



**SAFETY VALVE**

# **TIANSHENG VALVE**

**HIGH QUALITY INDUSTRIAL VALVES**



**ZHEJIANG TIANSHENG VALVE CO.,LTD**



|       |                                                                                                         |       |                                                                                                    |
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| 24    | TA、A型炼油专用安全阀<br>TA、A Type Special safety valve series for oil refining                                  | 73~75 | NFNJ系列保温夹套安全阀<br>NFNJ Series safety valve with jacket                                              |
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## ● 安全阀简介Introduction of Safety valve:

安全阀是承压设备、容器和管线上的最佳超压保护装置，当介质压力升高超过允许值时，安全阀自动开启，继而全量排放，防止压力继续升高，当压力降低至规定值时，安全阀及时自动关闭。

安全阀设计、制造、验收技术标准符合GB/T12243的要求。封闭式安全阀的阀盖是封闭的，利于防止灰尘和杂物侵入，防止有毒和易燃介质溢出，开放式安全阀由于阀盖散开，利于降低弹簧腔室的温度，主要用于蒸汽介质管道及容器，带散热器安全阀主要用于介质温度超过350℃的工况。带扳手弹簧式安全阀当介质压力达到开启压力的75%以上时，能利用扳手作手动开启。全启式安全阀开启高度 $\geq 1/4$ 流道直径，排放量大，微启式安全阀开启高度为 $1/20 \sim 1/40$ 流道直径。

Safety valve, as the best device for extra-pressure protection, will automatically open and fully discharge to protect the equipment pressure from going on rise when medium's pressure rises over the allowed value and will automatically close when the pressure lowers to the setting value. The valve conforms with GB/T12243 on its design, manufacture and acceptance etc. technical standards. The bonnet of the sealed safety valve is enclosed in order to protect dust and foreign matters from getting in and protect toxic and combustible media from over-flow, while the opened bonnet of the open-type safety valve, which benefits to lower the temperature inside of the spring chamber, is mainly used for the pipeline and container with steam medium and the safety valve with radiator is suitable for the medium with a temperature over 350℃.

For the safety valve with a lever, it can be opened manually with the lever when the medium's pressure is up to over 75% of that at which the valve opens.

Full-bore safety valve's height of opening  $\geq 1/4$  time the flow diameter with large amount of discharge, the height of opening for a low-lift safety valve  $1/20 \sim 1/40$  time the flow diameter.

## ● 安全阀型号编制方法 Method of compiling the types safety valve

阀门的型号参照机械部标准JB308-2004《阀门型号编制方法》编制，系由以下八个部分组成

The types of valves are generally compiled in accordance with the standard of the ministry of machine-building industry, JB308-2004 "Method of Compiling the Types of Valves", which is composed of eight parts:

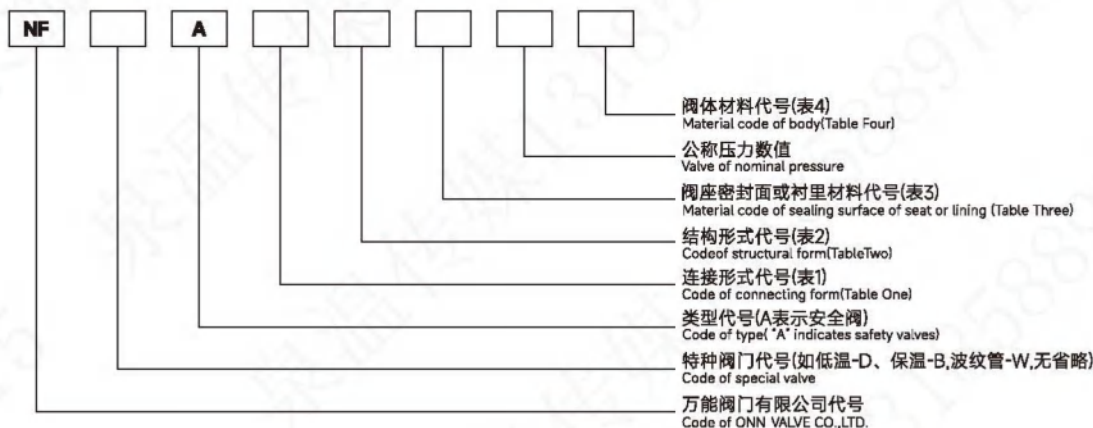


表1 Table one

| 连接形式<br>Connection form | 代号<br>Code |
|-------------------------|------------|
| 内螺纹<br>Internal thread  | 1          |
| 外螺纹<br>External thread  | 2          |
| 法兰<br>Flange            | 4          |
| 焊接<br>Welding           | 6          |

表2 Table two

| 安全阀结构形式<br>Structural form of safety valve |             |                     |                                        | 代号<br>Code |
|--------------------------------------------|-------------|---------------------|----------------------------------------|------------|
| 弹簧式<br>Spring loaded type                  | 封闭<br>Close | 带散热器 With radiator  | 全启式 Full bore type                     | 0          |
|                                            |             | 微启式 Low lift type   |                                        | 1          |
|                                            |             | 全启式 Full bore type  |                                        | 2          |
|                                            | 不封闭<br>Open | 带扳手<br>With lever   | 全启式 Full bore type                     | 4          |
|                                            |             |                     | 双联弹簧微启式 Double spring loaded lift type | 3          |
|                                            |             |                     | 微启式 Low lift type                      | 7          |
|                                            |             |                     | 全启式 Full bore type                     | 8          |
|                                            |             |                     | 微启式 Low lift type                      | 5          |
|                                            |             | 带控制机构 With controls | 全启式 Full bore type                     | 6          |
|                                            |             |                     | 脉冲式 Pulse type                         | 9          |

## 产品简介 Product Introduction



阀座密封面或衬里材料代号用汉语拼音字母表示，如表3所列。

The material codes of sealing surface of seat or lining are indicated by Chinese phonetic letters as they are listed in table three.

●表3 Table three

| 阀座密封面或衬里材料<br>Material of sealing surface of seat or lining | 代号<br>Code | 阀座密封面或衬里材料<br>Material of sealing surface of seat or lining | 代号<br>Code |
|-------------------------------------------------------------|------------|-------------------------------------------------------------|------------|
| 铜合金 Copper alloy                                            | T          | 合金钢 Alloy steel                                             | H          |
| 橡胶 Rubber                                                   | X          | 渗氮钢 Nitrided steel                                          | D          |
| 尼龙塑料 Nylon plastic                                          | N          | 硬质合金 Stellite                                               | Y          |
| 氟塑料 Fluoro plastics                                         | F          | 衬胶 Lining rubber                                            | J          |
| 锡基轴承合金〔巴氏合金〕 Tin-base bearing alloy (babbitt alloy)         | B          | 搪瓷 Enamel                                                   | C          |

注：由阀体直接加工的阀座密封面材料用“W”表示；当阀座和阀瓣密封面材料不同时，用低硬度材料代号表示。

Remarks: "W" indicates the material of sealing surface of seat which is processed directly together with the body. The material of sealing surface of seat is indicated by a code of low hardness material if it different from the material of sealing surface of disc.

The body of materials codes can indicated by Chinese phonetic letters as they are listed in the table four.

阀体材料代号用汉语拼音字母表示。如表4所列。

The material code of the valve body is represented by Chinese pinyin letters. As listed in Table 4.

表4 Table four

| 阀体材料<br>Valve body material | 代号<br>Code | 阀体材料<br>Valve body material | 代号<br>Code |
|-----------------------------|------------|-----------------------------|------------|
| HT250                       | Z          | 304 CF8                     | P          |
| WCB ZG230-450               | C          | 316 CF8M                    | R          |
| ZG20CrMo                    | I          | ZG20CrMoV                   | V          |

注：PN ≤ 1.6MPa的灰铸铁阀体和PN ≥ 2.5MPa碳素钢阀体，省略本代号。

型号示例：A42Y-16C表示：弹簧封闭全启式安全阀、法兰连接，密封面材料硬质合金，公称压力1.6MPa阀体材料为碳素钢。

Remarks: If the PN of cast-iron body is as much as or less than 1.6MPa and the PN of carbon steel body is as much as of more than 2.5MPa the present codes can omitted.

Examples: A42Y-16C indicates: The safety valve of closed spring loaded full bore, Connected with flange. The sealing surface material is stellite. The nominal pressure is PN 1.6MPa and the body material is carbon steel.

## ●安全阀整定压力分级 The conditioning pressure class of safety valve(MPa)

| 公称压力(MPa)<br>Nominal pressure | 整定压力分级<br>Set pressure grade |           |           |           |           |         |         |         |         |
|-------------------------------|------------------------------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|
| 1.6                           | 0.06-0.1                     | 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                          | > 4.0-5.0                    | > 5.0-6.4 | > 6.4-8.0 | > 8.0-10  |           |         |         |         |         |
| 16.0                          | > 10-13                      | > 13-16   |           |           |           |         |         |         |         |
| 32.0                          | > 16-19                      | > 19-22   | > 22-25   | > 25-29   | > 29-32   |         |         |         |         |

## ●安全阀进出口法兰规定 Regulations on inlet and outlet flanges of safety valves

法兰压力级按表5规定，进出口口径按表6规定。(MPa)

Standards for flange pressure class is table one, Standards for inlet and outlet diameter is table two

表5 Table five

| 安全阀公称压力 PN Nominal pressure for safety valve | 1.6 | 2.5 | 4.0 | 6.4 | 10.0 | 16.0     | 32.0 |
|----------------------------------------------|-----|-----|-----|-----|------|----------|------|
| 进口法兰压力级 Inlet flange pressure class          | 1.6 | 2.5 | 4.0 | 6.4 | 10.0 | 16.0     | 32.0 |
| 出口法兰压力级 Outlet flange pressure class         | 1.6 | 1.6 | 1.6 | 4.0 | 4.0  | 4.0/16.0 | 16.0 |

表6 Table six

| 安全阀型式 Safety valve type | 微启式 Low lift type              | 全启式 Fully bore type                                                    |
|-------------------------|--------------------------------|------------------------------------------------------------------------|
| 进口口径 DN Inlet diameter  | 同公称口径 Same as nominal diameter |                                                                        |
| 出口口径 DN Outlet diameter | 同公称口径 Same as nominal diameter | 比公称口径增大一级或一级以上 Bigger than the nominal diameter for one grade or more. |

# ► A41H弹簧微启式封闭式安全阀

## A41H Closed Spring Loaded Low Lift Type Safety Valve



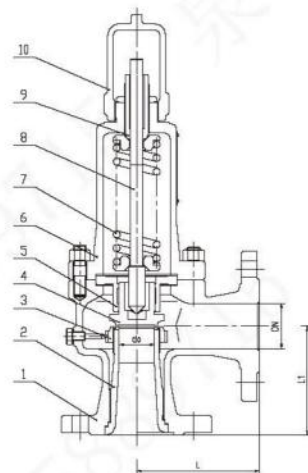
### ●用途Purpose

A41H型适用于工作温度 $\leq 300^{\circ}\text{C}$ 的石油气、空气、水等介质的设备或管路上。A41Y-P/R型适用于工作温度 $\leq 200^{\circ}\text{C}$ 有腐蚀性介质的设备或管路上，作为超压保护装置。连接法兰标准按JB/T79-94/系列1。

A41H type are used for the equipment and pipeline of the petroleum gas, air, water etc. medium what the working temperature are Less than or equal to  $300^{\circ}\text{C}$ . A41Y-P/R type are used for the equipment and pipeline of the quality with corrode medium what the working temperature are Less than or equal to  $200^{\circ}\text{C}$ . Take for extra pressure devices. Flange connecting dimensions of comply with Standard series first of JB/T79-94.

### ●主要零部件材料 Materials for main parts

| 序号<br>No.                            | 零件名称<br>Name of part   | 材料<br>Materials |                               |          |
|--------------------------------------|------------------------|-----------------|-------------------------------|----------|
|                                      |                        | A41H-16C        | A41Y-16P                      | A41Y-16R |
| 1                                    | 阀体<br>Body             | WCB             | CF8                           | CF8M     |
| 2                                    | 阀座<br>Nozzle           | 20Cr13/304      | 304                           | 316      |
| 3                                    | 调节圈<br>Adjusting ring  | ZG20Cr13/CF8    | CF8                           | CF8M     |
| 4                                    | 阀瓣<br>Disc             | 20Cr13/304      | 304                           | 316      |
| 5                                    | 导向套<br>Guide           | 20Cr13/304      | 304                           | 316      |
| 6                                    | 阀盖<br>Bonnet           | WCB             | CF8                           | CF8M     |
| 7                                    | 弹簧<br>Spring           | 50CrVA          | 50CrVA喷塑                      | 50CrVA喷塑 |
| 8                                    | 阀杆<br>Stem             | 20Cr13          | 20Cr13                        | 20Cr13   |
| 9                                    | 调整螺栓<br>Adjusting bolt | 45              | 20Cr13                        | 20Cr13   |
| 10                                   | 保护罩<br>Cap             | WCB             | CF8                           | CF8M     |
| 密封面材料<br>Sealing surface of material |                        | 堆焊D507          | 堆焊Co基硬质合金 Depositing stellite |          |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 20                                    | 15         | 95  | 85  | 20  |
|                                        | 25                                    | 20         | 100 | 85  | 25  |
|                                        | 32                                    | 25         | 115 | 100 | 32  |
|                                        | 40                                    | 32         | 120 | 110 | 40  |
|                                        | 50                                    | 40         | 135 | 120 | 50  |
|                                        | 65                                    | 50         | 140 | 130 | 65  |
|                                        | 80                                    | 65         | 160 | 135 | 80  |
|                                        | 100                                   | 80         | 170 | 160 | 100 |
|                                        | 125                                   | 100        | 190 | 190 | 125 |
|                                        | 150                                   | 125        | 205 | 190 | 150 |
|                                        | 200                                   | 150        | 240 | 230 | 200 |
|                                        | 250                                   | 200        | 350 | 320 | 250 |

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 6.4<br>10.0                            | 20                                    | 15         | 95  | 85  | 20  |
|                                        | 25                                    | 20         | 100 | 95  | 25  |
|                                        | 32                                    | 25         | 115 | 105 | 32  |
|                                        | 40                                    | 32         | 135 | 115 | 40  |
|                                        | 50                                    | 40         | 160 | 125 | 50  |
|                                        | 65                                    | 50         | 175 | 160 | 65  |
|                                        | 80                                    | 65         | 175 | 160 | 80  |
|                                        | 100                                   | 80         | 190 | 180 | 100 |
|                                        | 150                                   | 125        | 280 | 266 | 150 |
|                                        | 200                                   | 150        | 350 | 325 | 200 |

# ► A47H带扳手弹簧微启式安全阀

## A47H Spring Loaded Low Lift Type with Lever Safety Valve



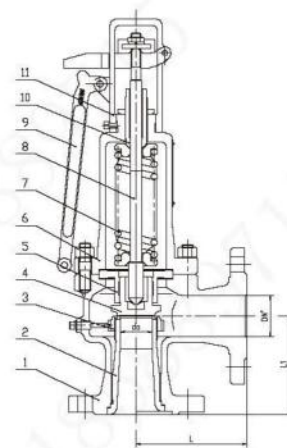
### ●用途Purpose

A47H阀门适用于工作温度 $\leq 350^{\circ}\text{C}$ 的蒸汽、空气等介质的设备或管路上。作为超压保护装置。  
连接法兰标准按JB/T79-94的系列1。

A47H type safety valve are used for the equipment and pipeline of the steam, air etc. medium what the working temperature are Less than or equal to  $350^{\circ}\text{C}$ . Take for extra pressure protection devices. Flange connecting dimensions of comply with Standard series first of JB/T79-94.

### ●主要零部件材料 Materials for main parts

| 序号<br>No.                            | 零件名称<br>Name of part   | 材料<br>Materials |
|--------------------------------------|------------------------|-----------------|
|                                      |                        | A47H-C          |
| 1                                    | 阀体<br>Body             | WCB             |
| 2                                    | 阀座<br>Nozzle           | 20Cr13          |
| 3                                    | 调节圈<br>Adjusting ring  | ZG20Cr13        |
| 4                                    | 阀瓣<br>Disc             | 20Cr13          |
| 5                                    | 导向套<br>Guide           | 20Cr13          |
| 6                                    | 阀盖<br>Bonnet           | WCB             |
| 7                                    | 弹簧<br>Spring           | 50CrVA          |
| 8                                    | 阀杆<br>Stem             | 20Cr13          |
| 9                                    | 扳手<br>Lever            | WCB             |
| 10                                   | 调整螺杆<br>Adjusting bolt | 45              |
| 11                                   | 保护罩<br>Cap             | WCB             |
| 密封面材料<br>Sealing surface of material |                        | 堆焊D507          |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 20                                    | 15         | 95  | 85  | 20  |
|                                        | 25                                    | 20         | 100 | 85  | 25  |
|                                        | 32                                    | 25         | 115 | 100 | 32  |
|                                        | 40                                    | 32         | 120 | 110 | 40  |
|                                        | 50                                    | 40         | 135 | 120 | 50  |
|                                        | 65                                    | 50         | 140 | 130 | 65  |
|                                        | 80                                    | 65         | 160 | 135 | 80  |
|                                        | 100                                   | 80         | 170 | 160 | 100 |
|                                        | 125                                   | 100        | 190 | 190 | 125 |
|                                        | 150                                   | 125        | 205 | 190 | 150 |
|                                        | 200                                   | 150        | 240 | 230 | 200 |
|                                        | 250                                   | 200        | 350 | 320 | 250 |

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 6.4<br>10.0                            | 20                                    | 15         | 95  | 85  | 20  |
|                                        | 25                                    | 20         | 100 | 95  | 25  |
|                                        | 32                                    | 25         | 115 | 105 | 32  |
|                                        | 40                                    | 32         | 135 | 115 | 40  |
|                                        | 50                                    | 40         | 160 | 125 | 50  |
|                                        | 65                                    | 50         | 175 | 160 | 65  |
|                                        | 80                                    | 65         | 175 | 160 | 80  |
|                                        | 100                                   | 80         | 190 | 180 | 100 |
|                                        | 150                                   | 125        | 280 | 266 | 150 |
|                                        | 200                                   | 150        | 350 | 325 | 200 |

# ► A42Y弹簧全启封闭式安全阀

## A42Y Closed Spring Loaded full bore type Safety Valve



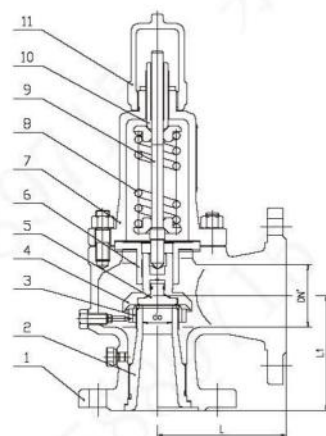
### ●用途Purpose

A42Y-C型适用于工作温度 $\leq 300^{\circ}\text{C}$ 空气、石油气、液体等介质的设备和管路上。A42Y-P型及A42Y-R型适用于工作温度 $\leq 200^{\circ}\text{C}$ 有腐蚀性的介质的设备和管路上，作为超压保护装置。连接法兰标准按JB/T79-94的系列1。

A42Y-C type are used for the equipment and pipeline of the air, petroleum gas, liquid etc. medium what the working temperature are Less than or equal to  $300^{\circ}\text{C}$ . A42Y-P type and A42Y-R type are used for the equipment and pipeline of the quality with corrode medium what the working temperature are Less than or equal to  $200^{\circ}\text{C}$ . Take for extra pressure protection devices. Flange connecting dimensions of comply with Standard series first of JB/T79-94.

### ●主要零部件材料 Materials for main parts

| 序号<br>No.                            | 零件名称<br>Name of part   | 材料<br>Materials |                               |          |
|--------------------------------------|------------------------|-----------------|-------------------------------|----------|
|                                      |                        | A42Y-16C        | A42Y-16P                      | A42Y-16R |
| 1                                    | 阀体<br>Body             | WCB             | CF8                           | CF8M     |
| 2                                    | 阀座<br>Nozzle           | 20Cr13/304      | 304                           | 316      |
| 3                                    | 调节圈<br>Adjusting ring  | ZG20Cr13/CF8    | CF8                           | CF8M     |
| 4                                    | 反冲盘<br>Disc holder     | 20Cr13/304      | 304                           | 316      |
| 5                                    | 阀瓣<br>Disc             | 20Cr13/304      | 304                           | 316      |
| 6                                    | 导向套<br>Guide           | 20Cr13/304      | 304                           | 316      |
| 7                                    | 阀盖<br>Bonnet           | WCB             | CF8                           | CF8M     |
| 8                                    | 弹簧<br>Spring           | 50CrVA          | 50CrVA喷塑                      | 50CrVA喷塑 |
| 9                                    | 阀杆<br>Stem             | 20Cr13          | 20Cr13                        | 20Cr13   |
| 10                                   | 调整螺杆<br>Adjusting bolt | 45              | 20Cr13                        | 20Cr13   |
| 11                                   | 保护罩<br>Cap             | WCB             | CF8                           | CF8M     |
| 密封面材料<br>Sealing surface of material |                        | 堆焊D507          | 堆焊Co基硬质合金 Depositing stellite |          |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 20                                    | 10         | 95  | 85  | 25  |
|                                        | 25                                    | 15         | 110 | 95  | 32  |
|                                        | 32                                    | 20         | 115 | 100 | 40  |
|                                        | 40                                    | 25         | 120 | 110 | 50  |
|                                        | 50                                    | 32         | 135 | 120 | 65  |
|                                        | 65                                    | 40         | 160 | 125 | 80  |
|                                        | 80                                    | 50         | 170 | 135 | 100 |
|                                        | 100                                   | 65         | 195 | 175 | 125 |
|                                        | 125                                   | 80         | 210 | 190 | 150 |
|                                        | 150                                   | 100        | 250 | 210 | 175 |
|                                        | 200                                   | 125        | 305 | 260 | 250 |
|                                        | 250                                   | 150        | 350 | 320 | 300 |
| 6.4<br>10.0                            | 300                                   | 200        | 370 | 350 | 400 |
|                                        | 350                                   | 250        | 500 | 450 | 500 |
|                                        | 400                                   | 280        | 500 | 450 | 500 |

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 6.4<br>10.0                            | 20                                    | 10         | 110 | 100 | 25  |
|                                        | 25                                    | 15         | 110 | 100 | 32  |
|                                        | 32                                    | 20         | 130 | 110 | 40  |
|                                        | 40                                    | 25         | 130 | 120 | 50  |
|                                        | 50                                    | 32         | 135 | 130 | 65  |
|                                        | 65                                    | 40         | 170 | 150 | 80  |
|                                        | 80                                    | 50         | 175 | 160 | 100 |
|                                        | 100                                   | 65         | 195 | 195 | 125 |
|                                        | 100                                   | 65         | 220 | 200 | 150 |
|                                        | 150                                   | 100        | 280 | 265 | 200 |

# ► A44Y/A48Y带扳手弹簧全启式安全阀

A44Y/A48Y Spring loaded full bore type with lever safety valve



## ●用途Purpose

A48Y型适用于工作温度 $\leq 350^{\circ}\text{C}$ 的蒸汽、空气等介质的设备和管路上。  
A44Y适用于工作温度 $\leq 300^{\circ}\text{C}$ 的空气、石油等介质的设备或管路上，作为超压保护装置。连接法兰标准按JB/T79-94系列1。

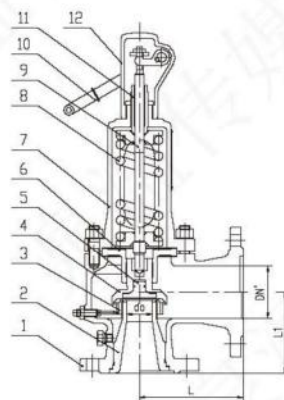
A48Y type are used for the equipment and pipeline of the with steam and air etc. medium what the working temperature are Less than or equal to  $350^{\circ}\text{C}$ . A44Y type are used for the equipment and pipeline of the with air and petroleum gas medium what the working temperature are Less than or equal to  $300^{\circ}\text{C}$ . Take for extra pressure protection devices. Flange connecting dimensions of comply with Standard series first of JB/T79-94.

## ●主要零部件材料 Materials for main parts

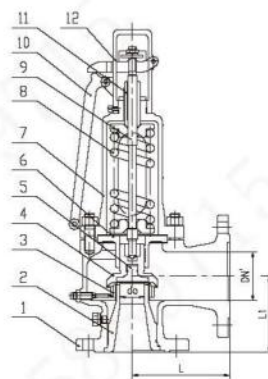
| 序号<br>No.                            | 零件名称<br>Name of part   | 材料<br>Materials |                                  |          |
|--------------------------------------|------------------------|-----------------|----------------------------------|----------|
|                                      |                        | A48Y/A44Y-C     | A44Y-P                           | A44Y-R   |
| 1                                    | 阀体<br>Body             | WCB             | CF8                              | CF8M     |
| 2                                    | 阀座<br>Nozzle           | 20Cr13          | 304                              | 316      |
| 3                                    | 调节圈<br>Adjusting ring  | ZG20Cr13        | CF8                              | CF8M     |
| 4                                    | 反冲盘<br>Disc holder     | 20Cr13          | 304                              | 316      |
| 5                                    | 阀瓣<br>Disc             | 20Cr13          | 304                              | 316      |
| 6                                    | 导向套<br>Guide           | 20Cr13          | 304                              | 316      |
| 7                                    | 阀盖<br>Bonnet           | WCB             | CF8                              | CF8M     |
| 8                                    | 弹簧<br>Spring           | 50CrVA          | 50CrVA喷塑                         | 50CrVA喷塑 |
| 9                                    | 阀杆<br>Stem             | 20Cr13          | 20Cr13                           | 20Cr13   |
| 10                                   | 扳手<br>Lever            | WCB             | WCB                              | WCB      |
| 11                                   | 调整螺栓<br>Adjusting bolt | 45              | 20Cr13                           | 20Cr13   |
| 12                                   | 保护罩<br>Cap             | WCB             | CF8                              | CF8M     |
| 密封面材料<br>Sealing surface of material |                        | 堆焊D507          | 堆焊Co基硬质合金<br>Depositing etellite |          |



A44Y



A48Y



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 20                                    | 10         | 95  | 85  | 25  |
|                                        | 25                                    | 15         | 110 | 95  | 32  |
|                                        | 32                                    | 20         | 115 | 100 | 40  |
|                                        | 40                                    | 25         | 120 | 110 | 50  |
|                                        | 50                                    | 32         | 135 | 120 | 65  |
|                                        | 65                                    | 40         | 160 | 125 | 80  |
|                                        | 80                                    | 50         | 170 | 135 | 100 |
|                                        | 100                                   | 65         | 195 | 175 | 125 |
|                                        | 125                                   | 80         | 210 | 190 | 150 |
|                                        | 150                                   | 100        | 250 | 210 | 175 |
|                                        | 200                                   | 125        | 305 | 260 | 250 |
|                                        | 250                                   | 150        | 350 | 320 | 300 |
|                                        | 300                                   | 200        | 370 | 350 | 400 |
|                                        | 350                                   | 250        | 500 | 450 | 500 |
|                                        | 400                                   | 280        | 500 | 450 | 500 |

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 6.4<br>10.0                            | 20                                    | 10         | 110 | 100 | 25  |
|                                        | 25                                    | 15         | 110 | 100 | 32  |
|                                        | 32                                    | 20         | 130 | 110 | 40  |
|                                        | 40                                    | 25         | 130 | 120 | 50  |
|                                        | 50                                    | 32         | 135 | 130 | 65  |
|                                        | 65                                    | 40         | 170 | 150 | 80  |
|                                        | 80                                    | 50         | 175 | 160 | 100 |
|                                        | 100                                   | 65         | 195 | 195 | 125 |
|                                        | 100                                   | 65         | 220 | 200 | 150 |
|                                        | 150                                   | 100        | 280 | 265 | 200 |

# ► A42Y/AH42F液化石油气安全阀、安全回流阀

## A42F/AH42F Liquefied petroleum gas、Back-flow safety valve



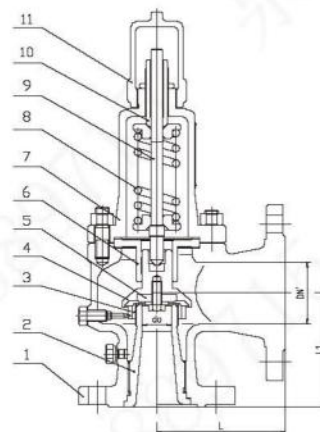
### ●用途Purpose

AH42F、A42F适用于工作温度在-40~80℃的液化石油气的液相出口管上，当进出口压差大于0.5MPa时液化石油气能自动回流入罐。

AH42F, A42F type are applicable in liqued phase outlet pipes with operation temperature range of -40~80℃, when the inlet and outlet differential pressure is larger than 0.5MPa, the liquefied gas will return to the gas tank automatically.

### ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part   | 材料<br>Materials |              |              |
|-----------|------------------------|-----------------|--------------|--------------|
|           |                        | A42F/AH42F-C    | A42F/AH42F-P | A42F/AH42F-R |
| 1         | 阀体<br>Body             | WCB             | CF8          | CF8M         |
| 2         | 阀座<br>Nozzle           | 20Cr13          | 304          | 316          |
| 3         | 调节圈<br>Adjusting ring  | ZG20Cr13        | CF8          | CF8M         |
| 4         | 反冲盘<br>Disc holder     | 20Cr13          | 304          | 316          |
| 5         | 阀瓣<br>Disc             | 20Cr13+PTFE     | 304+PTFE     | 316+PTFE     |
| 6         | 导向套<br>Guide           | 20Cr13          | 304          | 316          |
| 7         | 阀盖<br>Bonnet           | WCB             | CF8          | CF8M         |
| 8         | 弹簧<br>Spring           | 50CrVA          | 50CrVA喷塑     | 50CrVA喷塑     |
| 9         | 阀杆<br>Stem             | 20Cr13          | 20Cr13       | 20Cr13       |
| 10        | 调整螺杆<br>Adjusting bolt | 45              | 20Cr13       | 20Cr13       |
| 11        | 保护罩<br>Cap             | WCB             | CF8          | CF8M         |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 20                                    | 10         | 95  | 85  | 25  |
|                                        | 25                                    | 15         | 110 | 95  | 32  |
|                                        | 32                                    | 20         | 115 | 100 | 40  |
|                                        | 40                                    | 25         | 120 | 110 | 50  |
|                                        | 50                                    | 32         | 135 | 120 | 65  |
|                                        | 65                                    | 40         | 160 | 125 | 80  |
|                                        | 80                                    | 50         | 170 | 135 | 100 |
|                                        | 100                                   | 65         | 195 | 175 | 125 |
|                                        | 125                                   | 80         | 210 | 190 | 150 |
|                                        | 150                                   | 100        | 250 | 210 | 175 |
|                                        | 200                                   | 125        | 305 | 260 | 250 |
|                                        | 250                                   | 150        | 350 | 320 | 300 |
|                                        | 300                                   | 200        | 370 | 350 | 400 |
|                                        | 350                                   | 250        | 500 | 450 | 500 |

# ▶ AHN42F平行式安全回流阀

AHN42F Back-flow safety valve



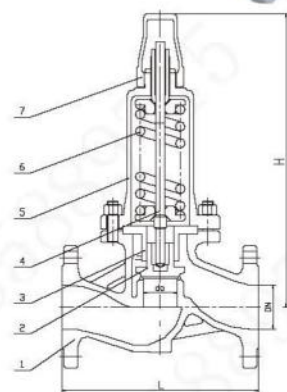
## ●用途Purpose

AHN42F型阀门安装于液化石油气站罐泵出口的液相回流管道上，当泵前压力超过规定值时，阀门自动开启并起安全回流作用，保证设备和管路的安全运行。

AHN42F Type valve is mounted on the liquidoid reflurence pipeline of the pan pump' s outlet of the liquefied petroleum gas station, when front pump pressure exceeds the stipulated value, the valve will open automatically and lead to safe return of the liquid so that ensures the safe operation of equipments and pipelines.

## ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |
|-----------|----------------------|-----------------|
|           |                      | AHN42F-C        |
| 1         | 阀体<br>Body           | WCB             |
| 2         | 阀瓣<br>Disc           | 20Cr13+PTFE     |
| 3         | 导向套<br>Guide         | 20Cr13          |
| 4         | 阀杆<br>Stem           | 20Cr13          |
| 5         | 阀盖<br>Bonnet         | WCB             |
| 6         | 弹簧<br>Spring         | 50CrVA          |
| 7         | 保护罩<br>Cap           | WCB             |



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|
|                                        |                                       | d0         | L   | H   |
| 1.6<br>2.5<br>4.0                      | 40                                    | 25         | 200 | 240 |
|                                        | 50                                    | 40         | 230 | 270 |
|                                        | 80                                    | 50         | 310 | 490 |
|                                        | 100                                   | 80         | 350 | 550 |
|                                        | 150                                   | 100        | 480 | 710 |

# ► A41Y-160/320弹簧微启封闭式高压安全阀

## A41Y-160/320 Closed spring loaded low lift type high pressure safety valve



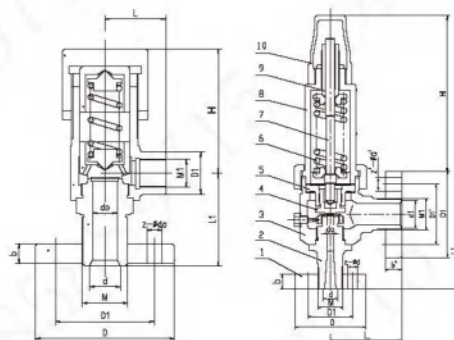
### ●用途Purpose

A41Y-160、320型适用于工作温度 $\leq 200^{\circ}\text{C}$ 空气、氮氢混合气、水等介质的设备和管路上。A41Y-160P/320P、A41Y-160R/320R型适用于工作温度 $\leq 200^{\circ}\text{C}$ 有腐蚀性的气体或液体介质的设备和管路上，作为超压保护装置。连接法兰按JB/T2769-2008的标准。

A41Y-160/320 type are used for the equipment and pipeline of the air,  $\text{N}_2/\text{H}_2$  mixed gas, water etc. Medium what the working temperature are Less than or equal to  $200^{\circ}\text{C}$ . A41Y-160P/320P, A41Y-160R/320R type are used for the equipment and pipeline of the quality with corrode gas and liquid medium what the working temperature are Less than or equal to  $200^{\circ}\text{C}$ . Take for extra pressure protection devices. Flange connecting dimensions of comply with Standard of JB/T2769-2008

### ●主要零部件材料 Materials for main parts

| 序号<br>No.                            | 零件名称<br>Name of part   | 材料<br>Materials |                                  |               |
|--------------------------------------|------------------------|-----------------|----------------------------------|---------------|
|                                      |                        | A41Y-160/320    | A41Y-160/320P                    | A41Y-160/320R |
| 1                                    | 法兰<br>Flange           | 35              | 20Cr13                           | 304           |
| 2                                    | 阀座<br>Nozzle           | 20Cr13          | 304                              | 316           |
| 3                                    | 阀体<br>Body             | WCB             | CF8                              | CF8M          |
| 4                                    | 阀瓣<br>Disc             | 20Cr13          | 304                              | 316           |
| 5                                    | 导向套<br>Guide           | 20Cr13          | 304                              | 316           |
| 6                                    | 弹簧<br>Spring           | 50CrVA          | 50CrVA喷塑                         | 50CrVA喷塑      |
| 7                                    | 阀杆<br>Stem             | 20Cr13          | 20Cr13                           | 20Cr13        |
| 8                                    | 阀盖<br>Bonnet           | WCB             | CF8                              | CF8           |
| 9                                    | 调整螺栓<br>Adjusting bolt | 45              | 20Cr13                           | 20Cr13        |
| 10                                   | 保护罩<br>Cap             | WCB             | CF8                              | CF8           |
| 密封面材料<br>Sealing surface of material |                        | 堆焊D507          | 堆焊Co基硬质合金<br>Depositing stellite |               |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |    |     |     |       |    |      |     |     |     |        |    |       |     |     |     |
|----------------------------------------|---------------------------------------|------------|----|-----|-----|-------|----|------|-----|-----|-----|--------|----|-------|-----|-----|-----|
|                                        |                                       | d0         | d  | D   | D1  | M     | b  | Z-Φd | DN' | D'  | D1' | M1     | b' | Z-Φd' | L   | L1  | H   |
| 16<br>单法兰                              | 15                                    | 7          | 16 | 95  | 60  | M24X2 | 20 | 3-18 | /   | 36  | /   | M33X2  | /  | /     | 50  | 80  | 105 |
|                                        | 20                                    | 10         | 19 | 95  | 60  | M27X2 | 20 | 3-18 | /   | 48  | /   | M33X2  | /  | /     | 50  | 80  | 105 |
|                                        | 25                                    | 12         | 23 | 105 | 68  | M33X2 | 20 | 3-18 | /   | 48  | /   | M33X2  | /  | /     | 50  | 80  | 105 |
| 16                                     | 10                                    | 8          | 18 | 95  | 60  | M24X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 15                                    | 8          | 20 | 95  | 60  | M24X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 20                                    | 10         | 27 | 105 | 68  | M33X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 25                                    | 12         | 28 | 105 | 68  | M33X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 32                                    | 15         | 37 | 115 | 80  | M42X2 | 22 | 4-18 | 50  | 165 | 115 | M64X3  | 32 | 6-26  | 130 | 135 | 275 |
|                                        | 40                                    | 20         | 47 | 165 | 115 | M52X2 | 28 | 6-26 | 65  | 200 | 145 | M80X3  | 40 | 6-29  | 165 | 165 | 390 |
|                                        | 50                                    | 25         | 58 | 165 | 115 | M64X3 | 32 | 6-26 | 80  | 225 | 170 | M100X3 | 50 | 6-33  | 180 | 180 | 465 |
| 32                                     | 10                                    | 8          | 18 | 95  | 60  | M24X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 15                                    | 8          | 20 | 105 | 68  | M33X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 20                                    | 10         | 23 | 110 | 75  | M36X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 25                                    | 12         | 23 | 115 | 80  | M42X2 | 22 | 4-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 250 |
|                                        | 32                                    | 14         | 30 | 135 | 95  | M48X2 | 25 | 4-22 | 50  | 165 | 115 | M64X3  | 32 | 6-26  | 130 | 135 | 275 |
|                                        | 40                                    | 16         | 38 | 165 | 115 | M64X3 | 32 | 6-26 | 65  | 200 | 145 | M80X3  | 40 | 6-29  | 165 | 165 | 390 |
|                                        | 50                                    | 20         | 48 | 200 | 145 | M80X3 | 40 | 6-29 | 80  | 225 | 170 | M100X3 | 50 | 6-33  | 180 | 180 | 465 |

# ► A42Y-160/320弹簧全启封闭式高压安全阀

A42Y-160/320 Closed spring loaded full bore type high pressure safety valve



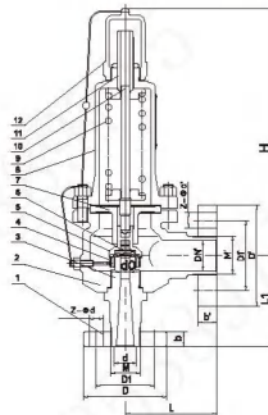
## ●用途Purpose

A42Y-160/320适用于工作温度 $\leq 200^{\circ}\text{C}$ 的空气、氮氢混合气等介质的设备或管路上。  
A42Y160P/320P、A42Y-160R/320R适用于工作温度 $\leq 200^{\circ}\text{C}$ 有腐蚀性介质的设备或管路上，作为超压保护装置。连接法兰按JB/T2769-2008的标准，

A42Y-160/320 type are used for the equipment and pipeline of the air, N<sub>2</sub>, H<sub>2</sub> mixed gas, etc. medium what the working temperature are Less than or equal to 200°C. A42Y-160P/320P, A42Y-160R/320R type are used for the equipment and pipeline of the quality with corrode medium what the working temperature are Less than or equal to 200°C. Take for extra pressure protection devices. Flange connecting dimensions of comply with Standard of JB/T2769-2008.

## ●主要零部件材料 Materials for main parts

| 序号<br>No.                            | 零件名称<br>Name of part   | 材料<br>Materials |                               |               |
|--------------------------------------|------------------------|-----------------|-------------------------------|---------------|
|                                      |                        | A42Y-160/320    | A42Y-160/320P                 | A42Y-160/320R |
| 1                                    | 法兰<br>Flange           | 35              | 20Cr13                        | 304           |
| 2                                    | 阀体<br>Body             | WCB             | CF8                           | CF8M          |
| 3                                    | 阀座<br>Nozzle           | 20Cr13          | 304                           | 316           |
| 4                                    | 调节圈<br>Adjusting ring  | ZG20Cr13        | CF8                           | CF8M          |
| 5                                    | 反冲盘<br>Disc holder     | 20Cr13          | 304                           | 316           |
| 6                                    | 阀瓣<br>Disc             | 20Cr13          | 304                           | 316           |
| 7                                    | 导向套<br>Guide           | 20Cr13          | 304                           | 316           |
| 8                                    | 阀盖<br>Bonnet           | WCB             | CF8                           | CF8           |
| 9                                    | 弹簧<br>Spring           | 50CrVA          | 50CrVA喷塑                      | 50CrVA喷塑      |
| 10                                   | 阀杆<br>Stem             | 20Cr13          | 20Cr13                        | 20Cr13        |
| 11                                   | 调整螺栓<br>Adjusting bolt | 45              | 20Cr13                        | 20Cr13        |
| 12                                   | 保护罩<br>Cap             | WCB             | CF8                           | CF8           |
| 密封面材料<br>Sealing surface of material |                        | 堆焊D507          | 堆焊Co基硬质合金 Depositing stellite |               |



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称口径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |    |     |     |       |    |      |     |     |     |        |    |       |     |     |     |
|----------------------------------------|---------------------------------------|------------|----|-----|-----|-------|----|------|-----|-----|-----|--------|----|-------|-----|-----|-----|
|                                        |                                       | d0         | d  | D   | D1  | M     | b  | Z-Φd | DN' | D'  | D1' | M1     | b' | Z-Φd' | L   | L1  | H   |
| 16                                     | 15                                    | 8          | 20 | 95  | 60  | M24X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 220 |
|                                        | 20                                    | 8          | 27 | 105 | 68  | M33X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 220 |
|                                        | 25                                    | 14         | 28 | 105 | 68  | M33X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 280 |
|                                        | 32                                    | 15         | 37 | 115 | 80  | M42X2 | 22 | 4-18 | 50  | 165 | 115 | M64X3  | 32 | 6-26  | 150 | 150 | 390 |
|                                        | 40                                    | 20         | 47 | 165 | 115 | M52X2 | 28 | 6-26 | 65  | 200 | 145 | M80X3  | 40 | 6-29  | 165 | 165 | 495 |
|                                        | 50                                    | 25         | 59 | 165 | 115 | M64X3 | 32 | 6-26 | 80  | 225 | 170 | M100X3 | 50 | 6-33  | 180 | 180 | 510 |
| 32                                     | 15                                    | 8          | 27 | 105 | 68  | M33X2 | 20 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 220 |
|                                        | 20                                    | 8          | 30 | 110 | 75  | M36X2 | 22 | 3-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 220 |
|                                        | 25                                    | 14         | 35 | 115 | 80  | M42X2 | 22 | 4-18 | 32  | 115 | 80  | M42X2  | 22 | 4-18  | 95  | 100 | 280 |
|                                        | 32                                    | 15         | 41 | 135 | 95  | M48X2 | 25 | 4-22 | 50  | 165 | 115 | M64X3  | 32 | 6-26  | 150 | 150 | 390 |
|                                        | 40                                    | 20         | 58 | 165 | 115 | M64X3 | 32 | 6-26 | 65  | 200 | 145 | M80X3  | 40 | 6-29  | 165 | 165 | 495 |
|                                        | 50                                    | 25         | 70 | 200 | 145 | M80X3 | 40 | 6-29 | 80  | 225 | 170 | M100X3 | 50 | 6-33  | 180 | 180 | 510 |
| 40                                     | 32                                    | 15         | 41 | 135 | 95  | M48X2 | 25 | 4-22 | 50  | 165 | 115 | M64X3  | 32 | 6-26  | 150 | 150 | 390 |

# ▶ A46Y先导式安全阀

## A46Y Pilot operated safety valve



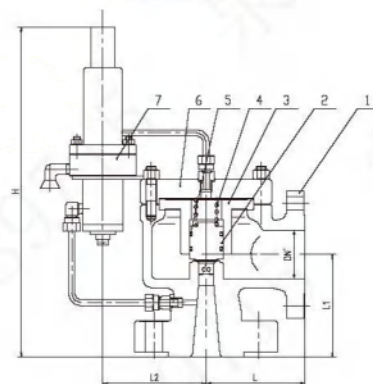
### ●用途Purpose

A46Y先导式安全泄压阀是一种新颖结构的安全阀。主要用于石油天然气、化工、电力、冶金和城市燃气等领域，是受压设备、容器或管路上的最佳超压保护装置。其主要优点是变弹簧直接作用为导阀间接作用，提高了动作的灵敏度，而且主阀采用套筒活塞式，双重密封阀座结构，动作精度高、重复性好、回座快、不泄漏、能带高压排放、工作寿命长、工作稳定可靠，它还可在线调校，反复启跳排放后，仍然能自动回座，关闭严密，操作维护方便。

A46Y Pilot operated safety valve, newly-structured, is mainly applied to such trades as petroleum & natural gas, chemistry, electric, metallurgy & burning gas. It is the best super-pressure protecting equipment on press equipment, container, or pipeline. It is mainly characterized by shifting direct function of spring to indirect function of guide valve. What's more, main valve, applying for sleeve piston & double sealed seat, is characterized by high precision of action, good recycling function, fast turning back to seat, ability to high-pressure leaking, long working time & security, together with readjustment on line, automatic turning back to seat after leaking again and again, tight closure, operating and maintaining convenience.

### ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |              |              |
|-----------|----------------------|-----------------|--------------|--------------|
|           |                      | A46Y/F-C        | A46Y/F-P     | A46Y/F-R     |
| 1         | 阀体<br>Body           | WCB             | CF8          | CF8M         |
| 2         | 阀瓣<br>Disc           | 304/304+PTFE    | 304/304+PTFE | 316/316+PTFE |
| 3         | 导向套<br>Guide         | 304             | 304          | 316          |
| 4         | 弹簧<br>Spring         | 50CrVA          | 50CrVA喷塑     | 50CrVA喷塑     |
| 5         | O型圈<br>O Ring        | 氟橡胶 Viton       | 氟橡胶 Viton    | 氟橡胶 Viton    |
| 6         | 阀盖<br>Bonnet         | 25              | 304          | 316          |
| 7         | 导阀<br>Pilot Valve    | 部件 Part         |              |              |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal pressure<br>PN(Mpa) | 公称通径<br>Nominal Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |      |     |
|-------------------------------------|------------------------------------|------------|-----|-----|-----|------|-----|
|                                     |                                    | d0         | L   | L1  | L2  | H    | DN' |
| 1.6<br>2.5<br>4.0                   | 25                                 | 15         | 110 | 95  | 180 | 410  | 32  |
|                                     | 32                                 | 20         | 115 | 100 | 180 | 420  | 40  |
|                                     | 40                                 | 25         | 120 | 110 | 185 | 440  | 50  |
|                                     | 50                                 | 32         | 135 | 120 | 195 | 450  | 65  |
|                                     | 65                                 | 40         | 160 | 125 | 210 | 470  | 80  |
|                                     | 80                                 | 50         | 170 | 135 | 210 | 485  | 100 |
|                                     | 100                                | 65         | 195 | 175 | 235 | 540  | 125 |
|                                     | 150                                | 100        | 250 | 210 | 245 | 600  | 175 |
|                                     | 200                                | 125        | 305 | 260 | 285 | 660  | 250 |
|                                     | 250                                | 150        | 350 | 320 | 340 | 780  | 300 |
|                                     | 300                                | 200        | 370 | 350 | 455 | 890  | 400 |
|                                     | 350                                | 250        | 500 | 450 | 480 | 1150 | 500 |
|                                     | 400                                | 300        | 500 | 450 | 480 | 1190 | 500 |
|                                     | 500                                | 400        | 550 | 500 | 550 | 1300 | 600 |
|                                     | 600                                | 500        | 800 | 750 | 800 | 1550 | 800 |

| 公称压力<br>Nominal pressure<br>PN(Mpa) | 公称通径<br>Nominal Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |     |     |
|-------------------------------------|------------------------------------|------------|-----|-----|-----|-----|-----|
|                                     |                                    | d0         | L   | L1  | L2  | H   | DN' |
| 6.4<br>10.0                         | 25                                 | 15         | 110 | 100 | 185 | 415 | 32  |
|                                     | 32                                 | 20         | 130 | 110 | 200 | 430 | 40  |
|                                     | 40                                 | 25         | 130 | 120 | 200 | 440 | 50  |
|                                     | 50                                 | 32         | 135 | 130 | 210 | 460 | 65  |
|                                     | 80                                 | 50         | 175 | 160 | 240 | 520 | 100 |
|                                     | 100                                | 65         | 195 | 195 | 270 | 675 | 125 |
|                                     | 150                                | 80         | 280 | 265 | 300 | 780 | 200 |
|                                     | 200                                | 100        | 300 | 300 | 320 | 800 | 300 |

# ► GA42H单杠杆安全阀 GA42H Single-lever safety valve



## ●用途Purpose

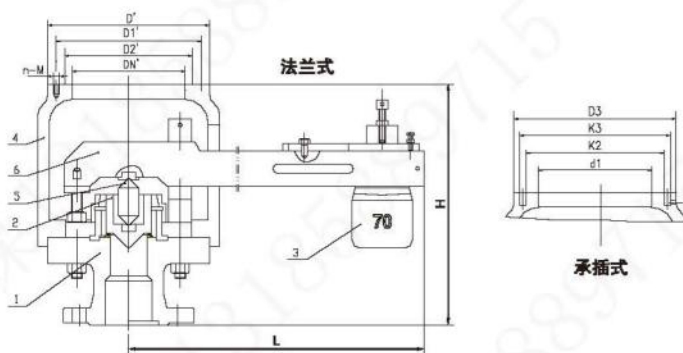
GA42H型安全阀适用于温度 $\leq 450^{\circ}\text{C}$ 的电站锅炉和压力容器上，防止压力超过允许最高值，介质可为蒸汽、空气。

GA42H type safety valve is suitable for power plant boilers and pressure vessels with temperatures below  $450^{\circ}\text{C}$  to prevent pressure from exceeding the maximum allowable value. The medium can be steam or air.



## ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |
|-----------|----------------------|-----------------|
| 1         | 阀座<br>Nozzle         | WCB             |
| 2         | 阀瓣<br>Disc           | 20Cr13          |
| 3         | 重锤<br>Hammer         | 铸铁 Cast iron    |
| 4         | 阀体<br>Body           | HT200           |
| 5         | 阀杆<br>Stern          | 20Cr13          |
| 6         | 杠杆<br>Lever          | 35              |



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号<br>Type | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |                             |     |     |     |       |                             |     |     |     |
|------------|---------------------------------------|------------|-----|-----|-----------------------------|-----|-----|-----|-------|-----------------------------|-----|-----|-----|
|            |                                       | d0-z       | L   | H   | 出口法兰式<br>Export flange type |     |     |     |       | 出口承插式<br>Export socket type |     |     |     |
|            |                                       |            |     |     | DN'                         | D2' | D1' | D'  | n-M   | d1                          | K2  | K3  | D3  |
| GA42H-16   | 50                                    | 40 × 1     | 840 | 412 | 125                         | 175 | 200 | 235 | 8-M16 | 120                         | 145 | 162 | 190 |
| GA42H-25   | 50                                    | 40 × 1     | 840 | 412 | 125                         | 175 | 200 | 235 | 8-M16 | 120                         | 145 | 162 | 190 |
| GA42H-40   | 50                                    | 40 × 1     | 840 | 412 | 125                         | 175 | 200 | 235 | 8-M16 | 120                         | 145 | 162 | 190 |
| GA42H-64   | 50                                    | 40 × 1     | 840 | 420 | 125                         | 175 | 200 | 235 | 8-M16 | 120                         | 145 | 162 | 190 |
| GA42H-100  | 50                                    | 40 × 1     | 840 | 420 | 125                         | 175 | 200 | 235 | 8-M16 | 120                         | 145 | 162 | 190 |

# ► GA44H双杠杆安全阀 GA44H Dual-lever safety valve



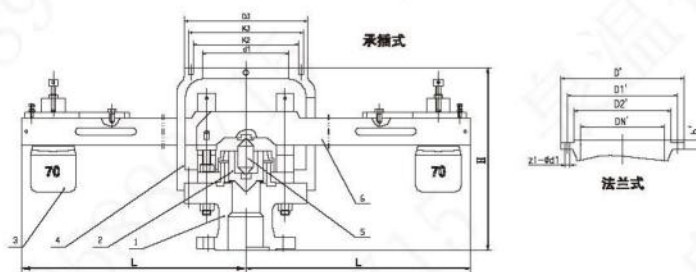
## ●用途Purpose

GA44H型安全阀适用于温度 $\leq 450^{\circ}\text{C}$ 的电站锅炉和压力容器上，防止压力超过允许最高值，介质可为蒸汽、空气。

GA44H type safety valve is applicable to the power-station boiler and pressure container (The working temperature is  $450^{\circ}\text{C}$  or less.) Which will avoid the pressure rate beyond the allowed upper limit. The medium can be steam or air.

## ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |
|-----------|----------------------|-----------------|
| 1         | 阀座<br>Nozzle         | WCB             |
| 2         | 阀瓣<br>Disc           | 20Cr13          |
| 3         | 重锤<br>Hammer         | 铸铁 Cast iron    |
| 4         | 阀体<br>Body           | HT200           |
| 5         | 阀杆<br>Stem           | 20Cr13          |
| 6         | 杠杆<br>Lever          | 35              |



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号<br>Type | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |                             |     |     |     |    |    |      |                             |     |     |     |
|------------|---------------------------------------|------------|-----|-----|-----------------------------|-----|-----|-----|----|----|------|-----------------------------|-----|-----|-----|
|            |                                       | d0-z       | L   | H   | 出口法兰式<br>Export flange type |     |     |     |    |    |      | 出口承插式<br>Export socket type |     |     |     |
|            |                                       |            |     |     | DN'                         | D2' | D1' | D'  | b' | f' | Z-Φd | d1                          | K2  | K3  | D3  |
| GA44H-16   | 80                                    | 50X2       | 840 | 410 | 150                         | 210 | 240 | 280 | 24 | 3  | 8-23 | 120                         | 145 | 162 | 190 |
| GA44H-25   | 80                                    | 50X2       | 840 | 410 | 150                         | 210 | 240 | 280 | 24 | 3  | 8-23 | 120                         | 145 | 162 | 190 |
| GA44H-40   | 80                                    | 50X2       | 840 | 410 | 150                         | 210 | 240 | 280 | 24 | 3  | 8-23 | 120                         | 145 | 162 | 190 |
| GA44H-64   | 80                                    | 50X2       | 840 | 480 | 200                         | 255 | 280 | 315 | 24 | 3  | 8-18 | 200                         | 218 | 253 | 285 |



## ► A49H-4主安全阀

### A49H-4 Main safety valve



#### ● 用途 Purpose

主要用于电站锅炉、压力容器、减温减压装置上使用，防止压力超过允许最高压力值，保证设备安全运行

This valve is used for power plant boilers, pressure containers, pressure and temperature reducing device and other facilities. It serves to prevent the pressure exceeding the highest allowable pressure value and ensure the safety of the device when working.

#### ● 结构简述 Structure briefing

1、当介质压力升高到整定压力时，冲量安全阀打开，介质从脉冲管进入主安全阀的活塞室，推动活塞下降，使阀门自动打开，当冲量阀关闭时，阀瓣又自动关闭。

2、密封面用钴基铬镍不锈钢堆焊而成，阀瓣经热处理，提高了耐磨性和抗冲蚀性。

1. When the medium pressure rises to the set pressure, the impulse safety valve opens, and the medium in the impulse pipe enters into the piston chamber of the main safety valve from impulse pipe, forcing the piston to descend, and then the valve automatically opens; when the impulse safety valve closes, the disc will also automatically close.

2. The sealed surface is made of Fe base stainless steel by overlaying welding. Through thermal treatment, the wear resistance and anti-erosion of disc is improved.

#### ● 安装说明 Installation instruction

1、阀门必须垂直安装在设备的最高位置。

2、主安全阀紧固在支座上，支座承受主安全阀排汽时产生的反座力。

3、排气管应有专门吊架，排气管重量不得加在主安全阀上，主安全阀与排气管之间的连接法兰应消除任何的附加预应力。

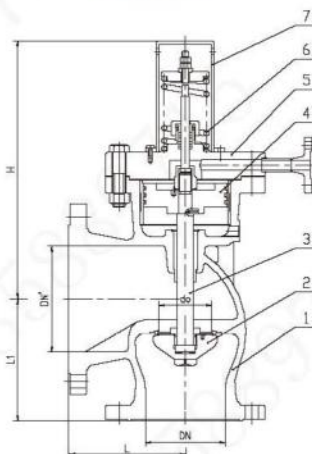
4、排气管的最低点应考虑疏水，以免排汽时产生水击。

1. The main safety valve shall be installed vertically at the highest position of the device.

2. The main safety valve shall be fastened upon the gallow, which sustains the back-seat force produced in the steam discharging process of the main safety valve.

3. The exhaust pipe shall contain a special gallow to prevent the force of its weight directly applying on the main safety valve. The connecting lange between the main safety valve and exhaust pipe shall eliminate any extra stress.

4. At the lowest point of the exhaust pipe, water drainage shall be taken into consideration to avoid producing water hammer while discharging steam.



#### ● 主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |
|-----------|----------------------|-----------------|
| 1         | 阀体 Body              | WCB             |
| 2         | 阀瓣 Disc              | 25              |
| 3         | 阀杆 Stem              | 20Cr13          |
| 4         | 活塞 Piston            | 20Cr13          |
| 5         | 阀盖 Bonnet            | 25              |
| 6         | 弹簧 Spring            | 50CrVA          |
| 7         | 保护罩 Cap              | 25              |

#### ● 外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力PN(Mpa)<br>Nominal pressure | 公称口径DN(mm)<br>Nominal Diameter | 尺寸Size(mm) |     |     |     |     |
|---------------------------------|--------------------------------|------------|-----|-----|-----|-----|
|                                 |                                | d0         | L   | L1  | DN' | H   |
| 4.0                             | 100                            | 80         | 180 | 200 | 150 | 400 |
|                                 | 150                            | 100        | 220 | 230 | 200 | 490 |
|                                 | 200                            | 150        | 270 | 295 | 300 | 615 |
|                                 | 250                            | 200        | 300 | 350 | 350 | 650 |
|                                 | 300                            | 250        | 350 | 400 | 400 | 670 |

# ► GA41H/A51H单杠杆安全阀 GA41H/A51H Single-lever safety valve



## ●用途Purpose

GA41H, A51H型安全阀适用于温度 $\leq 450^{\circ}\text{C}$ 的锅炉和压力容器上,防止压力超过允许最高值。介质可为蒸汽、空气。

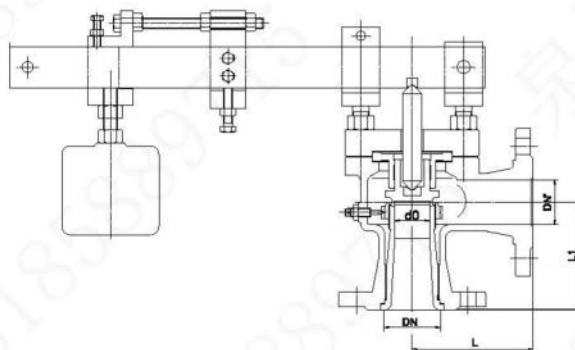
GA41H, A51H type safety valve is applicable to the boiler and pressure container (The working temperature is  $450^{\circ}\text{C}$  or less.), which will avoid the pressure rate beyond the allowed upper limit. The medium can be steam or air.

## ●主要零部件材料说明

### Explanation of the materials for main parts

GA41H、A51H型安全阀除杠杆(材料为碳钢),重锤(材料为铸铁),其余材料均和A41H-16C型弹簧式安全阀相同

GA41H, A51H type safety valve, except the lever (material is carbon steel), hammer (material is cast iron), the materials of other parts is the same as A41H-16C spring load type safety valve.



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 20                                    | 15         | 95  | 85  | 20  |
|                                        | 25                                    | 20         | 100 | 85  | 25  |
|                                        | 32                                    | 25         | 115 | 100 | 32  |
|                                        | 40                                    | 32         | 120 | 110 | 40  |
|                                        | 50                                    | 40         | 135 | 120 | 50  |
|                                        | 65                                    | 50         | 140 | 130 | 65  |
|                                        | 80                                    | 65         | 160 | 135 | 80  |
|                                        | 100                                   | 80         | 170 | 160 | 100 |
|                                        | 125                                   | 100        | 190 | 190 | 125 |
|                                        | 150                                   | 125        | 205 | 190 | 150 |
|                                        | 200                                   | 150        | 240 | 230 | 200 |
|                                        | 250                                   | 200        | 350 | 320 | 250 |

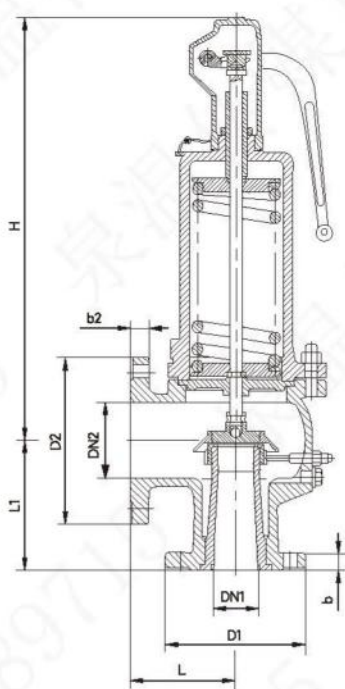
# ► 900系列安全阀 900 series safety valve



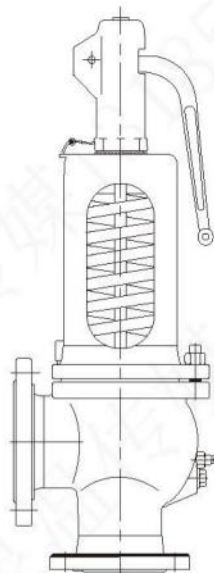
## ● 用途 Purpose

900系列德标安全阀主要用于石油、天然气、化工、电力、城市燃气等领域,作为超压保护装置,具有动作精度高,重复性好,回座准确,操作维护方便。

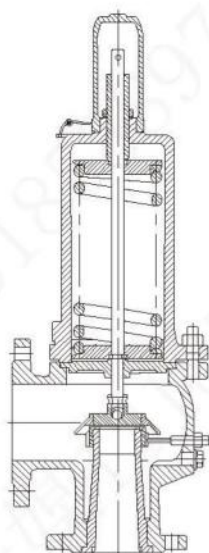
900 series DIN standard safety valves are mainly applied to such trades as petroleum & natural gas, chemistry, electric, metallurgy & burning gas. As the super-pressure protecting equipment. With high precision of action, good recycling function and fast turning back to seat, operating and maintaining convenience.



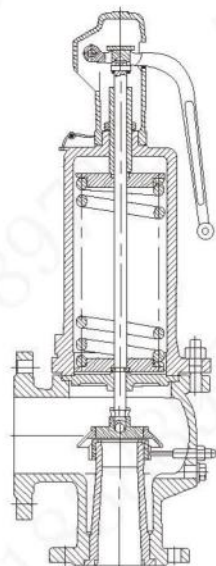
901型type  
闭式阀帽Closed valve cap  
闭式顶盖Closed top cover  
带手柄With handle



902型type  
开式阀帽Open valve cap  
开式顶盖Open top cover  
带手柄With handle



911型type  
闭式阀帽Closed valve cap  
气密式顶盖Airtight top cover  
不带手柄Without handle



912型type  
闭式阀帽Closed valve cap  
开式顶盖Open top cover  
带手柄With handle

| 型号model            | 公称压力<br>Nominal pressure | 阀体材质<br>Body material | 公称通径<br>Nominal diameter | 工作温度<br>Working temperature |
|--------------------|--------------------------|-----------------------|--------------------------|-----------------------------|
| 35.901/902/911/912 | PN40/16                  | 铸钢1.0619+N            | DN20/32~DN150/250        | -10℃~+450℃                  |
| 55.901/911         | PN40/16                  | 不锈钢1.4408             | DN20/32~DN100/150        | -60℃~+400℃                  |

# ► 900系列安全阀

900 series safety valve



| DN                                         | 20/32 | 25/40 | 32/50 | 40/65 | 50/80 | 65/100 | 80/125 | 100/150 | 125/200 | 150/250 |
|--------------------------------------------|-------|-------|-------|-------|-------|--------|--------|---------|---------|---------|
| 流通孔径d0(mm)<br>Diameter of discharging hole | 18    | 20    | 25    | 32    | 40    | 50     | 65     | 90      | 105     | 125     |
| 流通面积Ao(mm)<br>Discharging area             | 254   | 314   | 491   | 804   | 1256  | 1963   | 3317   | 6359    | 8655    | 12266   |
| 重量(kg)<br>weight                           | 8.5   | 10    | 14    | 20    | 28    | 40     | 53     | 80      | 125     | 165     |

## ● 外形尺寸和连接尺寸 Dimensions (mm)

901/902/911/912型安全阀, 901/902/911/912 type safety valve

| DN1 × DN2 |      | 20x32 | 25x40 | 32x50 | 40x65 | 50x80 | 65x100 | 80x125 | 100x150 | 125x200 | 150x250 |
|-----------|------|-------|-------|-------|-------|-------|--------|--------|---------|---------|---------|
| D1        | PN16 | 105   | 115   | 140   | 150   | 165   | 185    | 200    | 220     | 250     | 285     |
|           | PN40 |       |       |       |       |       |        |        | 235     | 270     | 300     |
| D2        | PN16 | 140   | 150   | 165   | 185   | 200   | 220    | 250    | 285     | 340     | 405     |
| b1        |      | 20    | 20    | 20    | 21    | 22    | 24     | 26     | 28      | 31      | 34      |
| b2        |      | 19    | 19    | 20    | 20    | 20    | 20     | 22     | 22      | 27      | 29      |
| L         |      | 85    | 100   | 110   | 115   | 120   | 140    | 160    | 180     | 200     | 225     |
| L1        |      | 95    | 105   | 115   | 140   | 150   | 170    | 195    | 220     | 250     | 285     |
| H         |      | 270   | 280   | 330   | 395   | 435   | 545    | 610    | 690     | 845     | 890     |

921/922/923/924型安全阀, 921/922/923/924 type safety valve

| DN |      | 20  | 25  | 32  | 40  | 50  | 65  | 80  | 100 | 150 | 200 |
|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| D  | PN16 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 220 | 285 | 340 |
|    | PN40 |     |     |     |     |     |     |     | 235 | 300 | 375 |
| b  |      | 18  | 18  | 18  | 18  | 20  | 22  | 24  | 24  | 28  | 34  |
| L  |      | 95  | 100 | 105 | 115 | 125 | 145 | 155 | 175 | 225 | 275 |

941, 942, 943型安全阀Type safety valve

| DN | 15   | 20   | 25     | 25     |
|----|------|------|--------|--------|
| GE | 1/2" | 3/4" | 1"     | 1"     |
| GA | 3/4" | 1"   | 1 1/4" | 1 1/2" |
| b  | 15   | 16   | 18     | 18     |
| L  | 50   | 50   | 50     | 50     |
| L1 | 53   | 55   | 58     | 58     |
| H  | 260  | 260  | 260    | 260    |

961, 962, 963型安全阀Type safety valve  
951, 952, 953型安全阀Type safety valve

| DN     | 15                 | 20                 | 25  |
|--------|--------------------|--------------------|-----|
| GE     | 1/2"               | 3/4"               | 1"  |
| GA     | 1/2" <sup>1)</sup> | 1/2" <sup>2)</sup> | 1"  |
| b      | 15                 | 16                 | 18  |
| L      | 42                 | 42                 | 50  |
| L1     | 34                 | 34                 | 34  |
| H (最大) | 187                | 187                | 187 |

注: 1) DN15GA可选3/4"; 2) DN20GA可选3/4"和1"。

# ► A21/A27H/A28H系列安全阀

A21/A27H/A28H Series safety valve



## ● 用途Purpose

A21型适用于工作温度 $\leq 200^{\circ}\text{C}$ 的水、空气等介质的设备或管路上。

A21 type are used for the equipment and pipeline of the water, air, etc. medium what the working temperature are Less than or equal to  $200^{\circ}\text{C}$ .

## ● 外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |    |     |       |
|----------------------------------------|---------------------------------------|------------|----|-----|-------|
|                                        |                                       | d0         | L  | L1  | G     |
| 1.6                                    | 15                                    | 12         | 35 | 80  | G1/2" |
| 2.5                                    | 20                                    | 15         | 40 | 87  | G3/4" |
| 4.0                                    | 25                                    | 19         | 52 | 100 | G1"   |
| 6.4<br>10.0                            | 15                                    | 10         | 52 | 104 | G1"   |
|                                        | 20                                    | 10         | 52 | 104 | G1"   |
|                                        | 25                                    | 12         | 52 | 104 | G1"   |
| 16.0                                   | 15                                    | 8          | 52 | 104 | G1"   |
|                                        | 20                                    | 8          | 52 | 104 | G1"   |
|                                        | 25                                    | 8          | 52 | 104 | G1"   |

## ● 用途Purpose

A27H型适用于工作温度 $< 200^{\circ}\text{C}$ 的水、空气、蒸气等介质的设备或管路上。

A27H type are used for the equipment and pipeline of water, air, steam etc. Medium what the working temperature are less than  $200^{\circ}\text{C}$ .

## ● 外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |        |     |     |        |
|----------------------------------------|---------------------------------------|------------|--------|-----|-----|--------|
|                                        |                                       | d0         | R      | L   | L1  | G      |
| 1.0<br>1.6<br>2.5<br>4.0               | 15                                    | 10         | 1/2"   | 37  | 66  | 1/2"   |
|                                        | 20                                    | 15         | 3/4"   | 39  | 68  | 3/4"   |
|                                        | 25                                    | 20         | 1"     | 40  | 72  | 1"     |
|                                        | 32                                    | 25         | 1-1/4" | 50  | 81  | 1-1/4" |
|                                        | 40                                    | 32         | 1-1/2" | 61  | 90  | 1-1/2" |
|                                        | 50                                    | 40         | 2"     | 66  | 108 | 2"     |
|                                        | 65                                    | 50         | 2-1/2" | 81  | 130 | 2-1/2" |
|                                        | 80                                    | 65         | 3"     | 108 | 142 | 3"     |

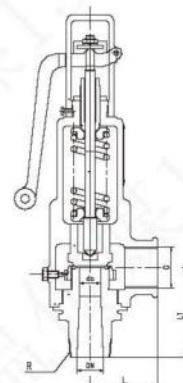
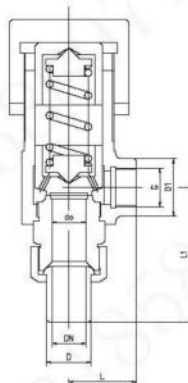
## ● 用途Purpose

A28H型适用于工作温度 $< 200^{\circ}\text{C}$ 的空气、蒸气等介质的设备或管路上。

A28H type are used for the equipment and pipeline of air, steam etc. Medium what the working temperature are less than  $200^{\circ}\text{C}$ .

## ● 外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |        |     |     |        |
|----------------------------------------|---------------------------------------|------------|--------|-----|-----|--------|
|                                        |                                       | d0         | R      | L   | L1  | G      |
| 1.0<br>1.6<br>2.5<br>4.0               | 15                                    | 10         | 1/2"   | 37  | 66  | 3/4"   |
|                                        | 20                                    | 12         | 3/4"   | 40  | 68  | 1"     |
|                                        | 25                                    | 15         | 1"     | 45  | 78  | 1-1/4" |
|                                        | 32                                    | 20         | 1-1/4" | 61  | 90  | 1-1/2" |
|                                        | 40                                    | 25         | 1-1/2" | 66  | 102 | 2"     |
|                                        | 50                                    | 32         | 2"     | 78  | 110 | 2-1/2" |
|                                        | 65                                    | 40         | 2-1/2" | 108 | 140 | 3"     |
|                                        | 80                                    | 50         | 3"     | 110 | 155 | 4"     |



# ► A48SH高温高压安全阀

## A48SH high temperature and high pressure safety valve



### ●用途Purpose

本阀门适用于工作温度“C型” ≤425℃; “I型” ≤500; “V型” ≤550℃的蒸汽等介质设备或管路上, 作为超压保护装置。

These safety valve are used for the equipment and pipeline of the steam, etc. Medium what the working temperature with C Type are Less than or equal to 425℃ and I type are Less than or equal to 500℃ and V Type are Less than or equal to 550℃. Take for extra pressure protection devices.

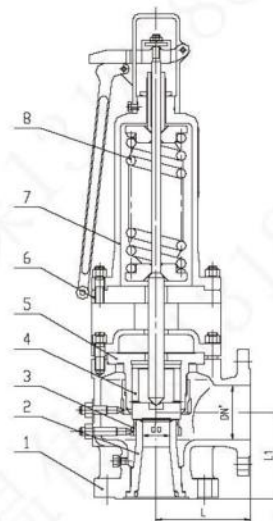
### ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part  | 材料<br>Materials |           |           |
|-----------|-----------------------|-----------------|-----------|-----------|
|           |                       | C型              | I型        | V型        |
| 1         | 阀体<br>Body            | WCB             | ZG20CrMo  | ZG20CrMoV |
| 2         | 阀座<br>Nozzle          | 20Cr13          | 304+STL   | 304+STL   |
| 3         | 调节圈<br>Adjusting ring | ZG20Cr13        | CF8       | CF8       |
| 4         | 阀瓣<br>Disc            | 20Cr13          | 304+STL   | 304+STL   |
| 5         | 导向套<br>Guide          | 20Cr13          | 304       | 304       |
| 6         | 散热器<br>Radiator       | WCB             | WCB       | WCB       |
| 7         | 阀盖<br>Bonnet          | WCB             | WCB       | WCB       |
| 8         | 弹簧<br>Spring          | 50CrVA          | 30W4Cr2VA | 30W4Cr2VA |

### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 1.6<br>2.5<br>4.0                      | 40                                    | 25         | 135 | 116 | 50  |
|                                        | 50                                    | 32         | 160 | 126 | 65  |
|                                        | 65                                    | 40         | 160 | 125 | 80  |
|                                        | 80                                    | 50         | 170 | 156 | 100 |
|                                        | 100                                   | 65         | 220 | 196 | 125 |
|                                        | 150                                   | 90         | 240 | 225 | 200 |
|                                        | 200                                   | 125        | 305 | 260 | 250 |

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |
|----------------------------------------|---------------------------------------|------------|-----|-----|-----|
|                                        |                                       | d0         | L   | L1  | DN' |
| 6.4<br>10.0                            | 40                                    | 25         | 135 | 120 | 50  |
|                                        | 50                                    | 32         | 160 | 130 | 65  |
|                                        | 50                                    | 32         | 160 | 145 | 80  |
|                                        | 65                                    | 40         | 175 | 160 | 80  |
|                                        | 80                                    | 50         | 175 | 160 | 100 |
|                                        | 100                                   | 65         | 220 | 200 | 125 |
|                                        | 100                                   | 65         | 220 | 200 | 150 |
|                                        | 150                                   | 100        | 280 | 280 | 200 |
|                                        | 200                                   | 115        | 300 | 300 | 250 |
| 16.0                                   | 80                                    | 40         | 230 | 210 | 150 |



# ▶ AY42H、YA802Y安全溢流阀

AY42H、YA802Y Safety overflow valves



## ●用途Purpose

AY42H、YA802Y型安全溢流阀可用于高压注水站的管路上，作为超压保护装置。  
AY42H, YA802Y type safety overflow valves are to be applied to pipelines in high-pressure pump stations to provide over pressure protection.

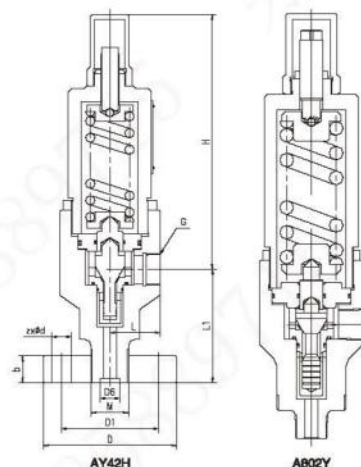
## ●主要性能参数Main performance parameters

| 型号<br>Type       | 公称压力<br>Nominal pressure<br>PN(Mpa) | 整定压力(Mpa)<br>Set pressure(Mpa) | 工作温度(°C)<br>Working temperature(°C) | 适用介质<br>Suitable medium  |
|------------------|-------------------------------------|--------------------------------|-------------------------------------|--------------------------|
| AY42H/A802Y-160P | 160                                 | 6.3~16.0                       | ≤200                                | 水、油品等<br>Water, oil, etc |
| AY42H/A802Y-250P | 250                                 | 10.0~25.0                      | ≤200                                |                          |
| AY42H/A802Y-400P | 400                                 | 20.0~40.0                      | ≤200                                |                          |



## ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |
|-----------|----------------------|-----------------|
|           |                      | P型              |
| 1         | 阀体<br>Body           | 304             |
| 2         | 阀座<br>Nozzle         | 304             |
| 3         | 阀瓣<br>Disc           | 304             |
| 4         | 阀盖<br>Bonnet         | 304             |
| 5         | 弹簧<br>Spring         | 50CrVA喷塑        |



## ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号<br>Type | 公称通径<br>Nominal Diameter<br>DN(mm) | 尺寸Size(mm) |        |    |     |     |
|------------|------------------------------------|------------|--------|----|-----|-----|
|            |                                    | Rc         | ZG     | L  | L1  | H   |
| YA802-600  | 15                                 | 1/2"       | 1/2"   | 48 | 140 | 250 |
|            | 25                                 | 1"         | 1"     | 52 | 113 | 275 |
|            | 40                                 | 1-1/2"     | 1-1/2" | 52 | 157 | 336 |

| 型号<br>Type        | 公称通径<br>Nominal Diameter<br>DN(mm) | 尺寸Size(mm) |     |    |    |       |        |         |     |     |     |
|-------------------|------------------------------------|------------|-----|----|----|-------|--------|---------|-----|-----|-----|
|                   |                                    | D          | D1  | D6 | b  | Z-Φd  | M      | G       | L   | L1  | H   |
| AY42H-160/250/400 | 15                                 | 135        | 95  | 25 | 25 | 4-Φ22 | M48×2  | Rc1     | 65  | 140 | 329 |
|                   | 20                                 | 165        | 115 | 30 | 28 | 6-Φ26 | M52×2  | Rc1-1/2 | 80  | 150 | 447 |
|                   | 25                                 | 200        | 145 | 38 | 40 | 6-Φ29 | M80×3  | Rc2     | 90  | 180 | 485 |
|                   | 32                                 | 225        | 170 | 42 | 50 | 6-Φ33 | M100×3 | Rc2-1/2 | 100 | 200 | 570 |

# FA72W-10P真空负压安全阀

## FA72W-10P Vacuum negative-pressure safety valve



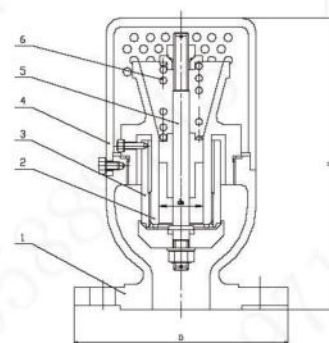
### ●用途Purpose

- 1、用于负压系统：当负压容器系统内负压超过允许值时，该阀自动开启，吸入空气。当负压升到规定值时，阀门自动关闭，从而保证设备容器及系统的安全运行；
  - 2、用于正常非负压系统：各种腐蚀性介质容器，如吸收塔、蒸馏塔、贮槽、罐等，当通入蒸汽清洗后，如放散阀未打开，蒸汽冷凝，产生负压，安装设备即确保设备安全。
1. Used for negative pressure system: When the negative pressure in the negative pressure vessel system exceeds the allowed value, the valve opens automatically to inhale air. When the negative pressure rises to the specified value, the valve closes automatically, thus ensuring the safe operation of the equipment vessel and the system;
2. For normal non-negative pressure systems: Various corrosive media containers, such as absorption towers, distillation towers, storage tanks, and cans, etc after being cleaned with steam, if the relief valve is not opened, the steam condenses and creates a negative pressure, the installation equipment ensures the safety of the.



### ●主要零部件材料 Materials for main parts

| 序号<br>No. | 零件名称<br>Name of part | 材料<br>Materials |
|-----------|----------------------|-----------------|
|           |                      | P型              |
| 1         | 阀体<br>Body           | CF8             |
| 2         | 阀座<br>Nozzle         | 304             |
| 3         | 阀瓣<br>Disc           | 304             |
| 4         | 阀盖<br>Bonnet         | CF8             |
| 5         | 阀杆<br>Stem           | 304             |
| 6         | 弹簧<br>Spring         | 50CrVA喷塑        |



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |       |     |
|----------------------------------------|---------------------------------------|------------|-------|-----|
|                                        |                                       | d0         | D     | H   |
| 1.0                                    | 25                                    | 20         | Φ 115 | 210 |
|                                        | 32                                    | 25         | Φ 140 | 210 |
|                                        | 40                                    | 32         | Φ 150 | 210 |
|                                        | 50                                    | 40         | Φ 165 | 215 |
|                                        | 65                                    | 40         | Φ 185 | 240 |
|                                        | 80                                    | 65         | Φ 200 | 280 |
|                                        | 100                                   | 65         | Φ 220 | 280 |
|                                        | 150                                   | 100        | Φ 285 | 320 |
|                                        | 200                                   | 150        | Φ 340 | 360 |

# ▶TA、A型炼油专用安全阀

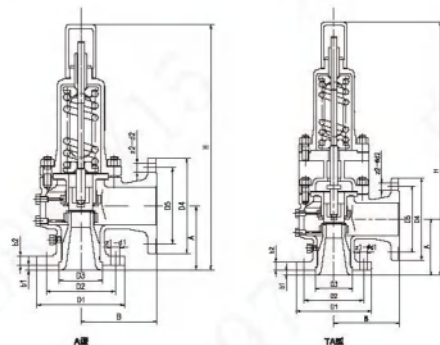
TA、A Type Special safety valve series for oil refining



## ●用途Purpose

炼油专用安全阀是石油化工受压容器的主要附件之一，用于控制容器压力，保证容器安全。本系列安全阀为密闭全开型弹簧安全阀，即当气体介质压力高于整定压力3%时，阀门自动开启，继而全量排放。本系列安全阀可以具有稳定背压，无腐蚀性或含轻微硫腐蚀性的气体、液体下使用。

The refining special safety valve is one of the main accessories of the petrochemical pressure vessel, used to control the pressure of the vessel and the safety of the vessel. This series of safety valves are enclosed full-opening spring safety valves, which automatically open when the pressure of the gas medium is 3% higher than the set pressure, and then fully discharge. This series of safety valves can have stable back pressure and can be used in gases and liquids that are noncorrosive or contain slight sulfur corrosion.



| 系列<br>Series | 型号<br>Type | 进口法兰<br>Inlet Flange             |                                   | 定压范围<br>Range of<br>constant<br>pressure | 配置喷嘴<br>Arrangement of nozzle |                                |                                           | 使用温度<br>Operating<br>temperature<br>℃ |
|--------------|------------|----------------------------------|-----------------------------------|------------------------------------------|-------------------------------|--------------------------------|-------------------------------------------|---------------------------------------|
|              |            | 公称通径<br>Normal<br>diameter<br>mm | 公称压力<br>Normal<br>pressure<br>Mpa |                                          | 代号<br>Letter                  | 喉径<br>Throat<br>diameter<br>mm | 喉部面积<br>Throat<br>area<br>cm <sup>2</sup> |                                       |
| A型<br>Type   | A1D40      | 25                               | 4.0                               | 0.03-4.2                                 | D                             | 10                             | 0.78                                      | -25~300                               |
|              | A1.5F40    | 40                               | 4.0                               | 0.03-4.2                                 | F                             | 16                             | 2.0                                       | -25~300                               |
|              | A2J16      | 50                               | 1.6                               | 0.03- < 1.6                              | J                             | 34                             | 9.1                                       | -25~300                               |
|              | A2H40      | 50                               | 4.0                               | 1.6-4.2                                  | H                             | 26                             | 5.3                                       | -25~300                               |
|              | A3L16      | 80                               | 1.6                               | 0.03- < 1.6                              | L                             | 50                             | 19.6                                      | -25~300                               |
|              | A3K40      | 80                               | 4.0                               | 1.6-4.2                                  | K                             | 40                             | 12.6                                      | -25~300                               |
|              | A4P16      | 100                              | 1.6                               | 0.03- < 1.6                              | P                             | 72                             | 40.7                                      | -25~300                               |
|              | A4N40      | 100                              | 4.0                               | 1.6-4.2                                  | N                             | 60                             | 28.3                                      | -25~300                               |
|              | A6R5.5     | 150                              | 1.6                               | 0.03- < 0.55                             | R                             | 115                            | 104                                       | -25~300                               |
|              | A6Q16      | 150                              | 1.6                               | 0.55-1.1                                 | Q                             | 95                             | 71                                        | -25~300                               |
| TA型<br>Type  | TA1D40     | 25                               | 4.0                               | 0.03-4.2                                 | D                             | 10                             | 0.78                                      | 300~550                               |
|              | TA1.5F40   | 40                               | 4.0                               | 0.03-4.2                                 | F                             | 16                             | 2.0                                       | 300~550                               |
|              | TA2J16     | 50                               | 1.6                               | 0.03- < 1.6                              | J                             | 34                             | 9.1                                       | 300~550                               |
|              | TA2H40     | 50                               | 4.0                               | 1.6-4.2                                  | H                             | 26                             | 5.3                                       | 300~550                               |
|              | TA3L16     | 80                               | 1.6                               | 0.03- < 1.6                              | L                             | 50                             | 19.6                                      | 300~550                               |
|              | TA3K40     | 80                               | 4.0                               | 1.6-4.2                                  | K                             | 40                             | 12.6                                      | 300~550                               |
|              | TA4P16     | 100                              | 1.6                               | 0.03- < 1.6                              | P                             | 72                             | 40.7                                      | 300~550                               |
|              | TA4N40     | 100                              | 4.0                               | 1.6-4.2                                  | N                             | 60                             | 28.3                                      | 300~550                               |
|              | TA6R5.5    | 150                              | 1.6                               | 0.03- < 0.55                             | R                             | 115                            | 104                                       | 300~550                               |
|              | TA6Q16     | 150                              | 1.6                               | 0.55-1.1                                 | Q                             | 95                             | 71                                        | 300~550                               |

## ●外形尺寸和连接尺寸 Dimensions (mm)

| 系列<br>Series | B   | A     | D1  | D2  | D3  | D4  | D5<br>mm | b1   | b2 | b3 | z1-Φd1 | z2-Φd2 | H     |
|--------------|-----|-------|-----|-----|-----|-----|----------|------|----|----|--------|--------|-------|
| A1D40        | 100 | 99    | 115 | 85  | 57  | 160 | 125      | 9    | 19 | 16 | 4-Φ14  | 4-Φ18  | 327   |
| TA1D40       |     |       |     |     |     |     |          |      |    |    |        |        | 424.5 |
| A1.5F40      | 120 | 107   | 145 | 110 | 75  | 160 | 125      | 13   | 20 | 16 | 4-Φ18  | 4-Φ18  | 363.6 |
| TA1.5F40     |     |       |     |     |     |     |          |      |    |    |        |        | 443.5 |
| A2J16        | 150 | 139   | 160 | 125 | 92  | 195 | 160      | 14   | 22 | 20 | 4-Φ18  | 4-Φ18  | 409   |
| TA2J16       |     |       |     |     |     |     |          |      |    |    |        |        | 539.5 |
| A2H40        | 150 | 139   | 160 | 125 | 87  | 195 | 160      | 14   | 22 | 20 | 4-Φ18  | 8-Φ18  | 409   |
| TA2H40       |     |       |     |     |     |     |          |      |    |    |        |        | 539.5 |
| A3L16        | 160 | 147   | 195 | 160 | 133 | 215 | 180      | 12   | 22 | 20 | 8-Φ18  | 8-Φ18  | 487   |
| TA3L16       |     |       |     |     |     |     |          |      |    |    |        |        | 652   |
| A3K40        | 160 | 149   | 195 | 160 | 120 | 215 | 180      | 14   | 24 | 20 | 8-Φ18  | 8-Φ18  | 489   |
| TA3K40       |     |       |     |     |     |     |          |      |    |    |        |        | 654   |
| A4P16        | 200 | 176   | 215 | 180 | 153 | 280 | 240      | 13   | 22 | 24 | 8-Φ18  | 8-Φ23  | 596   |
| TA4P16       |     |       |     |     |     |     |          |      |    |    |        |        | 789   |
| A4N40        | 200 | 182.5 | 230 | 190 | 149 | 280 | 240      | 17.5 | 26 | 24 | 8-Φ23  | 8-Φ23  | 639.5 |
| TA4N40       |     |       |     |     |     |     |          |      |    |    |        |        | 832.5 |
| A6R5.5       | 230 | 228   | 280 | 240 | 195 | 335 | 295      | 18   | 24 | 26 | 8-Φ23  | 12-Φ23 | 757   |
| TA6R5.5      |     |       |     |     |     |     |          |      |    |    |        |        | 976   |
| A6Q16        | 230 | 228   | 280 | 240 | 189 | 335 | 295      | 18   | 24 | 26 | 8-Φ23  | 12-Φ23 | 775   |
| TA6Q16       |     |       |     |     |     |     |          |      |    |    |        |        | 986   |

# ► A38Y/A37H/A43H系列安全阀

## A38Y/A37H/A43H series safety valve



### ●主要零部件材料说明

#### Explanation of materials for main parts

A38Y、A43H、A37H型安全阀除三通（材料为WCB）外，其余零件的材料均和A47H、A48Y型弹簧式安全阀相同。

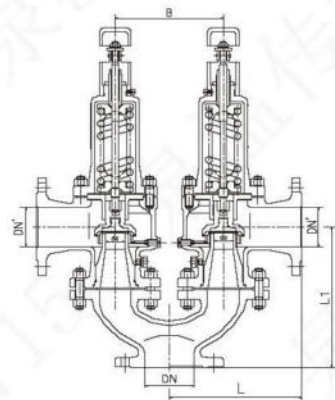
A38Y、A43H、A37H型双联安全阀是在Y型接头上装设两个同样规格的A48Y或A47H型安全阀而构成，其公称通径系列指Y型接头进口通径，其组合情况如下表：

A38Y, A43H, and A37H safety valves are made of the same material as A47H, A48Y spring type safety valves, except for three-way valves (made of WCB).

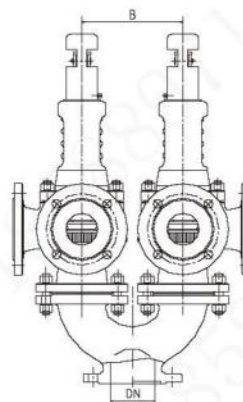
A38Y, A43H, and A37H double safety valves are composed of two A48Y or A47H safety valves of the same specification installed on the Y-shaped joint. The nominal diameter series refers to the inlet diameter of the Y-shaped joint, and their combination is shown in the table below:

| A38Y型<br>A38Y type<br>(DN) | 相应的A48Y型<br>Corresponding<br>A48Y type<br>(DN) | A43Y型<br>A43Y type<br>(DN) | 相应的A47Y型<br>Corresponding<br>A47Y type<br>(DN) |
|----------------------------|------------------------------------------------|----------------------------|------------------------------------------------|
| 50                         | 32×2                                           | 50                         | 32×2                                           |
| 80                         | 50×2                                           | 80                         | 50×2                                           |
| 100                        | 65×2                                           | 100                        | 80×2                                           |
| 150                        | 100×2                                          | 125                        | 100×2                                          |
|                            |                                                | 150                        | 125×2                                          |

| A37Y型<br>A37Y type<br>(DN) | 相应的A47Y型<br>Corresponding<br>A47Y type<br>(DN) |
|----------------------------|------------------------------------------------|
| 50                         | 32×2                                           |
| 80                         | 65×2                                           |
| 100                        | 80×2                                           |
| 125                        | 100×2                                          |
| 150                        | 125×2                                          |



A38H



A43H/A37H

### ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号<br>Model          | 公称通径<br>Nominal Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |       |
|----------------------|------------------------------------|------------|-----|-----|-----|-------|
|                      |                                    | L          | L1  | B   | DN' | d0    |
| A43H-16C<br>20<br>25 | 50                                 | 115        | 225 | 165 | 32  | 2x25  |
|                      | 80                                 | 140        | 270 | 190 | 50  | 2x40  |
|                      | 100                                | 160        | 355 | 255 | 80  | 2x65  |
|                      | 125                                | 170        | 390 | 260 | 100 | 2x80  |
|                      | 150                                | 190        | 440 | 280 | 125 | 2x100 |
| A38Y-16C<br>20<br>25 | 50                                 | 200        | 225 | 165 | 40  | 2x20  |
|                      | 80                                 | 230        | 270 | 190 | 65  | 2x32  |
|                      | 100                                | 235        | 285 | 220 | 80  | 2x40  |
|                      | 150                                | 320        | 375 | 250 | 125 | 2x65  |
| A37H-16C<br>20<br>25 | 80                                 | 140        | 310 | 205 | 65  | 2x50  |
|                      | 100                                | 160        | 355 | 255 | 80  | 2x65  |
|                      | 125                                | 170        | 390 | 260 | 100 | 2x80  |
|                      | 150                                | 190        | 440 | 280 | 125 | 2x100 |
| A38Y-64              | 80                                 | 230        | 270 | 200 | 65  | 2x32  |
|                      | 100                                | 235        | 285 | 220 | 80  | 2x40  |

# ▶ ANA42F内装式安全阀

## ANA42F Inner assemble safety valve



### ●用途Purpose

ANA42F内装式安全阀主要用于铁路和汽车石油液化气槽车或地面液化气储罐上，起超压安全保护作用。

ANA42F inner assemble safety valve is to be applied to liquefied gas tank lorry in railroad and automobile or ground liquefied gas tank, to provide over pressure protection.

### ●主要零部件材料 Materials for main parts

| NO. | 零件名称<br>Name of part | 材料<br>Materials    |
|-----|----------------------|--------------------|
| 1   | 阀瓣<br>Disc           | 20Cr13             |
| 2   | 密封垫<br>Sealing       | 聚四氟乙烯<br>PTFE      |
| 3   | 阀体<br>Body           | 碳钢<br>Carbon steel |
| 4   | 阀杆<br>Stem           | 20Cr13             |
| 5   | 阀座<br>Seat           | 碳钢<br>Carbon steel |
| 6   | 支架<br>Yoke           | 碳钢<br>Carbon steel |

### ●外形尺寸和连接尺寸 Dimensions (mm)

| 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 尺寸Size(mm) |     |     |     |    |    |     |      |     |
|---------------------------------------|------------|-----|-----|-----|----|----|-----|------|-----|
|                                       | L          | D   | D1  | D2  | do | b  | f   | z-Φd | ~H  |
| 50                                    | 95         | 160 | 125 | 100 | 34 | 20 | 3   | 4-18 | 376 |
| 80                                    | 99         | 235 | 190 | 149 | 52 | 25 | 4.5 | 8-22 | 512 |

# ► A48Y弹簧全启式安全阀 (W系列)

## A48Y Spring full bore type safety valve(W series)



### ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置上。

Mainly used in power station boilers, pressure vessels, temperature and pressure reducing devices.

### ●结构简述 Structure Description

- 1、弹簧全启式安全阀具有结构简单、密封性能好、开启压力准确、排放能力大、回座压差小、调整方便等特点。
- 2、喷嘴型阀座：阀座为位伐尔喷嘴型阀座，蒸汽流经阀座出口处时达到音速，排放系数大，阀座密封面堆焊钴铬钨硬质合金，耐磨抗冲蚀，寿命长。
- 3、热弹性阀瓣：阀瓣设计为热弹性结构，利用其在介质压力下微小的变形，提高密封能力，克服安全阀在介质压力下临近整定压力时的前泄现象。阀瓣密封面采用先进的激光淬火技术，提高了硬度、耐磨性、抗冲抗性。
- 4、调节螺母：通过调整调节螺母，调整弹簧压缩量，使阀门能够很方便、很迅速地获得准确的整定压力。
- 5、背压调整套：调整阀瓣背压的辅助机构，通过背压调整套调整，可获得合适的回座压差。上调时，使阀门背压降低。下调时，使阀门背压提高。

1. The spring fully open safety valve has the characteristics of simple structure, good sealing performance, accurate opening pressure, large discharge capacity, small backseat pressure difference, and convenient adjustment.
2. Nozzle type valve seat: The valve seat is a Naval nozzle type valve seat. When steam flows through the outlet of the valve seat, it reaches the sound speed, with a large discharge coefficient. The sealing surface of the valve seat is welded with cobalt chromium tungsten carbide, which is wear-resistant and erosion resistant, and has a long service life.
3. Thermo elastic valve flap: The valve flap is designed as a thermo elastic structure, which utilizes its small deformation under medium pressure to improve sealing ability and overcome the forward leakage phenomenon of the safety valve when it approaches the set pressure under medium pressure. the sealing surface of the valve flap adopts advanced laser quenching technology, which improves hardness, wear resistance, and impact resistance.
4. Adjusting nut: By adjusting the adjusting nut and adjusting the spring compression, the valve can easily and quickly obtain an accurate set pressure.
5. Back pressure adjusting sleeve: An auxiliary mechanism for adjusting the back pressure of the valve flap. By adjusting the back pressure adjusting sleeve, an appropriate reseating pressure difference can be obtained. When adjusted upward, the valve back pressure decreases. When lowering, the valve back pressure increases.

### ●安装说明 Installation instructions

- 1、安全阀必须垂直安装，并最好直接安装在容器或管道的接头上。接头内径应不小于安全阀的进口通径。
  - 2、安全阀的出口必须装设适当的膨胀节，以防止排放管的热膨胀给安全阀带来不应有的热应力。排放管内径应比阀门出口直径大，长度尽可能短，避免拐弯。排放管及膨胀节重量不应作用在安全阀上，应固定在建筑上。排放管的中心线与阀体的中心线间距离尽可能的短。对每台安全阀都应单独装设排放管。
  - 3、消声器的出口处要有足够的面积，防止产生背压影响阀门的排放能力。
1. The safety valve must be installed vertically and preferably directly on the joint of the container or pipeline. The inner diameter of the joint should not be less than the inlet diameter of the safety valve.
  2. The outlet of the safety valve must be equipped with an appropriate expansion joint to prevent the thermal expansion of the discharge pipe from causing undue thermal stress to the safety valve. The inner diameter of the discharge pipe should be larger than the valve outlet diameter, and the length should be as short as possible to avoid turning. The weight of the discharge pipe and expansion joint should not act on the safety valve, but should be fixed to the building. The distance between the centerline of the discharge pipe and the centerline of the valve body should be as short as possible. Each safety valve should be equipped with a separate discharge pipe.
  3. The outlet of the muffler should have sufficient area to prevent back pressure from affecting the discharge capacity of the valve.

# ► A48Y弹簧全启式安全阀 (W系列)

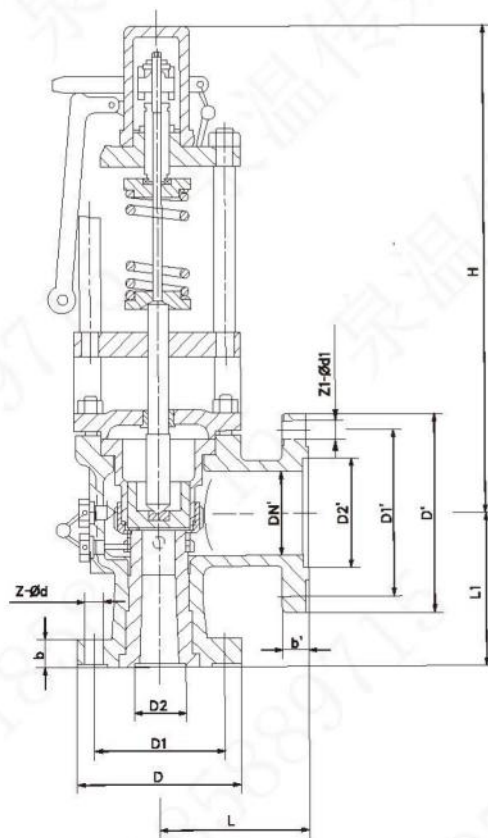
A48Y Spring full bore type safety valve(W series)



## ● 用途 Purpose

A48Y-C型适用于温度 $\leq 425^{\circ}\text{C}$ ; A48Y-V型适用于温度 $\leq 550^{\circ}\text{C}$ 的电站锅炉、压力容器、减温减压装置上, 作为超压保护装置。

A48Y-C type is suitable for temperatures  $\leq 425^{\circ}\text{C}$ ; A48Y-V type is suitable for power plant boilers, pressure vessels, and temperature and pressure reducing devices with a temperature  $\leq 550^{\circ}\text{C}$ , as an overpressure protection device.



## ● 外形尺寸和连接尺寸 Dimensions (mm)

| 型号<br>Type    | DN | 尺寸 Dimensions(mm) |     |     |     |     |     |    |      |     |     |     |     |    |        |
|---------------|----|-------------------|-----|-----|-----|-----|-----|----|------|-----|-----|-----|-----|----|--------|
|               |    | L                 | L1  | H   | D   | D1  | D2  | b  | Z-Φd | DN' | D'  | D1' | D2' | b' | Z1-Φd1 |
| A48Y-P543.82V | 65 | 190               | 190 | 853 | 220 | 170 | 110 | 50 | 8-25 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-10       | 80 | 190               | 190 | 853 | 230 | 180 | 121 | 50 | 8-25 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-10       | 65 | 190               | 190 | 853 | 220 | 170 | 110 | 50 | 8-25 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-P543.82V | 80 | 190               | 190 | 853 | 230 | 180 | 121 | 50 | 8-25 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-20       | 65 | 210               | 210 | 933 | 260 | 203 | 97  | 55 | 8-30 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-P545.29V | 65 | 210               | 210 | 933 | 260 | 203 | 97  | 55 | 8-30 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-20       | 80 | 210               | 210 | 933 | 260 | 203 | 116 | 60 | 8-34 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-P545.29V | 80 | 210               | 210 | 933 | 290 | 230 | 116 | 60 | 8-34 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-20       | 80 | 210               | 210 | 933 | 290 | 230 | 116 | 60 | 8-34 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-P5410V   | 80 | 210               | 210 | 933 | 290 | 230 | 116 | 60 | 8-34 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-20       | 65 | 210               | 210 | 933 | 290 | 230 | 116 | 60 | 8-34 | 150 | 300 | 250 | 204 | 30 | 8-25   |
| A48Y-P5410V   | 65 | 210               | 210 | 933 | 290 | 230 | 116 | 60 | 8-34 | 150 | 300 | 250 | 204 | 30 | 8-25   |

# ► A68Y弹簧全启式安全阀 (W系列)

## A68Y Spring full bore type safety valve(W series)



### ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置上，保证设备安全运行。

Mainly used in power station boilers, pressure vessels, temperature and pressure reducing devices to ensure the safe operation of equipment.

### ●结构简述 Structure Description

- 1、弹簧全启式安全阀具有结构简单、密封性能好、开启压力准确、排放能力大、回座压差小、调整方便等特点。
  - 2、喷嘴型阀座：阀座为拉伐尔喷嘴型阀座，蒸汽流经阀座出口处时达到音速，排放系数大，阀座密封面堆焊钴铬钨硬质合金，耐磨抗冲蚀，寿命长。
  - 3、热弹性阀瓣：阀瓣设备为热弹性结构，利用其在介质压力下微小的变形，提高密封能力，克服安全阀在介质压力下临近整定压力时的前泄现象。阀瓣密封面采用先进的淬火技术，提高了硬度、耐磨性、抗冲抗性。
  - 4、上调节圈：通过调整上调节圈，改变由阀座排放出的介质流动方向，使阀门获得合适的回座压力。
  - 5、下调节圈：通过下调节圈，使阀门在启跳时迅速达到全开。
  - 6、背压调整套：调整阀瓣背压的辅助机构，通过背压调整套调整，可获得合适的回座压差。
1. The spring fully open safety valve has the characteristics of simple structure, good sealing performance, accurate opening pressure, large discharge capacity, small backseat pressure difference, and convenient adjustment.
  2. Nozzle type valve seat: The valve seat is a Laval nozzle type valve seat. When steam flows through the outlet of the valve seat, it reaches the sound speed, with a large discharge coefficient. The sealing surface of the valve seat is welded with cobalt chromium tungsten carbide, which is wear-resistant and erosion resistant, and has a long service life.
  3. Thermoelastic valve clack: The valve clack equipment is of a thermoelastic structure, which utilizes its small deformation under medium pressure to improve sealing ability and overcome the forward leakage phenomenon of the safety valve when it approaches the set pressure under medium pressure. The sealing surface of the valve flap adopts advanced quenching technology to improve hardness, wear resistance, and impact resistance.
  4. Upper regulating ring: By adjusting the upper regulating ring, the flow direction of the medium discharged from the valve seat is changed to obtain a suitable reseating pressure for the valve.
  5. Lowering the throttle ring: By lowering the throttle ring, the valve can reach full open speed when starting and tripping.
  6. Back pressure adjusting sleeve: An auxiliary mechanism for adjusting the back pressure of the valve flap. By adjusting the back pressure adjusting sleeve, an appropriate reseating pressure difference can be obtained.

### ●安装说明 Installation instructions

- 1、安全阀必须垂直安装，并最好直接安装在容器或管道的接头上。接头内径应不小于安全阀的进口通径。
  - 2、安全阀的出口必须装设适当的膨胀节，以防止排放管的热膨胀给安全阀带来不应有的热应力。排放管内径应比阀门出口直径大，长度尽可能短，避免拐弯。排放管及膨胀节重量不应作用在安全阀上，应固定在建筑上。排放管的中心线与阀体的中心线间距离尽可能的短。
  - 3、消声器的出口处要有足够的面积，防止产生背压影响阀门的排放能力。
  - 4、排汽管底端、阀体底端应装有疏水管；背压调整套出口一定要装设短弯管。
1. The safety valve must be installed vertically and preferably directly on the joint of the container or pipeline. The inner diameter of the joint should not be less than the inlet diameter of the safety valve.
  2. The outlet of the safety valve must be equipped with appropriate expansion joints to prevent the thermal expansion of the discharge pipe from causing undue thermal stress on the safety valve. The inner diameter of the discharge pipe should be larger than the diameter of the valve outlet, and the length should be as short as possible, Avoid turning. The weight of the discharge pipe and expansion joint should not act on the safety valve and should be fixed on the building. The distance between the centerline of the discharge pipe and the centerline of the valve body should be as short as possible.
  3. The outlet of the muffler should have sufficient area to prevent back pressure from affecting the valve's emission capacity.
  4. The bottom of the exhaust pipe and the bottom of the valve body should be equipped with drainage pipes; Short bend pipes must be installed at the outlet of the back pressure adjustment sleeve.

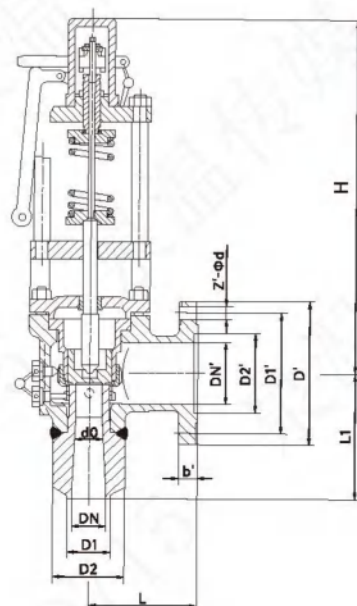
# ► A68Y弹簧全启式安全阀 (W系列)

A68Y Spring full bore type safety valve(W series)



## ●外形尺寸和连接尺寸 Dimensions (mm)

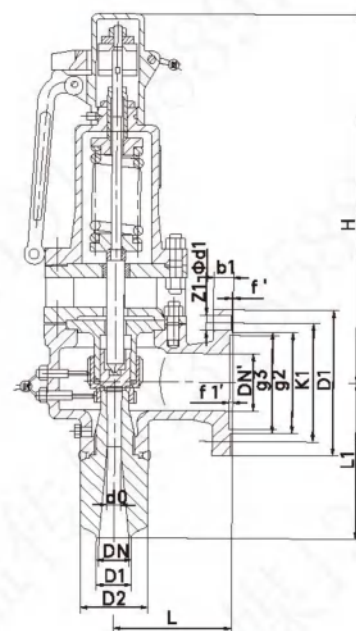
| 型号<br>Type    | DN  | 尺寸 Dimensions(mm) |     |     |      |     |     |     |     |    |       |
|---------------|-----|-------------------|-----|-----|------|-----|-----|-----|-----|----|-------|
|               |     | L                 | L1  | do  | H    | DN' | D'  | D1' | D2' | b' | Z'-d' |
| A68Y-20       | 65  | 210               | 290 | 48  | 923  | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-P5410V   | 65  | 210               | 290 | 48  | 923  | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-20       | 80  | 210               | 290 | 52  | 923  | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-P5410V   | 80  | 210               | 290 | 52  | 923  | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-25       | 65  | 210               | 290 | 48  | 923  | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-P5414V   | 65  | 210               | 290 | 48  | 923  | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-25       | 80  | 210               | 290 | 52  | 1003 | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-P5414V   | 80  | 210               | 290 | 52  | 1003 | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-32       | 65  | 210               | 290 | 48  | 1083 | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-P5420V   | 65  | 210               | 290 | 48  | 1083 | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-32       | 80  | 210               | 290 | 52  | 1083 | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-P5420V   | 80  | 210               | 290 | 52  | 1083 | 150 | 300 | 250 | 204 | 30 | 8-25  |
| A68Y-10       | 150 | 310               | 525 | 100 | 1158 | 300 | 485 | 430 | 390 | 36 | 16-30 |
| A68Y-P543.82V | 150 | 310               | 525 | 100 | 1158 | 300 | 485 | 430 | 390 | 36 | 16-30 |
| A68Y-10       | 200 | 310               | 525 | 125 | 1158 | 300 | 485 | 430 | 390 | 36 | 16-30 |
| A68Y-P542.5V  | 200 | 310               | 525 | 125 | 1158 | 300 | 485 | 430 | 390 | 36 | 16-30 |



W系列  
结构图 Structural drawing

## ●NFA68型安全阀外形尺寸和连接尺寸 Dimensions (mm)

| 型号<br>Type       | DN         | 尺寸 Dimensions(mm) |     |     |            |     |     |     |    |       |  |
|------------------|------------|-------------------|-----|-----|------------|-----|-----|-----|----|-------|--|
|                  |            | L                 | L1  | do  | DN'        | D'  | D1' | D2' | b' | Z'-d' |  |
| NFA68E210/550V1  | 65         | 240               | 280 | 46  | 100        | 265 | 210 | 150 | 38 | 8-30  |  |
| NFA68SB160/440C1 | 65         | 260               | 280 | 52  | 150        | 320 | 250 | 204 | 30 | 8-25  |  |
| NFA68E210/400C1  | 80         | 190               | 305 | 58  | 150        | 340 | 280 | 204 | 38 | 8-34  |  |
| NFA68E210/550V1  | 80         | 190               | 305 | 58  | 150        | 340 | 280 | 204 | 38 | 8-34  |  |
| NFA68E210/550V2  | 80         | 190               | 305 | 60  | 150        | 300 | 250 | 204 | 30 | 8-25  |  |
| NFA68E160/550V1  | 100        | 320               | 340 | 70  | 250        | 445 | 385 | 313 | 42 | 12-34 |  |
| NFA68SB100V1     | 100        | 260               | 325 | 80  | 150        | 300 | 250 | 204 | 30 | 8-25  |  |
| NFA68SB100V2     | 100        | 260               | 325 | 85  | 150        | 300 | 250 | 204 | 30 | 8-25  |  |
| NFA68SB100C1     | 150        | 305               | 385 | 115 | 250        | 445 | 385 | 313 | 42 | 12-34 |  |
| NFA68SB100C2     | 150        | 305               | 385 | 110 | 250        | 445 | 385 | 313 | 42 | 12-34 |  |
| NFA68SB100S3     | 150        | 305               | 385 | 120 | 250        | 445 | 385 | 313 | 42 | 12-34 |  |
| NFA68SB100V1     | 150        | 305               | 385 | 115 | 250        | 445 | 385 | 313 | 42 | 12-34 |  |
| NFA68SB100V2     | 150        | 305               | 385 | 100 | 250        | 445 | 385 | 313 | 42 | 12-34 |  |
| NFA68SC2500C2    | 1 1/1"     | 155               | 165 | 18  | 出口3"x300Lb |     |     |     |    |       |  |
| NFA68SC1500I1    | 2"(50)     | 216               | 280 | 33  | 出口6"x300Lb |     |     |     |    |       |  |
| NFA68C1500C1     | 2 1/2*(65) | 216               | 280 | 40  | 出口6"x300Lb |     |     |     |    |       |  |
| NFA68C1500C2     | 2 1/2*(65) | 216               | 305 | 46  | 出口6"x300Lb |     |     |     |    |       |  |



NFA68型  
结构图 Structural drawing

注:D1、D2尺寸可根据用户配管尺寸确定。 Note: The dimensions of D1 and D2 can be determined based on the user's piping size.

# ► A49Y-Pw5414V超高压冲量安全装置 (H系列)

## A49Y-Pw5414V Superhigh pressure impulse safety device(H series)



### ●用途Purpose

本装置供蒸汽工作压力为 $P=13.72\text{MPa}$ ;  $t=540^\circ\text{C}$ 的电站锅炉上使用, 防止锅炉内介质压力超过允许值, 以保证锅炉安全运行。

The working pressure for steam supply in this device is  $P=13.72\text{MPa}$ ; Used on power plant boilers at  $t=540^\circ\text{C}$  to prevent the medium pressure inside the boiler from exceeding the allowable value and ensure safe operation of the boiler.

### ●特点Specialties

冲量式安全装置为主、辅阀配套使用, 具有排放能力大, 调整方便, 机械与电器双重保护, 安装维护简便。

The impulse type safety device is mainly used in conjunction with auxiliary valves, with a large discharge capacity, easy adjustment, dual protection of mechanical and electrical components, and easy installation and maintenance.

### ●工作原理 Operation principle

当锅炉内介质压力超过允许值时, 冲量安全阀首先开启, 蒸汽进入主安全阀活塞室, 使主安全阀打开, 对外排汽, 待锅炉内余压排除后, 冲量安全阀关闭, 切断进入主安全阀活塞室的蒸汽, 主安全阀在弹簧和介质作用下自行关闭。

When the medium pressure inside the boiler exceeds the allowable value, the impulse safety valve first opens, and steam enters the piston chamber of the main safety valve, causing the main safety valve to open and exhaust steam to the outside. After the residual pressure inside the boiler is eliminated, the impulse safety valve closes, cutting off the steam entering the piston chamber of the main safety valve. The main safety valve closes automatically under the action of the spring and medium.

### ●结构简述 Structure briefing

- 1、冲量安全装置如图所示, 主要由冲量安全阀、主安全阀、截止阀、节流阀等所组成。冲量安全阀为弹簧安全阀, 它主要由阀体、阀盖、弹簧、阀瓣等零件组件。通过调节弹簧来调节冲量安全阀开启压力。冲量安全阀还分别带有用来开启或关闭用的电磁铁, 机械和电器动作互不干扰。
- 2、主安全阀结构如图所示, 为双排汽结构、它主要由阀体、缓冲阀、活塞室、阀瓣等零件组成。阀门采用压力自紧式密封结构, 介质压力越高, 密封性能越好, 缓冲阀在主安全阀动作过程中起缓冲作用, 避免密封面或阀瓣损坏。
- 3、冲量安全阀阀座和阀瓣密封面均由钴基硬质合金堆焊而成, 主安全阀阀座、阀瓣密封面均由钴基硬质合金等离子喷焊而成。
- 4、冲量安全阀上部带有开启和关闭电磁铁, 关闭用电磁铁平时可以不通电, 但当阀门密封面泄漏时, 可长期通电使阀门密封, 或当机械调整回座压力过低时, 接通电源促使阀瓣回座, 以获得较高的回座压力。
- 5、冲量安全阀出厂前经密封试验、灵敏性试验。
1. The impulse safety device is shown in the figure, mainly composed of impulse safety valve, main safety valve, shut-off valve, throttle valve, etc. The impulse safety valve is a spring safety valve, which mainly consists of components such as valve body, valve cover, spring, and valve disc. Adjust the opening pressure of the impulse safety valve by adjusting the spring. The impulse safety valve is also equipped with electromagnets for opening or closing, and the mechanical and electrical components do not interfere with each other.
2. The structure of the main safety valve is shown in the figure, which is a double exhaust structure. It is mainly composed of valve body, buffer valve, piston chamber, valve disc and other parts. The valve adopts a pressure self tightening sealing structure, and the higher the medium pressure, the better the sealing performance. the buffer valve plays a buffering role during the action of the main safety valve, avoiding damage to the sealing surface or valve disc.
3. The valve seat and valve disc sealing surface of the impulse safety valve are welded with cobalt based hard alloy, while the main safety valve seat and valve disc sealing surface are plasma sprayed with cobalt based hard alloy.
4. The upper part of the impulse safety valve is equipped with an opening and closing electromagnet. The closing electromagnet can not be powered normally, but when the valve sealing surface leaks, it can be powered on for a long time to seal the valve, or when the mechanical adjustment reseating pressure is too low, the power supply can be turned on to urge the valve disc to resend, in order to obtain a higher reseating pressure.
5. The impulse safety valve undergoes sealing and sensitivity tests before leaving the factory.

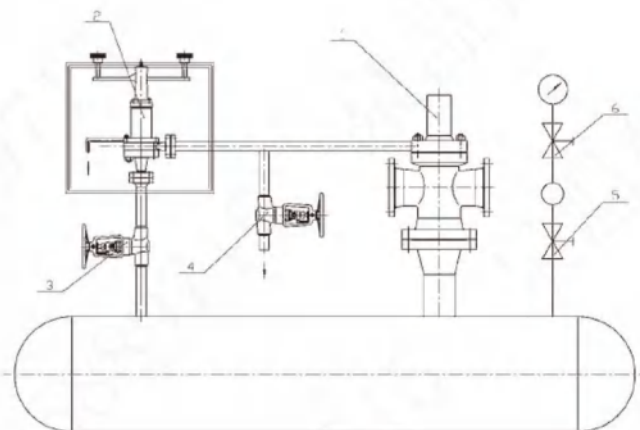
# ► A49Y-Pw5414V超高压冲量安全装置 (H系列)

## A49Y-Pw5414V Superhigh pressure impulse safety device(H series)



### ● 安装说明 Installation instruction

- 1、主安全阀A49Y-Pw5414V DN100应与冲量安全阀A49Y-Pw5414V DN20配套安装。冲量安全阀引出管与主安全阀的入口管之间应保持一段较长的距离，电接点压力表和主安全阀入口管之间的距离不得小于5倍主安全阀入口径，以免主安全阀动作时，因排汽影响电接点压力表和冲量安全阀工作正确性。
  - 2、冲量安全阀安装前，必须将管路冲洗干净。
  - 3、主安全阀与冲量安全阀必须垂直安装，主安全阀在安装焊接后，要进行了局部热处理。
  - 4、主安全阀应紧固在构架上，该构架应能承受主安全阀排汽时产生的反作用力，主安全阀的排汽管应有专门的吊架，避免排汽管的质量(重量)与其它作用力作用在主安全阀上及主安全阀与排汽管之间的连接法兰上，在排汽管的最低点，应考虑疏水，以免主安全阀排汽时产生水击。主安全阀活塞上部的三圈填料必须压紧要压缩到填料压盖下平面与活塞上平面接触为止，然后用细铁丝固定好压紧螺栓，以免泄漏而造成主阀拒跳。
  - 5、冲量安全阀与电磁铁一起装在一个专门的支架上，阀门上杠杆与电磁铁连接要灵活，不得有卡涩现象。冲量阀应装在便于维修和调试，灰尘少、空气干燥、无振动的地方，其环境温度不应高于70℃，相对湿度不应超过80%。
  - 6、为了保证冲量安全阀动作自如，冲量安全阀的回座杠杆头部的圆弧部分与冲量安全阀压杆端部的距离应调到：冲量安全阀实际行程+1mm (用护罩顶部M10紧固螺钉调之)。
1. The main safety valve A49Y-Pw5414V DN100 should be installed in conjunction with the impulse safety valve A49Y-Pw5414V DN20. A long distance should be maintained between the outlet pipe of the impulse safety valve and the inlet pipe of the main safety valve. The distance between the electric contact pressure gauge and the inlet pipe of the main safety valve should not be less than 5 times the inlet diameter of the main safety valve to avoid affecting the correctness of the operation of the electric contact pressure gauge and impulse safety valve due to exhaust steam during the operation of the main safety valve.
  2. Before installing the impulse safety valve, the pipeline must be flushed clean.
  3. The main safety valve and impulse safety valve must be installed vertically, and the main safety valve must undergo local heat treatment after installation and welding.
  4. The main safety valve should be fastened to the frame, which should be able to withstand the reaction force generated by the main safety valve exhaust. The exhaust pipe of the main safety valve should have a special hanger to avoid the weight and other forces of the exhaust pipe acting on the main safety valve and the connecting flange between the main safety valve and the exhaust pipe. At the lowest point of the exhaust pipe, drainage should be considered to prevent water hammer during the exhaust of the main safety valve. The three ring packing on the upper part of the piston chamber of the main safety valve must be compressed until the lower plane of the packing cover contacts the upper plane of the piston, and then the compression bolt should be fixed with a thin wire to prevent leakage and cause the main valve to refuse to jump.
  5. The impulse safety valve and electromagnet are installed together on a dedicated bracket, and the lever on the valve should be flexibly connected to the electromagnet without any jamming. The impulse valve should be installed in a place that is easy to maintain and debug, with less dust, dry air, and no vibration. The ambient temperature should not exceed 70 °C, and the relative humidity should not exceed 80%.
  6. In order to ensure the smooth operation of the impulse safety valve, the distance between the arc-shaped part of the recoil lever head of the impulse safety valve and the end of the impulse safety valve pressure rod should be adjusted to: the actual stroke of the impulse safety valve+1mm (adjusted with the M10 fastening screw on the top of the shield).

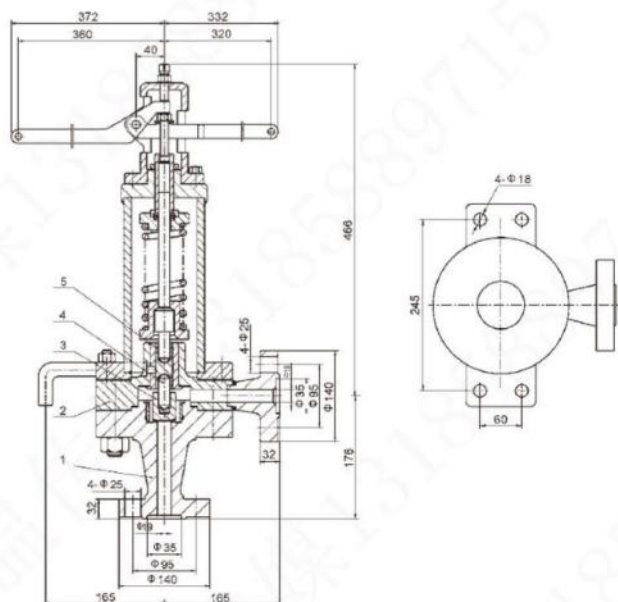


- |                              |                |
|------------------------------|----------------|
| 1.主安全阀 Main safety valve     | DN100; Pw5414V |
| 2.冲量安全阀 Impulse safety valve | DN20; Pw5414V  |
| 3.截止阀 Stop valve             | DN20; Pw5417V  |
| 4.节流阀 Throttle valve         | DN10; PN32     |
| 5.截止阀 Stop valve             | DN10; Pw5417V  |
| 6.三通阀 Triple valve           | DN4; PN32      |

冲量安全装置图  
Figure of impulse safety device

# ► A49Y-Pw5414V超高压冲量安全装置 (H系列)

A49Y-Pw5414V Superhigh pressure impulse safety device(H series)

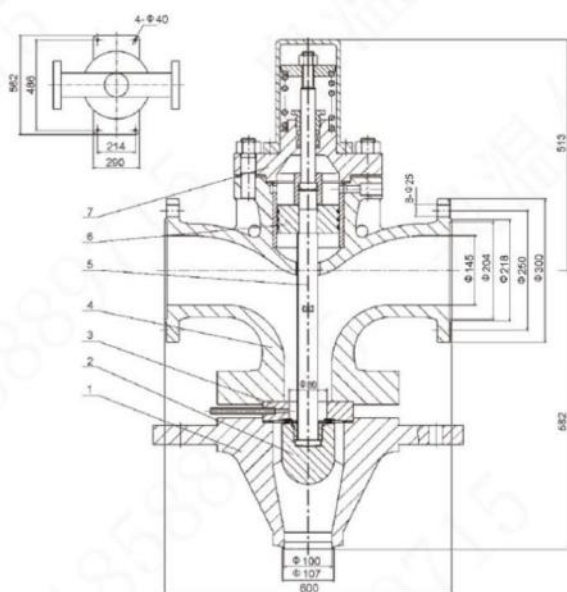


A49Y-Pw5414V型 DN20冲量安全阀  
A49Y-Pw5414V DN20 Impulse safety valves

## ●主要零件材料 Main part material

### 1.冲量安全阀 Impulse safety valve

| 件号<br>Part number | 零件名称<br>Name of parts | 材料<br>Material         |
|-------------------|-----------------------|------------------------|
| 1                 | 阀体<br>Body            | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀盖<br>Bonnet          | 铬钼钒钢<br>CrMoV steel    |
| 3                 | 阀瓣<br>Disc            | 铬钼钒钢<br>CrMoV steel    |
| 4                 | 阀杆<br>Stem            | 不锈钢<br>Stainless steel |
| 5                 | 导向套<br>Guide sleeve   | 不锈钢<br>Stainless steel |
| 重量(kg)<br>Weight  |                       | 113                    |



A49Y-Pw5414V型 DN100主安全阀  
A49Y-Pw5414V DN100 Main safety valves

### 2.主安全阀 Main safety valve

| 件号<br>Part number | 零件名称<br>Name of parts | 材料<br>Material         |
|-------------------|-----------------------|------------------------|
| 1                 | 下阀体<br>Nether body    | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀瓣<br>Disc            | 铬钼钒钢<br>CrMoV steel    |
| 3                 | 阀座<br>Seat            | 铬钼钒钢<br>CrMoV steel    |
| 4                 | 上阀体<br>Upper body     | 铬钼钒钢<br>CrMoV steel    |
| 5                 | 阀杆<br>Stem            | 铬钼钒钢<br>CrMoV steel    |
| 6                 | 活塞<br>Piston          | 不锈钢<br>Stainless steel |
| 7                 | 阀盖<br>Bonnet          | 铬钼钒钢<br>CrMoV steel    |
| 重量(kg)<br>Weight  |                       | 403                    |

# ► A49Y-Pw543.2V超高压冲量安全装置 (H系列)

A49Y-Pw543.2V Superhigh pressure impulse safety device(H series)



## ●用途Purpose

本装置供再热器入口及出口管道上使用，防止介质压力超过允许值，以保证再热器的安全运行。

This device is used on the inlet and outlet pipelines of the reheater to prevent the medium pressure from exceeding the allowable value and ensure the safe operation of the reheater.

## ●特点Specialties

冲量式安装装置为主、辅阀配套使用，具有排放能力大，调整方便，机械与电器双重保护，安装维护工作量小等特点。

The impulse type installation device is mainly used in conjunction with auxiliary valves, and has the characteristics of high discharge capacity, easy adjustment, dual protection of mechanical and electrical equipment, and low installation and maintenance workload.

## ●工作原理 Operation principle

当再热器内介质压力超过允许值时，冲量安全阀首先开启，蒸汽进入主安全阀活塞室，使主安全阀打开，对外排汽。等再热器内余压排除后，冲量安全阀关闭，切断进入主安全阀活塞室的蒸汽，主安全阀在弹簧和介质作用下自行关闭。

When the medium pressure inside the reheater exceeds the allowable value, the impulse safety valve opens first, and steam enters the piston chamber of the main safety valve, causing the main safety valve to open and exhaust steam to the outside. After the residual pressure inside the reheater is eliminated, the impulse safety valve closes, cutting off the steam entering the piston chamber of the main safety valve. The main safety valve closes automatically under the action of the spring and medium.

## ●结构简述 Structure briefing

- 1、冲量安全装置如图所示，主要由冲量安全阀、主安全阀、截止阀、节流阀等所组成。冲量安全阀为弹簧安全阀，它主要由阀体、阀盖、阀瓣等零件组成。通过调节弹簧来调节冲量安全阀开启压力。冲量安全阀还分别带有用来开启或关闭用的电磁铁，机械和电器动作互不干扰。
- 2、主安全阀如图所示，为单排汽，两端为法兰连接结构，主要由阀体、阀盖、活塞室、阀瓣、阀杆等零件组成。
- 3、冲量安全阀阀瓣、阀座均由钴基硬质合金堆焊而成，主安全阀阀座、阀瓣均由钴基硬质合金等离子喷焊而成。
- 4、冲量安全阀上部带有开启和关闭电磁铁，关闭用电磁铁平时可以不通电，但当阀门密封面泄漏时，或当机械调整回座压力过低时，关闭电磁铁通电以使阀门密封或促使阀瓣回座以获得较高的回座压力。
- 5、冲量安全阀出厂前经密封试验、灵敏性试验，合格后出厂。

1. The impulse safety device is shown in the figure, mainly composed of impulse safety valve, main safety valve, shut-off valve, throttle valve, etc. The impulse safety valve is a spring safety valve, which mainly consists of components such as valve body, valve cover, and valve disc. Adjust the opening pressure of the impulse safety valve by adjusting the spring. The impulse safety valve is also equipped with electromagnets for opening or closing, and the mechanical and electrical actions do not interfere with each other.
2. The main safety valve, as shown in the figure, is a single exhaust valve with flange connection structure at both ends. It mainly consists of components such as valve body, valve cover, piston chamber, valve disc, valve stem, etc.
3. The impulse safety valve disc and seat are both made of cobalt based hard alloy welding, while the main safety valve seat and disc are made of cobalt based hard alloy plasma spray welding.
4. The upper part of the impulse safety valve is equipped with opening and closing electromagnets. The closing electromagnet can not be powered normally, but when the valve sealing surface leaks or when the mechanical adjustment reseating pressure is too low, the closing electromagnet is powered to seal the valve or urge the valve disc to reseat to obtain a higher reseating pressure.
5. The impulse safety valve undergoes sealing and sensitivity tests before leaving the factory, and is qualified before leaving the factory.

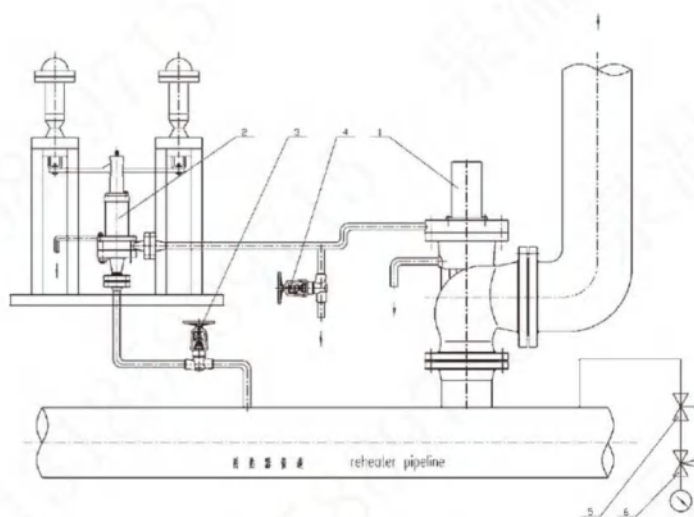
# ► A49Y-Pw543.2V超高压冲量安全装置 (H系列)

A49Y-Pw543.2V Superhigh pressure impulse safety device(H series)



## ● 安装说明 Installation instruction

- 1、主安全阀A49Y-Pw543.2V DN200应与冲量安全阀A49Y-Pw543.2V DN25配套安装。冲量安全阀引出管与主安全阀的入口管之间应保持一段较长的距离，电接点压力表和主安全阀入口管之间的距离不得小于5倍主安全阀入口径，以免主阀动作时，因排汽影响电接点压力表和冲量安全阀工作正确性。
  - 2、冲量安全阀安装前，应将管路冲洗干净。
  - 3、主安全阀与冲量安全阀必须垂直安装。
  - 4、主安全阀应紧固在构架上，该构架应能承受主安全阀排汽时产生的反作用力，主安全阀的排汽管应有专门的吊架，避免排汽管的质量(重量)与其它作用力作用在主安全阀上及主安全阀与排汽管之间的连接法兰上，在排汽管的最低点，应考虑疏水，以免主安全阀排汽时产生水击。
  - 5、冲量安全阀与电磁铁一起装在一个专门的支架上，阀门上杠杆与电磁铁连接要灵活、不得有卡涩现象。冲量阀应装在便于维修和调试，灰尘少、空气干燥、无振动的地方，其环境温度不应高于70℃，相对湿度不应超过80%。
  - 6、为了保证冲量安全阀动作自如，冲量安全阀的回座杠杆头部的圆弧部分与冲量安全阀压杆端部的距离应调到：冲量安全阀实际行程+1mm(用护罩顶部M10紧固螺钉调之)。
1. The main safety valve A49Y-Pw543.2V DN200 should be installed in conjunction with the impulse safety valve A49Y-Pw543.2V DN25. A long distance should be maintained between the outlet pipe of the impulse safety valve and the inlet pipe of the main safety valve. The distance between the electric contact pressure gauge and the inlet pipe of the main safety valve should not be less than 5 times the inlet diameter of the main safety valve to avoid affecting the correctness of the operation of the electric contact pressure gauge and impulse safety valve due to exhaust steam during the operation of the main valve.
  2. Before installing the impulse safety valve, the pipeline should be flushed clean.
  3. The main safety valve and impulse safety valve must be installed vertically.
  4. The main safety valve should be fastened to the frame, which should be able to withstand the reaction force generated by the main safety valve exhaust. The exhaust pipe of the main safety valve should have a special hanger to avoid the weight and other forces of the exhaust pipe acting on the main safety valve and the connecting flange between the main safety valve and the exhaust pipe. At the lowest point of the exhaust pipe, drainage should be considered to prevent water hammer during the exhaust of the main safety valve.
  5. The impulse safety valve and electromagnet are installed together on a dedicated bracket, and the lever on the valve should be flexibly connected to the electromagnet without any jamming. The impulse valve should be installed in a place that is easy to maintain and debug, with less dust, dry air, and no vibration. The ambient temperature should not exceed 70 °C, and the relative humidity should not exceed 80%.
  6. In order to ensure the smooth operation of the impulse safety valve, the distance between the arc-shaped part of the recoil lever head of the impulse safety valve and the end of the impulse safety valve pressure rod should be adjusted to: the actual stroke of the impulse safety valve+1mm (adjusted with the M10 fastening screw on the top of the protective cover).



冲量安全装置图  
Figure of impulse safety device

|                             |                |
|-----------------------------|----------------|
| 1.主安全阀 Main safety valve    | DN200;Pw543.2V |
| 2.冲量安全 Impulse safety valve | DN25; Pw543.2V |
| 3.截止阀 Stop valve            | DN25;PN32      |
| 4.节流阀 Throttle valve        | DN10;PN32      |
| 5.截止阀 Stop valve6.          | DN10;PN32      |
| 6.三通阀 Triple valve          | DN4;PN32       |

### ●主要零件材料 Main part material

637

300

φ485

φ430

φ350

φ300

40

10

10

12.034

40

φ200

φ250

φ300

φ345

φ405

300

1

2

3

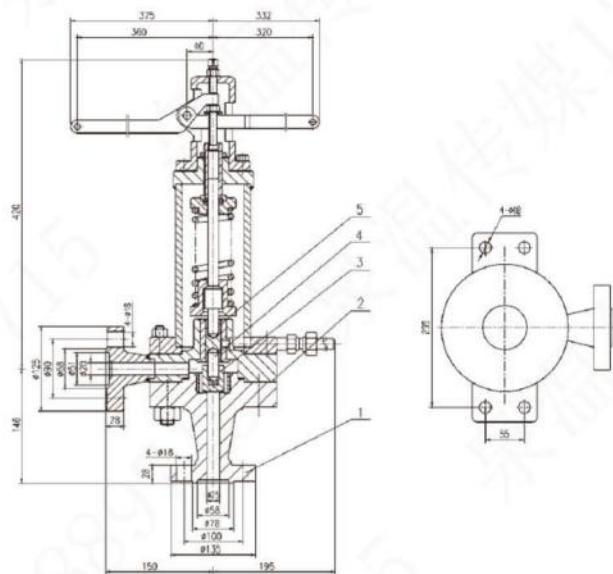
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5

6

7

| 件号<br>Part number | 零件名称<br>Name of parts | 材料<br>Material         |
|-------------------|-----------------------|------------------------|
| 1                 | 阀体<br>Body            | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀瓣<br>Disc            | 铬钼钢<br>CrMo steel      |
| 3                 | 下阀杆<br>Nether stem    | 渗氮钢<br>Nitriding steel |
| 4                 | 活塞<br>Piston          | 不锈钢<br>Stainless steel |
| 5                 | 上阀杆<br>Upper stem     | 渗氮钢<br>Nitriding steel |
| 6                 | 阀盖<br>Bonnet          | 铬钼钢<br>CrMo steel      |
| 7                 | 弹簧<br>Spring          | 弹簧钢<br>Spring steel    |
| 重量(kg)<br>Weight  |                       | 226.2                  |



2.冲量安全阀 Impulse safety valve

| 件号<br>Part number | 零件名称<br>Name of parts | 材料<br>Material         |
|-------------------|-----------------------|------------------------|
| 1                 | 阀体<br>Body            | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀盖<br>Bonnet          | 铬钼钒钢<br>CrMoV steel    |
| 3                 | 阀瓣<br>Disc            | 铬钼钒钢<br>CrMoV steel    |
| 4                 | 阀杆<br>Stem            | 不锈钢<br>Stainless steel |
| 5                 | 导向套<br>Guide sleeve   | 不锈钢<br>Stainless steel |
| 重量(kg)<br>Weight  |                       | 75.7                   |

# ► A49Y-10中温中压冲量安全装置 (H系列)

## A49Y-10 Middle temperature and pressure impulse safety device(H series)



### ●用途Purpose

本装置供蒸汽压力为 $P=3.92\text{MPa}$ ； $t\leq 450^\circ\text{C}$ 的电站锅炉上使用，防止锅炉内介质压力超过允许值，以保证锅炉安全运行。

The steam pressure supplied by this device is  $P=3.92\text{MPa}$ ; Used on power plant boilers with  $t\leq 450^\circ\text{C}$  to prevent the medium pressure inside the boiler from exceeding the allowable value and ensure safe operation of the boiler.

### ●特点Specialties

冲量式安全装置为主、辅阀配套使用，具有排放能力大，调整方便，机械与电器双重保护，安装维护工作量小等特点。

The impulse type safety device is mainly used in conjunction with auxiliary valves, and has the characteristics of high discharge capacity, easy adjustment, dual protection of mechanical and electrical equipment, and low installation and maintenance workload.

### ●工作原理 Operation principle

当锅炉内介质压力超过允许值时，冲量安全阀首先开启，蒸汽进入主安全阀活塞室，使主安全阀打开，对外排汽，待锅炉内余压排除后，冲量安全阀关闭，切断进入主安全阀活塞室的蒸汽，主安全阀在弹簧和介质作用下自行关闭。

When the medium pressure inside the boiler exceeds the allowable value, the impulse safety valve first opens, and steam enters the piston chamber of the main safety valve, causing the main safety valve to open and exhaust steam to the outside. After the residual pressure inside the boiler is eliminated, the impulse safety valve closes, cutting off the steam entering the piston chamber of the main safety valve. The main safety valve closes automatically under the action of the spring and medium.

### ●结构简述 Structure briefing

- 1、冲量安全装置如图所示，主要由冲量安全阀、主安全阀、截止阀、节流阀等所组成。冲量安全阀为弹簧安全阀、它主要由阀体、阀盖、阀瓣等零件组件。通过调节弹簧来调节冲量安全阀开启压力，冲量安全阀还分别带有用来开启或关闭用的电磁铁，机械和电器动作互不干扰。
- 2、主安全阀如图所示，主要由阀体、阀瓣、活塞室等零件组成。
- 3、冲量安全阀阀座密封面采用钴基硬质合金堆焊而成，阀瓣为不锈钢经过热处理。主安全阀的阀座和阀瓣密封面均由钴基硬质合金堆焊而成。
- 4、冲量安全阀上部带有开启和关闭电磁铁，关闭用电磁铁平时可以不通电，但当阀门密封面泄漏时，可长期通电使阀门密封，或当机械调整回座压力过低时，接通电源促使阀瓣回座，以获得较高的回座压力。
- 5、冲量安全阀出厂前经密封试验、灵敏性试验。
  1. The impulse safety device is shown in the figure, mainly composed of impulse safety valve, main safety valve, shut-off valve, throttle valve, etc. The impulse safety valve is a spring safety valve, which mainly consists of components such as valve body, valve cover, and valve disc. The opening pressure of the impulse safety valve is adjusted by adjusting the spring, and the impulse safety valve is also equipped with electromagnets for opening or closing, so that the mechanical and electrical actions do not interfere with each other.
  2. The main safety valve, as shown in the figure, is mainly composed of valve body, valve disc, piston chamber and other parts.
  3. The sealing surface of the impulse safety valve seat is welded with cobalt based hard alloy, and the valve disc is made of stainless steel that has undergone heat treatment. The valve seat and disc sealing surface of the main safety valve are both made of cobalt based hard alloy spray welded.
  4. The upper part of the impulse safety valve is equipped with opening and closing electromagnets. The closing electromagnet can not be powered normally, but when the valve sealing surface leaks, it can be powered on for a long time to seal the valve, or when the mechanical adjustment reseating pressure is too low, the power supply can be turned on to urge the valve disc to resend, in order to obtain a higher reseating pressure.
  5. The impulse safety valve undergoes sealing and sensitivity tests before leaving the factory.

# ► A49Y-10中温中压冲量安全装置 (H系列)

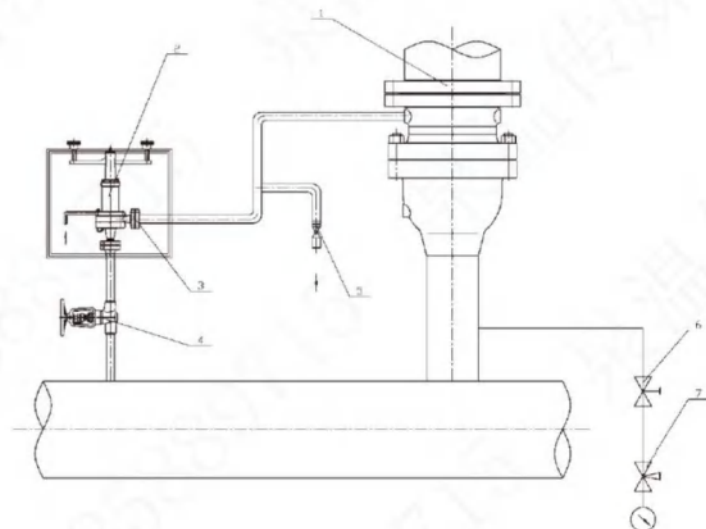
## A49Y-10 Middle temperature and pressure impulse safety device(H series)



### ● 安装说明 Installation instruction

- 1、主安全阀A49Y-10V DN150应与冲量安全阀A49Y-10V DN25配套安装。冲量安全阀引出管与主安全阀的入口管之间应保持一段较长的距离，电接点压力表和主安全阀入口管之间的距离不得小于5倍主安全阀入口径，以免主安全阀动作时，因排汽影响电接点压力表和冲量安全阀工作正确性。
- 2、冲量安全阀安装前，应将管路冲洗干净。
- 3、主安全阀与冲量安全阀必须垂直安装。
- 4、主安全阀应紧固在构架上，该构架应能承受主安全阀排汽时产生的反作用力，主安全阀的排汽管应有专门的吊架，避免排汽管的质量（重量）与其它作用力作用在主安全阀上及主安全阀与排汽管之间的连接法兰上，在排汽管的最低点，应考虑疏水，以免主安全阀排汽时产生水击。
- 5、冲量安全阀与电磁铁一起装在一个专门的支架上，阀门上杠杆与电磁铁连接要灵活，不得有卡涩现象。冲量阀应装在便于维修和调试，灰尘少、空气干燥、无振动的地方，其环境温度不应高于70℃，相对湿度不应超过80%。
- 6、为了保证冲量安全阀动作自如，冲量安全阀的回座杠杆头部的圆弧部分与冲量安全阀压杆端部的距离应调到：冲量安全阀实际行程+1mm（用护罩顶部M10紧固螺钉调之）。

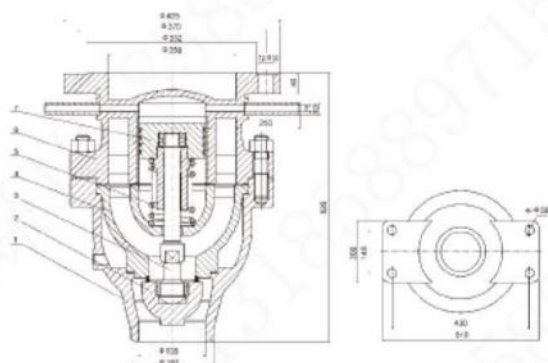
1. The main safety valve A49Y-10V DN150 should be installed in conjunction with the impulse safety valve A49Y-10V DN25. A long distance should be maintained between the outlet pipe of the impulse safety valve and the inlet pipe of the main safety valve. The distance between the electric contact pressure gauge and the inlet pipe of the main safety valve should not be less than 5 times the inlet diameter of the main safety valve to avoid affecting the correctness of the operation of the electric contact pressure gauge and impulse safety valve due to exhaust steam during the operation of the main safety valve.
2. Before installing the impulse safety valve, the pipeline should be flushed clean.
3. The main safety valve and impulse safety valve must be installed vertically.
4. The main safety valve should be fastened to the frame, which should be able to withstand the reaction force generated by the main safety valve exhaust. The exhaust pipe of the main safety valve should have a special hanger to avoid the weight and other forces of the exhaust pipe acting on the main safety valve and the connecting flange between the main safety valve and the exhaust pipe. At the lowest point of the exhaust pipe, drainage should be considered to prevent water hammer during the exhaust of the main safety valve.
5. The impulse safety valve and electromagnet are installed together on a dedicated bracket, and the lever on the valve should be flexibly connected to the electromagnet without any jamming. The impulse valve should be installed in a place that is easy to maintain and debug, with less dust, dry air, and no vibration. The ambient temperature should not exceed 70 °C, and the relative humidity should not exceed 80%.
6. In order to ensure the smooth operation of the impulse safety valve, the distance between the arc-shaped part of the recoil lever head of the impulse safety valve and the end of the impulse safety valve pressure rod should be adjusted to: the actual stroke of the impulse safety valve+1mm (adjusted with the M10 fastening screw on the top of the shield).



冲量安全装置图  
Figure of impulse safety device

- |                               |             |
|-------------------------------|-------------|
| 1.主安全阀 Main safety valve      | DN150; PN10 |
| 2.冲量安全阀 Impulse safety valve  | DN25; PN10  |
| 3.法兰, 螺栓, 螺母 Flange,bolt, nut |             |
| 4.节流阀 Throttle valve          | DN10;PN32   |
| 5.截止阀 Stop valve              | DN32; PN32  |
| 6.截止阀 Stop valve              | DN10; PN32  |
| 7.三通阀 Triple valve            | DN4;PN32    |

# ► A49Y-10中温中压冲量安全装置 (H系列) A49Y-10 Middle temperature and pressure impulse safety device(H series)



A49Y-10、A49Y-10V型 DN150主安全阀  
A49Y-10、A49Y-10V DN150 Main safety valves

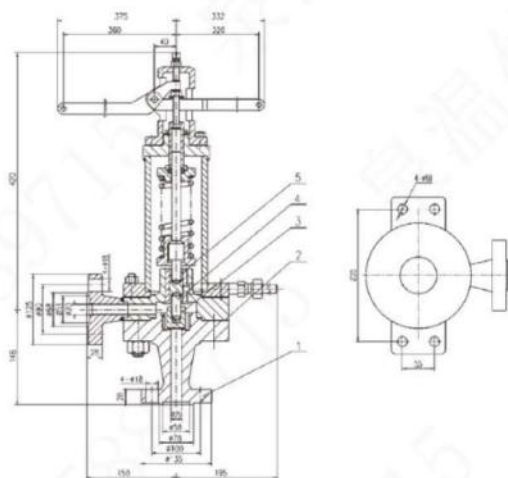
## ● 性能规范 Performance criterion

| 公称压力<br>Nominal pressure<br>PN(Mpa) | 公称通径<br>Nominal Diameter<br>DN(mm) | 试验压力(MPa)<br>Test pressure |            | 最大工作<br>压力<br>Max.<br>Working<br>pressure<br>(Mpa) | 最大工作<br>温度<br>Max.<br>Working<br>temper-<br>ature(°C) | 重量<br>Weight<br>(kg) |
|-------------------------------------|------------------------------------|----------------------------|------------|----------------------------------------------------|-------------------------------------------------------|----------------------|
|                                     |                                    | 强度<br>Strength             | 密封<br>Seal |                                                    |                                                       |                      |
| 10.0                                | 150                                | 15.0                       | 4.0        | 4.0                                                | ≤ 450<br>≤ 540                                        | 202                  |

## ● 主要零件材料 Main part material

### 1.主安全阀 Main safety valve

| 零件名称<br>Name of parts | 1                   | 2                   | 3                      | 4                   | 5                   | 6                   | 7                      |
|-----------------------|---------------------|---------------------|------------------------|---------------------|---------------------|---------------------|------------------------|
| 材料<br>Material        | 阀体<br>Body          | 阀瓣<br>Disc          | 阀杆<br>Stem             | 阀座<br>Seat          | 弹簧<br>Spring        | 阀盖<br>Bonnet        | 活塞<br>Piston           |
| A49Y-10               | 碳钢<br>Carbon steel  | 碳钢<br>Carbon steel  | 渗氮钢<br>Nitriding steel | 碳钢<br>Carbon steel  | 弹簧钢<br>Spring steel | 碳钢<br>Carbon steel  | 不锈钢<br>Stainless steel |
| A49Y-10V              | 铬钼钒钢<br>CrMoV steel | 铬钼钒钢<br>CrMoV steel | 渗氮钢<br>Nitriding steel | 铬钼钒钢<br>CrMoV steel | 弹簧钢<br>Spring steel | 铬钼钒钢<br>CrMoV steel | 不锈钢<br>Stainless steel |



A49Y-10、A49Y-10V型 DN25冲量安全阀  
A49Y-10、A49Y-10V DN25 Impulse safety valves

### 2.冲量安全阀 Impulse safety valve

| 件号<br>Part number | 零件名称<br>Name of parts | 材料 Material            |                        |
|-------------------|-----------------------|------------------------|------------------------|
|                   |                       | A49Y-10                | A49Y-10V               |
| 1                 | 阀体<br>Body            | 碳钢<br>Carbon steel     | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀盖<br>Bonnet          | 碳钢<br>Carbon steel     | 铬钼钒钢<br>CrMoV steel    |
| 3                 | 阀瓣<br>Disc            | 不锈钢<br>Stainless steel | 铬钼钒钢<br>CrMoV steel    |
| 4                 | 阀杆<br>Stem            | 不锈钢<br>Stainless steel | 不锈钢<br>Stainless steel |
| 5                 | 导向套<br>Guide sleeve   | 不锈钢<br>Stainless steel | 不锈钢<br>Stainless steel |
| 重量(kg)<br>Weight  |                       | 73.6                   |                        |

# ► A49Y-Pw5410V高压冲量安全装置 (H系列)

## A49Y-Pw5410V High pressure impulse safety device(H series)



### ●用途Purpose

本装置供蒸汽工作压力为 $P=9.81\text{MPa}$ ；温度为 $t=540^\circ\text{C}$ 的电站锅炉上使用，防止锅炉内介质压力超过允许值，以保证锅炉安全运行。

The working pressure for steam supply in this device is  $P=9.81\text{MPa}$ ; Used on power plant boilers with a temperature of  $t=540^\circ\text{C}$  to prevent the medium pressure inside the boiler from exceeding the allowable value and ensure safe operation of the boiler.

### ●特点Specialties

冲量式安全装置为主、辅阀配套使用，具有排放能力大，调整方便，机械与电器双重保护，安装维护工作量小等特点。

The impulse type safety device is mainly used in conjunction with auxiliary valves, and has the characteristics of high discharge capacity, easy adjustment, dual protection of mechanical and electrical equipment, and low installation and maintenance workload.

### ●工作原理 Operation principle

当锅炉内介质压力超过允许值时，冲量安全阀首先开启，蒸汽进入主安全阀活塞室，使主安全阀打开，对外排汽，待锅炉内余压排除后，冲量安全阀关闭，切断进入主安全阀活塞室的蒸汽，主安全阀在弹簧和介质作用下自行关闭。

When the medium pressure inside the boiler exceeds the allowable value, the impulse safety valve first opens, and steam enters the piston chamber of the main safety valve, causing the main safety valve to open and exhaust steam to the outside. After the residual pressure inside the boiler is eliminated, the impulse safety valve closes, cutting off the steam entering the piston chamber of the main safety valve. The main safety valve closes automatically under the action of the spring and medium.

### ●结构简述 Structure briefing

- 1、冲量安全装置如图所示，主要由弹簧安全阀、主安全阀、截止阀、节流阀等所组成。冲量安全阀为弹簧安全阀，它主要由阀体、阀盖、弹簧、阀瓣等零件组件。通过调节弹簧来调节安全阀开启压力。冲量安全阀还分别带有用来开启或关闭用的电磁铁，机械和电器动作互不干扰。
- 2、主安全阀结构如图所示，双排汽，两端为法兰连接结构，主要由阀体、阀盖、缓冲阀、活塞室、阀瓣、阀杆等零件组成。缓冲阀装设一只止回阀，可改变缓冲时间，在主安全阀动作过程中起缓冲作用，避免密封面或阀瓣损坏。
- 3、冲量安全阀阀座、阀瓣密封面均用钴基硬质合金堆焊而成，主安全阀阀座、阀瓣密封面均由钴基硬质合金喷焊而成。
- 4、冲量安全阀上部带有开启和关闭电磁铁，关闭用电磁铁平时可以不通电，但当阀门密封面泄漏时，可长期通电使阀门密封，或当机械调整回座压力过低时，接通电源促使阀瓣回座，以获得较高的回座压力。
- 5、冲量安全阀出厂前经密封试验、灵敏性试验。
  1. The impulse safety device is shown in the figure, mainly composed of a spring safety valve, a main safety valve, a shut-off valve, a throttle valve, etc. The impulse safety valve is a spring safety valve, which mainly consists of components such as valve body, valve cover, spring, and valve disc. Adjust the opening pressure of the safety valve by adjusting the spring. The impulse safety valve is also equipped with electromagnets for opening or closing, and the mechanical and electrical actions do not interfere with each other.
  2. The structure of the main safety valve is shown in the figure, with double exhaust and flange connection at both ends. It is mainly composed of valve body, valve cover, buffer valve, piston chamber, valve disc, valve stem and other parts. The buffer valve is equipped with a check valve that can change the buffering time and provide buffering during the operation of the main safety valve, avoiding damage to the sealing surface or valve disc.
  3. The valve seat and valve disc sealing surface of the impulse safety valve are welded with cobalt based hard alloy, while the main safety valve seat and valve disc sealing surface are spray welded with cobalt based hard alloy.
  4. The upper part of the impulse safety valve is equipped with an opening and closing electromagnet. The closing electromagnet can not be powered normally, but when the valve sealing surface leaks, it can be powered on for a long time to seal the valve, or when the mechanical adjustment reseating pressure is too low, the power supply can be turned on to urge the valve disc to resend, in order to obtain a higher reseating pressure.
  5. The impulse safety valve undergoes sealing and sensitivity tests before leaving the factory.

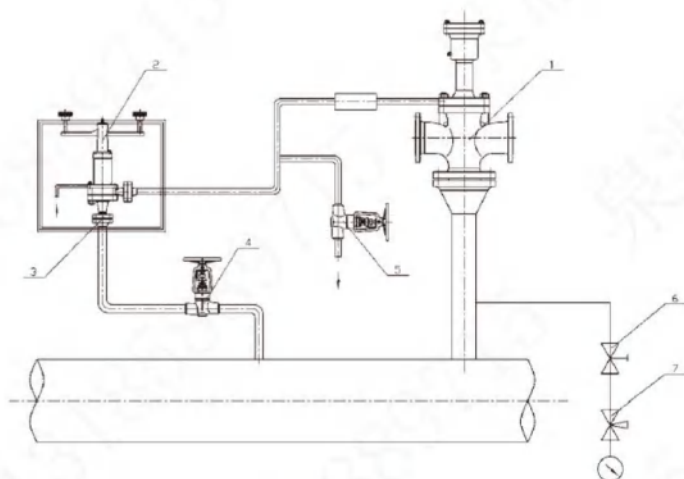
# ► A49Y-Pw5410V高压冲量安全装置 (H系列)

## A49Y-Pw5410V High pressure impulse safety device(H series)



### ● 安装说明 Installation instruction

- 1、主安全阀A49Y-Pw5410V DN125应与冲量安全阀A49Y-Pw5410V DN20配套安装。冲量安全阀引出管与主安全阀的入口管之间应保持一段较长的距离，电接点压力表和主安全阀入口管之间的距离不得小于5倍主安全阀入口径，以免主安全阀动作时，因排汽影响电接点压力表和弹簧安全阀工作稳定性。
- 2、冲量安全阀安装前，应将管路冲洗干净。
- 3、主安全阀与冲量安全阀必须垂直安装，主安全阀在安装焊接后，要进行局部热处理。
- 4、主安全阀应紧固在构架上，该构架应能承受主安全阀排汽时产生的反作用力，主安全阀的排气管应有专门的吊架避免排气管的质量(重量)与其它作用力作用在主安全阀上及主安全阀与排气管之间的连接法兰上，在排气管的最低点，应考虑疏水，以免主安全阀排汽时产生水击。
- 5、冲量安全阀与电磁铁一起装在一个专门的支架上，阀门上杠杆与电磁铁连接要灵活，不得有卡涩现象。冲量阀应装在便于维修和调试，灰尘少、空气干燥、无振动的地方，其环境温度不应高于70℃，相对湿度不应超过80%。
- 6、为了保证冲量安全阀动作自如，冲量安全阀的回座杠杆头部的圆弧部分与冲量安全阀杆端部的距离应调到：冲量安全阀实际行程+1mm（用护罩顶部M10x40紧固螺钉调之）。
1. The main safety valve A49Y-Pw5410V DN125 should be installed in conjunction with the impulse safety valve A49Y-Pw5410V DN20. A long distance should be maintained between the outlet pipe of the impulse safety valve and the inlet pipe of the main safety valve. The distance between the electric contact pressure gauge and the inlet pipe of the main safety valve should not be less than 5 times the inlet diameter of the main safety valve to avoid affecting the stability of the electric contact pressure gauge and the spring safety valve due to exhaust steam during the operation of the main safety valve.
2. Before installing the impulse safety valve, the pipeline should be flushed clean.
3. The main safety valve and impulse safety valve must be installed vertically, and the main safety valve must undergo local heat treatment after installation and welding.
4. The main safety valve should be fastened to the frame, which should be able to withstand the reaction force generated by the exhaust of the main safety valve. The exhaust pipe of the main safety valve should have a special hanger to prevent the weight and other forces of the exhaust pipe from acting on the main safety valve and the connecting flange between the main safety valve and the exhaust pipe. At the lowest point of the exhaust pipe, drainage should be considered to avoid water hammer during the exhaust of the main safety valve.
5. The impulse safety valve and electromagnet are installed together on a dedicated bracket, and the lever on the valve should be flexibly connected to the electromagnet without any jamming. The impulse valve should be installed in a place that is easy to maintain and debug, with less dust, dry air, and no vibration. The ambient temperature should not exceed 70 °C, and the relative humidity should not exceed 80%.
6. In order to ensure the smooth operation of the impulse safety valve, the distance between the arc-shaped part of the recoil lever head of the impulse safety valve and the end of the impulse safety valve stem should be adjusted to: actual stroke of the impulse safety valve+1mm (adjusted with M10x40 fastening screws on the top of the shield).

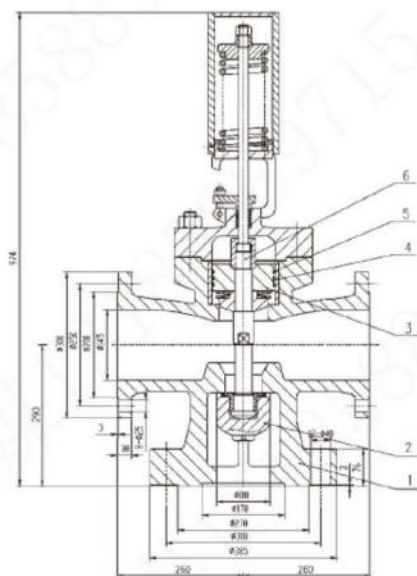


冲量安全装置图  
Figure of impulse safety device

- |                               |               |
|-------------------------------|---------------|
| 1.主安全阀 Main safety valve      | DN125;Pw5410V |
| 2.冲量安全阀 Impulse safety valve  | DN20; Pw5410V |
| 3.法兰, 螺栓, 螺母 Flange, bolt,nut |               |
| 4.截止阀 Stop valve              | DN20;Pw5417V  |
| 5.节流阀 Throttle valve          | DN10; PN32    |
| 6.截止阀 Stop valve              | DN10; Pw5417V |
| 7.三通阀 Triple valve            | DN4;PN32      |

# ► A49Y-Pw5410V高压冲量安全装置 (H系列)

A49Y-Pw5410V High pressure impulse safety device(H series)

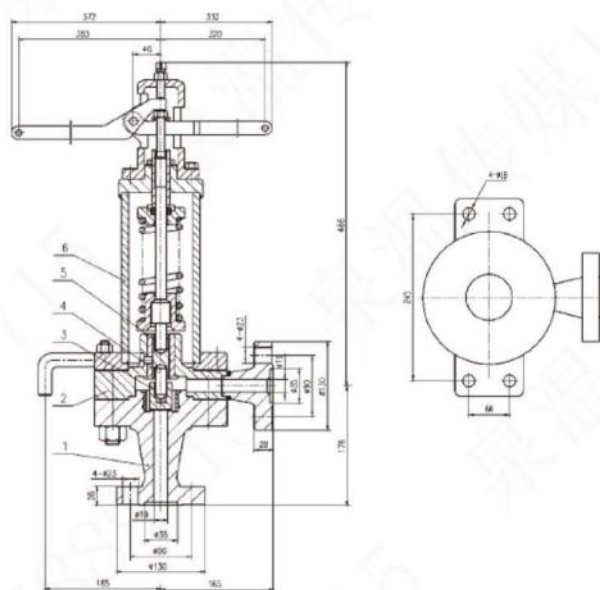


A49Y-Pw5410V型 DN125主安全阀  
A49Y-Pw5410V DN125 Main safety valves

## ●主要零件材料 Main part material

### 1.主安全阀 Main safety valve

| 件号<br>Part number | 零件名称<br>Name of parts | 材料<br>Material         |
|-------------------|-----------------------|------------------------|
| 1                 | 阀体<br>Body            | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀瓣<br>Disc            | 铬钼钒钢<br>CrMoV steel    |
| 3                 | 活塞<br>Piston          | 不锈钢<br>Stainless steel |
| 4                 | 活塞套<br>Piston sleeve  | 不锈钢<br>Stainless steel |
| 5                 | 活塞环<br>Piston ring    | 不锈钢<br>Stainless steel |
| 6                 | 阀杆<br>Stem            | 渗氮钢<br>Nitriding steel |
| 重量(kg)<br>Weight  |                       | 382                    |



A49Y-Pw5410V型 DN20冲量安全阀  
A49Y-Pw5410V DN20 Impulse safety valves

### 2.冲量安全阀 Impulse safety valve

| 件号<br>Part number | 零件名称<br>Name of parts | 材料<br>Material         |
|-------------------|-----------------------|------------------------|
| 1                 | 阀座<br>Seat            | 铬钼钒钢<br>CrMoV steel    |
| 2                 | 阀体<br>Body            | 铬钼钒钢<br>CrMoV steel    |
| 3                 | 阀瓣<br>Disc            | 不锈钢<br>Stainless steel |
| 4                 | 阀杆<br>Stem            | 不锈钢<br>Stainless steel |
| 5                 | 导向套<br>Guide sleeve   | 不锈钢<br>Stainless steel |
| 6                 | 阀盖<br>Bonnet          | 铬钼钒钢<br>CrMoV steel    |
| 重量(kg)<br>Weight  |                       | 111                    |

# ► A69Y-Pw5414V主安全阀 (W系列)

## A69Y-Pw5414V Main safety valve(W series)



### ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置等设备，防止压力超过允许最高压力值，保证设备安全运行。

Mainly used for power plant boilers, pressure vessels, temperature and pressure reduction devices, etc., to prevent pressure from exceeding the maximum allowable pressure value and ensure safe operation of the equipment.

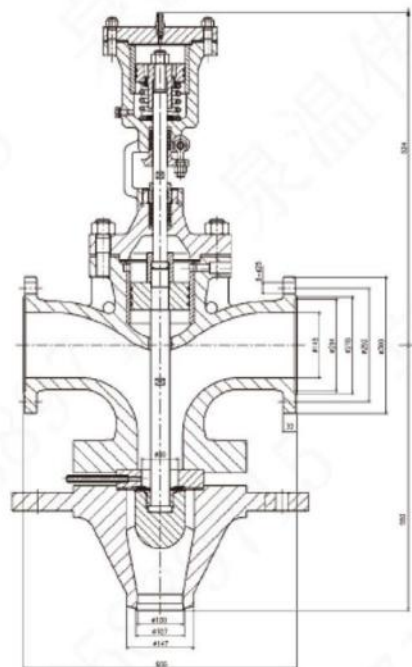
### ●结构简述 Structure briefing

- 1、阀门为双排汽、两端为法兰连接结构。主要由阀体、阀盖、缓冲容器、活塞室、阀瓣、阀杆等零件组件。
- 2、当介质压力升高至整定压力时，冲量安全阀打开，介质从脉冲管进入主安全阀的活塞室，推动活塞下降，使阀门自动打开，当冲量阀关闭时，阀瓣又自动关闭。
- 3、密封面用钴基硬质合金堆焊而成，阀瓣经热处理，提高了硬度。

1. The valve is double exhaust and has a flange connection structure at both ends, mainly composed of valve body, valve cover, buffer container, piston chamber, valve disc, valve stem and other components.
2. When the medium pressure rises to the set pressure, the impulse safety valve opens, and the medium enters the piston chamber of the main safety valve from the pulse tube, pushing the piston down and causing the valve to automatically open. When the impulse valve closes, the valve disc automatically closes again.
3. The sealing surface is welded with cobalt based hard alloy, and the valve disc is heat-treated to increase its hardness.

### ●安装说明 Installation instruction

- 1、主安全阀门必须垂直安装在设备的最高位置。
  - 2、主安全阀紧固在支座上，支座承受主安全阀排汽时产生的反作用力。
  - 3、排汽管应有专门吊架，排汽管重量不许加在主安全阀上，主安全阀与排汽管之间的连接法兰应消除任何的附加预应力。
  - 4、排汽管的最低点应考虑疏水，以免排汽时产生水击。
1. The main safety valve must be installed vertically at the highest position of the equipment.
  2. The main safety valve is fastened on the support, which bears the reaction force generated when the main safety valve exhausts steam.
  3. The exhaust pipe should have a dedicated hanger, and the weight of the exhaust pipe should not be added to the main safety valve. The connecting flange between the main safety valve and the exhaust pipe should eliminate any additional prestress.
  4. The lowest point of the exhaust pipe should consider drainage to avoid water hammer during exhaust.



# ► A49Y-Pw542.55V主安全阀 (W系列)

A49Y-Pw542.55V Main safety valve(W series)



## ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置等设备，防止压力超过允许最高压力值，保证设备安全运行。

Mainly used for power plant boilers, pressure vessels, temperature and pressure reduction devices, etc., to prevent pressure from exceeding the maximum allowable pressure value and ensure safe operation of the equipment.

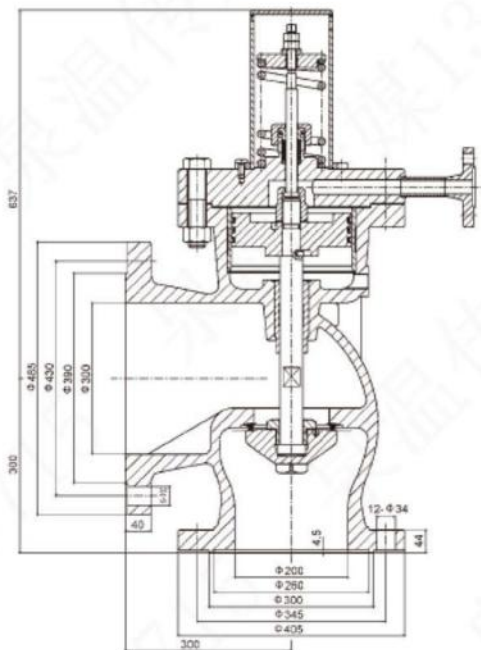
## ●结构简述 Structure briefing

1、该阀门为单排汽、两端为法兰连接结构。主要由阀体、阀盖、活塞室、阀瓣、阀杆等组件。

2、阀座、阀瓣密封面均由铁基铬镍不锈钢焊条堆焊而成，提高了耐磨性和抗冲蚀性。

1. The valve is a single exhaust valve with flange connections at both ends. Mainly composed of valve body, valve cover, piston chamber, valve disc, valve stem and other components.

2. The sealing surfaces of the valve seat and valve disc are welded with iron-based chromium nickel stainless steel electrodes, which improves wear resistance and erosion resistance.



A49Y-Pw54-2.55V型 DN200主安全阀  
A49Y-Pw54-2.55V DN200 Main safety valve

## ●安装说明 Installation instruction

1、阀门应垂直安装在设备最高位置。

2、主安全阀紧固在支座上，支座承受主安全阀排汽时产生的反作用力。

3、排汽管应有专门吊架，排汽管重量不得加在主安全阀上

4、主安全阀与排汽管之间的连接法兰应消除任何的附加预应力。

5、排汽管的最低点应考虑流水，以免排汽时产生水击。

1. Valves should be installed vertically at the highest position of the equipment.

2. The main safety valve is fastened on the support, which bears the reaction force generated when the main safety valve exhausts steam.

3. The exhaust pipe should have a dedicated hanger, and the weight of the exhaust pipe should not be added to the main safety valve.

4. The connecting flange between the main safety valve and the exhaust pipe should eliminate any additional prestress.

5. The lowest point of the exhaust pipe should consider flowing water to avoid water hammer during exhaust.

# ► A49Y弹簧安全阀（脉冲式）

## A49Y Spring safety valve(impulse type)



### ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置等设备，防止压力超过允许最高压力值，保证设备安全运行。

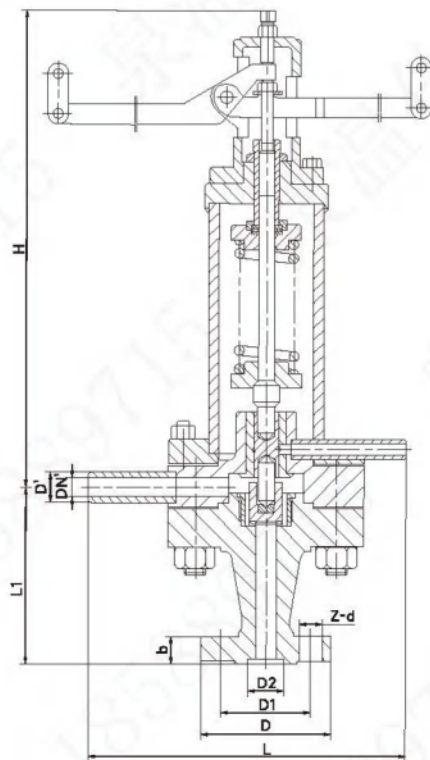
Mainly used for power plant boilers, pressure vessels, temperature and pressure reduction devices, etc., to prevent pressure from exceeding the maximum allowable pressure value and ensure safe operation of the equipment.

### ●结构简述 Structure briefing

- 1、该阀主要有阀体、阀盖、阀瓣等零件组成，通过调节弹簧来调节冲量安全阀开启压力。
- 2、该阀带有用来开启或关闭的电磁铁，机械和电器动作互不干扰。
- 3、阀座、阀瓣密封面均由铁基铬镍不锈钢堆焊而成。
  1. The valve mainly consists of valve body, valve cover, valve disc and other parts, and the opening pressure of the impulse safety valve is adjusted by adjusting the spring.
  2. The valve is equipped with an electromagnet for opening or closing, and the mechanical and electrical actions do not interfere with each other.
  3. The sealing surfaces of the valve seat and disc are both made of iron-based chromium nickel stainless steel by welding.

### ●安装说明 Installation instruction

- 1、脉冲安全阀A49H-Pw5414V DN20应与A69Y-Pw5414V Dn100、脉冲安全阀A49H-Pw542.55V DN25与A49Y-Pw542.55V DN200型主安全阀配套使用。
- 2、脉冲安全阀安装时应严格垂直，阀杆向上，应将管路冲洗干净。
- 3、脉冲安全阀引出管与主安全阀的入口管之间的距离，电接点压力表和主安全阀入口管之间的距离，不得小于5倍主安全阀入口管径，以免主安全阀动作时，因排汽影响电接点压力表和脉冲安全阀工作的正确性。
- 4、该阀与电磁铁一起装在一个专门的支架上，阀门与电磁铁连接要灵活，不得有卡涩现象。
  1. Pulse safety valve A49H-Pw5414V DN20 should be used in conjunction with A69Y-Pw5414V DN100, pulse safety valve A49H-Pw542.55V DN25, and A49Y-Pw542.55V DN200 main safety valves.
  2. The pulse safety valve should be installed strictly vertically, with the valve stem facing upwards, and the pipeline should be flushed clean.
  3. The distance between the outlet pipe of the pulse safety valve and the inlet pipe of the main safety valve, as well as the distance between the electric contact pressure gauge and the inlet pipe of the main safety valve, shall not be less than 5 times the diameter of the inlet pipe of the main safety valve, in order to avoid affecting the correctness of the operation of the electric contact pressure gauge and the pulse safety valve due to exhaust steam during the operation of the main safety valve.
  4. The valve and electromagnet are installed together on a dedicated bracket, and the connection between the valve and electromagnet should be flexible without any jamming.



### ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号Type         | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 连接尺寸 Connecting dimensions |                |     |     |                |                |    |      |     |    |
|----------------|---------------------------------------|----------------------------|----------------|-----|-----|----------------|----------------|----|------|-----|----|
|                |                                       | L                          | L <sub>1</sub> | H   | D   | D <sub>1</sub> | D <sub>2</sub> | b  | z-d  | DN' | D' |
| A49Y-10        | 20                                    | 320                        | 154            | 488 | 125 | 90             | 51             | 28 | 4-18 | 20  | 28 |
| A49H-Pw542.55V | 25                                    | 256                        | 154            | 443 | 135 | 100            | 43             | 24 | 4-18 | 20  | 28 |
| A49H-Pw5410V   | 20                                    | 320                        | 154            | 488 | 130 | 90             | 35             | 28 | 4-23 | 20  | 28 |
| A49H-Pw5414V   | 20                                    | 320                        | 166            | 480 | 140 | 95             | 35             | 32 | 4-25 | 20  | 28 |

# ► A69Y主安全阀 (W 系列)

A69Y Main safety valve(W series)



## ●用途Purpose

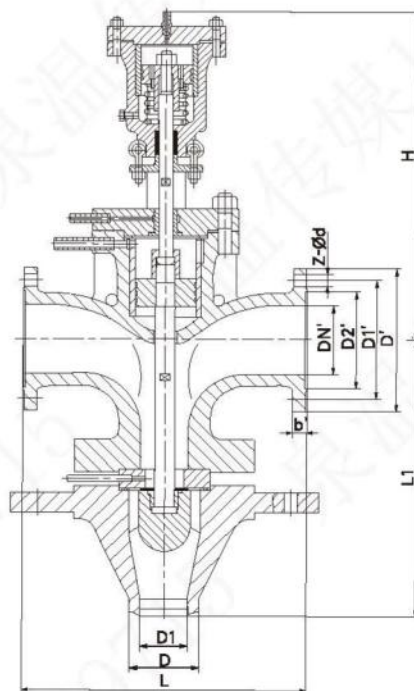
本装置供蒸汽压力 $P=10\text{MPa}$ ，温度为 $t=540^\circ\text{C}$ 的电站锅炉上使用，防止锅炉介质压力超过允许值，以保证锅炉安全运行。

This device is used on power plant boilers with steam pressure  $P=10\text{MPa}$  and temperature  $t=540^\circ\text{C}$  to prevent the medium pressure of the boiler from exceeding the allowable value and ensure safe operation of the boiler.

## ●结构简述 Structure briefing

- 1、阀门为双排汽、两端为法兰连接结构。主要由阀体、连接管、缓冲容器、活塞室、阀瓣、阀杆等零件组成。
- 2、当介质压力升高至整定压力时，冲量安全阀打开，介质从脉冲管进入安全阀的活塞室，推动活塞下降，使阀门自动打开，当冲量阀关闭时。阀瓣又自动关闭。
- 3、密封面用钴基硬质合金堆焊而成，阀瓣经热处理，提高了硬度。

1. The valve is double exhaust and has a flange connection structure at both ends. Mainly composed of valve body, connecting pipe, buffer container, piston chamber, valve disc, valve stem and other components.
2. When the medium pressure rises to the set pressure, the impulse safety valve opens, and the medium enters the piston chamber of the safety valve from the pulse tube, pushing the piston down and causing the valve to automatically open. When the impulse valve is closed. The valve disc automatically closes again.
3. The sealing surface is welded with cobalt based hard alloy, and the valve disc is heat-treated to increase its hardness.



## ●安装说明 Installation instruction

- 1、主安全阀门必须垂直安装在设备的最高位置。
- 2、主安全阀紧固在支座上，支座承受主安全阀排汽时产生的反作用力。
- 3、排汽管应用专门吊架，排汽管重量不得加在主安全阀上，主安全阀与排汽管之间的连接法兰应消除任何的附加预应力。
- 4、排汽管的最低点应考虑疏水，以免排汽时产生水击。

1. The main safety valve must be installed vertically at the highest position of the equipment.
2. The main safety valve is fastened on the support, which bears the reaction force generated when the main safety valve exhausts steam.
3. Special hangers should be used for exhaust pipes, and the weight of the exhaust pipe should not be added to the main safety valve. The connecting flange between the main safety valve and the exhaust pipe should eliminate any additional prestress.
4. The lowest point of the exhaust pipe should consider drainage to avoid water hammer during exhaust.

## ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号Type        | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 连接尺寸 Connecting dimensions |                |     |     |                |     |     |                  |                  |    |      |
|---------------|---------------------------------------|----------------------------|----------------|-----|-----|----------------|-----|-----|------------------|------------------|----|------|
|               |                                       | L                          | L <sub>1</sub> | H   | D   | D <sub>1</sub> | DN' | D'  | D <sub>1</sub> ' | D <sub>2</sub> ' | b' | Z-φd |
| A69Y-P45.3V   | 150                                   | 560                        | 638            | 698 | 220 | 165            | 150 | 300 | 250              |                  | 30 | 8-25 |
| A69Y-P46.7V   | 150                                   | 560                        | 638            | 698 | 220 | 165            | 150 | 300 | 250              | 204              | 30 | 8-25 |
| A69Y-P5410V   | 150                                   | 560                        | 638            | 698 | 220 | 165            | 150 | 300 | 250              | 204              | 30 | 8-25 |
| A69Y-P5410.5V | 150                                   | 560                        | 638            | 698 | 220 | 165            | 150 | 300 | 250              | 204              | 30 | 8-25 |

# ► GA49H脉冲式安全阀

GA49H Impulse safety valve



## ●用途Purpose

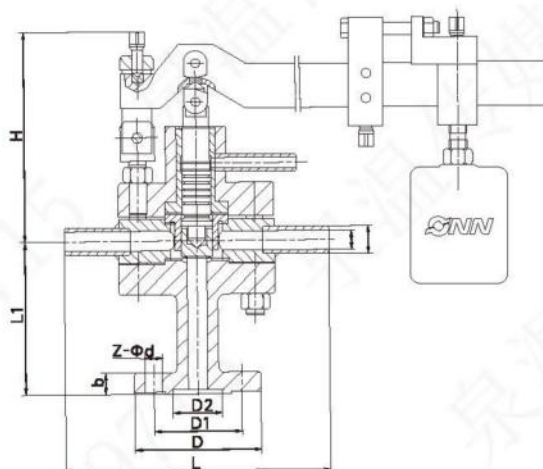
主要用于电站锅炉、压力容器、减温减压装置等设备，防止压力超过允许最高压力值，保证设备安全运行。

Mainly used for power plant boilers, pressure vessels, temperature and pressure reduction devices, etc., to prevent pressure from exceeding the maximum allowable pressure value and ensure safe operation of the equipment.

## ●结构简述 Structure briefing

- 1、通过杠杆和重锤来平衡阀瓣的压力，使阀门保证密封，移动重锤的位置和改变重锤的重量来达到要求的起跳压力。
- 2、密封面用铁基铬镍不锈钢堆焊而成，阀瓣经热处理，提高了耐磨性和抗冲蚀性。
- 3、阀门上部带有开启和关闭的电磁铁，机械和电动作互不干扰。

1. Balance the pressure of the valve disc through a lever and a heavy hammer to ensure sealing of the valve. Move the position of the heavy hammer and change its weight to achieve the required popping pressure.
2. The sealing surface is welded with iron-based chromium nickel stainless steel, and the valve disc is heat-treated to improve wear resistance and erosion resistance.
3. The upper part of the valve is equipped with an electromagnet for opening and closing, and the mechanical and electrical actions do not interfere with each other.



## ●安装说明 Installation instruction

- 1、本阀门应与A69Y-PW5410V型，DN150主安全阀等配套使用。
- 2、脉冲安全阀安装时应严格垂直，杠杆应保持水平，应将管路冲洗干净。
- 3、脉冲安全阀引出管与主安全阀的入口管之间应保持一段较长的距离，电接点压力表和主安全阀入口管之间的距离，不得小于5倍主安全阀入口管径，以免主安全阀动作时，因排汽影响电接点压力表和脉冲安全阀工作的正确性。
- 4、该阀与电磁铁一起装在一个专门的支架上，阀门上杠杆与电磁铁连接要灵活，不得有卡涩现象。

1. This valve should be used in conjunction with A69Y-PW5410V type, DN150 main safety valve, etc.
2. The pulse safety valve should be installed strictly vertically, the lever should be kept horizontal, and the pipeline should be flushed clean.
3. A long distance should be maintained between the outlet pipe of the pulse safety valve and the inlet pipe of the main safety valve. The distance between the electric contact pressure gauge and the inlet pipe of the main safety valve should not be less than 5 times the diameter of the inlet pipe of the main safety valve to avoid affecting the correctness of the operation of the electric contact pressure gauge and the pulse safety valve due to exhaust steam during the operation of the main safety valve.
4. The valve is mounted on a dedicated bracket together with the electromagnet, and the lever on the valve should be flexibly connected to the electromagnet without any jamming.

## ●外形尺寸和连接尺寸 Dimensions (mm)

| 型号Type          | 公称通径<br>Nominal<br>Diameter<br>DN(mm) | 连接尺寸 Connecting dimensions |                |     |     |                |                |    |      |     |    |
|-----------------|---------------------------------------|----------------------------|----------------|-----|-----|----------------|----------------|----|------|-----|----|
|                 |                                       | L                          | L <sub>1</sub> | H   | D   | D <sub>1</sub> | D <sub>2</sub> | b  | z-d  | DN' | D' |
| GA49H-PW46 6.7V | 20                                    | 280                        | 170            | 225 | 130 | 90             | 35             | 28 | 4-23 | 20  | 28 |
| GA49H-PW5410V   | 20                                    | 280                        | 170            | 225 | 130 | 90             | 35             | 28 | 4-23 | 20  | 28 |
| GA49H-PW5410.5V | 20                                    | 280                        | 170            | 225 | 130 | 90             | 35             | 28 | 4-23 | 20  | 28 |

# ► A69H-10-DN150主安全阀 (W系列)

## A69H-10-DN150 Main safety valve(W series)



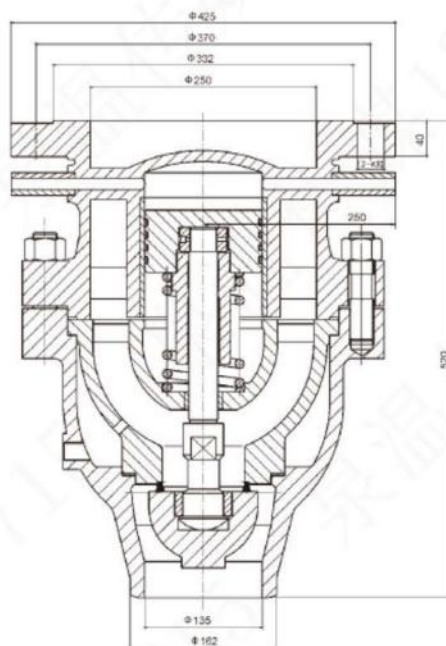
### ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置上等设备，防止压力超过允许最高压力值，保证设备安全运行。

Mainly used for power plant boilers, pressure vessels, temperature and pressure reduction devices and other equipment to prevent pressure from exceeding the maximum allowable pressure value and ensure safe operation of the equipment.

### ●结构简述 Structure briefing

1. 阀门主要由阀体、阀瓣、活塞室等组成。
2. 当介质压力升高至整定压力时，冲量安全阀打开，介质从脉冲管进入安全阀的活塞室，推动活塞下降，使阀门自动打开，当冲量阀关闭时，阀瓣又自动关闭。
3. 密封面用铁基铬镍不锈钢堆焊而成，阀瓣经热处理，提高了硬高。
  1. Valves are mainly composed of valve body, valve disc, piston chamber, etc.
  2. When the medium pressure rises to the set pressure, the impulse safety valve opens, and the medium enters the piston chamber of the safety valve from the pulse tube, pushing the piston down and causing the valve to automatically open. When the impulse valve closes, the valve disc automatically closes again.
  3. The sealing surface is welded with iron-based chromium nickel stainless steel, and the valve disc is heat-treated to increase its hardness.



### ●安装说明 Installation instruction

1. 阀门必须垂直安装在设备的最高位置。
2. 主安全阀紧固在支座上，支座承受主安全阀排汽时产生的反座力。
3. 排汽管应有专门吊架，排汽管重量不得加在主安全阀上，主安全阀与排汽管之间的连接法兰应消除任何的附加预应力。
4. 排汽管的最低点应考虑疏水，以免排汽时产生水击。
  1. The valve must be installed vertically at the highest position of the equipment.
  2. The main safety valve is fastened on the support, which bears the recoil force generated when the main safety valve exhausts steam.
  3. The exhaust pipe should have a dedicated hanger, and the weight of the exhaust pipe should not be added to the main safety valve. The connecting flange between the main safety valve and the exhaust pipe should eliminate any additional prestress.
  4. The lowest point of the exhaust pipe should consider drainage to avoid water hammer during exhaust.

# ► GA49H-10-DN20脉冲式安全阀

## GA49H-10-DN20 Impulse safety valve



### ●用途Purpose

主要用于电站锅炉、压力容器、减温减压装置等设备，防止压力超过允许最高压力值，保证设备安全运行。

Mainly used for power plant boilers, pressure vessels, temperature and pressure reduction devices, etc., to prevent pressure from exceeding the maximum allowable pressure value and ensure safe operation of the equipment.

### ●结构简述 Structure briefing

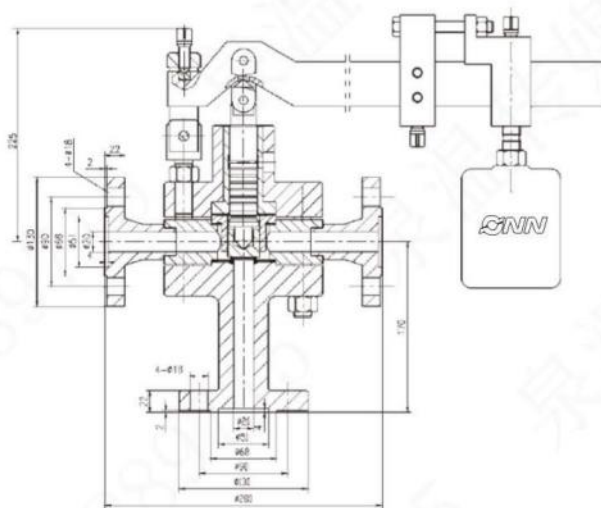
- 1、通过杠杆和重锤来平衡阀瓣的压力，使阀门保证密封，移动重锤的位置和改变重锤的重量来达到要求的起跳压力。
- 2、密封面用铁基铬镍不锈钢堆焊而成，阀瓣经热处理，提高了耐磨性和抗冲蚀性。
- 3、阀门上部带有开启和关闭的电磁铁，机械和电器动作互不干扰。

1. Balance the pressure of the valve disc through a lever and a heavy hammer to ensure sealing of the valve. Move the position of the heavy hammer and change its weight to achieve the required popping pressure.
2. The sealing surface is welded with iron-based chromium nickel stainless steel, and the valve disc is heat-treated to improve wear resistance and erosion resistance.
3. The upper part of the valve is equipped with an electromagnet for opening and closing, and the mechanical and electrical actions do not interfere with each other.

### ●安装说明 Installation instruction

- 1、本阀门应与A69H-10型 DN150主安全阀配套使用。
- 2、脉冲安全阀安装时应严格垂直，杠杆应保持水平。
- 3、脉冲安全阀安装之前，应将管路冲洗干净。
- 4、脉冲安全阀引出管与主安全阀的入口管之间应保持一段较长的距离，电接点压力表和主安全阀入口管之间的距离，不得小于5倍主安全阀入口管径，以免主安全阀动作时，因排汽影响电接点压力表和脉冲安全阀工作的正确性。
- 5、该阀与电磁铁一起装在一个专门的支架上，阀门上杠杆与电磁铁连接要灵活，不得有卡涩现象。

1. This valve should be used in conjunction with the A69H-10 DN150 main safety valve.
2. The pulse safety valve should be installed strictly vertically, and the lever should be kept horizontal.
3. Before installing the pulse safety valve, the pipeline should be flushed clean.
4. A long distance should be maintained between the outlet pipe of the pulse safety valve and the inlet pipe of the main safety valve. The distance between the electric contact pressure gauge and the inlet pipe of the main safety valve should not be less than 5 times the diameter of the inlet pipe of the main safety valve to avoid affecting the correctness of the operation of the electric contact pressure gauge and the pulse safety valve due to exhaust steam during the operation of the main safety valve.
5. The valve is mounted on a dedicated bracket together with the electromagnet, and the lever on the valve should be flexibly connected to the electromagnet without any jamming.





● 安全阀性能规范(依据GB/T12243标准) Safety valve performance standards (in accordance with GB/T12243)

| 性能规范<br>Performance standards    | 壳体试验压力<br>Shell test pressure<br>P (Mpa) | 密封试验压力<br>Seal test pressure<br>PM(MPa)                                                                                                                                                      | 启闭压差<br>Blow down<br>$\Delta P$ (MPa)                                                    | 排放压力<br>Relieving pressure<br>Pp(MPa) | 开启高度<br>Lift<br>H(mm)                                        |
|----------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------|
| 适用介质<br>Applicable medium        |                                          |                                                                                                                                                                                              |                                                                                          |                                       |                                                              |
| 蒸汽<br>Steam                      | 1.5PN                                    | PS<0.3时为PS-0.03, PS≥0.3时为90%PS或回座压力最小值, 取二较小值<br>When PS<0.3, it is PS-0.03, and when PS ≥ 0.3, it is 90% PS or the minimum value of the recoil pressure, take the smaller of the two values | PS≤0.4时为≤0.04<br>PS>0.4时为≤10%PS<br>When PS≤0.4, it is ≤0.04<br>When PS>0.4, it is ≤10%PS | ≤1.03Ps                               | 全启式<br>Full bore type ≥1/4do<br>微启式<br>Low lift type ≥1/20do |
| 空气或其他气体<br>Air and other gas     |                                          | PS<0.3时为PS-0.03;<br>PS≥0.3时为90%PS<br>When PS<0.3, it is PS-0.03;<br>When PS≥0.3, it is 90%PS                                                                                                 | PS≤0.2时为≤0.03<br>PS>0.2时为≤15%PS<br>When PS≤0.2, it is ≤0.03<br>When PS>0.2, it is ≤15%PS | ≤1.1Ps                                | 全启式<br>Full bore type ≥1/4do<br>微启式<br>Low lift type ≥1/20do |
| 水或其他液体<br>Water and other liquid |                                          |                                                                                                                                                                                              | PS≤0.3时为≤0.06<br>PS>0.3时为≤20%PS<br>When PS≤0.3, it is ≤0.06<br>When PS>0.3, it is ≤20%PS | ≤1.2Ps                                | 全启式<br>Full bore type ≥1/4do<br>微启式<br>Low lift type ≥1/20do |

注: Ps为整定压力, do为喉径。Note: Ps is the set pressure, do is throat diameter

● 密封性要求(依据GB/T12243) Airproof requirements (in accordance with GB/T12243)

| 安全阀类型<br>Safety valve type                      | 流道直径<br>Flow diameter<br>(mm) | 最大允许泄漏率, 气泡数/min Maximum allowable leakage rate, number of air bubble/min (试验介质: 空气或其它气体) (Test medium: Air or other gas) |      |
|-------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------|------|
|                                                 |                               | 公称压力PN(MPa) Nominal pressure                                                                                              |      |
|                                                 |                               | < 10                                                                                                                      | ≥ 10 |
| 一般安全阀<br>Normal safety valve                    | < 18                          | 40                                                                                                                        | 60   |
|                                                 | ≥ 18                          | 20                                                                                                                        | 30   |
| 背压平衡安全阀<br>Safety valve of backpressure balance | < 20                          | 50                                                                                                                        | 75   |
|                                                 | ≥ 20                          | 30                                                                                                                        | 45   |

注: 1.进行蒸汽安全阀密封试验时, 用目视或听音的方法检查阀的出口端, 如未发现泄漏现象, 则认为密封性合格。

2.进行水或其它液体用安全阀密封试验时, 在规定的试验持续时间2分钟内, 其密封面处不应有流淌的水珠。

Note: 1. When conducting a steam safety valve sealing test, the outlet end of the valve should be inspected visually or by listening to sound. If no leakage is found, the sealing is considered to be qualified.

2. During the sealing test of safety valves for water or other liquids, there should be no water droplets flowing on the sealing surface within the specified test duration of 2 minutes.

● 安全阀额定排量计算 Calculating the rated discharge amount of safety valve

一、介质为液体 (参照GB/T12241标准) Liquid as medium (in reference to GB/T12241)

$$W_t = \sqrt{\rho \Delta P / 0.1964}$$

式中Wt----安全阀的理论排量, Kg/h Theoretical discharge amount of the safety valve

$\rho$ ----介质密度, Kg/m<sup>3</sup>(如水  $\rho=1000\text{Kg/m}^3$ ) Medium density

$\Delta P$ ----阀门前后压差,  $\Delta P=P_p-P_b$ , MPa Differential pressure of front and back valve

$P_p$ ----排放压力, MPa(绝对压力) Discharge pressure, Mpa(absolute pressure)

$P_b$ ----阀门出口侧压力, MPa(对空排放时 $P_b=0$ ) Pressure of valve outlet, Mpa (for empty discharge,  $P_b=0$ )

二、介质为气体(参照GB/T12241标准) Gas as medium (in reference to GB/T12241)

$$W_t = 25.8 K P_d A \sqrt{\frac{M}{T}}$$

式中K----排气系数, 对微启式安全阀C=0.15, 全启式安全阀C=0.75 Discharge parameter, for slightly open safety valve, C=0.15, and for fully open safety valve, C=0.75.

M----气体分子量 (如空气M=29, 甲烷M=16) Molecular weight of gas (for example, the molecular weight of air is M=29, and for methane, M=16).

Z----气体在操作温度下的压缩系数, (如空气在常温, 压力为1.6MPa下Z=0.99, 压力为10MPa下Z=0.95) Gas compression parameter in operation temperature, (in normal temperature, when the pressure is 1.6MPa, the gas compression parameter of air is Z=0.99, and when the pressure is 10MPa, Z=0.95)

T----气体的温度, K(T=273+摄氏温度) Gas temperature, K(T=273+Celsius degree)

A----流道面积, mm<sup>2</sup> Flow area

三、介质为蒸汽 (参照《蒸汽锅炉安全技术监察规程》) Steam as medium (in reference to <safety technical supervision guide for steam boiler>)

$$W_t = CA(10.2P+1)K$$

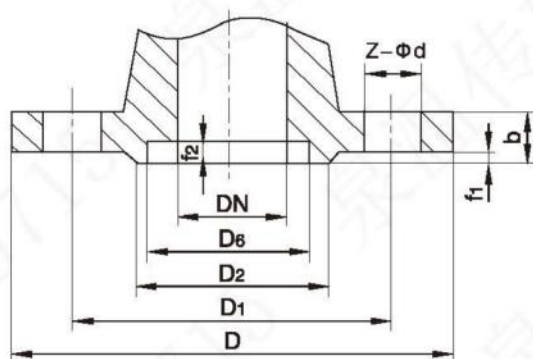
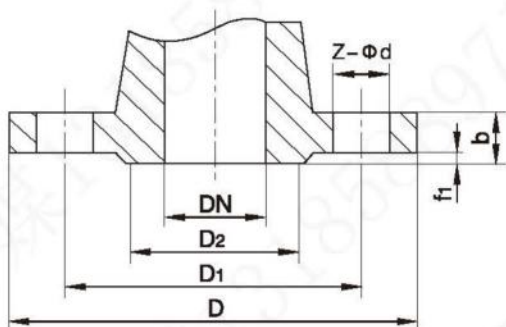
式中C----排气系数, 对微启式安全阀C=0.085, 全启式安全阀C=0.235 Discharge parameter, for low lift safety valve, C=0.085, and for full bore safety valve, C=0.235

P----安全阀入口处压力, MPa Inlet pressure of safety valve

K----蒸汽比容修正系数, 一般取K=1 Revised parameter of steam specific heat, it is K=1

A----流道面积, mm<sup>2</sup> Flow area

► JB/T79-94法兰尺寸表  
JB/T79-97 Flange Dimensional Table



| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 尺寸Size(mm) |     |     |     |    |    |       |
|----------------------------------------|------------|-----|-----|-----|----|----|-------|
|                                        | DN         | D   | D1  | D2  | f1 | b  | Z-Φd  |
| 1.6                                    | 15         | 95  | 65  | 45  | 2  | 14 | 4-14  |
|                                        | 20         | 105 | 75  | 55  | 2  | 14 | 4-14  |
|                                        | 25         | 115 | 85  | 65  | 2  | 14 | 4-14  |
|                                        | 32         | 140 | 100 | 78  | 2  | 16 | 4-18  |
|                                        | 40         | 150 | 110 | 85  | 3  | 16 | 4-18  |
|                                        | 50         | 165 | 125 | 100 | 3  | 16 | 4-18  |
|                                        | 65         | 185 | 145 | 120 | 3  | 18 | 4-18  |
|                                        | 80         | 200 | 160 | 135 | 3  | 20 | 8-18  |
|                                        | 100        | 220 | 180 | 155 | 3  | 20 | 8-18  |
|                                        | 125        | 250 | 210 | 185 | 3  | 22 | 8-18  |
|                                        | 150        | 285 | 240 | 210 | 3  | 22 | 8-23  |
|                                        | 175        | 310 | 270 | 240 | 3  | 24 | 8-23  |
|                                        | 200        | 340 | 295 | 265 | 3  | 24 | 12-23 |
|                                        | 250        | 405 | 355 | 320 | 3  | 26 | 12-26 |
|                                        | 300        | 460 | 410 | 375 | 4  | 28 | 12-26 |
|                                        | 350        | 520 | 470 | 435 | 4  | 32 | 16-26 |
|                                        | 400        | 580 | 525 | 485 | 4  | 36 | 16-30 |
|                                        | 500        | 715 | 650 | 608 | 4  | 42 | 20-34 |
| 2.5                                    | 600        | 840 | 770 | 718 | 5  | 46 | 20-36 |
|                                        | 15         | 95  | 65  | 45  | 2  | 16 | 4-14  |
|                                        | 20         | 105 | 75  | 55  | 2  | 16 | 4-14  |
|                                        | 25         | 115 | 85  | 65  | 2  | 16 | 4-14  |
|                                        | 32         | 140 | 100 | 78  | 2  | 18 | 4-18  |
|                                        | 40         | 150 | 110 | 85  | 3  | 18 | 4-18  |
|                                        | 50         | 165 | 125 | 100 | 3  | 20 | 4-18  |
|                                        | 65         | 185 | 145 | 120 | 3  | 22 | 8-18  |
|                                        | 80         | 200 | 160 | 135 | 3  | 22 | 8-18  |
|                                        | 100        | 230 | 190 | 160 | 3  | 24 | 8-23  |
|                                        | 125        | 270 | 220 | 188 | 3  | 26 | 8-26  |
|                                        | 150        | 300 | 250 | 218 | 3  | 28 | 8-26  |
|                                        | 200        | 360 | 310 | 278 | 3  | 30 | 12-26 |
|                                        | 250        | 425 | 370 | 332 | 3  | 32 | 12-30 |
|                                        | 300        | 485 | 430 | 390 | 4  | 36 | 16-30 |
|                                        | 350        | 555 | 490 | 448 | 4  | 40 | 16-34 |
|                                        | 400        | 620 | 550 | 505 | 4  | 44 | 16-36 |

# JB/T79-94法兰尺寸表

## JB/T79-97 Flange Dimensional Table



| 公称压力<br>Nominal<br>pressure<br>PN(Mpa) | 尺寸Size(mm) |     |     |     |     |    |     |    |       |
|----------------------------------------|------------|-----|-----|-----|-----|----|-----|----|-------|
|                                        | DN         | D   | D1  | D2  | D6  | f1 | f2  | b  | Z-Φd  |
| 4.0                                    | 15         | 95  | 65  | 45  | 40  | 2  | 3   | 16 | 4-14  |
|                                        | 20         | 105 | 75  | 55  | 51  | 2  | 3   | 16 | 4-14  |
|                                        | 25         | 115 | 85  | 65  | 58  | 2  | 4   | 16 | 4-14  |
|                                        | 32         | 140 | 100 | 78  | 66  | 2  | 4   | 18 | 4-18  |
|                                        | 40         | 150 | 110 | 85  | 76  | 3  | 4   | 18 | 4-18  |
|                                        | 50         | 165 | 125 | 100 | 88  | 3  | 4   | 20 | 4-18  |
|                                        | 65         | 185 | 145 | 120 | 110 | 3  | 4   | 22 | 8-18  |
|                                        | 80         | 200 | 160 | 135 | 121 | 3  | 4   | 22 | 8-18  |
|                                        | 100        | 235 | 190 | 160 | 150 | 3  | 4.5 | 24 | 8-23  |
|                                        | 125        | 270 | 220 | 188 | 176 | 3  | 4.5 | 28 | 8-26  |
|                                        | 150        | 300 | 250 | 218 | 204 | 3  | 4.5 | 30 | 8-26  |
|                                        | 175        | 350 | 295 | 258 | 234 | 3  | 4.5 | 34 | 12-30 |
|                                        | 200        | 375 | 320 | 282 | 260 | 3  | 4.5 | 38 | 12-30 |
|                                        | 250        | 450 | 385 | 345 | 313 | 3  | 4.5 | 42 | 12-34 |
| 6.4                                    | 25         | 140 | 100 | 78  | 58  | 2  | 4   | 22 | 4-18  |
|                                        | 32         | 155 | 110 | 82  | 66  | 2  | 4   | 24 | 4-23  |
|                                        | 40         | 170 | 125 | 95  | 76  | 3  | 4   | 24 | 4-23  |
|                                        | 50         | 180 | 135 | 105 | 88  | 3  | 4   | 26 | 4-23  |
|                                        | 65         | 205 | 160 | 130 | 110 | 3  | 4   | 28 | 8-23  |
|                                        | 80         | 215 | 170 | 140 | 121 | 3  | 4   | 30 | 8-23  |
|                                        | 100        | 250 | 200 | 168 | 150 | 3  | 4.5 | 32 | 8-26  |
|                                        | 150        | 345 | 280 | 240 | 204 | 3  | 4.5 | 38 | 8-34  |
|                                        | 200        | 415 | 345 | 300 | 260 | 3  | 4.5 | 44 | 12-36 |
| 10.0                                   | 25         | 140 | 100 | 78  | 58  | 2  | 4   | 24 | 4-18  |
|                                        | 32         | 155 | 110 | 82  | 66  | 2  | 4   | 24 | 4-23  |
|                                        | 40         | 170 | 125 | 95  | 76  | 3  | 4   | 26 | 4-23  |
|                                        | 50         | 195 | 145 | 112 | 88  | 3  | 4   | 28 | 4-26  |
|                                        | 65         | 220 | 170 | 138 | 110 | 3  | 4   | 32 | 8-26  |
|                                        | 80         | 230 | 180 | 148 | 121 | 3  | 4   | 34 | 8-26  |
|                                        | 100        | 265 | 210 | 172 | 150 | 3  | 4   | 38 | 8-30  |
|                                        | 150        | 355 | 290 | 250 | 204 | 3  | 4.5 | 46 | 12-34 |
| 16.0                                   | 40         | 175 | 125 | 92  | 76  | 3  | 4   | 32 | 4-27  |
|                                        | 50         | 215 | 165 | 132 | 88  | 3  | 4   | 36 | 8-25  |
|                                        | 80         | 260 | 205 | 168 | 121 | 3  | 4   | 46 | 8-30  |
|                                        | 100        | 300 | 240 | 200 | 150 | 3  | 4.5 | 48 | 8-34  |

# NF美标磅级系列安全阀简介

## NF API Pound-Grade series safety valve's introduction



### ●性能特点 Performance features

整定压力偏差:  $\leq \pm 3\%$

超过压力:  $\leq \pm 10\%$

启闭压差:  $\leq \pm 15\%$

密封性能: 符合API527标准规定的密封要求

Set pressure tolerance:  $\leq \pm 3\%$

Over-pressure:  $\leq \pm 10\%$

Blowdown:  $\leq \pm 15\%$

Sealing performance: accord the sealing request of API 527 standard

### ●结构特点 Structure features

- 1、结构紧凑,造型美观,铸件多数采用精密铸造,表面光洁。
  - 2、阀座和阀体采用分体式,阀座易于加工,密封面易研磨成镜面,保证密封,且便于装拆维修。
  - 3、设计合理的反冲盘与调节圈相匹配,调整方便,使安全阀开启迅速,回座及时,可得到理想的启闭压差。
  - 4、阀座和阀瓣均堆焊钴基硬质合金,耐磨,耐冲蚀,密封有保证,延长了使用寿命。
  - 5、背压平衡式安全阀采用军品波纹管制作,能有效地消除背压对起跳压力的影响,还能对有蚀有毒介质起严密的隔离作用,防止介质腐蚀阀门内件和污染环境。
  - 6、弹簧作为关键零件均作两次24小时恒温处理,确保其在工作状态中刚度稳定,起跳动作正确。
  - 7、对阀体、阀座等受压件都作严格的耐压试验,确保了使用时的安全、可靠。
1. As foundry goods have been founded precisely, it has tight structure, graceful appearance, smooth and cleaning surface.
2. The seat and the body have been adopted the subsection design, the seat is easy to process, the sealing face is rubbed into mirror face, which ensures sealing, and is convenient to dismantle, install and maintain
3. The reasonable design of disc holder with the adjusting ring so that safety valves can be turned on quickly in the respect of adjust and obtain a perfect blow down difference
4. Both the seat and body that are made of welding stellite are wear-resistant and erosive-resistant so as to ensure sealing and to prolong the life of use
5. The back pressure balance safety valve which is made of bellows is effective to eliminate the back pressure influence on set pressure, and have tightly segregant function for erosive and poison materials in order to prevent medium from eroding inner parts of valves and polluting environment.
6. The spring as a key part is treated for 24 hours under the constant temperature twice so as to ensure the stable firmness at work and the proper skip
7. The parts of the seat and the body have been tested press-resistance so as to ensure the safety and reliability at work.

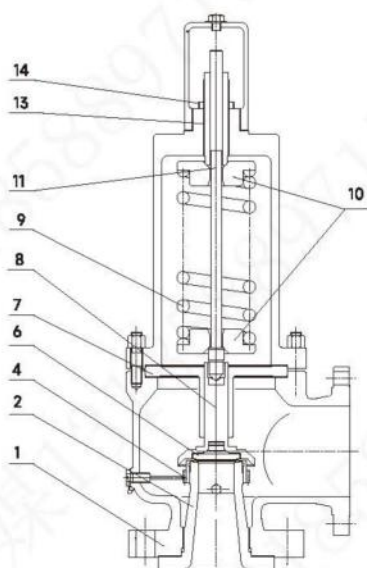
### ●安全阀型号编制方法Method of compiling the types safety valve

| 类别<br>Valve types                                                                                                                  | 进口法兰磅级<br>Flange Class                                                                       | 阀体材料<br>Material of Body                                                                                                   | 内件材料(注)<br>Material of Trim                                            | 阀帽型式<br>Cap Types                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NFO:普通式安全阀<br>Conventional<br>A42C Type<br>A44C Type<br>A48C Type<br>NFB:波纹管平衡式安全阀<br>Balanced Bellows<br>WA42C Type<br>WA44C Type | 编号NO:<br>01:150Lb<br>03:300Lb<br>03a:300Lb<br>06:600Lb<br>09:900Lb<br>15:1500Lb<br>25:2500Lb | C:WCB<br>P:CF8<br>R:CF8M<br>RL:CF3M<br>CL:LCB/LC2<br>C6/C9:WC6/WC9<br>M:Monel<br>H:Hastelloy<br>N:SPECIAL Material<br>特殊材料 | P:304<br>S:316<br>M:Monel<br>H:Hastelloy<br>N:SPECIAL Material<br>特殊材料 | A:螺紋式 Screwed<br>B:带螺塞的螺紋式<br>Screwed with plug<br>C:杠杆式 Lifting Levered<br>D:封闭杠杆式<br>Close Lifting Levered<br>E:带螺塞的封闭杠杆式<br>Close Lifting Levered With plug<br>G:带螺塞的杠杆式<br>Lifting Levered With plug |

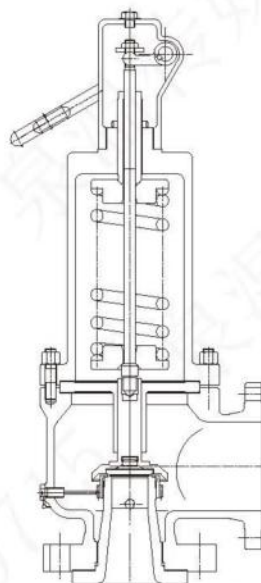
注:阀体材料碳钢内件材料304、阀体材料内件材料相同可以省略内件代号。

Note: If the valve body material is made of carbon steel and the valve body material is the same, the internal part code can be omitted.

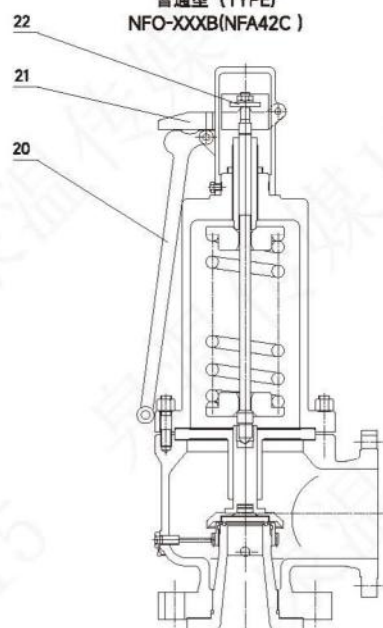
# ► NF美标磅级系列安全阀简介 NF API Pound-Grade series safety valve' s introduction



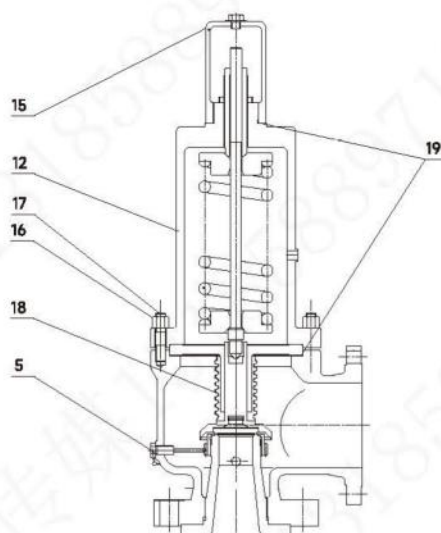
普通型 (TYPE)  
NFO-XXXB(NFA42C)



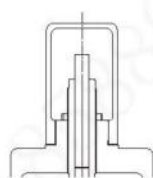
普通型 (TYPE)  
NFO-XXXE(NFA44C)



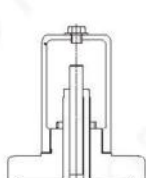
普通型 (TYPE)  
NFO-XXXG(NFA48C)



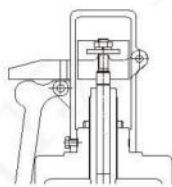
波纹管平衡型(TYPE)  
NFB-XXXB (NFWA42C)



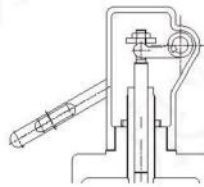
A: 螺纹式  
Screwed Cap



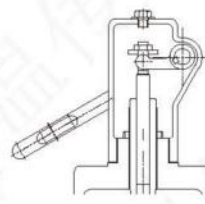
B: 带螺塞的螺纹式  
Screwed Cap  
with plug



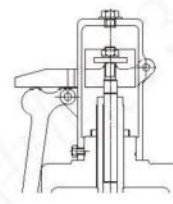
C: 杠杆式  
Lifting Lever



D: 螺纹式  
Packed  
Lifting Lever



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



G: 带螺塞的杠杆式  
Lifting Lever  
with Plug

# ▶ 阀门材料表 Valve Material List



## ● NF系列安全阀材料 NF series safety valve material

| 序号<br>NO. | 零件名称<br>Part Name      | 阀门材料<br>Valve Materials |                                      |                                      |                                       |                                             |                                      |                                      |
|-----------|------------------------|-------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------------|--------------------------------------|--------------------------------------|
|           |                        | C                       | P                                    | R                                    | RL                                    | C6/C9                                       | M                                    | H                                    |
| 1         | 阀体<br>Body             | WCB                     | CF8                                  | CF8M                                 | CF3M                                  | WC6/WC9                                     | Monel                                | Hastl.C                              |
| 2         | 阀座<br>Nozzle           | 304                     | 304/316                              | 316                                  | 316L                                  | 304                                         | Monel                                | Hastl.C                              |
| 3         | 螺塞<br>Plug             | 碳钢 C.St.                | 304                                  | 304                                  | 304                                   | 304                                         | 316L/Monel                           | 316L/Hastl.C                         |
| 4         | 调节圈<br>Nozzle Ring     | CF8                     | CF8/CF8M                             | CF8M                                 | CF3M                                  | CF8                                         | Monel                                | Hastl.C                              |
| 5         | 定位螺钉<br>Set Screw      | 420                     | 304                                  | 316                                  | 316                                   | 304                                         | 316L/Monel                           | 316L/Hastl.C                         |
| 6         | 阀瓣<br>Disc             | 304                     | 304/316                              | 316                                  | 316L                                  | 17-4PH                                      | Monel                                | Hastl.C                              |
| 7         | 导向套<br>Guide           | 304                     | 304                                  | 316                                  | 316L                                  | 304                                         | Monel                                | Hastl.C                              |
| 8         | 反冲盘<br>Disc Holder     | 304                     | 304                                  | 316                                  | 316L                                  | 304                                         | Monel                                | Hastl.C                              |
| 9         | 弹簧<br>Spring           | 合金钢<br>Alloy St.        | 合金钢涂氟四<br>Alloy St.<br>Spread Teflon | 合金钢涂氟四<br>Alloy St.<br>Spread Teflon | 合金钢涂氟四<br>Alloy St. S<br>pread Teflon | 合金钢/30W4Cr2VA<br>Alloy St./<br>Tungsten St. | 合金钢涂氟四<br>Alloy St.<br>Spread Teflon | 合金钢涂氟四<br>Alloy St.<br>Spread Teflon |
| 10        | 弹簧座<br>Spring Washer   | 碳钢 C.St.                | 420                                  | 420                                  | 420                                   | 碳钢 C.St.                                    | 420/316L                             | 316L/420                             |
| 11        | 阀杆<br>Stem             | 420                     | 420                                  | 420                                  | 420                                   | 431                                         | 420/316L                             | 316L/420                             |
| 12        | 阀盖<br>Bonnet           | WCB                     | CF8                                  | CF8M                                 | CF3M                                  | WCB                                         | CF8M/Monel                           | Hastl.C/CF8M                         |
| 13        | 调整螺杆<br>Adjusting Bolt | 碳钢 C.St.                | 420                                  | 420                                  | 420                                   | 420                                         | 420                                  | 420                                  |
| 14        | 锁紧螺母<br>Adj.Bolt Nut   | 碳钢 C.St.                | 420                                  | 420                                  | 420                                   | 420                                         | 420                                  | 420                                  |
| 15        | 保护罩<br>Cap             | 碳钢 C.St.                | CF8                                  | CF8M                                 | CF3M                                  | 碳钢 C.St.                                    | CF8M/Monel                           | Hastl.C/CF8M                         |
| 16        | 螺母<br>Nut              | 钢 Steel                 | 304                                  | 304                                  | 304                                   | 钢 Steel                                     | 304                                  | 304                                  |
| 17        | 螺栓<br>Bolt             | 钢 Steel                 | 304                                  | 304                                  | 304                                   | 钢 Steel                                     | 304                                  | 304                                  |
| 18        | 波纹管<br>Bellows         | 316L                    | 316L                                 | 316L                                 | 316L                                  | 316L                                        | 316L/Hastl.C                         | Hastl.C/316L                         |
| 19        | 垫片<br>Gaskets          | 石棉板<br>Asbestos         | 氟四 PTFE                              | 氟四 PTFE                              | 氟四 PTFE                               | 氟四 PTFE                                     | 氟四 PTFE                              | 氟四 PTFE                              |
| 20        | 扳手<br>Lifting level    | 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.                             |
| 21        | 横杆<br>Rail             | 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.                             |
| 22        | 提升螺母<br>Upgrade 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.                             |

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

# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## D 通径、压力——温度界限 Size、Pressure-Temperature Limits

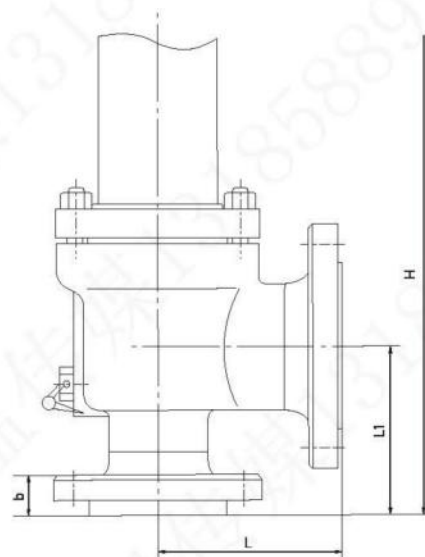
### ● 流通面积/喉径 Orifice Area/Diameter 0.710cm<sup>2</sup>/9.5mm

| 型号<br>Type                          |           | 通径(英寸)<br>Size(inch)                                       | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                     |
|-------------------------------------|-----------|------------------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|---------------------------------|---------------------------------------------------------------------|
|                                     |           | 进口温度 (°C)<br>Inlet Temperature                             |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                 |                                                                     |
|                                     |           | 进口<br>x<br>流道代号<br>x<br>出口<br><br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 1D2                                                        | 150                          | 150       | 1.96                                | 1.27         | 0.55      | 1.96                                       | 1.58 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                     | 03(300)   | 1D2                                                        | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 1.58 |                                 |                                                                     |
|                                     | 03a(300a) | 1D2                                                        | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.58 |                                 |                                                                     |
|                                     | 06(600)   | 1D2                                                        | 600                          | 150       | 10.20                               | 8.51         | 5.68      | 1.96                                       | 1.58 |                                 |                                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 09(900)   | 1 1/2D2                                                    | 900                          | 300       | 15.30                               | 12.72        | 8.51      | (4.13)                                     | 3.45 |                                 |                                                                     |
|                                     | 15(1500)  | 1 1/2D2                                                    | 1500                         | 300       | 25.54                               | 21.23        | 14.20     | (4.13)                                     | 3.45 |                                 |                                                                     |
|                                     | 25(2500)  | 1 1/2D3                                                    | 2500                         | 300       | 41.37                               | 35.40        | 23.65     | 5.10                                       | 3.45 |                                 |                                                                     |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。  
Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰<br>阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate<br>Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|--------------------------------------------------------------------|------------------------------------|-----|-----|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                    | 阀帽型式<br>Cap Type                   |     |     |                                                        |
|                                     |           | L                        | L1          | b                                                                  | A                                  | C   | D   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 115                      | 105         | 32                                                                 | 350                                | 380 | 380 | 15                                                     |
|                                     | 03(300)   | 115                      | 105         | 32                                                                 | 350                                | 380 | 380 | 15                                                     |
|                                     | 03a(300a) | 115                      | 105         | 32                                                                 | 350                                | 380 | 380 | 16                                                     |
|                                     | 06(600)   | 115                      | 105         | 31                                                                 | 350                                | 380 | 380 | 16                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 09(900)   | 140                      | 105         | 37                                                                 | 460                                | 480 | 500 | 28                                                     |
|                                     | 15(1500)  | 140                      | 105         | 37                                                                 | 460                                | 480 | 500 | 30                                                     |
|                                     | 25(2500)  | 178                      | 140         | 64                                                                 | 490                                | 520 | 540 | 32                                                     |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## E 通径、压力——温度界限 Size、Pressure-Temperature Limits

### ● 流道面积/喉径 Orifice Area/Diameter 1.265cm<sup>2</sup>/12.7mm

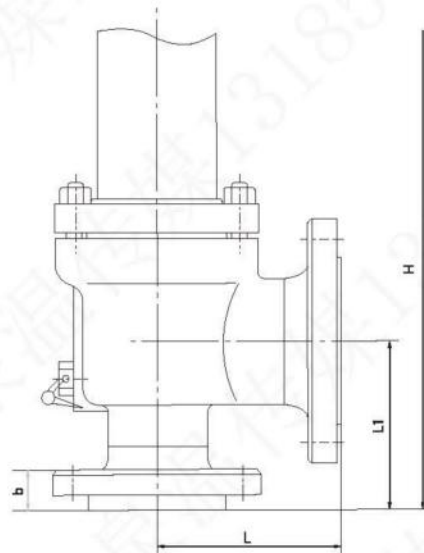
| 型号<br>Type                                                             |           | 通径(英寸)<br>Size(inch)           | ANSI<br>法兰磅级<br>Flange Class |     | 最高整定压力(MPa)<br>Maximum Set Pressure |              |                                                  | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |           | 材质Material                      |                                                                     |
|------------------------------------------------------------------------|-----------|--------------------------------|------------------------------|-----|-------------------------------------|--------------|--------------------------------------------------|--------------------------------------------|-----------|---------------------------------|---------------------------------------------------------------------|
|                                                                        |           | 进口温度 (°C)<br>Inlet Temperature |                              |     | 阀体<br>Body                          | 弹簧<br>Spring |                                                  |                                            |           |                                 |                                                                     |
|                                                                        |           |                                |                              |     |                                     |              | 进口 x<br>流道代号 x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                                   | 出口 Outlet | -29 ~ 38℃                       | 232℃                                                                |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 1E2                            | 150                          | 150 | 1.96                                | 1.27         | 0.55                                             | 1.96                                       | 1.58      | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                                                        | 03(300)   | 1E2                            | 300                          | 150 | (1.96)                              | (1.96)       | (1.96)                                           | 1.96                                       | 1.58      |                                 |                                                                     |
|                                                                        | 03a(300a) | 1E2                            | 300                          | 150 | 5.10                                | 4.24         | 2.82                                             | 1.96                                       | 1.58      |                                 |                                                                     |
|                                                                        | 06(600)   | 1E2                            | 600                          | 150 | 10.20                               | 8.51         | 5.68                                             | 1.96                                       | 1.58      |                                 |                                                                     |
|                                                                        | 09(900)   | 1 1/2E2                        | 900                          | 300 | 15.30                               | 12.72        | 8.51                                             | (4.13)                                     | 3.45      |                                 |                                                                     |
|                                                                        | 15(1500)  | 1 1/2E2                        | 1500                         | 300 | 25.54                               | 21.23        | 14.20                                            | (4.13)                                     | 3.45      |                                 |                                                                     |
|                                                                        | 25(2500)  | 1 1/2E3                        | 2500                         | 300 | 41.37                               | 35.40        | 23.65                                            | 5.10                                       | 3.45      |                                 |                                                                     |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。

Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center to Face |             | 法兰阀座总厚<br>Total Thickness of Flange and Nozzle | 近似高度<br>Approximate Height H |     |     | 近似重量<br>Approximate Weight Cap type B (kg) |
|-------------------------------------|-----------|-----------------------|-------------|------------------------------------------------|------------------------------|-----|-----|--------------------------------------------|
|                                     |           | 出口<br>Outlet          | 进口<br>Inlet |                                                | 阀帽型式<br>Cap Type             |     |     |                                            |
|                                     |           |                       |             | L                                              | L1                           | b   | A   |                                            |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 115                   | 105         | 32                                             | 350                          | 380 | 380 | 15                                         |
|                                     | 03(300)   | 115                   | 105         | 32                                             | 350                          | 380 | 380 | 15                                         |
|                                     | 03a(300a) | 115                   | 105         | 32                                             | 350                          | 380 | 380 | 16                                         |
|                                     | 06(600)   | 115                   | 105         | 31                                             | 350                          | 380 | 380 | 16                                         |
| NFB<br>(NFWA42C<br>NFWA44C)         | 09(900)   | 140                   | 105         | 37                                             | 460                          | 480 | 500 | 28                                         |
|                                     | 15(1500)  | 140                   | 105         | 37                                             | 460                          | 480 | 500 | 30                                         |
|                                     | 25(2500)  | 178                   | 140         | 64                                             | 490                          | 520 | 540 | 32                                         |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## F 通径、压力——温度界限 Size、Pressure-Temperature Limits

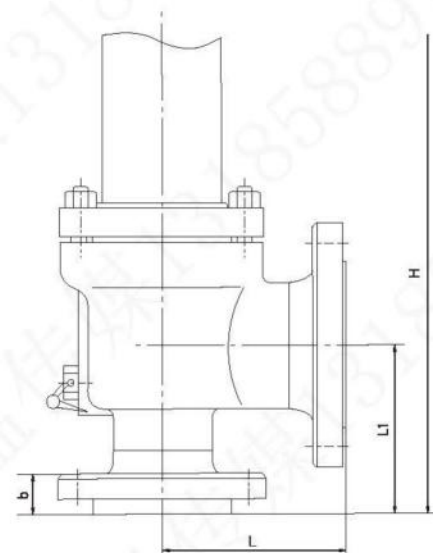
### ● 流道面积/喉径 Orifice Area/Diameter 1.981cm<sup>2</sup>/16mm

| 型号<br>Type                          |            | 通径(英寸)<br>Size(inch)                                   | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                     |
|-------------------------------------|------------|--------------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|---------------------------------|---------------------------------------------------------------------|
|                                     |            | 进口温度 (°C)<br>Inlet Temperature                         |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                 |                                                                     |
|                                     |            | 进口<br>x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)    | 1 1/2F2                                                | 150                          | 150       | 1.96                                | 1.27         | 0.55      | 1.96                                       | 1.58 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                     | 03(300)    | 1 1/2F2                                                | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 1.58 |                                 |                                                                     |
|                                     | 03a(300a)  | 1 1/2F2                                                | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.58 |                                 |                                                                     |
|                                     | 06(600)    | 1 1/2F2                                                | 600                          | 150       | 10.20                               | 8.51         | 5.68      | 1.96                                       | 1.58 |                                 |                                                                     |
|                                     | 09(900)    | 1 1/2F3                                                | 900                          | 300       | 15.30                               | 12.72        | 8.51      | 5.10                                       | 3.45 |                                 |                                                                     |
|                                     | 15(1500)   | 1 1/2F3                                                | 1500                         | 300       | 25.54                               | 21.23        | 14.20     | 5.10                                       | 3.45 |                                 |                                                                     |
|                                     | 25(2500)   | 1 1/2F3                                                | 2500                         | 300       | (34.47)                             | (34.47)      | 23.65     | 5.10                                       | 3.45 |                                 |                                                                     |
|                                     | 09*(900*)  | 1 1/2F2 1/2*                                           | 900                          | 300       | 15.30                               | 12.27        | 8.51      | 5.10                                       | 3.45 |                                 |                                                                     |
|                                     | 15*(1500*) | 1 1/2F2 1/2*                                           | 1500                         | 300       | 25.54                               | 21.23        | 14.20     | 5.10                                       | 3.45 |                                 |                                                                     |

备注: ①进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。②是1995年6月API Std 526 第四版之前的规格。  
Note: ① Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.  
② Is specifications before API standard 526 fourth edition, June 1995.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |            | 面心距<br>Center to Face |             | 法兰<br>阀座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|------------|-----------------------|-------------|----------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                     |            | 出口<br>Outlet          | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                     |            |                       |             |                                                                | L                               | L1  | b   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)    | 121                   | 124         | 32                                                             | 350                             | 380 | 380 | 22                                                     |
|                                     | 03(300)    | 121                   | 124         | 32                                                             | 350                             | 380 | 380 | 22                                                     |
|                                     | 03a(300a)  | 152                   | 124         | 44                                                             | 350                             | 380 | 380 | 24                                                     |
|                                     | 06(600)    | 152                   | 124         | 44                                                             | 350                             | 380 | 380 | 28                                                     |
|                                     | 09(900)    | 165                   | 124         | 51                                                             | 460                             | 480 | 500 | 32                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 15(1500)   | 165                   | 124         | 51                                                             | 460                             | 480 | 500 | 34                                                     |
|                                     | 25(2500)   | 178                   | 140         | 64                                                             | 490                             | 480 | 500 | 38                                                     |
|                                     | 09*(900*)  | 152                   | 124         | 51                                                             | 470                             | 500 | 520 | 32                                                     |
|                                     | 15*(1500*) | 152                   | 124         | 51                                                             | 420                             | 500 | 520 | 34                                                     |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## G 通径、压力——温度界限 Size、Pressure-Temperature Limits

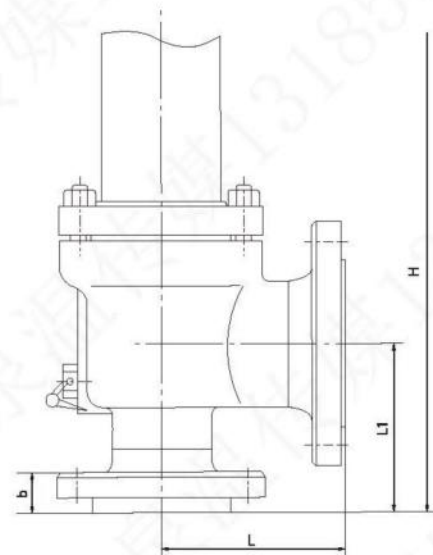
### ● 流道面积/喉径 Orifice Area/Diameter 3.245cm<sup>2</sup>/20.3mm

| 型号<br>Type                          |             | 通径(英寸)<br>Size(inch)                                   | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |         |        | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |                  | 材质Material    |                                             |
|-------------------------------------|-------------|--------------------------------------------------------|------------------------------|-----------|-------------------------------------|---------|--------|--------------------------------------------|------------------|---------------|---------------------------------------------|
|                                     |             | 进口温度 (°C)<br>Inlet Temperature                         |                              |           |                                     |         |        |                                            |                  |               |                                             |
|                                     |             | 进口<br>x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet | -29 ~ 38℃                           | 232℃    | 427℃   | NFO<br>(NFA42C)                            | NFB<br>(NFWA42C) | 阀体<br>Body    | 弹簧<br>Spring                                |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)     | 1 1/2G3                                                | 150                          | 150       | 1.96                                | 1.27    | 0.55   | 1.96                                       | 1.58             | 碳钢<br>C.St    | 合金钢<br>Alloy St.                            |
|                                     | 03(300)     | 1 1/2G3                                                | 300                          | 150       | (1.96)                              | (1.96)  | (1.96) | 1.96                                       | 1.58             |               |                                             |
|                                     | 03a(300a)   | 1 1/2G3                                                | 300                          | 150       | 5.10                                | 4.24    | 2.82   | 1.96                                       | 1.58             |               |                                             |
|                                     | 06(600)     | 1 1/2G3                                                | 600                          | 150       | 10.20                               | 8.51    | 5.68   | 1.96                                       | 1.58             |               |                                             |
|                                     | 09(900)     | 1 1/2G3                                                | 900                          | 300       | 15.30                               | 12.72   | 8.51   | 5.10                                       | 3.24             |               |                                             |
|                                     | 15(1500)    | 2G3                                                    | 1500                         | 300       | 25.54                               | 21.23   | 14.20  | 5.10                                       | 3.24             |               |                                             |
| NFB<br>(NFWA42C<br>NFWA44C)         | 25(2500)    | 2G3                                                    | 2500                         | 300       | (25.54)                             | (25.54) | 23.65  | 5.10                                       | 3.24             | 不锈钢<br>St.St. | 合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                     | 01*(150*)   | 1 1/2G2 1/2*                                           | 1850                         | 150       | 1.96                                | 1.27    | 0.55   | 1.96                                       | 1.58             |               |                                             |
|                                     | 03*(300*)   | 1 1/2G2 1/2*                                           | 300                          | 150       | 1.96                                | 1.96    | 1.96   | 1.96                                       | 1.58             |               |                                             |
|                                     | 03a*(300a*) | 1 1/2G2 1/2*                                           | 300                          | 150       | 5.10                                | 4.24    | 2.82   | 1.96                                       | 1.58             |               |                                             |
|                                     | 06*(600*)   | 1 1/2G2 1/2*                                           | 600                          | 150       | 10.20                               | 8.51    | 5.68   | 1.96                                       | 1.58             |               |                                             |
|                                     | 09(900)     | 1 1/2G2 1/2*                                           | 900                          | 300       | 15.30                               | 12.72   | 8.51   | 5.10                                       | 3.24             |               |                                             |

备注: ①进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。②是1995年6月API Std 526 第四版之前的规格。  
Note: ① Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.  
② Is specifications before API standard 526 fourth edition, June 1995.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |             | 面心距<br>Center to Face |             | 法兰阀座总厚<br>Total Thickness of Flange and Nozzle | 近似高度<br>Approximate Height H |     |     | 近似重量<br>Approximate Weight Cap type B (kg) |
|-------------------------------------|-------------|-----------------------|-------------|------------------------------------------------|------------------------------|-----|-----|--------------------------------------------|
|                                     |             | 出口<br>Outlet          | 进口<br>Inlet |                                                | 阀帽型式<br>Cap Type             |     |     |                                            |
|                                     |             |                       |             |                                                |                              |     |     |                                            |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)     | 121                   | 124         | 32                                             | 460                          | 480 | 500 | 24                                         |
|                                     | 03(300)     | 121                   | 124         | 32                                             | 460                          | 480 | 500 | 24                                         |
|                                     | 03a(300a)   | 152                   | 124         | 32                                             | 460                          | 480 | 500 | 30                                         |
|                                     | 06(600)     | 152                   | 124         | 43                                             | 460                          | 480 | 500 | 30                                         |
|                                     | 09(900)     | 165                   | 124         | 43                                             | 460                          | 480 | 500 | 34                                         |
|                                     | 15(1500)    | 171                   | 156         | 70                                             | 710                          | 740 | 755 | 58                                         |
| NFB<br>(NFWA42C<br>NFWA44C)         | 25(2500)    | 171                   | 156         | 70                                             | 710                          | 740 | 755 | 62                                         |
|                                     | 01*(150*)   | 121                   | 124         | 32                                             | 470                          | 490 | 520 | 28                                         |
|                                     | 03*(300*)   | 121                   | 124         | 32                                             | 470                          | 490 | 520 | 28                                         |
|                                     | 03a*(300a*) | 152                   | 124         | 32                                             | 470                          | 490 | 520 | 30                                         |
|                                     | 06*(600*)   | 152                   | 124         | 43                                             | 480                          | 500 | 530 | 34                                         |
|                                     | 09*(900*)   | 152                   | 124         | 43                                             | 480                          | 500 | 530 | 34                                         |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## H 通径、压力——温度界限 Size、Pressure-Temperature Limits

### ● 流道面积/喉径 Orifice Area/Diameter 5.065cm<sup>2</sup>/25.4mm

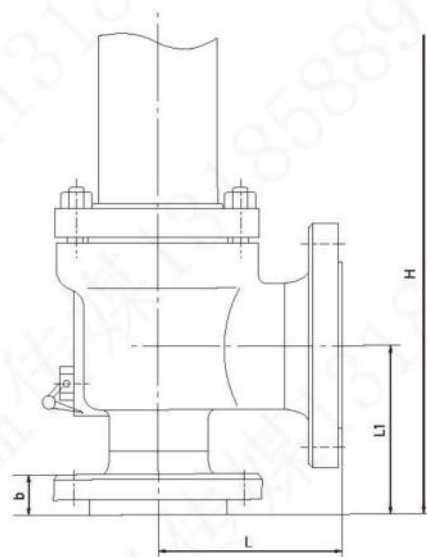
| 型号<br>Type                          |           | 通径(英寸)<br>Size(inch)                                | ANSI<br>法兰磅级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material      |                                             |
|-------------------------------------|-----------|-----------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|-----------------|---------------------------------------------|
|                                     |           | 进口温度 (°C)<br>Inlet Temperature                      |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                 |                                             |
|                                     |           | 进口 x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C) | NFB<br>(NFWA42C)                            |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 1 1/2H3                                             | 150                          | 150       | 1.96                                | (1.27)       | 0.55      | 1.96                                       | 1.58 | 碳钢<br>C.St      | 合金钢<br>Alloy St.                            |
|                                     | 03(300)   | 1 1/2H3                                             | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 1.58 |                 |                                             |
|                                     | 03a(300a) | 2H3                                                 | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.58 |                 |                                             |
| NFB<br>(NFWA42C<br>NFWA44C)         | 06(600)   | 2H3                                                 | 600                          | 150       | 10.20                               | 8.51         | 5.68      | 1.96                                       | 1.58 | 不锈钢<br>St.St.   | 合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                     | 09(900)   | 2H3                                                 | 900                          | 150       | 15.30                               | 12.72        | 8.51      | 1.96                                       | 1.58 |                 |                                             |
|                                     | 15(1500)  | 2H3                                                 | 1500                         | 300       | (18.96)                             | (18.96)      | 14.20     | 5.10                                       | 2.86 |                 |                                             |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。

Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|----------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                     |           |                          |             | L                                                              | L1                              | b   | A   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 124                      | 130         | 38                                                             | 420                             | 430 | 450 | 25                                                     |
|                                     | 03(300)   | 124                      | 130         | 38                                                             | 420                             | 430 | 450 | 25                                                     |
|                                     | 03a(300a) | 124                      | 130         | 26                                                             | 510                             | 520 | 580 | 30                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 06(600)   | 162                      | 154         | 45                                                             | 510                             | 520 | 580 | 34                                                     |
|                                     | 09(900)   | 162                      | 154         | 53                                                             | 540                             | 560 | 580 | 46                                                     |
|                                     | 15(1500)  | 162                      | 154         | 53                                                             | 540                             | 560 | 580 | 50                                                     |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## J 口径、压力——温度界限 Size、Pressure-Temperature Limits

### ● 流道面积/喉径 Orifice Area/Diameter 8.303cm<sup>2</sup>/32.5mm

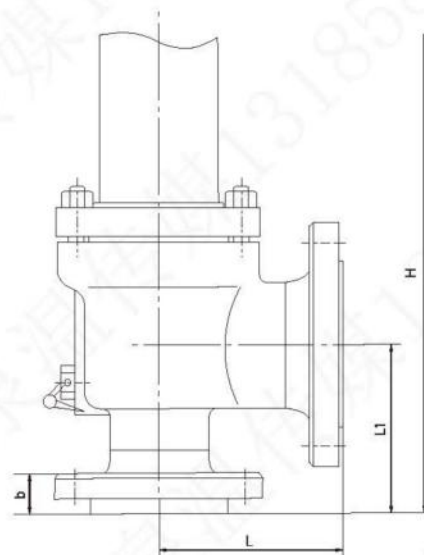
| 型号<br>Type                          |           | 通径(英寸)<br>Size(inch)                                       | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                     |                                                                     |
|-------------------------------------|-----------|------------------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|--------------------------------|---------------------------------------------------------------------|
|                                     |           | 进口温度 (°C)<br>Inlet Temperature                             |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                |                                                                     |
|                                     |           | 进口<br>x<br>流道代号<br>x<br>出口<br><br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 2J3                                                        | 150                          | 150       | 1.96                                | 1.27         | 0.55      | 1.96                                       | 1.58 | 碳钢<br>C.St<br><br>不锈钢<br>St.St | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                     | 03(300)   | 2J3                                                        | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 1.58 |                                |                                                                     |
|                                     | 03a(300a) | 3J4                                                        | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.58 |                                |                                                                     |
|                                     | 06(600)   | 3J4                                                        | 600                          | 150       | 10.20                               | 8.51         | 5.68      | 1.96                                       | 1.58 |                                |                                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 09(900)   | 3J4                                                        | 900                          | 150       | 15.30                               | 12.72        | 8.51      | 1.96                                       | 1.58 |                                |                                                                     |
|                                     | 15(1500)  | 3J4                                                        | 1500                         | 300       | (18.61)                             | (18.61)      | 14.20     | 4.13                                       | 1.58 |                                |                                                                     |
|                                     | 03*(300*) | 2 1/2J4*                                                   | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.58 |                                |                                                                     |
|                                     | 06*(600*) | 2 1/2J4*                                                   | 600                          | 150       | 10.2                                | 8.51         | 5.68      | 1.96                                       | 1.58 |                                |                                                                     |

备注: ①进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。②是1995年6月API Std 526 第四版之前的规格。

Note: ① Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.  
② Is specifications before API standard 526 fourth edition, June 1995.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |             | 面心距<br>Center to Face |             | 法兰<br>阀座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-------------|-----------------------|-------------|----------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                     |             | 出口<br>Outlet          | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                     |             | L                     | L1          | b                                                              | A                               | C   | D   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)     | 124                   | 136         | 31                                                             | 460                             | 480 | 500 | 30                                                     |
|                                     | 03(300)     | 124                   | 136         | 34                                                             | 460                             | 480 | 500 | 30                                                     |
|                                     | 03a(300a)   | 181                   | 184         | 38                                                             | 510                             | 520 | 580 | 42                                                     |
|                                     | 06(600)     | 181                   | 184         | 47                                                             | 650                             | 680 | 695 | 56                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 09(900)     | 181                   | 184         | 54                                                             | 650                             | 680 | 695 | 68                                                     |
|                                     | 15(1500)    | 181                   | 184         | 54                                                             | 650                             | 680 | 695 | 70                                                     |
|                                     | 03a*(300a*) | 143                   | 136         | 35                                                             | 510                             | 520 | 580 | 48                                                     |
|                                     | 06*(600*)   | 171                   | 156         | 40                                                             | 710                             | 740 | 755 | 62                                                     |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## K 通径、压力——温度界限 Size、Pressure-Temperature Limits

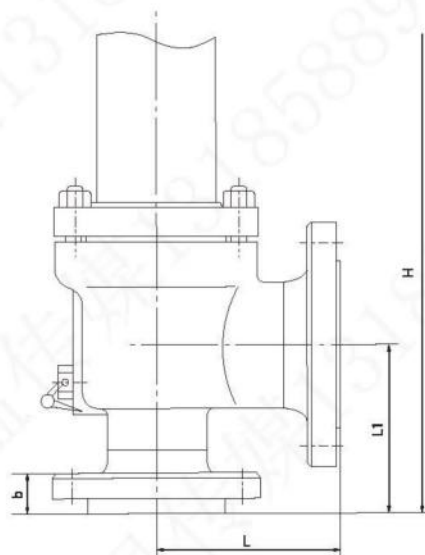
### ● 流道面积/喉径 Orifice Area/Diameter 11.858cm<sup>2</sup>/38.9mm

| 型号<br>Type                          |           | 通径(英寸)<br>Size(inch)                                | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                     |
|-------------------------------------|-----------|-----------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|---------------------------------|---------------------------------------------------------------------|
|                                     |           | 进口温度 (°C)<br>Inlet Temperature                      |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                 |                                                                     |
|                                     |           | 进口 x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 3K4                                                 | 150                          | 150       | 1.96                                | (1.27)       | 0.55      | 1.96                                       | 1.03 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                     | 03(300)   | 3K4                                                 | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 1.03 |                                 |                                                                     |
|                                     | 03a(300a) | 3K4                                                 | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.03 |                                 |                                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 06(600)   | 3K4                                                 | 600                          | 150       | 10.20                               | 8.51         | 5.68      | 1.96                                       | 1.38 |                                 |                                                                     |
|                                     | 09(900)   | 3K6                                                 | 900                          | 150       | 15.30                               | 12.72        | 8.51      | 1.96                                       | 1.38 |                                 |                                                                     |
|                                     | 15(1500)  | 3K6                                                 | 1500                         | 300       | (15.30)                             | (15.30)      | 14.20     | (4.13)                                     | 1.38 |                                 |                                                                     |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。  
Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

## ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰<br>阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|--------------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                    | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                     |           |                          |             | L                                                                  | L1                              | b   | A   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 162                      | 156         | 34                                                                 | 510                             | 520 | 580 | 42                                                     |
|                                     | 03(300)   | 162                      | 156         | 38                                                                 | 510                             | 520 | 580 | 42                                                     |
|                                     | 03a(300a) | 162                      | 156         | 38                                                                 | 510                             | 520 | 580 | 42                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 06(600)   | 181                      | 184         | 53                                                                 | 650                             | 680 | 695 | 88                                                     |
|                                     | 09(900)   | 216                      | 198         | 52                                                                 | 685                             | 710 | 725 | 89                                                     |
|                                     | 15(1500)  | 216                      | 197         | 62                                                                 | 685                             | 710 | 725 | 90                                                     |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## L 口径、压力——温度界限 Size、Pressure-Temperature Limits

### ● 流通面积/喉径 Orifice Area/Diameter 18.40cm<sup>2</sup>/48.5mm

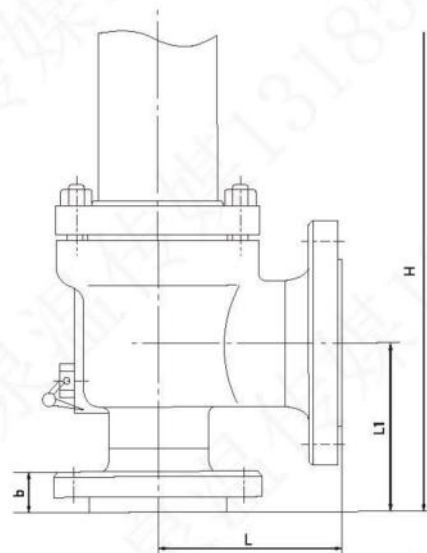
| 型号<br>Type                          | 口径(英寸)<br>Size(inch) | ANSI<br>法兰等级<br>Flange Class | 最高整定压力(MPa)<br>Maximum Set Pressure |           |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |                  | 材质Material |              |
|-------------------------------------|----------------------|------------------------------|-------------------------------------|-----------|-----------|--------------------------------------------|------------------|------------|--------------|
|                                     |                      |                              | 进口温度 (°C)<br>Inlet Temperature      |           |           | NFO<br>(NFA42C)                            | NFB<br>(NFWA42C) | 阀体<br>Body | 弹簧<br>Spring |
|                                     |                      |                              | 进口 Inlet                            | 出口 Outlet | -29 ~ 38℃ | 232℃                                       | 427℃             |            |              |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)              | 3L4                          | 150                                 | 150       | 1.96      | 1.27                                       | 0.55             | 1.96       | 0.69         |
|                                     | 03(300)              | 3L4                          | 300                                 | 150       | (1.96)    | (1.96)                                     | (1.96)           | 1.96       | 0.69         |
|                                     | 03a(300a)            | 4L6                          | 300                                 | 150       | 5.10      | 4.24                                       | 2.82             | 1.96       | 1.17         |
|                                     | 06(600)              | 4L6                          | 600                                 | 150       | (6.89)    | (6.89)                                     | 5.68             | 1.96       | 1.17         |
|                                     | 09(900)              | 4L6                          | 900                                 | 150       | (10.34)   | (10.34)                                    | 8.51             | 1.96       | 1.17         |
|                                     | 15(1500)             | 4L6                          | 1500                                | 150       | (10.34)   | (10.34)                                    | (10.34)          | 1.96       | 1.17         |
| NFB<br>(NFWA42C<br>NFWA44C)         | 01(150)              | 3L4                          | 150                                 | 150       | 1.96      | 1.27                                       | 0.55             | 1.96       | 0.69         |
|                                     | 03(300)              | 3L4                          | 300                                 | 150       | (1.96)    | (1.96)                                     | (1.96)           | 1.96       | 0.69         |
|                                     | 03a(300a)            | 4L6                          | 300                                 | 150       | 5.10      | 4.24                                       | 2.82             | 1.96       | 1.17         |
|                                     | 06(600)              | 4L6                          | 600                                 | 150       | (6.89)    | (6.89)                                     | 5.68             | 1.96       | 1.17         |
|                                     | 09(900)              | 4L6                          | 900                                 | 150       | (10.34)   | (10.34)                                    | 8.51             | 1.96       | 1.17         |
|                                     | 15(1500)             | 4L6                          | 1500                                | 150       | (10.34)   | (10.34)                                    | (10.34)          | 1.96       | 1.17         |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。

Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

## ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center to Face |             | 法兰<br>阀座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|-----------------------|-------------|----------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet          | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                     |           |                       |             |                                                                | L                               | L1  | b   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 165                   | 156         | 34                                                             | 510                             | 520 | 580 | 48                                                     |
|                                     | 03(300)   | 165                   | 156         | 38                                                             | 510                             | 520 | 580 | 48                                                     |
|                                     | 03a(300a) | 181                   | 179         | 40                                                             | 650                             | 680 | 695 | 56                                                     |
| NFB<br>(NFWA42C<br>NFWA44C)         | 06(600)   | 203                   | 179         | 62                                                             | 650                             | 680 | 695 | 110                                                    |
|                                     | 09(900)   | 222                   | 197         | 66                                                             | 670                             | 700 | 715 | 124                                                    |
|                                     | 15(1500)  | 222                   | 197         | 75                                                             | 670                             | 700 | 715 | 130                                                    |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## M 通径、压力——温度界限 Size、Pressure-Temperature Limits

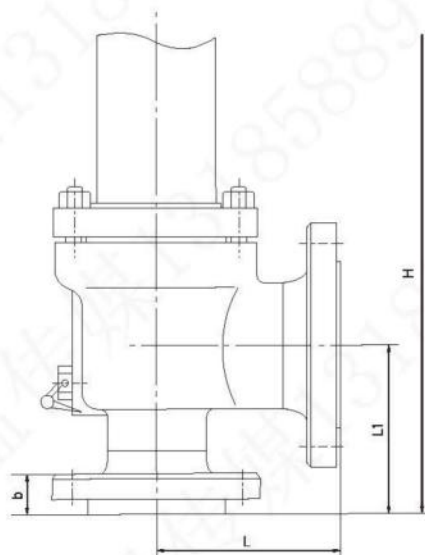
### ● 流通面积/喉径 Orifice Area/Diameter 23.22cm<sup>2</sup>/54.5mm

| 型号<br>Type                                                             |           | 通径(英寸)<br>Size(inch)                                | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                     |
|------------------------------------------------------------------------|-----------|-----------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|---------------------------------|---------------------------------------------------------------------|
|                                                                        |           | 进口温度 (°C)<br>Inlet Temperature                      |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                 |                                                                     |
|                                                                        |           | 进口 x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 4M6                                                 | 150                          | 150       | 1.96                                | 1.27         | 0.55      | 1.96                                       | 0.55 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                                                        | 03(300)   | 4M6                                                 | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 0.55 |                                 |                                                                     |
|                                                                        | 03a(300a) | 4M6                                                 | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.10 |                                 |                                                                     |
|                                                                        | 06(600)   | 4M6                                                 | 600                          | 150       | (7.58)                              | (7.58)       | 5.68      | 1.96                                       | 1.10 |                                 |                                                                     |
|                                                                        | 09(900)   | 4M6                                                 | 900                          | 150       | (7.58)                              | (7.58)       | 7.58      | 1.96                                       | 1.10 |                                 |                                                                     |

备注: 进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。  
Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰<br>阀座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|----------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                     |           |                          |             |                                                                | L                               | L1  | b   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 184                      | 178         | 33                                                             | 755                             | 790 | 805 | 90                                                     |
|                                     | 03(300)   | 184                      | 178         | 39                                                             | 755                             | 790 | 805 | 92                                                     |
|                                     | 03a(300a) | 184                      | 178         | 39                                                             | 755                             | 790 | 805 | 106                                                    |
| NFB<br>(NFWA42C<br>NFWA44C)         | 06(600)   | 203                      | 178         | 61                                                             | 755                             | 790 | 805 | 116                                                    |
|                                     | 09(900)   | 222                      | 197         | 66                                                             | 755                             | 790 | 805 | 170                                                    |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## N 口径、压力——温度界限 Size、Pressure-Temperature Limits

### ● 流通面积/喉径 Orifice Area/Diameter 28.00cm<sup>2</sup>/59.7mm

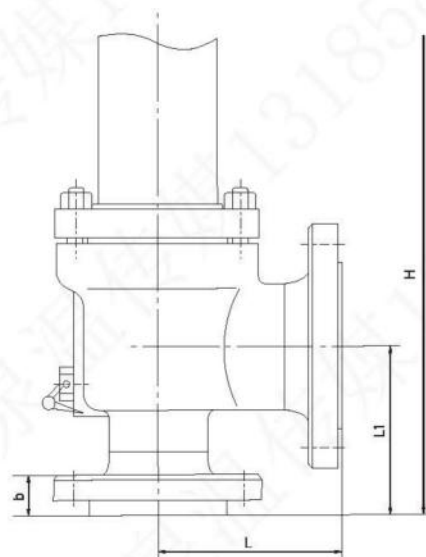
| 型号<br>Type                                                             |           | 通径(英寸)<br>Size(inch)                             | ANSI<br>法兰磅级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                     |
|------------------------------------------------------------------------|-----------|--------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|---------------------------------|---------------------------------------------------------------------|
|                                                                        |           | 进口温度 (°C)<br>Inlet Temperature                   |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                 |                                                                     |
|                                                                        |           | 进口 x<br>流道代号 x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29 ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 4N6                                              | 150                          | 150       | 1.96                                | 1.27         | 0.55      | 1.96                                       | 0.55 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                                                        | 03(300)   | 4N6                                              | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)    | 1.96                                       | 0.55 |                                 |                                                                     |
|                                                                        | 03a(300a) | 4N6                                              | 300                          | 150       | 5.10                                | 4.24         | 2.82      | 1.96                                       | 1.10 |                                 |                                                                     |
|                                                                        | 06(600)   | 4N6                                              | 600                          | 150       | (6.89)                              | (6.89)       | 5.68      | 1.96                                       | 1.10 |                                 |                                                                     |
|                                                                        | 09(900)   | 4N6                                              | 900                          | 150       | (6.89)                              | (6.89)       | (6.89)    | 1.96                                       | 1.10 |                                 |                                                                     |

备注: 进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。

Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                                                             |           | 面心距<br>Center<br>to Face |             | 法兰<br>阀座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|------------------------------------------------------------------------|-----------|--------------------------|-------------|----------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                                                        |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                                                        |           |                          |             | L                                                              | L1                              | b   | A   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 210                      | 197         | 36                                                             | 755                             | 810 | 825 | 96                                                     |
|                                                                        | 03(300)   | 210                      | 197         | 42                                                             | 755                             | 810 | 825 | 98                                                     |
|                                                                        | 03a(300a) | 210                      | 197         | 42                                                             | 755                             | 810 | 825 | 105                                                    |
|                                                                        | 06(600)   | 222                      | 197         | 66                                                             | 755                             | 810 | 825 | 140                                                    |
|                                                                        | 09(900)   | 222                      | 197         | 66                                                             | 755                             | 810 | 825 | 180                                                    |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## P 通径、压力——温度界限 Size、Pressure-Temperature Limits

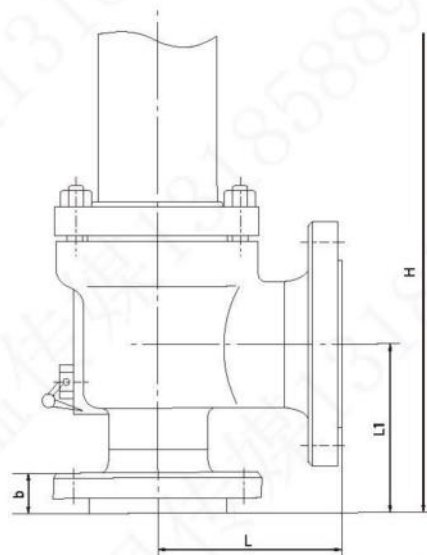
### ● 流道面积/喉径 Orifice Area/Diameter 46.161cm<sup>2</sup>/72.4mm

| 型号<br>Type                                                             |           | 通径(英寸)<br>Size(inch)                                | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |            | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                     |
|------------------------------------------------------------------------|-----------|-----------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|------------|--------------------------------------------|------|---------------------------------|---------------------------------------------------------------------|
|                                                                        |           | 进口温度 (°C)<br>Inlet Temperature                      |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |            |                                            |      |                                 |                                                                     |
|                                                                        |           | 进口 x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29℃ ~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 4P6                                                 | 150                          | 150       | 1.96                                | 1.27         | 0.55       | 1.96                                       | 0.55 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |
|                                                                        | 03(300)   | 4P6                                                 | 300                          | 150       | (1.96)                              | (1.96)       | (1.96)     | 1.96                                       | 0.55 |                                 |                                                                     |
|                                                                        | 03a(300a) | 4P6                                                 | 300                          | 150       | (3.62)                              | (3.62)       | 2.82       | 1.96                                       | 1.03 |                                 |                                                                     |
|                                                                        | 06(600)   | 4P6                                                 | 600                          | 150       | (6.89)                              | (6.89)       | 5.68       | 1.96                                       | 1.03 |                                 |                                                                     |
|                                                                        | 09(900)   | 4P6                                                 | 900                          | 150       | (6.89)                              | (6.89)       | (6.89)     | 1.96                                       | 1.03 |                                 |                                                                     |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。  
Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                                                             |           | 面心距<br>Center<br>to Face |             | 法兰<br>阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |     |     | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|------------------------------------------------------------------------|-----------|--------------------------|-------------|--------------------------------------------------------------------|---------------------------------|-----|-----|--------------------------------------------------------|
|                                                                        |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                    | 阀帽型式<br>Cap Type                |     |     |                                                        |
|                                                                        |           | L                        | L1          | b                                                                  | A                               | C   | D   |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 229                      | 181         | 36                                                                 | 800                             | 835 | 850 | 115                                                    |
|                                                                        | 03(300)   | 229                      | 181         | 42                                                                 | 800                             | 835 | 850 | 115                                                    |
|                                                                        | 03a(300a) | 254                      | 225         | 42                                                                 | 825                             | 915 | 935 | 140                                                    |
|                                                                        | 06(600)   | 254                      | 225         | 65                                                                 | 825                             | 915 | 935 | 190                                                    |
|                                                                        | 09(900)   | 254                      | 225         | 65                                                                 | 825                             | 915 | 935 | 220                                                    |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



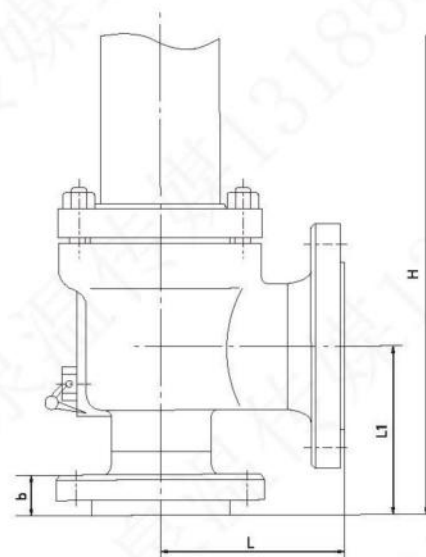
## Q 通径、压力——温度界限 Size、Pressure-Temperature Limits 流道面积/喉径 Orifice Area/Diameter 71.290cm<sup>2</sup>/95.3mm

| 型号<br>Type                          |                             | 通径(英寸)<br>Size(inch)                                   | ANSI<br>法兰磅级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |            | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |        | 材质Material                      |                                                                     |      |
|-------------------------------------|-----------------------------|--------------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|------------|--------------------------------------------|--------|---------------------------------|---------------------------------------------------------------------|------|
|                                     |                             | 进口温度 (°C)<br>Inlet Temperature                         |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |            |                                            |        |                                 |                                                                     |      |
|                                     |                             | 进口<br>x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29℃ ~ 38℃ | 232℃                                       | 427℃   | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |      |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)                     | 6Q8                                                    | 150                          | 150       | (1.13)                              | (1.13)       | 0.55       | (0.79)                                     | 0.48   | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |      |
|                                     | 03(300)                     | 6Q8                                                    | 300                          | 150       | (1.13)                              | (1.13)       | (0.68)     | (0.79)                                     | 0.48   |                                 |                                                                     |      |
|                                     | NFB<br>(NFWA42C<br>NFWA44C) | 03a(300a)                                              | 6Q8                          | 300       | 150                                 | (2.06)       | (2.06)     | (1.58)                                     | (0.79) |                                 |                                                                     | 0.79 |
|                                     | 06(600)                     | 6Q8                                                    | 600                          | 150       | (4.13)                              | (4.13)       | (2.06)     | (0.79)                                     | 0.79   |                                 |                                                                     |      |

备注: 进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。  
Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

## ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |      |      | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|----------------------------------------------------------------|---------------------------------|------|------|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |      |      |                                                        |
|                                     |           |                          |             |                                                                | L                               | L1   | b    |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 241                      | 240         | 40                                                             | 980                             | 1020 | 1035 | 180                                                    |
|                                     | 03(300)   | 241                      | 240         | 51                                                             | 980                             | 1020 | 1035 | 185                                                    |
| NFB<br>(NFWA42C<br>NFWA44C)         | 03a(300a) | 241                      | 240         | 51                                                             | 980                             | 1020 | 1035 | 205                                                    |
|                                     | 06(600)   | 241                      | 240         | 66                                                             | 980                             | 1020 | 1035 | 220                                                    |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## R 通径、压力——温度界限 Size、Pressure-Temperature Limits

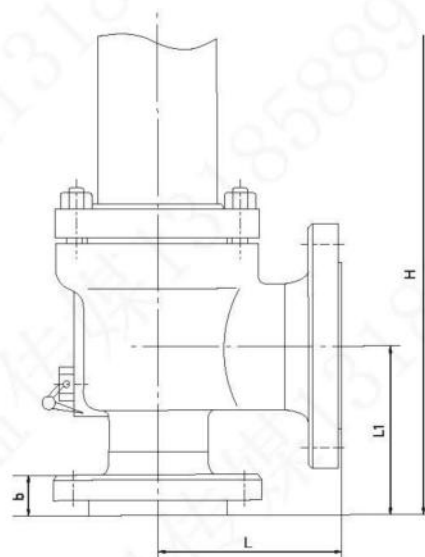
### ● 流道面积/喉径 Orifice Area/Diameter 103.22cm<sup>2</sup>/114.6mm

| 型号<br>Type                                                             |           | 通径(英寸)<br>Size(inch)                                   | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |           | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |      | 材质Material                      |                                                                  |
|------------------------------------------------------------------------|-----------|--------------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|-----------|--------------------------------------------|------|---------------------------------|------------------------------------------------------------------|
|                                                                        |           | 进口温度 (°C)<br>Inlet Temperature                         |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |           |                                            |      |                                 |                                                                  |
|                                                                        |           | 进口<br>x<br>流道代号<br>x<br>出口<br>Inlet x Orifice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29℃~ 38℃ | 232℃                                       | 427℃ | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                 |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C)<br><br>NFB<br>(NFWA42C<br>NFWA44C) | 01(150)   | 6R8                                                    | 150                          | 150       | (0.68)                              | (0.68)       | 0.55      | (0.41)                                     | 0.41 | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread Teflon |
|                                                                        | 03(300)   | 6R8                                                    | 300                          | 150       | (0.68)                              | (0.68)       | (0.68)    | (0.41)                                     | 0.41 |                                 |                                                                  |
|                                                                        | 03a(300a) | 6R10                                                   | 300                          | 150       | (1.58)                              | (1.58)       | (1.58)    | (0.68)                                     | 0.68 |                                 |                                                                  |
|                                                                        | 06(600)   | 6R10                                                   | 600                          | 150       | (2.06)                              | (2.06)       | (2.06)    | (0.68)                                     | 0.68 |                                 |                                                                  |

备注: 进出口法兰压力限制, 除了括号里的, 可以按温度符合ASME B16.34。  
Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰<br>阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |      |      | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|--------------------------------------------------------------------|---------------------------------|------|------|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                    | 阀帽型式<br>Cap Type                |      |      |                                                        |
|                                     |           |                          |             |                                                                    | L                               | L1   | b    |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 241                      | 240         | 40                                                                 | 980                             | 1020 | 1035 | 205                                                    |
|                                     | 03(300)   | 241                      | 240         | 51                                                                 | 980                             | 1020 | 1035 | 220                                                    |
| NFB<br>(NFWA42C<br>NFWA44C)         | 03a(300a) | 267                      | 240         | 51                                                                 | 1020                            | 1060 | 1075 | 260                                                    |
|                                     | 06(600)   | 267                      | 240         | 65                                                                 | 1020                            | 1060 | 1075 | 330                                                    |



# ► NF系列安全阀标准参数 NF Series Safety Valves Standard Parameter



## T 通径、压力——温度界限 Size、Pressure-Temperature Limits

### ● 流道面积/喉径 Orifice Area/Diameter 167.742cm<sup>2</sup>/146mm

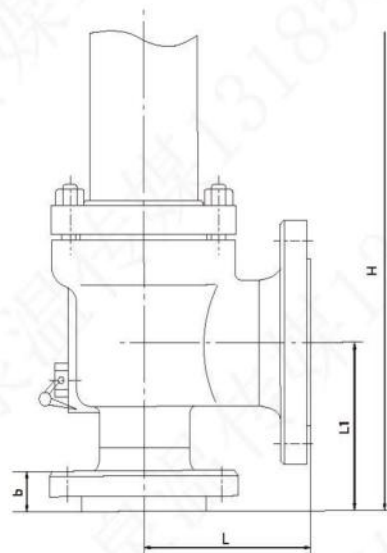
| 型号<br>Type                          |                             | 通径(英寸)<br>Size(inch)                                        | ANSI<br>法兰等级<br>Flange Class |           | 最高整定压力(MPa)<br>Maximum Set Pressure |              |            | 38℃最高背压<br>Back Pressure<br>Limit 38℃(MPa) |        | 材质Material                      |                                                                     |      |
|-------------------------------------|-----------------------------|-------------------------------------------------------------|------------------------------|-----------|-------------------------------------|--------------|------------|--------------------------------------------|--------|---------------------------------|---------------------------------------------------------------------|------|
|                                     |                             | 进口温度 (℃)<br>Inlet Temperature                               |                              |           | 阀体<br>Body                          | 弹簧<br>Spring |            |                                            |        |                                 |                                                                     |      |
|                                     |                             | 进口<br>x<br>流道代号<br>x<br>出口<br>Inlet x Orif-<br>ice x Outlet | 进口 Inlet                     | 出口 Outlet |                                     |              | -29℃ ~ 38℃ | 232℃                                       | 427℃   | NFO<br>(NFA42C)                 | NFB<br>(NFWA42C)                                                    |      |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)                     | 8T10                                                        | 150                          | 150       | (0.44)                              | (0.44)       | (0.44)     | (0.20)                                     | 0.20   | 碳钢<br>C.St<br><br>不锈钢<br>St.St. | 合金钢<br>Alloy St.<br><br>合金钢<br>涂四氟<br>Alloy St.<br>Spread<br>Teflon |      |
|                                     | 03(300)                     | 8T10                                                        | 300                          | 150       | (0.44)                              | (0.44)       | (0.44)     | (0.20)                                     | 0.20   |                                 |                                                                     |      |
|                                     | NFB<br>(NFWA42C<br>NFWA44C) | 03a(300a)                                                   | 8T10                         | 300       | 150                                 | (0.82)       | (0.82)     | (0.82)                                     | (0.41) |                                 |                                                                     | 0.41 |
|                                     | 036(3006)                   | 8T10                                                        | 300                          | 150       | (2.06)                              | (2.06)       | (2.06)     | (0.68)                                     | 0.68   |                                 |                                                                     |      |

备注: 进出口法兰压力限制, 除了括号里边的, 可以按温度符合ASME B16.34。

Note: Inlet and outlet flange pressure limits according to the temperature correspond to the values in ASME B 16.34 unless enclosed in parentheses.

### ● 尺寸 Dimensions (mm)

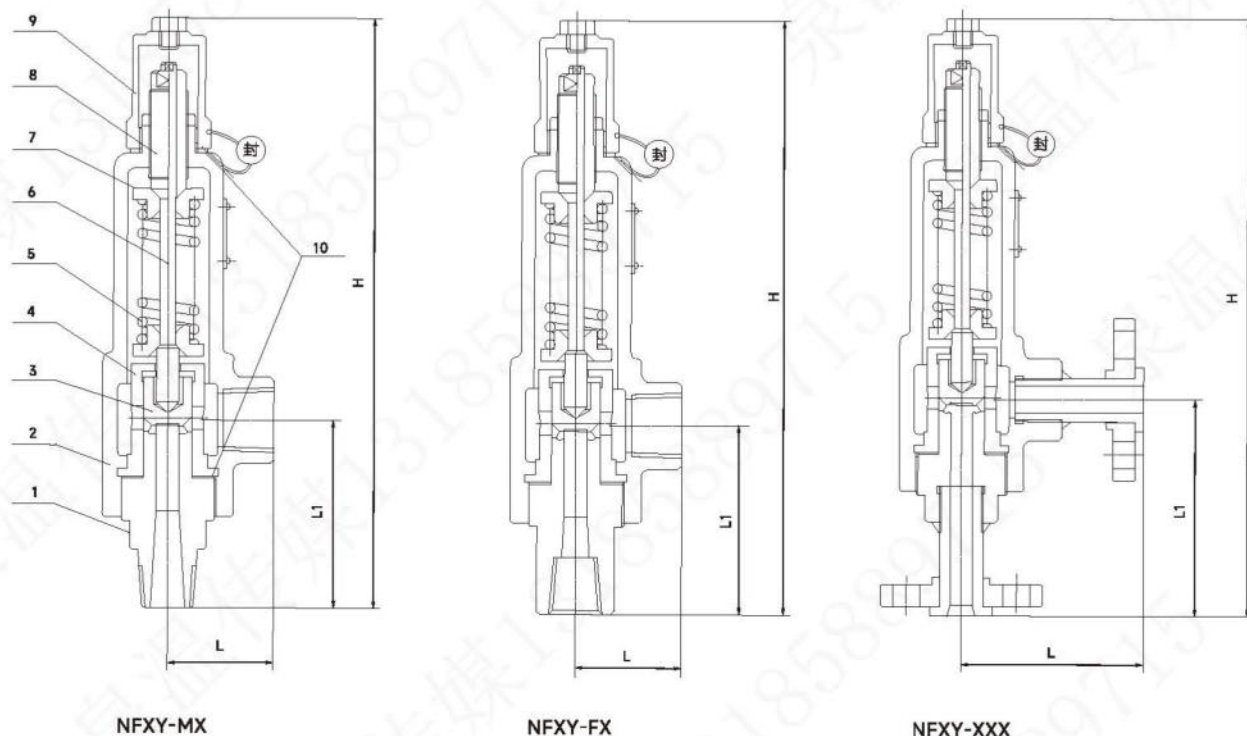
| 型号<br>Type                          |           | 面心距<br>Center<br>to Face |             | 法兰阀<br>座总厚<br>Total<br>Thickness<br>of Flange<br>and<br>Nozzle | 近似高度<br>Approximate Height<br>H |      |      | 近似重量<br>Approximate<br>Weight<br>Cap<br>type B<br>(kg) |
|-------------------------------------|-----------|--------------------------|-------------|----------------------------------------------------------------|---------------------------------|------|------|--------------------------------------------------------|
|                                     |           | 出口<br>Outlet             | 进口<br>Inlet |                                                                | 阀帽型式<br>Cap Type                |      |      |                                                        |
|                                     |           | L                        | L1          | b                                                              | A                               | C    | D    |                                                        |
| NFO<br>(NFA42C<br>NFA44C<br>NFA48C) | 01(150)   | 279                      | 276         | 45                                                             | 1040                            | 1080 | 1095 | 380                                                    |
|                                     | 03(300)   | 279                      | 276         | 58                                                             | 1040                            | 1080 | 1095 | 400                                                    |
| NFB<br>(NFWA42C<br>NFWA44C)         | 03a(300a) | 279                      | 276         | 58                                                             | 1040                            | 1080 | 1095 | 460                                                    |
|                                     | 036(3006) | 279                      | 276         | 58                                                             | 1040                            | 1080 | 1095 | 480                                                    |



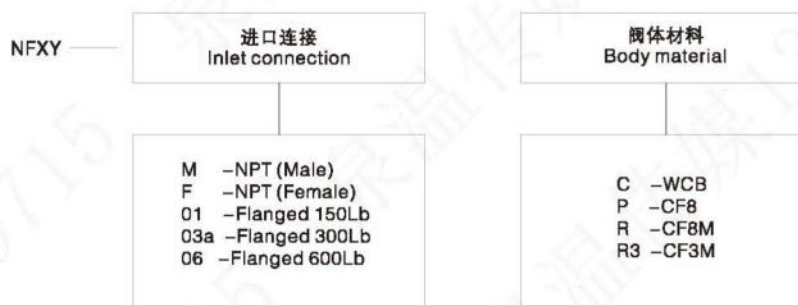
# ► NFXY系列螺纹松套法兰式泄压阀 NFXY Series screw, loose knot type flanged pressure relief valve



## ● NFXY系列螺纹、松套法兰式泄压阀 NFXY Series screw, loose knot type flanged pressure relief valve



## ● 型号编制方法Method of compiling the types



例: 进口连接为外螺纹, 阀体材料为WCB的泄压阀, 其型号代码为: NFXY-MC。  
Example: A pressure relief valve, which the inlet connection is made screwed, the material of body is WCB, is named NFXY-MC.

# NFXY系列螺纹松套法兰式泄压阀

NFXY Series screw, loose knot type flanged pressure relief valve



## ●材料 Materials

| 序号<br>No. | 零件名称 Name of part   | 阀门材料 Valve Materials |          |          |          |
|-----------|---------------------|----------------------|----------|----------|----------|
|           |                     | C                    | P        | R        | R3       |
| 1         | 阀座 Nozzle           | 304                  | 304      | 316      | 316L     |
| 2         | 阀体 Body             | WCB                  | CF8      | CF8M     | CF8M     |
| 3         | 阀瓣 Disc             | 304                  | 304      | 316      | 316L     |
| 4         | 导套 Guide            | 304                  | 304      | 316      | 316L     |
| 5         | 弹簧 Spring           | 50CrVA               | 50CrVA喷塑 | 50CrVA喷塑 | 50CrVA喷塑 |
| 6         | 阀杆 Stem             | 420                  | 420      | 420      | 420      |
| 7         | 弹簧座 Spring Washer   | 420                  | 420      | 420      | 420      |
| 8         | 调整螺钉 Adjusting Bolt | 420                  | 420      | 420      | 420      |
| 9         | 阀帽 Cap              | WCB                  | CF8      | CF8M     | CF8M     |
| 10        | 垫片 Gaskets          | 石棉板 Asbestors        | PTFE     | PTFE     | PTFE     |

## ●螺纹连接 Screwed Connections

| 流道面积<br>Orifice<br>Area<br>(cm <sup>2</sup> ) | 型号<br>Type | 口径(英寸)<br>Size(inch)<br>进口x出口<br>Inlet x Outlet | 连接<br>Connections<br>(NPT) |           | 最高整定压力(MPa)<br>Maximum Set Pressure |               | 尺寸<br>Dimensions<br>(mm) |    |     | 近似重量<br>Approx.<br>Weight<br>(kg) |
|-----------------------------------------------|------------|-------------------------------------------------|----------------------------|-----------|-------------------------------------|---------------|--------------------------|----|-----|-----------------------------------|
|                                               |            |                                                 | 进口 Inlet                   | 出口 Outlet | -29°C ~ 232°C                       | 232°C ~ 427°C | L                        | L1 | H   |                                   |
| 0.28(B)                                       | NFXY-MX    | 1/4B1/4                                         | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 1/2B1/2                                         | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
| 0.50(C)                                       | NFXY-MX    | 1/2C1/2                                         | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 3/4C3/4                                         | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 1/2C1                                           | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 3/4C1                                           | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 1C1                                             | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
| 0.71(D)                                       | NFXY-MX    | 3/4D3/4                                         | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 3/4D1                                           | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |
|                                               | NFXY-MX    | 1D1                                             | 外螺纹                        | F(内螺纹)    | 8.51                                | 5.68          | 55                       | 80 | 280 | 4                                 |
|                                               | NFXY-FX    |                                                 | 内螺纹                        |           |                                     |               | 55                       | 70 | 270 |                                   |

注: L和L1可按用户要求定制。 Note: L and L1 can be customized according to user requirements.

# ► NFXY系列螺纹松套法兰式泄压阀

NFXY Series screw, loose knot type flanged pressure relief valve



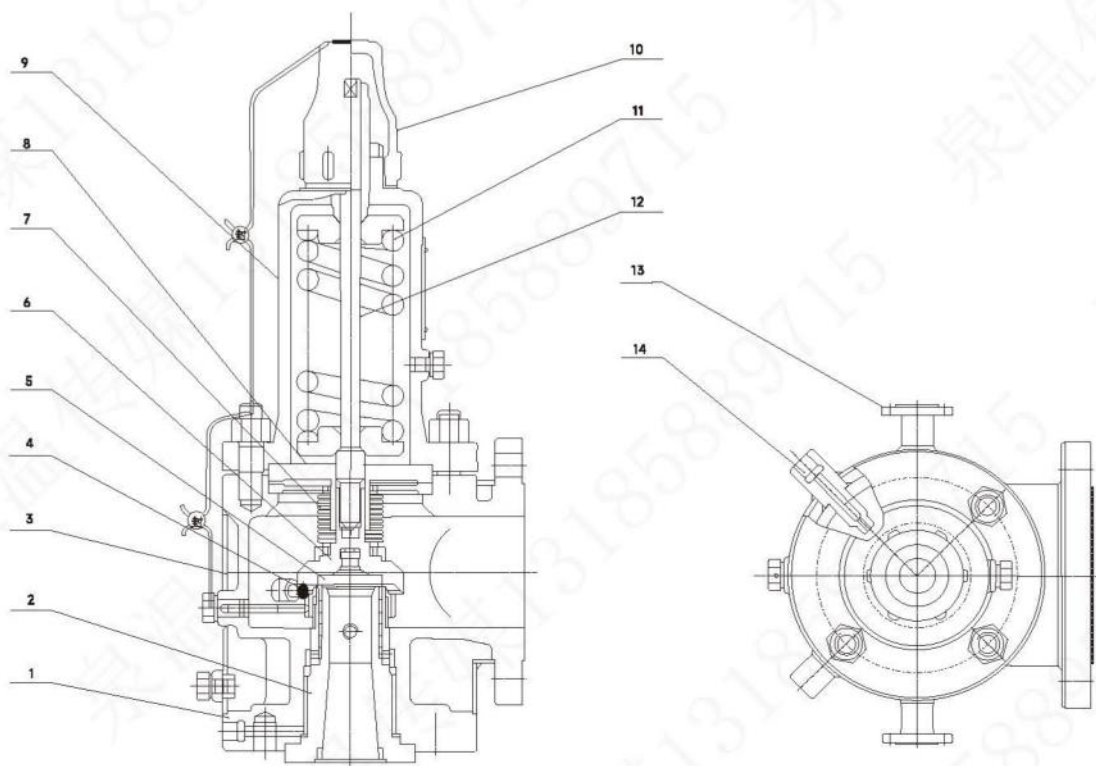
## ● 法兰连接 Flanged Connections

| 流道面积<br>Orifice<br>Area<br>(cm <sup>2</sup> ) | 型号<br>Type | 口径(英寸)<br>Size(inch)<br>进口x出口<br>Inlet x Outlet | 连接<br>Connections<br>(NPT) |           | 最高整定压力(MPa)<br>Maximum Set Pressure |                  | 尺寸<br>Dimensions<br>(mm) |     |     | 近似重量<br>Approx.<br>Weight<br>(kg) |
|-----------------------------------------------|------------|-------------------------------------------------|----------------------------|-----------|-------------------------------------|------------------|--------------------------|-----|-----|-----------------------------------|
|                                               |            |                                                 | 进口 Inlet                   | 出口 Outlet | -29°C ~<br>232°C                    | 232°C ~<br>427°C | L                        | L1  | H   |                                   |
| 0.28(B)                                       | NFXY-01X   | 1/4B1/4                                         | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
|                                               | NFXY-01X   | 1/2B1/2                                         | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
| 0.50(C)                                       | NFXY-01X   | 1/2C1/2                                         | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
|                                               | NFXY-01X   | 3/4C3/4                                         | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
|                                               | NFXY-01X   | 1/2C1                                           | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
|                                               | NFXY-01X   | 3/4C1                                           | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
| 0.71(D)                                       | NFXY-01X   | 3/4D3/4                                         | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
|                                               | NFXY-01X   | 3/4D1                                           | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |
|                                               | NFXY-01X   | 1D1                                             | 150Lb                      | 150Lb     | 1.27                                | 0.55             | 100                      | 118 | 318 | 6                                 |
|                                               | NFXY-03a X |                                                 | 300Lb                      |           | 4.24                                | 2.82             |                          |     |     |                                   |
|                                               | NFXY-06X   |                                                 | 600Lb                      |           | 8.51                                | 5.68             |                          |     |     |                                   |

注：L和L1可按用户要求定制。 Note: L and L1 can be customized according to user requirements.

## ► NFNJ系列保温夹套安全阀

NFNJ Series safety valve with jacket



### ● 用途及特点 Application & Features

1. 用作聚酯、乙烯、沥青及尿素化肥等装置中介质需要保温的压力安全泄压阀。
  2. 对进、出口法兰在内的阀体均进行保温，因而保温效果好；特殊需要时可以增加蒸汽冲洗功能。
  3. 平衡波纹管式结构，变动背压力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保护介质侵蚀作用。
  4. 内件（阀瓣、阀座）标准材料均为奥氏体不锈钢，密封面堆焊Stellite硬质合金。
  5. 特殊需要时内件可提供尿素级316L、双相不锈钢0Cr25Ni6Mo3CuN、0Cr25Ni6Mo2N及超级双相不锈钢F51(NUS S31803)、F53 (UNS S32750)、F55(UNS S32760)。
1. It's serviced in the circumstance where the heat preservation of fluid is needed, such as equipment of polyester, ethylene, pitch, urea, etc
  2. Body including inlet and outlet flanges is heat preserved, so the effect is very well the function of vapor flushing be added, if needed
  3. Balanced bellows construction protects set pressure from being affected by variable back pressure, and the parts in bonnet, such as spring, form being corroded
  4. Trim (nozzle and disc) is normally made with austenitic stainless steel, and faced with stellite alloy.
  5. To meet special service, the material of trim can be 316LN, 0Cr25Ni6Mo3CuN, 00Cr25Ni6Mo2N, F51(NUS S31803), F53(UNS S32750), F55(UNS S32760).

# ► NFNJ系列保温夹套安全阀

NFNJ Series safety valve with jacket



## ● 型号编制方法 Method of compiling the types



## ● 材料Materials

| 序号<br>No. | 零件名称 Name of part  | 阀门材料 Valve Materials |                          |                          |                          |
|-----------|--------------------|----------------------|--------------------------|--------------------------|--------------------------|
|           |                    | C                    | P                        | R                        | R3                       |
| 1         | 阀体 Body            | WCB                  | CF8                      | CF8M                     | CF3M                     |
| 2         | 阀座 Nozzle          | 304                  | 316                      | 316                      | 316L                     |
| 3         | 夹套 Jacket          | 304                  | 304                      | 304                      | 304                      |
| 4         | 调节圈 Adjusting ring | CF8                  | CF8                      | CF8M                     | CF3M                     |
| 5         | 阀瓣 Disc            | 304                  | 316                      | 316                      | 316L                     |
| 6         | 反冲盘 Disc holder    | 304                  | 304                      | 316                      | 316L                     |
| 7         | 波纹管 Bellows        | 316                  | 316                      | 316L                     | 316L                     |
| 8         | 导向套 Guide          | CF8                  | CF8                      | CF8M                     | CF3M                     |
| 9         | 阀盖 Bonnet          | WCB                  | CF8                      | CF8M                     | CF8M                     |
| 10        | 阀帽 Cap             | WCB                  | CF8                      | CF8M                     | CF8M                     |
| 11        | 弹簧 Spring          | Alloy st             | Alloy st / Spread Teflon | Alloy st / Spread Teflon | Alloy st / Spread Teflon |
| 12        | 阀杆 Stem            | 420                  | 420                      | 420                      | 420                      |
| 13        | 法兰 Flange          | 304                  | 304                      | 304                      | 304                      |
| 14        | 吹气管 Huff pipe      | 304                  | 304                      | 316                      | 316L                     |

# ► NFNJ系列保温夹套安全阀

NFNJ Series safety valve with jacket



- 型号(Type): NFNJ-03a
- 法兰磅级(Flange Class): 300Lb/150Lb(进口/出口 Inlet/outlet)

| 口径(英寸)<br>Size (inch)                      | 最高整定压力<br>Max Set Pressure(Mpa) |               | 法兰尺寸<br>Flange size(mm) |     |       |     |      |         | 面心距<br>Center to Face (mm) |       | 近似高度II<br>App.Height<br>阀帽型式<br>Cap Types |      |
|--------------------------------------------|---------------------------------|---------------|-------------------------|-----|-------|-----|------|---------|----------------------------|-------|-------------------------------------------|------|
|                                            | 进口温度 (°C)<br>Inlet Temperature  |               |                         |     |       |     |      |         |                            |       |                                           |      |
| Inlet/Orifice/<br>Outlet<br>(Orifice Area) | -29~232<br>°C                   | 232~427<br>°C |                         | ΦD  | ΦC    | Φg  | f/t  | n-M/Φ-h | L                          | L1    | B                                         | E    |
| 1D2(2 1/2)(0.710)                          | 4.24                            | 2.82          | 进口 Inlet                | 160 | 89    | 51  | 18   | 4-M16   | 134                        | 125   | 470                                       | 530  |
|                                            |                                 |               | 出口 Outlet               | 178 | 139.5 | 105 | 22.4 | 4-Φ19   |                            |       |                                           |      |
| 1E2(2 1/2)(1.264)                          | 4.24                            | 2.82          | 进口 Inlet                | 160 | 89    | 51  | 18   | 4-M16   | 134                        | 125   | 470                                       | 530  |
|                                            |                                 |               | 出口 Outlet               | 178 | 139.5 | 105 | 22.4 | 4-Φ19   |                            |       |                                           |      |
| 1/2F2(2 2/1)(1.981)                        | 4.24                            | 2.82          | 进口 Inlet                | 170 | 114.5 | 73  | 20   | 4-M20   | 140                        | 139   | 485                                       | 550  |
|                                            |                                 |               | 出口 Outlet               | 178 | 139.5 | 105 | 22.4 | 4-Φ19   |                            |       |                                           |      |
| 1 1/2G3(4)(3.245)                          | 4.24                            | 2.82          | 进口 Inlet                | 190 | 114.5 | 73  | 20   | 4-M20   | 140                        | 149   | 535                                       | 595  |
|                                            |                                 |               | 出口 Outlet               | 229 | 190.5 | 157 | 23.9 | 8-Φ19   |                            |       |                                           |      |
| 2H3(4)(5.064)                              | 4.24                            | 2.82          | 进口 Inlet                | 200 | 127   | 92  | 20   | 8-M16   | 155                        | 150   | 555                                       | 615  |
|                                            |                                 |               | 出口 Outlet               | 229 | 190.5 | 157 | 23.9 | 8-Φ19   |                            |       |                                           |      |
| 3J4(6)(8.303)                              | 4.24                            | 2.82          | 进口 Inlet                | 250 | 168   | 127 | 22   | 8-M20   | 185                        | 170   | 690                                       | 760  |
|                                            |                                 |               | 出口 Outlet               | 279 | 241.5 | 216 | 25.4 | 8-Φ22   |                            |       |                                           |      |
| 3K4(6)(11.858)                             | 4.24                            | 2.82          | 进口 Inlet                | 250 | 168   | 127 | 22   | 8-M20   | 185                        | 170   | 690                                       | 760  |
|                                            |                                 |               | 出口 Outlet               | 279 | 241.5 | 216 | 25.4 | 8-Φ22   |                            |       |                                           |      |
| 4L6(8)(18.406)                             | 4.24                            | 2.82          | 进口 Inlet                | 320 | 200   | 157 | 22   | 8-M20   | 225                        | 200   | 860                                       | 930  |
|                                            |                                 |               | 出口 Outlet               | 343 | 298.5 | 270 | 28.4 | 8-Φ22   |                            |       |                                           |      |
| 4M6(8)(23.226)                             | 4.24                            | 2.82          | 进口 Inlet                | 320 | 200   | 157 | 22   | 8-M20   | 225                        | 200   | 860                                       | 930  |
|                                            |                                 |               | 出口 Outlet               | 343 | 298.5 | 270 | 28.4 | 8-Φ22   |                            |       |                                           |      |
| 4N6(8)(28.000)                             | 4.24                            | 2.82          | 进口 Inlet                | 320 | 200   | 157 | 22   | 8-M20   | 225                        | 200   | 860                                       | 930  |
|                                            |                                 |               | 出口 Outlet               | 343 | 298.5 | 270 | 28.4 | 8-Φ22   |                            |       |                                           |      |
| 4P6(8)(41.161)                             | 3.62                            | 2.82          | 进口 Inlet                | 320 | 200   | 157 | 22   | 8-M20   | 225                        | 200   | 860                                       | 930  |
|                                            |                                 |               | 出口 Outlet               | 343 | 298.5 | 270 | 28.4 | 8-Φ22   |                            |       |                                           |      |
| 6Q8(10)(71.290)                            | 2.06                            | 2.06          | 进口 Inlet                | 370 | 270   | 216 | 22   | 12-M20  | 256                        | 239.5 | 1025                                      | 1130 |
|                                            |                                 |               | 出口 Outlet               | 406 | 362   | 324 | 30.2 | 12-Φ26  |                            |       |                                           |      |
| 6R10(12)(103.226)                          | 1.58                            | 1.58          | 进口 Inlet                | 420 | 270   | 216 | 22   | 12-M20  | 282                        | 269   | 1070                                      | 1175 |
|                                            |                                 |               | 出口 Outlet               | 483 | 432   | 381 | 32   | 12-Φ26  |                            |       |                                           |      |
| 8T10(12)(167.742)                          | 0.82                            | 0.82          | 进口 Inlet                | 480 | 330   | 270 | 22   | 12-M24  | 310                        | 280   | 1215                                      | 1320 |
|                                            |                                 |               | 出口 Outlet               | 483 | 432   | 381 | 32   | 12-Φ26  |                            |       |                                           |      |

注: L和L1可按用户要求定制。 Note: L and L1 can be made according to user's requests.

# ► NFA46C型磅级先导式安全泄压阀

## NFA46C Type Pilot-operated pressure relief valve



NFA46C150、NFA46C300、NFA46C600  
NFA46C900、NFA46C1500、NFA46C2500

型先导式安全泄压阀 Pilot-operated pressure relief valve

### ● 主要性能规范 Main property and specification

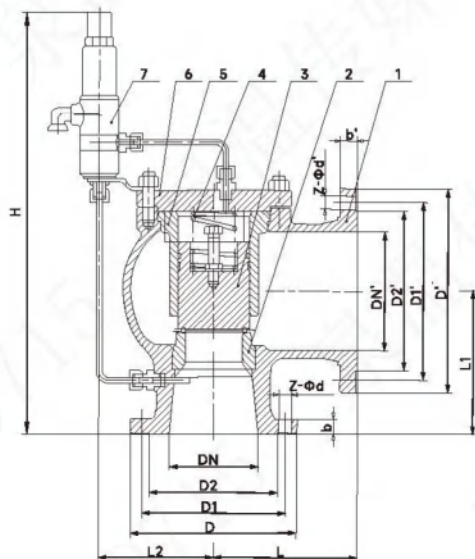
|                              |         |                                                           |     |      |      |      |      |
|------------------------------|---------|-----------------------------------------------------------|-----|------|------|------|------|
| 公称压力 Normal pressure         | PN(Lb)  | 150                                                       | 300 | 600  | 900  | 1500 | 2500 |
| 壳体强度 Body strength           | Ps(MPa) | 3.0                                                       | 7.5 | 15   | 22.5 | 37.5 | 63   |
| 最高整定压力 Max Set pressure      | Pk(MPa) | 2                                                         | 5.1 | 10.2 | 15.3 | 25.5 | 42.5 |
| 密封压力 Seal pressure           | Pm      | 90%Pk                                                     |     |      |      |      |      |
| 回座压力 Reseating pressure      | Ph      | ≥90%Pk                                                    |     |      |      |      |      |
| 排放压力 Relieving pressure      | Pp      | ≤1.03Pk                                                   |     |      |      |      |      |
| 开启高度 Lift                    | H(mm)   | ≥1/4 do                                                   |     |      |      |      |      |
| 适用温度 Appropriate temperature |         | ≤200°C                                                    |     |      |      |      |      |
| 适用介质 Appropriate medium      |         | 气、液、水蒸气、原油、天然气等<br>Gas, Steam etc, Crude oil, Natural gas |     |      |      |      |      |

### ● 喉部直径代号 Code of throat diameter

| 代号 Code | 直径 Diameter mm | 代号 Code | 直径 Diameter mm |
|---------|----------------|---------|----------------|
| D       | 10             | L       | 50             |
| E       | 13             | M       | 55             |
| F       | 16             | N       | 60             |
| G       | 20.5           | P       | 72             |
| H       | 26             | Q       | 96             |
| J       | 33             | R       | 115            |
| K       | 40             | T       | 146            |

### ● 外形尺寸和连接尺寸 Dimensions (mm)

| 口径<br>Size<br>(in) | 流道直径<br>Orifice | 进口压力级<br>Inlet Lb | 出口压力级<br>Outlet Lb | 结构尺寸<br>Dimension mm |     |     | 口径<br>Size<br>(in) | 流道直径<br>Orifice | 进口压力级<br>Inlet Lb | 出口压力级<br>Outlet Lb | 结构尺寸<br>Dimension mm |     |     |
|--------------------|-----------------|-------------------|--------------------|----------------------|-----|-----|--------------------|-----------------|-------------------|--------------------|----------------------|-----|-----|
|                    |                 |                   |                    | L                    | L1  | H   |                    |                 |                   |                    | L                    | L1  | H   |
| 1x2                | D,E,F           | 150               | 150                | 115                  | 105 | 406 | 1 1/2x2            | D,E,F           | 150               | 150                | 121                  | 124 | 432 |
|                    |                 | 300               | 150                | 115                  | 110 | 406 |                    |                 | 300               | 150                | 121                  | 124 | 432 |
|                    |                 | 600               | 150                | 115                  | 110 | 406 |                    |                 | 600               | 150                | 121                  | 124 | 432 |
|                    |                 | 900               | 300                | 121                  | 125 | 508 |                    |                 | 900               | 300                | 140                  | 149 | 533 |
|                    |                 | 1500              | 300                | 121                  | 125 | 508 |                    |                 | 1500              | 300                | 140                  | 149 | 533 |
|                    |                 | 2500              | 300                | 121                  | 125 | 508 |                    |                 | 2500              | 300                | 140                  | 149 | 533 |
| 1 1/2x3            | G,H             | 150               | 150                | 124                  | 130 | 457 | 2x3                | G,H,J           | 150               | 150                | 124                  | 136 | 457 |
|                    |                 | 300               | 150                | 124                  | 130 | 457 |                    |                 | 300               | 150                | 124                  | 136 | 457 |
|                    |                 | 600               | 150                | 124                  | 130 | 457 |                    |                 | 600               | 150                | 124                  | 136 | 457 |
|                    |                 | 900               | 300                | 171                  | 162 | 559 |                    |                 | 900               | 300                | 171                  | 167 | 559 |
|                    |                 | 1500              | 300                | 171                  | 162 | 559 |                    |                 | 1500              | 300                | 171                  | 167 | 559 |
|                    |                 | 2500              | 300                | 171                  | 162 | 559 |                    |                 | 2500              | 300                | 171                  | 178 | 584 |
| 3x4                | J,K,L           | 150               | 150                | 162                  | 156 | 483 | 4x6                | L,M,N,P         | 150               | 150                | 210                  | 197 | 559 |
|                    |                 | 300               | 150                | 162                  | 156 | 483 |                    |                 | 300               | 150                | 210                  | 197 | 559 |
|                    |                 | 600               | 150                | 162                  | 162 | 483 |                    |                 | 600               | 150                | 210                  | 197 | 559 |
|                    |                 | 900               | 300                | 181                  | 190 | 610 |                    |                 | 900               | 300                | 233                  | 249 | 711 |
|                    |                 | 1500              | 300                | 181                  | 190 | 610 |                    |                 | 1500              | 300                | 233                  | 249 | 711 |
|                    |                 |                   |                    |                      |     |     |                    |                 | 1500              | 600                | 264                  | 249 | 711 |
| 6x8                | Q,R             | 150               | 150                | 241                  | 240 | 635 | 8x10               | T               | 150               | 150                | 279                  | 276 | 711 |
|                    |                 | 300               | 150                | 241                  | 240 | 635 |                    |                 | 300               | 150                | 279                  | 276 | 711 |
|                    |                 | 600               | 150                | 241                  | 240 | 635 |                    |                 | 600               | 150                | 279                  | 297 | 737 |



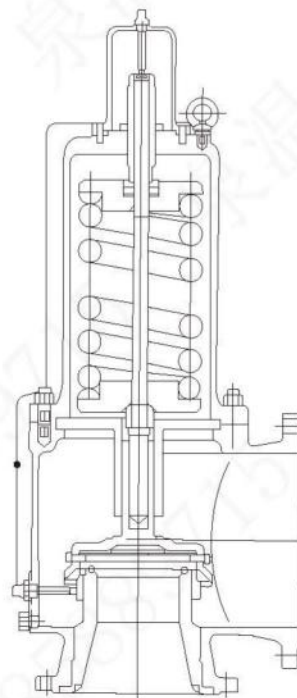
# ► NFA42C、NFWA42C大口径安全阀

## NFA42C,NFWA42C Big Calibers Safety Valve



### ● 用途及特点 Application & Features

- 1、适用于炼油连续重整、三十万吨乙烯、尿素化肥、电厂汽轮机等场合，起安全泄压作用。
  - 2、根据用户介质、温度等特殊需要，分别可以采用不同材料，不同结构的安全。有适用于尿素化肥的双相不锈钢安全阀，适用于炼油用的波纹管平衡式安全阀，适用于电厂的合金钢高温安全阀。
1. Applicable to the environment of oil refining continuous reforming, three hundred thousand tons ethene, carbamide manure, power station steam turbine, take care for release pressure safety.
  2. According to different medium, temperature and other special. We respective adopt in different material and structure safety valve. Such as ferritic stainless steel safety valve suitable for carbamide manure, balance bellows safety valve suitable for oil refining, alloy steel high temperature safety valve suitable for power station.



### ● 尺寸规格 Dimension & Specification

| 进口x出口<br>Intel x Outlet | 150Lb结构尺寸 Structure size |     | 300Lb结构尺寸 Structure size |     | 600Lb结构尺寸 Structure size |     |
|-------------------------|--------------------------|-----|--------------------------|-----|--------------------------|-----|
|                         | L                        | L1  | L                        | L1  | L                        | L1  |
| 8T12(200x300)           | 350                      | 320 | 350                      | 320 | 350                      | 320 |
| 10T12(250x300)          | 300                      | 340 | 300                      | 340 | 350                      | 340 |
| 10V14(250x350)          | 335                      | 345 | 335                      | 345 | 360                      | 350 |
| 12W16(300x400)          | 455                      | 335 | 455                      | 335 |                          |     |
| 14X18(350x450)          | 500                      | 400 | 500                      | 400 |                          |     |
| 14X20(350x500)          | 500                      | 450 | 500                      | 450 |                          |     |
| 16Y18(400x450)          | 500                      | 450 | 500                      | 450 |                          |     |
| 16Y20(400x500)          | 500                      | 450 | 500                      | 450 |                          |     |
| 18AA24(450x600)         | 630                      | 510 |                          |     |                          |     |

注：有特殊要求的可以协商定制。  
Note: For special requirements, customization can be negotiated.

# ► NFGS系列高温蒸汽安全阀

## NFGS Series High temperature safety valve of steam



用途：适用于动力锅炉、裂解炉、直流锅炉、再热器及其他设备管道作超压保护。

Application: NFA48sc is serviced for overpres sure protection of power boiler, decomposition 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。

Performance: NFsc meets the requirements of YFA48sc Boiler and pressure Vessel Code, Section I, power Boilers.

特点：采用背压套来调节回座压力，以达到极小的启闭压差，

高性能高温材料作弹性阀瓣材料，以保证高温下的密封性，

密封付表面堆焊钴基硬质合金，以防护高温蒸汽气蚀，

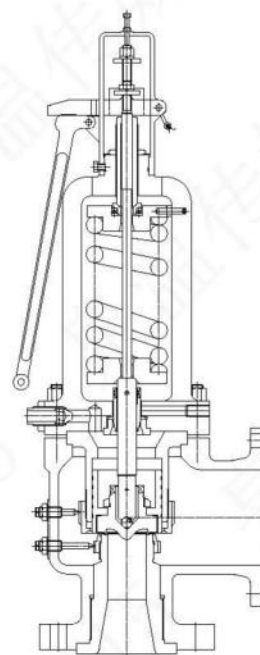
一定的热态测试，使安全阀更接近工况条件。

Features: Adjusting back Seat pressure with back pressure Jacket, to arrive minimum Blowdown.

High performance and temperature material are used for valve, to ensure its tightness in high temperature).

Tightness body is faced with stellite, to prevent from eroding of high temperature gas.

Tested under hot position and make the safety valve approach to service condition.



| 规格<br>Size(in) | 300Lb面心距<br>Center-to-Face<br>Dimensions(mm) |     |     | 600Lb面心距<br>Center-to-Face<br>Dimensions(mm) |     |     | 900Lb面心距<br>Center-to-Face<br>Dimensions(mm) |     |     | 1500Lb面心距<br>Center-to-Face<br>Dimensions(mm) |     |     | 2500Lb面心距<br>Center-to-Face<br>Dimensions(mm) |     |     |
|----------------|----------------------------------------------|-----|-----|----------------------------------------------|-----|-----|----------------------------------------------|-----|-----|-----------------------------------------------|-----|-----|-----------------------------------------------|-----|-----|
|                | 编号No.                                        | L   | L1  | 编号No.                                        | L   | L1  | 编号No.                                        | L   | L1  | 编号No.                                         | L   | L1  | 编号No.                                         | L   | L1  |
| 1D2½           |                                              |     |     |                                              |     |     |                                              |     |     | 1501                                          | 146 | 170 |                                               |     |     |
| 1½F2           | 03a01                                        | 152 | 124 |                                              |     |     |                                              |     |     |                                               |     |     |                                               |     |     |
| 1½F2½          |                                              |     |     | 0601                                         | 140 | 130 |                                              |     |     |                                               |     |     |                                               |     |     |
| 1½G2½          | 03a01                                        | 152 | 124 |                                              |     |     |                                              |     |     |                                               |     |     |                                               |     |     |
| 1½F3           |                                              |     |     |                                              |     |     | 0901                                         | 155 | 140 | 1501                                          | 155 | 150 | 2503                                          | 155 | 190 |
| 1½G3           |                                              |     |     | 0601                                         | 155 | 130 | 0901                                         | 155 | 140 | 1501                                          | 155 | 150 | 2503                                          | 200 | 220 |
| 1½H3           | 03a01                                        | 152 | 130 | 0601                                         | 155 | 140 | 0901                                         | 155 | 140 | 1501                                          | 155 | 150 |                                               |     |     |
| 1½H4           |                                              |     |     |                                              |     |     |                                              |     |     |                                               |     |     | 2503                                          | 200 | 220 |
| 2J3            | 03a01                                        | 152 | 137 |                                              |     |     |                                              |     |     |                                               |     |     |                                               |     |     |
| 2J4            |                                              |     |     | 0601                                         | 180 | 150 | 0901                                         | 180 | 150 | 1501                                          | 180 | 160 | 2503                                          | 220 | 220 |
| 2J6            |                                              |     |     |                                              |     |     |                                              |     |     |                                               |     |     | 2503                                          | 220 | 220 |
| 2½K4           | 03a01                                        | 152 | 165 | 0601                                         | 180 | 185 | 0901                                         | 180 | 185 |                                               |     |     |                                               |     |     |
| 2½K6           |                                              |     |     | 0601                                         | 180 | 185 | 0901                                         | 180 | 185 | 1501                                          | 240 | 195 | 2503                                          | 240 | 270 |
| 3L6            | 03a01                                        | 165 | 178 | 0601                                         | 220 | 195 | 0901                                         | 220 | 195 | 1501                                          | 250 | 210 |                                               |     |     |
| 3M6            |                                              |     |     | 0601                                         | 220 | 195 | 0901                                         | 220 | 195 | 1501                                          | 260 | 230 | 2503                                          | 260 | 280 |
| 4N6            |                                              |     |     | 0601                                         | 220 | 215 | 0901                                         | 250 | 230 | 1501                                          | 265 | 240 |                                               |     |     |
| 4P6            | 03a01                                        | 254 | 225 | 0603                                         | 265 | 235 | 0903                                         | 265 | 250 | 1503                                          | 265 | 260 |                                               |     |     |
| 4P8            |                                              |     |     | 0603                                         | 265 | 235 | 0903                                         | 265 | 250 | 1503                                          | 265 | 260 |                                               |     |     |
| 6Q8            | 03a01                                        | 241 | 240 | 0603                                         | 280 | 285 |                                              |     |     |                                               |     |     |                                               |     |     |

# ► NFQH系列切换式安全阀

NFQH series change-over safety valve



## ●主要零部件材料 Materials for main parts

| 序号<br>NO. | 零件名称<br>Part Name   | 阀门材料<br>Valve Materials |         |
|-----------|---------------------|-------------------------|---------|
|           |                     | NFQH-C型                 | NFQH-P型 |
| 1         | 管座<br>Pipe seat     | WCB                     | CF8     |
| 2         | Y管<br>Y-shaped pipe | WCB                     | CF8     |
| 3         | 手轮<br>Handwheel     | WCB                     | WCB     |
| 4         | 阀体<br>Body          | WCB                     | CF8     |



## ●尺寸规格 Dimension&Specification

| 型号<br>Type             | 规格<br>Size(in) | 法兰等级<br>ANSI Flange Rating | 面心距<br>Center-to-Face<br>Dimensions |     |     |
|------------------------|----------------|----------------------------|-------------------------------------|-----|-----|
|                        |                |                            | L                                   | H1  | H   |
| NFQH-150C<br>NFQH-150P | 1"             | 150                        | 190                                 | 115 | 230 |
|                        | 1½"            | 150                        | 265                                 | 150 | 300 |
|                        | 2"             | 150                        | 265                                 | 150 | 300 |
|                        | 3"             | 150                        | 360                                 | 190 | 380 |
|                        | 4"             | 150                        | 460                                 | 230 | 460 |
|                        | 6"             | 150                        | 600                                 | 280 | 560 |
|                        | 8"             | 150                        | 800                                 | 370 | 740 |
| NFQH-300C<br>NFQH-300P | 1"             | 300                        | 190                                 | 115 | 230 |
|                        | 1½"            | 300                        | 265                                 | 150 | 300 |
|                        | 2"             | 300                        | 265                                 | 150 | 300 |
|                        | 3"             | 300                        | 360                                 | 190 | 380 |
|                        | 4"             | 300                        | 460                                 | 230 | 460 |
|                        | 6"             | 300                        | 600                                 | 280 | 560 |
|                        | 8"             | 300                        | 800                                 | 370 | 740 |

# ► 衬氟安全阀 Fluorine lined safety valve



## ● 主要零部件材料 Materials for main parts

| 序号<br>NO. | 零件名称<br>Part Name | 阀门材料<br>Valve Materials           |                                   |
|-----------|-------------------|-----------------------------------|-----------------------------------|
|           |                   | NFA42F46                          | NFA42PFA                          |
| 1         | 阀体<br>Body        | WCB+F46                           | WCB+PFA                           |
| 2         | 阀瓣<br>Disc        | F46/25+F46                        | PFA/25+PFA                        |
| 3         | 导向套<br>Guide      | F46/25+F46                        | PFA/25+PFA                        |
| 4         | O型圈<br>O Ring     | FKM                               | FFKM                              |
| 5         | 阀杆<br>Stem        | 420                               | 420                               |
| 6         | 阀盖<br>Bonnet      | WCB                               | WCB                               |
| 7         | 弹簧<br>Spring      | 合金钢涂氟四<br>Alloy St. Spread Teflon | 合金钢涂氟四<br>Alloy St. Spread Teflon |
| 8         | 保护罩<br>Cap        | WCB                               | WCB                               |

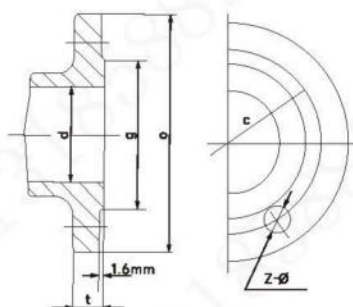


## ● 尺寸规格 Dimension&Specification

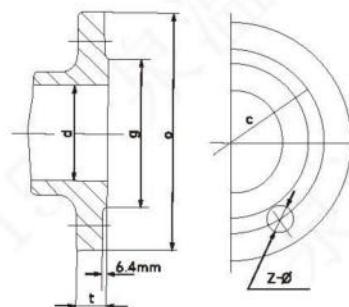
| 型号<br>Type                     | 规格<br>Size(in)   | 法兰等级<br>ANSI Flange Rating |              | 流道直径<br>Orifice Dime | 面心距<br>Center-to-Face Dimensions |     |
|--------------------------------|------------------|----------------------------|--------------|----------------------|----------------------------------|-----|
|                                |                  | 进口<br>Inlet                | 出口<br>Outlet |                      | L                                | L1  |
| NFA42F46-150C<br>NFA42PFA-150C | $\frac{3}{4}$ D1 | 150                        | 150          | 9.5                  | 96                               | 92  |
|                                | 1E2              | 150                        | 150          | 12.7                 | 115                              | 105 |
|                                | $\frac{1}{2}$ F2 | 150                        | 150          | 16.0                 | 121                              | 124 |
|                                | $\frac{1}{2}$ H3 | 150                        | 150          | 25.4                 | 124                              | 130 |
|                                | 2J3              | 150                        | 150          | 32.4                 | 124                              | 136 |
|                                | 3L4              | 150                        | 150          | 48.5                 | 165                              | 156 |
|                                | 4N6              | 150                        | 150          | 59.7                 | 210                              | 197 |
|                                | 6Q8              | 150                        | 150          | 95.3                 | 241                              | 240 |
| NFA42F46-300C<br>NFA42PFA-300C | $\frac{3}{4}$ D1 | 300                        | 150          | 9.5                  | 96                               | 92  |
|                                | 1E2              | 300                        | 150          | 12.7                 | 115                              | 105 |
|                                | $\frac{1}{2}$ F2 | 300                        | 150          | 16.0                 | 121                              | 124 |
|                                | $\frac{1}{2}$ H3 | 300                        | 150          | 25.4                 | 124                              | 130 |
|                                | 2J3              | 300                        | 150          | 32.4                 | 124                              | 136 |
|                                | 3L4              | 300                        | 150          | 48.5                 | 165                              | 156 |
|                                | 4N6              | 300                        | 150          | 59.7                 | 210                              | 197 |
|                                | 6Q8              | 300                        | 150          | 95.3                 | 241                              | 240 |

# ► ASME/ANSI B16.5a 法兰尺寸

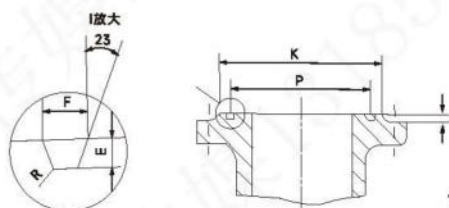
## ASME/ANSI B16.5a Flange Size



a)150~300Lb (PN2.0~5.0MPa)



b)600~2500Lb (PN11.0~42.0Mpa)



150~2500Lb (PN2.0~42.0MPa)

### ● ASME/ANSI B16.5a 法兰尺寸 Flange Size

| 磅级<br>Class | (D) 通径 Size |     | O   | t    | g   | z  | Φ  | 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 |
| 300         | 10          | 250 | 406 | 30.2 | 324 | 12 | 26 | 362   | 330   | 304.80 | 6.35 | 8.74  | 0.8 |
|             | 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 2/1       | 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 |

# ▶ ASME/ANSI B16.5a 法兰尺寸

## ASME/ANSI B16.5a Flange Size



### ● ASME/ANSI B16.5a 法兰尺寸 Flange Size

| 磅级<br>Class | (D) 通径 Size |     | O   | t     | g   | z  | Φ   | 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  | 11.94 | 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 |
| 900         | 10          | 250 | 508 | 63.5  | 324 | 16 | 35  | 432   | 356   | 323.85 | 7.92  | 11.91 | 0.8 |
|             | 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 | 156   | 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 | 1.5 |
| 1500        | 8           | 200 | 470 | 63.5  | 270 | 12 | 39  | 394   | 308   | 269.88 | 7.92  | 11.91 | 1.5 |
|             | 10          | 250 | 546 | 69.9  | 324 | 16 | 39  | 470   | 362   | 323.85 | 7.92  | 11.91 | 1.5 |
|             | 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 |
| 2500        | 6           | 150 | 394 | 82.4  | 216 | 12 | 39  | 317.5 | 248   | 211.12 | 9.53  | 13.49 | 1.5 |
|             | 8           | 200 | 483 | 92.1  | 270 | 12 | 45  | 394   | 317.5 | 269.88 | 11.13 | 16.66 | 1.5 |
|             | 10          | 250 | 584 | 108   | 324 | 12 | 51  | 483   | 371   | 323.85 | 11.13 | 16.66 | 1.5 |
|             | 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 |



### ●介质为气体

1、临界条件:  $\frac{P_o}{P_d} \leq \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$

$$W_s = 7.6 \times 10^{-2} C K B d A \sqrt{\frac{M}{Z T}} \text{ kg/h}$$

2、亚临界条件:  $\frac{P_o}{P_d} > \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$

$$W_s = 55.84 \times 10 K P d A \sqrt{\frac{M}{Z T} \left[ \left( \frac{P_o}{P_d} \right)^{\frac{2}{k}} \left( \frac{P_o}{P_d} \right)^{\frac{k+1}{k}} \right]} \text{ kg/h}$$

式中  $W_s$ ——安全阀的排放能力, kg/h

$K$ ——排放系数, 与安全阀结构有关, 由制造厂提供;  
也可按下述规定选取:

全启式安全阀介质气态  $K=0.75-0.85$

全启式安全阀介质液态  $K=0.5-0.65$

微启式安全阀  $K=0.2-0.3$

$P_d$ ——安全阀的排放压力 (绝压),  $P_d=1.1P_s+0.1$ , MPa

$P_s$ ——安全阀的整定压力, MPa

$P_o$ ——安全阀的出口侧压力 (绝压), MPa

$A$ ——安全阀最小排气截面积,  $\text{mm}^2$

$$\text{全启式安全阀, 即 } h \geq \frac{1}{4} d_1 \text{ 时, } A = \pi \frac{d_1^2}{4}$$

$$\text{微启式安全阀, 即 } h < \frac{1}{20} d_1 \text{ 时, 平面密封, } A = \pi D h;$$

式中  $h$ ——安全阀的开启高度, mm;

$d_1$ ——安全阀最小流道直径 (阀座喉径), mm;

$D$ ——安全阀阀座口径, mm;

$C$ ——气体特性系数,  $C=520 \sqrt{K \left( \frac{2}{k+1} \right)^{\frac{k+1}{k-1}}}$ , 见附表1

$K$ ——气体绝热指数  $K=C_p/C_v$

$M$ ——气体摩尔质量, kg/kmol;

$T$ ——气体的温度, K;

$Z$ ——气体在操作温度压力下的压缩系数。

### ●介质为液

$$W_s = 5.09 k K_p K_v A \sqrt{p \Delta P} \text{ kg/h}$$

式中  $K_p$ ——超压修正因数

超压力25%时  $K_p=1.0$

超压力20%时  $K_p=0.8$

超压力10%时  $K_p=0.6$

$K_v$ ——粘度修正因数

$$K_v = \left[ 0.9935 + \frac{2.878}{R^{0.5}} + \frac{342.75}{R^{1.5}} \right]^{-1.5}$$

$$R = \frac{\{WS / [(p/1000) \times 60]\} \times 18800 \times (1/1000)}{U/A}$$

### ●The medium is gas

1、Critical condition:  $\frac{P_o}{P_d} \leq \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$

$$W_s = 7.6 \times 10^{-2} C K B d A \sqrt{\frac{M}{Z T}} \text{ kg/h}$$

2、Subcritical condition:  $\frac{P_o}{P_d} > \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$

$$W_s = 55.84 \times 10 K P d A \sqrt{\frac{M}{Z T} \left[ \left( \frac{P_o}{P_d} \right)^{\frac{2}{k}} \left( \frac{P_o}{P_d} \right)^{\frac{k+1}{k}} \right]} \text{ kg/h}$$

$W_s$ ——the discharge capacity of safety valve kg/h

$K$ ——Emission factor, related with structure of the safety valve, provided by the manufacturer, Also selected according to the following provisions

Full lift type safety valve medium gaseous  $K=0.75-0.85$

Full lift type safety valve medium liquid  $K=0.5-0.65$

Low lift type safety valve  $K=0.2-0.3$

$P_d$ ——The discharge pressure of relief valve,  $P_d=1.1P_s+0.1$ , MPa

$P_s$ ——Setting pressure of relief valve, MPa

$P_o$ ——The export side lateral pressure of relief valve, MPa(a)

$A$ ——Minimum exhaust cross-sectional area,  $\text{mm}^2$

$$\text{Full lift type safety valve, when } h \geq \frac{1}{4} d_1, A = \pi \frac{d_1^2}{4}$$

$$\text{Low lift type safety valve, when } h < \frac{1}{20} d_1, \text{ Flat sealed, } A = \pi D h;$$

$h$ ——Valve opening height, mm

$d_1$ ——Minimum flow path diameter <Seat throat diameter>, mm

$D$ ——Valve seat diameter, mm

$C$ ——Coefficient of gas properties,  $C=520 \sqrt{K \left( \frac{2}{k+1} \right)^{\frac{k+1}{k-1}}}$ , See Schedule

$K$ ——Gas adiabatic index,  $K=C_p/C_v$

$M$ ——Gas molar mass, kg/kmol

$T$ ——The temperature of the gas, K

$Z$ ——The gas compressibility under pressure of operating temperature

### ●The medium is liquid

$$W_s = 5.09 k K_p K_v A \sqrt{p \Delta P} \text{ kg/h}$$

$K_p$ ——Overpressure correction coefficient

$K_p=1.0$  at 25% overpressure

$K_p=0.8$  at 20% overpressure

$K_p=0.6$  at 10% overpressure

$K_v$ ——Viscosity correction coefficient

$$K_v = \left[ 0.9935 + \frac{2.878}{R^{0.5}} + \frac{342.75}{R^{1.5}} \right]^{-1.5}$$

$$R = \frac{\{WS / [(p/1000) \times 60]\} \times 18800 \times (1/1000)}{U/A}$$

# 安全阀排量计算

## Discharge Calculate



U——介质流动温度下的绝对粘度（厘泊）

U——Absolute viscosity at medium flow temperature (centipoise)

$\rho$ ——阀门入口侧温度下的液体密度， $\text{kg/m}^3$

$\rho$ ——Liquid density at valve inlet side temperature,  $\text{kg/m}^3$

$\Delta P$ ——阀门前后压力降，MPa；

$\Delta P$ ——Pressure drop before and after the valve, MPa；

$\Delta P = (1.25P_s + 0.1) - (P_b + 0.1)$   $P_s$  整定压力（表压）， $P_b$  背压力（表压）

$\Delta P = (1.25P_s + 0.1) - (P_b + 0.1)$   $P_s$ ——set pressure (gauge pressure),  
 $P_b$ ——back pressure (gauge pressure)

### ● 介质为饱和蒸气 The medium is saturated vapor

饱和蒸气中含量不小于98%，最大过热度为10℃

The content of saturated steam shall not be less than 98%, and the maximum superheat degree shall be 10 °C.

1、当  $P_d \leq 10\text{MPa}$  时

$W_s = 5.25KAP_d$  kg/h

$P_d = 1.03P_s + 0.1$  MPa

1、When  $P_d \leq 10\text{MPa}$

$W_s = 5.25KAP_d$  kg/h

$P_d = 1.03P_s + 0.1$  Mpa

2、当  $10\text{MPa} < P_d \leq 22\text{MPa}$  时

$W_s = 5.25KAP_d \left( \frac{190.6P_d - 6895}{229.2P_d - 7315} \right)$  kg/h

$P_d = 1.03P_s + 0.1$  MPa

2、When  $10\text{MPa} < P_d \leq 22\text{MPa}$

$W_s = 5.25KAP_d \left( \frac{190.6P_d - 6895}{229.2P_d - 7315} \right)$  kg/h

$P_d = 1.03P_s + 0.1$  MPa

### ● 不同K值气体特性系数C值 Gas characteristic coefficient C with different K values

| K    | C   | K    | C   | K    | C   | K    | C   |
|------|-----|------|-----|------|-----|------|-----|
| 1.00 | 315 | 1.20 | 337 | 1.40 | 356 | 1.60 | 372 |
| 1.02 | 318 | 1.22 | 339 | 1.42 | 358 | 1.62 | 374 |
| 1.04 | 320 | 1.24 | 341 | 1.44 | 359 | 1.64 | 376 |
| 1.06 | 322 | 1.26 | 343 | 1.46 | 361 | 1.66 | 377 |
| 1.08 | 324 | 1.28 | 345 | 1.48 | 363 | 1.68 | 379 |
| 1.10 | 327 | 1.30 | 347 | 1.50 | 364 | 1.70 | 380 |
| 1.12 | 329 | 1.32 | 349 | 1.52 | 366 | 2.00 | 400 |
| 1.14 | 331 | 1.34 | 351 | 1.54 | 368 | 2.20 | 412 |
| 1.16 | 333 | 1.36 | 352 | 1.56 | 369 |      |     |
| 1.18 | 335 | 1.38 | 354 | 1.58 | 371 |      |     |

### ● API527标准规定的密封要求 Sealing requirements specified in API527 standard

| 整定压力MPa(15.6℃)<br>Set pressure MPa (15.6 °C) | 最大允许泄漏（泡/分）<br>Maximum allowable leakage (bubbles/minute) |                                         |
|----------------------------------------------|-----------------------------------------------------------|-----------------------------------------|
|                                              | 喉径小于F<br>Throat diameter less than F                      | 喉径大于F<br>Throat diameter greater than F |
| 0.103~6.896                                  | 40                                                        | 20                                      |
| 10.3                                         | 60                                                        | 30                                      |
| 13.2                                         | 80                                                        | 40                                      |
| 17.2                                         | 100                                                       | 50                                      |
| 20.7                                         | 100                                                       | 60                                      |
| 27.6                                         | 100                                                       | 80                                      |
| 38.5                                         | 100                                                       | 100                                     |
| 41.4                                         | 100                                                       | 100                                     |



# TS

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