

SAFETY-RELIEF VALVES ALY-1

Nominal Pressure

ANSI Class 150-2500

PN 10-420

Nominal size

1/2"-10"

DN 15-250

Materials

Carbon Steel

Low Alloy Steel

Stainless Steel

Monel

Hastelloy

Connections

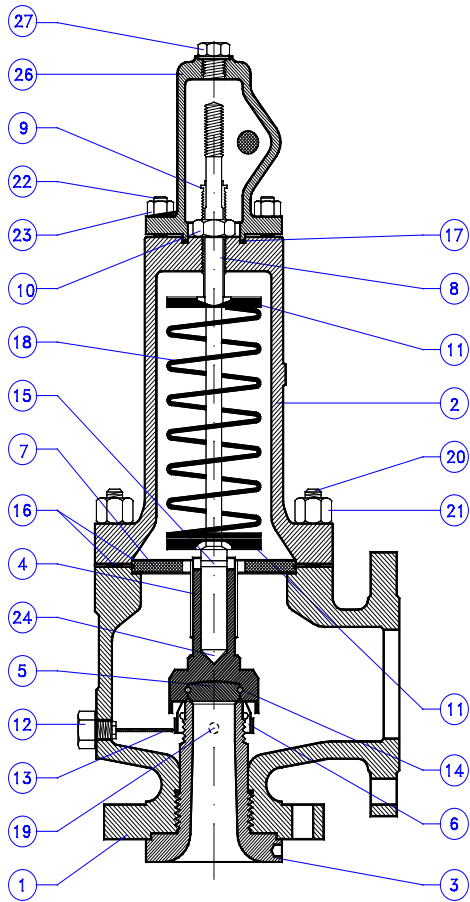
Flanged

Butt Weld

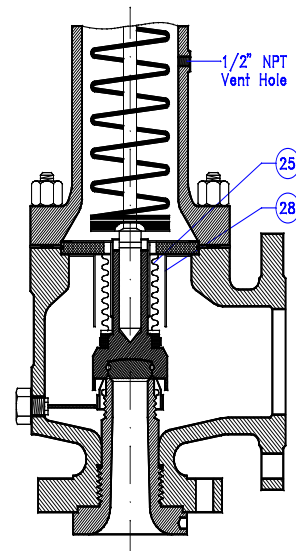
Threaded



Conventional valve



Bellow valve



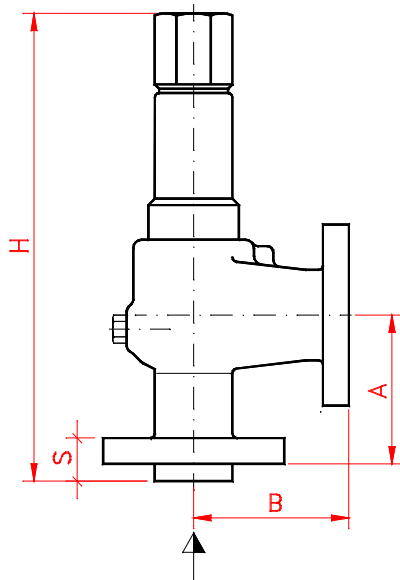
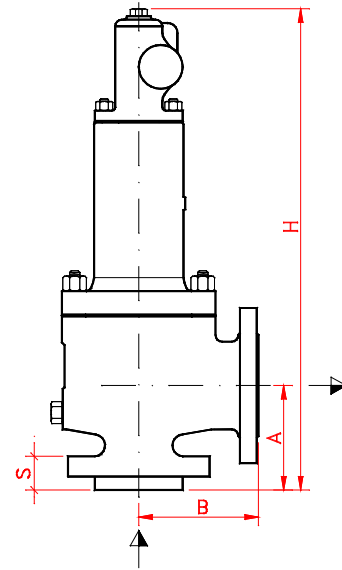
Specification			
1	Body	15	Stem retainer
2	Bonnet	16	Body gasket
3	Nozzle*	17	Cap gasket
4	Disc holder	18	Spring
5	Disc*	19	Drain plug
6	Blowdown ring	20	Body studs
7	Guide	21	Body nuts
8	Stem	22	Cap studs
9	Spring adjust screw	23	Cap nuts
10	Locknut	24	Sphere support
11	Spring washers*	25	Bellow
12	Adjust ring screw	26	Cap
13	Pin	27	Cap plug
14	Disc retainer*	28	Bellow protector

* Recommended spare parts



Standard material specification				
No	Part	Material		
1	Body	ASTM A216 WCB	ASTM A352 LCB	ASTM A351 CF8M
2	Bonnet	ASTM A216 WCB	ASTM A352 LCB	ASTM A351 CF8M
3	Nozzle	AISI 304/316	AISI 304/316	AISI 316
4	Disc holder	AISI 304	AISI 304	AISI 316
5	Disc	AISI 304/316	AISI 304/316	AISI 316
6	Blowdown ring	AISI 304	AISI 304	AISI 316 AISI 316
7	Guide	AISI 410	AISI 410	AISI 316
8	Stem	AISI 410	AISI 304	AISI 316
9	Spring adjust screw	AISI 410	AISI 410	AISI 316
10	Locknut	CARBON STEEL	CARBON STEEL	AISI 316
11	Spring washers	CARBON STEEL	CARBON STEEL	AISI 316
12	Adjust ring screw	CARBON STEEL	CARBON STEEL	AISI 316
13	Pin	AISI 316	STAINLESS STEEL	AISI 316
14	Disc retainer	AISI 316	STAINLESS STEEL	AISI 316
15	Stem retainer	AISI 316	STAINLESS STEEL	AISI 316
16	Body gasket	ASBESTOS -FREE	STAINLESS STEEL	AISI 316
17	Cap gasket	ASBESTOS -FREE	STAINLESS STEEL	AISI 316
18	Spring	CARBON STEEL	CARBON STEEL	AISI 316
19	Drain plug	CARBON STEEL	CARBON STEEL	AISI 316
20	Body studs	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8
21	Body nuts	ASTM A194 2H	ASTM A194 2H	ASTM A194 G8
22	Cap studs	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8
23	Cap nuts	ASTM A194 2H	ASTM A194 2H	ASTM A194 G8
24	Sphere support	AISI 316	AISI 316	AISI 316
25	Bellow	AISI 316L	AISI 316L	AISI 316L
26	Cap	ASTM A216 WCB	CARBON STEEL	AISI 316
27	Cap plug	CARBON STEEL	CARBON STEEL	STAINLESS STEEL
28	Bellow protector	CARBON STEEL	CARBON STEEL	STAINLESS STEEL

Other materials and material combinations available on request.


1/2" x 1" ... 3/4" x 1 1/2"

1" x 2" ... 8" x 10"

Dimensions

Symbol	Channel, cm ²	Inlet x Outlet, inch	Pressure inlet, class ANSI	Pressure outlet, class ANSI	Maximum pressure setting*, kg/cm ²	A mm	B mm	H mm	S mm	Weight, kg
B	0,284	1/2x1	150	150	19,6	100	90	272	29	6
B	0,284	1/2x1	300	150	51	100	90	272	29	6
B	0,284	1/2x1	600	150	102	106	100	349	31	9
B	0,284	1/2x1 1/2	900	150	153	106	100	349	36	10
B	0,284	1/2x1 1/2	1500	150	240	106	100	349	36	10
C	0,426	1/2x1	150	150	19,6	100	90	272	29	6
C	0,426	1/2x1	300	150	51	100	90	272	29	6
C	0,426	1/2x1 1/2	600	150	102	106	100	349	31	9
C	0,426	1/2x1 1/2	900	150	153	106	100	349	36	10
C	0,426	1/2x1 1/2	1500	150	240	106	100	349	36	10
D	0,785	3/4x1	150	150	19,6	100	90	272	31	6,5
D	0,785	3/4x1	300	150	51	100	90	272	31	6,5
D	0,785	3/4x1 1/2	600	150	102	106	100	349	31	9,5
D	0,785	3/4x1 1/2	900	150	120	106	100	349	39	10,5
D	0,785	1x2	150	150	20	105	114	477	35	22
D	0,785	1x2	300	150	52	105	114	477	35	22
D	0,785	1x2	600	150	104	105	114	477	35	22
D	0,785	1 1/2x2	900	300	156	105	140	545	47	36
D	0,785	1 1/2x2	1500	300	260,4	105	140	545	47	36
D	0,785	1 1/2x2 1/2	2500	300	421,9	140	165	635	65	55

* Maximum pressure setting at a temperature of +38°C.

Dimensions										
Symbol	Channel, cm ²	Inlet x Outlet, inch	Pressure inlet, class ANSI	Pressure outlet, class ANSI	Maximum pressure setting*, kg/cm ²	A mm	B mm	H mm	S mm	Weight, kg
E	1,389	1/2x1 1/2	150	150	19,6	106	100	349	31	9
E	1,389	1/2x1 1/2	300	150	51	106	100	349	31	10
E	1,389	1/2x1 1/2	600	150	80	106	100	349	31	10
E	1,389	1x2	150	150	20	105	114	477	35	22
E	1,389	1x2	300	150	52	105	114	477	35	22
E	1,389	1x2	600	150	104	105	114	477	35	22
E	1,389	1 1/2x2 1/2	900	300	156	105	140	545	47	36
E	1,389	1 1/2x2 1/2	1500	300	260,4	105	140	545	47	36
E	1,389	1 1/2 x 2 1/2	2500	300	421,9	140	165	635	65	55
F	2,164	1x1 1/2	150	150	19,6	106	100	349	31	9
F	2,164	1x1 1/2	300	150	40	106	100	349	31	10
F	2,164	1 1/2 x 2	150	150	20	124	121	496	40	25
F	2,164	1 1/2 x 2	300	150	52	124	121	496	40	25
F	2,164	1 1/2 x 2	600	150	104	124	121	496	40	25
F	2,164	1 1/2 x 2 1/2	900	300	156	140	165	635	63	55
F	2,164	1 1/2 x 2 1/2	1500	300	260,4	140	165	635	63	55
F	2,164	1 1/2 x 2 1/2	2500	300	351,5	140	165	635	63	55
G	3,530	1 1/2 x 2 1/2	150	150	20	124	152	564	40	34
G	3,530	1 1/2 x 2 1/2	300	150	52	124	152	564	40	34
G	3,530	1 1/2 x 2 1/2	600	150	104	124	152	564	40	34
G	3,530	1 1/2 x 2 1/2	900	300	156	140	165	635	63	55
G	3,530	2 x 3	1500	300	260,4	156	171	650	70	60
G	3,530	2 x 3	2500	300	260,4	156	171	650	70	60
H	5,515	1 1/2 x 3	150	150	20	130	124	570	40	34
H	5,515	1 1/2 x 3	300/600	150	20	130	124	570	40	34
H	5,515	2 x 3	300/600	150	52	137	124	577	40	35
H	5,515	2 x 3	600	150	104	154	162	650	56	50
H	5,515	2 x 3	900	150	156	154	162	650	56	50
H	5,515	2 x 3	1500	300	193,3	156	171	650	70	60
J	9,079	2 x 3	300	150	20	137	124	577	42	36
J	9,079	2 x 3	300/600	150	20	137	124	577	42	36
J	9,079	2 1/2 x 4	300	150	52	156	165	705	48	65
J	9,079	2 1/2 x 4	600	150	104	156	165	705	48	65
J	9,079	2 1/2 x 4	900	150	156	184	181	735	56	67
J	9,079	3 x 4	900	150	156	184	181	735	56	75
J	9,079	3 x 4	1500	300	189,8	184	181	735	65	80

* Maximum pressure setting at a temperature of +38°C.

Dimensions

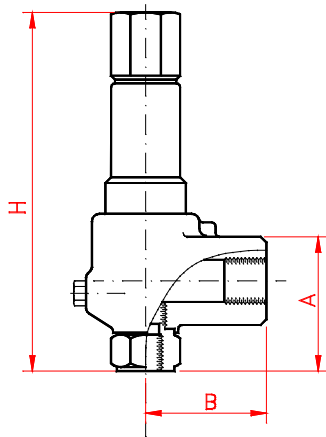
Symbol	Channel, cm ²	Inlet x Outlet, inch	Pressure inlet, class ANSI	Pressure outlet, class ANSI	Maximum pressure setting*, kg/cm ²	A mm	B mm	H mm	S mm	Weight, kg
K	12,946	3 x 4	150	150	20	156	165	705	48	66
K	12,946	3 x 4	300	150	52	156	165	705	48	66
K	12,946	3 x 4	600	150	104	184	181	735	56	75
K	12,946	3 x 4	900	150	156	184	181	735	56	75
K	12,946	4 x 6	900	150	156	197	216	930	65	130
K	12,946	4 x 6	1500	300	156	197	216	930	65	130
L	20,109	3 x 4	150	150	20	156	165	705	48	67
L	20,109	3 x 4	300	150	20	156	165	705	48	67
L	20,109	4 x 6	300	150	52	178	184	908	54	120
L	20,109	4 x 6	600	150	70,3	178	203	1005	60	165
L	20,109	4 x 6	900	150	105,5	225	254	1055	65	184
L	20,109	4 x 6	1500	150	-	225	254	1055	74	185
M	25,339	4 x 6	150	150	20	178	184	908	54	120
M	25,339	4 x 6	300	150	52	178	184	908	54	120
M	25,339	4 x 6	600	150	77,3	178	203	1005	60	168
M	25,339	4 x 6	900	150	-	225	254	1055	65	185
N	30,581	4 x 6	150	150	20	181	229	911	46	125
N	30,581	4 x 6	300	150	52	181	229	911	54	130
N	30,581	4 x 6	600	150	70,3	225	254	1055	65	185
N	30,581	4 x 6	900	150	-	225	254	1055	65	186
P	45,007	4 x 6	150	150	20	181	229	911	46	125
P	45,007	4 x 6	300	150	36,9	181	229	911	54	130
P	45,007	4 x 6	600	150	70,3	225	254	1055	65	186
P	45,007	4 x 6	900	150	-	225	254	1055	65	187
Q	77,913	6 x 8	150	150	11,6	240	241	1100	57	220
Q	77,913	6 x 8	300	150	21	240	241	1100	57	225
Q	77,913	6 x 8	600	150	42,2	240	241	1100	68	230
R	12,663	6 x 8	150	150	7	240	241	1100	57	220
R	12,663	6 x 8	300	150	7	240	241	1100	57	225
R	12,663	6 x 10	300	150	16,1	240	267	1100	68	240
R	12,663	6 x 10	600	150	21	240	267	1100	68	245
T	183,281	8 x 10	150	150	4,5	275	279	1280	61	350
T	183,281	8 x 10	300	150	8,4	275	279	1280	61	350
T	183,281	8 x 10	300	150	21	275	279	1405	61	370

* Maximum pressure setting at a temperature of +38°C.

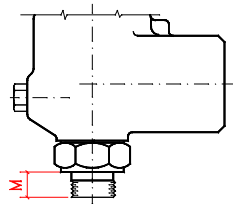


Weld and thread ends

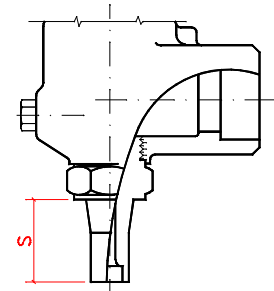
Female thread



Male thread



Weld ends



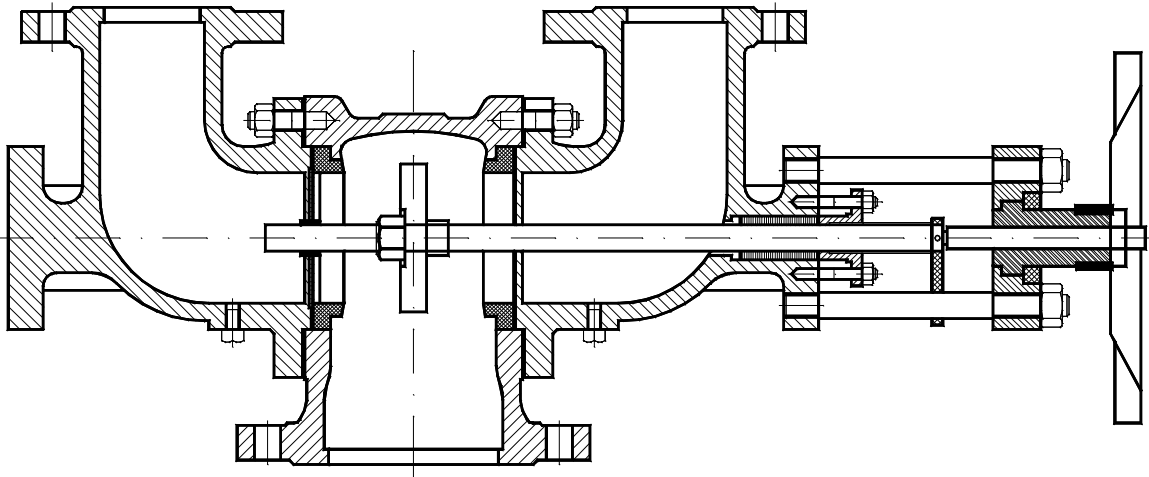
Dimensions

Symbol	Channel, cm ²	Inlet x Outlet, inch	Pressure inlet, class ANSI	Pressure outlet, class ANSI	Maximum pressure setting*, kg/cm ²	A mm	B mm	H mm	S mm	Weight, kg
b	0,284	1/2x 1 (1)	6000	2000	100	54	50	226	20	3
c	0,426	1/2x 1 (1)	6000	2000	100	54	50	226	20	3
d	0,785	3/4x 1	3000	2000	70	54	50	226	23	3
e	1,389	1 x 1	2000	2000	40	63	50	235	18	3
b	0,284	1/2x 1 1/2	6000	2000	240	60	70	303	20	7
c	0,426	1/2x 1 1/2	6000	2000	240	60	70	303	20	7
d	0,785	3/4x 1 1/2	3000	2000	120	60	70	303	23	7
e	1,389	1 x 1 1/2	3000	2000	80	69	70	312	18	7
f	2,164	1 x 1 1/2	2000	2000	40	69	70	312	18	7
b	0,284	1/2x 1 1/2	6000	2000	400**	60	70	303	20	7
c	0,426	1/2x 1 1/2	6000	2000	400**	60	70	303	20	7
d	0,785	3/4x 1 1/2	6000	2000	240	60	70	303	23	7
e	1,389	1 x 1 1/2	3000	2000	110	69	70	312	18	7
f	2,164	1 x 1/12	2000	2000	55	69	70	312	18	7

* Maximum pressure setting at a temperature of +38°C.

** For liquid maximum pressure setting - 1500 kg/cm².



**Nominal Pressure**

ANSI Class 150-2500
PN 10-420

Materials

Carbon steel
Stainless steel
Special alloys

Nominal size

Inlet 3/4" - 14" DN 20-350
Outlet 3/4" - 10" DN 20-250

Operate

Handwheel
Pneumatic
Electric
Hydraulic

Connections

Flanged



Minimum cold differential test pressure (spring setting), bar

Symbol	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	T
Conventional valve	1	1	1	0,9	0,8	0,7	0,6	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,4	0,3
Bellow valve	-	-	-	-	1,5	1,5	1,4	1,3	1,2	1,1	1,0	1,0	1,0	0,9	0,8	0,6

Modifications

- Plain lever.
- Protected lever.
- Heating jacket.
- Counter-weight lever.
- Electric or pneumatic operated.
- Cryogenic duty.
- High temperature duty.
- Flanged, threaded, butt weld connections.
- Special dimensions and special materials.
- Soft or hard-face seal surfaces.
- Bellow valve.
- Carbon steel spring and open bonnet for temperature up to 350°C.
- Extended bonnet for high temperature (426...538°C).

Features

- Full lift spring valve with high capacity.
- Seat tightness test is performed at 95% of the set pressure allowing operating pressure very close to the set-pressure of the safety valve.

Design and dimensions:

According to Standards: ANSI, API, UNI, DIN, AFNOR, ISO, BS, ГОСТ.

Material certificates

Axelvalves supply valves with test and material certificates in accordance to EN 10204 3.1B as standard. Heat codes are forged or cast on the valve material ensuring full traceability.

