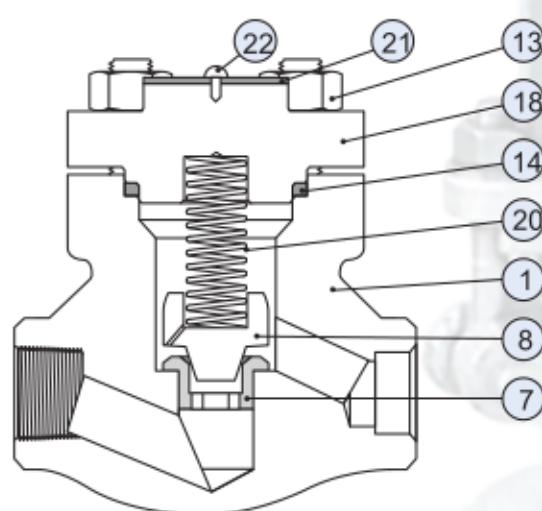


CHECK VALVES

Bolted, Welded & Union Cap Class 150, 300, 600, 800, 1500 & 2500

No.	Part	Material
1	Body	A105N Carbon Steel
7	Seat	ASTM A A276 SS410
8	Disc	ASTM A 276 SS410
13	Bolted	ASTM A193 B7
14	Gasket	316 SS Spiral Wound Grafoil
18	Bolted Cover	A105N Carbon Steel
20	Spring	AISI 304 Stainless Steel
21	Name Plate	Aluminum
22	Rivet	Stainless Steel



HARA valves are manufactured in strict accordance with the following standards

API 602	Compact steel gate valves
API 598	Valve Inspection and Test
ANSI/ASME B16.34	Steel valve, flanged and butt-welding end
ANSI/ASME B16.5	Steel pipe flanges and flanged fittings
ANSI/ASME B16.10	Face-to-face and end-to-end dimensions of ferrous valves
ANSI/ASME B16.11	Forged steel fittings, socket welding and threaded
ANSI/ASME B1.20.1	Pipe threads, general purpose
ANSI/ASME B31.3	Chemical plant and petroleum refinery piping
MSS SP-25	Standard marking system for valves, fittings, flanges and unions
MSS SP-6	Standard finishes for contact faces of pipe, flanges and connecting end flanges of valves and fittings
NACE MR-01-75	Material requirements: Sulfide stress cracking resistant metallic materials for oil field equipment.

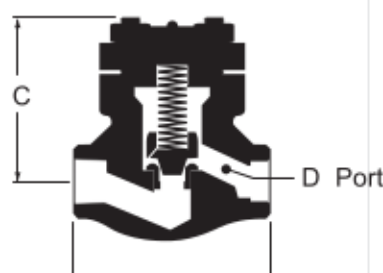
External Material		Trim Material		Sealing Material		
ASTM	BODY BONNET	BOLTS ASTM	DISC AISI	SEAT AISI	GASKET	
A105	A105N	ASTMA193-B7M	410	410HF	316 Stainless Steel Spiral Wound Grafoil	
			316	316HF		
			410	410HF		
			MONEL	MONEL		
A350	LF2	ASTMA320-L7M	410	410HF		
			316	316HF		
A182	F5	ASTMA193-B16	410	410HF		
	F11					
	F9					
	F316L	ASTMA193-B8M				316L
	F316				316	316HF

NOTE : Monel trim valves are fitted with a Monel spiral wound Grafoil filled gasket.

CHECK VALVES

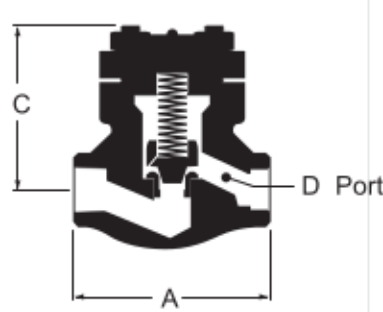
Class 800 Standards and Full Port - Piston - Bolted Cover - Threaded and Socket weld Ends.

Dimension	Size (mm.)							
Standard Port		10	15	20	25	32	40	50
Full Diameter		8	10	15	20	25	32	40
Port Diameter	A	6	9.0	12.0	17.0	23	28	36
End to End	B	88	88	92	106	125	125	140
Center to Top	H	56	56	65	74	104	104	106
Weight	Kgs.	1.5	1.4	1.8	3.0	6.5	6.2	9.2



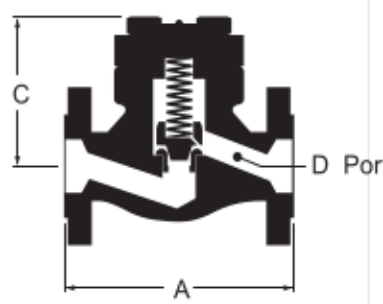
Class 1500 Standard Port - Piston - Bolted Cover - Threaded and Socket weld Ends.

Dimension	Size (mm.)							
Standard Port		10	15	20	25	32	40	
Port Diameter	A	6	9.5	12.0	17.0	23	28	
End to End	B	92	92	106	125	140	140	
Center to Top	H	65	65	74	104	106	106	
Weight	Kgs.	1.9	1.8	3.0	6.5	9.3	9.2	



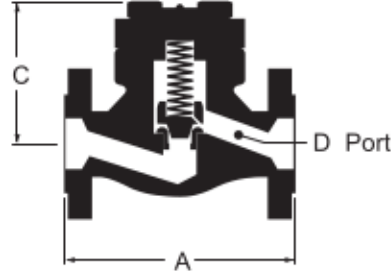
Class 150 Standard Port - Piston - Bolted Cover - Flanged Ends.

Dimension	Size (mm.)					
Standard Port		15	20	25	40	50
Port Diameter	A	9.0	12.0	17.0	28	36
End to End	B	152	178	203	229	267
Center to Top	H	56	65	74	104	106
Weight	Kgs.	3.2	4.0	6.0	12.0	18.5



Class 300 Standard Port - Piston - Bolted Cover - Flanged Ends

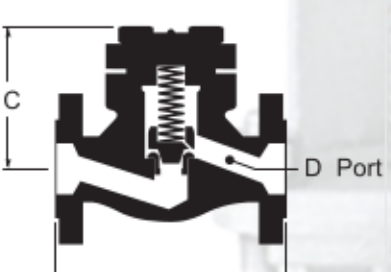
Dimension	Size (mm.)							
Standard Port			15	20	25	32	40	50
Port Diameter	A		9.0	12.0	17.0	23	28	36
Face to Face	B		88	92	106	128	128	140
Center to Top	H		56	65	74	104	104	106
Weight	Kgs.		1.4	1.8	3.0	6.5	6.2	9.2



CHECK VALVES

Class 600 Standard Port - Piston - Bolted Cover - Flanged Ends

Dimension	Size (mm.)					
Standard Port		15	20	25	40	50
Port Diameter	A	9.0	12.0	17.0	28	31
Face to Face	B	165	190	216	241	292
Center to Top	H	56	65	74	104	106
Weight	Kgs.	5.3	6.5	8.2	17.2	23.8



Class 1500 Standard Port - Piston - Bolted Cover - Flanged Ends

Dimension	Size (mm.)				
Standard Port		15	20	25	40
Port Diameter	A	9.0	12.0	17.0	28
Face to Face	B	152	178	203	229
Center to Top	H	65	74	104	106
Weight	Kgs.	3.2	4.0	6.0	12.0

