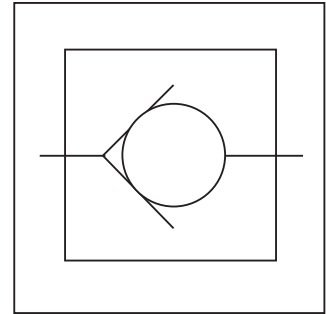
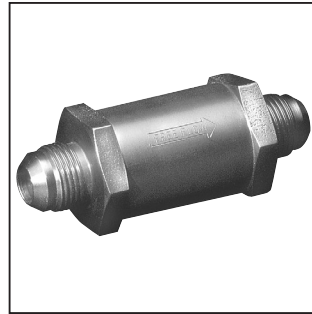


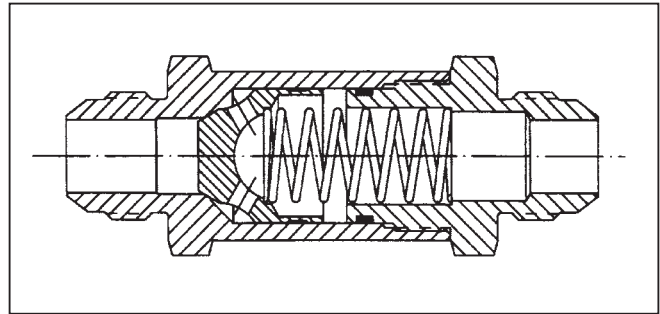
General Description

Series 440 and 450 high pressure check valves permit free flow in one direction, and shut off in the reverse direction with an extremely low internal leakage. These valves are ruggedly built for systems with high shock and high velocity, and will close smoothly.



Features

- High-pressure check valves.
- Poppet 440F stainless steel.
- For high-shock service.
- AN and MS valves are qualified to military specifications MIL-V-5524 and MIL-V-19069.



Specifications

Service App.	Hydraulic	Mounting	In-line
Maximum Operating Pressure	Working: Aluminum alloy 207 Bar (3000 PSI) Steel and Stainless Steel 345 Bar (5000 PSI) Proof: Aluminum alloy 345 Bar (4500 PSI) Steel and Stainless Steel 517.5 Bar (7500 PSI)	Ports	NPT: Pipe threads FLD: Flared tube connection SAE 30° MS33656 FLS: Flareless tube connection MS33514 IST: Internal straight threads per MS33649
Nominal Cracking Pressure	0.4 Bar (6 PSI), ± 0.14 Bar (2 PSI), or 4.5 Bar (65 PSI), ± 0.4 Bar (6 PSI) Below 0.4 Bar (6 PSI), ±33% 0.4 - 1.4 Bar (6 - 20 PSI), ± 0.14 Bar (2 PSI) Above 1.4 Bar (20 PSI) ±10% Other settings available to order	Material	Body & Cap: Aluminum alloy, steel or 303 Stainless steel Poppet: Hardened 440F Stainless Steel Tube: Steel and aluminum valves: aluminum alloy Stainless steel valves: 316 Stainless steel Spring: 302 Stainless Steel Finish: Aluminum alloy, anodized; steel, cadmium plated; stainless steel O-ring: Synthetic rubber. Aluminum and stainless steel valves, sizes 4 - 16, when furnished to MS28765, MS28771, MS28890 and MS28892 only, O-rings are Code 27 (MIL-P-25732) Back-up rings: PTFE
Operating Temperature	-40°C to +121°C (-40°F to +250°F) Higher on special order		
Internal Leakage	1 drop in 2 minutes		
Sizes	NPT: 1/8", 1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" FLD, FLS: 4", 6", 8", 10", 12", 16", 20", 24", 32"		

Valve Tube	Size Pipe	Weights, Maximum (Approx.)		CV Factors	
		Aluminum Alloy	Steel & Stainless Steel	440 Series	450 Series
4	1/8	0.03 kg (0.06 lbs.)	0.06 kg (0.13 lbs.)	.06	0.84
6	1/4	0.06 kg (0.13 lbs.)	0.12 kg (0.25 lbs.)	1.6	1.6
8	3/8	0.12 kg (0.25 lbs.)	0.23 kg (0.5 lbs.)	2.6	2.7
10	1/2	0.17 kg (0.38 lbs.)	0.28 kg (0.63 lbs.)	4.1	4.2
12	3/4	0.23 kg (0.5 lbs.)	0.57 kg (1.25 lbs.)	6.5	6.5
16	1	0.40 kg (.88 lbs.)	0.85 kg (1.88 lbs.)	11	10
20	1 1/4	1.13 kg (2.5 lbs.)	2.3 kg (5.0 lbs)	18	18
24	1 1/2	1.13 kg (2.5 lbs.)	2.3 kg (5.0 lbs)	24	23

3000-C1.p65, dd

Ordering Information

453	
Catalog Number	
448	Inlet FLS / Outlet FLS
453	Inlet NPT / Outlet NPT
458	Inlet FLD / Outlet FLD
459	Inlet NPT / Outlet NPT

-1/4	
Size and Type Ports	
4 IST or FLD or FLS	
6 IST or FLD or FLS	1/4 NPT
8 IST or FLD or FLS	3/8 NPT
10 IST or FLD or FLS	1/2 NPT
12 IST or FLD or FLS	3/4 NPT
16 IST or FLD or FLS	1 NPT
20 IST or FLD or FLS	1-1/4 NPT
24 IST or FLD or FLS	1-1/2 NPT

S
Materials
D Aluminum Alloy
S Steel
SS Stainless Steel

2
O-Ring Code
2 Nitrile
27 MIL-P-25732
Others Available See O-Ring Code & Media Chart Reference Section

6
Cracking Pressure
6 PSI ± 2
Others Available Consult Factory

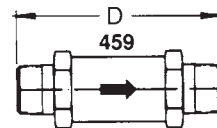
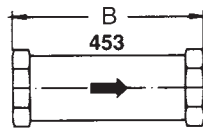
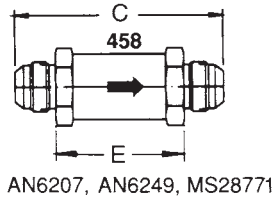
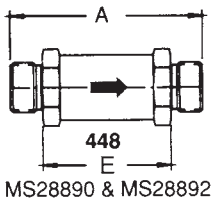
Phase Out

Valves meet or exceed AN or MS military specifications as shown.
 Part numbers marked * should be used for new production, and for replacement of parts marked †.
PARTS MARKED † SHOULD NOT BE USED IN PLACE OF THOSE MARKED *.

MS or AN Number	Materials	Pressure P.S.I.	Military Spec.
†AN6207	Alum. Alloy	1500	MIL-V-5524
†AN6249	Alum. Alloy	3000	MIL-V-5524
*MS28771	Alum. Alloy, Stain. Steel	3000	MIL-V-19069
†MS28890	Alum. Alloy	3000	MIL-V-5524
*MS28892	Alum. Alloy, Stain. Steel	3000	MIL-V-19069

NOTE: AN and MS part numbers require the addition of a dash number for size identification, example MS28892-12.

** Add dash number for size and SS for Stainless Steel or AL for Aluminum.



Valve Size		All Dimensions in Inches					
Tube	Pipe	A	B	C	D	E	Flats F
4		2 7/16	2 11/32	2 41/64	2 7/16	1 17/32	11/16
6	1/4	2 11/16	2 11/16	2 55/64	3 1/32	1 3/4	13/16
8	3/8	3 11/32	3 3/8	3 17/32	3 17/32	2 7/32	1 1/16
10	1/2	3 21/32	3 23/32	3 59/64	3 15/16	2 13/32	1 1/8
12	3/4	4 1/8	4 5/64	4 31/64	4 3/8	2 3/4	1 7/16
16	1	4 11/16	4 7/8	5 1/8	5 13/32	3 5/16	1 11/16
20	1 1/4	5 7/16	6	5 15/16	6 3/16	4 1/16	2 1/4
24	1 1/2	5 5/8	6 3/16	6 13/32	6 17/32	4 1/4	2 1/2
32	2	6 3/16	7	7 15/32	7 1/8	4 13/16	3

