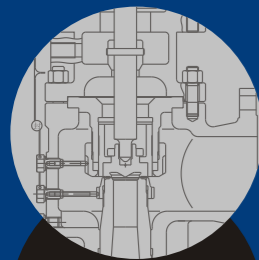


Safety Valve

安全阀 (国标/美标)

TANMA Valve



Innovative
Professional
Eternal
创新 专业 永恒

TANA[®]

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○ 如需详细了解本公司的产品，敬请来电咨询，内页数据仅供参考。
○ 本手册仅介绍公司产品部分。版面有限，其它产品未能详细列出。敬请谅解。



TANA[®]

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WENZHOU TOPNOTCH MACHINE CO.,LTD.



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Brief Introduction

Wenzhou Topnotch Machine Co.,Ltd., brand name TANA .established in the year 2003, located at China famous pump&valve TownOubei,Wenzhou. We'respecialized in producing and marketing all kinds of industrial valves,pump & actuators. Our corporate Vision is to be a pipeline control specialist by supply products and help our valued customersolve their problems with excellent sales & after-sales service, and also reasonable price.

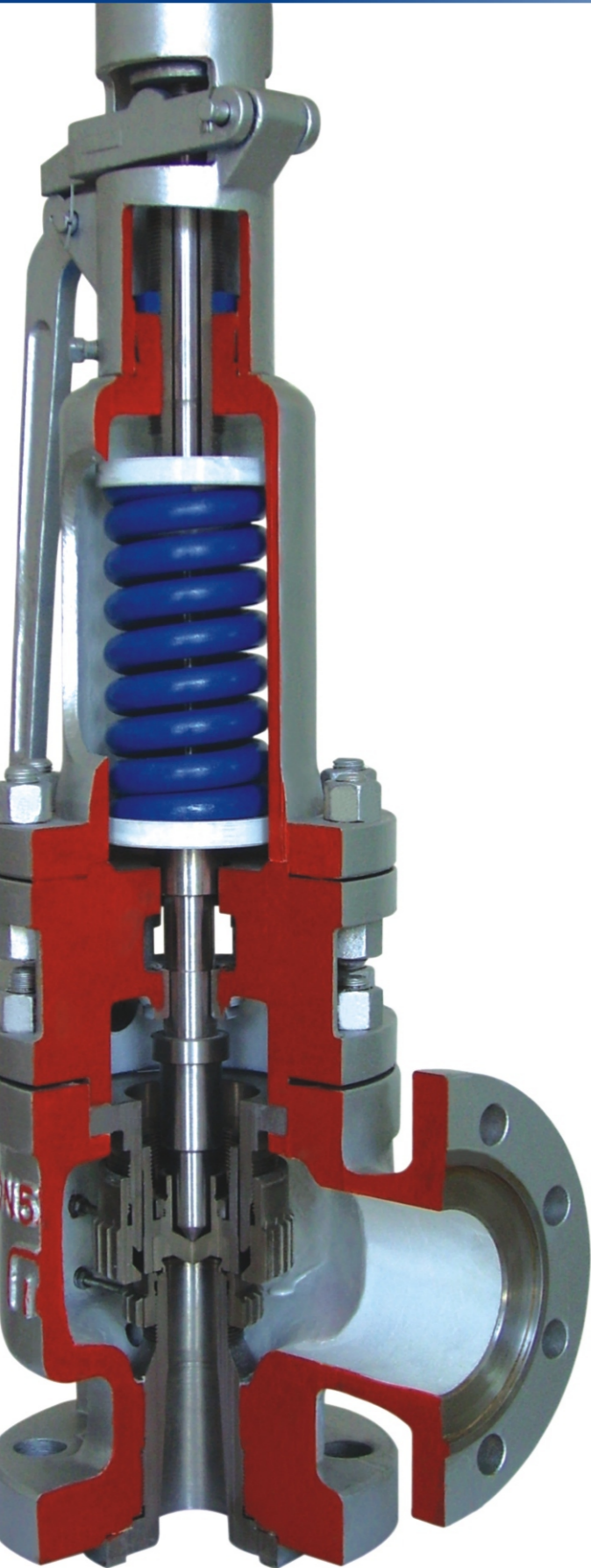
Over the years, we already have expanded our operations with team of well experienced design,manufacturing and marketing engineers. We have 100 -150 employees,around 50 sets advantaged producing equipments,which ensure our production ability. Our products have been widely application in the gas, oil, refining, chemical, marine, power generation and pipeline transmission industries. And 80% of products are supplied to SoutheastAsia, the Middle East, North America, Europe and Africa, more than 30 oversea countries' we have accumulated good reputation from our clients.

Quality is at the heart of everything we do, through product development to manufacturing, supply and sale. We make products strictly according to International standards & clients' requirements, and have established quality control system to ensure us offer the high quality products.

"Keep the promise and offer the top-class products & service" is our principle, we believe that we can establish and maintain long term win-win cooperation through our mutual effort by reasonable price, good quality product and best service.

Welcome to contact us, thank you!





国标安全阀系列

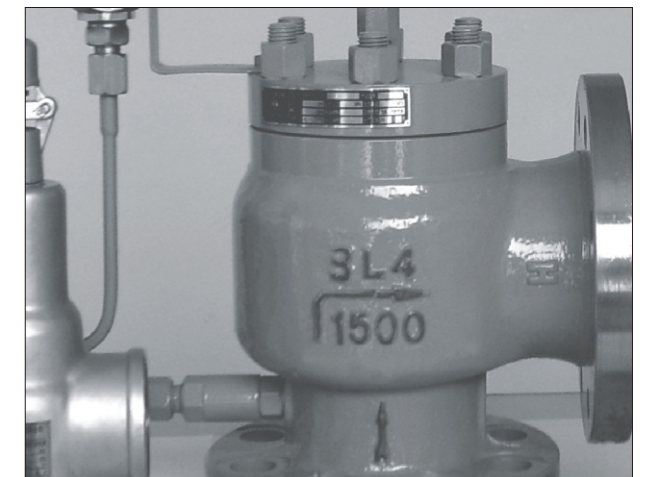
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● 泰纳系列安全简介:

泰纳公司安全阀是承压设备、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,保证设备和管路的安全运行。

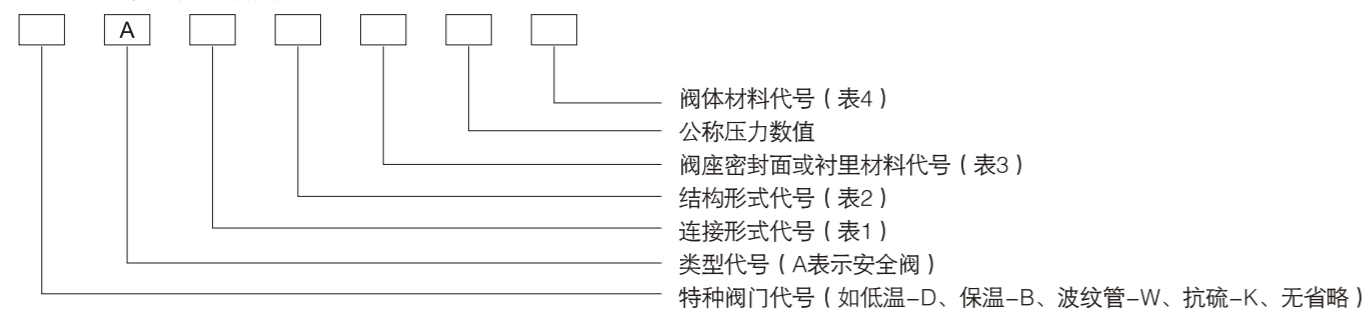
封闭式安全阀的阀盖是封闭的,利于防止灰尘和杂物侵入,防止有毒和易燃介质溢出,开放式安全阀由于阀盖是敞开,利于降低弹簧腔室的温度,主要用于蒸汽介质管道及容器,带散热器安全阀主要适用于介质温度超过350℃的工况。

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(在保证安全的情况下)。

全启式安全阀开启高度≥1/4流道直径,排放量大,微启式安全阀开启高度为1/20-1/40流道直径。

● 安全阀型号编制方法

阀门的型号参照机械部标准JB308《阀门型号编制方法》编制,系由以下七个部分组成:



● 表1

连接形式	代号
内螺纹	1
外螺纹	2
法兰	4
焊接	6

● 表2

		安全阀结构形式		代号	
弹簧式	封闭	带散热器	全启式	0	
		微启式		1	
		全启式		2	
	不封闭		全启式		4
			双联弹簧微启式		3
		带扳手	微启式		7
			全启式		8
			微启式		5
			带控制机构	全启式	
	脉冲式			9	

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。

阀体材料代号用汉语拼音字母表示,如表4所列。

● 表3

阀座密封面或衬里材料	代号	阀座密封面或衬里材料	代号
铜合金	T	合金钢	H
橡胶	X	渗氮钢	D
尼龙塑料	N	硬质合金	Y
氟塑料	F	衬胶	J
锡基轴承合金(巴氏合金)	B	搪瓷	C

● 表4

阀体材料	代号	阀体材料	代号
灰铸铁	Z	ZG1Cr18Ni9Ti	P
WCB、ZG230-450	C	ZG1Cr18Ni12Mo2Ti	R
1Cr5Mo、ZG1Cr5Mo	I	ZG15CrMoV	V

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。

● 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。

● Introduction to GB Safety Valve

TANA safety valve is the best overpressure protection device taking care of pressure equipment, containers and pipelines. When the medium pressure rises over the allowed pressure, the safety valve will automatically open and fully discharge to protect the equipment from pressure going on rising and will automatically close when the pressure lowers to the setting pressure to ensure that the equipment and pipeline runs safely.

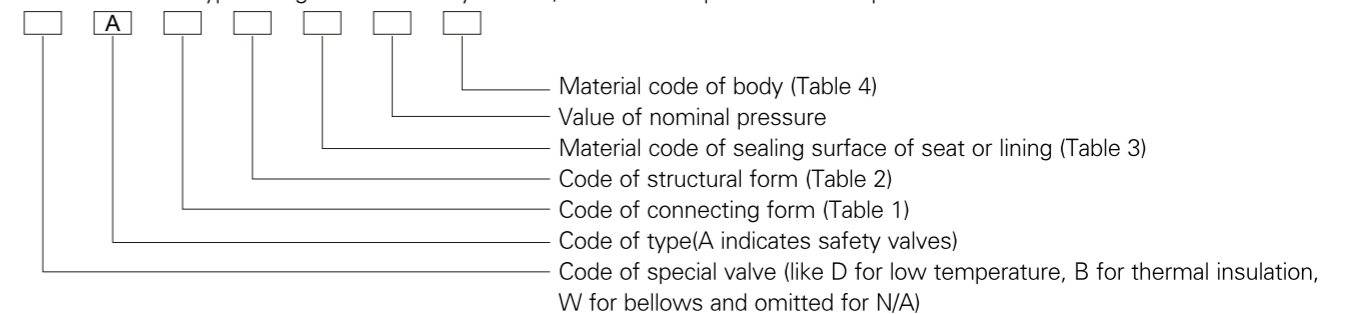
The bonnet of a sealed safety valve is enclosed to prevent dust and foreign matters from invading and meanwhile protect toxic combustible media from overflowing. The open safety valve is mainly used for the pipelines and containers with the steam medium to reduce the spring chamber's temperature as its bonnet is open, while the safety valve with a radiator is suitable for the medium with a temperature over 350°C.

The spring safety valve with a lever can be opened manually by the lever when the media pressure over 75% of setting pressure (On the premise of ensuring safety).

The opening height of the fall lift safety valve is one forth of the flow-through diameter, having an advantage of discharging greatly. The opening height of the low-lift safety valve is between one twentieth and one fortieth of the flow-through diameter.

● Method of Compiling The Types Safety Valve

The types of valves are generally compiled in accordance with the standard of the ministry of machine-building industry, Jb308 "Method of Type Designation of Safety Valves", which is composed of seven parts:



● Table 1

Connecting form	Code
internal thread	1
External thread	2
Flange	4
Welding	6

● Table 2

		Structural form of safety valve		Code	
Spring loaded type	Closed	With radiator	Full lift type	0	
		Low lift type		1	
		Full lift type		2	
			Full lift type		4
			Twin spring loaded low lift		3
	Open	With a lever	Low lift type		7
			Full lift type		8
			Low lift type		5
		With controls	Full lift type		6
		Pulse type		9	

The material codes of sealing surface of seat or liner are indicated by Chinese phonetic letters as listed in Table 3.

The body material code is indicated by Chinese phonetic letters as shown in Table 4.

● Table 3

Material of sealing surface of seat or liner	Code	Material of sealing surface of seat or liner	Code
Copper alloy	T	alloy steel	H
Rubber	X	Nifriding steel	D
Nyluro plastic	N	Stellite	Y
Fluoro plastics	F	Lining rubber	J
Tin-base bearing alloy (Babbitt metal)	B	Enamel	C

● Table 4

Body Material	Code	Body Material	Code
Grey Cast Iron	Z	ZG1Cr18Ni9Ti	P
WCB、ZG230-450	C	ZG1Cr18Ni12Mo2Ti	R
1Cr5Mo、ZG1Cr5Mo	I	ZG15CrMoV	V

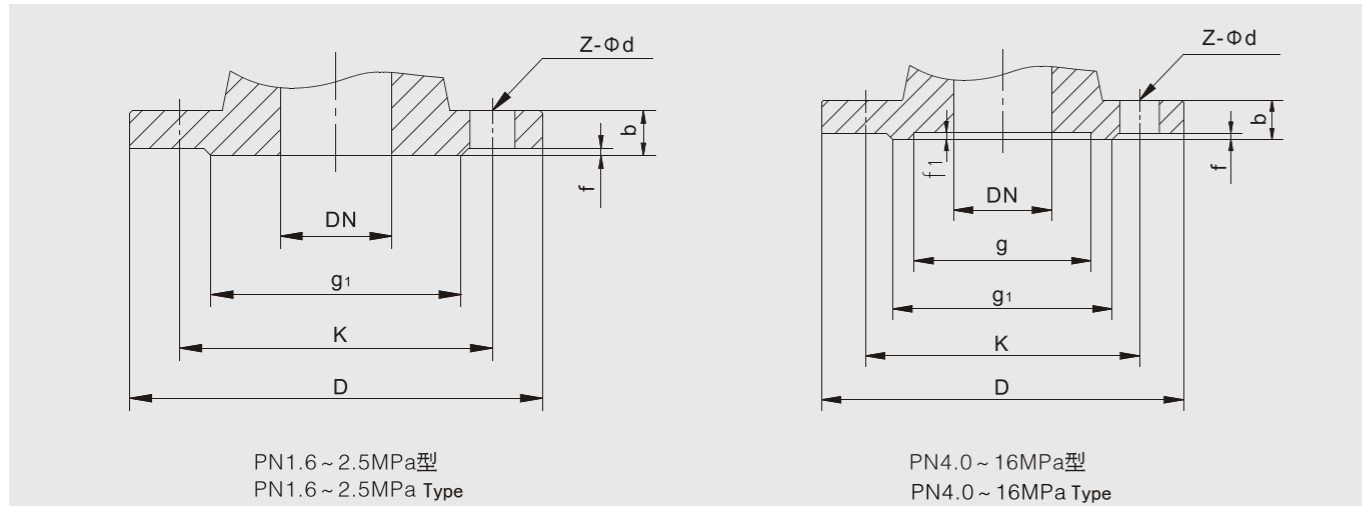
Remarks: "W" indicates the material of sealing surface of seat which is processed directly together with the body. The material of sealing surface of seat is indicated by a code of low hardness material if the materials of sealing surfaces of disc and seat are different.

● Type Designation Example:

A42Y-16C indicates: spring enclosed type fall lift safety valve, sealing surface material Stellite, nominal pressure PN 1.6 Mpa, and body material carbon steel.

安全阀 Safety Valve

● 依据JB/T79-94 According to JB/T79-94 standard



公称压力 Nominal Pressure								公称压力 Nominal Pressure														
尺寸(mm) Dimension(mm)								尺寸(mm) Dimension(mm)														
PN(Mpa)	DN	D	K	g1	b	f	Z-Φd	PN(Mpa)	DN	D	K	g1	g	f	f1	b	Z-Φd					
1.6	25	115	85	65	14	2	4-14	4.0	25	115	85	65	58	2	4	16	4-14					
	32	140	100	78	16	2	4-18		32	140	100	78	66	2	4	18	4-18					
	40	150	110	85	16	3	4-18		40	150	110	85	76	3	4	18	4-18					
	50	165	125	100	16	3	4-18		50	165	125	100	88	3	4	20	4-18					
	65	185	145	120	18	3	4-18		80	200	160	135	121	3	4	22	8-18					
	80	200	160	135	20	3	8-18		100	235	190	160	150	3	4.5	24	8-23					
	100	220	180	155	20	3	8-18		150	300	250	218	204	3	4.5	30	8-26					
	125	250	210	185	22	3	8-18		200	375	320	282	260	3	4.5	38	12-30					
	150	285	240	210	24	3	8-23		250	450	385	345	313	3	4.5	42	12-34					
	200	340	295	265	26	3	12-23		25	140	100	78	58	2	4	22	4-18					
	250	405	355	320	30	3	12-26		32	155	110	82	66	2	4	24	4-23					
300	460	410	375	30	4	12-26	40	170	125	95	76	3	4	24	4-23							
2.5	350	520	470	435	34	4	16-26	50	180	135	105	88	3	4	26	4-23						
	400	580	525	485	36	4	16-30	80	215	170	140	121	3	4	30	8-23						
	450	640	585	545	40	4	20-30	100	250	200	168	150	3	4.5	32	8-26						
	500	715	650	608	44	4	20-34	150	345	280	240	204	3	4.5	38	8-34						
	600	840	770	718	48	4	20-36	25	140	100	78	58	2	4	24	4-18						
	10.0	25	115	85	65	16	2	4-14	32	155	110	82	66	2	4	24	4-23					
		32	140	100	78	18	2	4-18	40	170	125	95	76	3	4	26	4-23					
40		150	110	85	18	3	4-18	50	195	145	112	88	3	4	28	4-26						
50		165	125	100	20	3	4-18	80	230	180	145	121	3	4	34	8-26						
65		185	145	120	22	3	8-18	100	265	210	172	150	3	4	38	8-30						
80		200	160	135	22	3	8-18	150	355	290	250	204	3	4.5	46	12-34						
100		235	190	160	24	3	8-23	40	175	125	92	76	3	4	32	4-27						
125		270	220	188	28	3	8-26	50	215	165	132	88	3	4	36	8-25						
150		300	250	218	30	3	8-26	80	260	205	168	121	3	4	46	8-30						
200		360	310	278	34	3	12-26	100	300	240	200	150	3	4.5	48	8-34						
250	425	370	332	36	3	12-30	150	390	318	270	204	3	4.5	66	12-41							
300	485	430	390	40	4	16-30	说明:如果采用其他法兰标准,订货时请说明。 Descriptions:If you used the other flange standards,please specify when ordering															
350	555	490	448	44	4	16-34																
400	620	550	505	48	4	16-36																

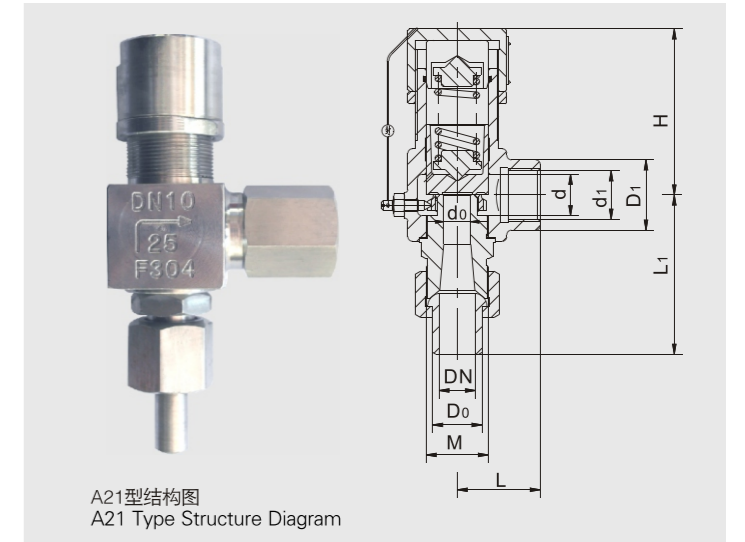
A21H-¹⁶/₄₀/₆₄/₁₀₀ C、A21W-¹⁶/₄₀/₆₄/₁₀₀ P/R、A21F-¹⁶/₂₅/₄₀ C/P/R 型 弹簧微启式外螺纹安全阀 Spring loaded low lift male thread safety valve

● 用途:

A21H型适用于工作温度≤200℃空气、氨、石油气等介质的设备和管路上。A21W型适用于温度≤200℃含腐蚀性的气体或液体的设备或管路上。A21F型适用于温度≤80℃的液化气、石油气等设备和管路上,作为超压保护装置。

● Use:

A21H type are used for the equipment and pipelines with such media as air, ammonia and petroleum at a working temperature less than 200℃. A21W type are used for the equipment and pipelines containing corrosive gases or liquids at a working temperature less than 200℃. A21F type are used for the equipment and pipelines of liquefied gas and petroleum gas at a working temperature less than 80℃. They function as an overpressure protection device.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径 Nominal Diameter (DN)	do	d	Do	M	d1	D1	L	L1	≈H
A21H/W/F-16C/P/R	15	12	15	20	M27×1.5	G1/2"	30	35	81	66
A21H/W/F-25C/P/R	20	16	20	25	M33×1.5	G3/4"	34	40	87	68
A21H/W/F-40C/P/R	25	18	25	31	M39×1.5	G1"	44	52	100	105
A21Y/W-64C/P/R	15	10	15	25	M36×1.5	G1"	44	52	100	105
A21Y/W-100C/P/R	20	10	20	31	M39×1.5	G1"	44	52	100	105
	25	12	25	31	M42×1.5	G1"	44	52	100	105

AQ-20 型 空压机安全阀 AQ-20 Air compressor safety valve

● 用途:

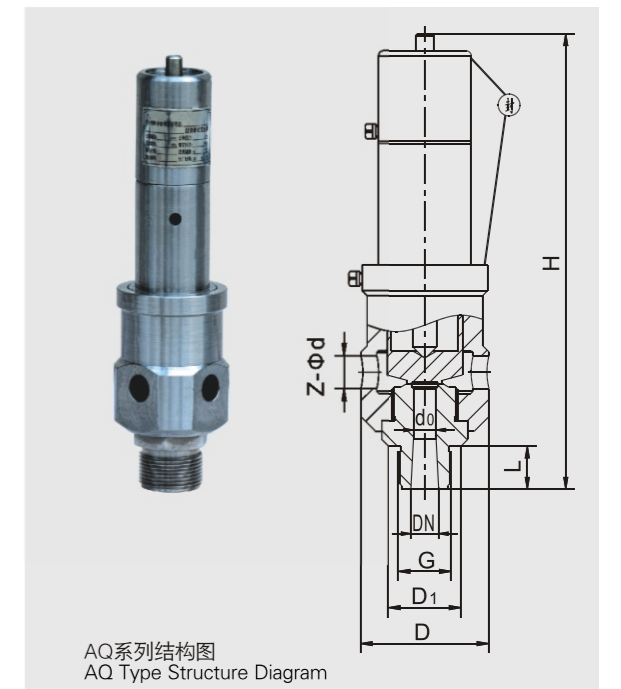
本阀门适用于工作温度≤200℃的空气,系空压机专用安全阀,当设备内压力超过允许值时,阀门自动开启,继而全量排放,当压力降低到规定值时,阀门自动关闭,保证设备安全运行。

● Use:

The valve is used for air at a working temperature less than 200℃, which is a safety valve dedicated to air compressors. When the pressure of equipment exceeds the allowed value, the valve will turn on automatically and discharge the pressure entirely. When the pressure decreases to the stated value, the valve will quickly turn off automatically, in order to make the equipment run effectively.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal Diameter	尺寸 Dimension						
DN	do	G	D	D1	Z-Φd	L	≈H
20	17	G1"	62	44	4-17	25	220
25	20	M36x2	70	50	4-20	28	226



A27H-10、A27H-¹⁶/₂₅C、A27Y-¹⁶/₂₅P/R型 弹簧微启式安全阀 Spring low lift safety valve

● 用途:

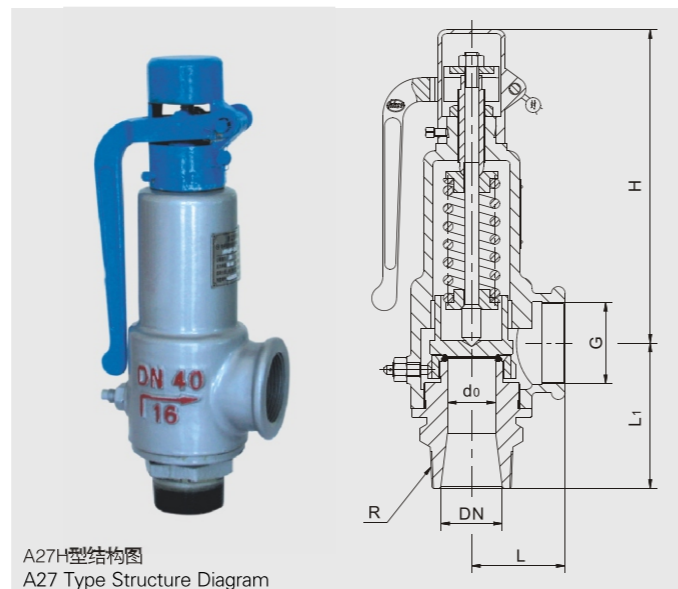
A27H型适用于工作温度≤200℃的水、空气、蒸气等介质的设备和管路上。A27Y-P/R适用于工作温度≤200℃有腐蚀性介质设备或管路上，作为超压保护装置。

● Use:

A27H type are used for the equipment and pipelines with such media as water, air and steam at a working temperature less than 200°C. A27Y-P/R type are used for the equipment and pipelines containing corrosive media at a working temperature less than 200°C. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN (mm) Diameter	尺寸 Dimension					
do	R	L	L ₁	G	≈H	
15	10	1/2"	40	65	1/2"	135
20	15	3/4"	45	65	3/4"	140
25	20	1"	45	76	1"	155
32	25	1 1/4"	55	85	1 1/4"	170
40	32	1 1/2"	60	90	1 1/2"	310
50	40	2"	67	105	2"	322
65	50	2 1/2"	76	115	2 1/2"	344
80	65	3"	110	145	3"	395



A28H-10、A28H-¹⁶/₂₅C、A28Y-¹⁶/₂₅P/R型 带手柄弹簧全启式安全阀 Spring fall lift safety valve with handle

● 用途:

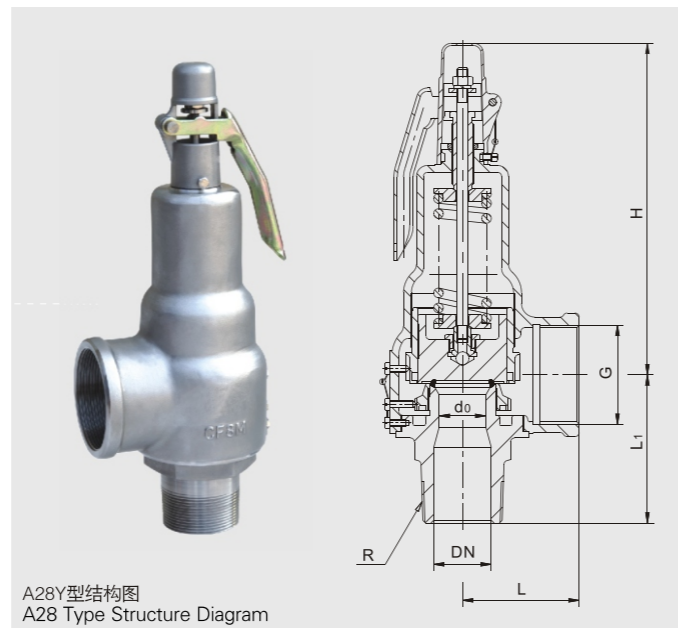
A28H/Y型适用于工作温度≤200℃的空气、蒸气、水、氮氢混合气体等介质的设备和管路上。A28Y-P/R适用于工作温度≤200℃有腐蚀性介质设备或管路上，作为超压保护装置。

● Use:

A28H/Y type are used for the equipment and pipelines with such media as air, vapour, water and N₂-H₂ mixed gas at a working temperature less than 200°C. A28Y-P/R type are used for the equipment and pipelines containing corrosive media at a working temperature less than 200°C. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN (mm) Diameter	尺寸 Dimension					
do	R	G	L	L ₁	≈H	
15	10	1/2"	3/4"	37	65	196
20	12	3/4"	1"	40	70	215
25	15	1"	1 1/4"	45	78	210
32	20	1 1/4"	1 1/2"	60	90	304
40	25	1 1/2"	2"	67	105	325
50	32	2"	2 1/2"	76	115	346
65	40	2 1/2"	3"	110	145	372



A41H-¹⁶/₂₅C/P/R型 弹簧微启封闭式安全阀 Spring low lift closed safety valve

● 用途:

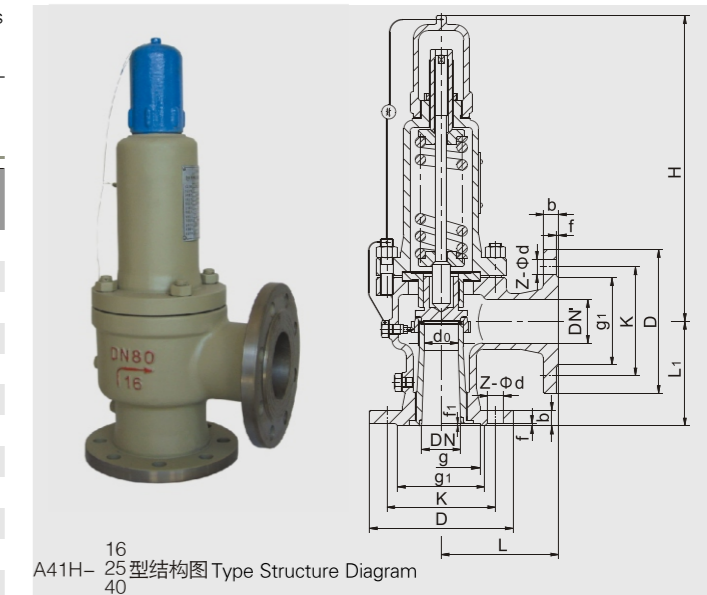
A41Y适用于工作温度≤300℃的石油、空气、水等介质的设备或管路上。A41Y-P/R型适用于工作温度≤200℃有腐蚀性介质的设备上或管路上，作为超压保护装置。

● Use:

A41Y type are used for the equipment and pipelines with such media as petroleum, air and water at a working temperature less than 300°C. A41Y-P/R type are used for the equipment and pipelines containing corrosive media at a working temperature less than 200°C. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN Diameter	do	DN'	L	L ₁	≈H
20	15	20	100	85	275
25	20	25	100	85	275
32	25	32	115	100	285
40	32	40	120	110	285
50	40	50	135	120	355
65	50	65	140	130	390
80	65	80	160	135	394
100	80	100	170	160	500
125	100	125	190	190	570
150	125	150	205	195	585
200	150	200	240	230	710
250	200	250	350	320	905



A41Y-⁶⁴/₁₀₀C/P/R型 弹簧微启封闭式安全阀 Spring low lift closed safety valve

● 用途:

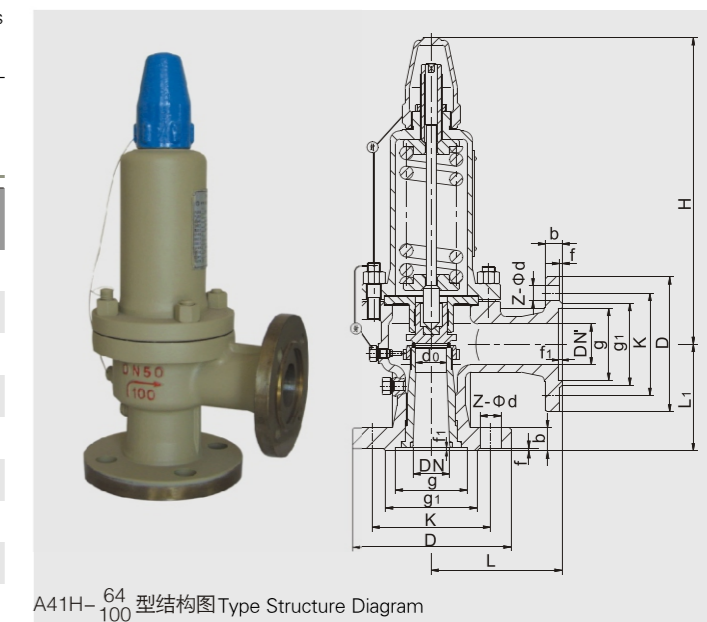
A41Y适用于工作温度≤300℃的石油、空气、水等介质的设备或管路上。A41Y-P/R型适用于工作温度≤200℃有腐蚀性介质的设备上或管路上，作为超压保护装置。

● Use:

A41Y type are used for the equipment and pipelines with such media as petroleum, air and water at a working temperature less than 300°C. A41Y-P/R type are used for the equipment and pipelines containing corrosive media at a working temperature less than 200°C. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN Diameter	do	DN'	L	L ₁	≈H
20	15	20	100	95	268
25	20	25	100	95	268
32	25	32	115	105	279
40	32	40	135	115	330
50	40	50	160	130	365
65	50	65	175	160	503
80	65	80	175	160	498
100	80	100	190	180	530
150	100	150	280	260	657



A47H-¹⁶/₂₅/₄₀C型 带扳手弹簧微启式安全阀 Spring low lift safety valve with spanner

● 用途:

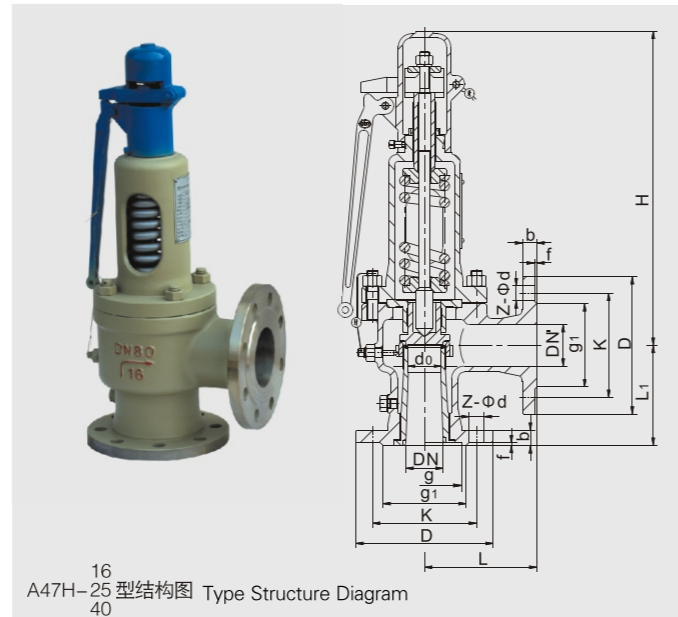
本阀门适用于工作温度在≤350℃的蒸汽、空气等介质的设备或管路上，作为超压保护装置。

● Use:

This safety valve is used for the equipment and pipelines with such media as steam and air at a working temperature less than 350℃. It serves as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	公称直径 Diameter do	DN'	L	L ₁	≈H
20	15	20	100	85	298
25	20	25	100	85	298
32	25	32	115	100	310
40	32	40	120	110	315
50	40	50	135	120	377
65	50	65	140	130	415
80	65	80	160	135	420
100	80	100	170	160	539
125	100	125	190	190	624
150	125	150	205	195	636
200	150	200	240	230	772
250	200	250	350	320	970



16
A47H-25 型结构图 Type Structure Diagram
40

A47Y-⁶⁴/₁₀₀C型 带扳手弹簧微启式安全阀 Spring low lift safety valve with spanner

● 用途:

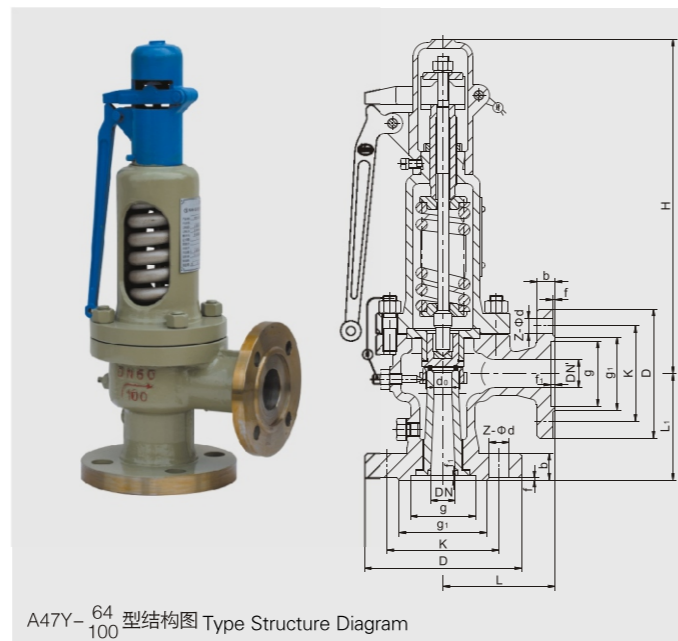
本阀门适用于工作温度在≤350℃的蒸汽、空气等介质的设备或管路上，作为超压保护装置。

● Use:

This safety valve is used for the equipment and pipelines with such media as steam and air at a working temperature less than 350℃. It serves as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	公称直径 Diameter do	DN'	L	L ₁	≈H
20	15	20	100	95	301
25	20	25	100	95	301
32	25	32	115	105	312
40	32	40	135	115	366
50	40	50	160	130	401
65	50	65	175	160	570
80	65	80	175	160	565
100	80	100	190	180	597
150	100	150	280	260	738



A47Y-⁶⁴/₁₀₀ 型结构图 Type Structure Diagram

A42Y-¹⁶/₂₅/₄₀C/P/R型 弹簧全启封闭式安全阀 Spring fall lift closed safety valve

● 用途:

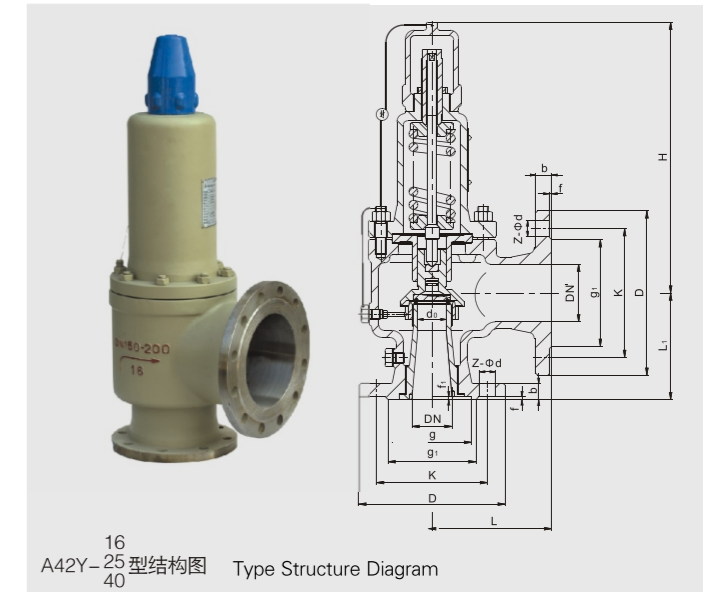
A42Y-C适用于工作温度≤300℃的空气、石油气、液体等介质的设备或管路上。A42Y-P/R型适用于工作温度≤200℃有腐蚀性介质的设备上或管路上，作为超压保护装置。

● Use:

A42Y-C type are used for the equipment and pipelines with such media as air, petroleum gas and liquids at a working temperature less than 300℃. A42Y-P/R type are used for the equipment and pipelines containing corrosive media at a working temperature less than 200℃. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	公称直径 Diameter do	DN'	L	L ₁	≈H
20	15	25	110	95	281
25	16	32	110	95	281
32	20	40	115	100	285
40	25	50	120	110	295
50	32	65	135	120	305
65	40	80	160	140	394
80	50	100	170	135	406
100	65	125	205	160	511
125	80	150	210	190	586
150	100	175	255	230	601
200	125	250	305	260	734
250	150	300	350	320	928
300	200	400	370	350	1159
350	250	500	375	415	1314
400	280	500	395	415	1530



16
A42Y-25 型结构图 Type Structure Diagram
40

A42Y-⁶⁴/₁₀₀C/P/R型 弹簧全启封闭式安全阀 Spring fall lift closed safety valve

● 用途:

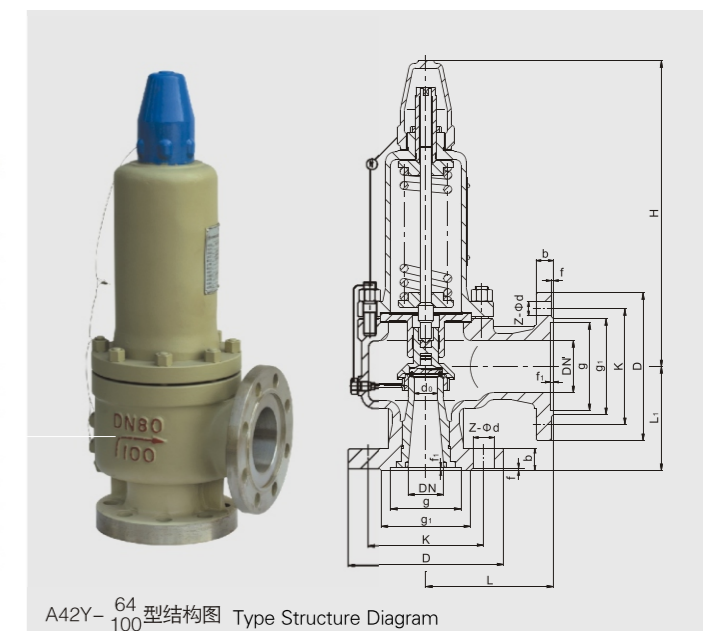
A42Y-C适用于工作温度≤300℃的空气、石油气、液体等介质的设备或管路上。A42Y-P/R型适用于工作温度≤200℃有腐蚀性介质的设备上或管路上，作为超压保护装置。

● Use:

A42Y-C type are used for the equipment and pipelines with such media as air, petroleum gas and liquids at a working temperature less than 300℃. A42Y-P/R type are used for the equipment and pipelines containing corrosive media at a working temperature less than 200℃. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径 Nominal DN	公称直径 Diameter do	DN'	L	L ₁	≈H
A42Y-64C	20	12	25	110	100	276
	25	16	32	110	100	276
	32	20	40	130	110	287
	40	25	50	135	120	292
	50	32	65	160	130	383
A42Y-64P	65	40	80	175	160	479
	80	50	100	175	160	489
	100	65	125	195	195	562
A42Y-64R	150	100	200	285	260	832
	20	12	25	110	100	276
	25	16	32	110	100	276
A42Y-100C	32	20	40	130	110	287
	40	25	50	135	120	292
	50	32	65	160	130	383
A42Y-100P	65	40	80	175	160	479
	80	50	100	175	160	489
	100	65	125	195	195	562
A42Y-100R	150	100	200	285	260	832



A42Y-⁶⁴/₁₀₀ 型结构图 Type Structure Diagram

A48Y-¹⁶/₂₅/₄₀ C型 带扳手弹簧全启式安全阀 Spring fall lift safety valve with spanner

● 用途:

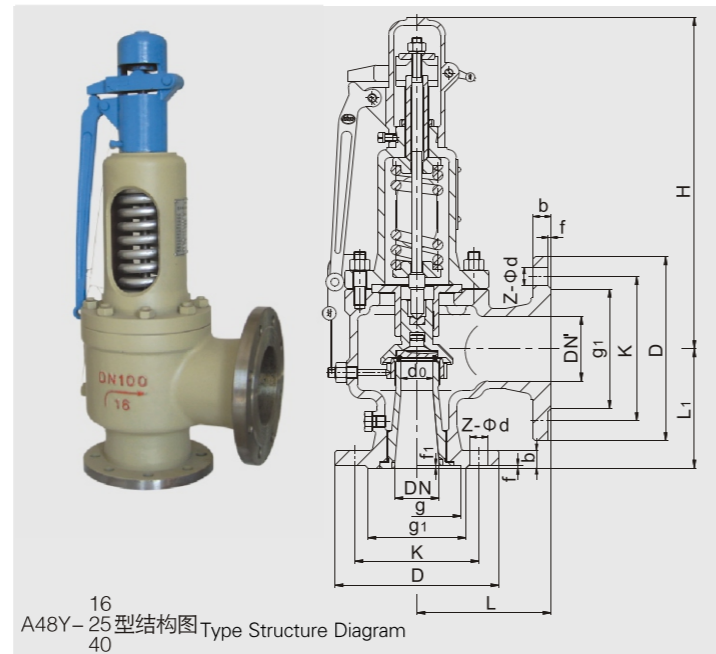
A48Y型适用于工作温度在≤350℃的蒸汽、空气等介质的设备或管路上，作为超压保护装置。

● Use:

A48Y type are used for the equipment and pipelines with such media as steam and air at a working temperature less than 350°C. It functions as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	公称通径 Nominal Diameter	do	DN'	L	L ₁	≈H
20	15	25	110	95	306	
25	16	32	110	95	306	
32	20	40	115	100	309	
40	25	50	120	110	323	
50	32	65	135	120	333	
65	40	80	160	140	420	
80	50	100	170	135	432	
100	65	125	205	160	553	
125	80	150	210	190	639	
150	100	175	255	230	654	
200	125	250	305	260	797	
250	150	300	350	320	998	
300	200	400	370	350	1246	
350	250	500	375	415	1494	
400	280	500	395	415	1780	



A44Y-¹⁶/₂₅/₄₀ C/P/R型 带扳手弹簧全启封闭式安全阀 Spring fall lift enclosed safety valve with spanner

● 用途:

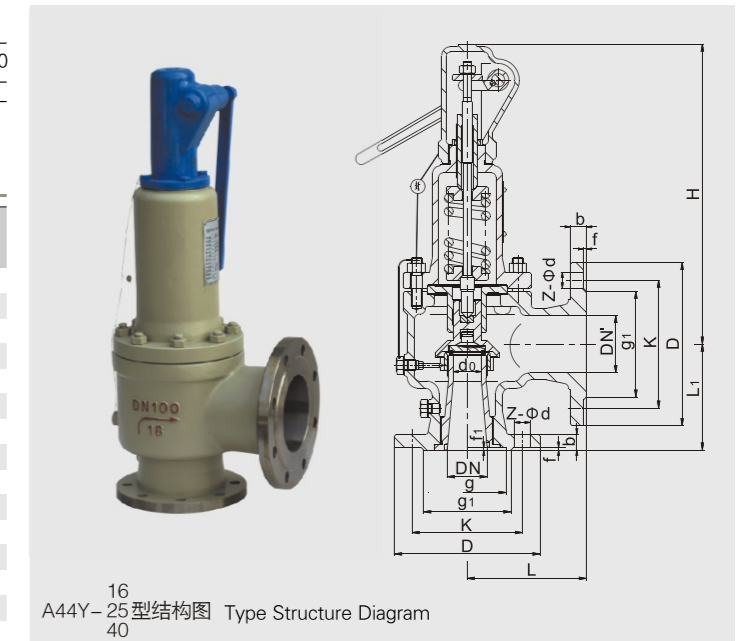
A44Y-C适用于工作温度≤300℃的空气、蒸汽、石油等介质的设备或管路上。A44Y-P/R型适用于工作温度≤200℃有腐蚀性介质的设备上，作为超压保护装置。

● Use:

A44Y-C type are used for the equipment and pipelines with such media as air, steam and petroleum at a working temperature less than 300°C. A44Y-P/R type are used for the equipment containing corrosive media at a working temperature less than 200°C. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	公称通径 Nominal Diameter	do	DN'	L	L ₁	≈H
20	15	25	110	95	307	
25	16	32	110	95	307	
32	20	40	115	100	311	
40	25	50	120	110	330	
50	32	65	135	120	340	
65	40	80	160	140	426	
80	50	100	170	135	438	
100	65	125	205	160	557	
125	80	150	210	190	641	
150	100	175	255	230	656	
200	125	250	305	260	795	
250	150	300	350	320	995	
300	200	400	370	350	1263	
350	250	500	375	415	1711	
400	280	500	395	415	1780	



A48Y-⁶⁴/₁₀₀ C型 带扳手弹簧全启式安全阀 Spring fall lift safety valve with spanner

● 用途:

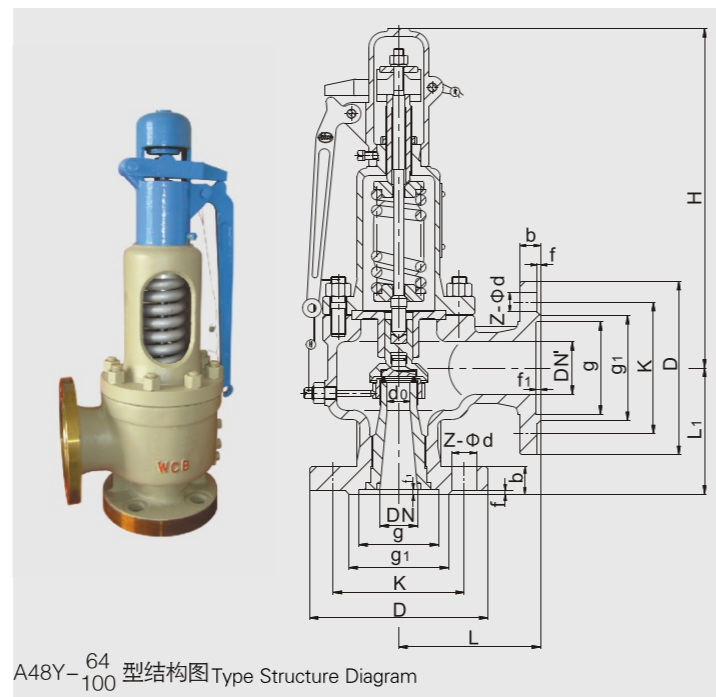
A48Y型适用于工作温度在≤350℃的蒸汽、空气等介质的设备或管路上，作为超压保护装置。

● Use:

A48Y type are used for the equipment and pipelines with such media as steam and air at a working temperature less than 350°C. It functions as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径 Nominal DN	公称通径 Nominal Diameter	do	DN'	L	L ₁	≈H
A48Y-64C	20	12	25	110	100	305	
	25	16	32	110	100	305	
	32	20	40	130	110	318	
	40	25	50	135	120	323	
	50	32	65	160	130	415	
	65	40	80	175	160	531	
A48Y-100C	80	50	100	175	160	541	
	100	65	125	195	195	624	
	150	100	200	285	260	903	
	20	12	25	110	100	305	
	25	16	32	110	100	305	
	32	20	40	130	110	318	
A48Y-100C	40	25	50	135	120	323	
	50	32	65	160	130	415	
	65	40	80	175	160	531	
	80	50	100	175	160	541	
	100	65	125	195	195	624	
	150	100	200	285	260	903	



A44Y-⁶⁴/₁₀₀ C/P/R型 带扳手弹簧全启封闭式安全阀 Spring fall lift enclosed safety valve with spanner

● 用途:

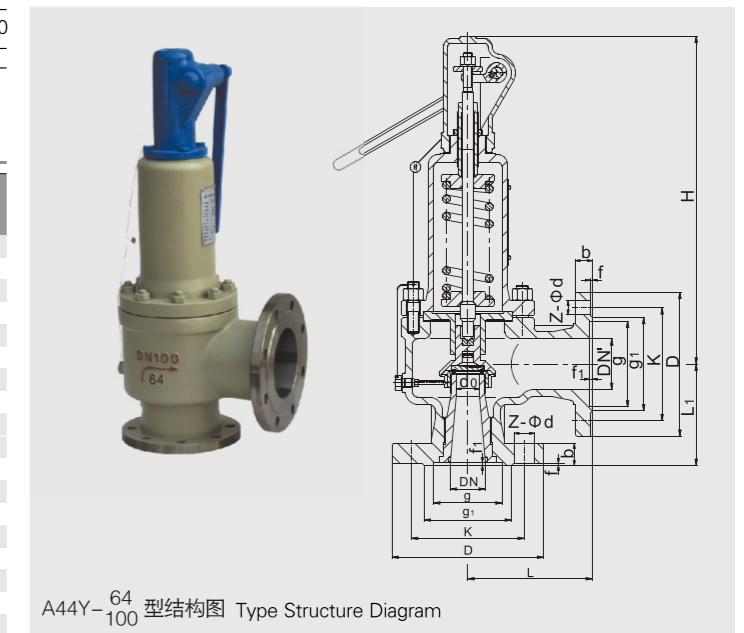
A44Y-C适用于工作温度≤300℃的空气、蒸汽、石油等介质的设备或管路上。A44Y-P/R型适用于工作温度≤200℃有腐蚀性介质的设备上，作为超压保护装置。

● Use:

A44Y-C type are used for the equipment and pipelines with such media as air, steam and petroleum at a working temperature less than 300°C. A44Y-P/R type are used for the equipment containing corrosive media at a working temperature less than 200°C. They function as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

型号	公称通径 Nominal DN	公称通径 Nominal Diameter	do	DN'	L	L ₁	≈H
A44Y-64C	20	12	25	110	100	306	
	25	16	32	110	100	306	
	32	20	40	130	110	325	
	40	25	50	135	120	330	
	A44Y-64P	50	32	65	160	130	421
		65	40	80	175	160	535
A44Y-64R	80	50	100	175	160	545	
	100	65	125	195	195	626	
	150	100	200	285	260	899	
	20	12	25	110	100	306	
	25	16	32	110	100	306	
	32	20	40	130	110	325	
A44Y-100C	40	25	50	135	120	330	
	A44Y-100P	50	32	65	160	130	421
		65	40	80	175	160	535
	A44Y-100R	80	50	100	175	160	545
		100	65	125	195	195	626
	150	100	200	285	260	899	



A37H-¹⁶/₂₅C, A38Y-¹⁶/₄₀C, A43H-¹⁶/₂₅C 双联弹簧式安全阀 Duplex spring safety valve

● 用途:

本阀门适用于工作温度在≤350℃的蒸汽、空气等介质的设备或管路上。当设备和管路内压力升高超过允许值时，阀门自动开启，继而全量排放。当压力降低至规定值时，阀门自动关闭，保证设备和管路的安全进行。

说明:该阀门是在一个Y型接头上装设两个同样型号规格的安全阀，其中公称通径是指Y型接头进口口径，组合情况如下:

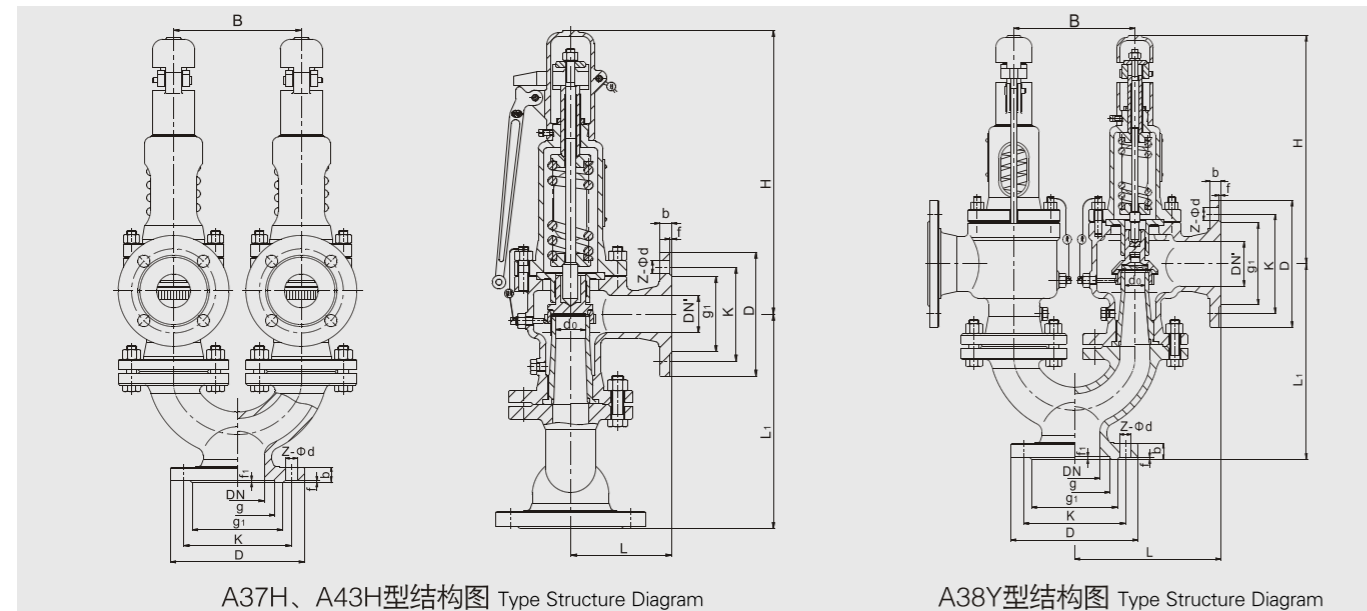
主要部件材料说明:A38Y、A43H、A37H型安全阀除三通材料为WCB外，其余零件的材料均和A47H、A48Y型弹簧式安全阀相同。

● Use:

This safety valve is used for the equipment and pipelines with such media as steam and air at a working temperature less than 350°C. When the pressure inside equipment and pipelines rises over the allowed pressure, the valve will automatically open and fully discharge, and will automatically close when the pressure lowers to the setting pressure to ensure the safety of equipment and pipelines.

Description: The equipment is made of the same two types of safety valves which are connected by a Y-type joint. The nominal diameter means the Y-type joint's inlet size. Combinations are as below:

Materials description of main parts: Except the teematerial for WCB, the materials of other parts of A38Y/A43H/A37H safety valves are the same as those of A47H/A48Y type spring loaded safety valves.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	尺寸 Dimension						
	DN	L	L ₁	B	DN'	do	H
A37H- ¹⁶ / ₂₅ 40	50	115	225	165	32	2×25	310
	80	140	310	205	65	2×50	415
	100	160	355	255	80	2×65	420
	125	170	400	275	100	2×80	540
A38Y- ¹⁶ / ₂₅ 40	50	198	225	165	40	2×20	310
	80	230	285	190	65	2×32	335
	100	275	350	230	80	2×40	420
	150	343	400	275	125	2×65	555
A43H- ¹⁶ / ₂₅ 40	50	115	225	165	32	2×25	310
	80	135	285	190	50	2×40	380
	100	160	355	255	80	2×65	420
	125	170	400	275	100	2×80	540
A43H- ¹⁶ / ₄₀	150	190	440	300	125	2×100	625

A37H型公称通径DN A37H Type Nominal Diameter	50	80	100	125	150
相应的A47H型公称通径DN Relevant A47H Type Nominal Diameter	32	65	80	100	125



A38H型公称通径DN A38H Type Nominal Diameter	50	80	100	150	
相应的A48H型公称通径DN Relevant A48H Type Nominal Diameter	32	50	65	100	
A43H型公称通径DN A43H Type Nominal Diameter	50	80	100	125	150
相应的A47H型公称通径DN Relevant A47H Type Nominal Diameter	32	50	80	100	125

A42Y-¹⁶⁰/₃₂₀C/P/R型 弹簧全启封闭式高压安全阀 Spring fall lift closed high pressure safety valve

● 用途:

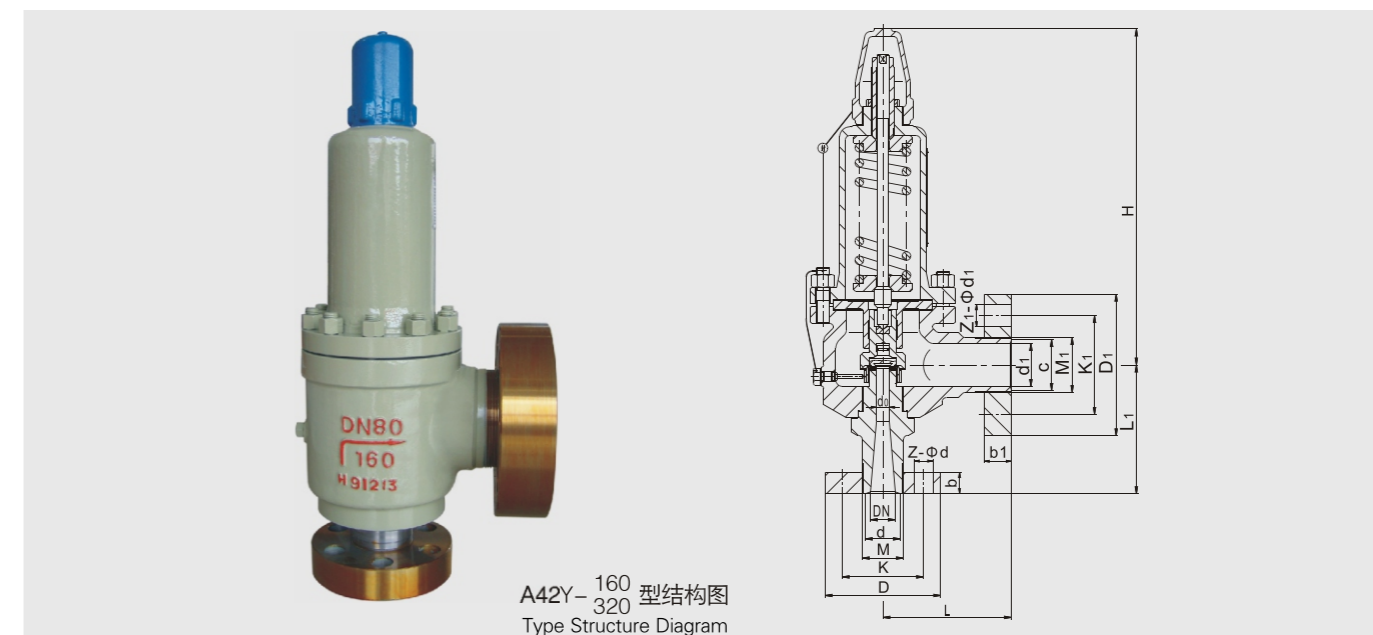
A42Y-160/320 C型适用于工作温度≤200℃空气、氮氢混合气等介质的设备和管路上。A42Y-160P/R、A42Y-320P/R型适用于工作温度≤200℃有腐蚀性气体的设备和管路上，作为超压保护装置。

连接法兰标准按JB/T2769的标准。

● Use:

A42Y-160/320C type are used for the equipment and pipelines with such media as air and N₂-H₂ mixed gas at a working temperature less than 200°C. A42Y-160P/R and A42Y-320P/R type are used for the equipment and pipelines containing corrosive gases at a working temperature less than 200°C as an overpressure protection device.

Flange connecting dimensions comply with Standard of JB/T2769.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径 DN Nominal Diameter	do	d	M	D	K	Z-φd	b	d ₁	C	M ₁	D ₁	K ₁	Z ₁ -φd	b ₁	L	L ₁	≈H
A42Y-160	15	8	20	M24×2	95	60	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	20	10	27	M33×2	105	68	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	25	12	28	M33×2	105	68	3-18	20	40	47	M52×2	165	115	6-26	28	135	130	314
	32	15	37	M42×2	115	80	4-18	22	50	59	M64×3	165	115	6-26	32	150	150	390
	40	20	47	M52×2	165	115	6-26	28	65	74	M80×3	200	145	6-29	40	180	165	495
A42Y-320	50	25	59	M64×3	165	115	6-26	32	80	94	M100×3	225	170	6-33	45	190	190	510
	15	8	27	M33×2	105	68	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	20	10	32	M36×2	110	75	3-18	22	29	37	M42×2	115	80	4-18	22	95	100	263
	25	12	35	M42×2	115	80	4-18	22	40	47	M52×2	165	115	6-26	28	135	130	314
	32	14	41	M48×2	135	95	4-22	25	50	59	M64×3	165	115	6-26	32	150	150	390
A42Y-400	40	18	58	M64×3	165	115	6-26	32	65	74	M80×3	200	145	6-29	40	180	165	495
	50	23	70	M80×3	200	145	6-29	40	80	94	M100×3	225	170	6-33	45	190	190	510
	32	15	41	M48×2	135	95	4-22	25	50	59	M64×3	165	115	6-26	32	150	150	397

A41Y-160/320 C/P/R型 弹簧微启封闭式高压安全阀 Spring low lift closed high pressure safety valve

● 用途:

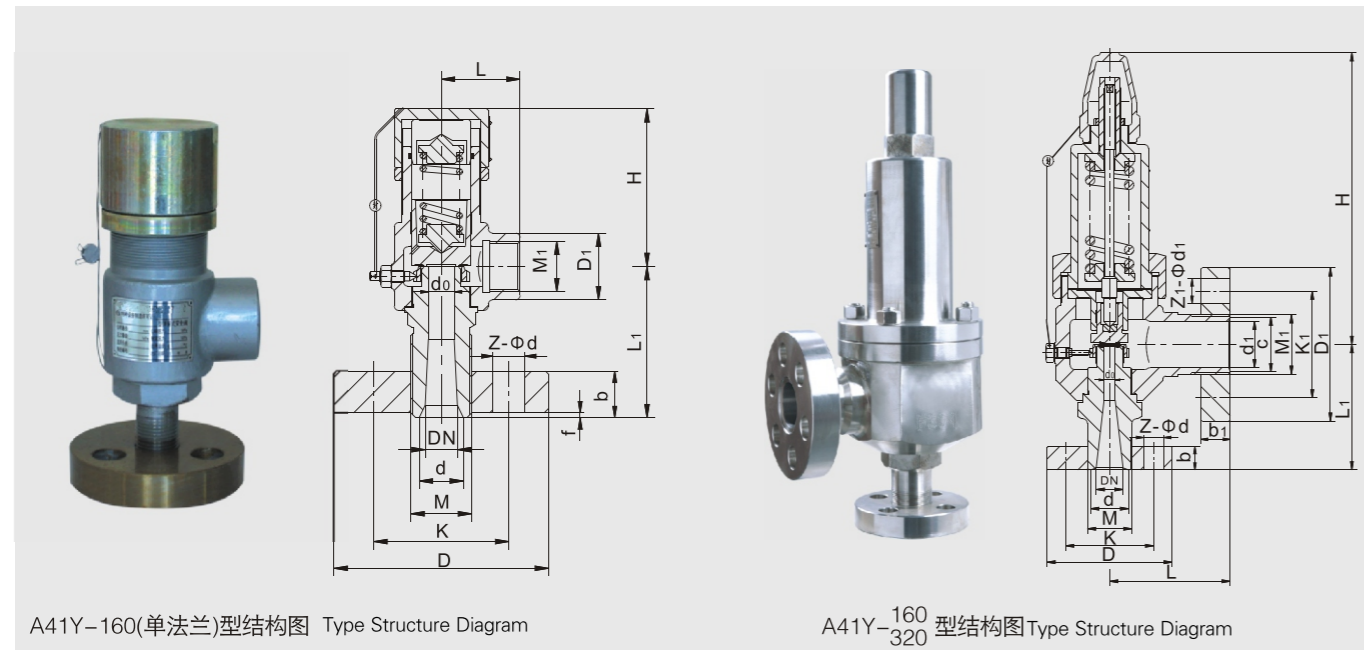
A41Y-160/320型适用于工作温度≤200℃空气、氮氢混合气、水等介质的设备和管路上。A41Y-160P/R、A41Y-320P/R型适用于工作温度≤200℃有腐蚀性气体或液体介质的设备和管路上，作为超压保护装置。

连接法兰标准按JB/T2769的标准。

● Use:

A41Y-160/320 C type are used for the equipment and pipelines with such media as air and N₂-H₂ mixed gas at a working temperature less than 200°C. A41Y-160P/R and A41Y-320P/R type are used for the equipment and pipelines containing corrosive gases or liquids at a working temperature less than 200°C as an overpressure protection device.

Flange connecting dimensions comply with Standard of JB/T2769.



A41Y-160(单法兰)型结构图 Type Structure Diagram

A41Y-320型结构图 Type Structure Diagram

● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径DN Nominal Diameter	do	d	M	D	K	Z-φd	b	d ₁	C	M ₁	D ₁	K ₁	Z ₁ -φd ₁	b ₁	L	L ₁	≈H
A41Y-160 (单法兰)	15	8	20	M24×2	95	60	3-18	20	--	--	M33×2	36	--	--	--	50	80	85
	20	10	25	M27×2	95	60	3-18	20	--	--	M33×2	48	--	--	--	50	80	85
	25	12	28	M33×2	105	68	3-18	20	--	--	M33×2	48	--	--	--	50	80	85
A41Y-160	15	8	20	M24×2	95	60	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	20	10	27	M33×2	105	68	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	25	12	28	M33×2	105	68	3-18	20	40	47	M52×2	165	115	6-26	28	135	130	285
	32	15	37	M42×2	115	80	4-18	22	50	59	M64×3	165	115	6-26	32	130	135	285
	40	20	47	M52×2	165	115	6-26	28	65	74	M80×3	200	145	6-29	40	180	165	495
A41Y-320	15	8	27	M33×2	105	68	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	20	10	32	M36×2	110	75	3-18	20	29	37	M42×2	115	80	4-18	22	95	100	263
	25	12	35	M42×2	115	80	4-18	22	40	47	M52×2	165	115	6-26	28	135	130	285
	32	14	41	M48×2	135	95	4-22	25	50	59	M64×3	165	115	6-26	32	130	135	285
	40	18	58	M64×3	165	115	6-26	32	65	74	M80×3	200	145	6-29	40	180	165	495
	50	23	70	M80×3	200	145	6-29	40	80	94	M100×3	225	170	6-33	45	190	190	510

A42F-16/25/40 C型 液化石油气安全阀 LPG safety valve AH42F-16/25/40 C型 安全回流阀 AH42F safety reflux valve

● 用途:

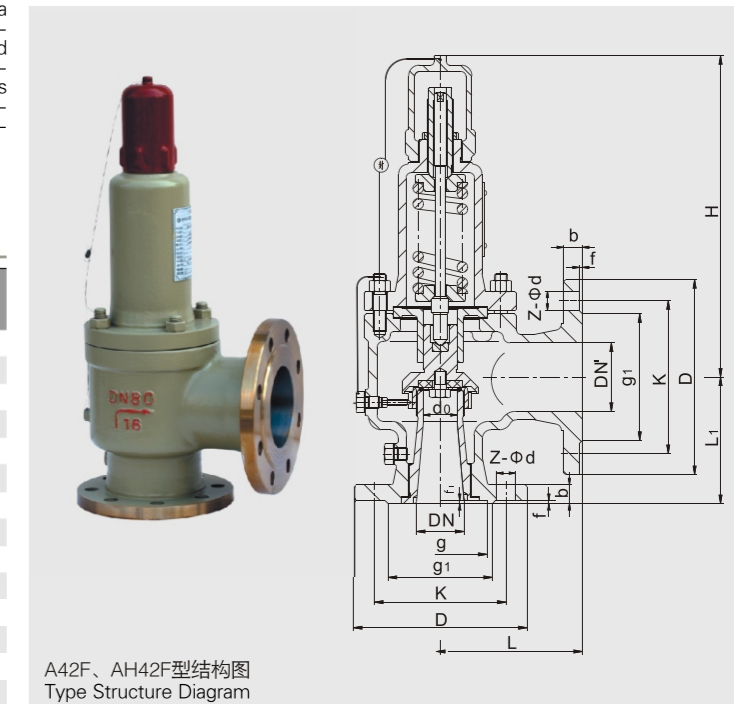
A42F型适用于工作温度-29~+80℃的液化石油气和类似非腐蚀性介质的设备和管路上。AH42F型安全回流阀适用于液化石油气罐泵出口的液相回流管道上。当设备和管路内压力超过允许值时，阀门自动开启，继而全量排放，当压力降低到规定值时，阀门自动关闭，保证设备安全运行。

● Use:

A42F type are used for the equipment and pipelines with such media as liquefied petroleum gas and similar non-corrosive at a working temperature between -29~+80°C. AH42F type safety reflux valve is mounted on the liquid-phase reflux pipeline of the pump outlet of the liquefied petroleum gas station. When the pressure inside equipment and pipelines rises over the allowed pressure, the valve will automatically open and fully discharge, and will automatically close when the pressure lowers to the setting pressure to ensure the safety of equipment.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	do	DN'	L	L ₁	≈H
20	15	25	110	95	281	
25	16	32	110	95	281	
32	20	40	115	100	285	
40	25	50	120	110	295	
50	32	65	135	120	305	
65	40	80	160	140	394	
80	50	100	170	135	406	
100	65	125	205	160	511	
125	80	150	210	190	586	
150	100	175	255	230	601	
200	125	250	305	260	734	
250	150	300	350	320	928	
300	200	400	370	350	1159	
350	250	500	375	415	1314	



A42F、AH42F型结构图 Type Structure Diagram

AHN42F-P18型 平行式安全回流阀 AHN42F-P18型 Parallel safety reflux valve

● 用途:

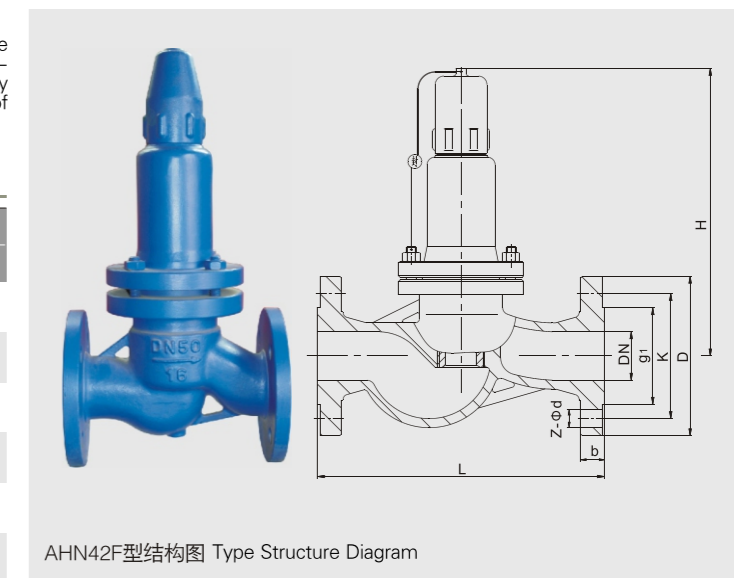
AHN42F型安全回流阀适用于液化石油气罐泵出口的液相回流管道上。当泵前压力超过规定值时，阀门自动开启并起安全回流作用，保证设备和管路的安全运行。

● Use:

AHN 42F type is mounted on the liquid-phase reflux pipeline of the pump outlet of the liquefied petroleum gas station, when the pressure before the pump exceeds the stated value, the valve will open automatically and lead to safe return of the liquid so as to ensure the safe operation of equipment and pipelines.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	尺寸 Dimension					
		D	K	g ₁	b	Z-φd	L ≈H
40	150	110	85	16	4-18	200	346
50	160	125	100	16	4-18	230	346
65	180	145	120	20	4-18	290	440
80	195	160	135	20	8-18	310	537
100	215	180	155	22	8-18	350	548
150	280	240	210	24	8-23	480	706



AHN42F型结构图 Type Structure Diagram

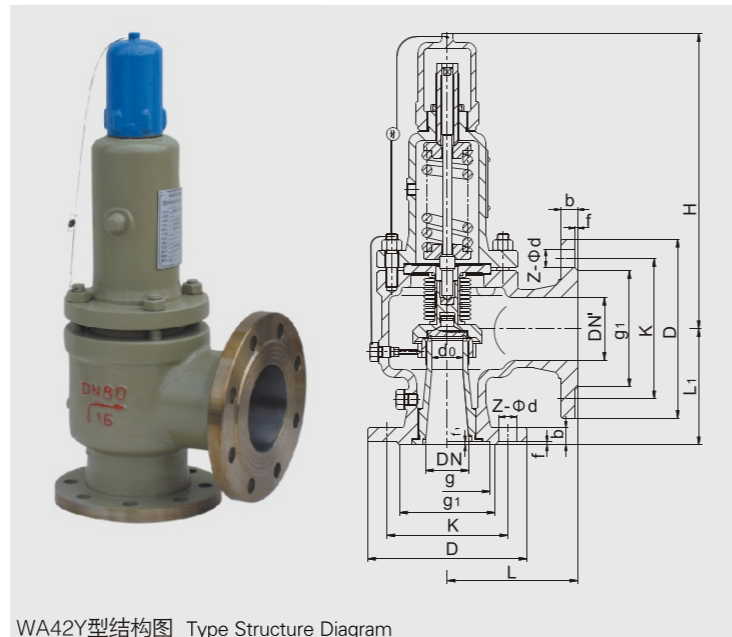
WA42Y-¹⁶/₂₅/₄₀ C/P/R型 波纹管背压平衡全启式安全阀 Bellows back pressure balanced fall lift safety valve

● 用途:
本阀门适用于工作温度≤300℃存在变动背压或有毒易燃、腐蚀性介质的设备或管路上, 作为超压保护装置。

● Use:
This safety valve is used for the equipment and pipelines with instable back pressure or containing poisonous or corrosive media at a working temperature less than 300℃ as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	do	DN'	L	L ₁	≈H
20	15	25	110	95	281	
25	16	32	110	95	281	
32	20	40	115	100	285	
40	25	50	120	110	295	
50	32	65	135	120	305	
65	40	80	160	140	394	
80	50	100	170	135	406	
100	65	125	205	160	511	
125	80	150	210	190	586	
150	100	175	255	230	601	
200	125	250	305	260	734	
250	150	300	350	320	928	
300	200	400	370	350	1159	
350	250	500	375	415	1314	



WA42Y型结构图 Type Structure Diagram

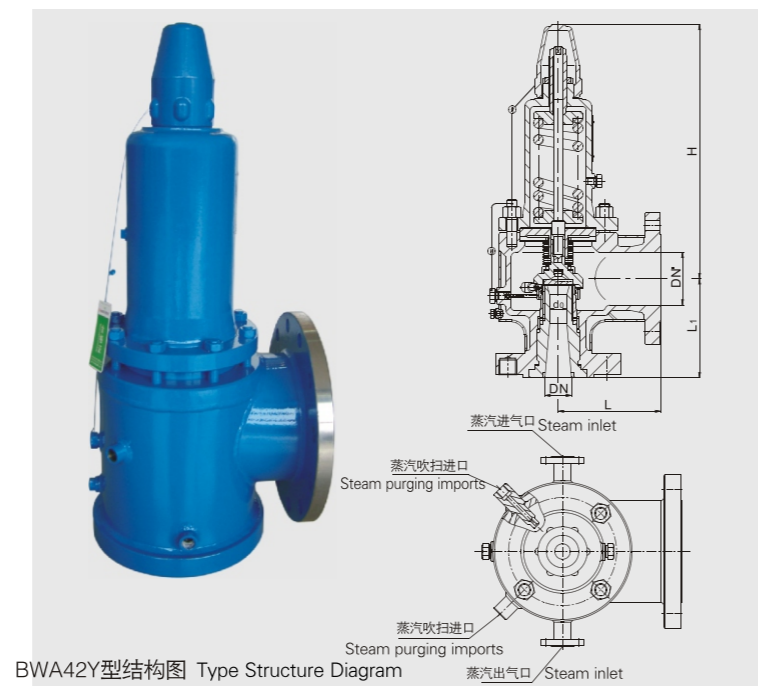
BWA42Y-¹⁶/₂₅/₄₀ C/P/R型 保温波纹管背压平衡全启式安全阀 Thermal insulation bellows back pressure balanced fall lift safety valve

● 用途:
BWA42型安全阀用作聚酯、乙烯及尿素等装置, 安全阀配备保温夹套, 蒸汽吹扫接头, 确保系统安全运行。

● Use:
BWA42 type safety valve is used for equipment of polyester, ethylene, urea and so on. The safety valve is equipped with a heating jacket and steam purging connectors to ensure safe operation of the system.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	do	DN'	L	L ₁	≈H
20	15	25	110	95	281	
25	16	32	110	95	281	
32	20	40	115	100	285	
40	25	50	120	110	295	
50	32	65	135	120	305	
65	40	80	160	140	394	
80	50	100	170	135	406	
100	65	125	205	160	511	
125	80	150	210	190	586	
150	100	175	255	230	601	
200	125	250	305	260	734	
250	150	300	350	320	928	
300	200	400	370	350	1159	
350	250	500	375	415	1314	



BWA42Y型结构图 Type Structure Diagram

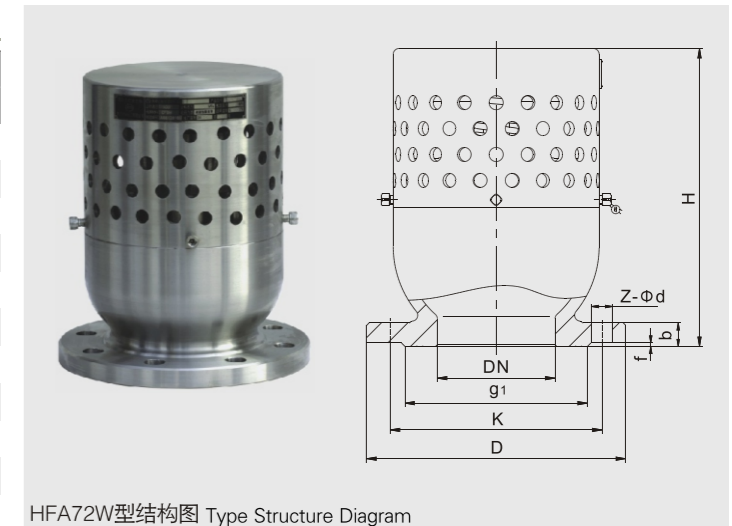
HFA72W-10P/R型 真空负压安全阀 Vacuum negative pressure safety valve

● 用途:
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; 当负压降低到规定值时, 该阀自动关闭, 从而保护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, 产生负压时, 安装设备即确保设备安全。

● Use:
1. Used for negative pressure systems: When the negative pressure in the container exceeds allowable values, the valve will open automatically and absorb air. When the negative pressure in the container reaches the allowable values, the valve will close automatically so as to protect the equipment and the system.
2. Used for normal non negative pressure systems: containers of all kinds of corrosive media, such as the absorption tower, distillation tower, storage tank, etc. If the radiation valve does not open after cleaning with steam inside, steam will condensate and produce negative pressure, while the equipment installed can ensure safety.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	尺寸 Dimension						
DN	Diameter	D	K	g ₁	Z-φd	b	f	≈H
15	95	65	45	4-14	14	2	110	
20	105	75	55	4-14	16	2	130	
25	115	85	65	4-14	16	2	150	
32	140	100	78	4-18	18	2	180	
40	150	110	85	4-18	18	3	200	
50	165	125	100	4-18	20	3	221	
80	200	160	135	4-18	22	3	245	
100	220	180	155	8-18	22	3	253	
125	250	210	185	8-18	24	3	280	
150	285	240	210	8-23	24	3	329	
200	340	295	265	8-23	26	3	377	



HFA72W型结构图 Type Structure Diagram

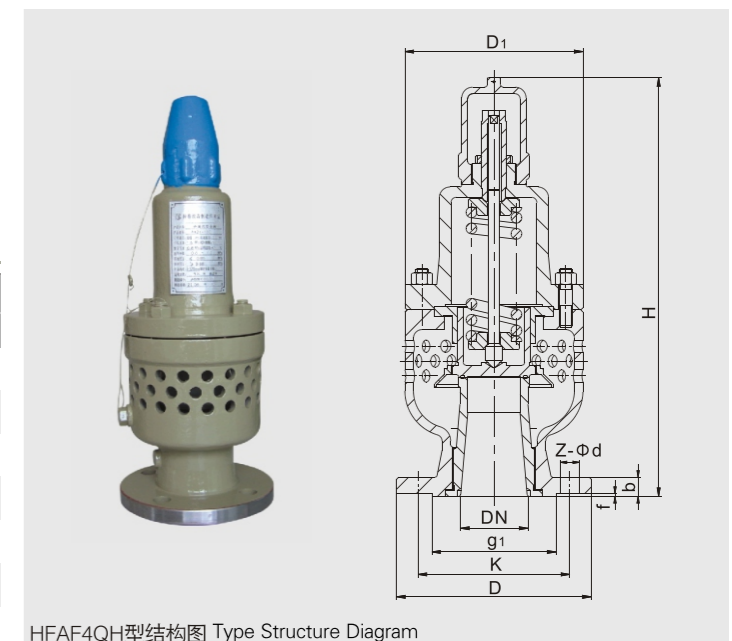
HFAF4QH-10C 安全阀 Safety Valve

● 用途:
HFAF4QH型安全阀主要用于风机系统, 作为设备超压保持装置。

● Use:
HFAF4QH type safety valve is used for the fan system. It serves as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	尺寸 Dimension							
压力 Pressure	DN	D	K	g ₁	b	f	Z-φd	D ₁	≈H
PN1.0MPa (PN10bar)	40	145	110	85	16	3	4-18	100	250
	50	160	125	100	16	3	4-18	115	272
	65	180	145	120	18	3	4-18	140	285
	80	195	160	135	20	3	4-18	172	296
	100	215	180	155	20	3	8-18	212	425
	125	245	210	185	22	3	8-18	254	450
150	280	240	210	22	3	8-23	280	480	



HFAF4QH型结构图 Type Structure Diagram

ANA42F-25型 内装式安全阀 Built-in safety valve

● 用途:

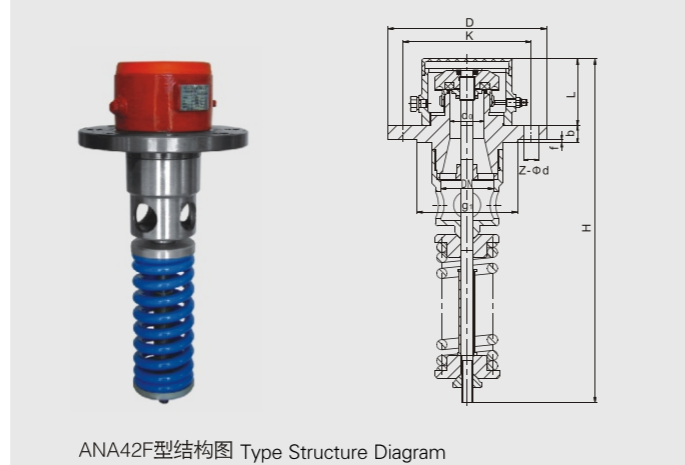
ANA42F内装式安全阀主要用于铁路和汽车石油液化气槽车或地面液化气储罐上使用, 作为超压安全保护装置。

● Use:

ANA42F built-in safety valve is to be applied to liquefied gas tank lorries or ground liquefied gas tanks in railways and automobiles for overpressure protection.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	尺寸 Dimension											
Diameter	L	D	K	g ₁	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			



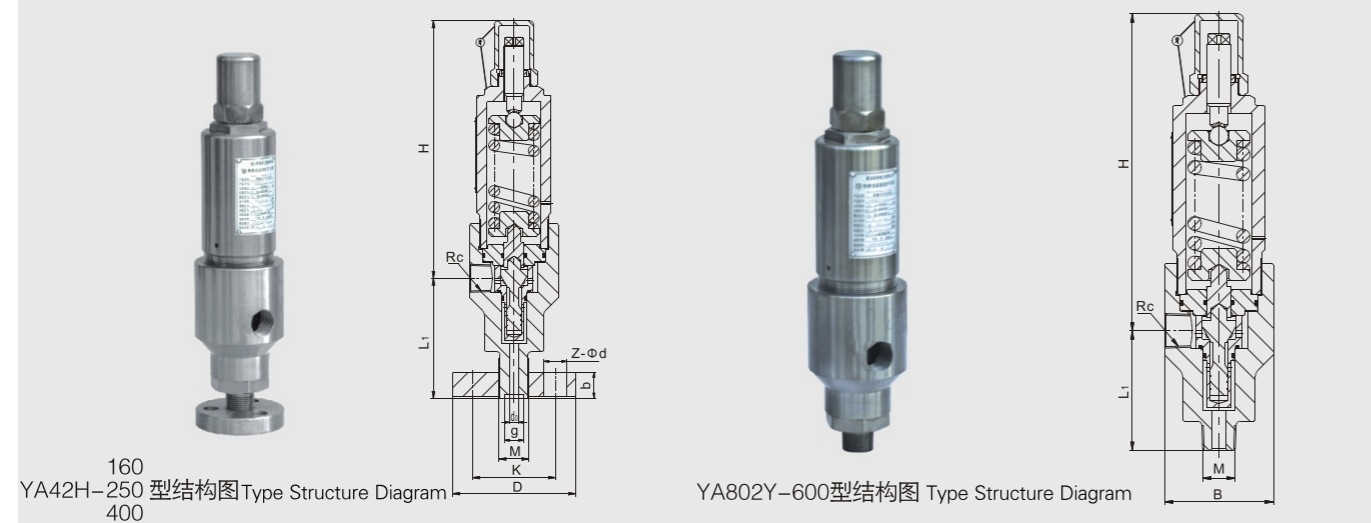
YA42H-160、250、400、YA802Y-600型 安全溢流阀 Safety overflow valve

● 用途:

A42H、YA802Y型安全溢流阀适用于工作温度≤200℃的石油、化工以及其它液压输送管路中, 作为设备的超压保护装置。

● Use:

A42H and YA802Y type overflow valves are used for petroleum, chemistry and other hydraulic conveyor pipelines at a working temperature less than 200°C. It serves as an overpressure protection device.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径 Nominal DN	尺寸 Dimension											
Type	Diameter	B	D	Z-φd	M	do	K	L ₁	Rc	b	g	≈H	
YA42H-160	10	95	105	4-18	M33×3	10	88	117	3/4"	25	20	248	
YA42H-250	15	105	135	6-26	M48×3	15	95	140	1"	25	25	290	
YA42H-400	20	135	200	6-29	M56×3	20	145	170	1 1/2"	40	30	356	
	25	140	200	6-29	M64×3	25	145	173	2"	40	38	440	
	32	160	210	6-29	M64×3	32	155	181	2 1/2"	40	40	520	

型号 Type	公称通径 DN	M	Rc	B	L ₁	≈H
YA802Y-600	15	1/2"	1/2"	105	90	280
	25	1"	1"	105	115	305

A40Y-16/25 C/I型 带封闭散热器弹簧全启式安全阀 Spring fall lift safety valve with radiator

● 用途:

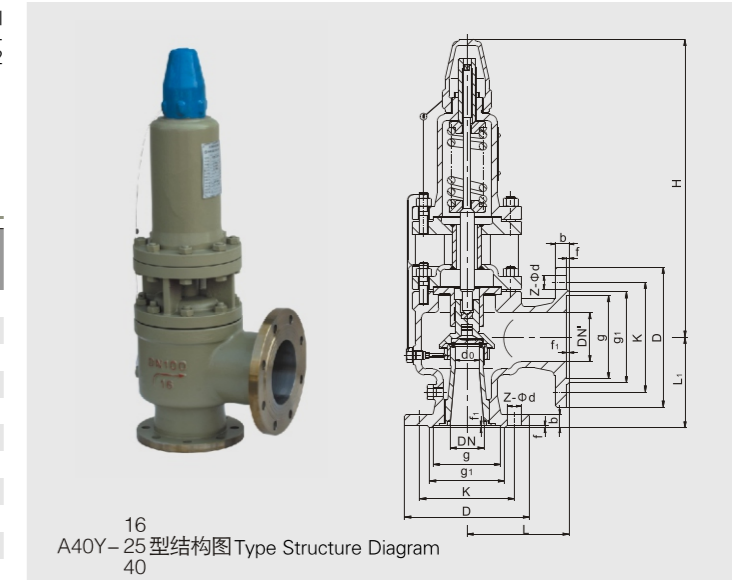
A40Y-C 型适用于工作温度≤400℃、A40Y-I 型适用于工作温度≤450℃的空气、石油气、氮氢混合气等介质的设备和管路上, 作为超压保护装置。

● Use:

A40Y-C type, at a working temperature less than 400°C, and A40Y-I type, at a working temperature less than 450°C, are used for the equipment and pipelines with such media as air, petroleum gas and N₂-H₂ mixed gas as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 Nominal DN	尺寸 Dimension					
Diameter	do	DN'	L	L ₁	≈H	
20	15	25	110	95	360	
25	16	32	110	95	360	
32	20	40	115	100	365	
40	25	50	120	110	380	
50	32	65	135	120	400	
65	40	80	160	140	500	
80	50	100	170	135	512	
100	65	125	205	160	635	
125	80	150	210	190	710	
150	100	175	255	230	725	
200	125	250	305	260	880	



A40Y-64/100 C/I型 带封闭散热器弹簧全启式安全阀 Spring fall lift safety valve with radiator

● 用途:

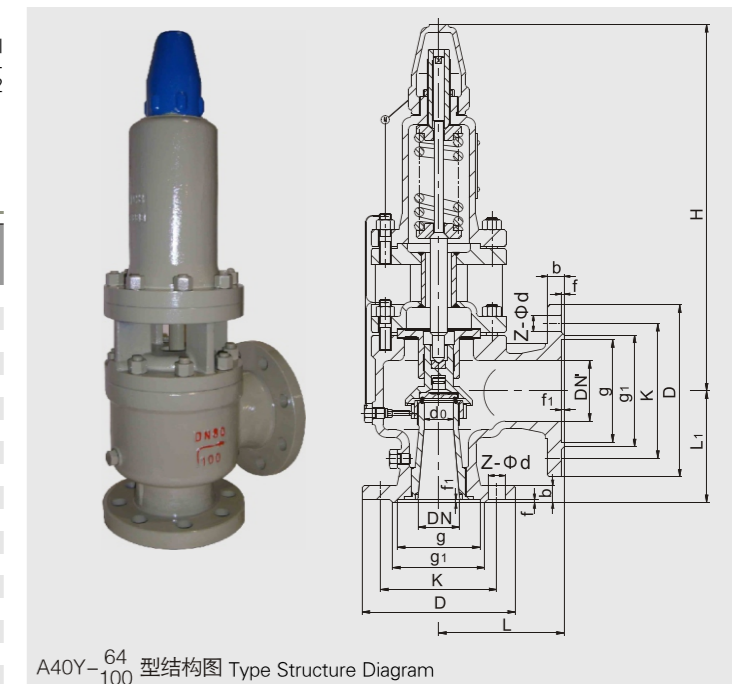
A40Y-C 型适用于工作温度≤400℃、A40Y-I 型适用于工作温度≤450℃的空气、石油气、氮氢混合气等介质的设备和管路上, 作为超压保护装置。

● Use:

A40Y-C type, at a working temperature less than 400°C, and A40Y-I type, at a working temperature less than 450°C, are used for the equipment and pipelines with such media as air, petroleum gas and N₂-H₂ mixed gas as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称通径 Nominal DN	尺寸 Dimension					
Type	Diameter	do	DN'	L	L ₁	≈H	
	20	12	25	110	100	355	
	25	16	32	110	100	355	
	32	20	40	130	110	375	
	40	25	50	135	120	390	
A40Y-64C	50	32	65	160	130	495	
A40Y-64I	65	40	80	175	160	605	
	80	50	100	175	160	615	
	100	65	125	195	195	695	
	150	100	200	285	260	995	
	20	12	25	110	100	355	
	25	16	32	110	100	355	
	32	20	40	130	110	375	
A40Y-100C	40	25	50	135	120	390	
A40Y-100I	50	32	65	160	130	495	
	65	40	80	175	160	605	
	80	50	100	175	160	615	
	100	65	125	195	195	695	
	150	100	200	285	260	995	



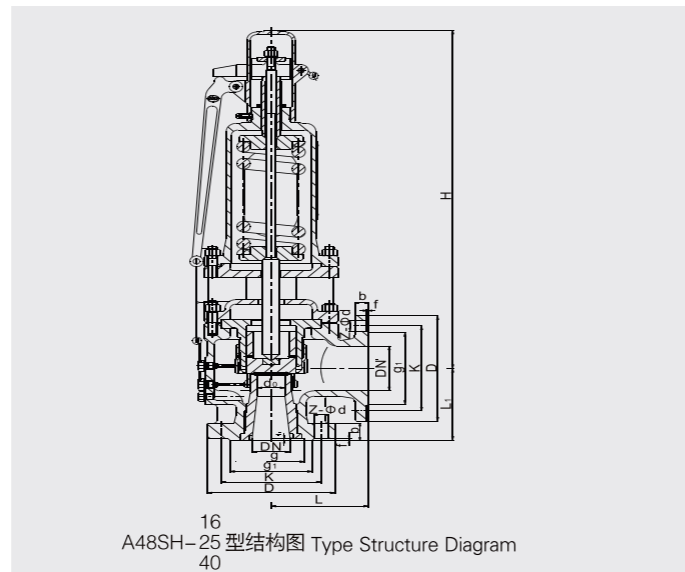
A48SH- $\frac{16}{25}$ C/I/V型 高温弹簧全启式安全阀 High temperature spring full lift safety valve

● 用途: A48SH-C型适用于工作温度 $\leq 425^{\circ}\text{C}$, A48SH-I型适用于工作温度 $\leq 510^{\circ}\text{C}$, A48SH-V型适用于工作温度 $\leq 550^{\circ}\text{C}$ 的蒸汽等介质的设备和管路上, 作为超压保护装置。

● Use: A48SH-C, at a working temperature less than 425°C , A48SH-I, at a working temperature less than 510°C , and A48SH-V, at a working temperature less than 550°C , are used for the equipment and pipelines with such media as steam as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	do	尺寸 Dimension			$\approx H$
			L	L ₁	DN'	
25	15	110	95	32	395	
40	25	120	110	50	418	
50	32	135	120	65	525	
50	32	135	120	80	525	
80	50	170	135	100	675	
100	65	205	160	125	748	
100	65	205	160	150	748	
150	100	230	210	200	1135	
200	125	290	310	250	1230	
250	150	350	320	300	1285	



A48SB- $\frac{64}{100}$ C/I/V型 高温高压弹簧全启式安全阀 High temperature and high pressure spring full lift safety valve

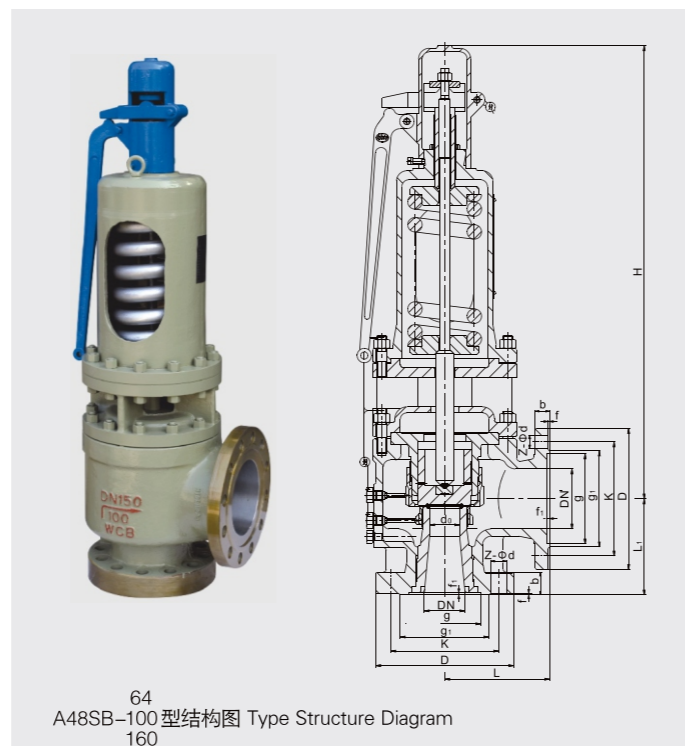
● 用途: A48SB-C型适用于工作温度 $\leq 425^{\circ}\text{C}$, A48SB-I型适用于工作温度 $\leq 510^{\circ}\text{C}$, A48SB-V型适用于工作温度 $\leq 550^{\circ}\text{C}$ 的蒸汽等介质的设备和管路上, 作为超压保护装置。

● Use: A48SB-C, at a working temperature less than 425°C , A48SB-I, at a working temperature less than 510°C , and A48SB-V, at a working temperature less than 550°C , are used for the equipment and pipelines with such media as steam as an overpressure protection device.

● 主要连接尺寸 Main Connection Dimensions

公称通径 DN	Nominal Diameter	do	尺寸 Dimension			$\approx H$
			L	L ₁	DN'	
40	25	135	120	50	518	
50	32	160	130	65	625	
50	32	160	145	80	600	
80	50	175	160	100	740	
100	65	220	200	125	920	
100	65	220	200	150	920	
150	90	280	280	200	1128	
200	125	300	295	250	1350	
250	150	370	390	350	1430	

型号 Type	公称通径 DN	Nominal Diameter	do	L	L ₁	DN'	$\approx H$
HFA48TH-100	50	32	160	145	80	580	
HFA48SB-160	80	40	215	210	150	820	



A46 $\frac{Y}{F}$ - $\frac{16}{25}$ C/P/R、A46 $\frac{Y}{F}$ - $\frac{64}{100}$ C/P/R型 先导式安全阀 Pilot operated safety valve

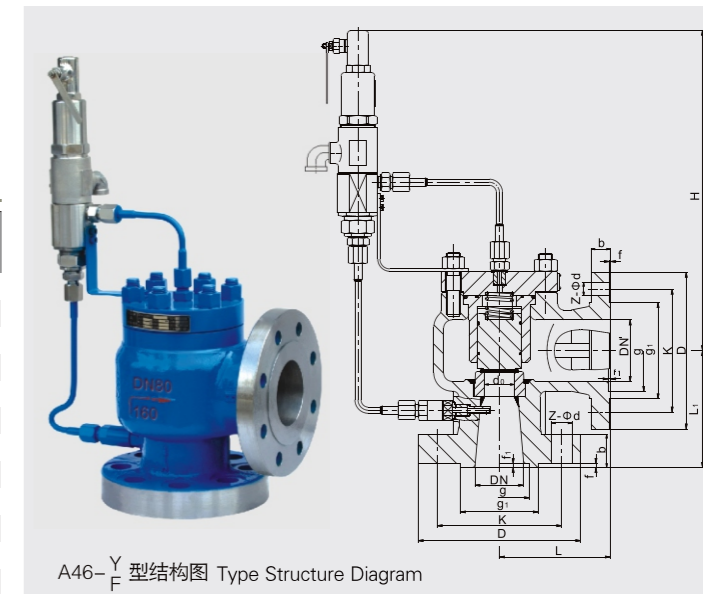
● 用途: 先导式安全泄压阀是一种新颖结构的安全阀。主要用于石油天然气、化工、电力、冶金和城市燃气等领域, 是受压设备、容器或管路上的最佳超压保护装置。其主要优点是变弹簧直接作用为导阀间接作用, 提高了动作的灵敏度, 而且主阀采用套筒活塞式, 动作精度高、重复性好、回座压力高、密封性能好、能带高背压排放、工作稳定可靠, 可在线调校, 操作维护方便。

● Use: The pilot operated safety pressure relieve valve, newly-structured, is mainly applied in such fields as petroleum & natural gas, chemistry, electric, metallurgy & city gas. It is the best overpressure protecting equipment for pressure equipment, containers or pipelines. It is mainly characterized by shifting direct action of spring to indirect action of guide valve, thus improving action sensitivity. What's more, the main valve, applying sleeve piston, is characterized by high precision of action, good repetition, high reseating pressure, zero leakage, discharge with high back pressure, stable and reliable operation, online calibration, and convenience in operating and maintaining.

● A46 $\frac{Y}{F}$ - $\frac{16}{25}$ C/P/R型主要连接尺寸

● Main Connection Dimensions

公称通径 DN	Nominal Diameter	DN"	do	尺寸 Dimension		
				L	L ₁	$\approx H$
25	32	15	110	95	355	
25	50	15	114	105	365	
32	40	20	115	105	382	
40	50	25	121	124	402	
50	65	32	135	120	428	
50	80	33	124	137	442	
65	80	40	160	140	455	
80	100	50	162	156	465	
100	125	65	205	160	485	
100	150	65	210	197	515	
150	200	100	241	240	632	
200	250	125	279	276	695	



● A46 $\frac{Y}{F}$ - $\frac{64}{100}$ C/P/R型主要连接尺寸 Main Connection Dimensions

PN64 ~ 100						
DN	DN'	do	L	L ₁	$\approx H$	
25	32	15	110	100	372	
25	50	15	114	111	385	
32	40	20	130	110	398	
40	50	25	121	124	410	
50	65	32	160	130	445	
50	80	32	124	137	458	
65	80	40	175	160	485	
80	100	50	162	162	496	
100	125	65	195	195	520	
100	150	65	210	197	538	
150	200	100	241	246	638	
200	250	125	279	297	715	
PN160						
DN	DN'	do	L	L ₁	$\approx H$	
25	50	13	121	126	445	
40	50	16	140	149	460	
50	80	32	171	167	495	
80	100	48	181	191	515	
100	150	60	233	249	575	



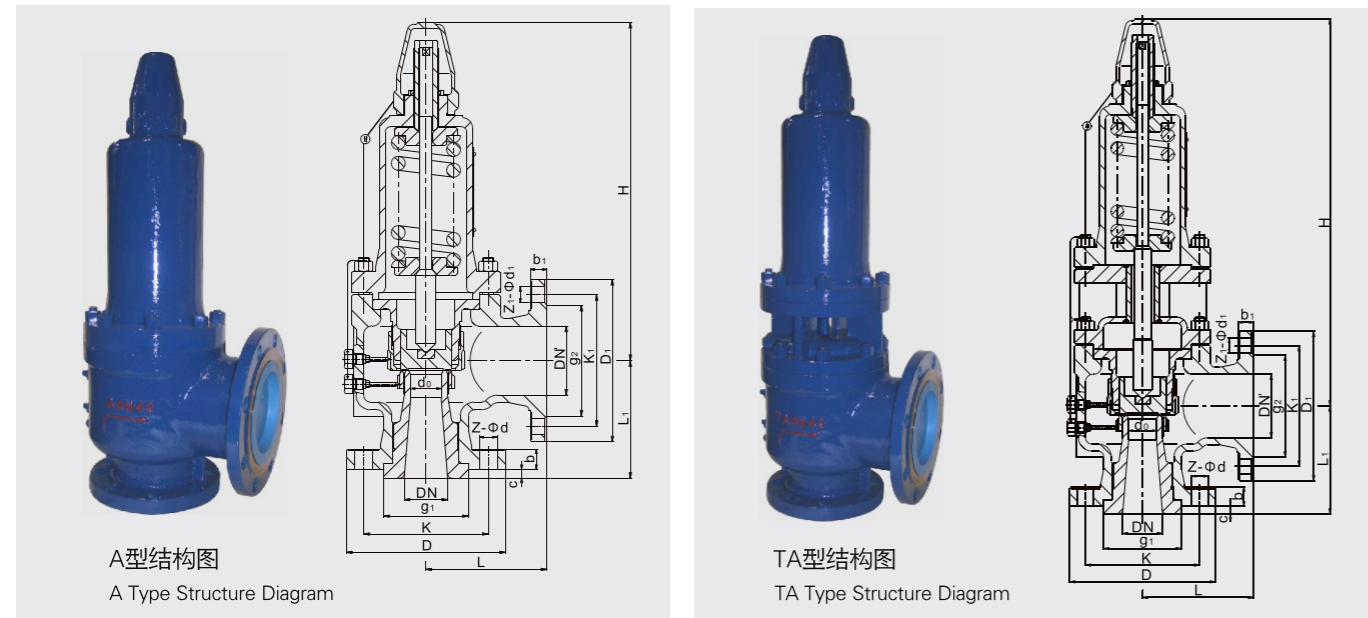
炼油安全阀系列 HF oil refining safety valve series

● 用途:

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。本系列安全阀可在具有稳定背压、无腐蚀或含轻微硫腐蚀的气体、液体下使用。

● Use:

HF oil refining safety valves are used as a main accessory for petrochemical pressure vessels to control the vessel pressure and ensure the safety of the container. This series valve is enclosed fully-open spring safety valve, that is, when the gas medium pressure is 3% higher than the setting, the valve will automatically open and then discharge fully. This series can be used for gases or liquids with stable back pressure and no or slight corrosion.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	L	L ₁	D	K	g ₁	D ₁	K ₁	g ₂	C	b	b ₁	Z-φd	Z ₁ -φd ₁	≈H
A1D40	100	99	115	85	57	160	125	100	9	19	16	4-14	4-18	327
TA1D40														424.5
A1.5F40	120	107	145	110	75	160	125	100	13	20	16	4-18	4-18	363.6
TA1.5F40														443.5
A2J16	150	139	160	125	92	195	160	135	14	22	20	4-18	8-18	409
TA2J16														539.5
A2H40	150	139	160	125	87	195	160	135	14	22	20	4-18	8-18	409
TA2H40														539.5
A3L16	160	147	195	160	133	215	180	155	12	22	20	8-18	8-18	487
TA3L16														652
A3K40	160	149	195	160	120	215	180	155	14	24	20	8-18	8-18	489
TA3K40														654
A4P16	200	176	215	180	153	280	240	210	13	22	24	8-18	8-23	596
TA4P16														789
A4N40	200	182.5	230	190	149	280	240	210	17.5	26	24	8-23	8-23	639.5
TA4N40														832.5
A6R5.5	230	228	280	240	195	335	295	265	18	24	26	8-23	12-23	757
TA6R5.5														976
A6Q16	230	228	280	240	189	335	295	265	18	24	26	8-23	12-23	775
TA6Q16														986

炼油安全阀系列 HF oil refining safety valve series

● 型号系列 Type & Series

系列 Series	型号 Type	进口法兰 Inlet flange		定压范围Mpa Range of constant pressure	代号 Code	流道尺寸 Size		使用温度℃ Operating Temperature
		公称通径DN Nominal Diameter	公称压力PN(MPa) Nominal Pressure			流道直径d ₀ Diameter	流道面积cm ² Area	
A型 A 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~<1.3	J	33	8.54	-25 ~ 300
	A2H40	50	4.0	1.30~4.2	H	26	5.31	-25 ~ 300
	A3L16	80	1.6	0.03~<1.6	L	50	19.62	-25 ~ 300
	A3K40	80	4.0	1.60~4.2	K	40	12.56	-25 ~ 300
	A4P16	100	1.6	0.03~<1.6	P	72	40.69	-25 ~ 300
	A4N40	100	4.0	1.60~4.2	N	60	28.26	-25 ~ 300
	A6R5.5	150	1.6	0.03~<0.55	R	115	103.82	-25 ~ 300
	A6Q16	150	1.6	0.55~1.6	Q	96	72.35	-25 ~ 300
TA型 TA 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~<1.3	J	33	8.54	>300 ~ 550
	TA2H40	50	4.0	1.30~4.2	H	26	5.31	>300 ~ 550
	TA3L16	80	1.6	0.03~<1.6	L	50	19.62	>300 ~ 550
	TA3K40	80	4.0	1.60~4.2	K	40	12.56	>300 ~ 550
	TA4P16	100	1.6	0.03~<1.6	P	72	40.69	>300 ~ 550
	TA4N40	100	4.0	1.60~4.2	N	60	28.26	>300 ~ 550
	TA6R5.5	150	1.6	0.03~<0.55	R	115	103.82	>300 ~ 550
	TA6Q16	150	1.6	0.55~1.6	Q	96	72.35	>300 ~ 550

● 主要连接尺寸 Main Connection Dimensions

公称压力 PN(MPa)	阀体进出口直径 (进口直径代号) Body inlet and outlet Diameter	25x50(1)		40x50(1.5)		50x80(2)		80x100(3)		100x150(4)		150x200(6)	
		D	F	J	H	L	K	P	N	R	Q		
Nominal Pressure	流通直径代号 Flow-through Diameter Code												
	流通面积 (cm ²) Flow-through Area (cm ²)	0.78	2.0	8.54	5.31	19.62	12.56	40.69	28.26	103.82	72.35		
压力范围MPa Pressure Range Mpa	弹簧编号 Spring												
		0.03 ~ <0.1	101	201	301	--	401	--	501	--	601	601	
1.6	0.1 ~ <0.2	102	202	302	--	402	--	502	--	602	602		
	0.2 ~ <0.3	103	203	303	--	403	--	503	--	603	603		
	0.3 ~ <0.4	104	204	304	--	404	--	504	--	604	604		
	0.4 ~ <0.55	105	205	305	--	405	--	505	--	605	605		
	0.55 ~ <0.7	106	206	306	--	406	--	506	--	606	606		
	0.7 ~ <0.9	107	207	307	--	407	--	507	--	607	607		
	0.9 ~ <1.1	108	208	308	--	408	--	508	--	608	608		
	1.1 ~ <1.35	109	209	309	--	409	--	509	--	609	609		
	1.35 ~ <1.6	110	210	310	310	410	--	510	--	610	610		
	4.0	1.6 ~ <1.9	111	211	--	311	--	411	--	511	--	--	
1.9 ~ <2.2		112	212	--	312	--	412	--	512	--	--		
2.2 ~ <2.55		113	213	--	313	--	413	--	513	--	--		
2.55 ~ <2.9		114	214	--	314	--	414	--	514	--	--		
2.9 ~ <3.3		115	215	--	315	--	415	--	515	--	--		
3.3 ~ <3.7		116	216	--	316	--	416	--	516	--	--		
3.7 ~ <4.2		117	217	--	317	--	417	--	517	--	--		

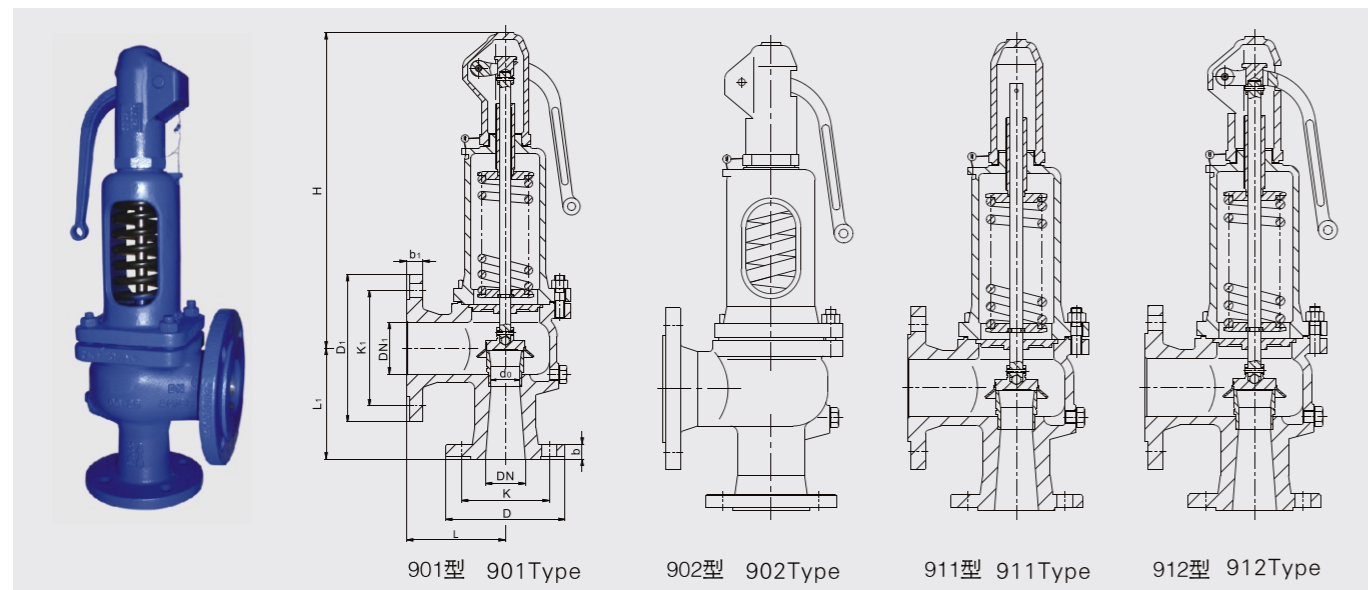
900系列德标安全阀 HF900 series DIN safety valve

● 用途:

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。

● Use:

900 series DIN safety valves are used for oil, natural gas, chemical, electric power, city gas, and other fields as an overpressure protection device. It has high precision of action, good repeatability, accurate return and convenient operation and maintenance.



型号 Type	公称压力 Nominal Pressure	阀体材质 Body Material	公称口径 Nominal Diameter	工作温度 Operating Temperature
35.901/902/911/912	PN40/16	铸钢1.0619+N Cast Steel 1.0619+N	DN20/32 ~ DN150/250	-10°C ~ +450°C
55.901/911	PN40/16	不锈钢1.4408 Stainless Steel 1.4408	DN20/32 ~ DN100/150	-60°C ~ +400°C

公称口径 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 do(mm) Flow-through Hole Diameter	18	22	29	36	45	58	72	80	100	125
流通面积 A0(mm²) Flow-through Area	254	398	661	1018	1590	2688	4072	6362	8825	12266
重量(Kg) weight(kg)	8.5	10	14	20	28	40	53	80	125	165

● 主要连接尺寸 Main Connection Dimensions

DN × DN1		901、902、911、912型安全阀 Safety Valve									
		20 × 32	25 × 40	32 × 50	40 × 65	50 × 80	65 × 100	80 × 125	100 × 150	125 × 200	150 × 250
D	PN16										
	PN40	105	115	140	150	165	185	200	220	250	285
K	PN16										
	PN40	75	85	100	110	125	145	160	180	210	240
b		20	20	20	21	22	24	26	28	31	34
D1	PN16	140	150	165	185	200	220	250	285	340	405
K1		100	110	125	145	160	180	210	240	295	355
b1		19	19	20	20	20	22	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		298	311	315	355	405	555	580	690	845	890
排污孔(带螺塞) Sewage Hole (with Plug)		G3/8"					G1/2"				

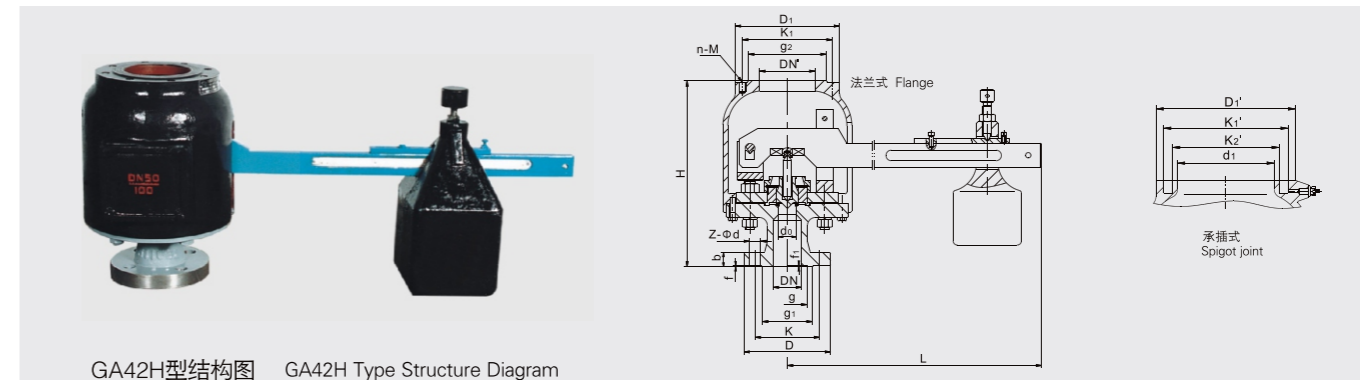
GA42H-16/25/40 GA42H-64/100 C型 单杠杆安全阀 Single-lever Safety Valve

● 用途:

GA42H型安全阀适用于温度≤450°C的空气、蒸汽等介质的设备和管路上，作为超压保护装置。

● Use:

GA42H safety valves are used for the equipment and pipelines of air and steam media with a working temperature less than 450°C as an overpressure protection device.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称口径 DN	尺寸 Dimension										出口法兰式 Outlet Flange Type				出口承插式 Outlet Socket Type					
		do	D	K	g1	g	f	fi	b	Z-φd	L	≈H	DN'	g2	K1	D1	n-M	d1	K2'	K1'	D1'
GA42H-16	50	40	165	125	100	--	3	--	18	4-18	900	412	125	175	200	235	8-M16	120	145	162	190
GA42H-25	50	40	165	125	100	--	3	--	20	4-18	900	412	125	175	200	235	8-M16	120	145	162	190
GA42H-40	50	40	165	125	100	88	3	4	20	4-18	900	412	125	175	200	235	8-M16	120	145	162	190
GA42H-64	50	40	180	135	105	88	3	4	26	4-23	900	420	125	175	200	235	8-M16	120	145	162	190
GA42H-100	50	40	195	145	112	88	3	4	28	4-25	900	420	125	175	200	235	8-M16	120	145	162	190

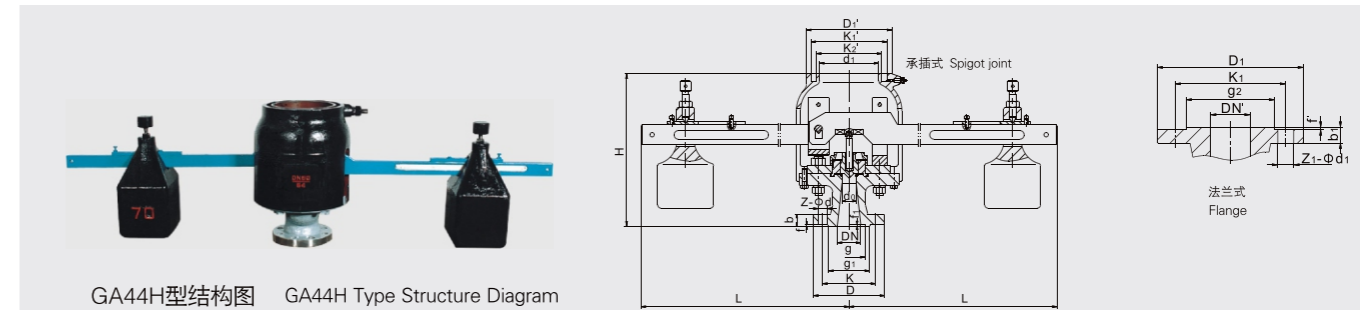
GA44H-16/25/40 GA44H-64 C型 双杠杆安全阀 Double-lever Safety Valve

● 用途:

GA44H型安全阀适用于温度≤450°C的空气、蒸汽等介质的设备和管路上，作为超压保护装置。

● Use:

GA44H safety valves are used for the equipment and pipelines of air and steam media with a working temperature less than 450°C as an overpressure protection device.



● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称口径 DN	尺寸 Dimension										出口承插式 Outlet Socket Type				出口法兰式 Outlet Flange Type							
		do-z	D	K	g1	g	f	fi	b	Z-φd	≈H	L	d1	K2'	K1'	D1'	DN'	g2	K1	D1	b1	f'	Z1-φd1
GA44H-16	80	50×2	200	160	135	--	3	--	20	8-18	410	900	120	145	162	190	150	210	240	280	24	3	8-23
GA44H-25	80	50×2	200	160	135	--	3	--	22	8-18	410	900	120	145	162	190	150	210	240	280	24	3	8-23
GA44H-40	80	50×2	200	160	135	121	3	4	22	8-18	410	900	120	145	162	190	150	210	240	280	24	3	8-23
GA44H-64	80	40×2	210	170	140	121	3	4	30	8-23	475	900	200	218	253	285	200	255	280	315	24	3	8-M16

A68系列高温高压蒸汽安全阀 A68 Series high temperature safety valve for steam

● 用途:

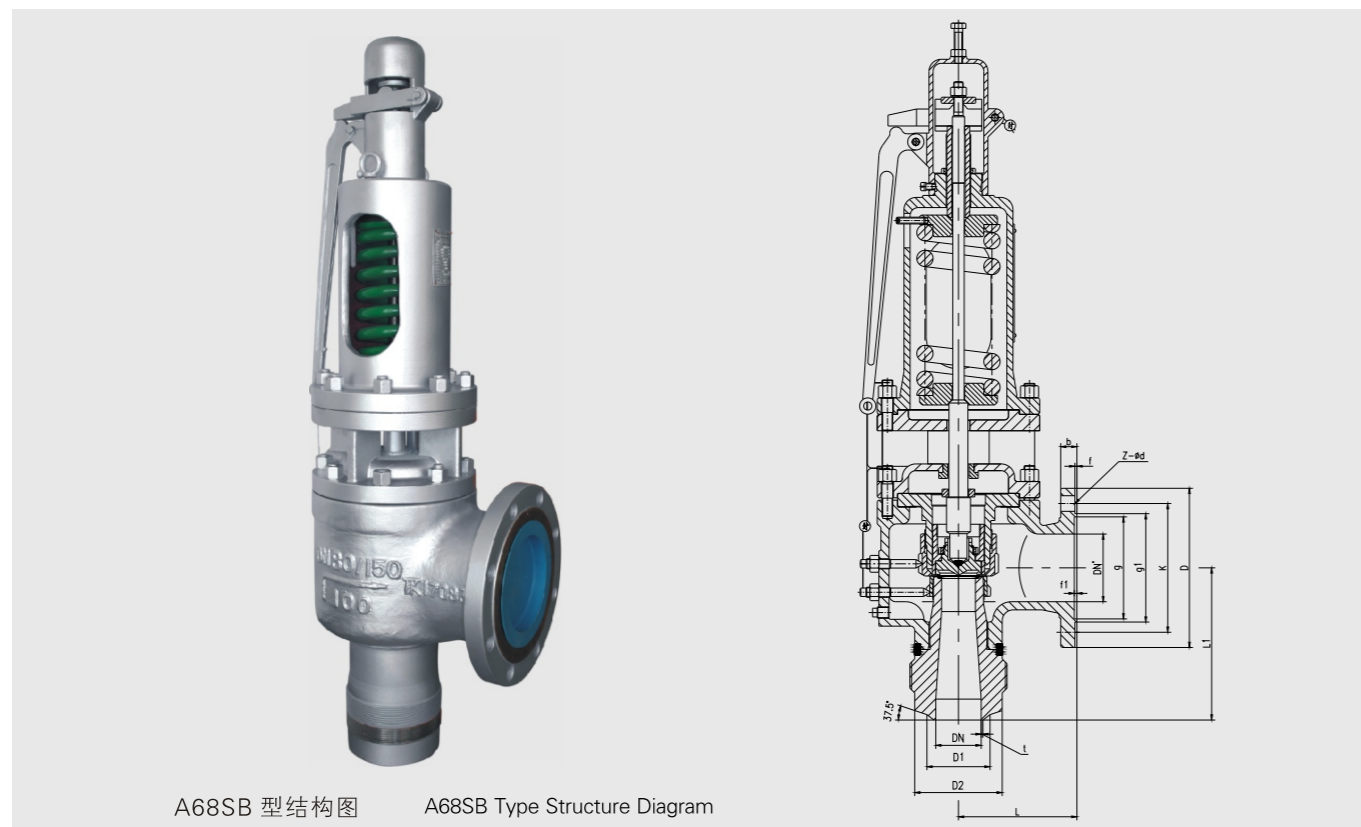
A68SB-C型适用于工作温度≤425℃, A68SB-I型适用于工作温度≤510℃, A68SB-V型适用于工作温度≤550℃的蒸汽等介质的设备和管路上, 作为超压保护装置。

● Use:

A68SB-C, at a working temperature less than 425℃, A68SB-I, at a working temperature less than 510℃, A68SB-V, at a working temperature less than 550℃, are used for the equipment and pipelines with such media as steam as an overpressure protection device.

特点: Characteristics:

- 1 采用背压套来调节回座压力, 以达到极小的启闭压差。
Adjusting the reseating pressure with a back pressure jacket, to achieve the minimum blowdown.
- 2 高性能高温材料作弹性阀瓣材料, 以保证高温下的密封性。
High-performance and high-temperature materials are used for disc to ensure its tightness in high temperature.
- 3 密封付表面堆焊钴基硬质合金, 以防护高温蒸汽的气蚀。
The sealing pair surface adopts overlay welding of Co-based Stellite to avoid cavitation caused by high-temperature steam.
- 4 一定的热态测试, 使安全阀更接近工况条件。
A thermal state test can make the safety valve closer to working conditions.



A68SB 型结构图 A68SB Type Structure Diagram

● 主要连接尺寸 Main Connection Dimensions

型号 Type	公称 通径 Nominal DN Diameter	D ₂	D ₁	DN'	t	L	L ₁
A68SB- 100 160 210 550 C/I/V	DN 50/100	100	88	50	1.6	180	250
	DN 65/150	140	110	65	1.6	220	300
	DN 80/150	140	117	80	1.6	215	310
	DN 100/200	170	117	100	1.6	270	380
	DN 150/250	225	172	150	1.6	320	420

GA49H-16型 冲量安全阀 Impulse safety valve

● 用途:

GA49H-16C型DN40/50冲量安全阀, 主要用于电站锅炉或蒸汽压力管道上, 该阀门可配套或单独使用。当压力容器内介质超过允许值时, 阀瓣开启排除超压蒸汽, 当压力下降到一定值时, 阀瓣靠杠杆上的重锤将阀门迅速关闭, 保证设备安全运行。

● 结构简述

1. 冲量安全阀主要由阀体、阀瓣、阀座、杠杆、重锤等组成, 其结构如右图:

2. 性能范围

公称压力: 1.6MPa
壳体强度: 2.4MPa
工作温度: ≤350℃

公称通径: 40/50mm
开启高度: ≥9mm
适用介质: 蒸汽、空气

● Use:

GA49H-16CDN 40/50 impulse safety valves are mainly used for power plant boilers or steam pressure piping. It can be used as a part or alone. When the medium in the pressure container exceeds the allowable value, the disc will open to discharge the overpressure steam, and when the pressure drops to a certain value, the disc will quickly close the valve by the heavy hammer on the lever to ensure the safe operation of the equipment.

equipment.

● Structure Descriptions:

1. The impulse safety valve mainly consists of body, disc, seat, lever, weight and so on, whose structure is shown in the right figure:

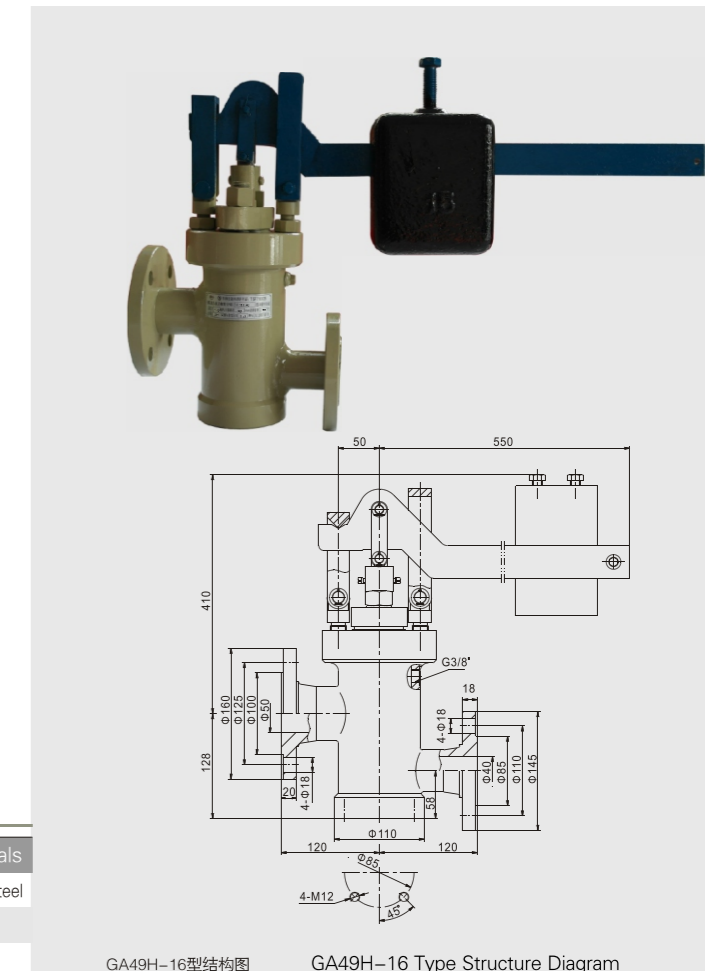
2. Performance range:

Nominal Pressure: 1.6MPa
Shell Strength: 2.4MPa
Operating Temperature: ≤350℃

Nominal Diameter: 40/50mm
Lift Height: ≥9mm
Applicable Medium: Steam, Air

● 主要零件材料 Materials of main parts

零件名称 Part Name	材质 Materials	零件名称 Part Name	材质 Materials
阀体 Body	WCB	杠杆 Lever	碳钢 Carbon Steel
阀瓣 Disc	不锈钢 Stainless steel	重锤 Weight	铸铁 Cast Iron
阀座 Seat	不锈钢 Stainless steel		



GA49H-16型结构图 GA49H-16 Type Structure Diagram

F2-250/400型 主安全阀 Main safety valve

● 用途:

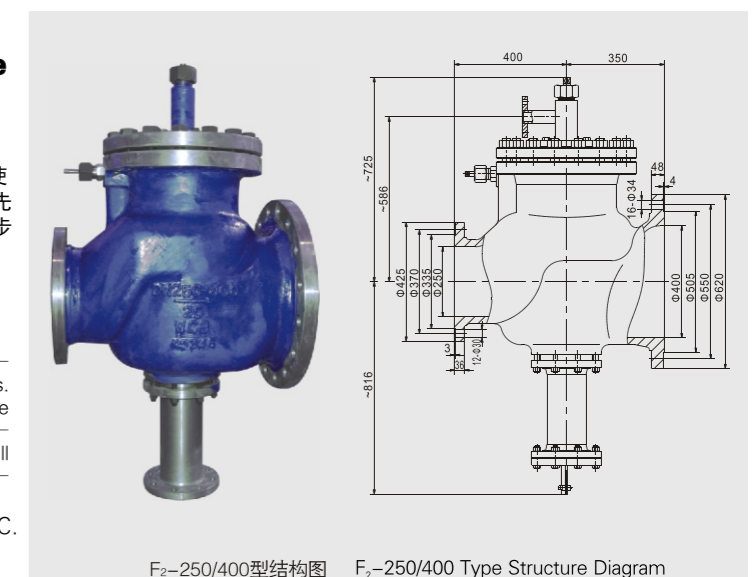
HFF2-250/400型主安全阀和冲量安全阀GA49H-16C DN40/50配套使用于电站汽轮机的管线上, 当管线压力超过允许值时, 冲量安全阀先开启, 主阀随之开启; 压力降至安全值时, 冲量关闭, 主安全阀同步关闭, 对管线和汽轮机起到安全保护作用。

该阀适用温度: ≤425℃

● Use:

HFF2-250/400 main safety valves and GA49H-16C DN40/50 impulse safety valves are used for pipelines of power station steam turbines. When the pipeline pressure exceeds the allowable value, the impulse safety valve will open first and then the main valve will open accordingly; when the pressure drops a safe value, the impulse safety valve will shut and the main safety valve will close simultaneously for safety protection of the pipelines and steam turbines.

This safety valve is used for temperature are less than 425℃.



F2-250/400型结构图 F2-250/400 Type Structure Diagram

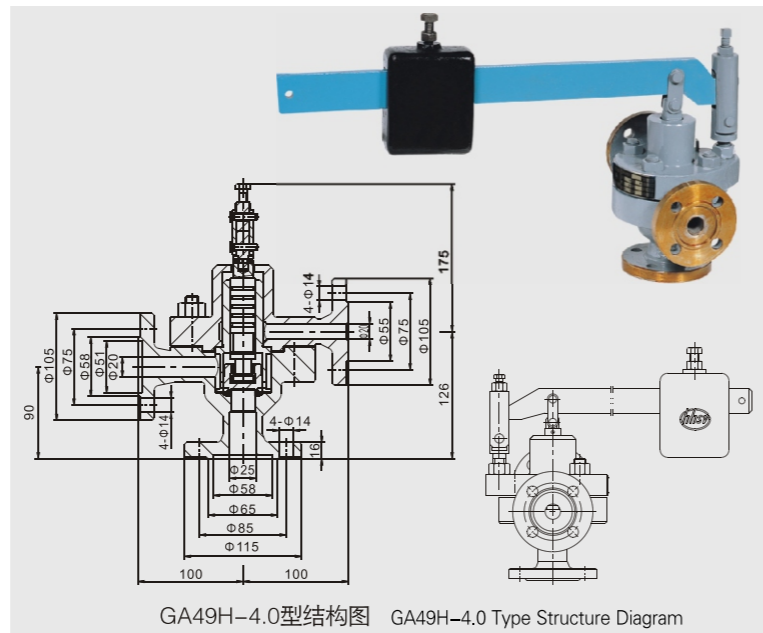
GA49H-4.0 DN25型 脉冲式安全阀

● 用途:

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。

● 安装说明

- 1、本阀门应与A49H-40型主安全阀配套使用。其工作原理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、脉冲安全阀安装时应严格垂直,杠杆应保持水平,与导向叉两侧面间隙必须均匀。
- 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。



A49H-40型 主安全阀

● 用途:

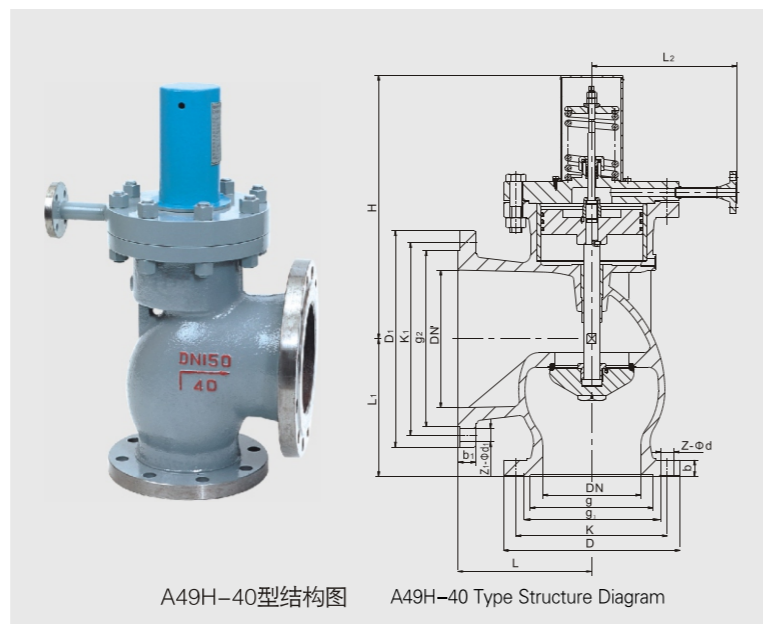
本阀主要用于电站锅炉、压力容器、减温减压装置上使用,防止压力超过允许最高压力值,保证设备安全运行。

● 结构简述

- 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。

● 安装说明

- 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。



● 主要连接尺寸

型号	公称通径 DN	尺寸															
		L	L ₁	L ₂	H	D	K	g ₁	g	b	Z-Φd	DN'	D ₁	K ₁	g ₂	b ₁	Z ₁ -Φd ₁
A49H-40	150	220	230	240	486	300	250	218	204	30	8-25	200	360	310	278	34	12-25
	200	270	295	330	615	375	320	285	260	38	12-30	300	485	430	390	40	16-30
	250	300	350	370	646	445	385	345	313	42	12-34	350	550	490	450	44	16-34

GA49H-4.0 DN25型 Impulse safety device

● Use:

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

● Installation Instruction

1. This valve shall work with A49H-40 main safety valve. Its working principle goes like this: the pressure of the disc is balanced through the lever and weight to ensure the valve's seal, and the required starting pressure can be reached by means of changing the weight's position and weight.
2. The impulse safety valve shall be installed vertically and the lever shall be kept level. The clearance from the lever to both sides of guide fork shall be even.
3. The pipeline shall be purged before installing the impulse safety valve.
4. A long distance between the leading pipe of the impulse safety valve and the inlet pipe of the main safety valve shall be kept. And the distance between the electric contact pressure meter and the inlet pipe of the main safety valve shall be no less than 5 times of the diameter of the inlet pipe, for fear that accuracy of the meter and the impulse safety valve may be affected by the steam discharging process of the main safety valve.

A49H-40型 Main safety valve

● Use:

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

● Structure Briefing

1. When the medium pressure rises to the set pressure, the impulse safety valve will open, and the medium will enter into the piston chamber of the main safety valve from the impulse pipe to drive the piston to descend, while the valve will automatically open; when the impulse safety valve closes, the disc will automatically close.
2. The sealing surface is made of Fe-based Cr-Ni stainless steel by over-layering welding. Through thermal treatment, the disc has stronger resistance to wear and erosion.

● Installation Instruction

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 galleys, 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 galleys, and the steam exhaust pipe's weight shall not be exerted on the main safety valve. The connecting flange between the main safety valve and exhaust pipe shall be free of any extra prestress.
4. At the lowest point of the exhaust pipe, water drainage shall be taken into consideration to avoid producing water hammer while discharging steam.

● Main Connection Dimensions

Type	Nominal Diameter (DN)	Dimension															
		L	L ₁	L ₂	H	D	K	g ₁	g	b	Z-Φd	DN'	D ₁	K ₁	g ₂	b ₁	Z ₁ -Φd ₁
A49H-40	150	220	230	240	486	300	250	218	204	30	8-25	200	360	310	278	34	12-25
	200	270	295	330	615	375	320	285	260	38	12-30	300	485	430	390	40	16-30
	250	300	350	370	646	445	385	345	313	42	12-34	350	550	490	450	44	16-34

冲量安全装置说明

● 用途:

冲量安全装置用在电站锅炉或受压容器上,防止介质压力超过允许值,以保证锅炉或受压容器的安全。

● 特点

冲量安全装置为脉冲安全阀、主安全阀配套使用,具有排放能力大,调整方便,机械与电器双保护,安装维护方便等特点。

● 工作原理

当介质压力低于整定压力时,脉冲安全阀在弹簧力(或重锤)的作用下密封,主安全阀在介质压力作用下密封;当介质压力超过整定压力时,脉冲安全阀开启,蒸汽进入主安全阀活塞室,使主安全阀开启,对外排汽;当压力降到回座值时,脉冲安全阀关闭,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。

● 结构简述

- 1、冲量安全装置如图所示,主要由脉冲安全阀、主安全阀、截止阀、节流阀等组成。
- 2、脉冲安全阀为弹簧式或重锤杠杆式,通过调节弹簧压缩量或调整重锤在杠杆上的位置来调节安全装置的开启压力。脉冲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。
- 3、主安全阀结构如图所示,排汽端为法兰连接形式,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。
- 4、脉冲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。

● 安装说明

- 1、主安全阀应与冲量安全阀配套安装使用。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稳定性。
- 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。主安全阀活塞室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、为了保证弹簧式冲量安全阀动作自如,冲量安全阀回座杠杆头部的圆弧部分与冲量安全阀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M10紧固螺钉调之)。

Descriptions of impulse safety device

● Use:

The impulse safety device is used for power station boilers or pressure vessels to prevent the medium pressure from exceeding the allowable value to ensure their safety.

● Characteristics

The impulse safety device works with an impulse safety valve and a main safety valve. This device has a large discharge ability with convenient adjustment, double mechanical and electrical protection and user-friendly installation and maintenance.

● Operation Principle

When the medium pressure is lower than the setting, the impulse safety valve will be enclosed under the spring force, while the main safety valve will be enclosed under the medium pressure; when the medium pressure is higher than the setting, the impulse safety valve will open and steam will enter into the main safety valve's piston chamber to open the main safety valve and discharge steam to the outside; when the pressure drops to the reseating value, the impulse safety valve will be closed to cut off steam going into the safety valve's piston chamber, and the main safety valve will be closed automatically as acted by the spring and the medium.

● Structure Briefing

- 1 The impulse safety device is as shown in the figure, mainly consisting of impulse safety valve, main safety valve, stop valve and throttle valve.
- 2 The impulse safety valve is a kind of spring or heavy hammer lever. The safety device's opening pressure can be adjusted by adjusting the spring compression or the heavy hammer position on the lever. Also the impulse safety valve contains an electromagnet to open or close the valve, with no interference between mechanical and electrical actions.
- 3 The main safety valve is as shown in the figure. Its steam exhaust end adopts a flange connection form, and it mainly consists of body, cushion valve, piston chamber, disc and other parts. The valve adopts the pressure self tightening and sealed structure. The higher the medium pressure is, the better the sealability will be. The cushion valve serves as a buffer in the working process of the main safety valve to avoid the damage of the sealed surface and the disc.
- 4 The upper part of the impulse safety valve contains an electromagnet to open or close. At ordinary times, the close-off electromagnet may not be electrified, but when the sealed surface of the valve leaks, it can be electrified continuously to make the valve sealed; or when the mechanical adjusting reseating pressure is excessively low, it can be electrified to help the disc return and procure a higher reseating pressure.

● Installation Instruction

1. The main safety valve and the impulse safety valve should be installed together. The distance between the outlet pipe of the impulse safety valve and the inlet pipe of the main safety valve should be maintained as relatively long and the distance between the electric contact pressure meter and the inlet pipe of the main safety valve should be no less than 5 times of the diameter of the inlet pipe, for fear that the precision of the meter and the impulse safety valve may be affected by the steam discharging process of the main safety valve.
- 2 Before the installation of the main safety valve, the pipeline shall be cleaned first.
- 3 The main safety valve and the impulse safety valve must be positioned vertically. After the installation and the welding of the main safety valve, it shall be under partial heat treatment.
- 4 The main safety valve shall be fastened upon the framework, which sustains the counter-reaction force produced in the steam discharging process of the main safety valve. The exhaust pipe of the main safety valve shall be supported with a special gallow lest the force of its weight and action would be directly apply to both the main safety valve and the flange that is connecting them. At the lowest point of the exhaust pipe, water drainage shall be taken into consideration to avoid producing water hammer when the main safety valve is discharging steam. The three loops of filling above the main safety valve's piston chamber shall be deeply compressed until the lower surface of the filling gland touches the upper surface of the piston, and a fine wire shall be used to fasten the pressure bolt to avoid leakage and refusing release of the main safety valve.
- 5 The impulse safety valve and the electromagnets shall be placed together on a special gallow. The juncture of the upper lever of the valve and the electromagnets shall be flexible, with no phenomenon of seizure. The impulse safety valve shall be installed in a place with little dust, dry air and convenient maintenance and debugging and where no vibration occurs. Its ambient temperature shall not be higher than 70℃, and its relative humidity not more than 80%.
- 6 To ensure the agile working of the impulse safety valve, the distance between the circular arc part of the head of the seat returning lever and the end of the pressure bar of the valve shall be adjusted to such a length as the actual travel of the valve plus 1mm (adjusted by the M10 fastening screw at the top of the cap).

A49Y-10型 高压冲量安全装置(H) High pressure impulse safety device (H)

- 用途: 本装置供蒸汽工作压力为 $P=3.92\text{Mpa}$; $t \leq 450^\circ\text{C}$ 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。主安全阀A49Y-10 DN150应与冲量安全阀A49Y-10 DN25配套安装使用。

- Use: This device is used for power plant boilers with steam working conditions as: $p=3.92\text{MPa}$ and $t \leq 450^\circ\text{C}$, to avoid the medium pressure inside the boiler exceeding the allowable value to ensure that the boiler runs safely. The main safety valve A49Y-10 DN150 and the impulse safety valve A49Y-10 DN25 should be installed together.

● 性能规范

公称压力 Mpa	公称口径 DN	试验压力 强度	密封	最大工 作压力 Mpa	最大工 作温度 ℃
10.0	150	15.0	4.0	4.0	≤ 450

● Performance specifications

Nominal Pressure (Mpa)	Nominal Diameter (DN)	Test Pressure MPa Strength	Seal	Maximum working pressure MPa	Maximum working temperature °C
10.0	150	15.0	4.0	4.0	≤ 450

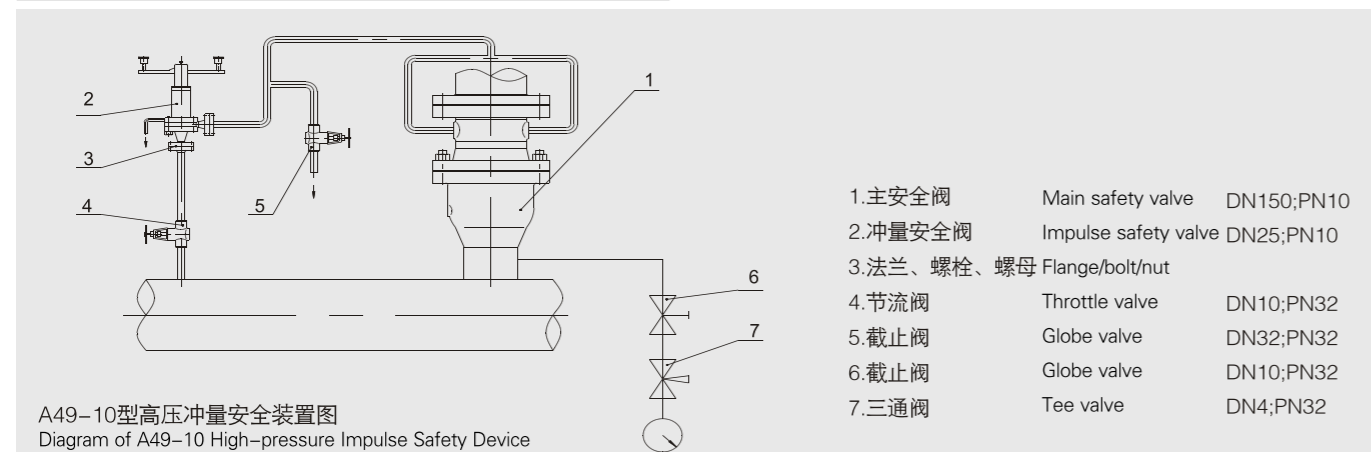
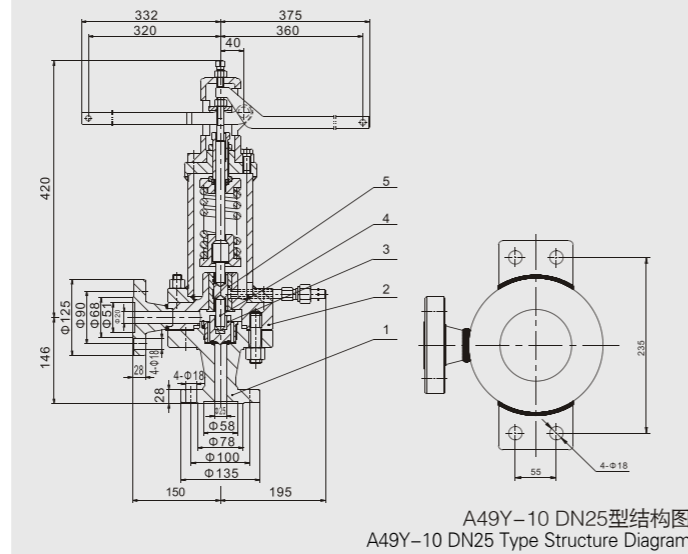
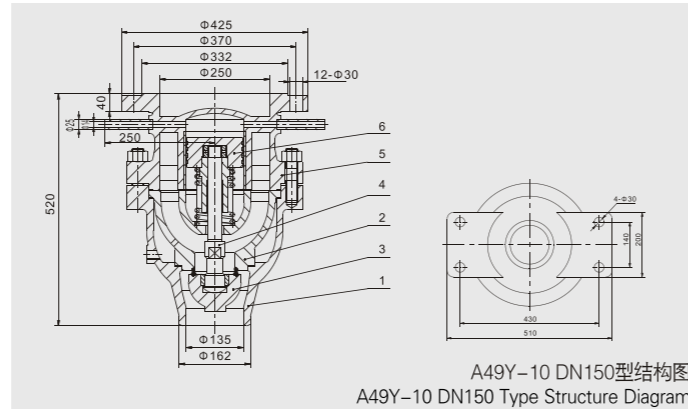
● 主要零件材料 Materials of main parts

1.主安全阀 The main safety valve

序号 No.	零件名称 Part Name	材料 Materials	材料 Materials
1	阀体 Body	碳钢	Carbon steel
2	阀座 Seat	碳钢+ 钴基硬质合金	Carbon steel+ Cobalt-based hard alloy
3	阀瓣 Disc	碳钢+ 钴基硬质合金	Carbon steel+ Cobalt-based hard alloy
4	阀杆 Stem	渗氮钢	Nitriding steel
5	阀盖 Bonnet	碳钢	Carbon steel
6	活塞 Piston	不锈钢	Stainless steel

2.冲量安全阀 Impulse safety valve

序号 No.	零件名称 Part Name	材料 Materials	材料 Materials
1	阀体 Body	碳钢	Carbon steel
2	阀盖 Bonnet	碳钢	Carbon steel
3	阀瓣 Disc	不锈钢+ 钴基硬质合金	Stainless steel+ Cobalt-based hard alloy
4	阀杆 Stem	不锈钢	Stainless steel
5	导向套 Guide Sleeve	不锈钢	Stainless steel



A49Y-P_{W54}10V 型 高压冲量安全装置(H) High pressure impulse safety device (H)

- 用途: 本装置供蒸汽工作压力为 $P=9.81\text{Mpa}$; $t \leq 540^\circ\text{C}$ 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。主安全阀A49Y-P_{W54}10V DN125应与冲量安全阀A49Y-P_{W54}10V DN20配套安装使用。

- Use: This device is used for power plant boilers with steam working conditions as: $p=9.81\text{MPa}$ and $t \leq 540^\circ\text{C}$, to avoid the medium pressure inside the boiler exceeding the allowable value to ensure that the boiler runs safely. The main safety valve A49Y-P_{W54}10V DN125 and the impulse safety valve A49Y-P_{W54}10V DN20 should be installed together.

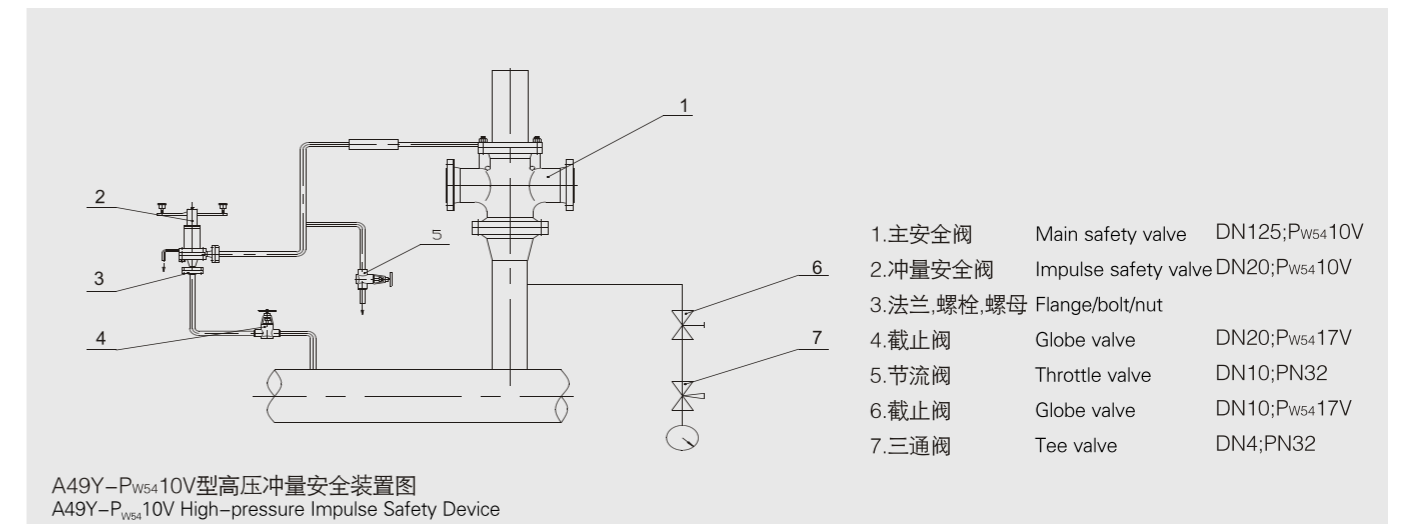
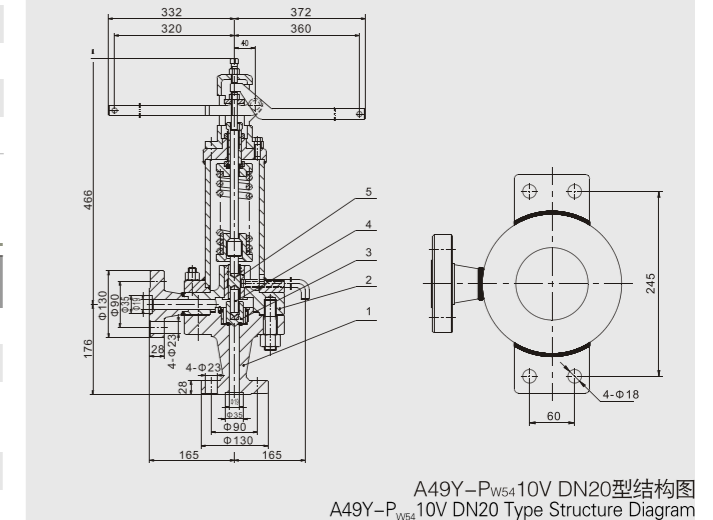
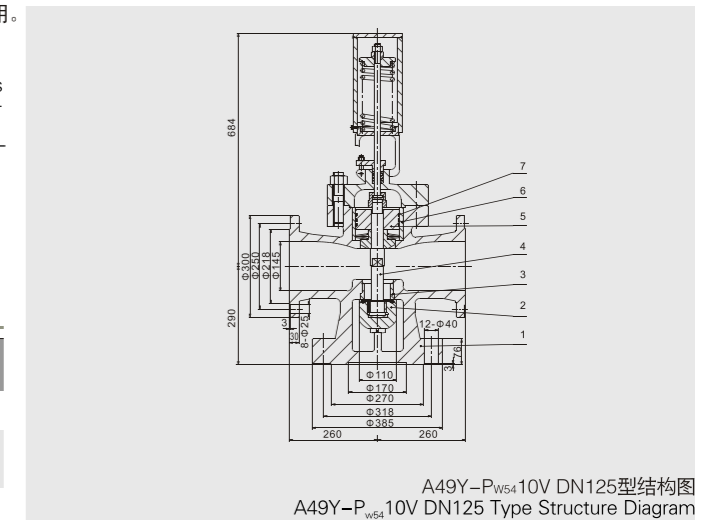
● 主要零件材料 Materials of main parts

1.主安全阀 The main safety valve

序号 No.	零件名称 Part Name	材料 Materials	材料 Materials
1	阀体 Body	铬钼钒钢	Molybdenum chrome vanadium steel
2	阀瓣 Disc	铬钼钒钢+ 钴基硬质合金	Molybdenum chrome vanadium steel + Cobalt-based hard alloy
3	阀座 Seat	铬钼钒钢+ 钴基硬质合金	Molybdenum chrome vanadium steel + Cobalt-based hard alloy
4	阀杆 Stem	渗氮钢	Nitriding steel
5	活塞 Piston	不锈钢	Stainless steel
6	活塞套 Piston set	不锈钢	Stainless steel
7	活塞环 Piston ring	不锈钢	Stainless steel

2.冲量安全阀 Impulse safety valve

序号 No.	零件名称 Part Name	材料 Materials	材料 Materials
1	阀体 Body	铬钼钒钢	Molybdenum chrome vanadium steel
2	阀盖 Bonnet	铬钼钒钢	Molybdenum chrome vanadium steel
3	阀瓣 Disc	不锈钢+ 钴基硬质合金	Stainless steel + Cobalt-based hard alloy
4	阀杆 Stem	不锈钢	Stainless steel
5	导向套 Guide Sleeve	不锈钢	Stainless steel



A49Y-P₅₄14V 型 高压冲量安全装置(H) High pressure impulse safety device (H)

● 用途:

本装置供蒸汽工作压力为 $P \leq 13.72\text{MPa}$; $t \leq 540^\circ\text{C}$ 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。

主安全阀A49Y-P₅₄14V DN100应与冲量安全阀A49Y-P₅₄14V DN20配套安装使用。

● Use:

This device is used for power plant boilers with steam working conditions as: $p=13.72\text{MPa}$; $t \leq 540^\circ\text{C}$. Its main function is to avoid the medium pressure inside the boiler exceeding the allowable value to ensure that the boiler runs safely.

The main safety valve A49Y-P₅₄14V DN100 should work with the impulse safety valve A49Y-P₅₄14V DN20.

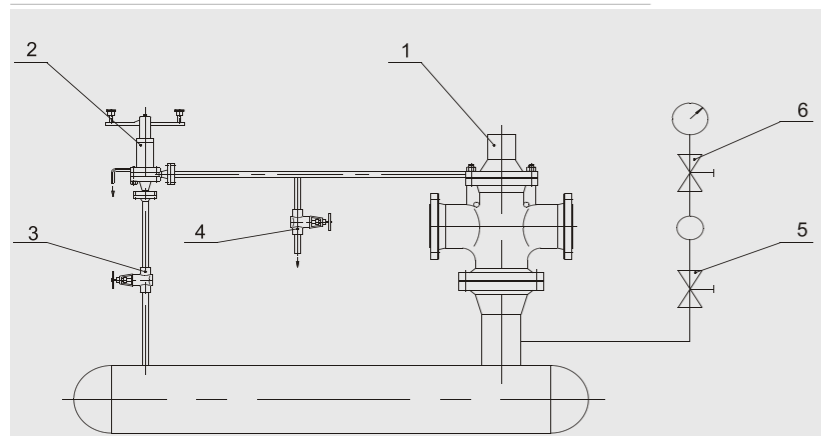
● 主要零件材料 Materials of main parts

1.主安全阀 The main safety valve

序号 No.	零件名称 Part Name	材料 Materials
1	下阀体 Lower body	铬钼钒钢 Molybdenum chrome vanadium steel
2	阀瓣 Disc	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
3	阀座 Upper body	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
4	上阀体 Body	铬钼钒钢 Molybdenum chrome vanadium steel
5	阀杆 Stem	铬钼钒钢 Molybdenum chrome vanadium steel
6	活塞 Piston	不锈钢 Stainless steel
7	阀盖 Bonnet	铬钼钒钢 Molybdenum chrome vanadium steel

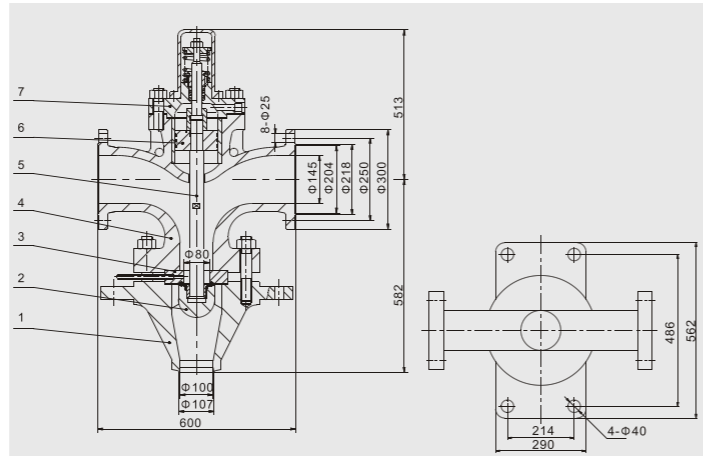
2.冲量安全阀 Impulse safety valve

序号 No.	零件名称 Part Name	材料 Materials
1	阀体 Body	铬钼钒钢 Molybdenum chrome vanadium steel
2	阀盖 Bonnet	铬钼钒钢 Molybdenum chrome vanadium steel
3	阀瓣 Disc	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
4	阀杆 Stem	不锈钢 Stainless steel
5	导向套 Guide Sleeve	不锈钢 Stainless steel

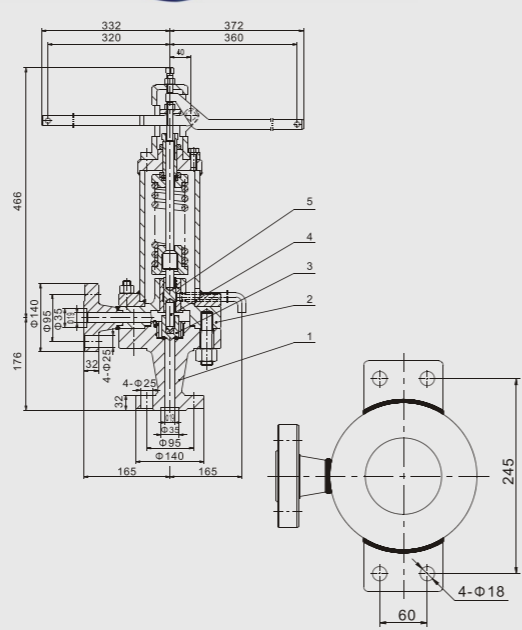


A49Y-P₅₄14V型高压冲量安全装置图
A49Y-P₅₄14V High-pressure Impulse Safety Device

1.主安全阀	Main safety valve	DN100;P ₅₄ 14V
2.冲量安全阀	Impulse safety valve	DN20;P ₅₄ 14V
3.截止阀	Globe valve	DN20;P ₅₄ 17V
4.节流阀	Throttle valve	DN10;PN32
5.截止阀	Globe valve	DN10;P ₅₄ 17V
6.三通阀	Tee valve	DN4;PN32



A49Y-P₅₄14V DN100型结构图
A49Y-P₅₄14V DN100 Type Structure Diagram



A49Y-P₅₄14V DN20型结构图
A49Y-P₅₄14V DN20 Type Structure Diagram

A69Y-P₅₄14V DN100 型 高压主安全阀(W) High pressure main safety valve (W)

● 用途:

本型号安全阀主要用于电站锅炉、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。A69Y-P₅₄14V DN100主安全阀与A49Y-P₅₄14V DN20脉冲安全阀配套使用。

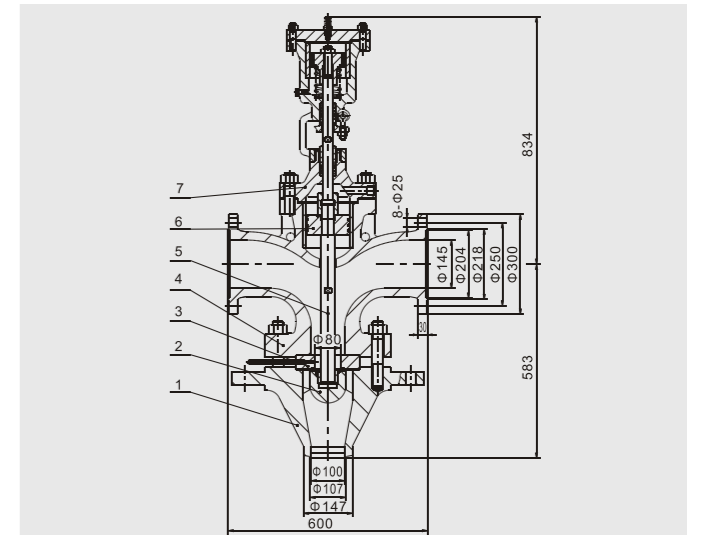
● Use:

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

The main safety valve A69Y-P₅₄14V DN100 should work with the impulse safety valve A49Y-P₅₄14V DN20.

● 主要零件材料 Materials of main parts

序号 No.	零件名称 Part Name	材料 Materials
1	下阀体 Lower body	铬钼钒钢 Molybdenum chrome vanadium steel
2	阀瓣 Disc	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
3	阀座 Seat	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
4	上阀体 Upper body	铬钼钒钢 Molybdenum chrome vanadium steel
5	阀杆 Stem	铬钼钒钢 Molybdenum chrome vanadium steel
6	活塞 Piston	不锈钢 Stainless steel
7	阀盖 Bonnet	铬钼钒钢 Molybdenum chrome vanadium steel



A69Y-P₅₄14V DN100型结构图
A69Y-P₅₄14V DN100 Type Structure Diagram

A49Y-P₅₄14V DN20 型 弹簧脉冲式安全阀(W) Spring Impulse safety valve (W)

● 用途:

本型号安全阀主要用于电站锅炉、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。A49Y-P₅₄14V DN20安全阀与A69Y-P₅₄14V DN100主安全阀配套使用。

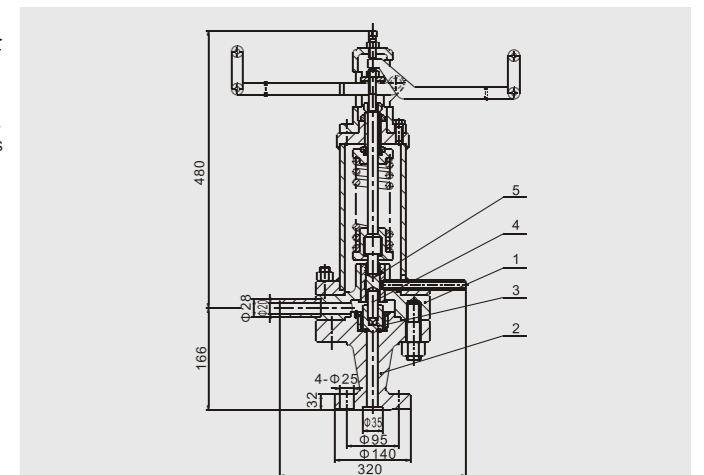
● Use:

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

The safety valve A49Y-P₅₄14V DN20 should work with the main safety valve A69Y-P₅₄14V DN100.

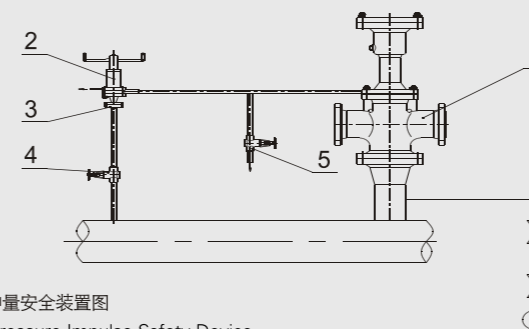
● 主要零件材料 Materials of main parts

序号 No.	零件名称 Part Name	材料 Materials
1	阀体 Body	铬钼钒钢 Molybdenum chrome vanadium steel
2	阀座 Seat	铬钼钒钢 Molybdenum chrome vanadium steel
3	阀瓣 Disc	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
4	阀杆 Stem	不锈钢 Stainless steel
5	导向套 Guide Sleeve	不锈钢 Stainless steel



A49Y-P₅₄14V DN20型结构图
A49Y-P₅₄14V DN20 Type Structure Diagram

● 说明: 本装置供蒸汽工作压力为14MPa;使用温度 $\leq 540^\circ\text{C}$ 的场合(200MW锅炉汽包或过热器出口)使用,防止锅炉内介质压力超过允许值,以保证设备安全运行。
● Descriptions: The device is applicable for a steam working pressure being 14MPa and a working temperature $\leq 540^\circ\text{C}$ (200MW boiler drum or overheater outlet) to prevent the medium pressure inside boilers from exceeding the allowable value to ensure safe operation of equipment.



A69Y-P₅₄14V型高压冲量安全装置图
A69Y-P₅₄14V High-pressure Impulse Safety Device

1.主安全阀	Main safety valve	DN100;P ₅₄ 14V
2.弹簧脉冲式安全阀	Spring plmpulse safety valve	DN20;P ₅₄ 14V
3.法兰 螺栓 螺母	Flange/bolt/nut	
4.截止阀	Globe valve	DN20;P ₅₄ 17V
5.节流阀	Throttle valve	DN10;PN32
6.截止阀	Globe valve	DN10;P ₅₄ 17V
7.三通阀	Tee valve	DN4;PN32

A69Y-P₅₄10V DN150 型 高压主安全阀(W) High pressure main safety valve (W)

● 用途:

本型号安全阀主要用于电站锅炉、压力容器、减温减压装置等设备上,防止压力超过允许最高压力值,保证设备安全运行。A69Y-P₅₄10V DN150主安全阀与GA49H-P₅₄10V DN20脉冲式安全阀配套使用。

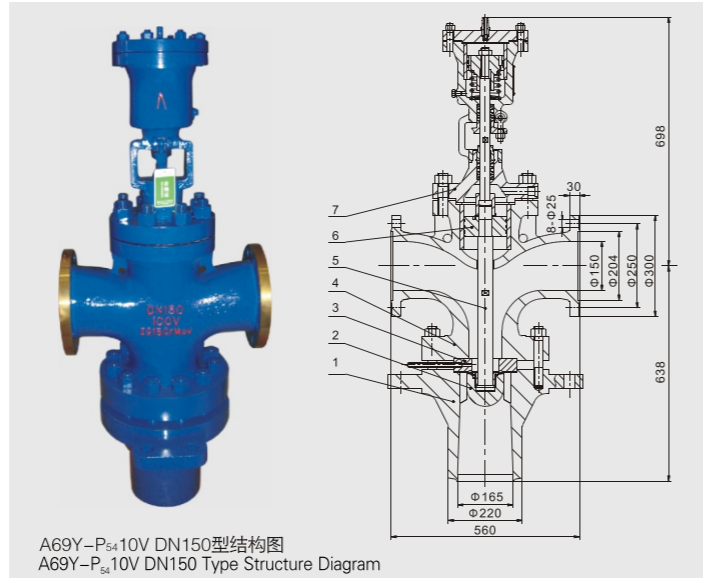
● Use:

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

The main safety valve A69Y-P₅₄10V DN150 should work with the impulse safety valve GA49H-P₅₄10V DN20.

● 主要零件材料 Materials of main parts

序号 No.	零件名称 Part Name	材料 Materials
1	下阀体 Body	铬钼钒钢 Molybdenum chrome vanadium steel
2	阀瓣 Disc	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
3	阀座 Seat	铬钼钒钢+钴基硬质合金 Molybdenum chrome vanadium steel + Cobalt-based hard alloy
4	上阀体 Body	铬钼钒钢 Molybdenum chrome vanadium steel
5	阀杆 Stem	铬钼钒钢 Molybdenum chrome vanadium steel
6	活塞 Piston	不锈钢 Stainless steel
7	阀盖 Bonnet	铬钼钒钢 Molybdenum chrome vanadium steel



GA49H-P₅₄10V DN20 型脉冲式安全阀(W) Impulse safety valve (W)

● 用途:

本型号安全阀主要用于电站锅炉、压力容器、减温减压装置等设备上,防止压力超过允许最高压力值,保证设备安全运行。GA49H-P₅₄10V DN20脉冲式安全阀与A69Y-P₅₄10V DN150主安全阀配套使用。

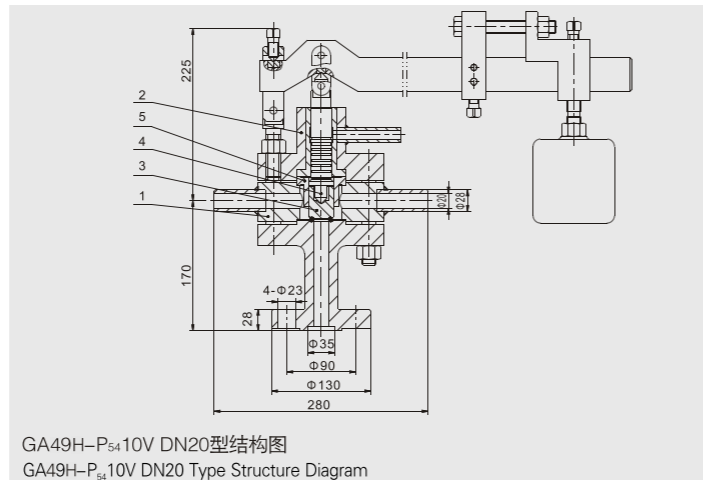
● Use:

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

The impulse safety valve GA49H-P₅₄10V DN20 should work with the main safety valve A69Y-P₅₄10V DN150.

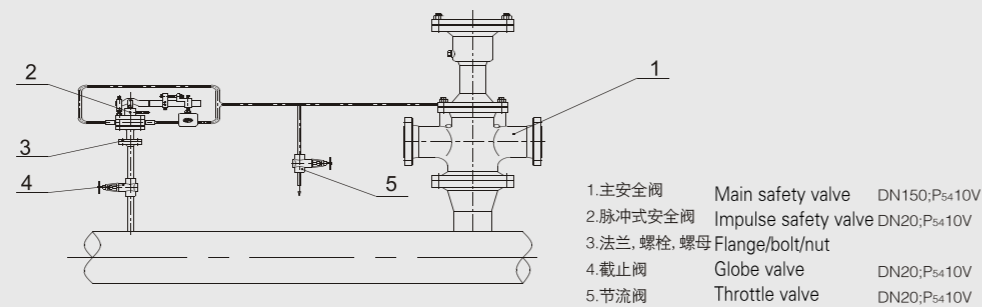
● 主要零件材料 Materials of main parts

序号 No.	零件名称 Part Name	材料 Materials
1	阀体 Body	铬钼钒钢 Molybdenum chrome vanadium steel
2	阀盖 Bonnet	铬钼钒钢 Molybdenum chrome vanadium steel
3	阀瓣 Disc	不锈钢+钴基硬质合金 Stainless steel + Cobalt-based hard alloy
4	阀杆 Stem	不锈钢 Stainless steel
5	导向套 Guide Sleeve	不锈钢 Stainless steel



● 说明: 本装置供蒸汽工作压力为11.4MPa;使用温度≤540℃的场合(50MW-100MW锅炉汽包或过热器出口)使用,防止锅炉内介质压力超过允许值,以保证设备安全运行。

● Descriptions: The device is applicable for a steam working pressure being 11.4MPa and a working temperature ≤540℃ (50MW-100MW boiler drum or overheater outlet) to prevent the medium pressure inside boilers from exceeding the allowable value to ensure safe operation of equipment.



A69Y-P₅₄10V 型高压冲量安全装置图
A69Y-P₅₄10V High-pressure Impulse Safety Device

A69Y-10 DN150 型 高压主安全阀(W) High pressure main safety valve (W)

● 用途:

本型号安全阀主要用于电站锅炉、压力容器、减温减压装置等设备上,防止压力超过允许最高压力值,保证设备安全运行。A69Y-10 DN150型主安全阀与GA49H-10 DN20型脉冲式安全阀配套安装。

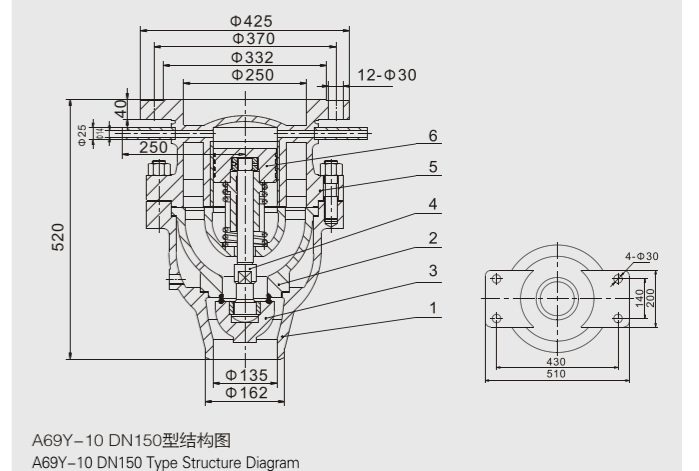
● Use:

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

The main safety valve A69Y-10 DN150 should work with the impulse safety valve GA49H-10 DN20.

● 主要零件材料 Materials of main parts

序号 No.	零件名称 Part Name	材料 Materials
1	阀体 Body	碳钢 Carbon steel
2	阀座 Seat	碳钢+钴基硬质合金 Carbon steel + Cobalt-based hard alloy
3	阀瓣 Disc	碳钢+钴基硬质合金 Carbon steel + Cobalt-based hard alloy
4	阀杆 Stem	弹簧钢 Spring steel
5	阀盖 Bonnet	碳钢 Carbon steel
6	活塞 Piston	不锈钢 Stainless steel



GA49H-10 DN20 型 脉冲式安全阀(W) Impulse safety valve (W)

● 用途:

本型号安全阀主要用于电站锅炉、压力容器、减温减压装置等设备上,防止压力超过允许最高压力值,保证设备安全运行。GA49H-10 DN20脉冲式安全阀与A69Y-10 DN150主安全阀配套安装使用。

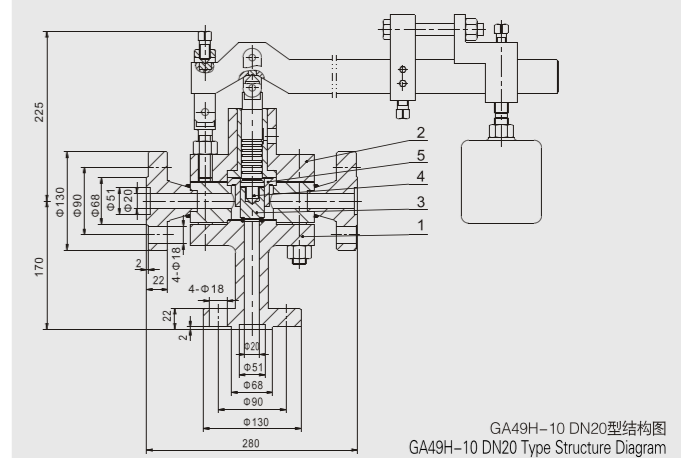
● Use:

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

The impulse safety valve GA49H-10 DN20 should work with the main safety valve A69Y-10 DN150.

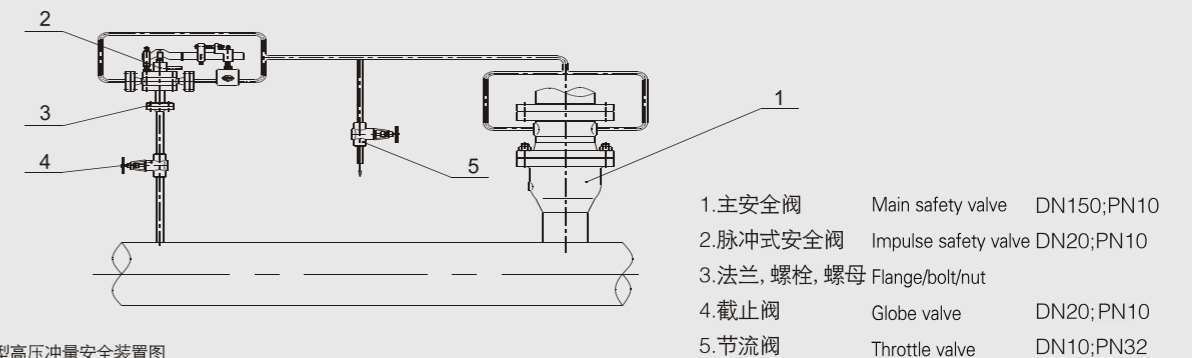
● 主要零件材料 Materials of main parts

序号 No.	零件名称 Part Name	材料 Materials
1	阀体 Body	碳钢 Carbon steel
2	阀盖 Bonnet	碳钢 Carbon steel
3	阀瓣 Disc	不锈钢+钴基硬质合金 Stainless steel + Cobalt-based hard alloy
4	阀杆 Stem	不锈钢 Stainless steel
5	导向套 Guide sleeve	不锈钢 Stainless steel



● 说明: 本装置供蒸汽工作压力为4.3MPa;使用温度≤450℃的电站锅炉、压力容器等设备使用,防止锅炉内介质压力超过允许值,以保证设备安全运行。

● Descriptions: The device is applicable for such equipment as power station boilers and pressure containers with a steam working pressure being 4.3MPa and a working temperature ≤450℃ to prevent the medium pressure inside boilers from exceeding the allowable value to ensure safe operation of equipment.



A69Y-10 DN150 型高压冲量安全装置图
A69Y-10 DN150 High-pressure Impulse Safety Device

SVL488型 洁净系统不锈钢安全阀

Stainless steel safety valve for cleaning system

● 用途:

SVL488 安全阀适用于低压蒸汽设备、管道、压力容器的超压保护, 尤其适用于酿酒和饮料工业, 对卫生和洁净标准的要求极高, 以保持高质的产品和使用工艺介质的污染降至最小。适用介质为蒸汽、气体和液体。

● Use:

SVL 488 safety valves are used for low pressure steam equipment, pipes, pressure vessels of overpressure protection, especially suitable for wine and beverage industry, with high standard requirements for health and cleanness, to maintain high quality products and minimum contamination to the working medium. The suitable medium can be steam, gas or liquid.

● 可供型号: Models available:

提供两种主要的型号:
Two major models are available:

SVL488-B 密闭阀帽, 适用于液体系统
Enclosed valve cap, applicable for liquid systems

SVL488-C 填料密封微升杆, 适用于蒸汽(或其它需要扳手的)系统
Packing seal slight rising stem, applicable for steam systems (or others requiring a wrench)

注: 两种型号都为封闭式阀盖。

Note: Both types adopt enclosed bonnets

● 主要连接尺寸 Main Connection Dimensions

进口 Inlet	出口 Outlet	do	L	L ₁	≈H	卡箍连接 Clamp connection	
						进口 Inlet	出口 Outlet
25	40	23	64	65	203	1"	1 1/2"
40	65	37	80	90	230	1 1/2"	2 1/2"
50	80	46	95	100	350	2"	3"

管道连接: 按DIN 2633 PN16 法兰标准连接。

Pipeline connection: as per the flange connection DIN 2633 PN 16

卡箍连接: 按 ISO 2852卫生级卡箍标准连接。

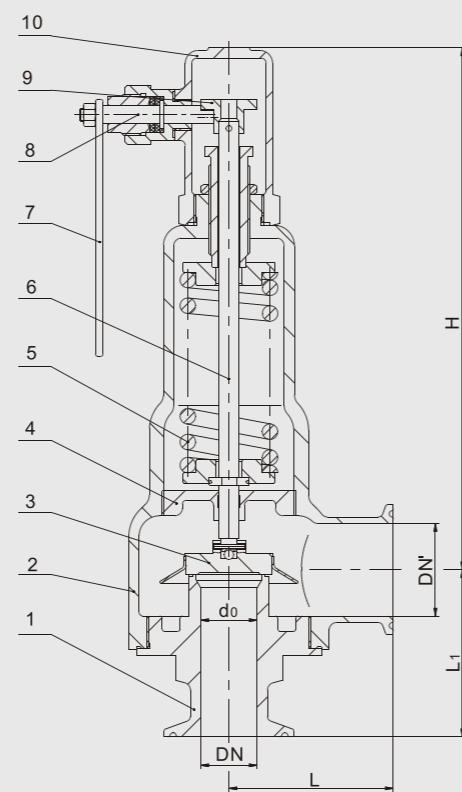
Clamp connection: as per the sanitary standard ISO 2852

客户订单时应注明连接形式

Note: please clarify the connection type when place order.

● 主要零件材料选用表 Bill of Materials for Main Parts

序号 No.	零件名称 Part Name	材料 Materials
1	阀座 Seat	不锈钢 Stainless steel 1.4404
2	阀体 Body	不锈钢 Stainless steel 1.4404
3	阀瓣 Disc	不锈钢 +EPDM Stainless steel +EPDM 1.4404
4	导向套 Guide Sleeve	不锈钢 Stainless steel 1.4404
5	弹簧 Spring	不锈钢 Stainless steel 17-7
6	阀杆 Stem	不锈钢 Stainless steel 1.4404
7	扳手 Spanner	不锈钢 Stainless steel 1.4404
8	提升杆 Lift link	不锈钢 Stainless steel 1.4404
9	提升块 Lift Stop	不锈钢 Stainless steel 1.4404
10	阀帽 Bonnet	不锈钢 Stainless steel 1.4404



SVL488型结构图
SVL 488 Type Structure Diagram

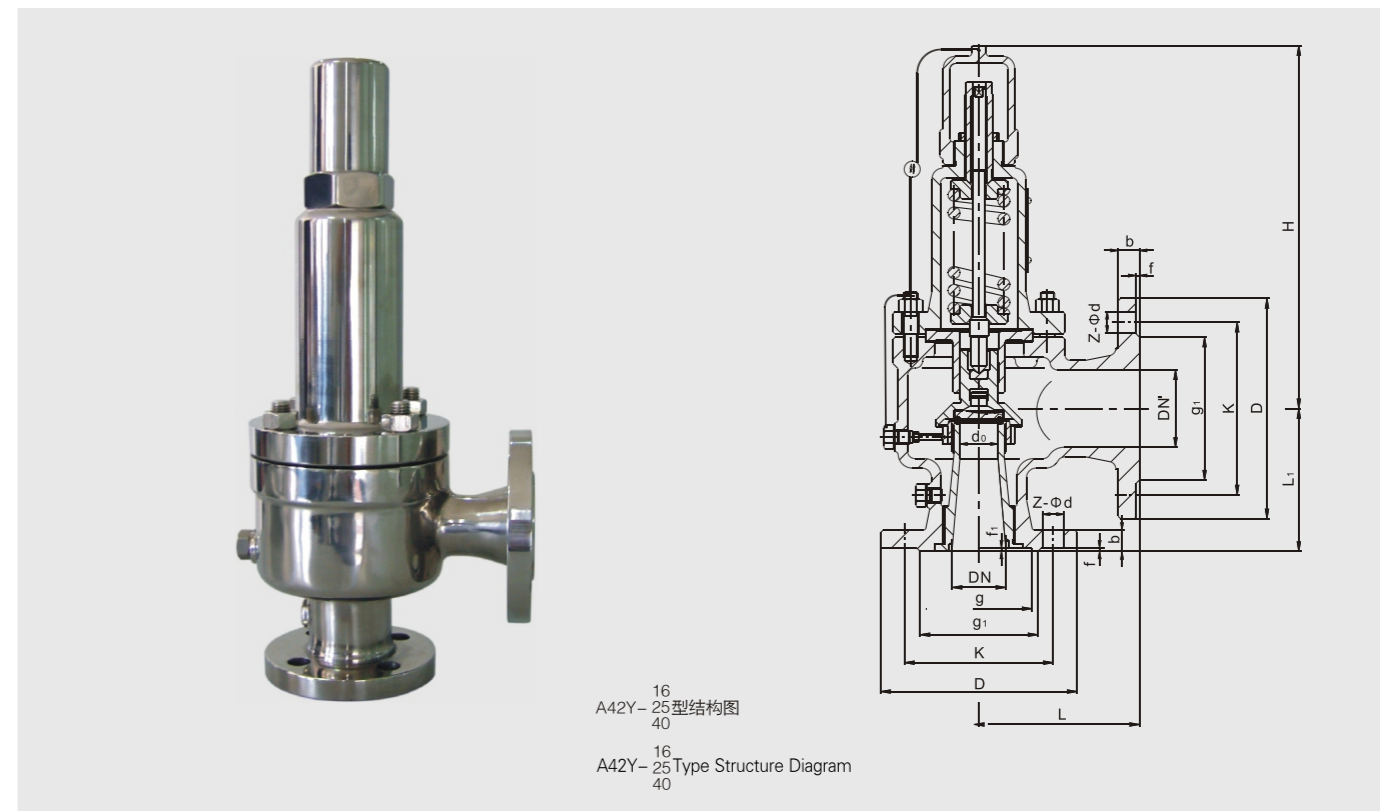
A42Y-¹⁶/₂₅/₄₀ P/R型 洁净系统不锈钢安全阀 Stainless steel safety valve for cleaning system

● 用途:

A42Y型安全阀适用于低压蒸汽设备、管道、压力容器的超压保护, 尤其适用于酿酒和饮料工业, 对卫生和洁净标准的要求极高, 以保持高质的产品和使用工艺介质的污染降至最小。适用介质为蒸汽、气体和液体。

● Use:

A42Y type safety valves are used for low pressure steam equipment, pipes, pressure vessels of overpressure protection, especially suitable for wine and beverage industry, with high standard requirements for health and cleanness, to maintain high quality products and minimum contamination to the working medium. The suitable medium can be steam, gas or liquid.



16
A42Y-25型结构图
40

16
A42Y-25 Type Structure Diagram
40

● 主要连接尺寸 Main Connection Dimensions

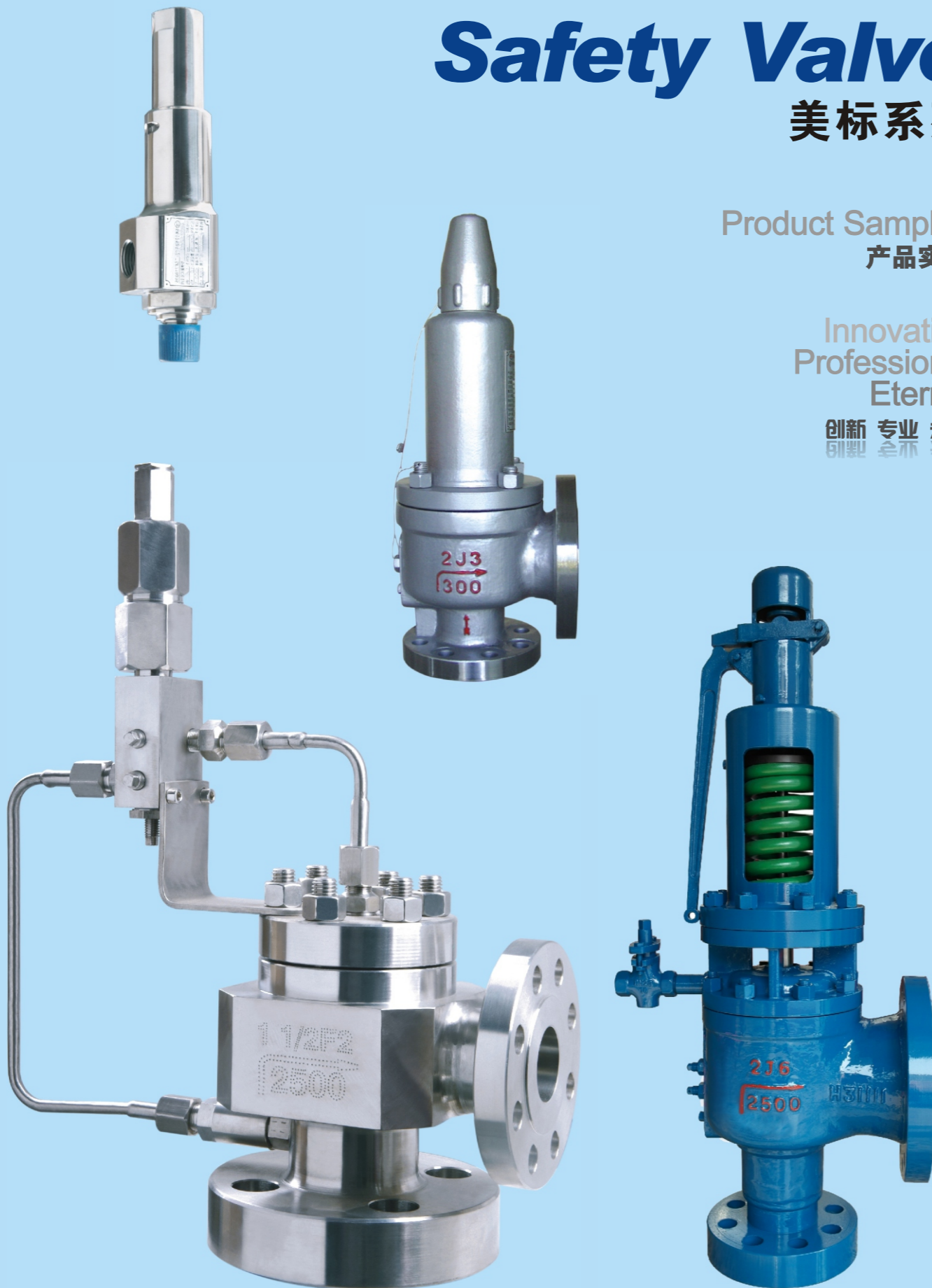
公称通径 DN	Nominal Diameter	do	DN'	L	L ₁	≈H
20		15	25	110	95	281
25		16	32	110	95	281
32		20	40	115	100	285
40		25	50	120	110	295
50		32	65	135	120	305
65		40	80	160	140	394
80		50	100	170	135	406
100		65	125	205	160	511
125		80	150	210	190	586
150		100	175	255	230	601

Safety Valve

美标系列

Product Samples
产品实样

Innovative
Professional
Eternal
创新 专业 永恒



HF 磅级系列安全阀简介

HF Pound-Grade series safety valve's introduction

● 性能特点:

- 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

Performance features:

- 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:

- 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。

Structure features:

- 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 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 posion 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 Valve types	进口法兰磅级 Flange Class	阀体材料 Material of Body	内件材料 (注) Material of Trim	阀帽型式 Cap Types
HFO:普通式安全阀 Conventional A42C Type A44C Type A48C Type HFB:波纹管平衡式安全阀 Balanced Bellows WA42C Type WA44C Type	编号 No.: 01:150Lb 03:300Lb 03a:300Lb 06:600Lb 09:900Lb 15:1500Lb 25:2500Lb	C:WCB P:CF8 R:CF8M R3:CF3M CL:LCB/LC2 C6/C9:WC6/WC9 M:Monel H:Hastelloy N:SPECIAL Material 特殊材料	P:304 R:316 R3:316L M:Monel H:Hastelloy	A:螺纹式Screwed B:带螺塞的螺纹式 Screwed with plug C:杠杆式 Lifting Leved D:封闭杠杆式 Close Lifting Leved E:带螺塞的封闭杠杆式 Close Lifting Leved With plug G:带螺塞的杠杆式 Lifting Leved With plug

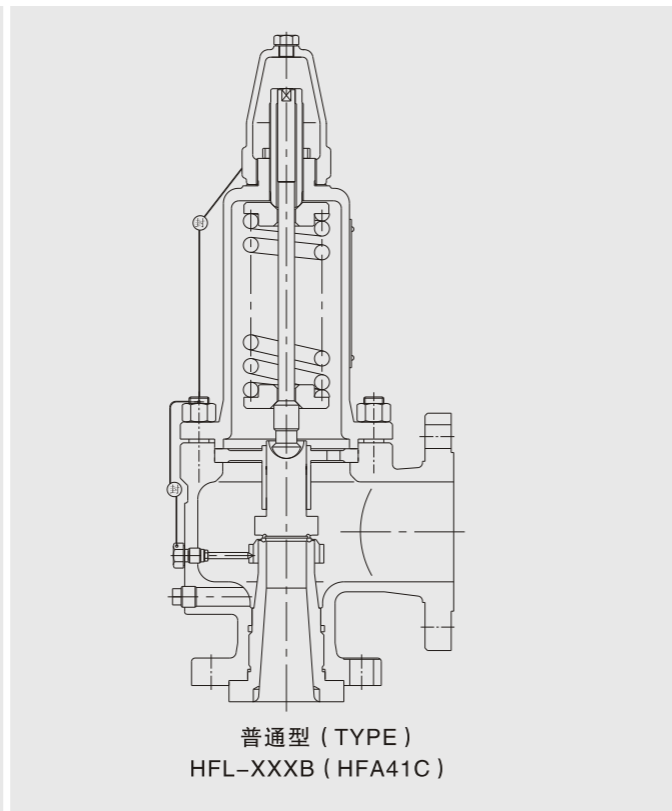
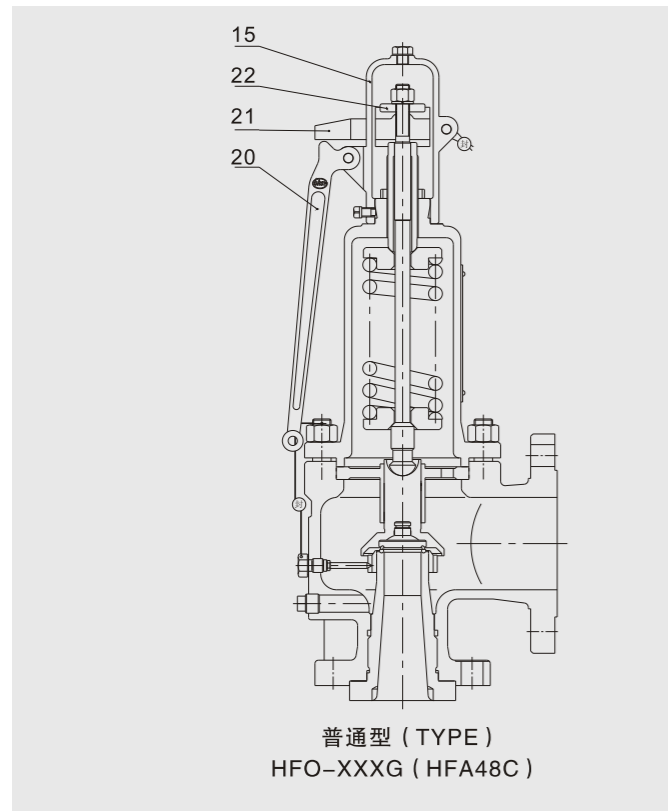
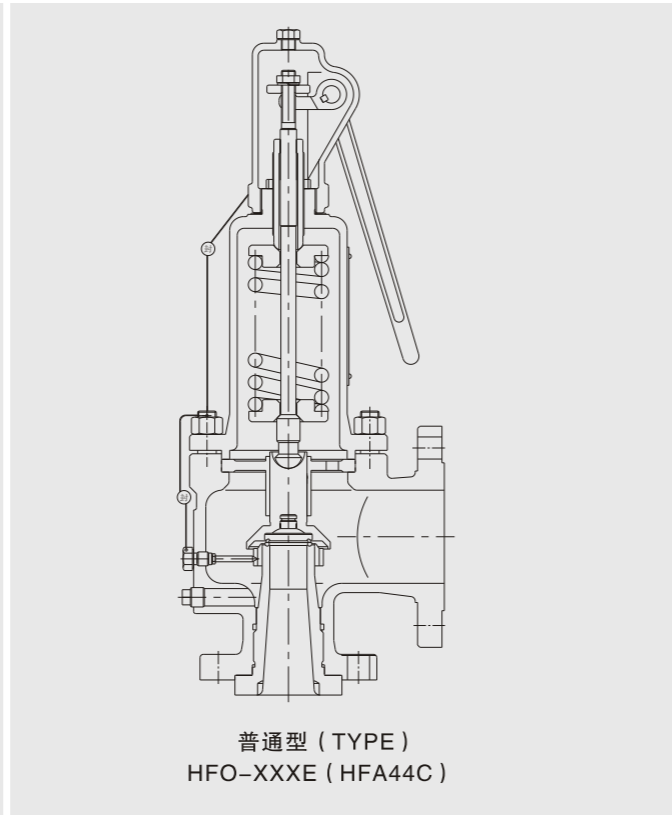
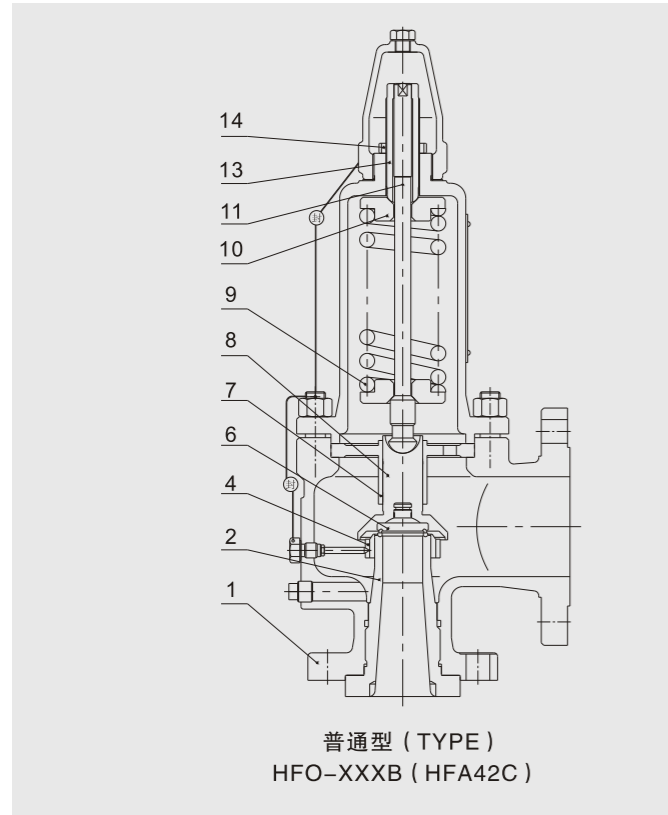
注: 阀体材料碳钢内件材料304, 阀体材料内件材料相同可以省略内件代号。

Remarks:Body material is WCB,internals material is 304,When the body material and the internals material is same,Code can be omitted.

HF 磅级系列安全阀简介

HF Pound-Grade series safety valve's introduction

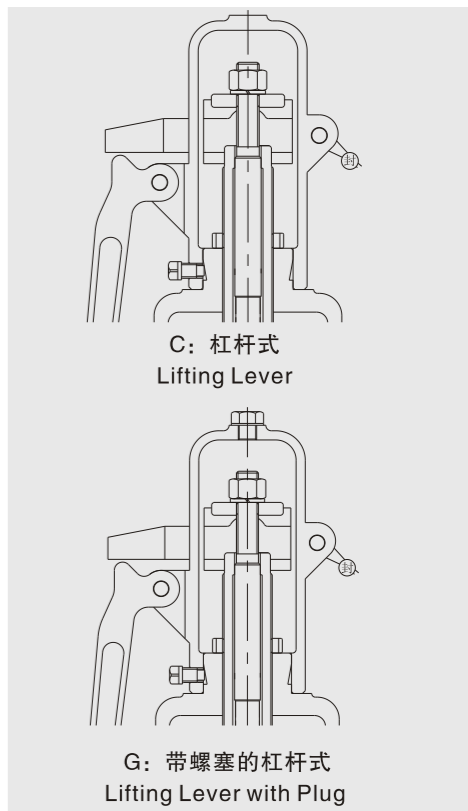
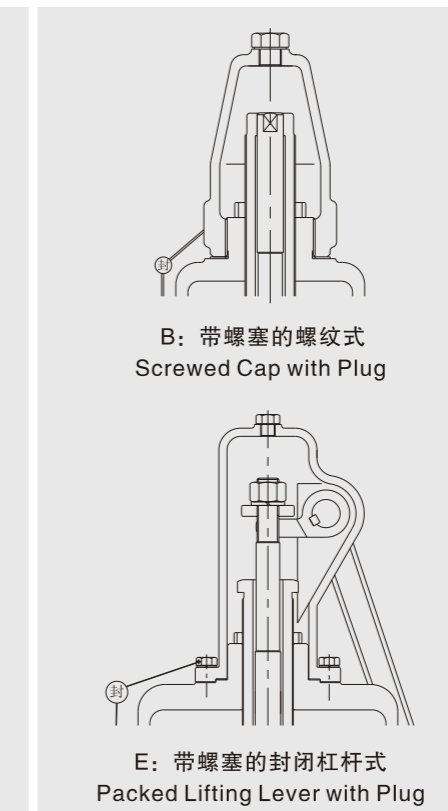
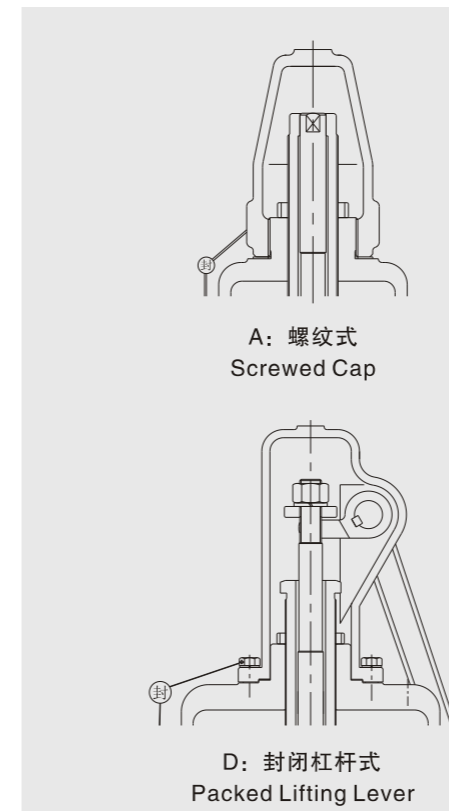
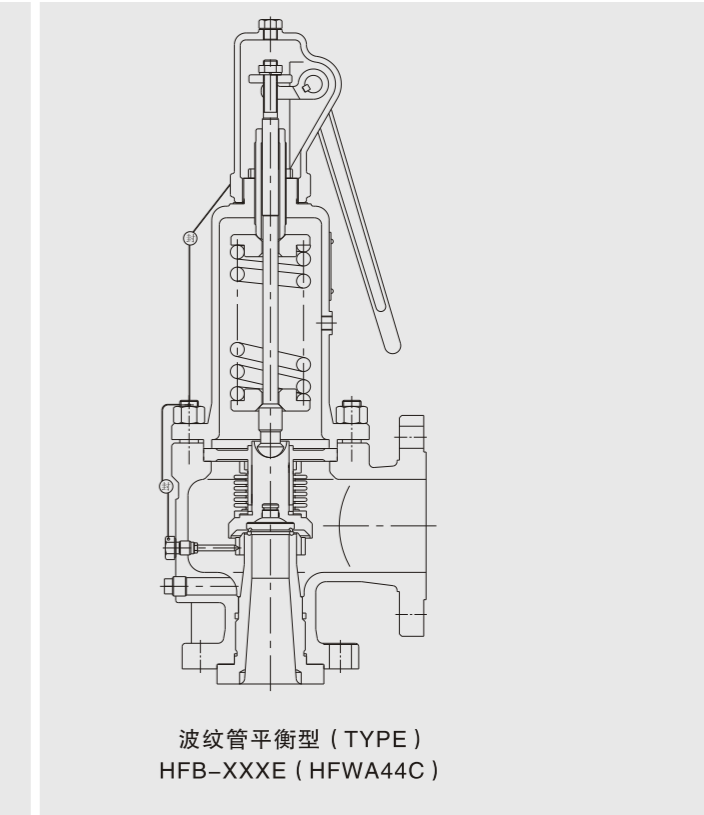
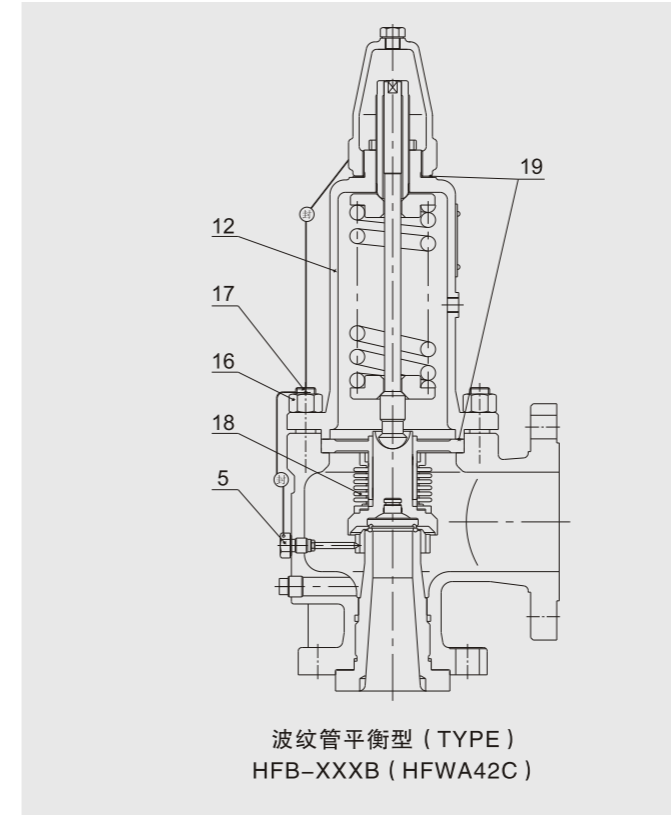
● 尺寸规格 Dimension & Specification



HF 磅级系列安全阀简介

HF Pound-Grade series safety valve's introduction

● 尺寸规格 Dimension & Specification



HF 系列安全阀材料表

HF Series safety valve materials

序号 No.	零件名称 Part Name	C	P	R	R3	C6/C9	M	H
1	阀体Body	WCB	CF8	CF8M	CF3M	WC6.WC9	Monel	Hastl.c
2	阀座Nozzle	304	316	316	316L	316	Monel	Hastl.c
3	螺塞Plug	碳钢C.St	420	420	420	420	420	420
4	调节阀Nozzle Ring	CF8	CF8M	CF8M	CF3M	CF8	Monel	Hastl.c
5	支头螺钉Set Screw	416	304	304	316	304	316L	316L
6	阀瓣Disc	304	316	316	316L	17-4PH	Monel	Hastl.c
7	导向套Guide	304	304	316	316L	304	Monel	Hastl.c
8	反冲盘Disc Holder	304	304	316	316L	304	Monel	Hastl.c
9	弹簧Spring	合金钢 Alloy.St	合金钢涂氟四 Alloy St Spread Teflon	合金钢涂氟四 Alloy St Spread Teflon	合金钢涂氟四 Alloy St Spread Teflon	合金钢 Alloy St	合金钢涂氟四 Alloy St Spread Teflon	合金钢涂氟四 Alloy St Spread Teflon
10	弹簧座Spring Washer	碳钢C.St	420	420	420	420	420	420
11	阀杆Stem	420	304	316	316	431	416	416
12	阀盖Bonnet	WCB	CF8	CF8M	CF3M	WC6	CF8M	Hastl.c
13	调整螺杆Adjusting Bolt	420	416	416	416	420	420	420
14	锁紧螺母Adj. Bolt Nut	碳钢C.St	420	420	420	420	420	420
15	保护罩Cap	碳钢C.St	CF8	CF8M	CF3M	碳钢C.St	CF8M	Hastl.c
16	螺母Nut	钢Steel	304	304	304	钢Steel	304	304
17	螺栓Bolt	钢Steel	304	304	304	钢Steel	304	304
18	波纹管Bellows	304	316	316	316L	316L	316L	316L
19	垫片Gaskets	石棉板Asbestos	氟四Teflon	氟四Teflon	氟四Teflon	V1500	V1500	V1500
20	扳手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
304								
0Cr19Ni9		0Cr17Ni12Mo2	00Cr17Ni14Mo2	Y1Cr13	2Cr13	ZG0Cr17Ni12M02	ZG00Cr17Ni14M02	0Cr17Ni14Cu4

材料对照Material Contrast

HF 系列安全阀标准参数

HF Series safety valves standard parameter

D 口径、压力——温度界限 Size、Pressure——Temperature Limits

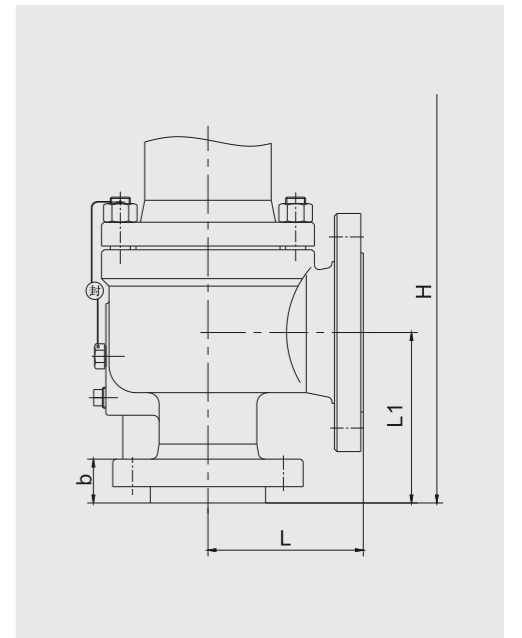
● 流道面积/喉径 Orifice Area/Diameter 0.710cm²/9.5mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material			
	进口 x 流道代号 x 出口		ANSI 法兰磅级 Flange Class		进口温度(℃) Inlet Temperature			阀体 Body	弹簧 Spring		
	Inlet x Orifice x Outlet		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃			HFO (HFA42C)	HFB (HFWA42C)
HFO (HFA42C HFA44C HFA48C)	01 (150)	1D2	150	150	1.96	1.27	0.55	1.96	1.58	碳钢 C.St	合金钢 Alloy St.
	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		
HFB (HFWA42C HFWA44C)	06 (600)	1D2	600	150	10.20	8.51	5.68	1.96	1.58	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	09 (900)	11/2D2	900	300	15.30	12.72	8.51	4.13	3.45		
	15(1500)	11/2D2	1500	300	25.54	21.23	14.20	4.13	3.45		
	25(2500)	11/2D3	2500	300	41.37	35.40	23.65	5.10	3.45		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰阀 座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	115	105	40	350	380	380	15
	03(300)	115	105	40	350	380	380	15
	03a(300a)	115	105	40	350	380	380	16
HFB (HFWA42C HFWA44C)	06(600)	115	105	40	350	380	380	16
	09(900)	140	105	51	460	480	500	28
	15(1500)	140	105	51	460	480	500	30
	25(2500)	178	140	64	490	520	540	32



HF 系列安全阀标准参数

HF Series safety valves standard parameter

E 口径、压力——温度界限 Size、Pressure——Temperature Limits

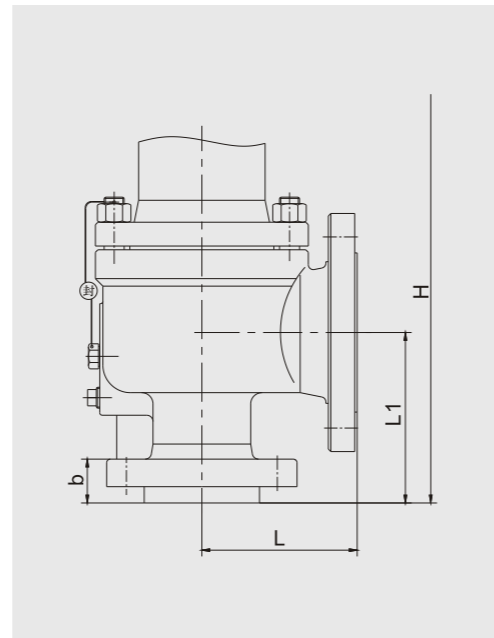
● 流通面积/喉径 Orifice Area/Diameter 1.265cm²/12.7mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material		
	进口 x 流道代号 x 出口		ANSI 法兰磅级 Flange Class		进口温度(℃) Inlet Temperature			阀体 Body	弹簧 Spring	
	Inlet x Orifice x Outlet	进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)			HFB (HFWA42C)
HFO (HFA42C HFA44C HFA48C)	01 (150)	1E2	150	150	1.96	1.27	0.55	1.96	1.58	碳钢 C.St
	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	
HFB (HFWA42C HFWA44C)	09 (900)	11/2E2	900	300	15.30	12.72	8.51	4.13	3.45	不锈钢 St.St.
	15(1500)	11/2E2	1500	300	25.54	21.23	14.20	4.13	3.45	
	25(2500)	11/2E3	2500	300	41.37	35.40	23.65	5.10	3.45	

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L ₁	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	115	105	40	350	380	380	15
	03(300)	115	105	40	350	380	380	15
	03a(300a)	115	105	40	350	380	380	16
	06(600)	115	105	40	350	380	380	16
HFB (HFWA42C HFWA44C)	09(900)	140	105	51	460	480	500	28
	15(1500)	140	105	51	460	480	500	30
	25(2500)	178	140	64	490	520	540	32



HF 系列安全阀标准参数

HF Series safety valves standard parameter

F 口径、压力——温度界限 Size、Pressure——Temperature Limits

● 流通面积/喉径 Orifice Area/Diameter 1.981cm²/16mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material		
	进口 x 流道代号 x 出口		ANSI 法兰磅级 Flange Class		进口温度(℃) Inlet Temperature			阀体 Body	弹簧 Spring	
	Inlet x Orifice x Outlet	进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)			HFB (HFWA42C)
HFO (HFA42C HFA44C HFA48C)	01 (150)	1 1/2F2	150	150	1.96	1.27	0.55	1.96	1.58	碳钢 C.St
	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	
HFB (HFWA42C HFWA44C)	09 (900)	1 1/2F3	900	300	15.30	12.72	8.51	5.10	3.45	不锈钢 St.St.
	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*)	11/2F2 1/2*	900	300	15.30	12.72	8.51	5.10	3.45	
	15*(1500*)	11/2F21/2*	1500	300	25.54	21.23	14.20	5.10	3.45	

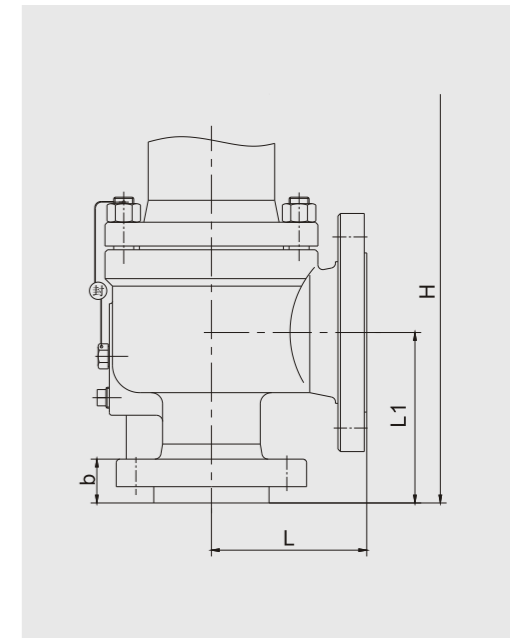
注: *是1995年6月API Std 526 第四版之前的规格

Note: * is specifications before API Standard 526 Fourth Edition. June 1995

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L ₁	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	121	124	44	350	380	380	22
	03(300)	121	124	44	350	380	380	22
	03a(300a)	152	124	44	350	380	380	24
	06(600)	152	124	44	350	380	380	28
HFB (HFWA42C HFWA44C)	09(900)	165	124	51	460	480	500	32
	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



HF 系列安全阀标准参数

HF Series safety valves standard parameter

G 口径、压力——温度界限 Size、Pressure——Temperature Limits

● 流通面积/喉径 Orifice Area/Diameter 3.245cm²/20.3mm

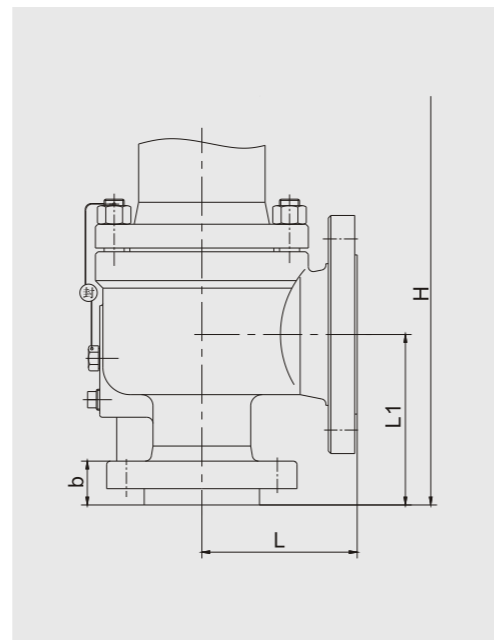
型号 Type	口径(英寸) Size(inch)		ANSI 法兰等级 Flange Class		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃ (MPa)		材质Material			
	进口 x 流道代号 x 出口		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring		
	Inlet x Orifice x Outlet	进口 Inlet										出口 Outlet	进口温度(℃) Inlet Temperature
HFO (HFA42C HFA44C HFA48C)	01 (150)	11/2G3	150	150	1.96	1.27	0.55	1.96	1.58	碳钢 C.St	合金钢 Alloy St.		
	03 (300)	11/2G3	300	150	1.96	1.96	1.96	1.96	1.58				
	03a(300a)	11/2G3	300	150	5.10	4.24	2.82	1.96	1.58				
	06 (600)	11/2G3	600	150	10.20	8.51	5.68	1.96	1.58				
	09 (900)	11/2G3	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				
HFB (HFWA42C HFWA44C)	25(2500)	2G3	2500	300	25.54	25.54	23.65	5.10	3.24			不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	01*(150*)	11/2G21/2*	150	150	1.96	1.27	0.55	1.96	1.58				
	03*(300*)	11/2G21/2*	300	150	1.96	1.96	1.96	1.96	1.58				
	03a(300a*)	11/2G21/2*	300	150	5.10	4.24	2.82	1.96	1.58				
	06*(600*)	11/2G21/2*	600	150	10.20	8.51	5.68	1.96	1.58				
	09(900)	11/2G21/2*	900	300	15.30	12.72	8.51	5.10	3.24				

注: *是1995年6月API Std 526 第四版之前的规格
Note: * is specifications before API Standard 526 Fourth Edition. June 1995

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	121	124	44	460	480	500	24
	03(300)	121	124	44	460	480	500	24
	03a(300a)	152	124	44	460	480	500	30
	06(600)	152	124	44	460	480	500	30
	09(900)	165	124	51	460	480	500	34
	15(1500)	171	156	70	710	740	755	58
HFB (HFWA42C HFWA44C)	25(2500)	171	156	70	710	740	755	62
	01*(150*)	121	124	44	470	490	520	28
	03*(300*)	121	124	44	470	490	520	28
	03a*(300a*)	152	124	44	470	490	520	30
	06*(600*)	152	124	44	480	500	530	34
	09*(900*)	152	124	51	480	500	530	34



HF 系列安全阀标准参数

HF Series safety valves standard parameter

H 口径、压力——温度界限 Size、Pressure——Temperature Limits

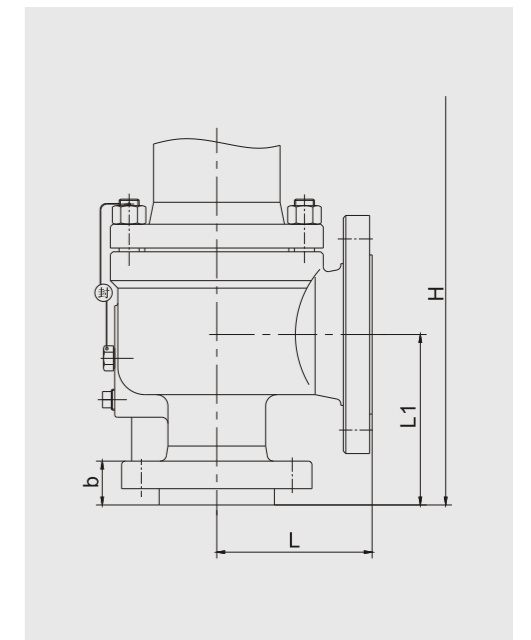
● 流通面积/喉径 Orifice Area/Diameter 5.065cm²/25.4mm

型号 Type	口径(英寸) Size(inch)		ANSI 法兰等级 Flange Class		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃ (MPa)		材质Material	
	进口 x 流道代号 x 出口		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring
	Inlet x Orifice x Outlet	进口 Inlet									
HFO (HFA42C HFA44C HFA48C)	01 (150)	1 1/2H3	150	150	1.96	1.27	0.55	1.96	1.58	碳钢 C.St	合金钢 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		
HFB (HFWA42C HFWA44C)	06 (600)	2H3	600	150	10.20	8.51	5.68	1.96	1.58	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread 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		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	124	130	43	420	430	450	25
	03(300)	124	130	43	420	430	450	25
	03a(300a)	124	130	46	510	520	580	30
HFB (HFWA42C HFWA44C)	06(600)	162	154	46	510	520	580	34
	09(900)	162	154	59	540	560	580	46
	15(1500)	162	154	59	540	560	580	50



HF 系列安全阀标准参数

HF Series safety valves standard parameter

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

● 流通面积/喉径 Orifice Area/Diameter 8.303cm²/32.5mm

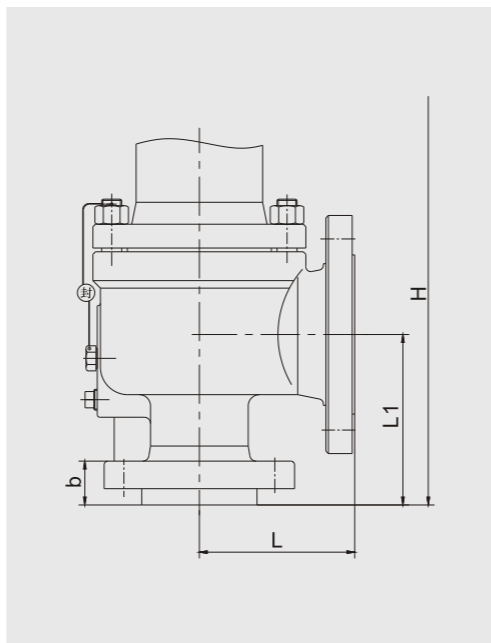
型号 Type	口径(英寸) Size(inch)		ANSI 法兰等级 Flange Class		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material	
	进口 x 流道代号 x 出口		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring
	Inlet x Orifice x Outlet	进口 Inlet									
HFO (HFA42C HFA44C HFA48C)	01 (150)	2J3	150	150	1.96	1.27	0.55	1.96	1.58	合金钢 Alloy St.	
	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		
HFB (HFWA42C HFWA44C)	06 (600)	3J4	600	150	10.20	8.51	5.68	1.96	1.58	碳钢 C.St	合金钢 涂四氟 Alloy St. Spread Teflon
	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	10.20	8.51	5.68	1.96	1.58		

注: *是1995年6月API Std 526 第四版之前的规格
Note: * is specifications before API Standard 526 Fourth Edition. June 1995

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	124	136	43	460	480	500	30
	03(300)	124	136	43	460	480	500	30
	03a(300a)	181	184	55	510	520	580	42
HFB (HFWA42C HFWA44C)	06(600)	181	184	57	650	680	695	56
	09(900)	181	184	68	650	680	695	68
	15(1500)	181	184	68	650	680	695	70
	03a*(300a*)	143	136	52	510	520	580	48
	06*(600*)	171	156	54	710	740	755	62



HF 系列安全阀标准参数

HF Series safety valves standard parameter

K 口径、压力——温度界限 Size、Pressure——Temperature Limits

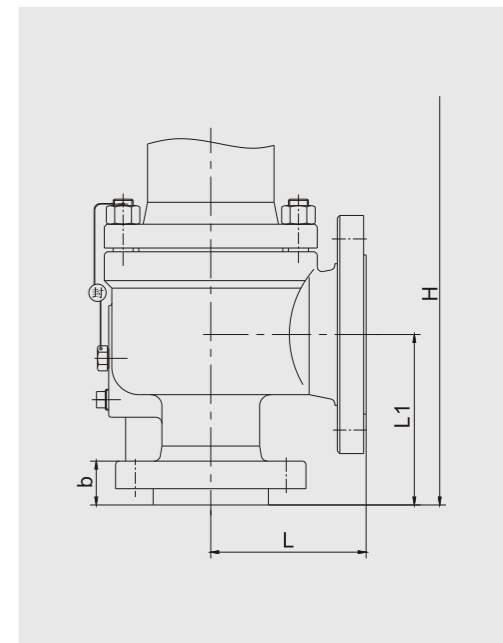
● 流通面积/喉径 Orifice Area/Diameter 11.858cm²/38.9mm

型号 Type	口径(英寸) Size(inch)		ANSI 法兰等级 Flange Class		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material	
	进口 x 流道代号 x 出口		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring
	Inlet x Orifice x Outlet	进口 Inlet									
HFO (HFA42C HFA44C HFA48C)	01 (150)	3K4	150	150	1.96	1.27	0.55	1.96	1.03	碳钢 C.St	合金钢 Alloy St.
	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		
HFB (HFWA42C HFWA44C)	06 (600)	3K4	600	150	10.20	8.51	5.68	1.96	1.38	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	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		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	162	156	54	510	520	580	42
	03(300)	162	156	54	510	520	580	42
	03a(300a)	162	156	54	510	520	580	42
HFB (HFWA42C HFWA44C)	06(600)	181	184	54	650	680	695	88
	09(900)	216	198	68	685	710	725	89
	15(1500)	216	197	68	685	710	725	90



HF 系列安全阀标准参数

HF Series safety valves standard parameter

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

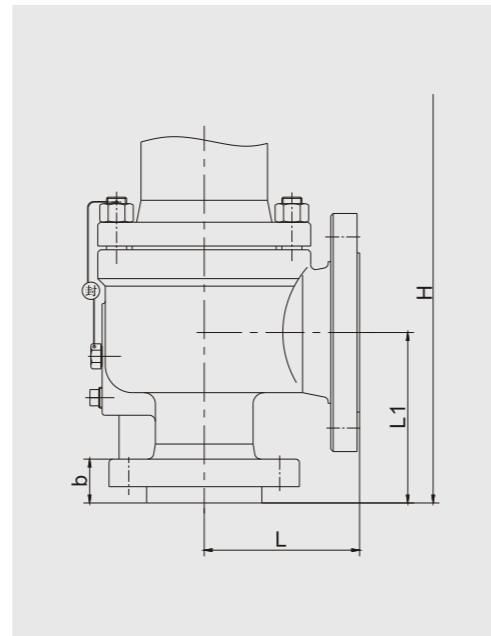
● 流通面积/喉径 Orifice Area/Diameter 18.406cm²/48.5mm

型号 Type	口径(英寸) Size(inch)		ANSI 法兰等级 Flange Class		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit 38℃ (MPa)		材质 Material	
	进口 x 流道代号 x 出口		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring
	Inlet x Orifice x Outlet	进口 Inlet									
HFO (HFA42C HFA44C HFA48C)	01 (150)	3L4	150	150	1.96	1.27	0.55	1.96	0.69	碳钢 C.St	合金钢 Alloy St.
	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		
HFB (HFWA42C HFWA44C)	06 (600)	4L6	600	150	6.89	6.89	5.68	1.96	1.17	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	09 (900)	4L6	900	150	10.34	10.34	8.51	1.96	1.17		
	15(1500)	4L6	1500	150	-	10.34	10.34	1.96	1.17		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	165	156	51	510	520	580	48
	03(300)	165	156	51	510	520	580	48
	03a(300a)	181	179	54	650	680	695	56
HFB (HFWA42C HFWA44C)	06(600)	203	179	60	650	680	695	110
	09(900)	222	197	75	670	700	715	124
	15(1500)	222	197	75	670	700	715	130



HF 系列安全阀标准参数

HF Series safety valves standard parameter

M 口径、压力——温度界限 Size、Pressure——Temperature Limits

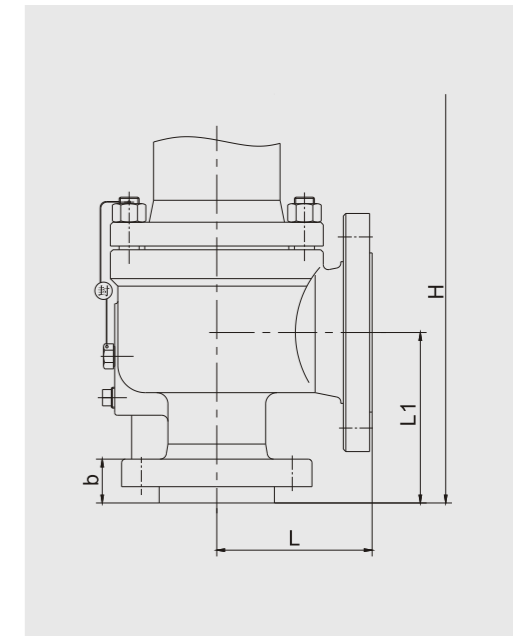
● 流通面积/喉径 Orifice Area/Diameter 23.22cm²/54.5mm

型号 Type	口径(英寸) Size(inch)		ANSI 法兰等级 Flange Class		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit 38℃ (MPa)		材质 Material	
	进口 x 流道代号 x 出口		进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring
	Inlet x Orifice x Outlet	进口 Inlet									
HFO (HFA42C HFA44C HFA48C)	01 (150)	4M6	150	150	1.96	1.27	0.55	1.96	0.55	碳钢 C.St	合金钢 Alloy St.
	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		
HFB (HFWA42C HFWA44C)	06 (600)	4M6	600	150	7.58	7.58	5.68	1.96	1.10	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	09 (900)	4M6	900	150	-	7.58	7.58	1.96	1.10		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	184	178	54	755	790	805	90
	03(300)	184	178	54	755	790	805	92
	03a(300a)	184	178	54	755	790	805	106
HFB (HFWA42C HFWA44C)	06(600)	203	178	62	755	790	805	116
	09(900)	222	197	65	755	790	805	170



HF 系列安全阀标准参数

HF Series safety valves standard parameter

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

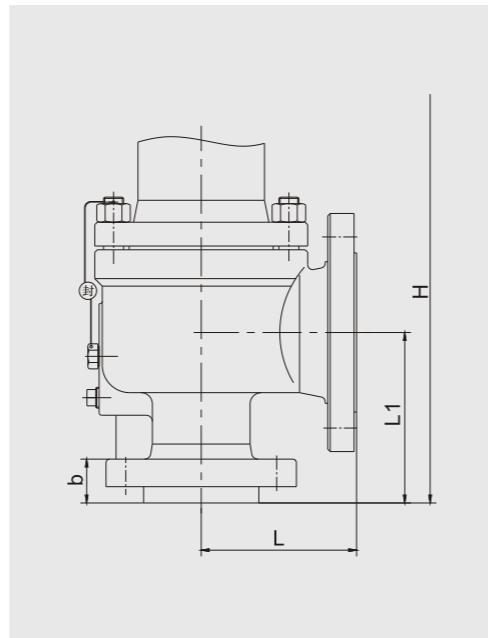
● 流通面积/喉径 Orifice Area/Diameter 28.00cm²/59.7mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material			
	进口 x 流道代号 x 出口		ANSI 法兰磅级 Flange Class		进口温度(℃) Inlet Temperature			阀体 Body	弹簧 Spring		
	Inlet x Orifice x Outlet	进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)			HFB (HFWA42C)	
01 (150)	4N6	150	150	1.96	1.27	0.55	1.96	0.55	碳钢 C.St	合金钢 Alloy St.	
HFO (HFA42C) HFA44C HFA48C)	03 (300)	4N6	300	150	1.96	1.96	1.96	0.55			
HFB (HFWA42C) HFWA44C)	03a(300a)	4N6	300	150	5.10	4.24	2.82	1.96	1.10	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
06(600)	4N6	600	150	6.89	6.89	5.68	1.96	1.10			
09(900)	4N6	900	150	-	6.89	6.89	1.96	1.10			

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
01(150)	210	197	54	755	810	825	96	
HFO (HFA42C) HFA44C HFA48C)	03(300)	210	197	54	755	810	825	98
HFB (HFWA42C) HFWA44C)	03a(300a)	210	197	54	755	810	825	105
06(600)	222	197	60	755	810	825	140	
09(900)	222	197	60	755	810	825	180	



HF 系列安全阀标准参数

HF Series safety valves standard parameter

P 口径、压力——温度界限 Size、Pressure——Temperature Limits

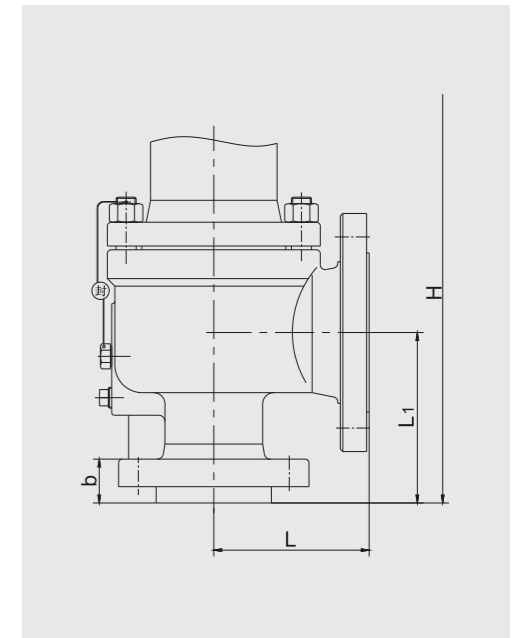
● 流通面积/喉径 Orifice Area/Diameter 41.161cm²/72.4mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit38℃(MPa)		材质Material			
	进口 x 流道代号 x 出口		ANSI 法兰磅级 Flange Class		进口温度(℃) Inlet Temperature			阀体 Body	弹簧 Spring		
	Inlet x Orifice x Outlet	进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)			HFB (HFWA42C)	
01 (150)	4P6	150	150	1.96	1.27	0.55	1.96	0.55	碳钢 C.St	合金钢 Alloy St.	
HFO (HFA42C) HFA44C HFA48C)	03 (300)	4P6	300	150	1.96	1.96	1.96	0.55			
HFB (HFWA42C) HFWA44C)	03a(300a)	4P6	300	150	3.62	3.62	2.82	1.96	1.03	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
06 (600)	4P6	600	150	6.89	6.89	5.68	1.96	1.03			
09 (900)	4P6	900	150	-	6.89	6.89	1.96	1.03			

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
01(150)	229	181	54	800	835	850	115	
HFO (HFA42C) HFA44C HFA48C)	03(300)	229	181	54	800	835	850	115
HFB (HFWA42C) HFWA44C)	03a(300a)	254	225	54	825	915	935	140
06(600)	254	225	65	825	915	935	190	
09(900)	254	225	65	825	915	935	220	



HF 系列安全阀标准参数

HF Series safety valves standard parameter

Q 口径、压力——温度界限 Size、Pressure——Temperature Limits

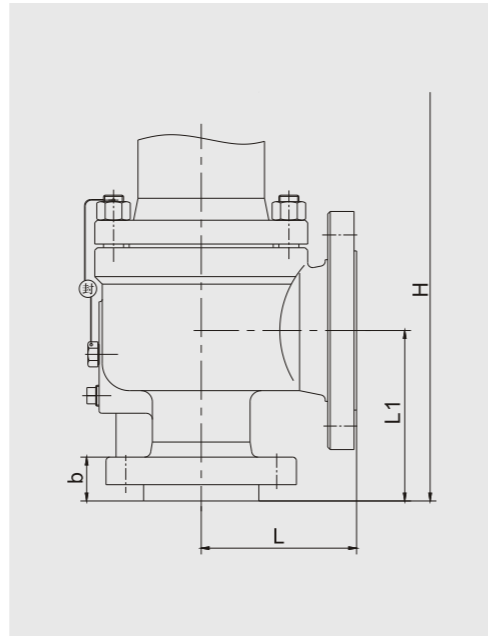
● 流通面积/喉径 Orifice Area/Diameter 71.290cm²/95.3mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit 38℃ (MPa)		材质 Material			
	进口 x 流道代号 x 出口	ANSI 法兰磅级 Flange Class	进口温度(℃) Inlet Temperature			HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring		
			Inlet x Orifice x Outlet	进口 Inlet	出口 Outlet					-29℃~ 38℃	38℃~ 232℃
HFO (HFA42C) HFA44C HFA48C)	01 (150)	6Q8	150	150	1.13	1.13	0.55	0.79	0.48	碳钢 C.St	合金钢 Alloy St.
	03 (300)	6Q8	300	150	1.13	1.13	1.13	0.79	0.48	碳钢 C.St	合金钢 Alloy St.
HFB (HFWA42C) HFWA44C)	03a(300a)	6Q8	300	150	2.06	2.06	2.06	0.79	0.79	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	06 (600)	6Q8	600	150	4.13	4.13	4.13	0.79	0.79		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C) HFA44C HFA48C)	01(150)	241	240	59	980	1020	1035	180
	03(300)	241	240	59	980	1020	1035	185
HFB (HFWA42C) HFWA44C)	03a(300a)	241	240	59	980	1020	1035	205
	06(600)	241	240	75	980	1020	1035	220



HF 系列安全阀标准参数

HF Series safety valves standard parameter

R 口径、压力——温度界限 Size、Pressure——Temperature Limits

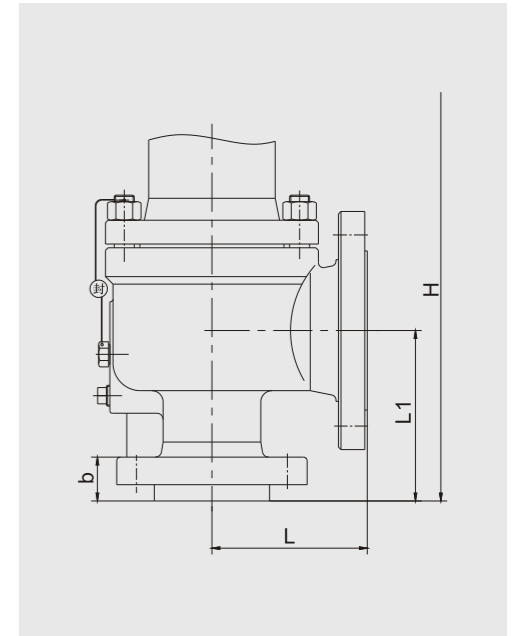
● 流通面积/喉径 Orifice Area/Diameter 103.22cm²/114.6mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit 38℃ (MPa)		材质 Material			
	进口 x 流道代号 x 出口	ANSI 法兰磅级 Flange Class	进口温度(℃) Inlet Temperature			HFO (HFA42C)	HFB (HFWA42C)	阀体 Body	弹簧 Spring		
			Inlet x Orifice x Outlet	进口 Inlet	出口 Outlet					-29℃~ 38℃	38℃~ 232℃
HFO (HFA42C) HFA44C HFA48C)	01 (150)	6R8	150	150	0.68	0.68	0.55	0.41	0.41	碳钢 C.St	合金钢 Alloy St.
	03 (300)	6R8	300	150	0.68	0.68	0.68	0.41	0.41	碳钢 C.St	合金钢 Alloy St.
HFB (HFWA42C) HFWA44C)	03a(300a)	6R10	300	150	1.58	1.58	1.58	0.68	0.68	不锈钢 St.St.	合金钢 涂四氟 Alloy St. Spread Teflon
	06 (600)	6R10	600	150	2.06	2.06	2.06	0.68	0.68		

● 尺寸 Dimensions

mm

型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C) HFA44C HFA48C)	01(150)	241	240	59	980	1020	1035	205
	03(300)	241	240	59	980	1020	1035	220
HFB (HFWA42C) HFWA44C)	03a(300a)	267	240	59	1020	1060	1075	260
	06(600)	267	240	70	1020	1060	1075	300



HF 系列安全阀标准参数

HF Series safety valves standard parameter

T 口径、压力——温度界限 Size、Pressure——Temperature Limits

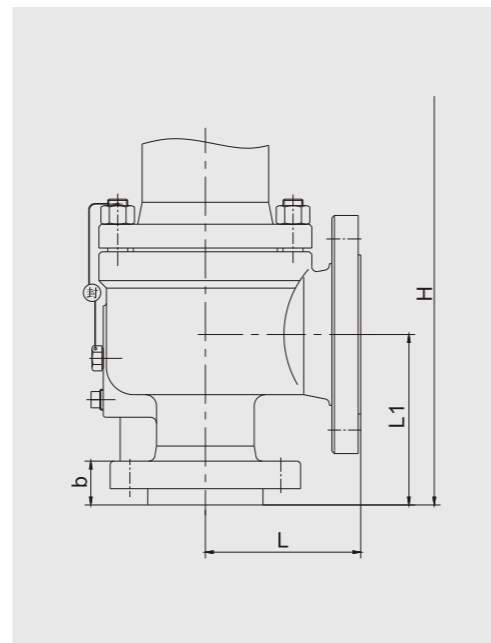
● 流道面积/喉径 Orifice Area/Diameter 167.742cm²/146mm

型号 Type	口径(英寸) Size(inch)		最高整定压力(MPa) Maximum Set Pressure			38℃ 最高背压 Back pressure limit 38℃ (MPa)			材质 Material		
	ANSI 法兰磅级 Flange Class		进口温度(℃) Inlet Temperature						阀体 Body	弹簧 Spring	
	进口 × 流道代号 × 出口	进口 Inlet	出口 Outlet	-29℃~ 38℃	38℃~ 232℃	232℃~ 427℃	HFO (HFA42C)	HFB (HFWA42C)			
HFO (HFA42C HFA44C HFA48C)	01(150)	8T10	150	150	0.44	0.44	0.44	0.20	0.20	碳钢 C.St	合金钢 Alloy St.
HFB (HFWA42C HFWA44C)	03a(300a)	8T10	300	150	0.82	0.82	0.82	0.41	0.41	不锈钢 St.St.	合金钢 Alloy St. 涂四氟 Spread Teflon
	03b(300b)	8T10	300	150	2.06	2.06	2.06	0.68	0.68		

● 尺寸 Dimensions

mm

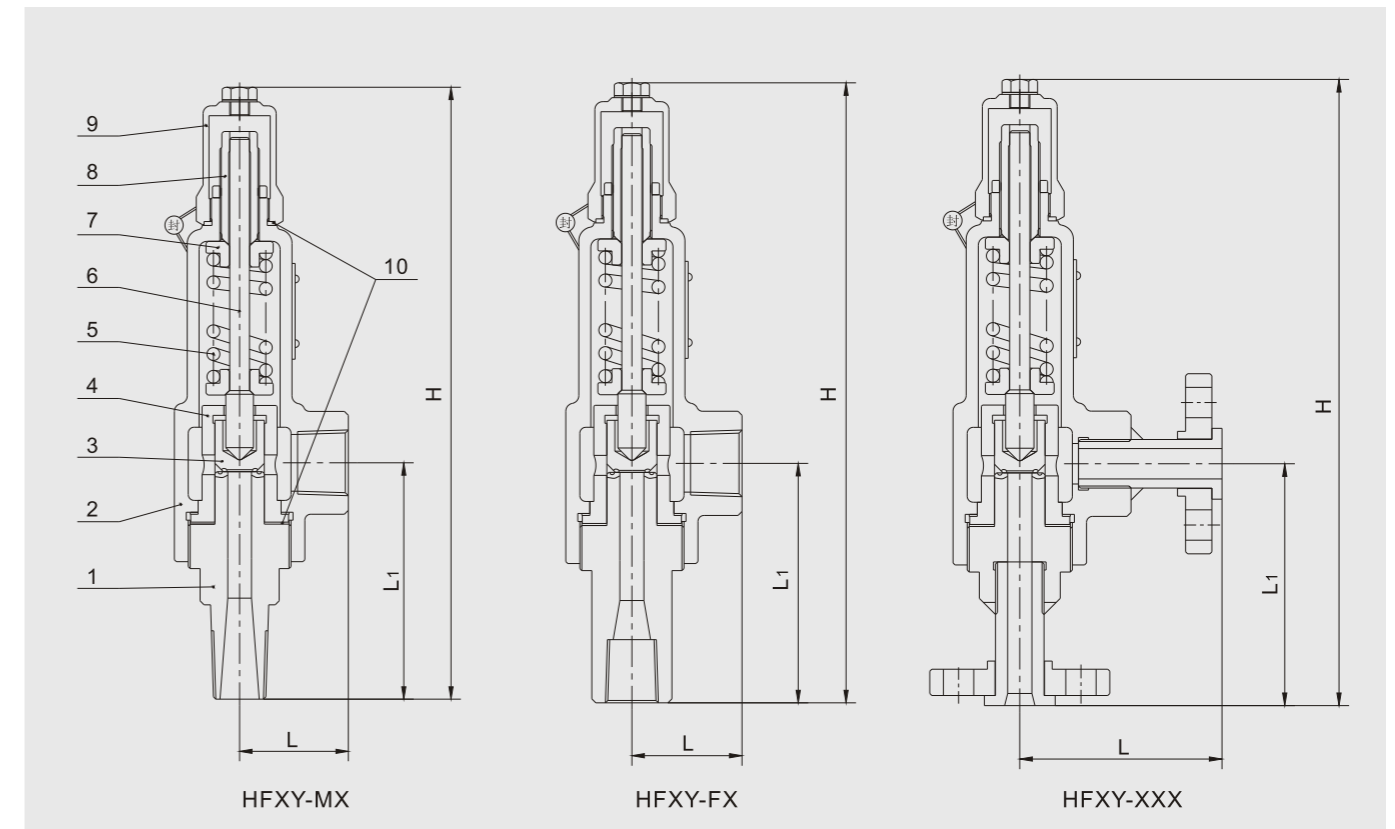
型号 Type	面心距 Center to Face		法兰 阀座总厚 Total Thickness of Flange and Nozzle	近似高度 Approximate Height H			近似重量 Approximate Weight Cap Type B (Kg)	
	出口 Outlet	进口 Inlet		阀帽型式 Cap Type				
	L	L1	b	A	C	D		
HFO (HFA42C HFA44C HFA48C)	01(150)	279	276	65	1040	1080	1095	380
	03(300)	279	276	65	1040	1080	1095	400
HFB (HFWA42C HFWA44C)	03a(300a)	279	276	65	1040	1080	1095	460
	03b(300b)	279	276	65	1040	1080	1095	480



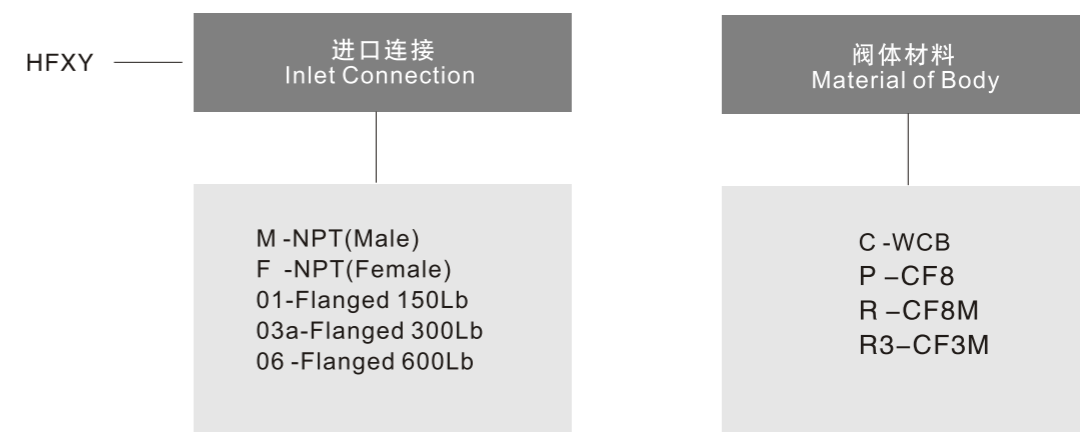
HFX系列螺纹、松套法兰式泄压阀

HFX Series screw, loose knot type flanged pressure relief valve

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



● 型号编制方法 Method of compiling the types



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

HFXY系列螺纹、松套法兰式泄压阀

HFXY Series screw, loose knot type flanged pressure relief valve

● 材料 Materials

序号 Ref.No	零件名称 Part Name	阀体材料 Valve Materials			
		C	P	R	R3
1	阀座 Nozzle	304	304	316	316L
2	阀体 Body	WCB	CF8	CF8M	CF3M
3	阀瓣 Disc	304	304	316	316L
4	导向套 Guide	304	304	316	316L
5	弹簧 Spring	304	304	316	316
6	阀杆 Stem	420	304	316	316L
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 Orifice Area (cm ²)	型号 Type	口径(英寸) Size(inch) 进口×出口 Inlet×Outlet	连接 Connections (NPT)		最高整定压力 Maximum Set Pressure (MPa)		尺寸 Dimensions (mm)			近似重量 Approx. Weight (Kg)
			进口 Inlet	出口 Outlet	-29°C~ 232°C	232°C~ 427°C	L	L ₁	H	
0.28(B)	HFXY-MX	1/4B1/4	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	4
	HFXY-FX		内螺纹							
	HFXY-MX	1/2B1/2	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	
	HFXY-FX		内螺纹							
0.50(C)	HFXY-MX	1/2C1/2	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	4
	HFXY-FX		内螺纹							
	HFXY-MX	3/4C3/4	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	
	HFXY-FX		内螺纹							
	HFXY-MX	1/2C1	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	
	HFXY-FX		内螺纹							
HFXY-MX	3/4C1	外螺纹	F(内螺纹)	8.51	5.68	55	80	280		
HFXY-FX		内螺纹							55	70
0.71(D)	HFXY-MX	1C1	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	4
	HFXY-FX		内螺纹							
	HFXY-MX	3/4D3/4	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	
	HFXY-FX		内螺纹							
	HFXY-MX	3/4D1	外螺纹	F(内螺纹)	8.51	5.68	55	80	280	
	HFXY-FX		内螺纹							
HFXY-MX	1D1	外螺纹	F(内螺纹)	8.51	5.68	55	80	280		
HFXY-FX		内螺纹							55	70

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

HFXY系列螺纹、松套法兰式泄压阀

HFXY Series screw, loose knot type flanged pressure relief valve

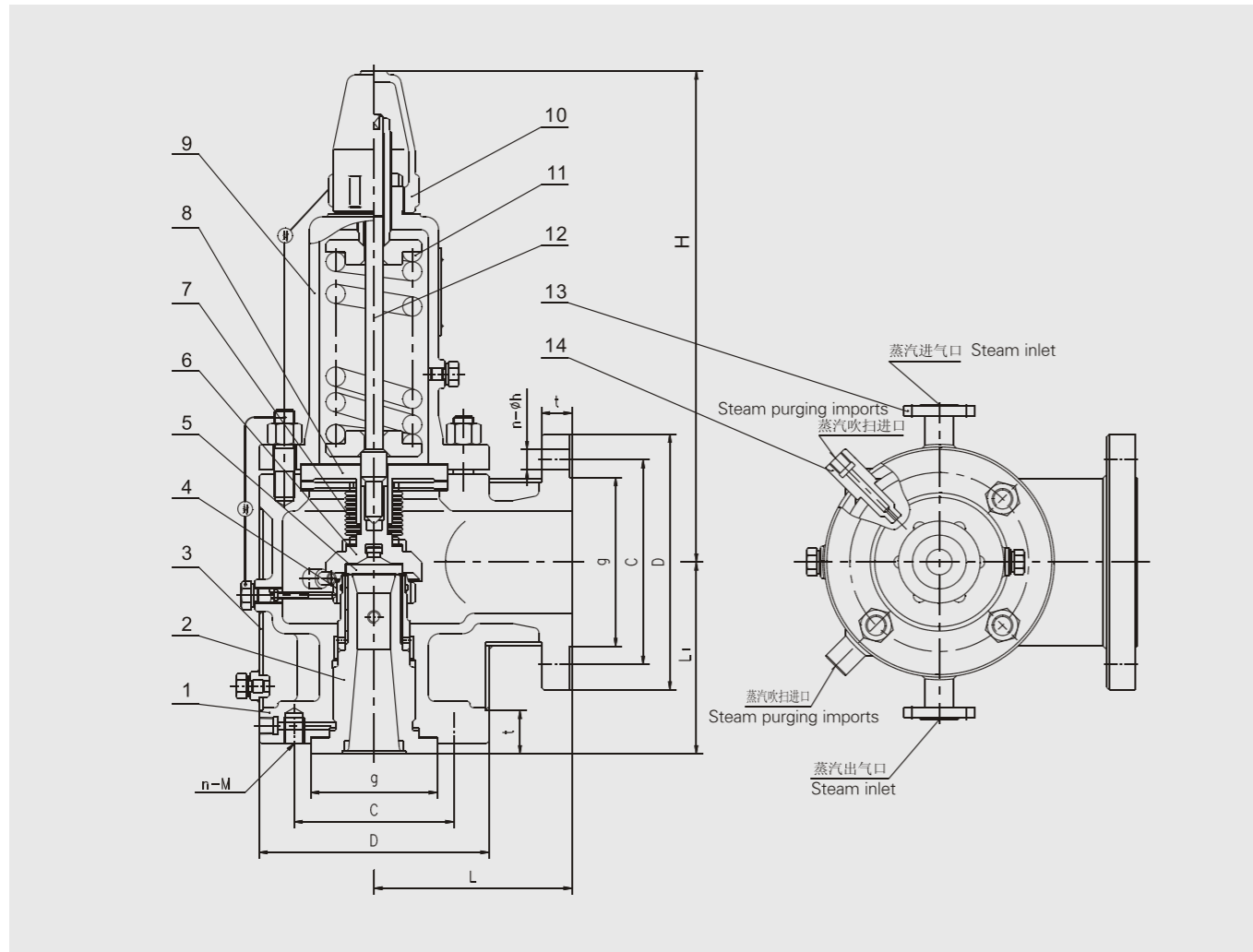
● 法兰连接 Flanged Connections

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

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

HFNJ系列保温夹套安全阀 (相当于HFBWA42型)

HFNJ Series safety valve with jacket



● 用途及特点

- 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、00Cr25Ni6Mo2N及超级双相不锈钢F51（NUS S31803）、F53（UNS S32750）、F55（UNS S32760）。

Application & Features

1. It's serviced in the circumstances 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, from 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).

HFNJ系列保温夹套安全阀 (相当于HFBWA42型)

HFNJ Series safety valve with jacket

● 型号编制方法 Method of compiling the types



● 材料 Materials

序号 Ref.No	零件名称 Part Name	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	316	316
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	304	316	316L
13	法兰 Flange	304	304	304	304
14	吹气管 Huff pipe	304	304	316	316L

HFNJ系列保温夹套安全阀 (相当于HFBWA42型)

HFNJ Series safety valve with jacket

● 型号 (Type) : HFNJ-03a

法兰磅级 (ANSI Flange Class) : 300Lb/150Lb (进口/出口 Inlet/Outlet)

口径(英寸) Size(inch)	最高整定压力 Max. Set Pressure(MPa)		进口/出口 Inlet/Outlet	法兰尺寸 Dimensions(mm)				面心距 Center to Face (mm)		近似高度 H App. Height		
	-29℃~ 232℃	232℃~ 427℃		φD	φC	φg	f/t	n-M/n-φh	L	L1	B	E
1 D 2(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				
1 E2 (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 1/2) (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				
2 H 3(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				
3 J 4(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				
3 K 4(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				
4 L 6(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				
4 M 6(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				
4 N 6(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				
4 P 6(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				
6 Q 8(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				
6 R 10(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				
8 T 10(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				

HFXD型磅级先导式安全泄压阀 (相当于HFA46型)

HFXD Type Pilot-operated pressure relief valve

HFA46C150、HFA46C300

型先导式安全泄压阀

HFA46C600、HFA46C900

Pilot-operated pressure relief valve

HFA46C1500、HFA46C2500

● 主要性能规范 Main property and specification

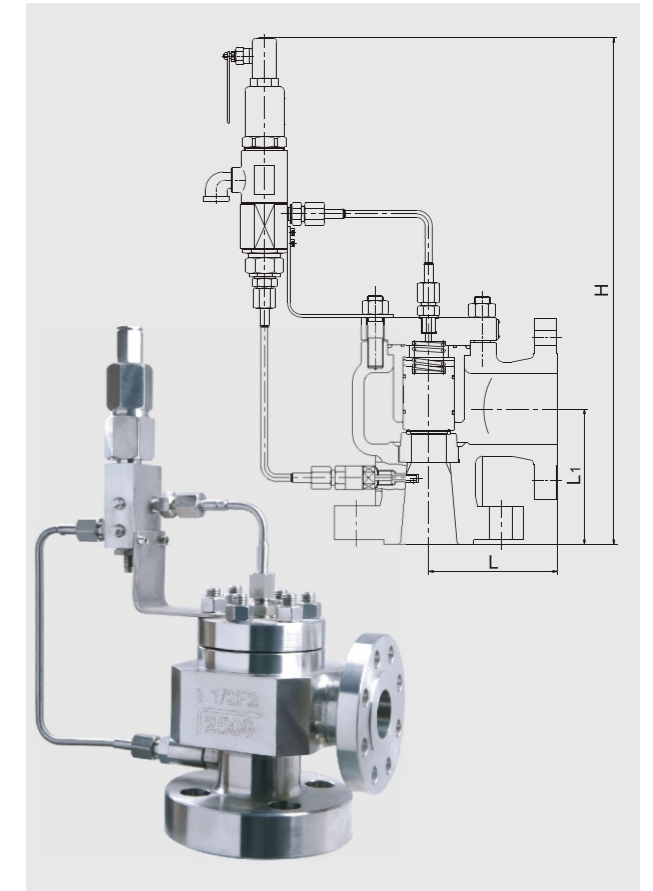
公称压力 Normal pressure	PN(Lb)	150	300	600	900	1500	2500
壳体强度 Body strength	Ps(MPa)	3.0	7.5	15	22.5	37.5	63
最高整定压力 Max Set pressure	Pk(MPa)	2	5.1	10.2	15.3	25.5	42.5
密封压力 Seal pressure	Pm	90% Pk					
回座压力 Reseating pressure	Ph	≥90% Pk					
排放压力 Rrelieving pressure	Pp	≤1.03 Pk					
开启高度 lift	H(mm)	≥1/4 do					
适用温度 Appropriate temperature		≤200℃					
适用介质 Appropriate Medium		气体、液体、水蒸气、原油、天然气等 Gas, Steam etc. Crude oil, Nature 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

● 主要尺寸 Main Dimension

口径 Size (in)	流通直径 Orifice	进口压力级 Inlet Lb		出口压力级 Outlet Lb		结构尺寸 Dimension mm			口径 Size	流通直径 Orifice	进口压力级 Inlet Lb		出口压力级 Outlet Lb		结构尺寸 Dimension mm		
		150	300	150	300	L	L1	H			150	300	150	300	L	L1	H
1×2	D,E,F	150	150	115	105	406	11/2×2	D,E,F	150	150	121	124	432				
		300	150	115	105	406			300	150	121	124	432				
		600	150	115	105	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				
1 1/2×3	G,H	150	150	124	130	457	2×3	G,H,J	150	150	124	130	457				
		300	150	124	130	457			300	150	124	130	457				
		600	150	124	130	457			600	150	124	130	457				
		900	300	171	162	559			900	300	171	167	559				
		1500	300	171	162	559			1500	300	171	167	559				
3×4	J,K,L	150	150	162	156	483	4×6	L,M,N,P	150	150	229	181	559				
		300	150	162	156	483			300	150	229	181	559				
		600	150	162	162	483			600	150	229	181	559				
		900	300	181	190	610			900	300	233	249	711				
		1500	300	181	190	610			1500	300	233	249	711				
6×8	Q,R	150	150	241	240	635	8×10	T	150	150	279	276	711				
		300	150	241	240	635			300	150	279	276	711				
		600	150	241	246	635			600	150	279	297	737				



HFA42C、HFWA42C 大口径安全阀

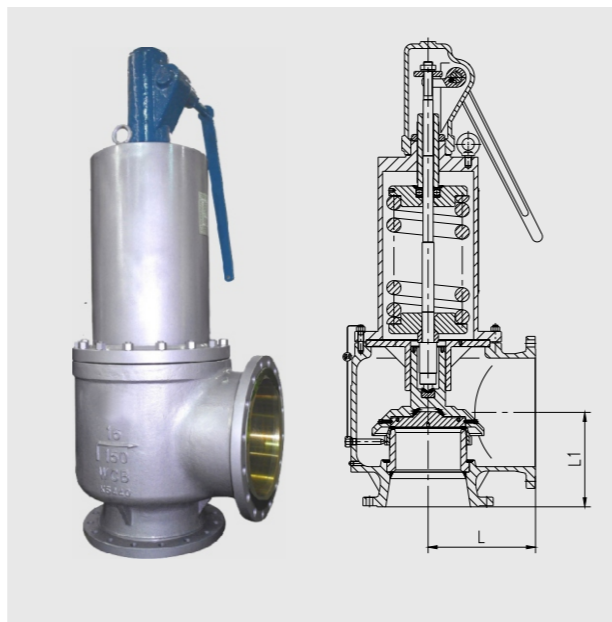
HFA42C、HFWA42C big calibers safety valve

● 用途及特点

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、不同结构的安全阀。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。

Application & Features

1. Applicable to the environment of oil refining continuous reforming, there hundred thousand tons ethere, 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 × 出口 Inlet × Outlet	150Lb结构尺寸		300Lb结构尺寸		600Lb结构尺寸	
	L	L ₁	L	L ₁	L	L ₁
8T1 12(200×166×300)	350	320	350	320	350	320
10T1 12(250×166×300)	350	340	350	340	350	340
10V14(250×181×350)	360	350	360	350	360	350
12W16(300×222×400)	370	370	370	370	-	-
14X18(350×250×450)	375	435	375	435	-	-
14X20(350×250×500)	375	435	500	470	-	-
16Y18(400×280×450)	495	435	500	470	-	-
16Y20(400×280×500)	495	435	500	470	-	-

注：有特殊要求的可以协商定制。

Note: If there are special demands, the valve can be custom-made by consulting.

HFGS系列高温蒸汽安全阀 (相当于HFA48SB型)

HFGS Series high temperature safety valve for steam

● 用途 Application

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 (HFGS is serviced for overpres sure protection of power boiler, decomposition boiler, once-through boiler, reheater and other pressure vessel and pipe).

● 性能 Performance

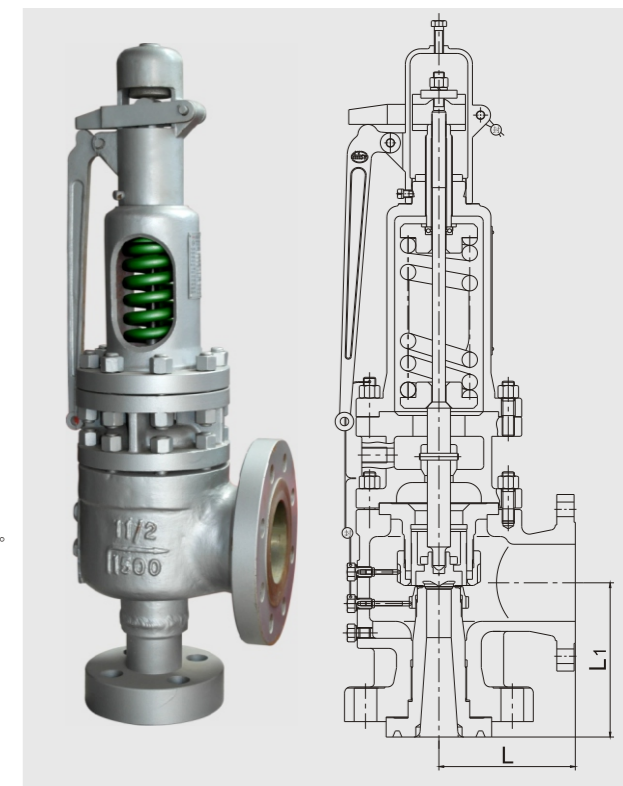
符合ASME《锅炉和压力容器规范》第I卷动力锅炉要求。(HFSH meets the requirements of HFGS Boiler and pressure Vessel Code, Section I, power Boilers)。

● 特点 Features

采用背压套来调节回座压力，以达到极小的启闭压差。(Adjusting back Seat pressure with back pressure Jacket, to arrive minimum Blowdown)。高性能高温材料作弹性阀瓣材料，以保证高温下的密封性 (High performance and temperature material are used for valve, to ensure its tightness in high temperature)。

密封衬面堆焊钴基硬质合金，以防护高温蒸汽的气蚀 (Tightness body is faced with stellite, to prevent from eroding of high temperature gas)。

一定的热态测试，使安全阀更接近工况条件 (Tested under hot position and make the safety valve approach to service condition)。



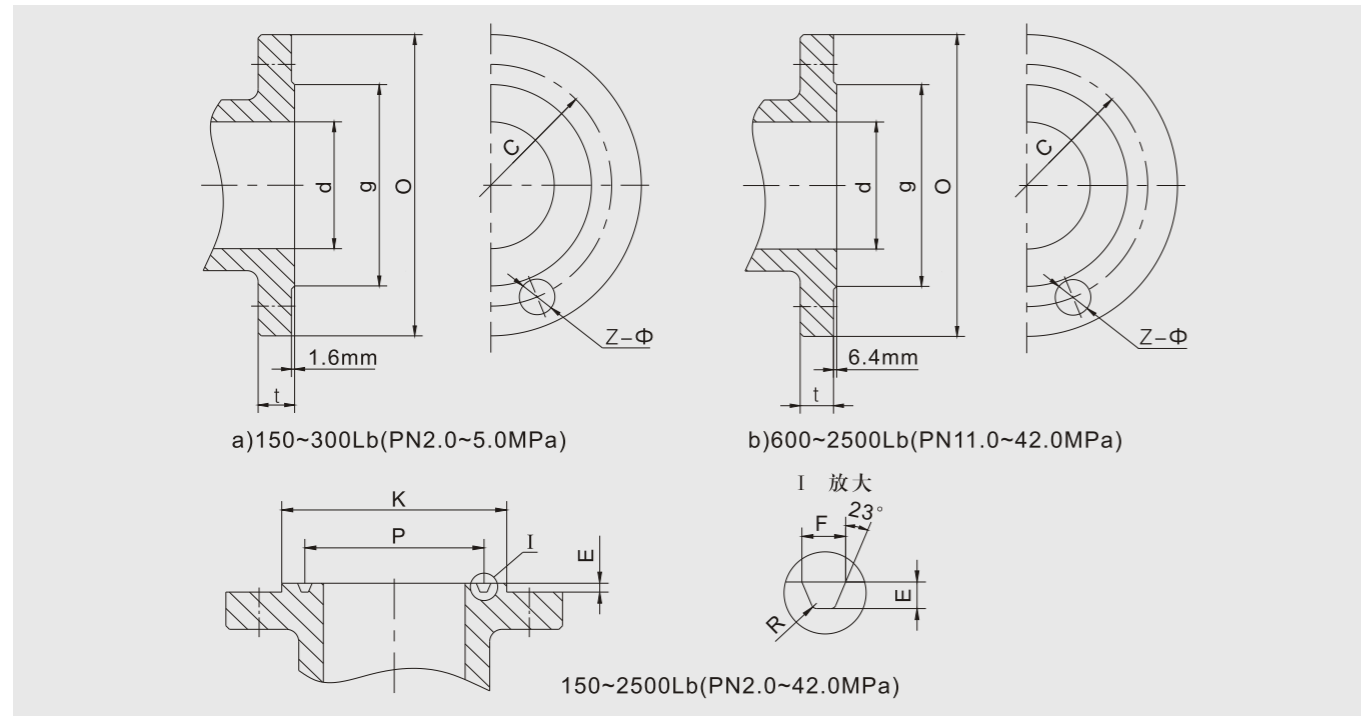
● 尺寸规格 Dimension & Specification

进口 × 出口 Inlet × Outlet	结构尺寸300Lb Construction dim		结构尺寸600Lb Construction dim		结构尺寸900Lb Construction dim		结构尺寸1500Lb Construction dim		结构尺寸2500Lb Construction dim	
	L	L ₁	L	L ₁	L	L ₁	L	L ₁	L	L ₁
1 × 11/2	-	-	-	-	-	-	146	170	-	-
11/2 × F × 2	152	124	-	-	-	-	-	-	-	-
11/2 × F × 21/2	-	-	140	130	-	-	-	-	-	-
11/2 × G × 21/2	152	124	-	-	-	-	-	-	-	-
11/2 × F × 3	-	-	-	-	155	140	155	150	155	190
11/2 × G × 3	-	-	155	130	155	140	155	150	200	220
11/2 × H × 3	152	130	155	140	155	140	155	150	-	-
11/2 × H × 4	-	-	-	-	-	-	-	-	200	220
2 × J × 3	152	137	-	-	-	-	-	-	-	-
2 × J × 4	-	-	180	150	180	150	180	160	220	220
2 × J × 6	-	-	-	-	-	-	-	-	220	220
21/2 × K × 4	152	165	180	185	180	185	-	-	-	-
21/2 × K × 6	-	-	180	185	180	185	240	195	240	270
3 × L × 6	165	178	220	195	220	195	250	210	-	-
3 × M × 6	-	-	220	195	220	195	260	230	260	280
4 × N × 6	-	-	220	215	250	230	265	240	-	-
4 × P × 6	254	225	265	235	265	250	265	260	-	-
4 × P × 8	-	-	265	235	265	250	265	260	-	-
6 × Q × 8	241	240	280	285	-	-	-	-	-	-

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 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	16	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	1/2	15	95	14.2	35	4	16	66.5	51	34.14	5.56	7.14	0.8
	3/4	20	117	15.9	43	4	19	82.5	63.5	42.88	6.35	8.74	0.8
	1	25	124	17.5	51	4	19	89	70	50.80	6.35	8.74	0.8
	1 1/2	40	156	20.7	73	4	22	114.5	90.5	68.28	6.35	8.74	0.8
	2	50	165	22.3	92	8	19	127	108	82.55	7.92	11.91	0.8
	2 1/2	65	190	25.4	105	8	22	149	127	101.60	7.92	11.91	0.8
	3	80	210	28.4	127	8	22	168	146	123.83	7.92	11.91	0.8
	4	100	254	31.8	157	8	22	200	175	149.23	7.92	11.91	0.8
	6	150	318	36.6	216	12	22	270	241	211.12	7.92	11.91	0.8
	8	200	381	41.3	270	12	26	330	302	269.88	7.92	11.91	0.8
10	250	444	47.7	324	16	29	387.5	356	323.85	7.92	11.91	0.8	

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 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	11.91	0.8
	2 1/2	65	190	28.4	105	8	22	149	127	101.60	7.92	11.91	0.8
	3	80	210	31.8	127	8	22	168	146	123.83	7.92	11.91	0.8
	4	100	273	38.1	157	8	26	216	175	149.23	7.92	11.91	0.8
	6	150	356	47.7	216	12	29	292	241	211.12	7.92	11.91	0.8
	8	200	419	55.6	270	12	32	349	302	269.88	7.92	11.91	0.8
900	1/2	15	121	22.3	35	4	22	82.5	60.5	39.67	6.35	8.74	0.8
	3/4	20	130	25.4	43	4	22	89	66.5	44.45	6.35	8.74	0.8
	1	25	149	28.4	51	4	26	101.5	71	50.80	6.35	8.74	0.8
	1 1/2	40	178	31.8	73	4	29	124	92	68.28	6.35	8.74	0.8
	2	50	216	38.1	92	8	26	165	124	95.25	7.92	11.91	0.8
	2 1/2	65	244	41.3	105	8	29	190.5	137	107.95	7.92	11.91	0.8
	3	80	241	38.1	127	8	26	190.5	168	136.53	7.92	11.91	0.8
	4	100	292	44.5	157	8	32	235	193.5	161.93	7.92	11.91	0.8
	6	150	381	55.6	216	12	32	317.5	248	211.12	9.53	13.49	1.5
	8	200	470	63.5	270	12	39	394	317.5	269.88	11.13	16.66	1.5
1500	1/2	15	121	22.3	35	4	22	82.5	60.5	39.67	6.35	8.74	0.8
	3/4	20	130	25.4	43	4	22	89	66.5	44.45	6.35	8.74	0.8
	1	25	149	28.4	51	4	26	101.5	71	50.80	6.35	8.74	0.8
	1 1/2	40	178	31.8	73	4	29	124	92	68.28	6.35	8.74	0.8
	2	50	216	38.1	92	8	26	165	124	95.25	7.92	11.91	0.8
	2 1/2	65	244	41.3	105	8	29	190.5	137	107.25	7.92	11.91	0.8
	3	80	267	47.7	127	8	32	203	168	136.53	7.92	11.91	0.8
	4	100	311	54	157	8	35	241.5	193.5	161.93	7.92	11.91	0.8
	6	150	394	62.4	216	12	39	317.5	248	211.12	9.53	13.49	1.5
	8	200	483	72.1	270	12	45	394	317.5	269.88	11.13	16.66	1.5
2500	1/2	15	133	30.2	35	4	22	89	65	42.88	6.35	8.74	0.8
	3/4	20	140	32	43	4	22	95	73	50.80	6.35	8.74	0.8
	1	25	159	35	51	4	26	108	82.5	60.33	6.35	8.74	0.8
	1 1/2	40	203	44.5	73	4	32	146	114	82.55	7.92	11.91	0.8
	2	50	235	50.8	92	8	29	171.5	133.5	101.60	7.92	11.91	0.8
	2 1/2	65	267	57.2	105	8	32	197	149	111.13	9.53	13.49	1.5
	3	80	305	66.5	127	8	35	228.5	168	127	9.53	13.49	1.5
	4	100	356	76.2	157	8	42	273	203	157.18	11.13	16.66	1.5
	6	150	483	108	216	8	54	368.5	279	228.60	12.70	19.84	1.5
	8	200	553	127	270	12	54	438	340	279.40	14.27	23.01	1.5
10	250	673	165.1	324	12	67	540	425.5	342.90	17.48	30.18	2.3	

安全阀排量计算

Discharge Calculate

● 介质为气体 Gas medium

1、临界条件: Critical conditions: $\frac{P_0}{P_d} \leq \left(\frac{2}{K+1}\right)^{\frac{K}{K-1}}$

$$W_s = 7.6 \times 10^{-2} CKPdA \sqrt{\frac{M}{ZT}} \text{ Kg/h}$$

2 亚临界条件: Under critical conditions: $\frac{P_0}{P_d} > \left(\frac{2}{K+1}\right)^{\frac{K}{K-1}}$

$$W_s = 55.84 KPdA \sqrt{\frac{M}{ZT}} \sqrt{\frac{2}{K+1} \left[\left(\frac{P_0}{P_d}\right)^{\frac{2}{K}} - \left(\frac{P_0}{P_d}\right)^{\frac{K+1}{K}} \right]} \text{ Kg/h}$$

式中 W_s --- 安全阀的排放能力, kg/h W_s --- Discharge capacity of the safety valve, 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;

K --- discharge coefficient, which is related with the structure and provided by the manufacturer; It can also be selected by one of the rules below:

全启式安全阀介质气态 Fall lift safety valve of gaseousness $K = 0.75 \sim 0.81$

全启式安全阀介质液态 Fall lift safety valve of gaseousness $K = 0.5 \sim 0.62$

微启式安全阀 Low lift safety valve $K = 0.2 \sim 0.3$

P_d --- 安全阀的排放压力 (绝压) P_d --- Discharge pressure (Absolute pressure) $P_d = 1.1 P_s + 0.1, \text{MPa}$

P_s --- 安全阀的整定压力, MPa P_s --- set pressure, Mpa

P_0 --- 安全阀的出口侧压力 (绝压), MPa P_0 --- pressure of the outlet side, Mpa

A --- 安全阀最小排气截面积, mm^2 Minimum exhaust cross-sectional area, mm^2

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

微启式安全阀, Low lift safety valve 即 $h < \frac{1}{20} d_1$ 时, 平面密封, $A = \pi Dh$;

式中 h --- 安全阀的开启高度, mm; Type: H --- lift height, mm;

d_1 --- 安全阀最小流道直径 (阀座喉径), mm; d_1 --- minimum flow-through diameter (orifice area of the seat), mm

D --- 安全阀阀座口径, mm; D --- Diameter of the seat, 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

Characteristic coefficient of the gas, $C = 520 \sqrt{K \left(\frac{2}{K+1}\right)^{\frac{K+1}{K-1}}}$ See the attached chart 1

K --- 气体绝热指数 K --- Adiabatic index of the gas $k = C_p/C_v$

M --- 气体摩尔质量, M --- Molar mass of the gas kg/kmol ;

T --- 气体的温度, T --- Temperature of the gas, K;

Z --- 气体在操作温度压力下的压缩系数。 Z --- Compressibility factor of the gas under operating temperature and pressure

● 介质为液体 liquid medium

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

式中 K_p --- 超压修正系数 Overpressure coefficient:

超压力25%时 $K_p = 1.0$ Overpressure $K_p = 1.0$ When 25%

超压力20%时 $K_p = 0.8$ Overpressure $K_p = 0.8$ When 20%

超压力10%时 $K_p = 0.6$ Overpressure $K_p = 0.6$ When 10%

安全阀排量计算

Discharge Calculate

K_v --- 粘度修正因素 Viscosity modification factors

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

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

U --- 介质流动温度下的绝对粘度 (厘泊) The absolute viscosity of medium flow temperature.

ρ --- 阀门入口侧温度下的液体密度, Kg/m^3 The safety valve is the entry side under the temperature of the liquid density, kg/m^3

ΔP --- 阀门前后压力降, MPa The safety valve is pressuer drop before and after, MPa

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

● 介质为饱和蒸气 Saturated stean medium

饱和蒸气中含量不小于98%, 最大过热度为10°C

Content of the saturated steam $\geq 98\%$, maximum over heat temperature should be 10°C

1、当 $P_d \leq 10 \text{MPa}$ 时

$$W_s = 5.25 K A P_d \text{ kg/h}$$

$$P_d = 1.03 P_s + 0.1 \text{ MPa};$$

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

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

$$P_d = 1.03 P_s + 0.1 \text{ Mpa}$$

● 不同K值气体特性系数C值 Different Characteristic Coefficient of The Gas (C) Under Different K

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 API 1527 Standard of Containment Requirement

整定压力MPa (15.6°C) Setting Pressure MPa	最大允许泄漏 (泡/分) Maximum allowable leakage	
	喉径小于F Throat diameter less than F	喉径大于F 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