

HXV系列 比例型安全泄压阀

HXV series Proportional safety Relief Valve

功能简介

HXV系列是一款比例型安全泄压阀,通过驱动量程弹簧设定阀门开启压力,用于过压保护,阀门常态为关闭状态,当系统压力达到设定值时打开,当系统压力跌落至设定值以下时再次关闭,阀芯经热处理后取得了更高的表面光洁度和结构强度,使得阀门在对抗磨损、流体中的污物、及使用寿命上表现出更优异的性能。

性能特点

- 用于过压保护,避免系统超过设定压力;
- 设定压力在 $\pm 5\%$ 范围内可重复;
- 适用于气体及液体,广泛应用于多种流体系统领域;
- 阀体标准接口为1/4NPT内螺纹,另可转接公制2mm~14mm,英制1/16in.~1/2in.卡套及其他管螺纹接口。

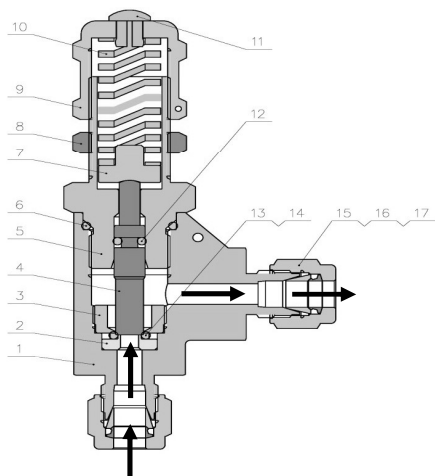
Functional Introduction

The HXV series is a proportional safety Relief Valve. The valve opening pressure is set by driving the range spring. It is used for overpressure protection. The valve is normally closed. It opens when the system pressure reaches the set value and closes again when the system pressure drops below the set value. The valve core has a higher surface finish and structural strength after heat treatment, which makes the valve show better performance in terms of resistance to wear, dirt in the fluid, and service life.

Performance features

- Used for overpressure protection to prevent the system from exceeding the set pressure;
- The set pressure is repeatable within the range of $\pm 5\%$;
- Applicable to gas and liquid, widely used in various fluid system fields;
- The standard interface of the valve body is 1/4NPT internal thread, and it can also be converted to metric 2mm~14mm, imperial 1/16in.~1/2in. ferrules and other pipe thread interfaces.

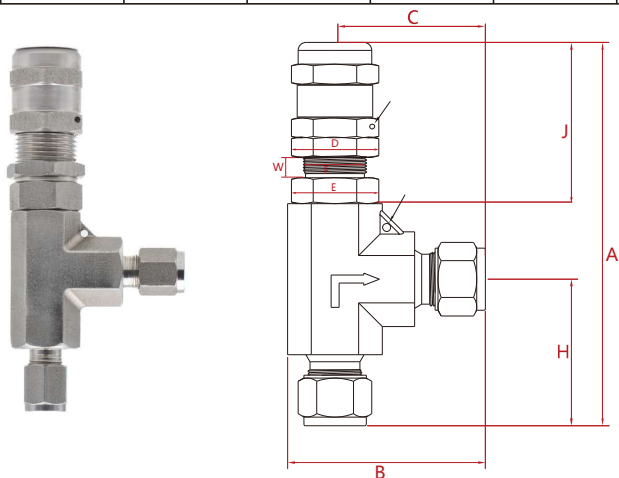
零件材料/Parts material



NO	零件/Parts	材料/Material
1	下阀体/Lower valve body	316SS
2	密封座/Sealing seat	316SS
3	压紧螺套/Compression screw sleeve	316SS
4	阀杆/Valve stem	316SS
5	上阀体/Upper valve body	316SS
6	O型圈/O-ring	FPM
7	弹簧承座/Spring seat	316SS
8	锁紧螺母/Locking nut	316SS
9	调压螺帽/Pressure regulating nut	316SS
10	螺旋弹簧/Spiral spring	SWOSC-V
11	塞头/Plug	尼龙
12	O型圈/O-ring	FPM
13、14	O型圈、挡圈/O-ring, retaining ring	FPM
15、16、17	螺帽卡套/Nut ferrule	316SS

温度及压力/Temperature and pressure

Material	316SS												
Types	HXV			MXV			LXV						
Pressure	100~ 414 bar (6000PSI)			25~100 bar			1~25 bar						
Seal Material	FPM	NBR	EPDM	FPM	NBR	EPDM	FPM	NBR	EPDM				
温度℃	Max. Set Pressure (bar)												
-40	414	—	—	100	100	100	20	20	20				
-23		414	414							100	100	20	
-10													
0													
10													
65	325	325	325										20
93	300	300	300										
121	286	286	286										
148	271	—	—		—	—							
190	254												



尺寸表/Table of Dimensions

规格/Specification		内通径 Orifice	A	B	C	D	E	F	J	H
Inlet	Oytlet									
1/8	1/8	进口/IN: 4mm 出口/OUT:5mm	108	50	38	24	22	20	46	40
1/4	1/4		108	50	38	24	22	20	46	40
3/8	3/8		108	50	38	24	22	20	46	40
1/2	1/2		108	55	38	24	22	20	46	40
6mm	6mm		108	55	38	24	22	20	46	40
8mm	8mm		108	55	38	24	22	20	46	40
3/4	3/4		108	55	38	24	22	20	46	40
12mm	12mm		108	55	38	24	22	20	46	40
1寸	1寸		170	75	58	27	30	24	64	63

选型指南/Selection Guide

NPT/OD 2

SS

HXV

1

T

8N

8T

阀门材质/Body Material

Valve Type / 阀门类型

Pressure Code / 压力等级代码

端部连接代号
(End Connection Designator)

进出口尺寸
Size Designator
Inlet Outlet

SS	316 Stainless Steel	LXV	Low Pressure Relief Valve	Code	Type	T	Both End Tube Fitting	NPT (ISO/BSP)	Thread in	TUBE	Fractional Tube Designator	OD in	Metric Tube Designator	OD mm
S4	304 Stainless Steel	MXV	Medium Pressure Relief Valve			1	10 ~ 225 psi							
S1	321 Stainless Steel	HXV	High Pressure Relief Valve	2	50 ~ 300 ps	MF	Male Pipe Thread & Female Pipe Thread							
6L	316L Stainless Steel			3	300 ~ 1500 psi									
4L	304L Stainless Steel			4	1,500 ~ 2500 psi									
H6	HC-276 Alloy			5	2500 ~ 3500 psi									
				6	3500 ~ 4500 psi									
				7	4500 ~ 6,000 psi									

低壓 /LXV

中壓 /MXV

高壓 /HXV

Both End Tube Fitting

Male Pipe Thread & Tube Fitting

Male Pipe Thread& Female Pipe Thread

2N

4N

6N

8N

10N

12N

1/8

1/4

3/8

1/2

3/4

1"

6M

8M

10M

12M

6

8

10

12

The method of marking import and export is the same as that of marking entry.

The method of marking import and export is the same as that of marking entry.

F		S		A	
O型圈材料/O-ring		弹簧 / 开启压力代号 Spring / Cracking Pressure Designator		开启压力设定 Turn-on Pressure Setting	
N	丁腈橡胶(NBR)	A	10 ~ 225 psi	Adjustable upon request	
F	氟橡胶(FPM)	B	50 ~ 300 ps		
E	三元乙丙橡胶(EPDM)	C	300 ~ 1500 psi		
Z	全氟橡胶(KZ)	D	1,500 ~ 2500 psi		
		E	2500 ~ 3500 psi		
		F	3500 ~ 4500 psi		
		G	4500 ~ 6,000 psi		

Example Ordering Code / 订货示例

SS-HXV-7-T-8N-8T-F-G-A

阀体材质: 316 不锈钢

阀门类型: 高压泄压阀

压力等级: 代码 7

端部连接形式: 双端卡套连接

入口尺寸: 1/2" 管

出口尺寸: 1/2" 管

O型圈: 氟橡胶

弹簧范围: G (5000-6000 psig)

开启压力设定: 可调

Body Material: 316 Stainless Steel

Valve Type: High Pressure Relief Valve

Pressure Code: 7

End Connection: Tube Fitting x Tube Fitting

Inlet Size: 1/2" Tube

Outlet Size: 1/2" Tube

O-Ring Material: FKM (Viton®)

Spring Range: G (5000-6000 psig)

Cracking Pressure Setting: Adjustable

测试/Test

阀门出厂前均经过1000psi(69bar)氮气检漏, 漏率不超过0.1std·cm³/min。All valves are leak tested with 1000psi (69bar) nitrogen before leaving the factory, and the leakage rate does not exceed 0.1std·cm³/min.

应用及安全/Application and security

- 泄压阀通过调节顶端阀帽驱动承压弹簧来设定开启压力, 出厂时不设定开启压力。
- 开启压力为泄压阀出口有流体溢出时的输入压力, 对于一段时间内未启动的阀门, 初始开启压力可能会比设定值略高;
- 泄压后的系统压力会比泄压时的开启压力底, 这是泄压阀瞬间的快速排放所致, 正因为这个特性不建议把卸荷阀当背压调节器使用;
- 泄压阀配件包括铅封组件, 用于锁定调节位置。
- The relief valve sets the cracking pressure by adjusting the top adjusting cap, which compresses the load-bearing spring. The cracking pressure is not preset at the factory.
- The cracking pressure is defined as the inlet pressure at which fluid begins to discharge from the outlet of the relief valve. For valves that have not been actuated for an extended period, the initial cracking pressure may be slightly higher than the set value.
- After pressure relief, the system pressure will drop below the cracking pressure at which relief occurred. This is caused by the instantaneous and rapid discharge characteristic of the relief valve.
- Due to this behavior, relief valves are not recommended for use as back pressure regulators. Relief valve accessories include a lead seal (tamper-evident sealing) assembly, which is used to lock the pressure adjustment setting.

禁止!/Prohibited!

- 用户在选型时需谨慎考虑材料兼容性、应用环境及产品参数等细节;
- 错误的选型、安装和使用可能会造成财产损失, 甚至危及人身安全。
- When selecting a product, users should carefully consider details such as material compatibility, application environment, and product parameters;
- Wrong selection, installation, and use may cause property loss and even endanger personal safety.

