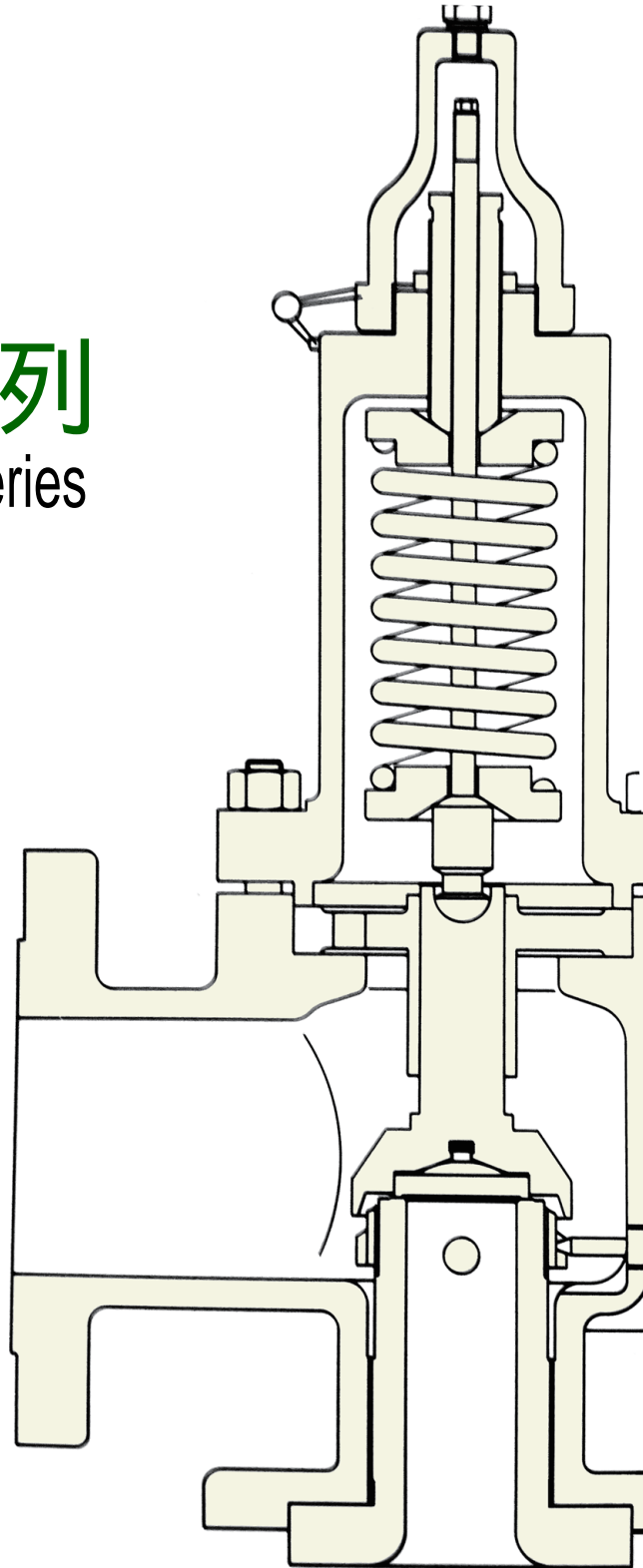


BBUB 标柏阀门

美标安全阀系列

API Safety Relief Valves Series



一、产品概述 Description

美标安全阀是锅炉、压力容器和其他受压力设备上重要的安全附件。安全阀(又称泄压阀)是根据压力系统的工作压力自动启闭,一般安装于封闭系统的设备或管路上保护系统安全。当设备或管道内压力超过安全阀设定压力时,自动开启泄压或降温,保证设备和管道内介质压力在设定压力之下,保护设备和管道正常工作,防止发生意外,减少损失。

美标安全阀主要被广泛应用于:蒸汽锅炉、液化石油气汽车槽车或液化石油气铁路罐车、采油井、蒸汽发电设备的高压旁路、压力管道、压力容器等。

二、执行标准 Standard

- ISO 4126-1 安全阀装置ISO标准
Safety Devices for Protection Against Excessive Pressure Part 1: Safety valves
- ASME《锅炉与压力容器规范》第 卷 第一册《压力容器建造规则》
ASME, Boiler and Pressure Vessel Code, Section VIII Division 1, Rules for Construction of Pressure Vessels
- API Std 526 钢制法兰连接泄压阀 Flanged Steel Pressure Relief Valves
- API RP 520 炼油厂泄压装置定径、选择与安装 Safety Relief Valve Sizing, Selection
- API Std 527 泄压阀阀座密封性 Seat Tightness of Pressure Relief Valves

三、产品性能 Performance

- 整定压力偏差: $\leq \pm 3\%$
- 超 压: $\leq 10\%$ (气体介质) / $\leq 20\%$ (液体介质)
- 启闭压差: $\leq 10\%$ (气体介质) / $\leq 20\%$ (液体介质)
- 密封性能: 符合 API Std 527 标准规定
- The allowable tolerance of the set pressure $\leq \pm 3\%$ of the set pressure
- Overpressure: $\leq 10\%$ of the set pressure (gas) / $\leq 20\%$ of the set pressure (liquid)
- Blowdown: $\leq 10\%$ of the set pressure (gas) / $\leq 20\%$ of the set pressure (liquid)
- Tightness: The valves have good seat tightness and the leakage rate conforms to API Std 527

四、产品特点 Features

- 阀座与阀体为可分离式,维修方便、经济。
- 伞形反冲盘能够有效地提高升力,阀瓣在较小超压下就能够迅速地全开启,排放介质,从而达到保护设备的目的。
- 调节圈能够调整满意的启闭压差。
- 对反冲盘和导套、阀杆和调整螺钉的材料进行合适的选择以及间隙的适当选取,保证阀瓣运动灵活。
- 阀瓣和阀座密封面堆焊硬质合金,表面精研后保证高密封性和使用寿命长。
- 平衡波纹管式安全阀中的波纹管能够消除背压波动对阀门性能的影响,还能保护弹簧和其它内件免受介质的腐蚀。
- 弹簧和波纹管选材及加工工艺精良,并进行严格的测试和检查。

五、产品特点 Features

- The solid nozzle is screwed into the body, which makes the maintenance easy.
- The shape of the disc holder has been designed to enhance the effect of the fluid thrust for an instant lift of the disc.
- Blowdown control is provided with adjustable nuzzle ring only.
- The adequate materials and clearance between disc holder and guide , spindle and adjusting screw assures disc to lift successfully.
- The surface of both the disc and the nozzle seat are deposited with Stellite. Excellent flatness and surface finish of the seating surfaces by precision machining and lapping assure pressure relief valve to have high degree of seat tightness and long using life.
- The bellows of balanced bellows pressure relief valves can not only avoid and effect of variable back pressure in the system , but also protect spring and other trim components from corrosive media.
- Materials are chosen carefully , and the manufacture of the spring and the bellows has strict technological process. Each of them is tested and checked strictly.

六、弹簧压力等级 Spring pressure range

| 公称压力(MPa) | 整定压力P _k (MPa) | | | | | | | |
|-----------|--------------------------|------------|-----------|----------|-----------|----------|----------|----------|
| | >0.1~0.16 | >0.16~0.25 | >0.25~0.4 | >0.4~0.6 | >0.6~0.8 | >0.8~1.0 | >1.0~1.3 | >1.3~1.6 |
| 1.6 | >0.1~0.16 | >0.16~0.25 | >0.25~0.4 | >0.4~0.6 | >0.6~0.8 | >0.8~1.0 | >1.0~1.3 | >1.3~1.6 |
| 2.5 | >1.3~1.6 | >1.6~2.0 | >2.0~2.5 | | | | | |
| 4.0 | >1.3~1.6 | >1.6~2.0 | >2.0~2.5 | >2.5~3.2 | >3.2~4.0 | | | |
| 6.4 | >2.5~3.2 | >3.2~4.0 | >4.0~5.0 | >5.0~6.4 | | | | |
| 10.0 | >3.2~4.0 | >4.0~5.0 | >5.0~6.4 | >6.4~8.0 | >8.0~10.0 | | | |
| 16.0 | >8.0~10.0 | >10~13 | >13~16 | | | | | |
| 32.0 | >13~16 | >16~19 | >19~22 | >22~25 | >25~29 | >29~32 | | |

七、安全阀进出口法兰压力等级 Flange pressure rate

单位：Lb

| 安全阀公称压力PN | 150 | 300 | 600 | 900 | 1500 | 2500 |
|------------|-----|-----|-----|-----|------|------|
| 进口法兰压力级PN1 | 150 | 300 | 600 | 900 | 1500 | 2500 |
| 出口法兰压力级PN2 | 150 | 150 | 150 | 300 | 300 | 300 |

八、型号编制 Code system

示 例Example
型号代号Model

| | | | | | | | | | | | |
|-----|---|---|---|----|---|---|---|---|---|---|----|
| BSO | - | S | F | 15 | J | C | B | - | 1 | D | 2 |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 |

1、阀门类型 Valve type

BSO-常规式安全阀 Coventional

BSB-波纹管式安全阀 Ballanced Bellow

BSOC-常规式带散热器安全阀 Coventional with Cooling Spool

BSBC-波纹管式带散热器安全阀 Ballanced Bellow with Cooling Spool

2、阀门结构 Valve type

安全泄放阀，适用于气体、蒸汽、液体，代号省略

Safety relief valve, suitable for gas, steam, liquid, omit code.

R-泄放阀，适用于液体 Relief valve, suitable for liquid

3、阀座密封类型 Sealing type

金属对金属硬密封省略代号 Metal to Metal omit code

F-金属对特氟龙软密封 Metal to Teflon

X-金属对氟橡胶O型圈 Metal to O-ring

4、进口法兰压力等级 Inlet flange Class

150Lb-15, 300Lb-30, 300Lb(高压high pressure)-30a, 600Lb-60,

1500-150, 2500-250

*注：出口法兰压力等级非执行API标准时，需标注出口压力法兰压力等级代号

5、进口法兰面型式代号 Inlet flange facing

RF面省略代号 RF facing omit code

RJ-J

6、阀帽类型 Cap type

B-带螺塞的螺纹式Screwed with plug C-敞开杠杆式扳手Lifting lever

D-封闭式扳手Packed lifting lever E-带螺塞封闭式扳手Packed lifting

lever with plug G-带螺塞杠杆式扳手Lifting Lever with plug

阀帽默认为不带螺塞的螺纹式，该类型代号省略 Screwed cap omit code

7、安全阀材质代号 Materials code

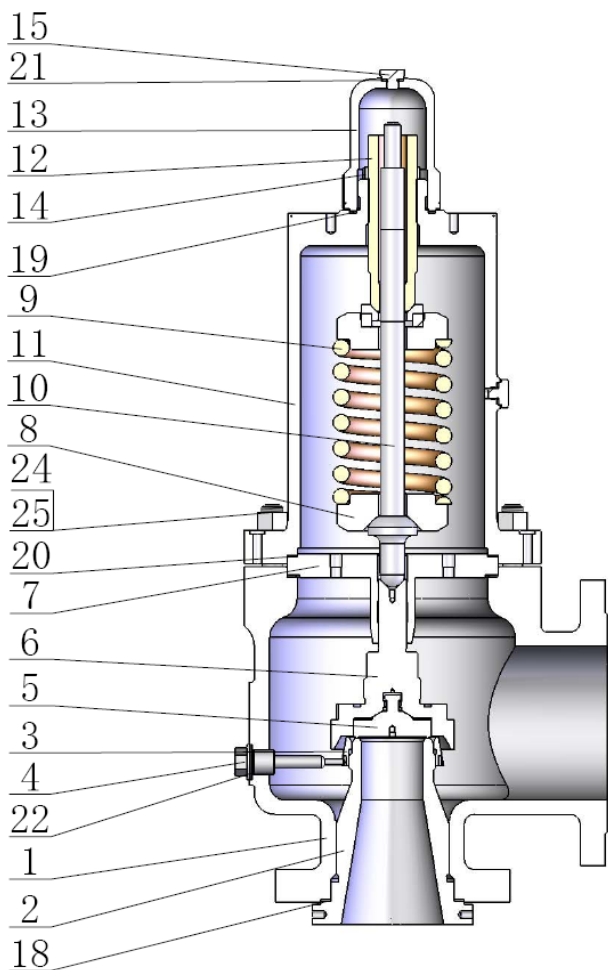
见表一 See table 1

8,9,10、进口法兰尺寸x喉径代号x出口法兰尺寸 Inlet flange*Orifice*Outlet flange 1D2~8T10

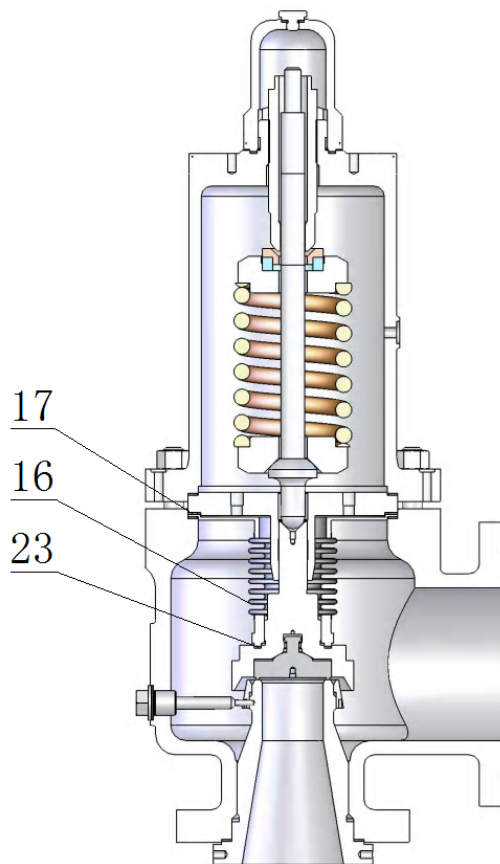
示例1：BSO-SF150JCB-1D2，微启式，特氟龙密封，进口法兰1500Lb，法兰密封面形式为RJ，阀体材质WCB，内件304，阀帽为带螺塞的螺纹式，进出口径 1X2"，喉径代号为D的常规式安全阀。

示例2：BSB-15CS-3J4，全启式，金属密封，进口法兰150Lb，法兰密封面形式为RF，阀体材质WCB内件材质316，阀帽形式为普通螺纹式，口径3X4"，喉径代号为J的波纹管式安全阀。

九、安全阀类型 Valve type

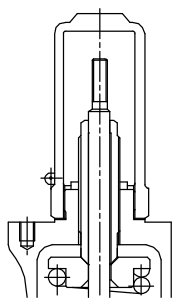


常规式 Coventional Type

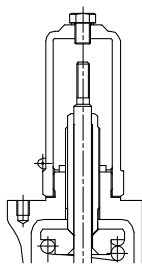


平衡波纹管式 Balanced Bellows Type

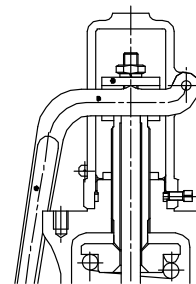
十、阀帽型式代号 Cap type code



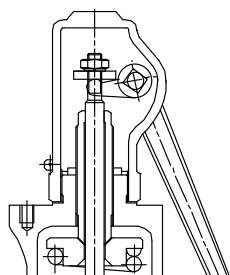
螺纹式 Screwed Cap
(默认阀帽型式, 代号省略)



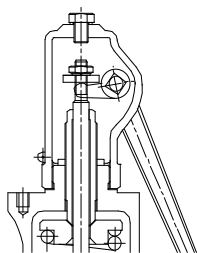
B: 带螺塞的螺纹式
Screwed Cap with Plug



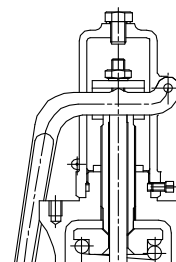
C: 杠杆式 Lifting Lever



D: 封闭杠杆式 Packed Lifting Lever

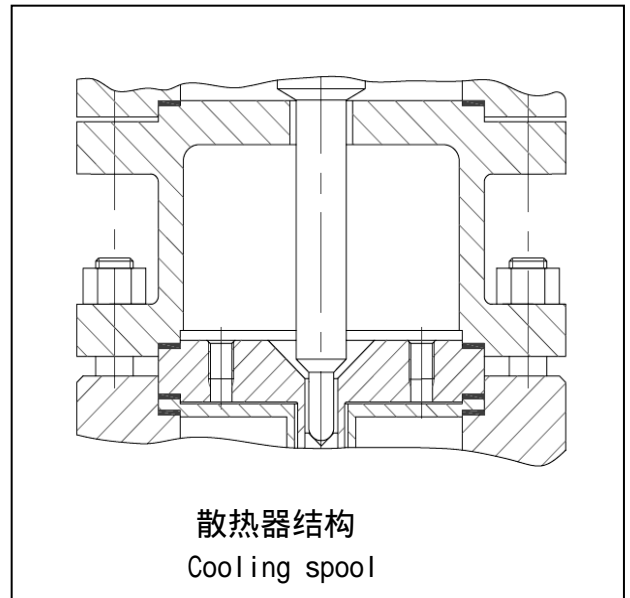
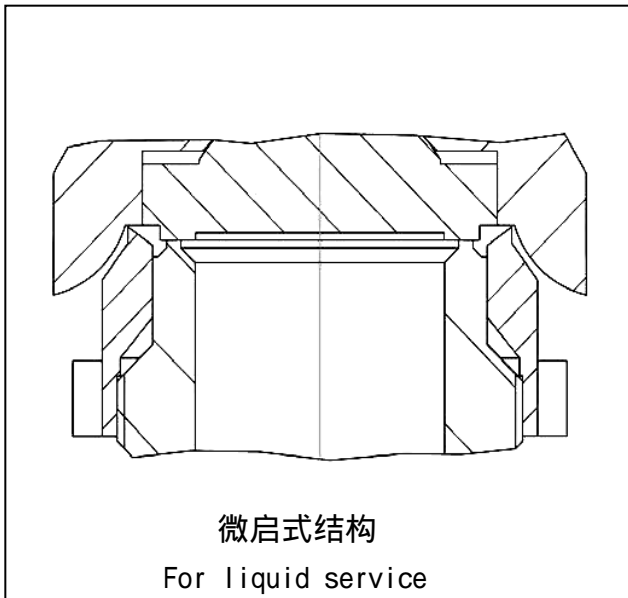
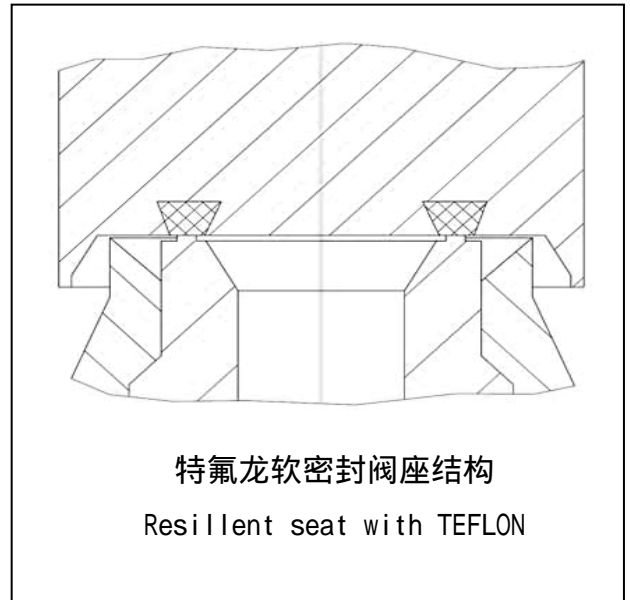
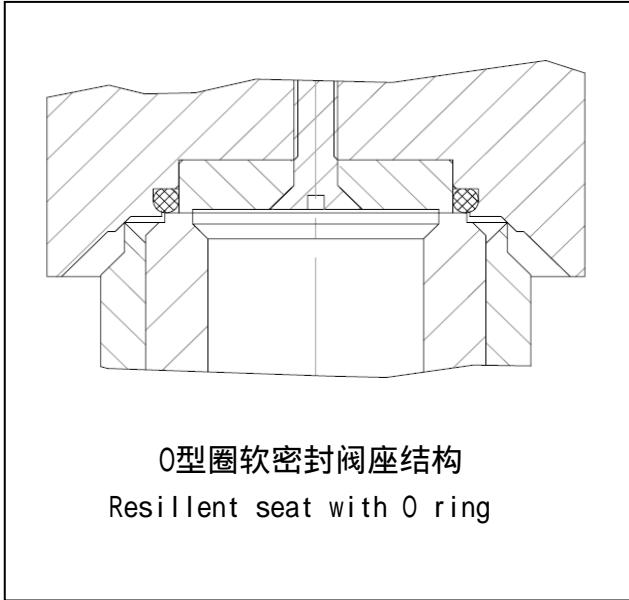


E: 带螺塞的封闭杠杆式
Packed Lifting Lever with Plug



G: 带螺塞的杠杆式
Lifting Lever with Plug

十一、特殊结构图 (局部) Special Construction(detail view)



十二、零件材质代号表 Materials code

表一 Table 1

| 序号 Ref.No | 零件名称 Part Name | 材料代号 Sign of Materials | | | | | | | |
|--------------|---------------------|------------------------|----------------------|----------------------|----------------------|-----------------------------------|-----------------------------------|-----------------------------------|----------------------|
| | | C | CS | C6 | C9 | CM | CC | CB | L |
| 1 | 阀体 Body | WCB | WCB | WC6 | WC9 | WCB | WCB | WCB | LCB |
| 2 | 阀座 Nozzle | 304 | 316 | 316 | 316 | Monel | H.C. | H.B. | 304 |
| 3 | 调节圈 Nozzle Ring | CF8M | CF8M | CF8M | CF8M | CF8M | CF8M | CF8M | CF8M |
| 4 | 定位螺钉 Set Screw | 304 | 304 | 304 | 304 | 304 | 304 | 304 | 304 |
| 5 | 阀瓣 Disc | 304 | 316 | 316 | 316 | Monel | H.C. | H.B. | 304 |
| 6 | 反冲盘 Disc Holder | 420 | 420 | 420 | 420 | 630 | 630 | 630 | 420 |
| 7 | 导套 Guide | 304 | 304 | 304 | 304 | 304 | 304 | 304 | 304 |
| 8 | 弹簧座 Spring Washer | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 420 | 420 | 420 | 碳钢 C.St. |
| 9 | 弹簧 Spring | 合金钢 Alloy St. | 合金钢 Alloy St. | 合金钢 Alloy St. | 合金钢 Alloy St. | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢 Alloy St. |
| 10 | 阀杆 Spindle | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| 11 | 阀盖 Bonnet | WCB | WCB | WCB | WCB | WCB | WCB | WCB | WCB |
| 12 | 调整螺钉 Adjusting Bolt | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| 13 | 阀帽 Cap | WCB | WCB | WCB | WCB | WCB | WCB | WCB | WCB |
| 14 | 锁紧螺母 Adj. Bolt Nut | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. |
| 15 | 螺塞 Plug | 碳钢 C.St. | 碳钢 C.St. | 304 | 304 | 碳钢 C.St. | 碳钢 C.St. | 碳钢 C.St. | 304 |
| 16 | 波纹管 Bellows | 316L | 316L | 316L | 316L | 316L | 316L | 316L | 316L |
| 17~23 | 垫片 Gaskets | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos | 非石棉板 Non-Asbestos |
| 24 | 螺柱 Bolt | A193-B7 | A193-B7 | A193-B7 | A193-B7 | A193-B7 | A193-B7 | A193-B7 | A193-B8 |
| 25 | 螺母 Nut | A194-2H | A194-2H | A194-7 | A194-7 | A194-2H | A194-2H | A194-2H | A194-8 |

十二、零件材质代号表 Materials code

表一 Table 1

| 序号 Ref.No | 零件名称 Part Name | 材料代号 Sign of Materials | | | | | | | | | | | | |
|--------------|---------------------|------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | LS | S | S1 | SM | SL | M | HC | HB | | | | | |
| 1 | 阀体 Body | LCB | CF8 | CF8 | CF8M | CF3M | Monel | H.C. | H.B. | | | | | |
| 2 | 阀座 Nozzle | 316 | 316 | 304 | 316L | 316L | Monel | H.C. | H.B. | | | | | |
| 3 | 调节圈 Nozzle ring | CF8M | CF8M | CF8M | CF8M | CF8M | Monel | H.C. | H.B. | | | | | |
| 4 | 定位螺钉 Set Screw | 304 | 304 | 304 | 316 | 316L | Monel | H.C. | H.B. | | | | | |
| 5 | 阀瓣 Disc | 316 | 316 | 304 | 316L | 316L | Monel | H.C. | H.B. | | | | | |
| 6 | 反冲盘 Disc Holder | 420 | 420 | 420 | 630 | 630 | Monel | H.C. | H.B. | | | | | |
| 7 | 导套 Guide | 304 | 304 | 304 | 316 | 304 | 316L | 304 | Monel | 304 | H.C. | 304 | H.B. | 304 |
| 8 | 弹簧座 Spring washer | 碳钢 C.St. | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| 9 | 弹簧 Spring | 合金钢 Alloy St. | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon | 合金钢涂四氟 Alloy St. Spread Teflon |
| 10 | 阀杆 Spindle | 420 | 420 | 420 | 630 | 420 | 630 | 420 | 630 | 420 | 630 | 420 | 630 | 420 |
| 11 | 阀盖 Bonnet | WCB | CF8 | CF8 | CF8M | CF8 | CF3M | CF8 | Monel | CF8 | H.C. | CF8 | H.B. | CF8 |
| 12 | 调整螺钉 Adjusting Bolt | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| 13 | 阀帽 Cap | WCB | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 | CF8 |
| 14 | 锁紧螺母 Adj. Bolt Nut | 碳钢 C.St. | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| 15 | 螺塞 Plug | 304. | 420 | 420 | 316 | 316L | Monel | H.C. | H.B. | | | | | |
| 16 | 波纹管 Bellows | 316L | 316L | 316L | No | 316L | No | 316L | No | Monel | No | H.C. | No | H.B. |
| 17~23 | 垫片 Gaskets | 非石棉板 Non-Asbestos | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE | 氟四 PTFE |
| 24 | 螺栓 Bolt | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 | A193-B8 |
| 25 | 螺母 Nut | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 | A194-8 |

● 内容如有更改，恕不另行通知。 The information contained herein is subject to change without notice.

D

ORIFICE

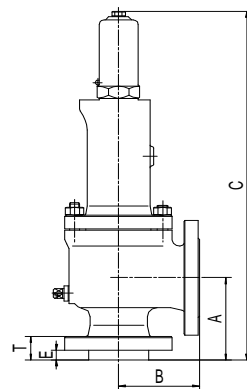
0.110in²
71.0mm²
9.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|-------|-------|-------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 1D2 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 15.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 1D2 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 15.9 | | |
| 1D2 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | 19.7 | 15.9 | | |
| 1D2 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 15.9 | | |
| 1½D2 | 900 | 300 | 90 | | | 153.1 | 127.2 | 85.2 | | 41.4 | 34.5 | | |
| 1½D2 | 1500 | 300 | 150 | | | 255.5 | 212.4 | 142.0 | | 41.4 | 34.5 | | |
| 1½D3 | 2500 | 300 | 250 | | | 413.7 | 413.7 | 236.5 | | 51.0 | 34.5 | | |
| 1D2 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 1D2 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 1½D2 | 900 | 300 | 90 | | | | | 105.1 | 44.8 | 41.4 | 34.5 | | |
| 1½D2 | 1500 | 300 | 150 | | | | | 175.1 | 74.5 | 41.4 | 34.5 | | |
| 1½D3 | 2500 | 300 | 250 | | | | | 291.7 | 124.1 | 51.0 | 34.5 | | |
| 1D2 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 1D2 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 15.9 | | |
| 1D2 | 300 | 150 | 30a | 49.6 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 1D2 | 600 | 150 | 60 | 99.3 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 1½D2 | 900 | 300 | 90 | 148.9 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 41.4 | 34.5 | | |
| 1½D2 | 1500 | 300 | 150 | 248.2 | 248.2 | 248.2 | 171.0 | 145.5 | 120.7 | 41.4 | 34.5 | | |
| 1½D3 | 2500 | 300 | 250 | 275.8 | 413.7 | 413.7 | 284.8 | 242.7 | 201.0 | 49.6 | 34.5 | | |
| 1D2 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 15.9 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 1D2 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | | |
| 1D2 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 15.9 | | |
| 1D2 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 15.9 | | |
| 1½D2 | 900 | 300 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 41.4 | 34.5 | | |
| 1D2 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 1D2 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 1D2 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 1D2 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 1½D2 | 900 | 300 | 90 | | | 124.1 | 69.2 | | | 41.4 | 34.5 | | |
| 1½D2 | 1500 | 300 | 150 | | | 206.9 | 160.7 | | | 41.4 | 34.5 | | |
| 1½D3 | 2500 | 300 | 250 | | | 344.8 | 267.5 | | | 41.4 | 34.5 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 1D2 | 150 | 150 | 15 | 105 | 115 | 350 | 40 | 15 | 15 |
| 1D2 | 300 | 150 | 30 | 105 | 115 | 350 | 40 | 15 | 15 |
| 1D2 | 300 | 150 | 30a | 105 | 115 | 350 | 40 | 15 | 16 |
| 1D2 | 600 | 150 | 60 | 105 | 115 | 350 | 40 | 15 | 16 |
| 1½D2 | 900 | 300 | 90 | 105 | 140 | 460 | 51 | 15 | 28 |
| 1½D2 | 1500 | 300 | 150 | 105 | 140 | 460 | 51 | 15 | 30 |
| 1½D3 | 2500 | 300 | 250 | 140 | 178 | 480 | 64 | 15 | 32 |



(1) 温度高于 38℃时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

(3) 带扳手的阀门: 增加 10%。

Tolerances for A and B: ±1.6

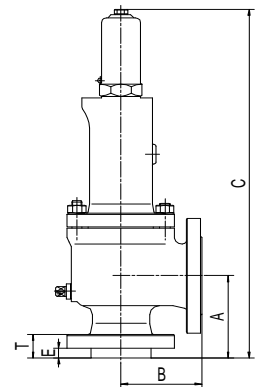
Valves with lift lever: add 10%.

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|----------------------------------|--|---------------|--------------|-------|-------|-------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 1E2 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 15.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 1E2 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 15.9 | | |
| 1E2 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | 19.7 | 15.9 | | |
| 1E2 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 15.9 | | |
| 1½E2 | 900 | 300 | 90 | | | 153.1 | 127.2 | 85.2 | | 41.4 | 34.5 | | |
| 1½E2 | 1500 | 300 | 150 | | | 255.5 | 212.4 | 142.0 | | 41.4 | 34.5 | | |
| 1½E3 | 2500 | 300 | 250 | | | 413.7 | 413.7 | 236.5 | | 51.0 | 34.5 | | |
| 1E2 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 1E2 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 1½E2 | 900 | 300 | 90 | | | | | 105.1 | 44.8 | 41.4 | 34.5 | | |
| 1½E2 | 1500 | 300 | 150 | | | | | 175.1 | 74.5 | 41.4 | 34.5 | | |
| 1½E3 | 2500 | 300 | 250 | | | | | 291.7 | 124.1 | 51.0 | 34.5 | | |
| 1E2 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 1E2 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 15.9 | | |
| 1E2 | 300 | 150 | 30a | 49.6 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 1E2 | 600 | 150 | 60 | 99.3 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 1½E2 | 900 | 300 | 90 | 148.9 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 41.4 | 34.5 | | |
| 1½E2 | 1500 | 300 | 150 | 248.2 | 248.2 | 248.2 | 171.0 | 145.5 | 120.7 | 41.4 | 34.5 | | |
| 1½E3 | 2500 | 300 | 250 | 275.8 | 413.7 | 413.7 | 284.8 | 242.7 | 201.0 | 49.6 | 34.5 | | |
| 1E2 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 15.9 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 1E2 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | | |
| 1E2 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 15.9 | | |
| 1E2 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 15.9 | | |
| 1½E2 | 900 | 300 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 41.4 | 34.5 | | |
| 1E2 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 1E2 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 1E2 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 1E2 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 1½E2 | 900 | 300 | 90 | | | 124.1 | 69.2 | | | 41.4 | 34.5 | | |
| 1½E2 | 1500 | 300 | 150 | | | 206.9 | 160.7 | | | 41.4 | 34.5 | | |
| 1½E3 | 2500 | 300 | 250 | | | 344.8 | 267.5 | | | 41.4 | 34.5 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|----------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 1E2 | 150 | 150 | 15 | 105 | 115 | 350 | 40 | 15 | 15 |
| 1E2 | 300 | 150 | 30 | 105 | 115 | 350 | 40 | 15 | 15 |
| 1E2 | 300 | 150 | 30a | 105 | 115 | 350 | 40 | 15 | 16 |
| 1E2 | 600 | 150 | 60 | 105 | 115 | 350 | 40 | 15 | 16 |
| 1½E2 | 900 | 300 | 90 | 105 | 140 | 460 | 51 | 15 | 28 |
| 1½E2 | 1500 | 300 | 150 | 105 | 140 | 460 | 51 | 15 | 30 |
| 1½E3 | 2500 | 300 | 250 | 140 | 178 | 480 | 64 | 15 | 32 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

(2) A 和 B 的公差为 ±1.6。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

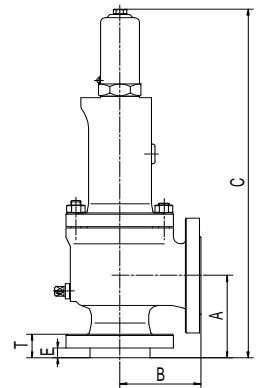
FORIFICE
0.307in²
198.1mm²
15.9mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|-------|-------|-------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 1½F2 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 15.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 1½F2 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 15.9 | | |
| 1½F2 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | 19.7 | 15.9 | | |
| 1½F2 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 15.9 | | |
| 1½F3 | 900 | 300 | 90 | | | 153.1 | 127.2 | 85.2 | | 51.0 | 34.5 | | |
| 1½F3 | 1500 | 300 | 150 | | | 255.5 | 212.4 | 142.0 | | 51.0 | 34.5 | | |
| 1½F3 | 2500 | 300 | 250 | | | 344.8 | 344.8 | 236.5 | | 51.0 | 34.5 | | |
| 1½F2 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 1½F2 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 1½F3 | 900 | 300 | 90 | | | | | 105.1 | 44.8 | 51.0 | 34.5 | | |
| 1½F3 | 1500 | 300 | 150 | | | | | 175.1 | 74.5 | 51.0 | 34.5 | | |
| 1½F3 | 2500 | 300 | 250 | | | | | 291.7 | 124.1 | 51.0 | 34.5 | | |
| 1½F2 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 1½F2 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 15.9 | | |
| 1½F2 | 300 | 150 | 30a | 49.6 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 1½F2 | 600 | 150 | 60 | 99.3 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 1½F3 | 900 | 300 | 90 | 148.9 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 49.6 | 34.5 | | |
| 1½F3 | 1500 | 300 | 150 | 151.7 | 248.2 | 248.2 | 171.0 | 145.5 | 120.7 | 49.6 | 34.5 | | |
| 1½F3 | 2500 | 300 | 250 | 234.4 | 344.8 | 344.8 | 284.8 | 242.7 | 201.0 | 49.6 | 34.5 | | |
| 1½F2 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 15.9 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 1½F2 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | | |
| 1½F2 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 15.9 | | |
| 1½F2 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 15.9 | | |
| 1½F3 | 900 | 300 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 41.4 | 34.5 | | |
| 1½F2 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 1½F2 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 1½F2 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 1½F2 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 1½F3 | 900 | 300 | 90 | | | 124.1 | 69.2 | | | 41.4 | 34.5 | | |
| 1½F3 | 1500 | 300 | 150 | | | 206.9 | 160.7 | | | 41.4 | 34.5 | | |
| 1½F3 | 2500 | 300 | 250 | | | 344.8 | 267.5 | | | 41.4 | 34.5 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 1½F2 | 150 | 150 | 15 | 124 | 121 | 350 | 44 | 24 | 22 |
| 1½F2 | 300 | 150 | 30 | 124 | 121 | 350 | 44 | 24 | 22 |
| 1½F2 | 300 | 150 | 30a | 124 | 152 | 350 | 44 | 24 | 24 |
| 1½F2 | 600 | 150 | 60 | 124 | 152 | 350 | 44 | 24 | 28 |
| 1½F3 | 900 | 300 | 90 | 124 | 165 | 460 | 51 | 12 | 32 |
| 1½F3 | 1500 | 300 | 150 | 124 | 165 | 460 | 51 | 12 | 34 |
| 1½F3 | 2500 | 300 | 250 | 140 | 178 | 490 | 64 | 15 | 38 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为 ±1.6。Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10% Valves with lift lever: add 10%.

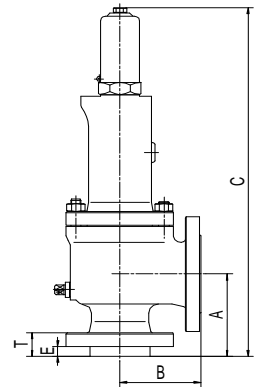
G ORIFICE
0.503in²
324.5mm²
20.3mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38°C | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|-----------------|----------------|-------|-------|-------|---|-----------------------------------|--------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268°C~ -59°C | -59°C~ -29°C | -29°C~ 38°C | 232°C | 427°C | 538°C | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 1½G3 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 15.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 1½G3 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 15.9 | | |
| 1½G3 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | 19.7 | 15.9 | | |
| 1½G3 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 15.9 | | |
| 1½G3 | 900 | 300 | 90 | | | 153.1 | 127.2 | 85.2 | | 51.1 | 32.4 | | |
| 2G3 | 1500 | 300 | 150 | | | 255.5 | 212.4 | 142.0 | | 51.0 | 32.4 | | |
| 2G3 | 2500 | 300 | 250 | | | 255.5 | 255.5 | 236.5 | | 51.0 | 32.4 | | |
| 1½G3 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | | |
| 1½G3 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 1½G3 | 900 | 300 | 90 | | | | | 105.1 | 44.8 | 51.0 | 34.5 | | |
| 2G3 | 1500 | 300 | 150 | | | | | 175.1 | 74.5 | 51.0 | 34.5 | | |
| 2G3 | 2500 | 300 | 250 | | | | | 255.5 | 124.1 | 51.0 | 34.5 | | |
| 1½G3 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 1½G3 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 15.9 | | |
| 1½G3 | 300 | 150 | 30a | 49.6 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 1½G3 | 600 | 150 | 60 | 99.3 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 1½G3 | 900 | 300 | 90 | 148.9 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 49.6 | 34.5 | | |
| 2G3 | 1500 | 300 | 150 | 168.9 | 248.2 | 248.2 | 171.0 | 145.5 | 120.7 | 49.6 | 34.5 | | |
| 2G3 | 2500 | 300 | 250 | 179.3 | 255.5 | 255.5 | 255.5 | 242.7 | 201.0 | 49.6 | 34.5 | | |
| 1½G3 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 15.9 | | |
| 1½G3 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | | |
| 1½G3 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 15.9 | | |
| 1½G3 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 15.9 | | |
| 1½G3 | 900 | 300 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 41.4 | 34.5 | | |
| 1½G3 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 1½G3 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 1½G3 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 1½G3 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 1½G3 | 900 | 150 | 90 | | | 124.1 | 69.2 | | | 41.4 | 34.5 | | |
| 2G3 | 1500 | 150 | 150 | | | 206.9 | 160.7 | | | 41.4 | 34.5 | | |
| 2G3 | 2500 | 150 | 250 | | | 344.8 | 267.5 | | | 41.4 | 34.5 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 1½G3 | 150 | 150 | 15 | 124 | 121 | 460 | 44 | 12 | 24 |
| 1½G3 | 300 | 150 | 30 | 124 | 121 | 460 | 44 | 12 | 24 |
| 1½G3 | 300 | 150 | 30a | 124 | 152 | 460 | 44 | 12 | 30 |
| 1½G3 | 600 | 150 | 60 | 124 | 152 | 460 | 44 | 12 | 30 |
| 1½G3 | 900 | 300 | 90 | 124 | 165 | 460 | 51 | 12 | 34 |
| 2G3 | 1500 | 300 | 150 | 156 | 171 | 710 | 70 | 14 | 58 |
| 2G3 | 2500 | 300 | 250 | 156 | 171 | 710 | 70 | 14 | 62 |



(1) 温度高于 38°C 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38°C, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为 ±1.6。Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。Valves with lift lever: add 10%.

H ORIFICE

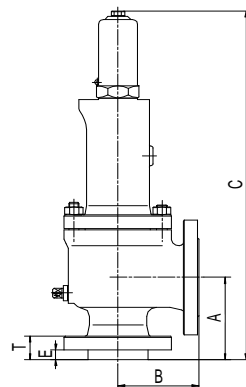
0.785in²
506.5mm²
25.4mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|-------|-------|-------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 1½H3 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 15.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 1½H3 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 15.9 | | |
| 2H3 | 300 | 150 | 30 | | | 51.0 | 42.4 | 28.3 | | 19.7 | 15.9 | | |
| 2H3 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 15.9 | | |
| 2H3 | 900 | 150 | 90 | | | 153.1 | 127.2 | 85.2 | | 19.7 | 15.9 | | |
| 2H3 | 1500 | 300 | 150 | | | 189.6 | 189.6 | 142.0 | | 51.0 | 28.6 | | |
| 2H3 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 2H3 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 2H3 | 900 | 150 | 90 | | | | | 105.1 | 44.8 | 19.7 | 15.9 | | |
| 2H3 | 1500 | 300 | 150 | | | | | 175.1 | 74.5 | 51.0 | 28.6 | | |
| 1½H3 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 1½H3 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 15.9 | | |
| 2H3 | 300 | 150 | 30 | 49.6 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 2H3 | 600 | 150 | 60 | 99.3 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 2H3 | 900 | 150 | 90 | 102.4 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 19.0 | 15.9 | | |
| 2H3 | 1500 | 300 | 150 | 110.3 | 189.6 | 189.6 | 171.0 | 145.5 | 120.7 | 41.4 | 28.6 | | |
| 1½H3 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 15.9 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 1½H3 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | | |
| 2H3 | 300 | 150 | 30 | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 15.9 | | |
| 2H3 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 15.9 | | |
| 2H3 | 900 | 150 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 15.9 | 15.9 | | |
| 1½H3 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 1½H3 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 2H3 | 300 | 150 | 30 | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 2H3 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 2H3 | 900 | 150 | 90 | | | 124.1 | 69.2 | | | 15.9 | 15.9 | | |
| 2H3 | 1500 | 300 | 150 | | | 206.9 | 160.7 | | | 41.4 | 28.6 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 1½H3 | 150 | 150 | 15 | 130 | 124 | 420 | 43 | 18 | 25 |
| 1½H3 | 300 | 150 | 30 | 130 | 124 | 420 | 43 | 18 | 25 |
| 2H3 | 300 | 150 | 30 | 130 | 124 | 510 | 46 | 10 | 30 |
| 2H3 | 600 | 150 | 60 | 154 | 162 | 510 | 46 | 14 | 34 |
| 2H3 | 900 | 150 | 90 | 154 | 162 | 540 | 59 | 14 | 46 |
| 2H3 | 1500 | 300 | 150 | 154 | 162 | 540 | 59 | 14 | 50 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。Valves with lift lever: add 10%.

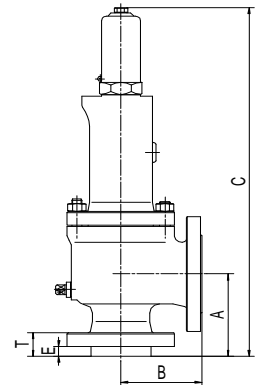
J ORIFICE
1.287in²
830.3mm²
32.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|-------|-------|-------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 2J3 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 15.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 2J3 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 15.9 | | |
| 3J4 | 300 | 150 | 30 | | | 51.0 | 42.4 | 28.3 | | 19.7 | 15.9 | | |
| 3J4 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 15.9 | | |
| 3J4 | 900 | 150 | 90 | | | 153.1 | 127.2 | 85.2 | | 19.7 | 15.9 | | |
| 3J4 | 1500 | 300 | 150 | | | 186.2 | 186.2 | 142.0 | | 41.4 | 15.9 | | |
| 3J4 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 3J4 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 3J4 | 900 | 150 | 90 | | | | | 105.1 | 44.8 | 19.7 | 15.9 | | |
| 3J4 | 1500 | 300 | 150 | | | | | 175.1 | 74.5 | 41.4 | 15.9 | | |
| 2J3 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 2J3 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | | |
| 3J4 | 300 | 150 | 30 | 34.5 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 3J4 | 600 | 150 | 60 | 43.1 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 3J4 | 900 | 150 | 90 | 55.2 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 19.0 | 15.9 | | |
| 3J4 | 1500 | 300 | 150 | 55.2 | 189.6 | 189.6 | 171.0 | 145.5 | 120.7 | 41.4 | 15.9 | | |
| 2J3 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 15.9 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 2J3 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | | |
| 3J4 | 300 | 150 | 30 | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 15.9 | | |
| 3J4 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 15.9 | | |
| 3J4 | 900 | 150 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 15.9 | 15.9 | | |
| 2J3 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 2J3 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 3J4 | 300 | 150 | 30 | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 3J4 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 3J4 | 900 | 150 | 90 | | | 124.1 | 96.2 | | | 15.9 | 15.9 | | |
| 3J4 | 1500 | 300 | 150 | | | 186.2 | 160.7 | | | 41.4 | 15.9 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 2J3 | 150 | 150 | 15 | 136 | 124 | 460 | 43 | 16 | 30 |
| 2J3 | 300 | 150 | 30 | 136 | 124 | 460 | 43 | 16 | 30 |
| 3J4 | 300 | 150 | 30 | 184 | 181 | 510 | 55 | 24 | 42 |
| 3J4 | 600 | 150 | 60 | 184 | 181 | 650 | 57 | 24 | 56 |
| 3J4 | 900 | 150 | 90 | 184 | 181 | 650 | 68 | 24 | 68 |
| 3J4 | 1500 | 300 | 150 | 184 | 181 | 650 | 68 | 24 | 70 |



(1) 温度高于 38℃时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。Valves with lift lever: add 10%.

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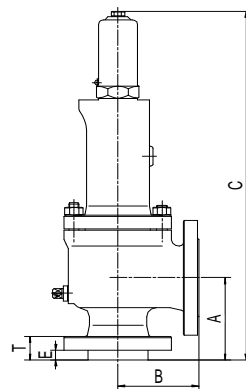
1.838in²
1185.8mm²
38.9mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|-------|-------|-------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 3K4 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 10.3 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 3K4 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 10.3 | | |
| 3K4 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | 19.7 | 10.3 | | |
| 3K4 | 600 | 150 | 60 | | | 102.0 | 85.2 | 56.9 | | 19.7 | 13.8 | | |
| 3K6 | 900 | 150 | 90 | | | 153.1 | 127.2 | 85.2 | | 19.7 | 13.8 | | |
| 3K6 | 1500 | 300 | 150 | | | 153.1 | 153.1 | 142.0 | | 41.4 | 13.8 | | |
| 3K4 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 15.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 3K4 | 600 | 150 | 60 | | | | | 70.0 | 29.6 | 19.7 | 15.9 | | |
| 3K4 | 900 | 150 | 90 | | | | | 105.1 | 44.8 | 19.7 | 15.9 | | |
| 3K4 | 1500 | 300 | 150 | | | | | 153.1 | 74.5 | 41.4 | 15.9 | | |
| 3K4 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 15.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 3K4 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 15.9 | | |
| 3K4 | 300 | 150 | 30a | 36.2 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 15.9 | | |
| 3K4 | 600 | 150 | 60 | 41.4 | 99.3 | 99.3 | 67.2 | 58.3 | 48.3 | 19.0 | 15.9 | | |
| 3K6 | 900 | 150 | 90 | 41.4 | 148.9 | 148.9 | 102.4 | 87.2 | 72.4 | 19.0 | 15.9 | | |
| 3K6 | 1500 | 300 | 150 | 51.7 | 153.1 | 153.1 | 153.1 | 145.5 | 120.7 | 41.4 | 15.9 | | |
| 3K4 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 10.3 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 3K4 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 10.3 | | |
| 3K4 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 10.3 | | |
| 3K4 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 13.8 | | |
| 3K4 | 900 | 150 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 15.9 | 13.8 | | |
| 3K4 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 3K4 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 15.9 | | |
| 3K4 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 15.9 | | |
| 3K4 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 15.9 | | |
| 3K6 | 900 | 150 | 90 | | | 124.1 | 96.2 | | | 15.9 | 15.9 | | |
| 3K6 | 1500 | 300 | 150 | | | 153.1 | 160.7 | | | 41.4 | 15.9 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 3K4 | 150 | 150 | 15 | 156 | 162 | 510 | 54 | 20 | 42 |
| 3K4 | 300 | 150 | 30 | 156 | 162 | 510 | 54 | 20 | 42 |
| 3K4 | 300 | 150 | 30a | 156 | 162 | 510 | 54 | 20 | 42 |
| 3K4 | 600 | 150 | 60 | 184 | 181 | 650 | 54 | 24 | 88 |
| 3K6 | 900 | 150 | 90 | 198 | 216 | 685 | 68 | 22 | 89 |
| 3K6 | 1500 | 300 | 150 | 197 | 216 | 685 | 68 | 22 | 90 |



(1) 温度高于 38℃时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

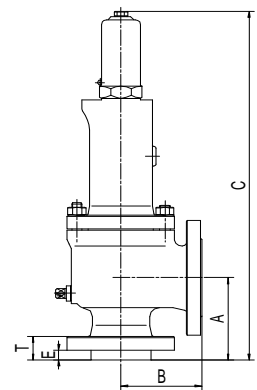
ORIFICE
 2.853in^2
 1840.6mm^2
48.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|-------|-------|------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 3L4 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 6.9 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 3L4 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 6.9 | | |
| 4L6 | 300 | 150 | 30 | | | 51.0 | 42.4 | 28.3 | | 19.7 | 11.7 | | |
| 4L6 | 600 | 150 | 60 | | | 69.0 | 69.0 | 56.9 | | 19.7 | 11.7 | | |
| 4L6 | 900 | 150 | 90 | | | 103.4 | 103.4 | 85.2 | | 19.7 | 11.7 | | |
| 4L6 | 1500 | 150 | 150 | | | 103.4 | 103.4 | 103.4 | | 19.7 | 11.7 | | |
| 4L6 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 11.7 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 4L6 | 600 | 150 | 60 | | | | | 69.0 | 29.6 | 19.7 | 11.7 | | |
| 4L6 | 900 | 150 | 90 | | | | | 103.4 | 44.8 | 19.7 | 11.7 | | |
| 4L6 | 1500 | 150 | 150 | | | | | 103.4 | 74.5 | 41.4 | 11.7 | | |
| 3L4 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 6.9 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 3L4 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 6.9 | | |
| 4L6 | 300 | 150 | 30 | 36.9 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 11.7 | | |
| 4L6 | 600 | 150 | 60 | 36.9 | 69.0 | 69.0 | 67.2 | | 48.3 | 19.0 | 11.7 | | |
| 4L6 | 900 | 150 | 90 | 48.3 | 103.4 | 103.4 | 102.4 | 87.2 | 72.4 | 19.0 | 11.7 | | |
| 3L4 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 6.9 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 3L4 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 6.9 | | |
| 4L6 | 300 | 150 | 30 | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 11.7 | | |
| 4L6 | 600 | 150 | 60 | | | 82.7 | 65.2 | 63.1 | 37.9 | 15.9 | 11.7 | | |
| 4L6 | 900 | 150 | 90 | | | 124.1 | 97.9 | 94.8 | 56.9 | 15.9 | 11.7 | | |
| 3L4 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 6.9 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 3L4 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 6.9 | | |
| 4L6 | 300 | 150 | 30 | | | 41.4 | 32.1 | | | 15.9 | 11.7 | | |
| 4L6 | 600 | 150 | 60 | | | 82.7 | 64.1 | | | 15.9 | 11.7 | | |
| 4L6 | 900 | 150 | 90 | | | 103.4 | 96.2 | | | 15.9 | 11.7 | | |
| 4L6 | 1500 | 150 | 150 | | | 103.4 | 103.4 | | | 41.4 | 11.7 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 3L4 | 150 | 150 | 15 | 156 | 165 | 510 | 51 | 20 | 48 |
| 3L4 | 300 | 150 | 30 | 156 | 165 | 510 | 51 | 20 | 48 |
| 4L6 | 300 | 150 | 30 | 179 | 181 | 650 | 51 | 19 | 56 |
| 4L6 | 600 | 150 | 60 | 179 | 203 | 650 | 51 | 19 | 110 |
| 4L6 | 900 | 150 | 90 | 197 | 222 | 670 | 75 | 22 | 124 |
| 4L6 | 1500 | 150 | 150 | 197 | 222 | 670 | 75 | 22 | 130 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

MORIFICE

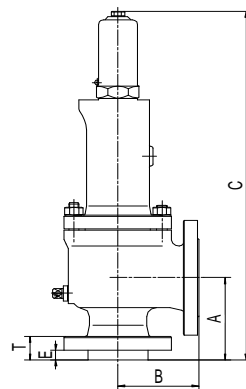
3.60in²
2322.6mm²
54.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|------|------|------|--|-----------------------------------|-----------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring | |
| 4M6 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | | 19.7 | 5.5 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 4M6 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | | 19.7 | 5.5 | | |
| 4M6 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | | 19.7 | 11.0 | | |
| 4M6 | 600 | 150 | 60 | | | 75.8 | 75.8 | 56.9 | | | 19.7 | 11.0 | | |
| 4M6 | 900 | 150 | 90 | | | 75.8 | 75.8 | 75.8 | | | 19.7 | 11.0 | | |
| 4M6 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | | 19.7 | 11.0 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 4M6 | 600 | 150 | 60 | | | | | 69.0 | 29.6 | | 19.7 | 11.0 | | |
| 4M6 | 900 | 150 | 90 | | | | | 75.8 | 44.8 | | 19.7 | 11.0 | | |
| 4M6 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | | 19.0 | 5.5 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 4M6 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | | 19.0 | 5.5 | | |
| 4M6 | 300 | 150 | 30a | 36.2 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | | 19.0 | 11.0 | | |
| 4M6 | 600 | 150 | 60 | 41.4 | 75.8 | 75.8 | 67.2 | 58.3 | 48.3 | | 19.0 | 11.0 | | |
| 4M6 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | | 15.9 | 5.5 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 4M6 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | | 15.9 | 5.5 | | |
| 4M6 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | | 15.9 | 11.0 | | |
| 4M6 | 600 | 150 | 60 | | | 75.8 | 65.2 | 63.1 | 37.9 | | 15.9 | 11.0 | | |
| 4M6 | 900 | 150 | 90 | | | 75.8 | 75.8 | 75.8 | 56.9 | | 15.9 | 11.0 | | |
| 4M6 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | | 15.9 | 5.5 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 4M6 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | | 15.9 | 5.5 | | |
| 4M6 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | | 15.9 | 11.0 | | |
| 4M6 | 600 | 150 | 60 | | | 75.8 | 64.1 | | | | 15.9 | 11.0 | | |
| 4M6 | 900 | 150 | 90 | | | 75.8 | 75.8 | | | | 15.9 | 11.0 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 4M6 | 150 | 150 | 15 | 178 | 184 | 755 | 54 | 18 | 90 |
| 4M6 | 300 | 150 | 30 | 178 | 184 | 755 | 54 | 18 | 92 |
| 4M6 | 300 | 150 | 30a | 178 | 184 | 755 | 54 | 18 | 106 |
| 4M6 | 600 | 150 | 60 | 178 | 203 | 755 | 62 | 18 | 116 |
| 4M6 | 900 | 150 | 90 | 197 | 222 | 755 | 65 | 22 | 170 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

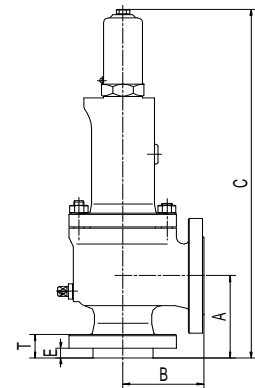
N ORIFICE
 4.34 in²
 2800.0mm²
 59.7mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|----------------------------------|--|---------------|--------------|------|------|------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 4N6 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 5.5 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 4N6 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 5.5 | | |
| 4N6 | 300 | 150 | 30a | | | 51.0 | 42.4 | 28.3 | | 19.7 | 11.0 | | |
| 4N6 | 600 | 150 | 60 | | | 69.0 | 69.0 | 56.9 | | 19.7 | 11.0 | | |
| 4N6 | 900 | 150 | 90 | | | 69.0 | 69.0 | 69.0 | | 19.7 | 11.0 | | |
| 4N6 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 11.0 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 4N6 | 600 | 150 | 60 | | | | | 69.0 | 29.6 | 19.7 | 11.0 | | |
| 4N6 | 900 | 150 | 90 | | | | | 69.0 | 44.8 | 19.7 | 11.0 | | |
| 4N6 | 150 | 150 | 15 | 19.0 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 5.5 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 4N6 | 300 | 150 | 30 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 5.5 | | |
| 4N6 | 300 | 150 | 30a | 31.0 | 49.6 | 49.6 | 34.1 | 29.0 | 24.1 | 19.0 | 11.0 | | |
| 4N6 | 600 | 150 | 60 | 34.5 | 69.0 | 69.0 | 67.2 | 58.3 | 48.3 | 19.0 | 11.0 | | |
| 4N6 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 5.5 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 4N6 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 5.5 | | |
| 4N6 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 9.7 | | |
| 4N6 | 600 | 150 | 60 | | | 69.0 | 65.2 | 63.1 | 37.9 | 15.9 | 9.7 | | |
| 4N6 | 900 | 150 | 90 | | | 69.0 | 69.0 | 69.0 | 56.9 | 15.9 | 9.7 | | |
| 4N6 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 11.0 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 4N6 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 11.0 | | |
| 4N6 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 11.0 | | |
| 4N6 | 600 | 150 | 60 | | | 69.0 | 64.1 | | | 15.9 | 11.0 | | |
| 4N6 | 900 | 150 | 90 | | | | 69.0 | | | 15.9 | 11.0 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|----------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 4N6 | 150 | 150 | 15 | 197 | 210 | 755 | 54 | 18 | 96 |
| 4N6 | 300 | 150 | 30 | 197 | 210 | 755 | 54 | 18 | 98 |
| 4N6 | 300 | 150 | 30a | 197 | 210 | 755 | 54 | 18 | 105 |
| 4N6 | 600 | 150 | 60 | 197 | 222 | 755 | 60 | 18 | 140 |
| 4N6 | 900 | 150 | 90 | 197 | 222 | 755 | 60 | 22 | 180 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

PORIFICE

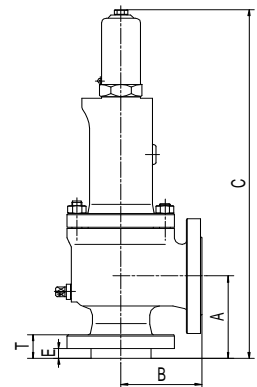
6.38in²
4116.1mm²
72.4mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|----------------------------------|--|---------------|--------------|------|------|------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 4P6 | 150 | 150 | 15 | | | 19.7 | 12.8 | 5.5 | | 19.7 | 5.5 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 4P6 | 300 | 150 | 30 | | | 19.7 | 19.7 | 19.7 | | 19.7 | 5.5 | | |
| 4P6 | 300 | 150 | 30a | | | 36.2 | 36.2 | 28.3 | | 19.7 | 10.3 | | |
| 4P6 | 600 | 150 | 60 | | | 69.0 | 69.0 | 56.9 | | 19.7 | 10.3 | | |
| 4P6 | 900 | 150 | 90 | | | 69.0 | 69.0 | 69.0 | | 19.7 | 10.3 | | |
| 4P6 | 300 | 150 | 30 | | | | | 35.2 | 14.8 | 19.7 | 11.0 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 4P6 | 600 | 150 | 60 | | | | | 69.0 | 29.6 | 19.7 | 11.0 | | |
| 4P6 | 900 | 150 | 90 | | | | | 69.0 | 44.8 | 19.7 | 11.0 | | |
| 4P6 | 150 | 150 | 15 | 12.1 | 19.0 | 19.0 | 12.4 | 5.5 | 1.4 | 19.0 | 5.5 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 4P6 | 300 | 150 | 30 | 12.1 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 5.5 | | |
| 4P6 | 300 | 150 | 30a | 20.7 | 36.2 | 36.2 | 34.1 | 29.0 | 24.1 | 19.0 | 11.0 | | |
| 4P6 | 600 | 150 | 60 | 33.1 | 69.0 | 69.0 | 67.2 | 58.3 | 48.3 | 19.0 | 11.0 | | |
| 4P6 | 150 | 150 | 15 | | | 15.9 | 12.1 | 5.5 | 3.4 | 15.9 | 5.5 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 4P6 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 5.5 | | |
| 4P6 | 300 | 150 | 30a | | | 41.4 | 32.8 | 31.7 | 19.0 | 15.9 | 10.3 | | |
| 4P6 | 600 | 150 | 60 | | | 69.0 | 65.2 | 63.1 | 37.9 | 15.9 | 10.3 | | |
| 4P6 | 900 | 150 | 90 | | | 69.0 | 69.0 | 69.0 | 56.9 | 15.9 | 11.0 | | |
| 4P6 | 150 | 150 | 15 | | | 15.9 | 12.4 | | | 15.9 | 5.5 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 4P6 | 300 | 150 | 30 | | | 15.9 | 12.4 | | | 15.9 | 5.5 | | |
| 4P6 | 300 | 150 | 30a | | | 41.4 | 32.1 | | | 15.9 | 11.0 | | |
| 4P6 | 600 | 150 | 60 | | | 69.0 | 64.1 | | | 15.9 | 11.0 | | |
| 4P6 | 900 | 150 | 90 | | | 69.0 | 69.0 | | | 15.9 | 11.0 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|----------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 4P6 | 150 | 150 | 15 | 181 | 229 | 800 | 54 | 21 | 115 |
| 4P6 | 300 | 150 | 30 | 181 | 229 | 800 | 54 | 21 | 115 |
| 4P6 | 300 | 150 | 30a | 225 | 254 | 825 | 54 | 25 | 140 |
| 4P6 | 600 | 150 | 60 | 225 | 254 | 825 | 65 | 25 | 190 |
| 4P6 | 900 | 150 | 90 | 225 | 254 | 825 | 65 | 25 | 220 |



(1) 温度高于 38℃ 时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

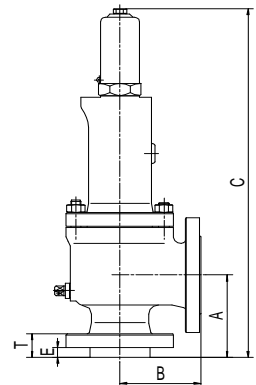
Q ORIFICE
11.05in²
7129.0mm²
95.3mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|------|------|------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 6Q8 | 150 | 150 | 15 | | | 11.4 | 11.4 | 5.5 | | 7.9 | 4.8 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 6Q8 | 300 | 150 | 30 | | | 11.4 | 11.4 | 11.4 | | 7.9 | 4.8 | | |
| 6Q8 | 300 | 150 | 30a | | | 20.7 | 20.7 | 20.7 | | 7.9 | 7.9 | | |
| 6Q8 | 600 | 150 | 60 | | | 41.4 | 41.4 | 41.4 | | 7.9 | 7.9 | | |
| 6Q8 | 300 | 150 | 30 | | | | | 11.4 | 11.4 | 7.9 | 7.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 6Q8 | 600 | 150 | 60 | | | | | 41.4 | 29.6 | 7.9 | 7.9 | | |
| 6Q8 | 150 | 150 | 15 | 11.4 | 11.4 | 11.4 | 11.4 | 5.5 | 1.4 | 7.9 | 4.8 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 6Q8 | 300 | 150 | 30 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 7.9 | 4.8 | | |
| 6Q8 | 300 | 150 | 30a | 17.2 | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 | 7.9 | 7.9 | | |
| 6Q8 | 600 | 150 | 60 | 20.7 | 41.4 | 41.4 | 41.4 | 41.4 | 41.4 | 7.9 | 7.9 | | |
| 6Q8 | 150 | 150 | 15 | | | 9.7 | 9.7 | 9.7 | 3.4 | 7.9 | 4.8 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 6Q8 | 300 | 150 | 30 | | | 9.7 | 9.7 | 9.7 | 9.7 | 7.9 | 4.8 | | |
| 6Q8 | 300 | 150 | 30a | | | 20.7 | 20.7 | 20.7 | 19.0 | 7.9 | 7.9 | | |
| 6Q8 | 600 | 150 | 60 | | | 41.4 | 41.4 | 41.4 | 37.9 | 7.9 | 7.9 | | |
| 6Q8 | 150 | 150 | 15 | | | 11.4 | 11.4 | | | 7.9 | 4.8 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 6Q8 | 300 | 150 | 30 | | | 11.4 | 11.4 | | | 7.9 | 4.8 | | |
| 6Q8 | 300 | 150 | 30a | | | 20.7 | 20.7 | | | 7.9 | 7.9 | | |
| 6Q8 | 600 | 150 | 60 | | | 41.4 | 41.4 | | | 7.9 | 7.9 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|-----|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 6Q8 | 150 | 150 | 15 | 240 | 241 | 980 | 59 | 14 | 180 |
| 6Q8 | 300 | 150 | 30 | 240 | 241 | 980 | 59 | 14 | 185 |
| 6Q8 | 300 | 150 | 30a | 240 | 241 | 980 | 59 | 14 | 205 |
| 6Q8 | 600 | 150 | 60 | 240 | 241 | 980 | 75 | 14 | 220 |



(1) 温度高于 38℃时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

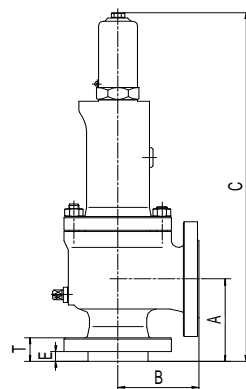
R ORIFICE
16.00in²
10322.6mm²
114.6mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|------|------|------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 6R8 | 150 | 150 | 15 | | | 6.9 | 6.9 | 5.5 | | 4.1 | 4.1 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 6R8 | 300 | 150 | 30 | | | 6.9 | 6.9 | 6.9 | | 4.1 | 4.1 | | |
| 6R10 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | | 6.9 | 6.9 | | |
| 6R10 | 600 | 150 | 60 | | | 20.7 | 20.7 | 20.7 | | 6.9 | 6.9 | | |
| 6R10 | 300 | 150 | 30 | | | | | 6.9 | 6.9 | 6.9 | 6.9 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 6R10 | 600 | 150 | 60 | | | | | 20.7 | 20.7 | 6.9 | 6.9 | | |
| 6R8 | 150 | 150 | 15 | 3.8 | 6.9 | 6.9 | 6.9 | 5.5 | 1.4 | 4.1 | 4.1 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 6R8 | 300 | 150 | 30 | 3.8 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 4.1 | 4.1 | | |
| 6R10 | 300 | 150 | 30 | 10.3 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 6.9 | 6.9 | | |
| 6R10 | 600 | 150 | 60 | 13.8 | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 | 6.9 | 6.9 | | |
| 6R8 | 150 | 150 | 15 | | | 6.9 | 6.9 | 6.9 | 3.4 | 4.1 | 4.1 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 6R8 | 300 | 150 | 30 | | | 6.9 | 6.9 | 6.9 | 6.9 | 4.1 | 4.1 | | |
| 6R10 | 300 | 150 | 30 | | | 15.9 | 15.9 | 15.9 | 15.9 | 6.9 | 6.9 | | |
| 6R10 | 600 | 150 | 60 | | | 20.7 | 20.7 | 20.7 | 20.7 | 6.9 | 6.9 | | |
| 6R8 | 150 | 150 | 15 | | | 6.9 | 6.9 | | | 4.1 | 4.1 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 6R8 | 300 | 150 | 30 | | | 6.9 | 6.9 | | | 4.1 | 4.1 | | |
| 6R10 | 300 | 150 | 30 | | | 15.9 | 15.9 | | | 6.9 | 6.9 | | |
| 6R10 | 600 | 150 | 60 | | | 20.7 | 20.7 | | | 6.9 | 6.9 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|------|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 6R8 | 150 | 150 | 15 | 240 | 241 | 980 | 59 | 14 | 205 |
| 6R8 | 300 | 150 | 30 | 240 | 241 | 980 | 59 | 14 | 220 |
| 6R10 | 300 | 150 | 30 | 240 | 267 | 1020 | 59 | 14 | 260 |
| 6R10 | 600 | 150 | 60 | 240 | 267 | 1020 | 75 | 14 | 300 |



(1) 温度高于 38℃时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

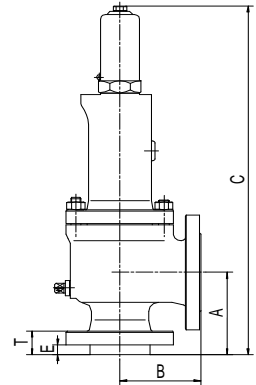
T ORIFICE
 26.00in²
 16774.2mm²
 146.2mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 进口法兰最大设定压力(bar) 极限 Max. Inlet Flange Set Pressure Limit | | | | | | 出口压力(bar)极限 ⁽¹⁾ Outlet Pressure Limit 38℃ | | 材料 Materials | |
|--|------------------------------|--------------|--------------------------------------|--|---------------|--------------|------|------|------|--|-----------------------------------|---------------------------------|------------------|
| | 进口 Inlet | 出口 Outlet | | -268℃~ -59℃ | -59℃~ -29℃ | -29℃~ 38℃ | 232℃ | 427℃ | 538℃ | 常规式阀门 Flange Rating Limit | 波纹管式阀门 Bellows Rating Limit | 阀体 Body | 弹簧 Spring |
| 8T10 | 150 | 150 | 15 | | | 4.5 | 4.5 | 4.5 | | 2.1 | 2.1 | 碳钢 C.St. WCB | 合金钢 alloy St. |
| 8T10 | 300 | 150 | 30 | | | 4.5 | 4.5 | 4.5 | | 2.1 | 2.1 | | |
| 8T10 | 300 | 150 | 30a | | | 8.3 | 8.3 | 8.3 | | 4.1 | 4.1 | | |
| 8T10 | 300 | 150 | 30b | | | 20.7 | 20.7 | 20.7 | | 6.9 | 6.9 | | |
| 8T10 | 300 | 150 | 30 | | | | | 8.3 | 6.9 | 4.1 | 4.1 | 铬钼钢 alloy St. WC6 | 合金钢 alloy St. |
| 8T10 | 600 | 150 | 60 | | | | | 20.7 | 14.8 | 6.9 | 6.9 | | |
| 8T10 | 150 | 150 | 15 | 3.4 | 4.5 | 4.5 | 4.5 | 4.5 | 1.4 | 2.1 | 2.1 | 奥氏体 不锈钢 St.St. CF8M | 合金钢 alloy St. |
| 8T10 | 300 | 150 | 30 | 3.4 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 2.1 | 2.1 | | |
| 8T10 | 300 | 150 | 30a | 4.5 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 4.1 | 4.1 | | |
| 8T10 | 150 | 150 | 15 | | | 4.5 | 4.5 | 4.5 | 3.4 | 2.1 | 2.1 | 镍/铜 合金 alloy St. M35-1 | 合金钢 alloy St. |
| 8T10 | 300 | 150 | 30 | | | 4.5 | 4.5 | 4.5 | 4.5 | 2.1 | 2.1 | | |
| 8T10 | 300 | 150 | 30a | | | 8.3 | 8.3 | 8.3 | 8.3 | 4.1 | 4.1 | | |
| 8T10 | 150 | 150 | 15 | | | 4.5 | 4.5 | | | 2.1 | 2.1 | 20号 合金 alloy St. CN7M | 合金钢 alloy St. |
| 8T10 | 300 | 150 | 30 | | | 4.5 | 4.5 | | | 2.1 | 2.1 | | |
| 8T10 | 300 | 150 | 30a | | | 8.3 | 8.3 | | | 4.1 | 4.1 | | |

结构尺寸和重量 Dimensions and Weights

| 进口×喉径 ×出口 Inlet×Orifice ×Outlet | 法兰等级 ASME Flange Class | | 型号中 进口压力 等级 Model Number | 代号 code name symbol | | | | | 重量(kg) Weight (approx) ⁽³⁾ |
|--|------------------------------|--------------|--------------------------------------|------------------------|------------------|------|----|----|---|
| | 进口 Inlet | 出口 Outlet | | A ⁽²⁾ | B ⁽²⁾ | C | T | E | |
| 8T10 | 150 | 150 | 15 | 276 | 279 | 1040 | 65 | 16 | 380 |
| 8T10 | 300 | 150 | 30 | 276 | 279 | 1040 | 65 | 16 | 400 |
| 8T10 | 300 | 150 | 30a | 276 | 279 | 1040 | 65 | 16 | 460 |
| 8T10 | 300 | 150 | 30b | 276 | 279 | 1040 | 65 | 16 | 480 |



(1) 温度高于 38℃时的最大出口压力应不超过 ASME B16.34 中规定的额定值。

Maximum back pressure limit at 38℃, for higher temperatures, refer to ASME B16.34 flange ratings.

(2) A 和 B 的公差为±1.6。

Tolerances for A and B: ±1.6

(3) 带扳手的阀门: 增加 10%。

Valves with lift lever: add 10%.

BSP美标系列先导式安全阀 BSP series pilot operated safety valve

性能

- 整定压力偏差: $\leq \pm 3\%$
- 超压: $\leq 10\%$
- 启闭压差: $\leq 10\%$
- 密封性能: 起跳回座后能保持良好的密封性, 符合API Std 527标准中的规定

特点

- 阀座软密封保证安全阀起跳前后的良好密封性。
- 允许工作压力接近安全阀的整定压力。
- 较小超压就能使主阀迅速达到全启状态。
- 安全阀动作性能和开启高度不受背压的影响。
- 启闭压差可调。
- 导阀不流动型结构设计减少了有害介质的排放和环境污染。
- 可在线检测安全阀的整定压力。

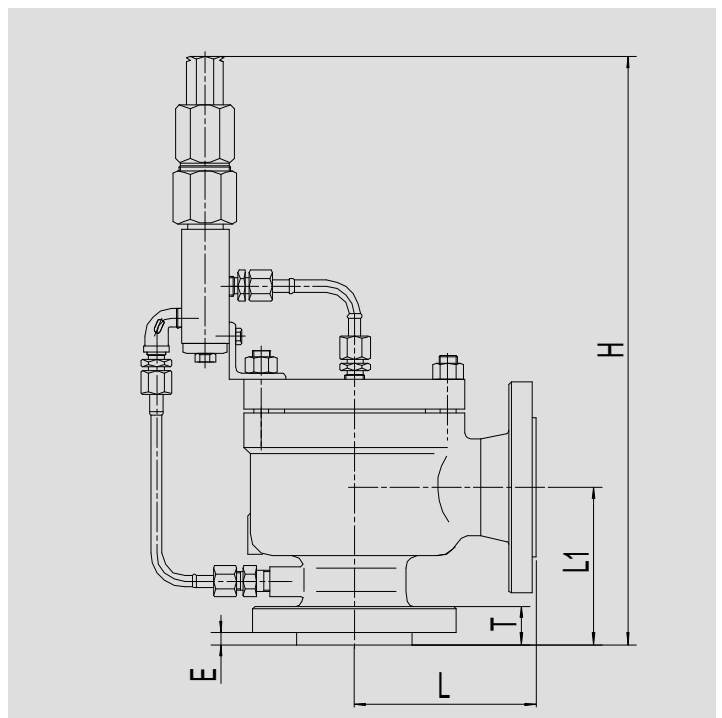


Performance

- The allowable tolerance of the set pressure: $\leq \pm 3\%$ of the set pressure
- Overpressure: $\leq 10\%$ of the set pressure
- Blowdown: $\leq 10\%$ of the set pressure
- Tightness: The valves have good seat tightness, conforms to API Std 527

Features

- The soft seat design provides good seat tightness before and after each relief cycle.
- The system can be operated nearer set pressure without valve leakage.
- No more overpressure required for full lift of main valve.
- Proper valve operation and lift are unaffected by back pressure.
- Adjustable blowdown.
- Non-flowing pilot reduces product loss and environmental pollution.
- Quick simple verification of set pressure while valve remains in service.



工作原理

当系统正常工作，先导阀处于关闭状态时，系统压力通过进口压力管道、导阀和气室压力管传到主阀阀瓣顶部的圆顶气室，从而在主阀瓣上产生了一个向下的净作用力，使主阀处于关闭状态。

当系统压力达到整定压力时，导阀开启且滑梭封闭导阀进气通道，主阀气室的压力通过导阀排放泄压，由于系统压力高于回座压力，滑梭封闭进气通道从而阻断流体在导阀中的流动（非流动型导阀的特征），这时主阀气室的压力急剧下降，主阀阀瓣完全打开，流体通过主阀泄放降压。

当系统压力降低到一定值时，导阀的弹簧力克服了阀进口压力作用在滑梭上的力，导阀回座，顶杆顶开滑梭，最后使得流体重新进入主阀的圆顶气室，关闭主阀。

Principles of operation

In the normal closed position, system pressure is transmitted through the pilot valve and into the dome of main valve. The pressure above the main valve disc generates a net downward force, hold the main valve closed.

When system pressure reaches the set pressure, the pilot spindle lifts and reseal piston closed simultaneously, venting the dome pressure through the pilot valve to atmosphere. Because of system pressure remains above reseal pressure, the reseal piston is held tightly closed, blocking flow to the pilot valve (the non-flowing pilot valve feature), at this time the dome pressure of main valve is depressed quickly, allowing the main valve to open fully.

When the desired system pressure is achieved, the pilot spring force overcomes force on the reseal piston, the reseal piston snaps open and the pilot spindle snaps closed simultaneously. Finally, system fluid reenter the dome and closes the main valve.

型号编制 Code system

| | | | | | | | | | |
|-----------------|-----|---|----|---|---|---|---|----|---|
| 示 例 Example | BSP | - | 15 | J | C | - | 1 | CD | 2 |
| 型号代号 Model code | 1 | | 2 | 3 | 4 | | 5 | 6 | 7 |

1、 阀门类型 Type

BSP-美标先导式安全阀 Pilot operated

2、 进口阀门压力等级代号 Inlet flange class code

150Lb-15, 300Lb-30, 300Lb(高压 high pressure)-30a, 600Lb-60, 1500Lb-150, 2500Lb-250

*注：出口法兰压力等级非执行API标准时，需标注出口压力法兰压力等级代号

3、 进口法兰面型式代号 Inlet flange facing code

RF面省去代号 RF facing omit code

RJ-J

4、 阀体材质代号 Materials code

见表一 See table 1

5,6 ,7、 进口法兰尺寸*喉径代号*出口法兰尺寸 Inlet flange*Orifice*Outlet flange

1D2-8T10

示例：BSP-150JC-3J4，进口法兰尺寸为3"x1500Lb，法兰面型式为RJ,出口法兰尺寸为4"x300Lb，法兰面型式为RF，阀体材质为WCB，喉径代号为J的先导式安全阀

D ORIFICE
0.110in²
71.0mm²
9.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (°C) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 1 D 2 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 114 | 105 | 435 | 17 |
| | 1 D 2 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 114 | 111 | 480 | 18 |
| | 1 D 2 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 114 | 111 | 480 | 18 |
| | 1 D 2 | 90 | 900 | 300 | 15.30 | 12.3 | 5.10 | 121 | 125 | 495 | 22 |
| | 1 D 2 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 121 | 125 | 505 | 22 |
| | 1 D 2 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 121 | 125 | 505 | 24 |
| | 1½ D 2 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 121 | 124 | 455 | 19 |
| | 1½ D 2 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 121 | 124 | 495 | 20 |
| | 1½ D 2 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 121 | 124 | 495 | 20 |
| | 1½ D 2 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 140 | 149 | 520 | 27 |
| | 1½ D 2 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 140 | 149 | 530 | 27 |
| 1½ D 2 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 140 | 149 | 530 | 34 | |

E ORIFICE
0.196in²
126.5mm²
12.7mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (°C) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 1 E 2 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 114 | 105 | 435 | 17 |
| | 1 E 2 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 114 | 111 | 480 | 18 |
| | 1 E 2 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 114 | 111 | 480 | 18 |
| | 1 E 2 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 121 | 125 | 495 | 22 |
| | 1 E 2 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 121 | 125 | 505 | 22 |
| | 1 E 2 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 121 | 125 | 505 | 24 |
| | 1½ E 2 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 121 | 124 | 455 | 19 |
| | 1½ E 2 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 121 | 124 | 495 | 20 |
| | 1½ E 2 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 121 | 124 | 495 | 20 |
| | 1½ E 2 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 140 | 149 | 520 | 27 |
| | 1½ E 2 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 140 | 149 | 530 | 27 |
| 1½ E 2 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 140 | 149 | 530 | 34 | |

F ORIFICE
0.307in²
198.1mm²
15.9mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (°C) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 1 F 2 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 114 | 105 | 435 | 17 |
| | 1 F 2 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 114 | 111 | 480 | 18 |
| | 1 F 2 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 114 | 111 | 480 | 18 |
| | 1 F 2 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 121 | 125 | 495 | 22 |
| | 1 F 2 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 121 | 125 | 505 | 22 |
| | 1 F 2 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 121 | 125 | 505 | 24 |
| | 1½ F 2 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 121 | 124 | 455 | 19 |
| | 1½ F 2 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 121 | 124 | 495 | 20 |
| | 1½ F 2 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 121 | 124 | 495 | 20 |
| | 1½ F 2 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 140 | 149 | 520 | 27 |
| | 1½ F 2 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 140 | 149 | 530 | 27 |
| | 1½ F 2 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 140 | 149 | 530 | 34 |

G ORIFICE
0.503in²
324.5mm²
20.3mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (°C) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 1½ G 3 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 124 | 130 | 475 | 24 |
| | 1½ G 3 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 124 | 130 | 515 | 26 |
| | 1½ G 3 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 124 | 130 | 515 | 26 |
| | 1½ G 3 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 171 | 162 | 545 | 30 |
| | 1½ G 3 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 171 | 162 | 555 | 30 |
| | 1½ G 3 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 171 | 162 | 555 | 42 |
| | 2 G 3 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 124 | 137 | 485 | 30 |
| | 2 G 3 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 124 | 137 | 525 | 31 |
| | 2 G 3 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 124 | 137 | 525 | 35 |
| | 2 G 3 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 171 | 167 | 555 | 44 |
| | 2 G 3 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 171 | 167 | 565 | 44 |
| | 2 G 3 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 171 | 178 | 575 | 53 |

H ORIFICE
0.785in²
506.5mm²
25.4mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (°C) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 1½H 3 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 124 | 130 | 475 | 24 |
| | 1½H 3 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 124 | 130 | 515 | 26 |
| | 1½H 3 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 124 | 130 | 515 | 26 |
| | 1½H 3 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 171 | 162 | 545 | 30 |
| | 1½H 3 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 171 | 162 | 555 | 30 |
| | 1½H 3 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 171 | 162 | 555 | 42 |
| | 2H 3 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 124 | 137 | 485 | 30 |
| | 2H 3 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 124 | 137 | 525 | 31 |
| | 2H 3 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 124 | 137 | 525 | 35 |
| | 2H 3 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 171 | 167 | 555 | 44 |
| | 2H 3 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 171 | 167 | 565 | 44 |
| | 2H 3 | 250 | 2500 | 300 | 42.54 | 34.40 | 5.10 | 171 | 178 | 575 | 53 |

J ORIFICE
1.287in²
830.3mm²
32.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (°C) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 2 J 3 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 124 | 137 | 485 | 30 |
| | 2 J 3 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 124 | 137 | 525 | 31 |
| | 2 J 3 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 124 | 137 | 525 | 35 |
| | 2 J 3 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 171 | 167 | 555 | 44 |
| | 2 J 3 | 150 | 1500 | 300 | 25.17 | 20.65 | 5.10 | 171 | 167 | 565 | 44 |
| | 2 J 3 | 15060 | 1500 | 600 | 25.54 | 20.65 | 10.20 | 171 | 167 | 565 | 47 |
| | 2 J 3 | 250 | 2500 | 300 | 25.17 | 25.17 | 5.10 | 171 | 178 | 575 | 53 |
| | 2 J 3 | 25060 | 2500 | 600 | 42.54 | 34.40 | 10.20 | 171 | 178 | 575 | 53 |
| | 3 J 4 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 162 | 156 | 525 | 50 |
| | 3 J 4 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 162 | 156 | 565 | 53 |
| | 3 J 4 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 162 | 162 | 570 | 55 |
| | 3 J 4 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 181 | 191 | 600 | 73 |
| | 3 J 4 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 181 | 191 | 610 | 83 |

K ORIFICE
 1.838in²
 1185.8mm²
 38.9mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 3K 4 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 162 | 156 | 525 | 50 |
| | 3K 4 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 162 | 156 | 565 | 53 |
| | 3K 4 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 162 | 162 | 570 | 55 |
| | 3K 4 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 181 | 191 | 600 | 73 |
| | 3K 4 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 181 | 191 | 610 | 83 |

L ORIFICE
 2.853in²
 1840.6mm²
 48.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 3L 4 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 162 | 156 | 525 | 50 |
| | 3L 4 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 162 | 156 | 565 | 53 |
| | 3L 4 | 60 | 600 | 150 | 8.55 | 8.27 | 1.96 | 162 | 162 | 570 | 55 |
| | 3L 4 | 6030 | 600 | 300 | 10.20 | 8.27 | 5.10 | 181 | 191 | 600 | 62 |
| | 3L 4 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 181 | 191 | 600 | 73 |
| | 3L 4 | 150 | 1500 | 300 | 20.00 | 20.00 | 5.10 | 181 | 191 | 610 | 83 |
| | 3L 4 | 15060 | 1500 | 600 | 25.54 | 20.65 | 10.20 | 194 | 191 | 610 | 86 |
| | 4L 6 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 210 | 197 | 645 | 82 |
| | 4L 6 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 210 | 197 | 685 | 91 |
| | 4L 6 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 210 | 197 | 685 | 95 |
| | 4L 6 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 233 | 249 | 740 | 132 |
| | 4L 6 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 233 | 249 | 750 | 143 |

M ORIFICE
3.60in²
2322.6mm²
54.5mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 4M6 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 210 | 197 | 645 | 82 |
| | 4M6 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 210 | 197 | 685 | 91 |
| | 4M6 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 210 | 197 | 685 | 95 |
| | 4M6 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 233 | 249 | 740 | 132 |
| | 4M6 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 233 | 249 | 750 | 143 |

N ORIFICE
4.34in²
2800.0mm²
59.7mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 4N6 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 210 | 197 | 645 | 82 |
| | 4N6 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 210 | 197 | 685 | 91 |
| | 4N6 | 60 | 600 | 150 | 10.20 | 8.27 | 1.96 | 210 | 197 | 685 | 95 |
| | 4N6 | 90 | 900 | 300 | 15.30 | 12.38 | 5.10 | 233 | 249 | 740 | 132 |
| | 4N6 | 150 | 1500 | 300 | 25.54 | 20.65 | 5.10 | 233 | 249 | 750 | 143 |

P ORIFICE
6.38in²
4116.1mm²
72.4mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 4P6 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 210 | 197 | 645 | 82 |
| | 4P6 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 210 | 197 | 685 | 91 |
| | 4P6 | 60 | 600 | 150 | 9.00 | 8.27 | 1.96 | 210 | 197 | 685 | 95 |
| | 4P6 | 6030 | 600 | 300 | 10.20 | 8.27 | 5.10 | 233 | 249 | 740 | 102 |
| | 4P6 | 9030 | 900 | 300 | 15.30 | 12.38 | 5.10 | 233 | 249 | 740 | 132 |
| | 4P6 | 150 | 1500 | 300 | 21.24 | 20.65 | 5.10 | 233 | 249 | 750 | 143 |
| | 4P6 | 15060 | 1500 | 600 | 25.54 | 20.65 | 10.20 | 264 | 249 | 750 | 150 |

Q ORIFICE
11.05in²
7129.0mm²
95.3mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 6Q8 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 241 | 240 | 690 | 144 |
| | 6Q8 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 241 | 240 | 730 | 155 |
| | 6Q8 | 60 | 600 | 150 | 9.17 | 8.27 | 1.96 | 241 | 246 | 740 | 182 |
| | 6Q8 | 6030 | 600 | 300 | 10.20 | 8.27 | 5.10 | 265 | 246 | 740 | 196 |

R ORIFICE
16.00in²
10322.6mm²
114.6mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 6R8 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 241 | 240 | 690 | 144 |
| | 6R8 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 241 | 240 | 730 | 155 |
| | 6R8 | 60 | 600 | 150 | 6.31 | 6.31 | 1.96 | 241 | 246 | 740 | 182 |
| | 6R8 | 6030 | 600 | 300 | 10.20 | 8.27 | 5.10 | 265 | 246 | 740 | 196 |

T ORIFICE
26.00in²
16774.2mm²
146.2mm

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | 规格 Size | 法兰磅级 Flange Class | | | 最高整定压力 (MPa) Maximum Set Pressure | | 38℃最高背压 Back Press. Limit 38℃ (MPa) | 外形尺寸 (mm) External Dimension | | | 重量 Weight (Kg) |
|------------|------------|----------------------|-----------------|------------------|--------------------------------------|--------|--|---------------------------------|-----|-----|----------------------|
| | | | | | 进口温度 (℃) Inlet Temperature | | | L | L1 | H | |
| | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | -29~38 | 38~260 | | | | | |
| BSP | 8T10 | 15 | 150 | 150 | 1.96 | 1.17 | 1.96 | 279 | 276 | 740 | 298 |
| | 8T10 | 30 | 300 | 150 | 5.10 | 4.14 | 1.96 | 279 | 276 | 780 | 314 |
| | 8T10 | 60 | 600 | 150 | 6.20 | 6.20 | 1.96 | 279 | 297 | 800 | 342 |
| | 8T10 | 6030 | 600 | 300 | 10.20 | 8.27 | 5.10 | 305 | 297 | 800 | 354 |

BSGS 美标系列高性能蒸汽安全阀 BSGS series high performance safety valve for steam

用途

BSGS 系列高性能美标蒸汽安全阀适用于蒸汽动力锅炉、直流锅炉、再热器和其他设备及管道的超压保护。

Application

BSGS Series High Performance Safety Valve for Steam Service is serviced for overpressure protection of power boiler, once-through boiler, reheater and other pressure vessel and pipe.

性能

符合ASME《锅炉和压力容器规范》第I卷动力锅炉要求

- 整定压力偏差 $\Delta P_s \leq \pm 1\% P_s$ ($P_s > 6.89\text{MPa}$)
- 超过压力 $\Delta P_o \leq 3\% P_s$
- 启闭压差 $\Delta P_{b1} \leq 4\% P_s$

特点

- 采取背压调节系统结构设计，利用安全阀进口蒸汽提供回座背压并可调节，保证了启闭压差 $\Delta P_{b1} \leq 4\% P_s$ 。
- 阀座与阀体整体焊接，确保高温、高压工作下的连接可靠。
- 进、出口连接均为法兰结构，便于安全阀的装卸和维修。
- 导向对中性好，保证了安全阀动作灵活、可靠。
- 选用材质均能很好满足高温条件下的正常使用。
- 阀瓣、阀座密封面堆焊硬质合金并进行高精度研磨。
- 高性能弹簧，并对其进行模拟工况条件测试，保证了高温、高压工况下的正常使用。

Performance

BSGS Series Safety Valve meets the requirements of ASME Boiler and Pressure Vessel Code, Section I, Power Boilers.

- Set pressure tolerance $\Delta P_s \leq \pm 1\% P_s$ ($P_s > 6.89\text{MPa}$)
- Overpressure $\Delta P_o \leq 3\% P_s$
- Blowdown $\Delta P_{b1} \leq 4\% P_s$

Features

- The back pressure adjusting system utilizes the flowing steam to build and adjust back pressure, to ensure that blowdown is not more than 4% of set pressure.
- Nozzle is welded with body, to make connection stable when it's serviced in the condition of high temperature and high pressure.
- Connection of inlet and outlet is flange type, to make installation and maintenance easy.
- Perfect guide design provides well alignment, to ensure that the operation of valve is agile and stable.
- The selected materials are of high performance, which can be used in high temperature condition.
- The nozzle and disc is faced with, and lapped precisely.
- Spring is produced through excellent technology, and tested under simulative service condition.

型号代码 Code system

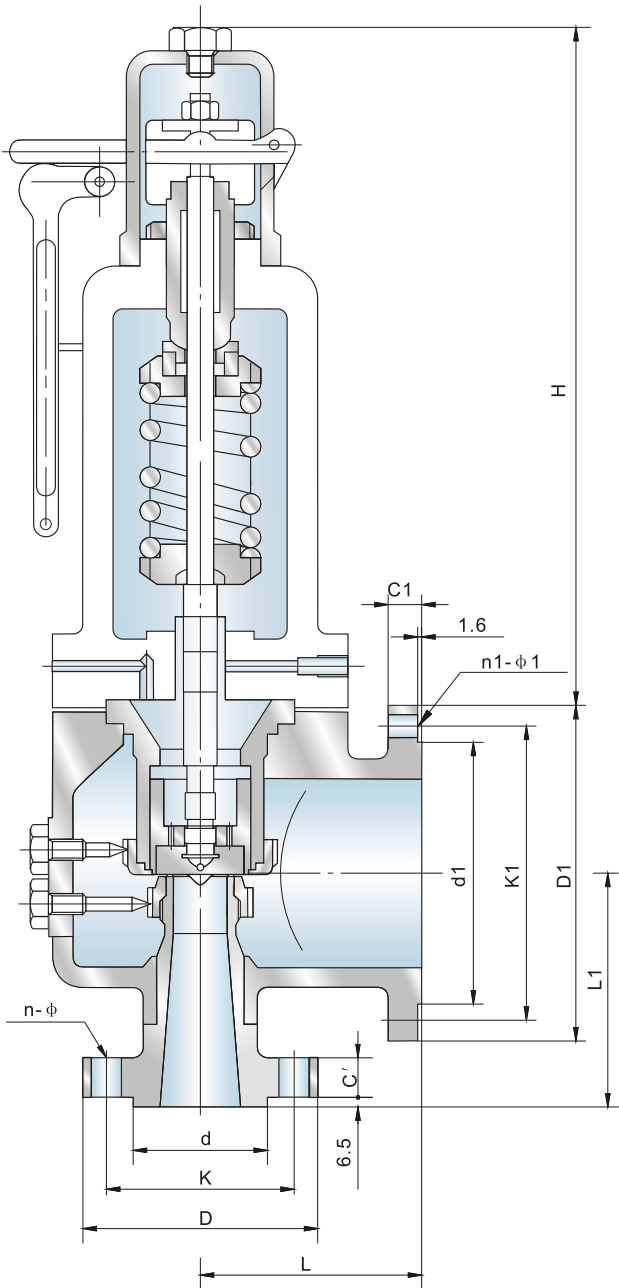
| 法兰磅级 Flange class(Lb) | | | 阀体材料 Material of body |
|--------------------------|-----------------|------------------|--------------------------|
| 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | |
| 30 | 300 | 150 | C—WCB |
| 30a | 300 | 150 | C ₆ —WC6 |
| 60 | 600 | 150 | |
| 6030 | 600 | 300 | |
| 9015 | 900 | 150 | |
| 90 | 900 | 300 | |
| 15015 | 1500 | 150 | |
| 150 | 1500 | 300 | |
| 250 | 2500 | 300 | |

例：进口法兰压力级为1500lb，阀体材料为WCB，其型号代码为：
BSGS-150C

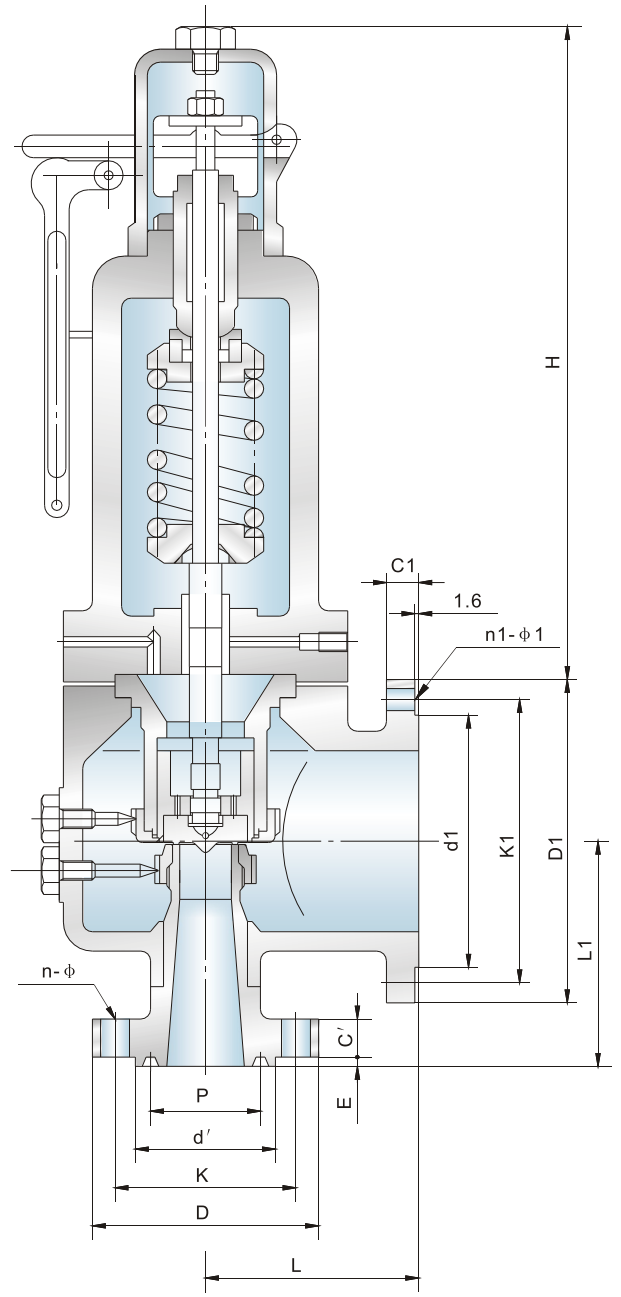
Example: Inlet flange class1500lb, WCB body, is named for
BSGS-150C



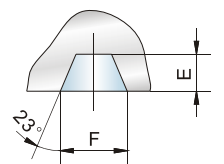
蒸汽安全阀结构图 Valve structure



3001b~9001b



15001b~25001b



CLASS 300Lb

最高整定压力2.0MPa

Maximum Set Pressure 2.0MPa

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | | 规格 Size | 流道 面积 Orifice Area (mm ²) | 法兰磅级 Flange Class | | | 外形尺寸 (mm) External Dimension | | |
|---------------|---------------|---|---|----------------------|-----------------|------------------|---------------------------------|-----|----|
| 适用温度 ≤400℃ | 适用温度 ≤520℃ | | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | L | L1 | C' |
| BSGS-30aC | BSGS-30aC6 | 1 ¹ / ₂ F 2 | 198(F= φ 16) | 30a | 300 | 150 | 152 | 124 | 25 |
| BSGS-30aC | BSGS-30aC6 | 1 ¹ / ₂ G 2 ¹ / ₂ | 324(G= φ 20) | | 300 | 150 | 152 | 124 | 25 |
| BSGS-30aC | BSGS-30aC6 | 1 ¹ / ₂ H 3 | 506(H= φ 26) | | 300 | 150 | 152 | 130 | 25 |
| BSGS-30aC | BSGS-30aC6 | 2 J 3 | 830(J= φ 33) | | 300 | 150 | 152 | 137 | 30 |
| BSGS-30aC | BSGS-30aC6 | 2 ¹ / ₂ K 4 | 1186(K= φ 40) | | 300 | 150 | 152 | 165 | 30 |
| BSGS-30aC | BSGS-30aC6 | 3 L 6 | 1841(L= φ 50) | | 300 | 150 | 165 | 178 | 35 |
| BSGS-30aC | BSGS-30aC6 | 4 P 6 | 4116(P= φ 72) | | 300 | 150 | 254 | 225 | 35 |
| BSGS-30aC | BSGS-30aC6 | 6 Q 8 | 7129(Q= φ 96) | | 300 | 150 | 241 | 240 | 40 |

CLASS 600Lb

最高整定压力4.13MPa

Maximum Set Pressure 4.13MPa

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | | 规格 Size | 流道 面积 Orifice Area (mm ²) | 法兰磅级 Flange Class | | | 外形尺寸 (mm) External Dimension | | |
|---------------|---------------|---|---|----------------------|-----------------|------------------|---------------------------------|-----|-----|
| 适用温度 ≤400℃ | 适用温度 ≤520℃ | | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | L | L1 | C' |
| BSGS-60C | BSGS-60C6 | 1 ¹ / ₂ F 2 ¹ / ₂ | 198(F= φ 16)) | 60 | 600 | 150 | 140 | 130 | 25 |
| BSGS-60C | BSGS-60C6 | 1 ¹ / ₂ G 3 | 324(G= φ 20) | | 600 | 150 | 155 | 130 | 25 |
| BSGS-60C | BSGS-60C6 | 1 ¹ / ₂ H 3 | 506(H= φ 26) | | 600 | 150 | 155 | 140 | 25 |
| BSGS-60C | BSGS-60C6 | 2 J 4 | 830(J= φ 33) | | 600 | 150 | 180 | 150 | 30 |
| BSGS-60C | BSGS-60C6 | 2 ¹ / ₂ K 4 | 1186(K= φ 40) | | 600 | 150 | 180 | 185 | 30 |
| BSGS-60C | BSGS-60C6 | 2 ¹ / ₂ K 6 | 1186(K= φ 40) | | 600 | 150 | 180 | 185 | 30 |
| BSGS-60C | BSGS-60C6 | 3 L 6 | 1841(L= φ 50) | | 600 | 150 | 220 | 195 | 35 |
| BSGS-60C | BSGS-60C6 | 3 M 6 | 2323(M= φ 55) | | 600 | 150 | 220 | 195 | 35 |
| BSGS-60C | BSGS-60C6 | 4 N 6 | 2800(N= φ 60) | | 600 | 150 | 220 | 215 | 40 |
| BSGS-6030C | BSGS-6030C6 | 4 P 6 | 4116(P= φ 72) | | 6030 | 600 | 300 | 265 | 235 |
| BSGS-6030C | BSGS-6030C6 | 4 P 8 | 4116(P= φ 72) | 600 | | 300 | 265 | 235 | 40 |
| BSGS-6030C | BSGS-6030C6 | 6 Q 8 | 7129(Q= φ 96) | 600 | | 300 | 280 | 285 | 50 |

CLASS 900Lb

最高整定压力4.13MPa

Maximum Set Pressure 4.13MPa

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | | 规格 Size | 流道 面积 Orifice Area (mm ²) | 法兰磅级 Flange Class | | | 外形尺寸 (mm) External Dimension | | |
|---------------|---------------|------------|---|----------------------|-----------------|------------------|---------------------------------|-----|-----|
| 适用温度 ≤400℃ | 适用温度 ≤520℃ | | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | L | L1 | C' |
| BSGS-9015C | BSGS-9015C6 | 1 1/2 F 3 | 198(F=φ16) | 9015 | 900 | 150 | 155 | 140 | 35 |
| BSGS-9015C | BSGS-9015C6 | 1 1/2 G 3 | 324(G=φ20) | | 900 | 150 | 155 | 140 | 35 |
| BSGS-9015C | BSGS-9015C6 | 1 1/2 H 3 | 506(H=φ26) | | 900 | 150 | 155 | 140 | 35 |
| BSGS-9015C | BSGS-9015C6 | 2 J 4 | 830(J=φ33) | | 900 | 150 | 180 | 150 | 40 |
| BSGS-9015C | BSGS-9015C6 | 2 1/2 K 4 | 1186(K=φ40) | | 900 | 150 | 180 | 185 | 45 |
| BSGS-9015C | BSGS-9015C6 | 2 1/2 K 6 | 1180(K=φ40) | | 900 | 150 | 180 | 185 | 45 |
| BSGS-9015C | BSGS-9015C6 | 3 L 6 | 1841(L=φ50) | | 900 | 150 | 220 | 195 | 40 |
| BSGS-9015C | BSGS-9015C6 | 3 M 6 | 2323(M=φ55) | | 900 | 150 | 220 | 195 | 40 |
| BSGS-9015C | BSGS-9015C6 | 4 N 6 | 2800(N=φ60) | | 900 | 150 | 250 | 230 | 50 |
| BSGS-90C | BSGS-90C6 | 4 P 6 | 4116(P=φ72) | | 90 | 900 | 300 | 265 | 250 |
| BSGS-90C | BSGS-90C6 | 4 P 8 | 4116(P=φ72) | 900 | | 300 | 265 | 250 | 50 |

CLASS 1500Lb

最高整定压力10.34MPa

Maximum Set Pressure 10.34MPa

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | | 规格 Size | 流道 面积 Orifice Area (mm ²) | 法兰磅级 Flange Class | | | 外形尺寸 (mm) External Dimension | | |
|---------------|---------------|------------|---|----------------------|-----------------|------------------|---------------------------------|-----|-----|
| 适用温度 ≤400℃ | 适用温度 ≤520℃ | | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | L | L1 | C' |
| BSGS-15015C | BSGS-15015C6 | 1 D 2 1/2 | 71(D=φ10) | 15015 | 1500 | 150 | 146 | 170 | 35 |
| BSGS-15015C | BSGS-15015C6 | 1 1/2 F 3 | 198(F=φ16) | | 1500 | 150 | 155 | 150 | 40 |
| BSGS-15015C | BSGS-15015C6 | 1 1/2 G 3 | 324(G=φ20) | | 1500 | 150 | 155 | 150 | 40 |
| BSGS-15015C | BSGS-15015C6 | 1 1/2 H 3 | 506(H=φ26) | | 1500 | 150 | 155 | 150 | 40 |
| BSGS-15015C | BSGS-15015C6 | 2 J 4 | 830(J=φ33) | | 1500 | 150 | 180 | 160 | 45 |
| BSGS-15015C | BSGS-15015C6 | 2 1/2 K 6 | 1186(K=φ40) | | 1500 | 150 | 240 | 195 | 50 |
| BSGS-15015C | BSGS-15015C6 | 3 L 6 | 1841(L=φ50) | | 1500 | 150 | 250 | 210 | 55 |
| BSGS-15015C | BSGS-15015C6 | 3 M 6 | 2323(M=φ55) | | 1500 | 150 | 260 | 230 | 55 |
| BSGS-15015C | BSGS-15015C6 | 4 N 6 | 2800(N=φ60) | | 1500 | 150 | 265 | 240 | 65 |
| BSGS-150C | BSGS-150C6 | 4 P 6 | 4116(P=φ72) | | 150 | 1500 | 300 | 265 | 260 |
| BSGS-150C | BSGS-150C6 | 4 P 8 | 4116(P=φ72) | 1500 | | 300 | 265 | 260 | 65 |

CLASS 250Lb

最高整定压力2.0MPa

Maximum Set Pressure 2.0MPa

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 型号 Type | | 规格 Size | 流道 面积 Orifice Area (mm ²) | 法兰磅级 Flange Class | | | 外形尺寸 (mm) External Dimension | | |
|---------------|---------------|------------|---|----------------------|-----------------|------------------|---------------------------------|-----|----|
| 适用温度 ≤400℃ | 适用温度 ≤520℃ | | | 编号 No. | 进口(Lb) Inlet | 出口(Lb) Outlet | L | L1 | C' |
| BSGS-250C | BSGS-250C6 | 1½ F 3 | 198(F=φ16) | 250 | 2500 | 300 | 155 | 190 | 55 |
| BSGS-250C | BSGS-250C6 | 1½ G 3 | 324(G=φ20) | | 2500 | 300 | 200 | 220 | 55 |
| BSGS-250C | BSGS-250C6 | 1½ H 4 | 506(H=φ26) | | 2500 | 300 | 200 | 220 | 55 |
| BSGS-250C | BSGS-250C6 | 2 J 4 | 830(J=φ33) | | 2500 | 300 | 220 | 220 | 60 |
| BSGS-250C | BSGS-250C6 | 2 J 6 | 830(J=φ33) | | 2500 | 300 | 220 | 220 | 60 |
| BSGS-250C | BSGS-250C6 | 2½ K 6 | 1186(K=φ40) | | 2500 | 300 | 240 | 270 | 70 |
| BSGS-250C | BSGS-250C6 | 3 M 6 | 2323(M=φ55) | | 2500 | 300 | 260 | 280 | 80 |

BSNJ美标系列保温夹套安全阀 BSNJ series safety valve with jacket

特点

- 用作聚酯、乙烯及尿素化肥等装置中介质需要保温的压力安全附件。
- 对进、出口法兰在内的阀体均进行保温，因而保温效果好；特殊需要时可增加蒸汽冲洗功能。
- 平衡波纹管式结构，变动背压不影响安全阀的整定压力，且波纹管对弹簧等阀盖内的零件起到防护介质侵蚀作用。
- 内件（阀瓣、阀座）标准材料均为奥氏体不锈钢且堆焊钴基硬质合金。
- 特殊需要时内件可提供尿素级316L、双相不锈钢0Cr25Ni6Mo3CuN（255合金）、00Cr25Ni6Mo2N（SUS329J1）等材质，波纹管可提供钛（Ti）材质。

Features

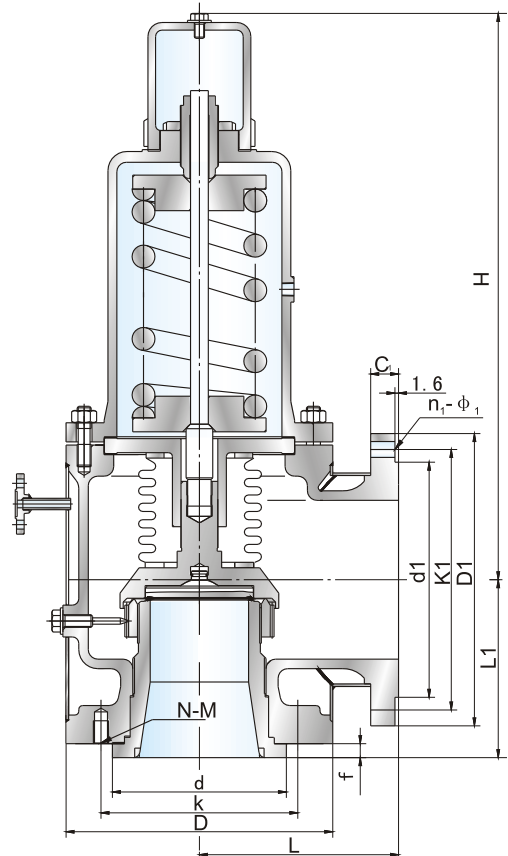
- It's serviced in the circumstance where the heat preservation of fluid is needed, such as the equipment of polyester, ethylene, urea, etc.
- Body including inlet and outlet flanges is heat preserved, so the effect is very well. The function of vapor flushing can be added, if needed.
- Balanced bellows construction protects set pressure from being affected by variable back pressure, and the parts in bonnet, such as spring, from being corroded.
- The standard materials for the inside parts (Valve clack, valve seat) are all austenitic stainless steel and bead welding cobalt-base hard alloy.
- To meet special service, the material of trim can be 316LN, 0Cr25Ni6Mo3CuN (255 alloy) and 00Cr25Ni6Mo2N (SUS329J1), the material of bellows can be Ti.

型号代码 Type Code

| | | | |
|------|--------------------------------------|--------------------------|---|
| BSNJ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | 进口法兰磅级 Flange Class | 阀体材料 Material Of Body | 阀帽型式 Cap Types |
| | 15: 150Lb 30: 300Lb 30a: 300Lb | 见表一 See table 1 | B: 带螺塞的螺纹式 E: 带螺塞的封闭杆杆式 B: Screwed Cap with Plug E: Packed Lifting Lever with Plug |

例：进口法兰压力级为150lb，阀体材料为碳钢，阀帽为带螺塞的螺纹式安全阀，其型号代码为：BSNJ-15CB

Example: A BSNJ Series Safety Valve with Jacket, inlet flange class 150lb, WCB body, Screwed with plug cap, is named for BSNJ-15CB



CLASS 150Lb

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 口径 (英寸) Size (inch) | 最高整定压力 Max. Set Pressure (MPa) | | 法兰尺寸 Dimensions (mm) | | | | | | 面心距 Center to Face (mm) | | 近似高度H App. Height (mm) | |
|----------------------------|---|---------|----------------------|----------------|----------------|----------------|----------------|--------------------------------|----------------------------|-------|---------------------------|------|
| | 进口温度 (°C) Inlet Temperature | | | | | | | | | | 阀帽型式 Cap Types | |
| | 进口/流道/出口 (法兰) (流道面积mm ²) Inlet/Orifice/Outlet (Orifice Area) | -29~232 | 232~427 | 进口 Inlet | D | K | d | f | n-M | L | L1 | B |
| 出口 Outlet | | | | D ₁ | K ₁ | d ₁ | C ₁ | n ₁ -Φ ₁ | | | | |
| 1 D 2 (2 1/2) (71) | 1.27 | 0.55 | 进口 | 168 | 79.5 | 51 | 18 | 4-M14 | 134 | 125 | 470 | 530 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ 19 | | | | |
| 1 E 2 (2 1/2) (126) | 1.27 | 0.55 | 进口 | 160 | 79.5 | 51 | 18 | 4-M14 | 134 | 125 | 470 | 530 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ 19 | | | | |
| 1 1/2 F 2 (2 1/2) (198) | 1.27 | 0.55 | 进口 | 170 | 98.5 | 73 | 20 | 4-M14 | 140 | 139 | 485 | 550 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ 19 | | | | |
| 1 1/2 G 3 (4) (324) | 1.27 | 0.55 | 进口 | 190 | 98.5 | 73 | 20 | 4-M14 | 149 | 149 | 535 | 595 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 4-φ 19 | | | | |
| 1 1/2 H 3 (4) (506) | 1.27 | 0.55 | 进口 | 190 | 98.5 | 73 | 20 | 4-M14 | 155 | 150 | 555 | 615 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 4-φ 19 | | | | |
| 2 J 3 (4) (830) | 1.27 | 0.55 | 进口 | 200 | 120.5 | 92 | 20 | 4-M16 | 155 | 150 | 555 | 615 |
| | | | 出口 | 279 | 241.5 | 216 | 25.4 | 8-φ 19 | | | | |
| 3 K 4 (6) (1186) | 1.27 | 0.55 | 进口 | 250 | 152.5 | 127 | 22 | 4-M16 | 185 | 170 | 690 | 760 |
| | | | 出口 | 279 | 241.5 | 216 | 25.4 | 8-φ 22 | | | | |
| 3 L 4 (6) (1841) | 1.27 | 0.55 | 进口 | 250 | 152.5 | 127 | 22 | 4-M16 | 185 | 170 | 690 | 760 |
| | | | 出口 | 279 | 241.5 | 216 | 25.4 | 8-φ 22 | | | | |
| 4 M 6 (8) (2323) | 1.27 | 0.55 | 进口 | 320 | 190.5 | 157 | 22 | 8-M16 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ 22 | | | | |
| 4 N 6 (8) (2800) | 1.27 | 0.55 | 进口 | 320 | 190.5 | 157 | 22 | 8-M16 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ 22 | | | | |
| 4 P 6 (8) (4116) | 1.27 | 0.55 | 进口 | 320 | 190.5 | 157 | 22 | 8-M16 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ 22 | | | | |
| 6 Q 8 (10) (7129) | 1.13 | 0.55 | 进口 | 370 | 241.5 | 216 | 22 | 8-M20 | 256 | 239.5 | 1025 | 1130 |
| | | | 出口 | 406 | 362 | 324 | 30.2 | 12-φ 26 | | | | |
| 6 R 8 (10) (10323) | 0.68 | 0.55 | 进口 | 410 | 241.5 | 216 | 22 | 8-M20 | 276 | 239.5 | 1040 | 1145 |
| | | | 出口 | 406 | 362 | 324 | 30.2 | 12-φ 26 | | | | |
| 8 T 10 (12) (16774) | 0.44 | 0.44 | 进口 | 480 | 298.5 | 270 | 22 | 8-M20 | 310 | 280 | 1215 | 1320 |
| | | | 出口 | 483 | 432 | 381 | 32 | 12-φ 26 | | | | |

CLASS 300Lb

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 口径 (英寸) Size (inch) | 最高整定压力 Max. Set Pressure (MPa) | | 法兰尺寸 Dimensions (mm) | | | | | | 面心距 Center to Face (mm) | | 近似高度H App. Height (mm) | |
|----------------------------|---|---------|----------------------|-----|-------|-----|------|---------|----------------------------|-----------|---------------------------|----------------|
| | 进口温度 (°C) Inlet Temperature | | 进口 Inlet | D | K | d | f | n-M | | | | |
| | 进口/流道/出口 (法兰) (流道面积mm ²) Inlet/Orifice/Outlet (Orifice Area) | -29~232 | | | | | | | 232~427 | 出口 Outlet | D ₁ | K ₁ |
| 1 D 2 (2 1/2) (71) | 1.96 | 1.96 | 进口 | 160 | 89 | 51 | 18 | 4-M16 | 134 | 125 | 470 | 530 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ 19 | | | | |
| 1 E 2 (2 1/2) (126) | 1.96 | 1.96 | 进口 | 160 | 89 | 51 | 18 | 4-M16 | 134 | 125 | 470 | 530 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ 19 | | | | |
| 1 1/2 F 2 (2 1/2) (198) | 1.96 | 1.96 | 进口 | 170 | 114.5 | 73 | 20 | 4-M20 | 140 | 139 | 485 | 550 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 8-φ 19 | | | | |
| 1 1/2 G 3 (4) (324) | 1.96 | 1.96 | 进口 | 190 | 114.5 | 73 | 20 | 4-M20 | 149 | 149 | 535 | 595 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 8-φ 19 | | | | |
| 1 1/2 H 3 (4) (506) | 1.96 | 1.96 | 进口 | 190 | 114.5 | 73 | 20 | 4-M20 | 149 | 149 | 535 | 595 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 8-φ 19 | | | | |
| 2 J 3 (4) (830) | 1.96 | 1.96 | 进口 | 200 | 127 | 92 | 20 | 8-M16 | 155 | 150 | 555 | 615 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 8-φ 19 | | | | |
| 3 K 4 (6) (1186) | 1.96 | 1.96 | 进口 | 250 | 168 | 127 | 22 | 8-M20 | 185 | 170 | 690 | 760 |
| | | | 出口 | 279 | 241.5 | 216 | 25.4 | 8-φ 22 | | | | |
| 3 L 4 (6) (1841) | 1.96 | 1.96 | 进口 | 250 | 168 | 127 | 22 | 8-M20 | 185 | 170 | 690 | 760 |
| | | | 出口 | 279 | 241.5 | 216 | 25.4 | 8-φ 22 | | | | |
| 4 M 6 (8) (2323) | 1.96 | 1.96 | 进口 | 320 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ 22 | | | | |
| 4 N 6 (8) (2800) | 1.96 | 1.96 | 进口 | 320 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ 22 | | | | |
| 4 P 6 (8) (4116) | 1.96 | 1.96 | 进口 | 320 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ 22 | | | | |
| 6 Q 8 (10) (7129) | 1.13 | 1.13 | 进口 | 370 | 270 | 216 | 22 | 12-M20 | 256 | 239.5 | 1025 | 1130 |
| | | | 出口 | 406 | 362 | 324 | 30.2 | 12-φ 26 | | | | |
| 6 R 8 (10) (10323) | 0.68 | 0.68 | 进口 | 410 | 270 | 216 | 22 | 12-M20 | 276 | 239.5 | 1040 | 1145 |
| | | | 出口 | 406 | 362 | 324 | 30.2 | 12-φ 26 | | | | |
| 8 T 10 (12) (16774) | 0.44 | 0.44 | 进口 | 480 | 330 | 270 | 22 | 12-M24 | 310 | 280 | 1215 | 1320 |
| | | | 出口 | 483 | 432 | 381 | 32 | 12-φ 26 | | | | |

CLASS 300Lb (高压High Pressure)

尺寸, 压力-温度极限 Size, Pressure-Temperature Limits

| 口径 (英寸) Size (inch) | 最高整定压力 Max. Set Pressure (MPa) | | 法兰尺寸 Dimensions (mm) | | | | | | 面心距 Center to Face (mm) | | 近似高度H App. Height (mm) | |
|----------------------------|---|---------|----------------------|----------------|----------------|----------------|----------------|--------------------------------|----------------------------|-------|---------------------------|----------|
| | 进口温度 (°C) Inlet Temperature | | | | | | | | | | | |
| | 进口/流道/出口 (法兰) (流道面积mm ²) Inlet/Orifice/Outlet (Orifice Area) | -29~232 | 232~427 | 进口 Inlet | D | K | d | f | n-M | L | L1 | B A42 |
| 出口 Outlet | | | | D ₁ | K ₁ | d ₁ | C ₁ | n ₁ -Φ ₁ | | | | |
| 1 D 2 (2 1/2) (71) | 4.24 | 2.82 | 进口 | 160 | 89 | 51 | 18 | 4-M16 | 134 | 125 | 470 | 530 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ19 | | | | |
| 1 E 2 (2 1/2) (126) | 4.24 | 2.82 | 进口 | 160 | 89 | 51 | 18 | 4-M16 | 134 | 125 | 470 | 530 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ19 | | | | |
| 1 1/2 F 2 (2 1/2) (198) | 4.24 | 2.82 | 进口 | 170 | 114.5 | 73 | 20 | 4-M20 | 140 | 139 | 485 | 550 |
| | | | 出口 | 178 | 139.5 | 105 | 22.4 | 4-φ19 | | | | |
| 1 1/2 G 3 (4) (324) | 4.24 | 2.82 | 进口 | 190 | 114.5 | 73 | 20 | 4-M20 | 149 | 149 | 535 | 595 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 8-φ19 | | | | |
| 1 1/2 H 3 (4) (506) | 4.24 | 2.82 | 进口 | 190 | 127 | 92 | 20 | 8-M16 | 155 | 150 | 555 | 615 |
| | | | 出口 | 229 | 190.5 | 157 | 23.9 | 8-φ19 | | | | |
| 3 J 4 (6) (830) | 4.24 | 2.82 | 进口 | 200 | 168 | 127 | 22 | 8-M20 | 185 | 170 | 555 | 615 |
| | | | 出口 | 229 | 241.5 | 216 | 25.4 | 8-φ22 | | | | |
| 3 K 4 (6) (1186) | 4.24 | 2.82 | 进口 | 250 | 168 | 127 | 22 | 8-M20 | 185 | 170 | 690 | 760 |
| | | | 出口 | 279 | 241.5 | 216 | 25.4 | 8-φ22 | | | | |
| 4 L 6 (8) (1841) | 4.24 | 2.82 | 进口 | 250 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 690 | 760 |
| | | | 出口 | 279 | 298.5 | 270 | 25.4 | 8-φ22 | | | | |
| 4 M 6 (8) (2323) | 4.24 | 2.82 | 进口 | 320 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ22 | | | | |
| 4 N 6 (8) (2800) | 4.24 | 2.82 | 进口 | 320 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ22 | | | | |
| 4 P 6 (8) (4116) | 3.62 | 2.82 | 进口 | 320 | 200 | 157 | 22 | 8-M20 | 225 | 200 | 860 | 930 |
| | | | 出口 | 343 | 298.5 | 270 | 28.4 | 8-φ22 | | | | |
| 6 Q 8 (10) (7129) | 2.06 | 2.06 | 进口 | 370 | 270 | 216 | 22 | 12-M20 | 256 | 239.5 | 1025 | 1130 |
| | | | 出口 | 406 | 362 | 324 | 30.2 | 12-φ26 | | | | |
| 6 R 10 (12) (10323) | 1.58 | 1.58 | 进口 | 420 | 270 | 216 | 22 | 12-M20 | 282 | 269 | 1070 | 1175 |
| | | | 出口 | 483 | 432 | 381 | 32 | 12-φ26 | | | | |
| 8 T 10 (12) (16774) | 0.82 | 0.82 | 进口 | 480 | 330 | 270 | 22 | 12-M24 | 310 | 280 | 1215 | 1320 |
| | | | 出口 | 483 | 432 | 381 | 32 | 12-φ26 | | | | |

美标系列安全阀订货须知 Ordering Information

为了给设备选择合适的安全阀，用户可根据样本进行选型，并在订货时提供以下资料。欢迎向我单位咨询，我们会满足您的要求并协助做好安全阀的选型和采购工作。

Users may select proper safety valves for your application by the catalog and please provide the information listed below in the ordering. We expect to be inquired, We must meet your requires and help you to sizing and order.

| 订单项目 | Ordering Information | 例: Example |
|-----------------|-------------------------------------|---------------------------|
| 型号 | Type | BSO |
| 口径 (进口×流道代号×出口) | Valve size (inlet×orifice×outlet) | 2J3 |
| 进口法兰等级 | Inlet flange class | 300lb |
| 出口法兰等级 | Outlet flange class | 150lb |
| 使用介质 | Medium | 空气 air |
| 介质状态 (液体、气体或蒸汽) | State (liquid, gas, vapor or steam) | 气体 gas |
| 温度 | Temperature | 60℃ |
| 材质 | Material | 碳钢 c.s |
| 整定压力 | Set pressure | 0.15MPa |
| 允许超压 | Allowable overpressure | 10% |
| 启闭压差 | Blowdown | 10% |
| 工作压力 | Operating pressure | 0.12MPa |
| 背压 (恒定或变动) | Backpressure (Constant or variable) | 大气 atmosphere 恒定 constant |
| 保护罩型式 | Cap type | B |
| 排放量 | Capacity | 1200kg/h |
| 订货台数 | Quantity | 5 |
| 其它订货要求 | Other ordering requirements | |

安全阀阀座的密封性 ——摘自 API Std 527

Seat Tightness of Pressure Relief Valves-Extract from API STD 527

1. 适用范围

该标准叙述了普通式、波纹管式和先导式安全阀金属阀座和软密封阀座密封性的确定方法。对于整定压力从 0.103MPa 至 41.379MPa 的安全阀的最大允许泄漏率在本标准中得到明确规定。如果要求更高的阀座密封度，则买方应在定单中说明。

2. 以空气为介质的试验装置

用空气确定泄压阀阀座密封度的试验装置如右图所示。用一根外径为 8mm，壁厚 1mm 的管子来测量泄漏率。管子末端应加工成光滑面并和轴线垂直，管端插入水面 13mm，管端面应和水面平行。

3. 试验方法

试验介质应是接近于环境温度的空气或氮气。

试验阀门应垂直安装在试验台架上，并应将试验装置固定到阀门出口端，如右图所示。所有孔口（包括保护罩、排放孔、通气孔、出口）都应封闭。

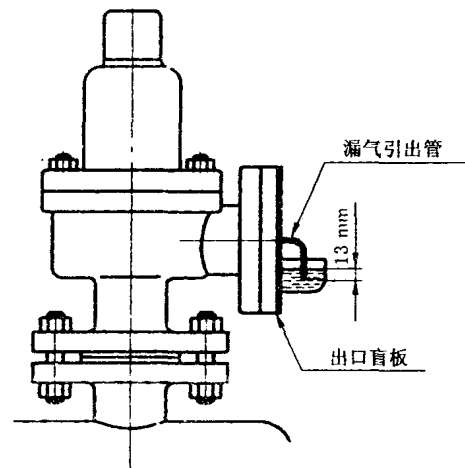
当安全阀的整定压力大于 0.345MPa（表压）时，安全阀的泄漏率（泡 / 分）应在保证阀门进口压力 90%的整定压力下来确定；当安全阀的整定压力小于或等于 0.345MPa（表压）时，试验压力应保持在比整定压力低 0.0345MPa 的数值上。

阀门试验前应先调整好整定压力，并用适当的方法检查安全阀所有的连接处和装配情况，以确定所有连接部件的密封性。

在测定气泡数以前，对通径小于等于 50mm 的安全阀，进口侧试验压力至少保持 1 分钟；对通径为 65、80、100mm 的安全阀，进口侧试验压力应保持在 2 分钟；通径大于等于 150mm 的安全阀至少保持在 5 分钟，然后观察阀门的泄漏时间不小于 1 分钟。

4. 密封性指标

对于用金属密封的安全阀，每分钟泄漏的气泡数不超过右表所列数值。对于软密封的安全阀，在 1 分钟内不允许有泄漏。



金属密封安全阀最大允许泄漏率

| 整定压力 MPa(15.6℃) | 最大允许泄漏率 (泡/分) | |
|-----------------|---------------|----------|
| | 流道直径小于等于 F | 流道直径大于 F |
| 0.103~6.896 | 40 | 20 |
| 10.3 | 60 | 30 |
| 13.0 | 80 | 40 |
| 17.2 | 100 | 50 |
| 20.7 | 100 | 60 |
| 27.6 | 100 | 80 |
| 38.5 | 100 | 100 |
| 41.4 | 100 | 100 |

美标安全阀喉径计算-摘自API Std 520

Sizing-Extract from API Std 520

1、气体和蒸气的喉径计算程序

首先要确定其流动状态，具体程序为：

(1) 计算安全阀背压与额定排放压力绝压数值的比 P_b/P_{dr} ；

(2) 按下式计算临界流动压力 P_{cf}/P_{dr} ；

$$\frac{P_{cf}}{P_{dr}} = \left[\frac{2}{k+1} \right]^{k/(k-1)}$$

(3) 若 $\frac{P_b}{P_{dr}} > \frac{P_{cf}}{P_{dr}}$ ，则可确定流动为亚临界流动； 若 $\frac{P_b}{P_{dr}} \leq \frac{P_{cf}}{P_{dr}}$ ，则可确定流动为临界流动。

式中： P_b = 背压，即附加背压和排放背压的和，再加上大气压，MPa(a)

P_{dr} = 额定排放压力，该压力等于整定压力加上允许超过压力，再加上大气压， $P_{dr} = P_s \times (1 + \Delta P_0) + P_{atm}$ ，MPa(a)

P_s = 整定压力，MPa(g)

P_{atm} = 大气压力，取 0.103MPa

P_{cf} = 出口临界流动压力

k = 气体的比热比

气体和蒸气的喉径计算公式

$$A = \frac{13.16 \times W}{CK_{dr} P_{dr} K_b K_c} \sqrt{\frac{TZ}{M}} \quad (1)$$

式中： A = 所需的有效排放面积，mm²

W = 所需泄放量，kg/h

C = 根据气体或蒸气在入口排放条件下的比热比($k = C_p/C_v$)确定的系数，由下

$$\text{面公式确定： } C = 520 \sqrt{k \left(\frac{2}{k+1} \right)^{(k+1)/(k-1)}}$$

K_{dr} = 额定排量系数

P_{dr} = 额定排放压力，该压力等于整定压力加上允许超过压力，再加上大气压， $P_{dr} = P_s \times (1 + \Delta P_0) + P_{atm}$ ，MPa(a)

K_b = 排量的背压修正系数

对于常规式和先导式泄压阀，当为临界流动时， K_b 等于 1.0；当为亚临界流

动时， $K_b = \sqrt{\frac{2 \cdot [(r)^{2/k} - r^{(k+1)/k}]}{(k-1) \cdot \left(\frac{2}{k+1} \right)^{(k+1)/(k-1)}}$ ，其中 r 为背压对上游排放压力的比值，

$$P_b / P_{dr}$$

对于平衡波纹管式泄压阀，超压 21% 时，且 P_b/P_s 小于等于 50% 时， K_b 等于 1.0；超压 10% 和 16% 时，由图 1 确定

美标安全阀喉径计算-摘自API Std 520

Sizing-Extract from API Std 520

- K_c = 当泄压阀上游装有一爆破片时的联合修正系数
- = 当不安装爆破片时, 取 1.0
- = 当一爆破片与一泄压阀联合安装, 取 0.9
- T = 入口气体或蒸气的排放温度, K(°C+273)
- Z = 压缩因子
- M = 气体和蒸气在入口排放状态下的摩尔质量, kg/kmole

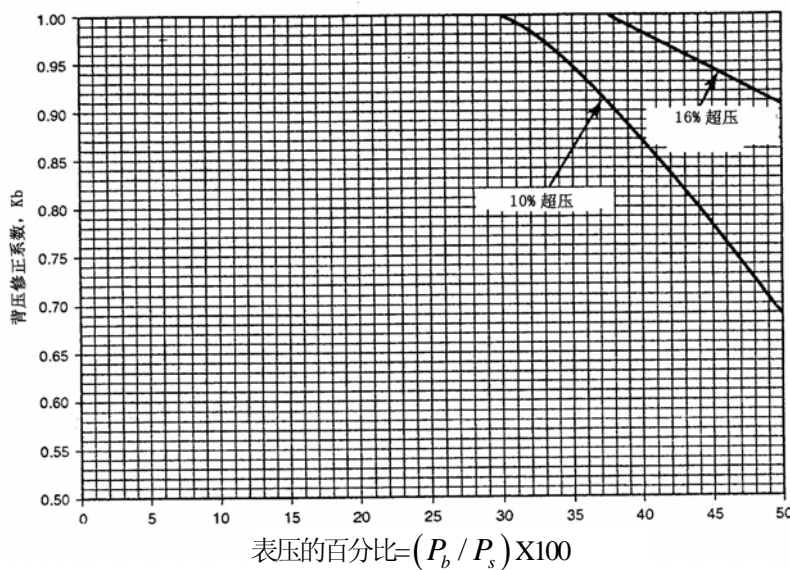


图 1—平衡波纹管式泄压阀（蒸气和气体）的背压修正系数, K_b

2、水蒸汽喉径计算程序

水蒸汽喉径计算公式

$$A = \frac{W}{5.25 \cdot P_{dr} K_{dr} K_b K_c K_N K_{SH}} \quad (2)$$

式中:

- A = 所需的有效排放面积, mm^2
- W = 所需泄放量, kg/hr
- P_{dr} = 额定排放压力, 该压力等于整定压力加上允许超过压力, 再加上大气压, $P_{dr} = P_s \times (1 + \Delta P_0) + P_{atm}$, MPa(a)
- K_{dr} = 额定排量系数
- K_b = 排量的背压修正系数

对于常规式和先导式泄压阀, 当为临界流动时, K_b 等于 1.0; 当为亚

临界流动时, $K_b = \sqrt{\frac{2 \cdot [(r)^{2/k} - r^{(k+1)/k}]}{(k-1) \cdot (\frac{2}{k+1})^{(k+1)/(k-1)}}$, 其中 r 为背压对上游

排放压力的比值, P_b / P_{dr}

美标安全阀喉径计算-摘自API Std 520

Sizing-Extract from API Std 520

对于平衡波纹管式泄压阀，超压 21% 时，且 P_b/P_S 小于等于 50% 时， K_b 等于 1.0；超压 10% 和 16% 时，由图 1 确定

K_c = 当泄压阀上游装有一爆破片时的联合修正系数

= 当不安装爆破片时，取 1.0

= 当一爆破片与一泄压阀联合安装，取 0.9

K_N = Napier 公式的修正系数

= 当 $P_{dr} \leq 10.339 \text{ MPa(a)}$ 时，取 1；

= 当 $P_{dr} > 10.339 \text{ MPa(a)}$ 且 $\leq 22.057 \text{ MPa(a)}$ 时，为 $\frac{27.64 \times P_{dr} - 1000}{33.24 \times P_{dr} - 1061}$

K_{SH} = 过热蒸汽修正系数，见下表：

表 3 (Table 3) 过热修正系数 K_{sh}

| 绝对压力 MPa | 饱和温度 (°C) | 进口温度 °C | | | | | | | | | | | | | | | | | | | | | |
|-------------|--------------|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 360 | 380 | 400 | 420 | 440 | 460 | 480 | 500 | 520 | 540 | 560 | 580 | 600 | |
| | | 过热修正系数 K_{sh} | | | | | | | | | | | | | | | | | | | | | |
| 0.4 | 144 | 0.99 | 0.97 | 0.95 | 0.93 | 0.91 | 0.90 | 0.88 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.73 | 0.72 | |
| 0.7 | 165 | 0.99 | 0.98 | 0.96 | 0.94 | 0.92 | 0.90 | 0.88 | 0.87 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.76 | 0.74 | 0.74 | 0.73 | 0.72 | |
| 1.0 | 180 | 1.00 | 0.98 | 0.96 | 0.94 | 0.92 | 0.90 | 0.88 | 0.87 | 0.85 | 0.84 | 0.83 | 0.81 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 1.3 | 192 | 1.00 | 0.99 | 0.97 | 0.94 | 0.92 | 0.91 | 0.89 | 0.87 | 0.86 | 0.84 | 0.83 | 0.81 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 1.6 | 201 | 1.00 | 0.99 | 0.97 | 0.95 | 0.93 | 0.91 | 0.89 | 0.88 | 0.86 | 0.84 | 0.83 | 0.82 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 1.9 | 210 | | 1.00 | 0.98 | 0.95 | 0.93 | 0.91 | 0.89 | 0.88 | 0.86 | 0.85 | 0.83 | 0.82 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 2.2 | 217 | | 1.00 | 0.98 | 0.96 | 0.94 | 0.92 | 0.90 | 0.88 | 0.86 | 0.85 | 0.83 | 0.82 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 2.5 | 221 | | 1.00 | 0.99 | 0.97 | 0.94 | 0.92 | 0.90 | 0.88 | 0.87 | 0.85 | 0.84 | 0.82 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 3.0 | 234 | | | 0.99 | 0.98 | 0.95 | 0.93 | 0.90 | 0.89 | 0.87 | 0.85 | 0.84 | 0.82 | 0.81 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 3.5 | 242 | | | 1.00 | 0.98 | 0.96 | 0.93 | 0.91 | 0.89 | 0.87 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 4.0 | 250 | | | 1.00 | 0.99 | 0.97 | 0.94 | 0.92 | 0.90 | 0.88 | 0.86 | 0.84 | 0.83 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| 4.5 | 258 | | | | 1.00 | 0.97 | 0.94 | 0.92 | 0.90 | 0.88 | 0.86 | 0.84 | 0.83 | 0.81 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 5.0 | 264 | | | | | 0.98 | 0.95 | 0.93 | 0.91 | 0.88 | 0.87 | 0.85 | 0.83 | 0.82 | 0.80 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 5.5 | 270 | | | | | 0.99 | 0.96 | 0.93 | 0.91 | 0.89 | 0.87 | 0.85 | 0.84 | 0.82 | 0.81 | 0.79 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 6.0 | 276 | | | | | 0.99 | 0.97 | 0.94 | 0.92 | 0.89 | 0.87 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 6.5 | 281 | | | | | 1.00 | 0.97 | 0.95 | 0.92 | 0.90 | 0.88 | 0.86 | 0.84 | 0.83 | 0.81 | 0.80 | 0.78 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 7.0 | 286 | | | | | | 0.98 | 0.95 | 0.94 | 0.90 | 0.88 | 0.86 | 0.84 | 0.83 | 0.81 | 0.80 | 0.79 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 7.5 | 290 | | | | | 1.00 | 0.99 | 0.96 | 0.94 | 0.91 | 0.89 | 0.87 | 0.85 | 0.83 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 8.0 | 295 | | | | | | 0.99 | 0.96 | 0.94 | 0.91 | 0.89 | 0.87 | 0.85 | 0.83 | 0.82 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 8.5 | 299 | | | | | | 1.00 | 0.97 | 0.95 | 0.92 | 0.90 | 0.87 | 0.85 | 0.83 | 0.82 | 0.81 | 0.79 | 0.78 | 0.77 | 0.75 | 0.74 | 0.73 | 0.72 |
| 9.0 | 303 | | | | | | | 0.98 | 0.96 | 0.93 | 0.90 | 0.88 | 0.88 | 0.84 | 0.82 | 0.81 | 0.79 | 0.78 | 0.77 | 0.75 | 0.74 | 0.73 | 0.72 |
| 9.5 | 307 | | | | | | | 0.98 | 0.97 | 0.93 | 0.90 | 0.88 | 0.88 | 0.84 | 0.82 | 0.81 | 0.80 | 0.78 | 0.77 | 0.76 | 0.74 | 0.73 | 0.72 |
| 10.0 | 311 | | | | | | 1.00 | 0.99 | 0.97 | 0.94 | 0.91 | 0.88 | 0.88 | 0.85 | 0.83 | 0.81 | 0.80 | 0.78 | 0.77 | 0.76 | 0.74 | 0.74 | 0.74 |
| 11.0 | 318 | | | | | | | 1.00 | 0.98 | 0.95 | 0.92 | 0.89 | 0.87 | 0.85 | 0.83 | 0.81 | 0.80 | 0.79 | 0.77 | 0.76 | 0.74 | 0.74 | 0.74 |
| 12.0 | 324 | | | | | | | | 0.98 | 0.96 | 0.92 | 0.89 | 0.87 | 0.85 | 0.83 | 0.81 | 0.80 | 0.78 | 0.77 | 0.76 | 0.74 | 0.74 | 0.73 |
| 13.0 | 331 | | | | | | | | 0.98 | 0.97 | 0.93 | 0.90 | 0.87 | 0.85 | 0.83 | 0.81 | 0.80 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 |
| 14.0 | 336 | | | | | | | | 0.99 | 0.96 | 0.93 | 0.90 | 0.87 | 0.85 | 0.82 | 0.81 | 0.79 | 0.77 | 0.76 | 0.75 | 0.73 | 0.72 | 0.72 |
| 15.0 | 342 | | | | | | | | 1.00 | 0.96 | 0.94 | 0.90 | 0.87 | 0.84 | 0.82 | 0.80 | 0.79 | 0.77 | 0.75 | 0.74 | 0.73 | 0.72 | 0.72 |
| 16.0 | 347 | | | | | | | | 1.00 | 0.97 | 0.95 | 0.90 | 0.87 | 0.84 | 0.82 | 0.80 | 0.78 | 0.76 | 0.75 | 0.73 | 0.72 | 0.71 | 0.71 |
| 17.0 | 352 | | | | | | | | | 0.97 | 0.95 | 0.90 | 0.88 | 0.84 | 0.81 | 0.79 | 0.77 | 0.76 | 0.74 | 0.73 | 0.71 | 0.70 | 0.70 |
| 18.0 | 357 | | | | | | | | | 0.99 | 0.94 | 0.90 | 0.88 | 0.83 | 0.80 | 0.78 | 0.76 | 0.75 | 0.73 | 0.72 | 0.71 | 0.69 | 0.69 |
| 19.0 | 361 | | | | | | | | | 1.00 | 0.94 | 0.90 | 0.86 | 0.82 | 0.80 | 0.78 | 0.76 | 0.74 | 0.73 | 0.71 | 0.70 | 0.68 | 0.68 |
| 20.0 | 366 | | | | | | | | | | 0.93 | 0.90 | 0.85 | 0.81 | 0.79 | 0.76 | 0.74 | 0.73 | 0.72 | 0.70 | 0.68 | 0.67 | 0.67 |
| 21.0 | 370 | | | | | | | | | | 0.93 | 0.90 | 0.84 | 0.80 | 0.78 | 0.76 | 0.73 | 0.71 | 0.70 | 0.68 | 0.67 | 0.66 | 0.66 |
| 22.0 | 374 | | | | | | | | | | 0.94 | 0.89 | 0.83 | 0.79 | 0.76 | 0.74 | 0.72 | 0.70 | 0.69 | 0.67 | 0.65 | 0.64 | 0.64 |

美标安全阀喉径计算-摘自API Std 520

Sizing-Extract from API Std 520

3、液体喉径计算程序

$$\text{液体喉径计算公式 } A = \frac{0.1963 \times W}{K_{dr} K_b K_c K_v K_p \sqrt{\rho \times (1.25 P_s - P_b)}} \quad (3)$$

式中:

A = 所需的有效排放面积, mm^2

W = 所需泄放量, kg/h

K_{dr} = 额定排量系数

K_b = 背压修正系数。常规式和先导式阀门, 取 1.0; 平衡波纹管式阀门, 由图 2 确定

K_c = 当泄压阀上游装有一爆破片时的联合修正系数

= 当不安装爆破片时, 取 1.0

= 当一爆破片与一泄压阀联合安装, 取 0.9

K_v = 粘度修正系数。由下面的公式确定:

$$K_v = \left(0.9935 + \frac{2.878}{R^{0.5}} + \frac{342.75}{R^{1.5}} \right)^{-1.0} \quad (4)$$

K_p = 超压修正系数。超过压力为 25% 时, $K_p = 1$; 超过压力不是 25% 时, 由图 3 确定

ρ = 在流动温度下液体的密度, kg/m^3

P_s = 整定压力, MPa(g)

P_b = 背压, MPa(g)

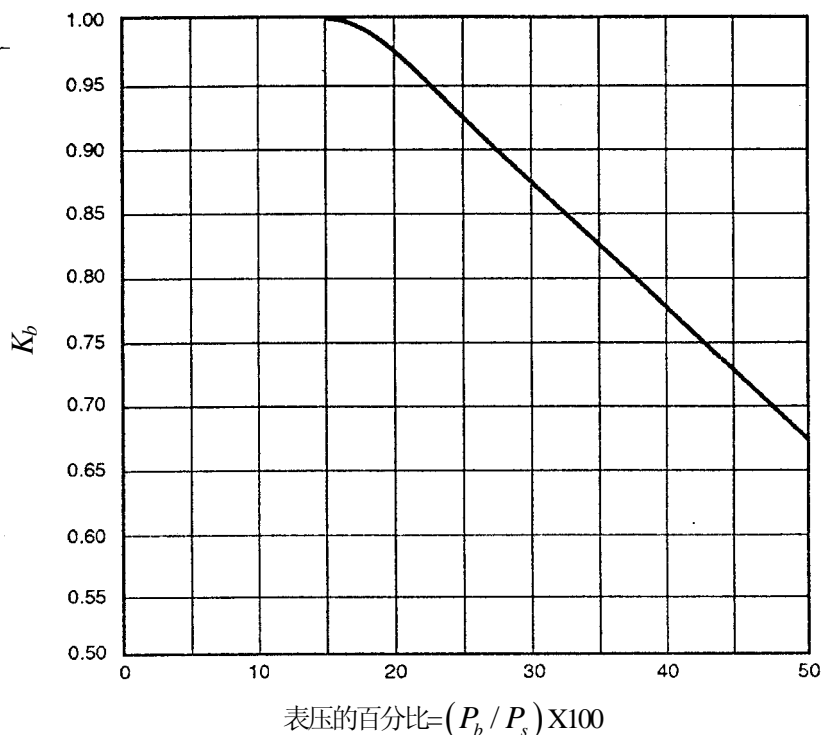


图 2—平衡波纹管式泄压阀 (液体) 的背压修正系数, K_b

美标安全阀喉径计算-摘自API Std 520

Sizing-Extract from API Std 520

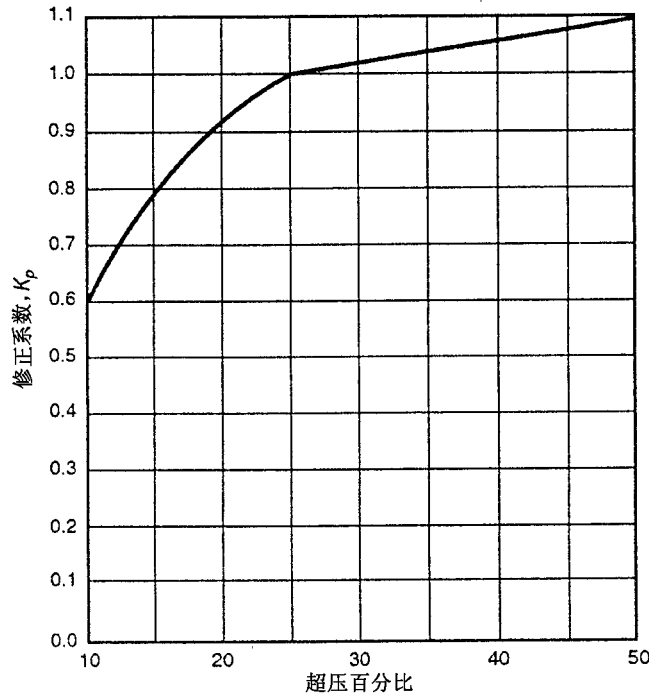


图3—未取得排量认证的泄压阀用于液体时针对超压的排量修正系数

泄放阀用于粘性液体，在确定口径时，应先按非粘性介质来确定口径（即 $K_v=1.0$ ），这样可用公式3初步得到所需的排放面积 A 。从系列流道面积中，选择大于 A 的临近的流道面积，利用下面的公式来确

定雷诺数 R ：

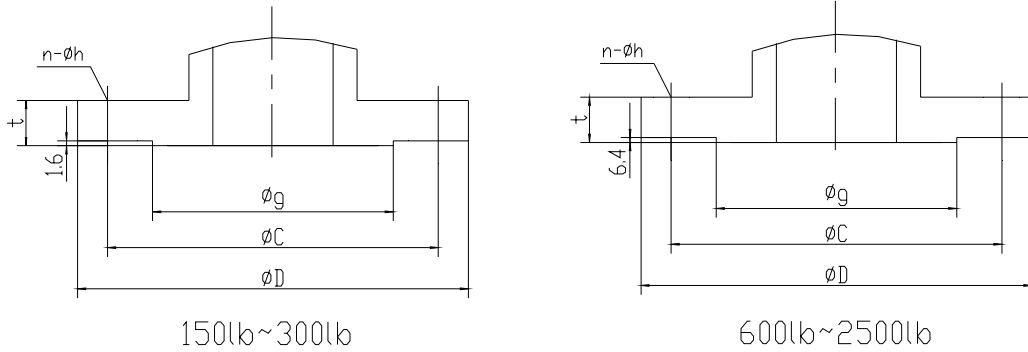
$$R = \frac{313.33 \times W}{\mu \sqrt{A}} \quad (5)$$

式中：

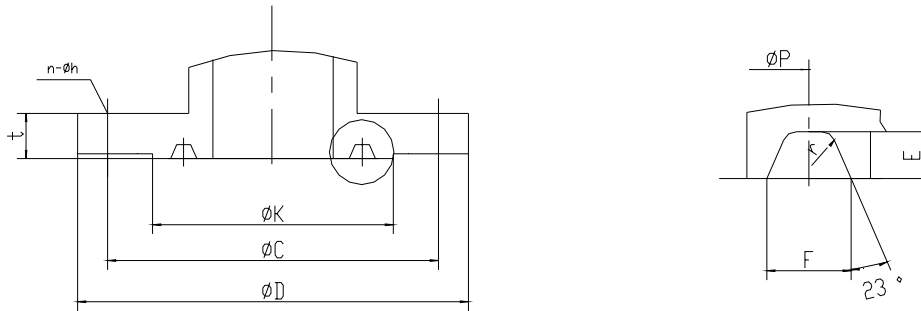
- R = 雷诺数
- W = 在流动温度下的流量，kg/h
- μ = 在流动温度下的绝对粘度，厘泊
- A = 有效排放面积， mm^2

确定雷诺数 R 以后，代入公式4 计算得到系数 K_v 。 K_v 数值代入公式3 来修正初算的所需排放面积。如果修正后的面积超过了所选择的标准喉部面积，则应用下一个更大的标准喉部尺寸重复上面的计算。

钢制法兰标准 (ASME B16.5) Steel Flange Standard



RF 突面法兰 Raised Face



RJ 环连接面法兰 Ring Type Joint

| 磅级 Class | 口径 Size | | D | t | g | n | h | C | K | P | E | F | r |
|-------------|---------|-----|------|------|-----|----|-------|-------|--------|--------|-------|-------|-----|
| | inch | mm | | | | | | | | | | | |
| 150 | 1/2 | 15 | 89 | 11.2 | 35 | 4 | 16 | 60.5 | | | | | |
| | 3/4 | 20 | 99 | 12.7 | 43 | 4 | 16 | 70 | | | | | |
| | 1 | 25 | 108 | 14.2 | 51 | 4 | 16 | 79.5 | 63.5 | 47.63 | 6.35 | 8.74 | 0.8 |
| | 1 1/2 | 40 | 127 | 17.5 | 73 | 4 | 16 | 98.5 | 83 | 65.07 | 6.35 | 8.74 | 0.8 |
| | 2 | 50 | 152 | 19 | 92 | 4 | 19 | 120.5 | 102 | 82.55 | 6.35 | 8.74 | 0.8 |
| | 2 1/2 | 65 | 178 | 22.4 | 105 | 4 | 19 | 139.5 | 121 | 101.60 | 6.35 | 8.74 | 0.8 |
| | 3 | 80 | 190 | 23.9 | 127 | 4 | 19 | 152.5 | 133 | 114.30 | 6.35 | 8.74 | 0.8 |
| | 4 | 100 | 229 | 23.9 | 157 | 8 | 19 | 190.5 | 171.5 | 149.23 | 6.35 | 8.74 | 0.8 |
| | 6 | 150 | 279 | 25.4 | 216 | 8 | 22 | 241.5 | 219 | 193.68 | 6.35 | 8.74 | 0.8 |
| | 8 | 200 | 343 | 28.4 | 270 | 8 | 22 | 298.5 | 273 | 247.65 | 6.35 | 8.74 | 0.8 |
| 10 | 250 | 406 | 30.2 | 324 | 12 | 26 | 362 | 330 | 304.80 | 6.35 | 8.74 | 0.8 | |
| 300 | 1/2 | 15 | 95 | 14.2 | 35 | 4 | 16 | 66.5 | 51 | 34.14 | 5.56 | 7.14 | 0.8 |
| | 3/4 | 20 | 117 | 15.9 | 43 | 4 | 19 | 82.5 | 63.5 | 42.88 | 6.35 | 8.74 | 0.8 |
| | 1 | 25 | 124 | 17.5 | 51 | 4 | 19 | 89 | 70 | 50.80 | 6.35 | 8.74 | 0.8 |
| | 1 1/2 | 40 | 156 | 20.7 | 73 | 4 | 22 | 114.5 | 90.5 | 68.28 | 6.35 | 8.74 | 0.8 |
| | 2 | 50 | 165 | 22.3 | 92 | 8 | 19 | 127 | 108 | 82.55 | 7.92 | 11.91 | 0.8 |
| | 2 1/2 | 65 | 190 | 25.4 | 105 | 8 | 22 | 149 | 127 | 101.60 | 7.92 | 11.91 | 0.8 |
| | 3 | 80 | 210 | 28.4 | 127 | 8 | 22 | 168 | 146 | 123.83 | 7.92 | 11.91 | 0.8 |
| | 4 | 100 | 254 | 31.8 | 157 | 8 | 22 | 200 | 175 | 149.23 | 7.92 | 11.91 | 0.8 |
| | 6 | 150 | 318 | 36.6 | 216 | 12 | 22 | 270 | 241 | 211.12 | 7.92 | 11.91 | 0.8 |
| | 8 | 200 | 381 | 41.3 | 270 | 12 | 26 | 330 | 302 | 269.88 | 7.92 | 11.91 | 0.8 |
| 10 | 250 | 444 | 47.7 | 324 | 16 | 29 | 387.5 | 356 | 323.85 | 7.92 | 11.91 | 0.8 | |

钢制法兰标准 (ASME B16.5) Steel Flange Standard

| 磅级 Class | 口径 Size | | D | t | g | n | h | C | K | P | E | F | r |
|-------------|---------|-----|-------|------|-----|----|-----|-------|--------|--------|-------|-------|-----|
| | inch | mm | | | | | | | | | | | |
| 600 | 1/2 | 15 | 95 | 14.2 | 35 | 4 | 16 | 66.5 | 51 | 34.14 | 5.56 | 7.14 | 0.8 |
| | 3/4 | 20 | 117 | 15.7 | 43 | 4 | 19 | 82.5 | 63.5 | 42.88 | 6.35 | 8.74 | 0.8 |
| | 1 | 25 | 124 | 17.5 | 51 | 4 | 19 | 89 | 70 | 50.80 | 6.35 | 8.74 | 0.8 |
| | 1 1/2 | 40 | 156 | 22.4 | 73 | 4 | 22 | 114.5 | 90 | 68.28 | 6.35 | 8.74 | 0.8 |
| | 2 | 50 | 165 | 25.4 | 92 | 8 | 19 | 127 | 108 | 82.55 | 7.92 | 11.91 | 0.8 |
| | 2 1/2 | 65 | 190 | 28.4 | 105 | 8 | 22 | 149 | 127 | 101.60 | 7.92 | 11.91 | 0.8 |
| | 3 | 80 | 210 | 31.8 | 127 | 8 | 22 | 168 | 146 | 123.83 | 7.92 | 11.91 | 0.8 |
| | 4 | 100 | 273 | 38.1 | 157 | 8 | 26 | 216 | 175 | 149.23 | 7.92 | 11.91 | 0.8 |
| | 6 | 150 | 356 | 47.7 | 216 | 12 | 29 | 292 | 241 | 211.12 | 7.92 | 11.91 | 0.8 |
| | 8 | 200 | 419 | 55.6 | 270 | 12 | 32 | 349 | 302 | 269.88 | 7.92 | 11.91 | 0.8 |
| 10 | 250 | 508 | 63.5 | 324 | 16 | 35 | 432 | 356 | 323.85 | 7.92 | 11.91 | 0.8 | |
| 900 | 1/2 | 15 | 121 | 22.3 | 35 | 4 | 22 | 82.5 | 60.5 | 39.67 | 6.35 | 8.74 | 0.8 |
| | 3/4 | 20 | 130 | 25.4 | 43 | 4 | 22 | 89 | 66.5 | 44.45 | 6.35 | 8.74 | 0.8 |
| | 1 | 25 | 149 | 28.4 | 51 | 4 | 26 | 101.5 | 71 | 50.80 | 6.35 | 8.74 | 0.8 |
| | 1 1/2 | 40 | 178 | 31.8 | 73 | 4 | 29 | 124 | 92 | 68.28 | 6.35 | 8.74 | 0.8 |
| | 2 | 50 | 216 | 38.1 | 92 | 8 | 26 | 165 | 124 | 95.25 | 7.92 | 11.91 | 0.8 |
| | 2 1/2 | 65 | 244 | 41.3 | 105 | 8 | 29 | 190.5 | 137 | 107.95 | 7.92 | 11.91 | 0.8 |
| | 3 | 80 | 241 | 38.1 | 127 | 8 | 26 | 190.5 | 155 | 123.83 | 7.92 | 11.91 | 0.8 |
| | 4 | 100 | 292 | 44.5 | 157 | 8 | 32 | 235 | 181 | 149.23 | 7.92 | 11.91 | 0.8 |
| | 6 | 150 | 381 | 55.6 | 216 | 12 | 32 | 317.5 | 241 | 211.12 | 7.92 | 11.91 | 0.8 |
| | 8 | 200 | 470 | 63.5 | 270 | 12 | 39 | 394 | 308 | 269.88 | 7.92 | 11.91 | 0.8 |
| 10 | 250 | 546 | 69.9 | 324 | 16 | 39 | 470 | 362 | 323.85 | 7.92 | 11.91 | 0.8 | |
| 1500 | 1/2 | 15 | 121 | 22.3 | 35 | 4 | 22 | 82.5 | 60.5 | 39.67 | 6.35 | 8.74 | 0.8 |
| | 3/4 | 20 | 130 | 25.4 | 43 | 4 | 22 | 89 | 66.5 | 44.45 | 6.35 | 8.74 | 0.8 |
| | 1 | 25 | 149 | 28.4 | 51 | 4 | 26 | 101.5 | 71 | 50.80 | 6.35 | 8.74 | 0.8 |
| | 1 1/2 | 40 | 178 | 31.8 | 73 | 4 | 29 | 124 | 92 | 68.28 | 6.35 | 8.74 | 0.8 |
| | 2 | 50 | 216 | 38.1 | 92 | 8 | 26 | 165 | 124 | 95.25 | 7.92 | 11.91 | 0.8 |
| | 2 1/2 | 65 | 244 | 41.3 | 105 | 8 | 29 | 190.5 | 137 | 107.95 | 7.92 | 11.91 | 0.8 |
| | 3 | 80 | 267 | 47.7 | 127 | 8 | 32 | 203 | 168 | 136.53 | 7.92 | 11.91 | 0.8 |
| | 4 | 100 | 311 | 54 | 157 | 8 | 35 | 241.5 | 193.5 | 161.93 | 7.92 | 11.91 | 0.8 |
| | 6 | 150 | 394 | 82.4 | 216 | 12 | 39 | 317.5 | 248 | 211.12 | 7.92 | 13.49 | 1.5 |
| | 8 | 200 | 483 | 92.1 | 270 | 12 | 45 | 394 | 317.5 | 269.88 | 7.92 | 16.66 | 1.5 |
| 10 | 250 | 584 | 108 | 324 | 12 | 51 | 483 | 371 | 323.85 | 9.53 | 16.66 | 1.5 | |
| 2500 | 1/2 | 15 | 133 | 30.2 | 35 | 4 | 22 | 89 | 65 | 42.88 | 6.35 | 8.74 | 0.8 |
| | 3/4 | 20 | 140 | 32 | 43 | 4 | 22 | 95 | 73 | 50.80 | 6.35 | 8.74 | 0.8 |
| | 1 | 25 | 159 | 35 | 51 | 4 | 26 | 108 | 82.5 | 60.33 | 6.35 | 8.74 | 0.8 |
| | 1 1/2 | 40 | 203 | 44.5 | 73 | 4 | 32 | 146 | 114 | 82.55 | 7.92 | 11.91 | 0.8 |
| | 2 | 50 | 235 | 50.8 | 92 | 8 | 29 | 171.5 | 133.5 | 101.60 | 7.92 | 11.91 | 0.8 |
| | 2 1/2 | 65 | 267 | 57.2 | 105 | 8 | 32 | 197 | 149 | 111.13 | 9.53 | 13.49 | 1.5 |
| | 3 | 80 | 305 | 66.5 | 127 | 8 | 35 | 228.5 | 168 | 127 | 9.53 | 13.49 | 1.5 |
| | 4 | 100 | 356 | 76.2 | 157 | 8 | 42 | 273 | 203 | 157.18 | 11.13 | 16.66 | 1.5 |
| | 6 | 150 | 483 | 108 | 216 | 8 | 54 | 368.5 | 279 | 228.60 | 12.70 | 19.84 | 1.5 |
| | 8 | 200 | 553 | 127 | 270 | 12 | 54 | 438 | 340 | 279.40 | 14.27 | 23.01 | 1.5 |
| 10 | 250 | 673 | 165.1 | 324 | 12 | 67 | 540 | 425.5 | 342.90 | 17.48 | 30.18 | 2.3 | |

用心创造品质



上海标柏阀门有限公司
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