow and minimal pressure drop
- ODS connections
- Negligible loss in system efficiency
- Hermetically sealed copper body
- Stable platform with no chance of a leak
- Efficient sealing with a negligible leak rate
- Able to be installed in any position
- Built in 30 mesh strainer to remove debris from the system and extend the valve service life
- Suitable for a wide range of applications

### Technical Specifications

Maximum working pressure = 650 to 800 PSI (45 Bar to 55 Bar)

See table below

Allowable operating temperature = -20°F to +250°F (-29°C to +121°C)

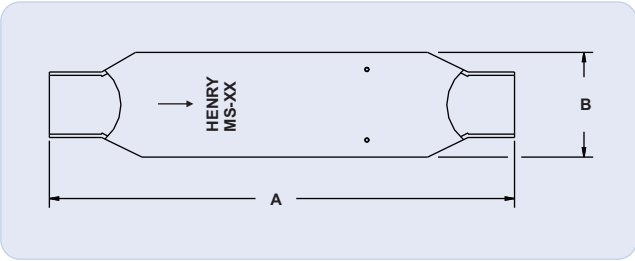
Magni-chek Valves are USR and CNR recognized by Underwriters Laboratories, Inc.

Valves 1-3/8 ODS and larger are CE marked in accordance with PED.



### Materials of Construction

The valve body is made from solid copper. The seat is made from brass. The retainer is made from aluminum. The flapper and screen are made from stainless steel.



Part No	Description	MWP (PSI)	ODS (inch)	Dimensions (inch)		Capacity - Suction Kw			Capacity - Liquid Kw		
				A	B	R22	R134a	R404A	R22	R134a	R404A
F6306	MS-4	800	1/4	4.00	7/8	1.10	0.80	0.90	9.50	8.80	6.80
F6307	MS-6	800	3/8	4.00	7/8	2.20	1.60	2.00	19.90	18.30	14.20
F6308	MS-8	700	1/2	5.00	1 1/8	6.00	4.40	5.30	53.80	49.40	38.20
F6309	MS-10	700	5/8	5.00	1 1/8	6.70	4.90	5.90	60.00	55.10	42.60
F6310	MS-12	700	3/4	7.00	1 5/8	12.50	9.20	11.00	112.20	103.10	79.70
F6311	MS-14	700	7/8	7.00	1 5/8	17.00	12.50	15.00	152.80	140.40	108.50
F6312	MS-18	700	1 1/8	8.38	2 1/8	29.60	21.70	26.10	265.90	244.30	188.80
F6313	MS-22	700	1 3/8	9.38	2 5/8	36.50	26.80	32.20	327.90	301.30	232.50
F6314	MS-26	700	1 5/8	10.50	3 1/8	62.30	45.80	54.90	560.10	514.60	397.70
F6315	MS-34	700	2 1/8	12.00	3 5/8	108.20	79.50	95.50	973.30	894.30	691.10
F6316	MS-42	650	2 5/8	13.00	4 1/8	145.20	106.70	128.10	1,305.90	1,200.00	927.30
F6085	MS-50	650	3 1/8	13.00	4 1/8	145.20	106.70	128.10	1,305.90	1,200.00	927.30

# CHECK VALVES

## Straight Through Design

The function of a Check Valve is to allow fluid flow in one direction only.

### Applications

Henry Technologies' Check Valves are suitable for use with HCFC and HFC refrigerants and their associated oils, as well as other industrial fluids non-corrosive to brass, steel, copper, Teflon and synthetic rubber.

A typical application is to install a Check Valve downstream of an Oil Separator. This prevents condensed liquid refrigerant returning down the Discharge Line and into the Separator.

The 119 and 120 series Check Valves are not suitable for discharge lines of reciprocating compressors.

### Main Features

- Robust design
- Flow direction arrow
- Quiet and efficient operation
- Minimal opening pressure
- Copper extensions on 120 series

### Technical Specifications

Maximum working pressure = 500 PSI (34.5 Bar)

Allowable operating temperature = -20°F to +200°F (-29°C to +93°C)

Using the standard spring, Henry Technologies' Check Valves will start to open at 0.5 PSI and be fully open at 5 PSI pressure differential. Contact Technical Support at 1(800) 627-5148 for alternative spring options.

Series 119 and 120 Check Valves are USR and CNR recognized by Underwriters Laboratories, Inc.

### Materials of Construction

The valve body and piston are made from brass. The spring is made from stainless steel. The seat is made from neoprene. The extensions on the 120 series are made from copper.



### Installation - Notes

1. Valves must be installed in accordance with the flow direction arrow.
2. The valve bodies and valve internals of series 120 valves must be protected against damage during brazing. Series 120 valves should not be disassembled for brazing. Full instructions are given in the Product Instruction Sheet, included with each valve.
3. Discharge Check Valves should be positioned as far from the compressor as possible.

- ① Inlet Flare
- ② Outlet Flare

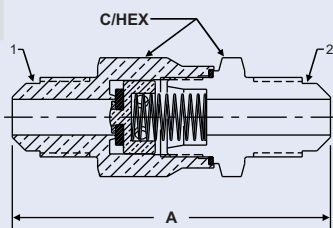


FIG 1

- ① Inlet ODS
- ② Outlet ODS

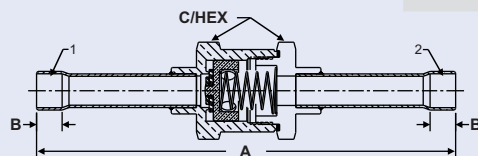


FIG 2

Part No	Fig No	Conn Size (inch)	Dimensions (inch)			Cv	Weight (lbs)
			A	B	C/HEX		
119-1/4	1	1/4 SAE Flare	2.26	-	13/16	0.44	0.22
119-3/8	1	3/8 SAE Flare	2.51	-	13/16	0.94	0.26
119-1/2	1	1/2 SAE Flare	3.00	-	1-1/4	2.80	0.28
120-3/8	2	3/8 ODS	6.04	0.31	13/16	0.85	0.28
120-1/2	2	1/2 ODS	6.23	0.38	1-1/4	1.99	0.57
120-5/8	2	5/8 ODS	6.41	0.50	1-1/4	3.05	0.64
120-7/8	2	7/8 ODS	7.44	0.75	1-1/2	5.80	1.06

# CHECK VALVES

## Globe Design

The function of a Check Valve is to allow fluid flow in one direction only.

### Applications

A typical application is to install a Check Valve downstream of an Oil Separator. This prevents condensed liquid refrigerant from returning down the discharge line and into the Separator. Henry Technologies' Check Valves are suitable for use with HCFC and HFC refrigerants and their associated oils, as well as other industrial fluids non-corrosive to brass, steel, copper, Teflon and synthetic rubber.

### Main Features

- Robust design
- ODS connections
- Flow direction arrow
- Quiet and efficient operation
- Minimal opening pressure

### Technical Specifications

Maximum working pressure = 500 PSI (34.5 Bar)

Allowable operating temperature = -20°F to +300°F (-29°C to +149°C)

Typically, Henry Technologies' Check Valves will start to open at 0.5 PSI and be fully open at 5 PSI pressure differential.

Series 116 and 205 Check Valves are USR and CNR recognized by Underwriters Laboratories, Inc.

### Materials of Construction

The valve body on the 116 series is made from brass and the valve body on the 205 series is made from cast bronze. The piston is made from brass. The spring is made from stainless steel. The seat is made from PTFE.



- 1 Inlet ODS
- 2 Outlet ODS

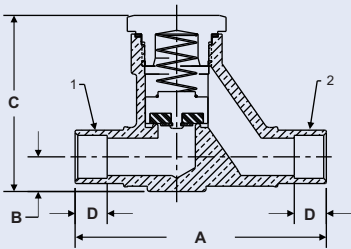


FIG 1

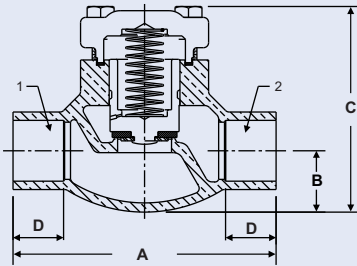


FIG 2

Part No	Fig No	ODS (inch)	Dimensions (inch)				Cv	Weight (lbs)
			A	B	C	D		
116003	1	3/8	2.94	0.41	2.06	0.31	1.5	0.53
116004	1	1/2	2.94	0.41	2.06	0.38	3.1	0.51
116005	1	5/8	2.94	0.41	2.06	0.50	3.9	0.48
116007	1	7/8	3.88	0.63	3.15	0.88	8.3	2.04
205-7/8	2	7/8	4.25	0.97	3.16	0.75	5.2	2.73
205-1-1/8	2	1 1/8	4.88	1.16	3.85	0.94	7.2	4.41
205-1-3/8	2	1 3/8	5.38	1.25	4.25	1.00	10.1	6.04
205-1-5/8	2	1 5/8	6.50	1.50	5.08	1.13	13.0	9.32
205-2-1/8	2	2 1/8	8.50	2.00	6.17	1.50	21.5	17.10
205-2-5/8	2	2 5/8	11.00	2.25	7.20	1.69	35.7	27.43

### Installation - Notes

1. Valves must be installed in accordance with the flow direction arrow.
2. The valve bodies and valve internals must be protected against damage during brazing. Piston must be removed for brazing. Full instructions are given in the Product Instruction Sheet, included with each valve.

3. Series 116 valves can be installed in any position except bonnet down. Series 205 valves sizes 7/8" - 1-3/8" can be installed in any position except bonnet down, however, 205 valves sizes 1-3/8" - 2-5/8" MUST be installed with bonnet positioned upwards. For all models, the recommended bonnet position is upwards.
4. Discharge Check Valves should be positioned as far from the compressor as possible.