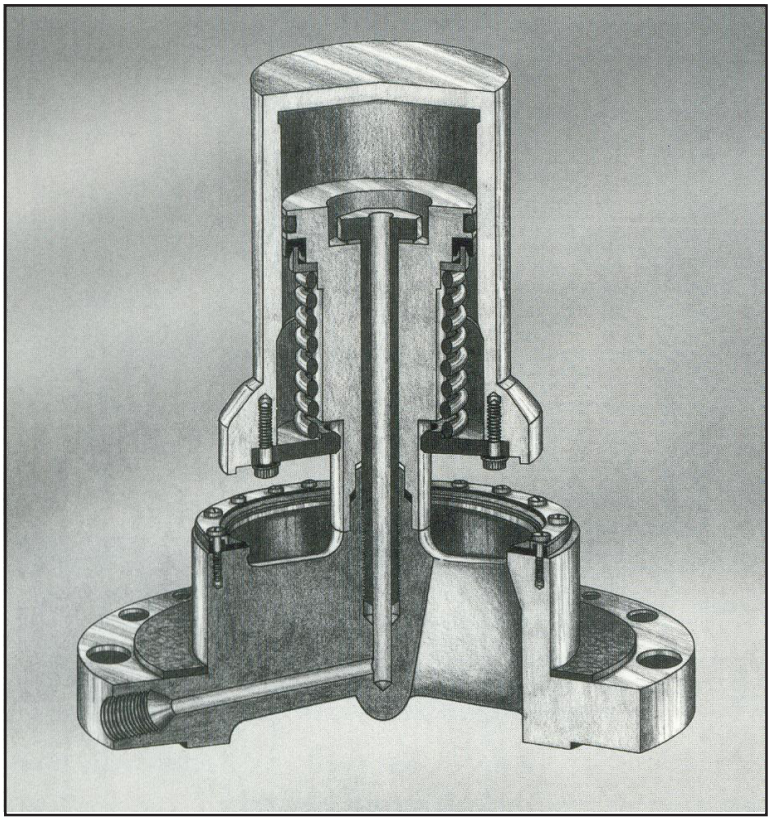
Tank Fitting

Hydraulically Operated Safety Valves



The Figure 6139 Hydraulically Operated Safety Valve has been designed as a rapid action, internal safety valve to facilitate the emergency shut-down of tanks and vessels used for the storage and transportation of LPG, Ammonia, Vinyl Chloride and other hazardous liquids stored at high pressure and usually at ambient temperatures.

The valve will “FAIL-SAFE” under all conditions.

INSTALLATION

Valves are normally installed in the vessel shell at the inlet/outlet ports or supplied complete with line housings (Figure 6060 / 6085) for fitting into pipelines. They can be installed horizontally or vertically.

Note : These valves are NOT intended as primary closure or check valves - despite their tight seating.

OPERATION

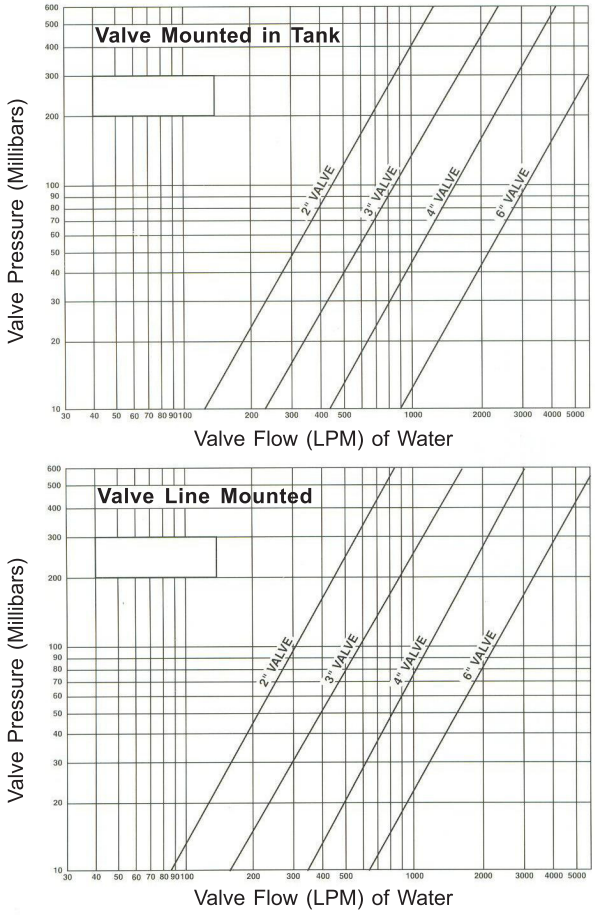
The valve is normally held closed by a heavy duty stainless steel spring and hydraulic pressure is applied to hold the valve open. When the hydraulic pressure is released, the valve closes rapidly to ensure safe shut-down in the event of an emergency. Hydraulic pressure can be released by :

* Fusible Plugs : Fitted into the hydraulic line and which melt at 74^{0}C (165^0 F)
* Frangible Elements : Which can be broken off in an emergency.
* Quick Manual Release : a feature on the Hydraulic Operator (Figure 7020)
* Solenoid Operated : suitable for automatic operation when incorporated into a system for remote operation.

OPTIONS

* Special Trim (seals and springs) available for service down to -45^{0}C

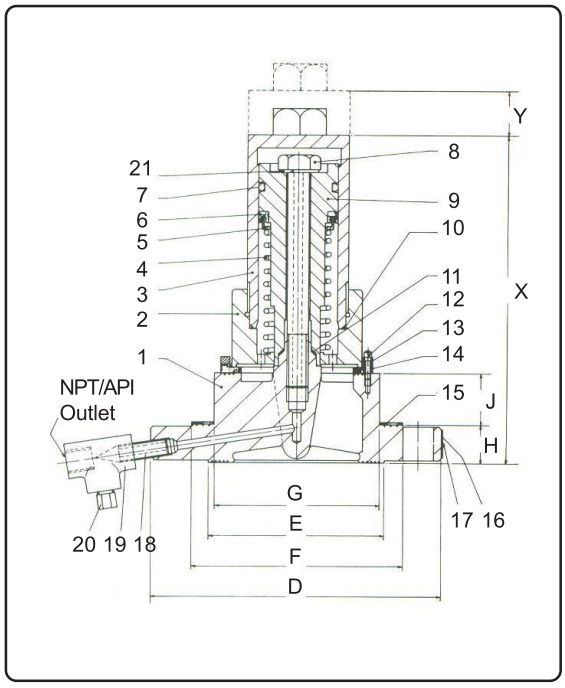
FLOW CAPACITY CHARACTERISTICS



HYDRAULIC OPERATING PRESSURES

	HYDRAULIC OPERATING PRESSURE (KG/CM2)							
	TO OPEN VALVE AGAINST UNBALANCED GAS PRESSURE ON CYLINDER SIDE OF VALVE				TO HOLD VALVE FULLY OPEN IN BALANCED GAS PRESSURE			
VALVE SIZE	2"	3"	4"	6"	2"	3"	4"	6"
GAS PRESSURE (KG/CM2)								
3.5	4.9	9.1	11.2	10.0	5.6	5.6	4.9	7.0
7.0	9.8	13.2	21.7	19.0	9.8	9.8	8.4	10.5
10.5	14.0	25.9	32.2	32.5	13.3	13.3	11.9	14.0
14.0	18.2	33.6	42.0	45.0	16.8	16.8	15.4	17.5
17.5	22.4	42.0	53.2	58.0	20.3	20.3	18.9	21.0
21.0	26.6	53.0	--	--	23.8	23.8	--	--

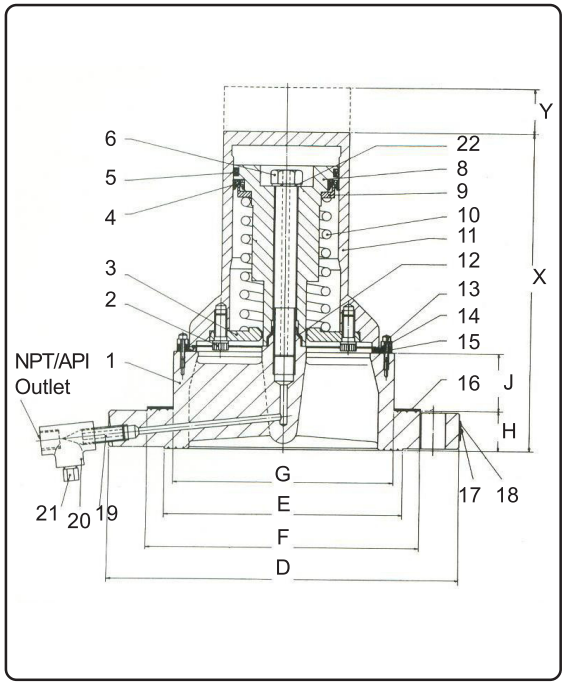
DIMENSIONS AND MATERIALS



Sizes 2” & 3”

Sr.No.	COMPONENT	MATERIAL
1	Base Flange	Cast Steel
2	Cylinder Face	* Steel
3	Cylinder	* Steel
4	Spring	Steel
5	U-Cup Retainer	Cadmium Plated Steel
6	U-Cup	Synthetic Rubber (to suit service)
7	O'Ring	Synthetic Rubber (to suit service)
8	Piston Bolt	Steel
9	Piston	* Steel
10	O'Ring	Synthetic Rubber (to suit service)
11	Piston Seal Ring	PTFE
12	Screw	Austenitic Stainless Steel
13	Seat Retainer	Cadmium Plated Steel
14	Seat	Synthetic Rubber (to suit service)
15	Gasket	C.A.F.
16	Name Plate	Austenitic Stainless Steel
17	Drive Screw	Austenitic Stainless Steel
18	Close Nipple & Strainer	Steel / Austenitic Stainless Steel
19	Tee	Steel
20	Fusible Plug	Steel
21	Coil Washer	Cadmium Plated Steel

* marked parts with hard chrome plating.



Sizes 4” & 6”

SR.NO.	COMPONENT	MATERIAL
1	Base	Cast Steel
2	Screw	Steel
3	Guide Plate	* Steel
4	U-Cup	Synthetic Rubber (to suit service)
5	O'Ring	Synthetic Rubber (to suit service)
6	Piston Bolt	Steel
7		
8	Piston	* Steel
9	U-Cup Retainer	Cadmium Plated Steel
10	Spring	Steel
11	Cylinder	* Steel
12	Piston Seal	PTFE
13	Screw	Austenitic Stainless Steel
14	Seat Retainer	Cadmium Plated Steel
15	Seat	Synthetic Rubber (to suit service)
16	Gasket	C.A.F.
17	Drive Screw	Austenitic Stainless Steel
18	Name Plate	Austenitic Stainless Steel
19	Close Nipple & Strainer	Steel / Austenitic Stainless Steel
20	Tee	Steel
21	Fusible Plug	Steel
22	Coil Washer	Cadmium Plated Steel

* marked parts with hard chrome plating.

DIMENSIONS												
VALVE SIZE	FLANGE	NO. OF HOLES	HOLE DIA.	P.C.D.	D	E	F	G	H	J	X	Y
2"	ASA 300 RF	8	19	127	165	107	107	91	22	40	238	33
3"	ASA 300 RF	8	22	168	210	127	146	110	30	37	243	33
4"	ASA 300 RF	8	22	200	254	157	178	148	32	57	267	32
6"	ASA 300 RF	12	22	270	318	216	248	199	36.5	52	302	41

SPECIFICATIONS

Sizes	: 2” (50 mm) 3” (80 mm) 4” (100 mm) 6” (150 mm)
Flange	: ASA 300 RF (Raised Face)
Max. Working Pressure	: 21.0 kg/cm^2 (2” size) 21.0 kg/cm^2 (3” size) 17.0 kg/cm^2 (4” size) 17.5 kg/cm^2 (6” size)
Piston Displacement (in air free system)	: 0.08 Litres (2” size) 0.08 Litres (3” size) 0.13 Litres (4” size) 0.29 Litres (6” size)

MATERIALS OF CONSTRUCTION

Body	: Cast Steel
Cylinder	: Steel (Chromed internally)
Piston	: Steel (Chromed externally)
Seals	: Synthetic rubber (to suit service)
Piston Seal Ring	: P.T.F.E.

MODEL DESIGNATION

Hydraulically Operated Safety Valve (Figue 6139)

HOSV	100	A

Service Temperature
A = Down to -10°C
B = Down to -33°C
C = Down to -45°C

Size
50 = 50 mm (2”)
75 = 75 mm (3”)
100 = 100 mm (4”)
150 = 150 mm (6”)

* *Specifications are subject to change without notice.*
* *All dimensions are in mm unless otherwise specified.*

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