TI-D344-02
BR Rev.02

SV80H
Safety and Relief Valves

Description

The SV80H is a full nozzle safety and relief valve with orifices D to T, comply with the API STD 526, beyond others with super capacity. Suitable for gas, steam and liquid service in the oil and gas production, refining, petrochemical and process industries.

Available Types

The body, bonnet, cap, nozzle, disc and spring are available in a variety of materials and selected to suit the chemical and physical characteristics of the specified process fluid available.
The SV80H has flanged connections according to ASME B16.5, open or closed bonnet configurations, and can be supplied with open or packed lever and resilient seat (O'Ring).
The valves can also be supplied with balancing or sealing metallic bellow.

Applications

The safety and relief valves SV80H are designed for the effective protection of overpressure in processes or equipment, including extreme service conditions such as high outflows, high pressures, high temperatures, corrosive media, viscous liquid and high backpressures. Always consult Spirax Sarco for fluid compatibility of the construction materials.

Standards and Approvals

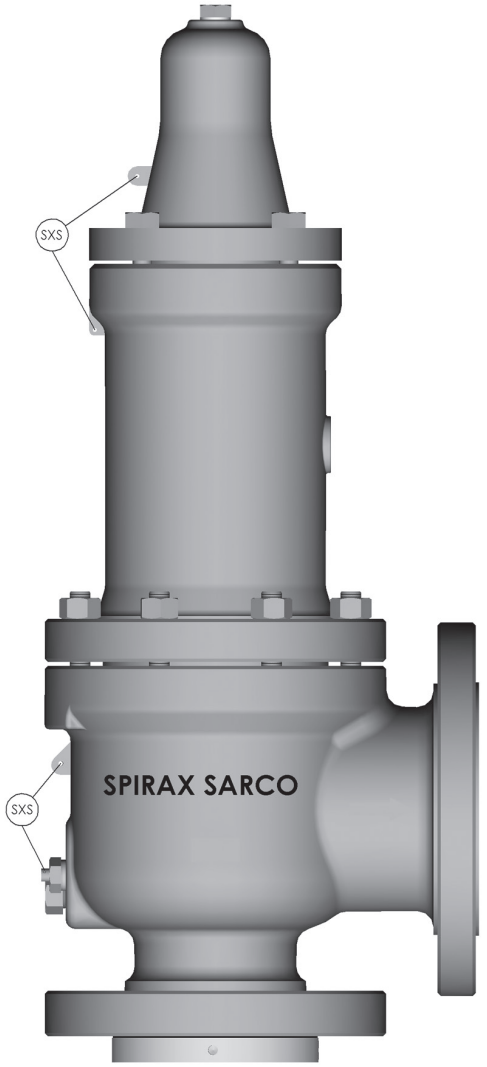
The SV80H are designed in accordance with ASME Boiler and Pressure Vessel Code, Section VIII Division 1. Capacities are certified by the National Board of Boiler and Pressure Vessel Inspectors.
For compressible fluids and liquids, the valve can be stamped with 'UV' and 'NB' marks.

The requirements of the European Pressure Equipment Directive, 97 / 23 / EC have been satisfied and the valve belongs to Category 4, having been designed for use with fluids in Group 1 and 2 (gases and liquids).

The materials of construction and the operating pressure and temperature limits comply with API Standard 526.
When required, the valve can be supplied with materials in compliance with NACE MR-01-75 standard for sour gas service.
The SV80H complies with the seat tightness requirements of the API STD 527.

Certification

A certificate of conformity is supplied with each valve including valve set pressure and hydrostatic test. Material certification is provided in accordance with BS-EN 10204 3.1 for all primary pressure containing parts.



Optional Extras

Resilient seat seal – O'Ring
Hard seat – Stellite 6
Steam Jacketing
Lift indicator

Installation and Maintenance

In accordance with API RP 520 Part 2. It covers recommended piping practices, calculation of reaction forces and precautions on pre-installation handling.
Please refer to the last revision of the IM-D344-02 for full details.

Materials see pages 4 to 7 for details.

Dimensions and Weight see pages 7 to 8 for details.

Size and Orifice see pages 9 to 10 for details.

Capacity Tables see pages 11 to 18 for details.

Limiting conditions

Pressure

* Minimum set pressure	0,5 bar g
* Maximum set pressure	414 bar g
* Maximum allowable backpressure	51,0 bar g
*[1] Hydrostatic test pressure	1,5 times designe pressure

*[1] **Quality Procedure in according PED 97 / 23 / EC ANNEX I – 3.2 and 7.4**

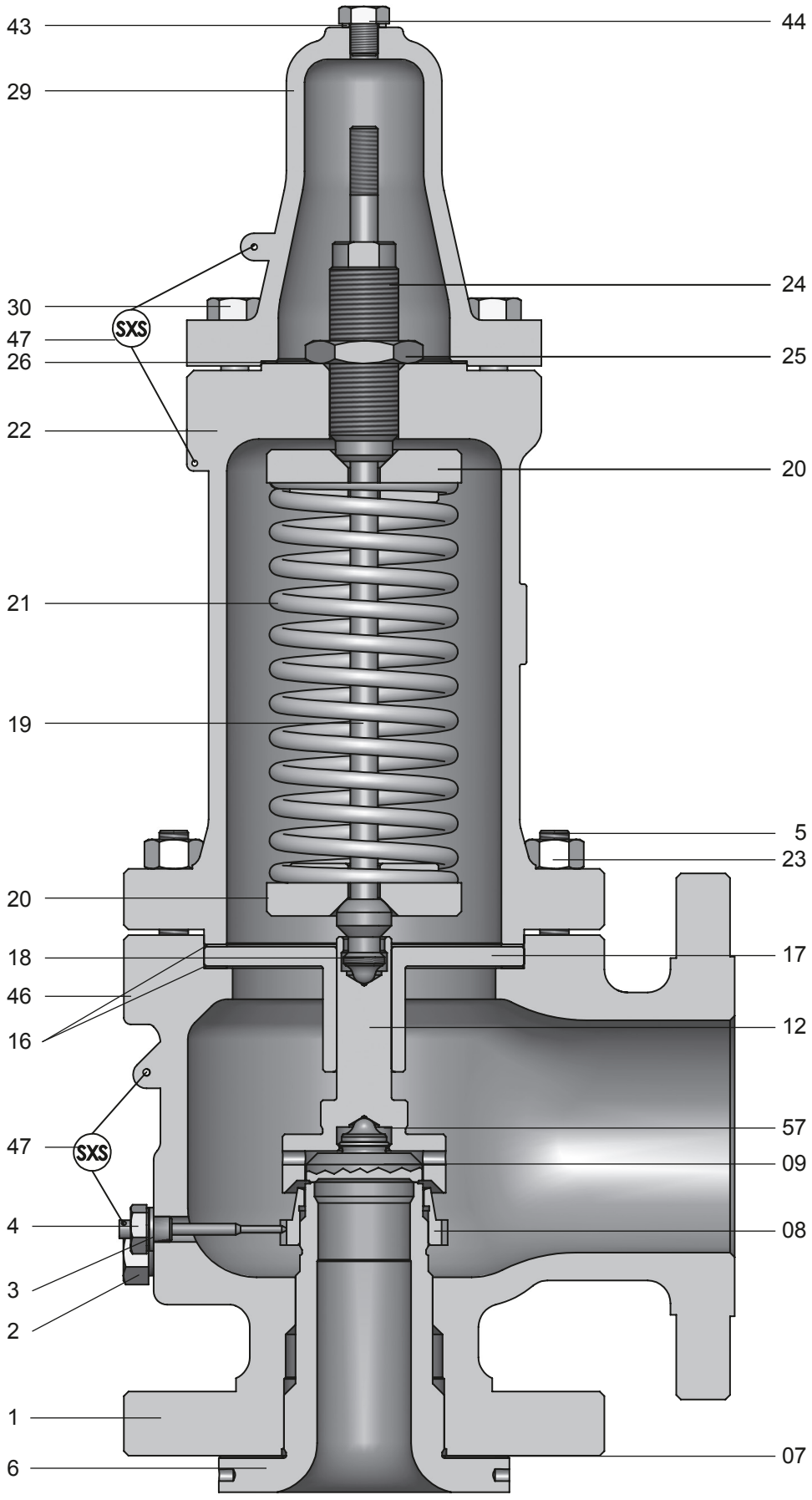
* Based on SA-216 Gr. WCB carbon steel @ -29°C to 38°C.
Values are subject to selection of suitable body/ flange rating.

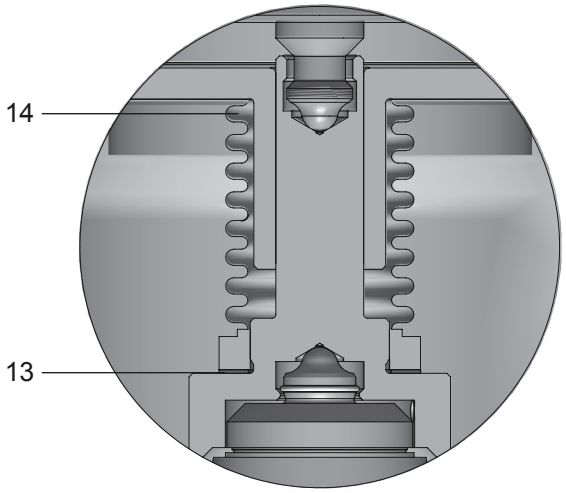
Temperature

Body material	Specification	Min. to Max. °C
Carbon steel	SA-216 Gr. WCB	-30 to 550
Alloy Steel	SA-217 Gr. WC6	-30 to 600
Stainless steel	SA-351 Gr. CF8M	- 232 to 825
Monel	SA-494 Gr. M-35-1	-29 to 400
Alloy 20	SA-351 Gr. CN7M	-30 to 325

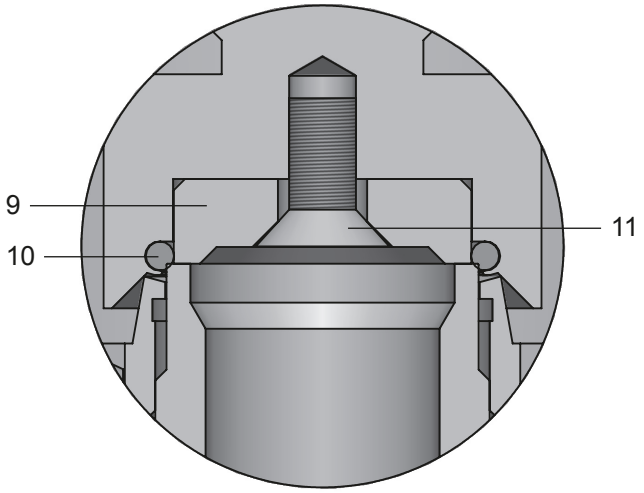
The temperature limits comply with API Standard 526.
Valves with 'O' ring seat seal are limited to (260°C).

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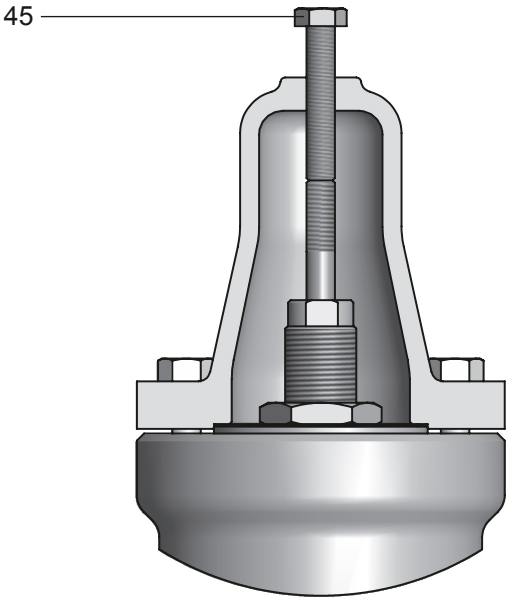

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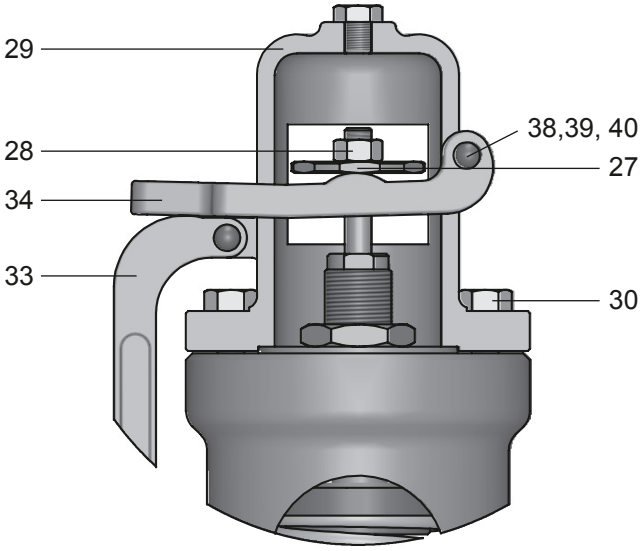
Bellows, BalanSeal



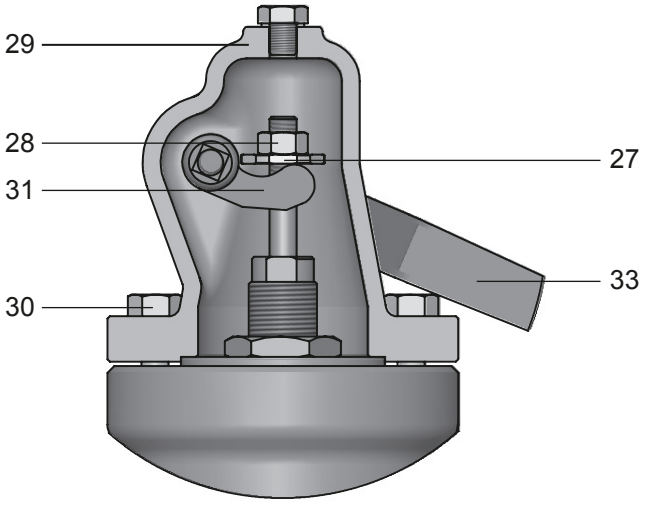
Resilient Seal (O'Ring)



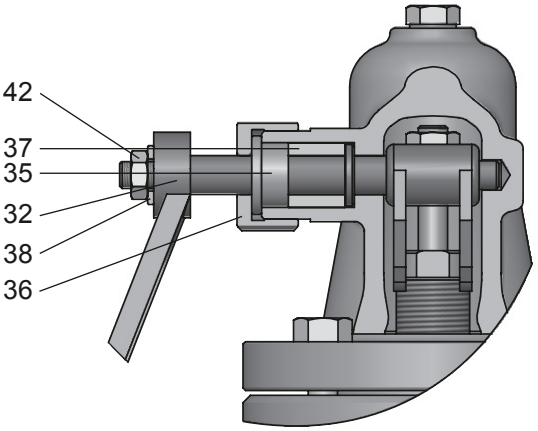
Test GAG



Open Lever



Packed Lever



Packed Lever

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Standard Materials

No.	Name		Conventional	Balanced
1	Body	-28 to 426 ºC	SA-216 Gr. WCB	
		427 to 538 ºC	SA-217 Gr. WC6	
2	Pipe Plug		Carbon Steel	
3	Lock Screw Gasket		NA 1002	
4	Lock Screw		304 St. St.	
5	Body Stud		SA-193 Gr. B7	
6	Nozzle		304 St. St.	
			316 St. St.	
7	Nozzle Gasket		NA1002	
8	Blowdown Ring		304 St. St.	
			316 St. St.	
9	Disc		304 St. St.	
			316 St. St.	
57	Disc Retainer Ring		302 St. St.	
12	Disc Holder		304 St. St.	
			316 St. St.	
13	Bellows Gasket		NA	NA 1002
14	Bellows		NA	316Ti St. St.
16	Guide gasket		NA 1002	
17	Guide		304 St. St.	
18	Stem retainer		304 St. St.	
19	Stem		304 St. St.	
20	Spring Washer		Carbon Steel	
21	Spring	-59 to 232 ºC	Carbon Steel or Alloy Steel	
		233 to 538 ºC	High Temperature Alloy Steel	
22	Bonnet	-28 to 426 ºC	SA-216 Gr. WCB	
		427 to 538 ºC	SA-217 Gr. WC6	
23	Hex Nut (Body)		SA-194 Gr. 2H	
24	Spring Adjusting Screw		304 St. St.	
25	Adjusting Screw Locknut		304 St. St.	
26	Cap Gasket		NA 1002	
29	Flanged Cap		Carbon Steel	
30	Cap Screw		ASTM A 193 Gr. B7	
43	Sealing Plug Gasket		NA 1002	
44	Sealing Plug		Carbon Steel	
45	Test Gag		Carbon Steel	
46	Nameplate		304 St. St.	
47	Seal		Lead	

Standard Materials for Corrosive Service - 316 St. St.

No.	Name	I1		I2		I3	
		-268 to 232 ºC		-59 to 232 ºC		233 to 426 ºC	
		Conventional	Balanced	Conventional	Balanced	Conventional	Balanced
1	Body	SA-351 Gr. CF8M		-		-	
2	Pipe Plug	316 St. St.		-		-	
3	Lock Screw Gasket	Teflon		NA 1002		NA 1002	
4	Lock Screw	316 St. St.		-		-	
5	Body Stud	SA-193 Gr. B8M		-		-	
6	Nozzle	316 St. St.		-		-	
7	Nozzle Gasket	Teflon		-		-	
8	Blowdown Ring	316 St. St.		-		-	
9	Disc	316 St. St.		-		-	
57	Disc Retainer Ring	Inconel		-		-	
12	Disc Holder	316 St. St.		-		-	
13	Bellows Gasket	NA	Teflon	NA	NA 1002	NA	NA 1002
14	Bellows	NA	316L St. St.	NA	-	NA	-
16	Guide gasket	Teflon		NA 1002		NA 1002	
17	Guide	316 St. St.		-		-	
18	Stem retainer	316 St. St.		-		-	
19	Stem	316 St. St.		-		-	
20	Spring Washer	316 St. St.		Nickel Carbon Steel		Nickel Alloy Steel	
21	Spring	316* St. St.		Carbon Steel or Nickel Alloy Steel		High Temperature Nickel Alloy Steel	
22	Bonnet	SA-351 Gr. CF8M		-		-	
23	Hex Nut (Body)	SA-194 Gr 8M		-		-	
24	Spring Adjusting Screw	316 St. St.		-		-	
25	Adjusting Screw Locknut	316 St. St.		-		-	
26	Cap Gasket	Teflon		NA 1002		NA 1002	
29	Flanged Cap	316 St. St.		-		-	
30	Cap Screw	ASTM A 193 Gr. B8M		-		-	
43	Sealing Plug Gasket	Teflon		NA 1002		NA 1002	
44	Sealing Plug	316 St. St.		-		-	
45	Test Gag	Carbon Steel		-		-	
46	Nameplate	Stainless Steel		-		-	
47	Seal	Lead		-		-	

* There may be restrictions on the opening pressure. "-" Indicates the same material for option I1.

Standard Materials for Corrosive Service - Alloy 20

No.	Name	A1		A2		A3	
		-28 to 149 ºC					
		Conventional	Balanced	Conventional	Balanced	Conventional	Balanced
1	Body	SA-216 Gr. WCB		SA-351 Gr. CN7M		-	
2	Pipe Plug	Carbon Steel		Alloy 20		-	
3	Lock Screw Gasket	NA 1002		NA 1002		-	
4	Lock Screw	304 St. St.		Alloy 20		-	
5	Body Stud	SA-193 Gr. B7		Alloy 20		-	
6	Nozzle	Alloy 20		Alloy 20		-	
7	Nozzle Gasket	NA 1002		NA 1002		-	
8	Blowdown Ring	Alloy 20		Alloy 20		-	
9	Disc	Alloy 20		Alloy 20		-	
57	Disc Retainer Ring	302 St. St.		Inconel		-	
12	Disc Holder	Alloy 20		Alloy 20		-	
13	Bellows Gasket	NA	NA 1002	NA	NA 1002	NA	-
14	Bellows	NA	316L St. St.	NA	Alloy 20	NA	-
16	Guide gasket	NA 1002		NA 1002		-	
17	Guide	304 St. St.		Alloy 20		-	
18	Stem retainer	304 St. St.		Alloy 20		-	
19	Stem	304 St. St.		Alloy 20		-	
20	Spring Washer	Carbon Steel		Nickel Carbon Steel		Alloy 20	
21	Spring	Carbon Steel or Alloy Steel		Carbon Steel or Nickel Alloy Steel		Alloy 20*	
22	Bonnet	SA-216 Gr. WCB		SA-351 Gr. CN7M		-	
23	Hex Nut (Body)	SA-194 Gr. 2H		SA-194 Gr. 2H		Alloy 20	
24	Spring Adjusting Screw	304 St. St.		Alloy 20		-	
25	Adjusting Screw Locknut	304 St. St.		Alloy 20		-	
26	Cap Gasket	NA 1002		NA 1002		-	
29	Flanged Cap	Carbon Steel		Alloy 20		-	
30	Cap Screw	ASTM A 193 Gr. B7		Alloy 20		-	
43	Sealing Plug Gasket	NA 1002		NA 1002		-	
44	Sealing Plug	Carbon Steel		Alloy 20		-	
45	Test Gag	Carbon Steel		Carbon Steel		-	
46	Nameplate	Stainless Steel		Stainless Steel		-	
47	Seal	Lead		Lead		-	

* There may be restrictions on the opening pressure. "-" Indicates the same material for option A2.

Standard Materials for Corrosive Service - Monel

No.	Name	M1		M2		M3	
		-28 to 315 ºC					
		Conventional	Balanced	Conventional	Balanced	Conventional	Balanced
1	Body	SA-216 Gr. WCB		SA-494 Gr. M-35-1		-	
2	Pipe Plug	Carbon Steel		Monel		-	
3	Lock Screw Gasket	NA 1002		NA 1002		-	
4	Lock Screw	304 St. St.		Monel		-	
5	Body Stud	SA-193 Gr. B7		Monel		-	
6	Nozzle	Monel		Monel		-	
7	Nozzle Gasket	NA 1002		NA 1002		-	
8	Blowdown Ring	Monel		Monel		-	
9	Disc	Monel		Monel		-	
57	Disc Retainer Ring	302 St. St.		Inconel		-	
12	Disc Holder	Monel		Monel		-	
13	Bellows Gasket	NA	NA 1002	NA	NA 1002	NA	-
14	Bellows	NA	316L St. St.	NA	Monel	NA	-
16	Guide gasket	NA 1002		NA 1002		-	
17	Guide	304 St. St.		Monel		-	
18	Stem retainer	304 St. St.		Monel		-	
19	Stem	304 St. St.		Monel		-	
20	Spring Washer	Carbon Steel		Nickel Alloy Steel		Monel	
21	Spring	Carbon Steel or Alloy Steel		Carbon Steel or Nickel Alloy Steel		Monel*	
22	Bonnet	SA-216 Gr. WCB		SA-494 Gr. M-35-1		-	
23	Hex Nut (Body)	SA-194 Gr. 2H		Monel		-	
24	Spring Adjusting Screw	304 St. St.		Monel		-	
25	Adjusting Screw Locknut	304 St. St.		Monel		-	
26	Cap Gasket	NA 1002		NA 1002		-	
29	Flanged Cap	Carbon Steel		Monel		-	
30	Cap Screw	ASTM A 193 Gr. B7		Monel		-	
43	Sealing Plug Gasket	NA 1002		NA 1002		-	
44	Sealing Plug	Carbon Steel		Monel		-	
45	Test Gag	Carbon Steel		Carbon Steel		-	
46	Nameplate	Stainless Steel		Stainless Steel		-	
47	Seal	Lead		Lead		-	

* There may be restrictions on the opening pressure. "-" Indicates the same material for option M2.

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Standard Materials for Corrosive Service - Hastelloy C

No.	Name	H1		H2		H3	
		-28 to 315 ºC					
		Conventional	Balanced	Conventional	Balanced	Conventional	Balanced
1	Body	SA-216 Gr. WCB		SA-494 Gr. CW-12-MW-1		-	
2	Pipe Plug	Carbon Steel		Hastelloy C		-	
3	Lock Screw Gasket	NA 1002		NA 1002		-	
4	Lock Screw	304 St. St.		Hastelloy C		-	
5	Body Stud	SA-193 Gr. B7		Hastelloy C		-	
6	Nozzle	Hastelloy C		Hastelloy C		-	
7	Nozzle Gasket	NA 1002		NA 1002		-	
8	Blowdown Ring	Hastelloy C		Hastelloy C		-	
9	Disc	Hastelloy C		Hastelloy C		-	
57	Disc Retainer Ring	302 St. St.		Inconel		-	
12	Disc Holder	Hastelloy C		Hastelloy C		-	
13	Bellows Gasket	-	NA 1002	-	NA 1002	-	-
14	Bellows	-	316L St. St.	-	Hastelloy C	-	-
16	Guide gasket	NA 1002		NA 1002		-	
17	Guide	304 St. St.		Hastelloy C		-	
18	Stem retainer	304 St. St.		Hastelloy C		-	
19	Stem	304 St. St.		Hastelloy C		-	
20	Spring Washer	Carbon Steel		Nickel Carbon Steel		Hastelloy C	
21	Spring	Carbon Steel ou Alloy Steel		Carbon Steel or Nickel Alloy Steel		Hastelloy C	
22	Bonnet	SA-216 Gr. WCB		SA-494 Gr. CW-12-MW-1		-	
23	Hex Nut (Body)	SA-194 Gr. 2H		Hastelloy C		-	
24	Spring Adjusting Screw	304 St. St.		Hastelloy C		-	
25	Adjusting Screw Locknut	304 St. St.		Hastelloy C		-	
26	Cap Gasket	NA 1002		NA 1002		-	
29	Flanged Cap	Carbon Steel		Hastelloy C		-	
30	Cap Screw	ASTM A 193 Gr. B7		Hastelloy C		-	
43	Sealing Plug Gasket	NA 1002		NA 1002		-	
44	Sealing Plug	Carbon Steel		Hastelloy C		-	
45	Test Gag	Carbon Steel		Carbon Steel		-	
46	Nameplate	Stainless Steel		Stainless Steel		-	
47	Seal	Lead		Lead		-	

* There may be restrictions on the opening pressure. "-" Indicates the same material for option H2.

Low temperature Services

For low temperatures applications the categories I1 and I2 could be used, depending on the degree of sub-zero temperatures involved.

Cap and Lever Materials

Type	Item	Description	Standard, A1, M1, H1	I1	I2, I3
Open Lever	27	Stem Test Nut	Carbon Steel	Stainless Steel T 316	Stainless Steel T 316
	28	Stem Nut	Carbon Steel	Stainless Steel T 316	Stainless Steel T 316
	29	Cap	Cast Steel	SA-351 Gr CF8M	SA-351 Gr CF8M
	30	Cap Screw	ASTM A 193 Gr B7	ASTM A 193 Gr B8M	ASTM A 193 Gr B8M
	33	Test Lever	Cast Steel	Cast Steel	Cast Steel
	34	Test Lever Fork	Cast Steel	Cast Steel	Cast Steel
	38	Drain Washer	Carbon Steel	Stainless Steel	Stainless Steel
	39	Rivet	Carbon Steel	Stainless Steel	Stainless Steel
	40	Cotter Pin	Carbon Steel	Stainless Steel	Stainless Steel
Packed Lever	27	Stem Test Nut	Carbon Steel	Stainless Steel T 316	Stainless Steel T 316
	28	Stem Nut	Carbon Steel	Stainless Steel T 316	Stainless Steel T 316
	29	Cap	Carbon Steel	SA-351 Gr CF8M	SA-351 Gr CF8M
	30	Cap Screw	ASTM A 193 Gr B7	ASTM A 193 Gr B8M	ASTM A 193 Gr B8M
	31	Cam	Carbon Steel	Stainless Steel T 316	Stainless Steel T 316
	32	Cam Shaft	Stainless Steel	Stainless Steel T 316	Stainless Steel T 316
	33	Lever	Cast Steel	Cast Steel	Cast Steel
	35	Bushing	Stainless Steel	Stainless Steel T 316	Stainless Steel T 316
	36	Gland	Carbon Steel	Stainless Steel T 316	IStainless Steel T 316
	37	Packing	Graphite	Teflon	Graphite
	38	Drain Washer	Carbon Steel	Stainless Steel	Stainless Steel
	42	Hex Nut	Carbon Steel	Stainless Steel	Stainless Steel

Cap and Lever Materials

Type	Item	Description	A2, A3	M2, M3	H2, H3
Open Lever	27	Stem Test Nut	Alloy 20	Monel	Hastelloy C
	28	Stem Nut	Alloy 20	Monel	Hastelloy C
	29	Cap	SA-351 Gr CN7M	SA-494 Gr M-35-1	SA-494 Gr CW-12-MW-1
	30	Cap Screw	Alloy 20	Monel	Hastelloy C
	33	Test Lever	Cast Steel	Cast Steel	Cast Steel
	34	Test Lever Fork	Cast Steel	Cast Steel	Cast Steel
	38	Drain Washer	Stainless Steel	Stainless Steel	Stainless Steel
	39	Rivet	Stainless Steel	Stainless Steel	Stainless Steel
	40	Cotter Pin	Stainless Steel	Stainless Steel	Stainless Steel
Packed Lever	27	Stem Test Nut	Alloy 20	Monel	Hastelloy C
	28	Stem Nut	Alloy 20	Monel	Hastelloy C
	29	Cap	SA-351 Gr CN7M	SA-494 Gr M-35-1	SA-494 Gr CW-12-MW-1
	30	Cap Screw	Alloy 20	Monel	Hastelloy C
	31	Cam	Alloy 20	Monel	Hastelloy C
	32	Cam Shaft	Alloy 20	Monel	Hastelloy C
	33	Lever	Cast Steel	Cast Steel	Cast Steel
	35	Bushing	Alloy 20	Monel	Hastelloy C
	36	Gland	Alloy 20	Monel	Hastelloy C
	37	Packing	Graphite	Graphite	Graphite
	38	Drain Washer	Stainless Steel	Stainless Steel	Stainless Steel
	42	Hex Nut	Stainless Steel	Stainless Steel	Stainless Steel

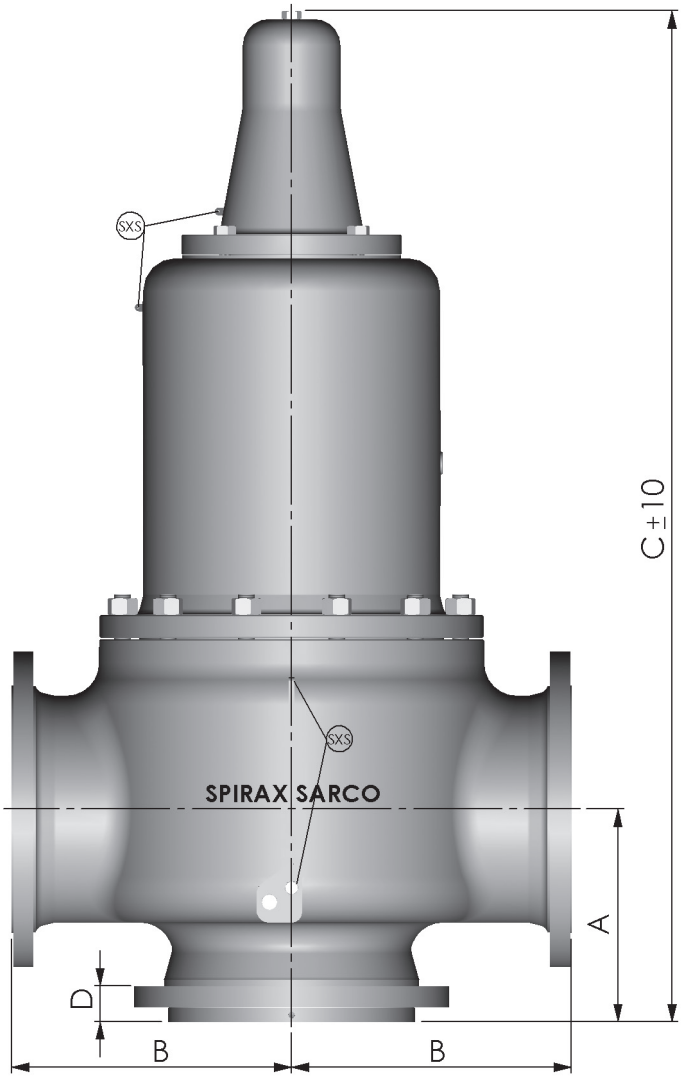
Dimensions and Weights approximate in mm and kg

Orifice	Size		Class	A	B	C		D	Weight
	Inlet	Outlet				Conventional	Balanced		
D	1"	2"	150 x 150	104.8	114.3	430	475	27	18
			300 x 150	104.8	114.3	430	475	33	19
			600 x 150						
	1½"	2"	900 x 300	104.8	139.7	440	485	49	30
			1500 x 300						
	1½"	3"	2500 x 300	139.7	177.8	620	665	60	50
E	1"	2"	150 x 150	104.8	114.3	430	475	27	18
			300 x 150	104.8	114.3	430	475	33	19
			600 x 150						
	1½"	2"	900 x 300	104.8	139.7	440	485	49	30
			1500 x 300						
	1½"	3"	2500 x 300	139.7	177.8	620	665	60	50
F	1½"	2"	150 x 150	123.8	120.7	460	495	30	22
			300 x 150	123.8	120.7	460	495	36	23
			300 x 150*1	123.8	152.4	460	495	36	25
			600 x 150						
	1½"	3"	900 x 300	123.8	165.1	526	526	49	40
			1500 x 300						
			2500 x 300	139.7	177.8	640	640	60	52
G	1½"	3"	150 x 150	123.8	120.7	476	476	30	27
			300 x 150	123.8	120.7	476	476	37	28
			300 x 150*1	123.8	152.4	476	476	38	29
			600 x 150						
			900 x 300	123.8	165.1	526	526	49	40
	2"	3"	1500 x 300	155.6	171.5	640	640	59	60
			2500 x 300	155.6	171.5	640	640	70	65
H	1½"	3"	150 x 150	130.2	123.8	485	485	31	26
			300 x 150	130.2	123.8	485	485	37	28
	2"	3"	300 x 150	130.2	123.8	485	485	39	30
			600 x 150	154	161.9	555	555	44	42
			900 x 150	154	161.9	640	640	54	45
			1500 x 300	154	161.9	640	640	54	52
J	2"	3"	150 x 150	136.5	123.8	490	490	32	32
			300 x 150	136.5	123.8	490	490	39	34
	3"	4"	300 x 150	184.2	181	596	596	45	52
			600 x 150	184.2	181	680	680	49	62
			900 x 150	184.2	181	680	680	54	65
			1500 x 300	184.2	181	680	680	63	80
K	3"	4"	150 x 150	155.6	161.9	600	600	35	55
			300 x 150	155.6	161.9	600	600	44	58
			300 x 150*1	155.6	161.9	650	650	44	58
			300 x 150*2	155.6	161.9	650	650	49	60
			600 x 150	184.2	181	680	680	49	62
	3"	6"	900 x 150	198.4	215.9	795	795	54	85
			1500 x 300	196.9	215.9	797	797	63	95

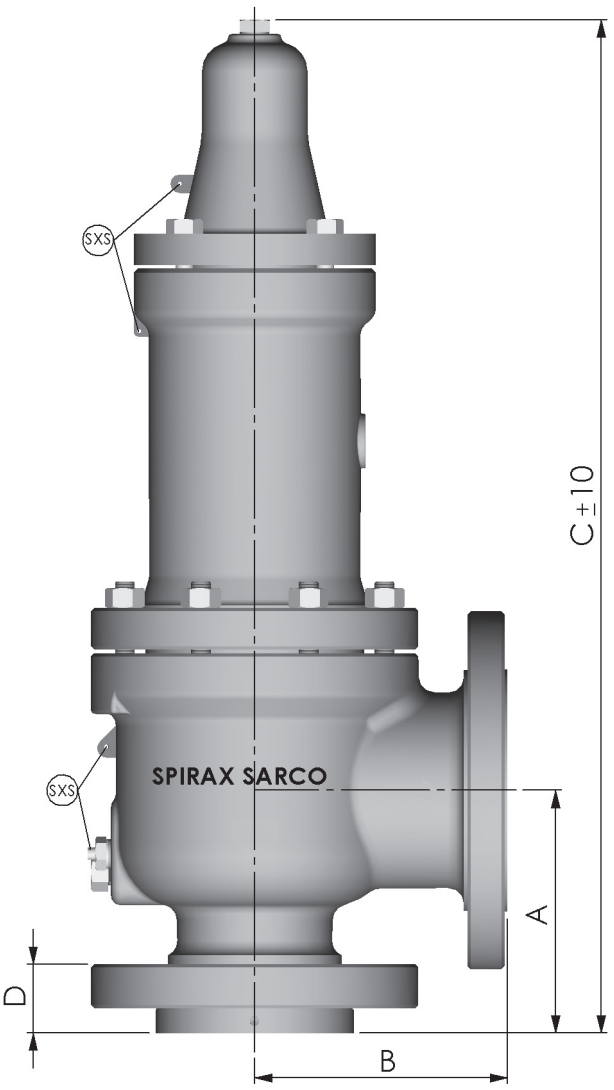
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Orifice	Size		Class	A	B	C		D	Weight
	Inlet	Outlet				Conventional	Balanced		
L	3"	4"	150 x 150	155.6	165.1	650	650	35	58
			300 x 150	155.6	165.1	650	650	44	60
	4"	6"	300 x 150*1	179.4	181	775	775	48	90
			600 x 150	179.4	203.2	775	775	55	95
			900 x 150	196.9	222.3	795	795	60	110
			1500 x 150	196.9	222.3	795	795	70	115
M	4"	6"	150 x 150	177.8	184.2	700	700	40	70
			300 x 150	177.8	184.2	700	700	48	74
			300 x 150*1	177.8	184.2	770	770	48	90
			600 x 150	177.8	203.2	770	770	55	95
			900 x 150	196.9	222.3	790	790	60	115
N	4"	6"	150 x 150	196.9	209.6	790	790	40	90
			300 x 150	196.9	209.6	790	790	48	92
			600 x 150	196.9	222.3	870	870	55	125
			900 x 150	196.9	222.3	870	870	62	128
P	4"	6"	150 x 150	181	228.6	775	775	40	93
			300 x 150	181	228.6	775	775	48	95
			300 x 150*1	225.4	254	900	900	49	125
			600 x 150	225.4	254	985	985	57	170
			900 x 150	225.4	254	985	985	63	175
Q	6"	8"	150 x 150	239.7	241.3	940	940	46	154
			300 x 150	239.7	241.3	940	940	57	160
			300 x 150*3	239.7	241.3	1020	1020	57	195
			600 x 150	239.7	241.3	1060	1060	70	240
R	6"	8"	150 x 150	239.7	241.3	940	940	46	154
			300 x 150	239.7	241.3	940	940	57	160
	6"	10"	300 x 150	239.7	266.7	1085	1085	57	245
			600 x 150	239.7	266.7	1085	1085	70	255
T	8"	10"	150 x 150	276.2	279.4	1260	1260	50	295
			300 x 150	276.2	279.4	1260	1260	63	305
			300 x 150*4	276.2	279.4	1350	1350	63	308
T2	8"	10"	150 x 150	276.2	279.4	1260	1260	50	295
			300 x 150	276.2	279.4	1260	1260	63	305
			300 x 150*6	276.2	279.4	1350	1350	63	308
U	8"	10"	150 x 150	276.2	279.4	1260	1260	50	295
			300 x 150	276.2	279.4	1260	1260	63	305
			300 x 150*7	276.2	279.4	1350	1350	63	308
V	10"	14"	150 x 150	380	370	1465	1465	54	555
			300 x 150	380	370	1465	1465	72	575
			300 x 150*5	380	370	1590	1590	72	640
W	12"	12"(x2)	150 x 150	327	430	1555	1555	56	854
			300 x 150	327	430	1555	1555	73	870
	12"	16"	150 x 150	369	430	1635	1635	56	882
			300 x 150	369	430	1635	1635	73	900

Notes:
*1 Temperatures above 426°C or pressures above 19,6 barg
*2 Temperatures above 426°C
*3 pressures above 11,4 barg
*4 pressures above 8,3 barg
*5 pressures above 5,1 barg
*6 pressures above 7,8 barg
*7 pressures above 7,3 barg



Orifice W



Orifice D-W

Valve size and orifice designation

Inlet* Flange ASME B16.5 150# RF to 2500# RF	Outlet Flange ASME B16.5 150# RF to 300# RF	Orifice
1"	2"	D,E
1½"	2"	D,E,F
1½"	3"	D,E,F,G,H
2"	3"	G,H,J
3"	4"	J,K,L
4"	6"	L,M,N P
6"	8"	Q,R
6"	10"	R
8"	10"	T,T2, U
10"	14"	V
12"	12" (x 2)	W
12"	16"	W

*** Notes:**

1. For inlet connections RTJ is also available. Contact Spirax Sarco for further information.
2. Selection of the inlet, orifice and outlet configurations shown may be limited by the required valve pressure rating. (See API STD 526).

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API STD 526 Designated Orifice Areas

Orifices	Area (cm^2)	
	API	Actual (ASME)
D	0.71	0.99
E	1.26	1.69
F	1.98	2.41
G	3.24	3.43
H	5.06	5.43
J	8.30	8.86
K	11.80	12.68
L	18.40	19.71
M	23.20	24.79
N	28.00	29.90
P	41.10	44.04
Q	71.30	76.16
R	103.20	110.10
T	167.70	178.79

Other Orifice Areas

Orifices	Area (cm^2)
	Actual (ASME)
T2	192.36
U	209.7
V	292.52
W	438.16

Purchase Information

For the correct sizing and selection of the SV80H, the following information is necessary:

1) Fluid
2) Required capacity (flow)
3) Operation pressure and Set pressure
4) Operating temperature and Opening temperature
5) Backpressure
6) Overpressure
7) Viscosty and Specific Gravity (Liquid)
8) Molecular Weight (Gases)

Spirax Sarco has a computer sizing program (PSV Calc) which performs sizing and selection functions. Additionally, it will select materials, configure the complete valve and provide a data sheet.

Capacity Table - Air - 10% Overpressure - Nm^3/h (0ºC and 1,013 bar)

Set Pressure (bar g)	Orifice Designation / Actual Area (cm^2)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	1,003	1,697	2,405	3,464	5,433	8,867	12,69	19,71	24,81	29,90	44,06	76,20	110,10	178,84	192,36	209,70	292,55	438,18
1,0	132	223	316	456	715	1.167	1.670	2.594	3.265	3.934	5.798	10.027	14.487	23.533	25.312	27.593	38.495	58.533
1,5	162	274	388	558	876	1.430	2.046	3.178	4.000	4.820	7.103	12.285	17.750	28.833	31.012	33.808	47.165	71.716
2,0	191	324	459	661	1.037	1.692	2.422	3.762	4.735	5.707	8.409	14.543	21.013	34.133	36.713	40.023	55.835	84.899
2,5	224	379	536	773	1.212	1.978	2.830	4.396	5.534	6.669	9.827	16.996	24.557	39.889	42.904	46.772	65.251	99.216
3,0	256	434	615	886	1.389	2.267	3.244	5.039	6.342	7.644	11.264	19.480	28.146	45.719	49.175	53.608	74.788	113.717
3,5	289	489	693	998	1.566	2.556	3.658	5.681	7.151	8.618	12.700	21.964	31.735	51.549	55.446	60.444	84.325	128.218
4,0	322	544	772	1.111	1.743	2.845	4.071	6.324	7.960	9.593	14.136	24.448	35.325	57.379	61.717	67.280	93.862	142.720
4,5	355	600	850	1.224	1.920	3.134	4.485	6.966	8.769	10.568	15.573	26.932	38.914	63.209	67.988	74.116	103.399	157.221
5,0	387	655	928	1.337	2.097	3.423	4.899	7.609	9.578	11.543	17.009	29.416	42.503	69.039	74.259	80.953	112.936	171.722
5,5	420	710	1.007	1.450	2.274	3.712	5.313	8.251	10.386	12.517	18.445	31.900	46.092	74.870	80.530	87.789	122.473	186.224
6,0	453	766	1.085	1.563	2.452	4.001	5.726	8.894	11.195	13.492	19.882	34.384	49.681	80.700	86.800	94.625	132.010	200.725
6,5	485	821	1.164	1.676	2.629	4.290	6.140	9.536	12.004	14.467	21.318	36.869	53.271	86.530	93.071	101.461	141.547	215.226
7,0	518	876	1.242	1.789	2.806	4.579	6.554	10.179	12.813	15.442	22.754	39.353	56.860	92.360	99.342	108.297	151.084	229.728
7,5	551	932	1.320	1.902	2.983	4.868	6.967	10.822	13.622	16.416	24.191	41.837	60.449	98.190	105.613	115.133	160.621	244.229
8,0	583	987	1.399	2.015	3.160	5.157	7.381	11.464	14.430	17.391	25.627	44.321	64.038	104.020	111.884	121.970	170.158	258.730
8,5	616	1.042	1.477	2.128	3.337	5.446	7.795	12.107	15.239	18.366	27.063	46.805	67.628	109.850	118.155	128.806	179.695	273.232
9,0	649	1.098	1.556	2.241	3.514	5.736	8.208	12.749	16.048	19.340	28.500	49.289	71.217	115.680	124.426	135.642	189.232	287.733
9,5	681	1.153	1.634	2.354	3.691	6.025	8.622	13.392	16.857	20.315	29.936	51.773	74.806	121.511	130.697	142.478	198.769	302.234
10	714,2	1.208	1.712	2.466	3.868	6.314	9.036	14.034	17.666	21.290	31.372	54.257	78.395	127.341	136.967	149.314	208.307	312.001
12	845	1.430	2.026	2.918	4.577	7.470	10.691	16.604	20.901	25.189	37.118	64.194	92.752	150.661	162.051	176.659	246.455	
14	976	1.651	2.340	3.370	5.285	8.626	12.345	19.175	24.136	29.088	42.863	74.130	107.109	173.982	187.135	204.004		
16	1.107	1.872	2.653	3.822	5.994	9.782	14.000	21.745	27.371	32.987	48.608	84.066	121.466	197.302	212.218	231.348		
18	1.237	2.093	2.967	4.273	6.702	10.939	15.655	24.315	30.606	36.886	54.354	94.003	135.823	220.623	237.302	258.693		
20	1.368	2.315	3.280	4.725	7.411	12.095	17.310	26.885	33.842	40.785	60.099	103.939	150.180	243.943	262.385	286.037		
22	1.499	2.536	3.594	5.177	8.119	13.251	18.964	29.455	37.077	44.683	65.845	113.876						
24	1.630	2.757	3.908	5.628	8.828	14.407	20.619	32.025	40.312	48.582	71.590	123.812						
26	1.760	2.979	4.221	6.080	9.536	15.564	22.274	34.596	43.547	52.481	77.335	133.748						
28	1.891	3.200	4.535	6.532	10.245	16.720	23.929	37.166	46.782	56.380	83.081	143.685						
30	2.022	3.421	4.849	6.984	10.953	17.876	25.583	39.736	50.018	60.279	88.826	153.621						
32	2.153	3.642	5.162	7.435	11.662	19.032	27.238	42.306	53.253	64.178	94.571	163.558						
34	2.284	3.864	5.476	7.887	12.370	20.189	28.893	44.876	56.488	68.077	100.317	173.494						
36	2.414	4.085	5.789	8.339	13.078	21.345	30.548	47.446	59.723	71.976	106.062	183.430						
38	2.545	4.306	6.103	8.790	13.787	22.501	32.202	50.017	62.958	75.875	111.808	193.367						
40	2.676	4.528	6.417	9.242	14.495	23.657	33.857	52.587	66.194	79.774	117.553	203.303						
42	2.807	4.749	6.730	9.694	15.204	24.814	35.512	55.157	69.429	83.673	123.298							
44	2.938	4.970	7.044	10.145	15.912	25.970	37.167	57.727	72.664	87.572	129.044							
46	3.068	5.191	7.357	10.597	16.621	27.126	38.821	60.297	75.899	91.471	134.789							
48	3.199	5.413	7.671	11.049	17.329	28.282	40.476	62.867	79.134	95.370	140.535							
50	3.330	5.634	7.985	11.501	18.038	29.439	42.131	65.438	82.370	99.268	146.280							
55	3.657	6.187	8.769	12.630	19.809	32.329	46.268	71.863	90.458	109.016	160.643							
60	3.984	6.741	9.553	13.759	21.580	35.220	50.405	78.288	98.546	118.763	175.007							
65	4.311	7.294	10.337	14.888	23.351	38.110	54.542	84.714	106.634	128.510	189.370							
70	4.638	7.847	11.121	16.018	25.122	41.001	58.679	91.139	114.722									
75	4.965	8.400	11.905	17.147	26.893	43.892	62.816	97.565	122.810									
80	5.292	8.953	12.689	18.276	28.665	46.782	66.952	103.990										
85	5.619	9.507	13.473	19.405	30.436	49.673	71.089	110.415										
90	5.946	10.060	14.257	20.535	32.207	52.564	75.226	116.841										
95	6.273	10.613	15.041	21.664	33.978	55.454	79.363	123.266										
100	6.600	11.166	15.825	22.793	35.749	58.345	83.500	129.692										
110	7.254	12.273	17.393	25.052	39.291	64.126	91.774											
120	7.908	13.379	18.961	27.310	42.834	69.907	100.048											
130	8.562	14.486	20.529	29.569	46.376	75.688	108.321											
140	9.216	15.592	22.097	31.827	49.918	81.470	116.595											
150	9.869	16.698	23.665	34.086	53.461	87.251	124.869											
160	10.523	17.805	25.233	36.344	57.003	93.032												
170	11.177	18.911	26.801	38.603	60.545	98.813												
180	11.831	20.018	28.369	40.861	64.087	104.595												
190	12.485	21.124	29.937	43.120														
200	13.139	22.231	31.505	45.378														
250	16.409	27.763	39.346	56.671														
300	19.679	33.295	47.186															
350	22.948	38.827																
400	26.218	44.359																
414	27.134	45.908																

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.870.

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Capacity Table - Air - 10% Overpressure - SCFM (60ºF and 14,7 psi)

Set Pressure (psig)	Orifice Designation / Actual Area (pol²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	0,155	0,263	0,373	0,537	0,842	1,374	1,967	3,056	3,845	4,634	6,829	11,811	17,066	27,721	29,816	35,503	45,346	67,918
15	81	137	195	280	439	717	1.027	1.595	2.007	2.418	3.564	6.164	8.906	14.467	15.560	16.962	23.665	35.444
20	93	158	224	323	507	827	1.183	1.839	2.313	2.788	4.109	7.106	10.268	16.679	17.939	19.556	27.283	40.864
25	106	179	254	366	574	936	1.340	2.083	2.620	3.158	4.654	8.049	11.630	18.891	20.318	22.150	30.902	46.283
30	118	200	284	409	641	1.046	1.497	2.326	2.927	3.528	5.199	8.991	12.992	21.103	22.698	24.743	34.520	51.703
35	132	223	317	456	715	1.167	1.670	2.595	3.265	3.934	5.798	10.028	14.490	23.536	25.315	27.596	38.500	57.665
40	145	246	349	503	789	1.287	1.843	2.863	3.602	4.341	6.397	11.065	15.988	25.969	27.932	30.449	42.481	63.626
45	159	269	382	550	863	1.408	2.015	3.131	3.940	4.748	6.997	12.101	17.486	28.403	30.549	33.302	46.461	69.588
50	172	293	415	597	937	1.528	2.188	3.399	4.277	5.155	7.596	13.138	18.984	30.836	33.166	36.155	50.441	75.549
55	186	316	448	644	1.011	1.649	2.361	3.668	4.615	5.561	8.196	14.175	20.482	33.269	35.783	39.008	54.421	81.511
60	200	339	480	692	1.084	1.770	2.533	3.936	4.952	5.968	8.795	15.212	21.980	35.702	38.400	41.861	58.402	87.473
65	213	362	513	739	1.158	1.890	2.706	4.204	5.290	6.375	9.395	16.248	23.478	38.136	41.018	44.714	62.382	93.434
70	227	385	546	786	1.232	2.011	2.879	4.472	5.627	6.782	9.994	17.285	24.976	40.569	43.635	47.567	66.362	99.396
75	240	408	579	833	1.306	2.131	3.051	4.741	5.965	7.188	10.593	18.322	26.473	43.002	46.252	50.420	70.343	105.357
80	254	431	611	880	1.380	2.252	3.224	5.009	6.302	7.595	11.193	19.358	27.971	45.435	48.869	53.273	74.323	111.319
85	268	454	644	927	1.454	2.373	3.397	5.277	6.640	8.002	11.792	20.395	29.469	47.868	51.486	56.126	78.303	117.280
90	281	477	677	974	1.528	2.493	3.569	5.545	6.977	8.409	12.392	21.432	30.967	50.302	54.103	58.979	82.283	123.242
95	295	500	710	1.022	1.602	2.614	3.742	5.814	7.315	8.815	12.991	22.469	32.465	52.735	56.720	61.832	86.264	129.204
100	308	523	742	1.069	1.676	2.734	3.915	6.082	7.652	9.222	13.591	23.505	33.963	55.168	59.337	64.685	90.244	135.165
110	336	570	808	1.163	1.823	2.976	4.260	6.618	8.327	10.036	14.789	25.579	36.959	60.035	64.572	70.391	98.205	147.088
120	363	616	873	1.257	1.971	3.217	4.605	7.155	9.002	10.849	15.988	27.652	39.955	64.901	69.806	76.097	106.165	159.011
130	390	662	939	1.352	2.119	3.458	4.951	7.691	9.677	11.663	17.187	29.726	42.951	69.768	75.040	81.803	114.126	170.935
140	417	708	1.004	1.446	2.267	3.699	5.296	8.228	10.352	12.476	18.386	31.799	45.947	74.634	80.275	87.509	122.086	182.858
150	445	754	1.070	1.540	2.415	3.940	5.641	8.764	11.027	13.290	19.585	33.873	48.943	79.501	85.509	93.215	130.047	
160	472	800	1.135	1.634	2.563	4.182	5.986	9.301	11.702	14.103	20.784	35.946	51.939	84.367	90.743	98.921	138.008	
170	499	847	1.201	1.729	2.710	4.423	6.332	9.837	12.377	14.917	21.982	38.019	54.935	89.234	95.977	104.627		
180	526	893	1.266	1.823	2.858	4.664	6.677	10.374	13.052	15.730	23.181	40.093	57.931	94.100	101.212	110.333		
190	553	939	1.332	1.917	3.006	4.905	7.022	10.910	13.727	16.544	24.380	42.166	60.927	98.966	106.446	116.039		
200	581	985	1.397	2.011	3.154	5.147	7.368	11.447	14.402	17.357	25.579	44.240	63.923	103.833	111.680	121.745		
210	608	1.031	1.463	2.106	3.302	5.388	7.713	11.983	15.077	18.171	26.778	46.313	66.919	108.699	116.914	127.451		
220	635	1.077	1.528	2.200	3.449	5.629	8.058	12.520	15.752	18.984	27.977	48.387	69.915	113.566	122.149	133.157		
230	662	1.124	1.594	2.294	3.597	5.870	8.404	13.056	16.427	19.798	29.176	50.460	72.911	118.432	127.383	138.863		
240	689	1.170	1.659	2.388	3.745	6.111	8.749	13.593	17.102	20.611	30.374	52.534	75.907	123.299	132.617	144.569		
250	717	1.216	1.725	2.483	3.893	6.353	9.094	14.129	17.777	21.425	31.573	54.607	78.903	128.165	137.851	150.274		
260	744	1.262	1.790	2.577	4.041	6.594	9.440	14.666	18.452	22.238	32.772	56.680	81.899	133.032	143.086	155.980		
270	771	1.308	1.855	2.671	4.189	6.835	9.785	15.202	19.127	23.052	33.971	58.754	84.895	137.898	148.320	161.686		
280	798	1.354	1.921	2.766	4.336	7.076	10.130	15.739	19.802	23.865	35.170	60.827	87.891	142.765	153.554	167.392		
290	825	1.401	1.986	2.860	4.484	7.317	10.475	16.275	20.477	24.679	36.369	62.901	90.887	147.631	158.788	173.098		
300	853	1.447	2.052	2.954	4.632	7.559	10.821	16.812	21.152	25.492	37.567	64.974	93.883	152.498	164.023	178.804		
320	907	1.539	2.183	3.143	4.928	8.041	11.511	17.885	22.502	27.119	39.965	69.121						
340	962	1.631	2.314	3.331	5.223	8.523	12.202	18.958	23.852	28.746	42.363	73.268						
360	1.016	1.724	2.445	3.520	5.519	9.006	12.893	20.030	25.202	30.373	44.761	77.415						
380	1.070	1.816	2.576	3.708	5.814	9.488	13.583	21.103	26.552	32.000	47.158	81.562						
400	1.125	1.909	2.707	3.897	6.110	9.971	14.274	22.176	27.902	33.627	49.556	85.709						
420	1.179	2.001	2.838	4.085	6.406	10.453	14.965	23.249	29.252	35.254	51.954	89.856						
440	1.234	2.093	2.969	4.274	6.701	10.936	15.655	24.322	30.602	36.882	54.351	94.002						
460	1.288	2.186	3.100	4.462	6.997	11.418	16.346	25.395	31.952	38.509	56.749	98.149						
480	1.342	2.278	3.231	4.651	7.293	11.900	17.036	26.468	33.302	40.136	59.147	102.296						
500	1.397	2.370	3.362	4.840	7.588	12.383	17.727	27.541	34.652	41.763	61.544	106.443						
600	1.669	2.832	4.016	5.782	9.066	14.795	21.180	32.906	41.402	49.898	73.533	127.178						
700	1.941	3.294	4.671	6.725	10.545	17.207	24.633	38.271	48.152	58.033	85.521							
800	2.213	3.755	5.326	7.668	12.023	19.619	28.086	43.636	54.902	66.168	97.510							
900	2.485	4.217	5.981	8.610	13.501	22.031	31.539	49.001	61.652	74.303	109.498							
1000	2.757	4.679	6.636	9.553	14.979	24.443	34.993	54.366	68.402	82.438	121.487							
1100	3.030	5.140	7.290	10.496	16.457	26.855	38.446	59.731	75.152									
1200	3.302	5.602	7.945	11.439	17.935	29.267	41.899	65.095										
1300	3.574	6.064	8.600	12.381	19.413	31.679	45.352	70.460										
1400	3.846	6.526	9.255	13.324	20.892	34.092	48.805	75.825										
1500	4.118	6.987	9.910	14.267	22.370	36.504	52.258	81.190										
2000	5.478	9.296	13.184	18.980	29.761	48.564	69.524											
2500	6.839	11.604	16.458	23.694	37.151	60.624												
3000	8.200	13.913	19.732	28.407														
4000	10.921	18.530	26.280															
5000	13.642	23.147	32.828															
6000	16.363	27.764																

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.870.

Capacity Table - Steam - 10% Overpressure - kg/h

Set Pressure (bar g)	Orifice Designation / Actual Area (cm²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	1,003	1,697	2,405	3,464	5,433	8,867	12,69	19,71	24,81	29,90	44,06	76,20	110,10	178,84	192,36	209,70	292,55	438,18
1,0	102	172	244	352	552	901	1.289	2.002	2.520	3.038	4.476	7.741	11.185	18.169	19.542	21.304	29.721	44.515
1,5	125	211	299	431	676	1.104	1.580	2.453	3.088	3.722	5.484	9.485	13.704	22.261	23.944	26.102	36.414	54.541
2,0	148	250	354	510	801	1.307	1.870	2.904	3.656	4.406	6.492	11.228	16.224	26.353	28.345	30.900	43.108	64.567
2,5	173	292	414	597	936	1.527	2.185	3.394	4.272	5.149	7.587	13.122	18.959	30.797	33.125	36.111	50.378	75.456
3,0	198	335	475	684	1.072	1.750	2.505	3.890	4.897	5.901	8.696	15.040	21.731	35.298	37.966	41.389	57.741	86.484
3,5	223	378	535	771	1.209	1.973	2.824	4.386	5.521	6.654	9.805	16.958	24.502	39.799	42.808	46.667	65.104	97.513
4,0	248	420	596	858	1.346	2.196	3.143	4.882	6.146	7.407	10.914	18.875	27.273	44.300	47.649	51.945	72.467	108.541
4,5	274	463	656	945	1.483	2.420	3.463	5.378	6.770	8.159	12.023	20.793	30.044	48.802	52.491	57.223	79.831	119.570
5,0	299	506	717	1.032	1.619	2.643	3.782	5.875	7.395	8.912	13.132	22.711	32.815	53.303	57.332	62.501	87.194	130.599
5,5	324	548	777	1.120	1.756	2.866	4.102	6.371	8.019	9.664	14.241	24.629	35.586	57.804	62.174	67.779	94.557	141.627
6,0	349	591	838	1.207	1.893	3.089	4.421	6.867	8.643	10.417	15.350	26.547	38.357	62.305	67.016	73.057	101.920	152.656
6,5	375	634	898	1.294	2.030	3.312	4.740	7.363	9.268	11.169	16.459	28.465	41.128	66.807	71.857	78.335	109.284	163.684
7,0	400	677	959	1.381	2.166	3.535	5.060	7.859	9.892	11.922	17.568	30.383	43.900	71.308	76.699	83.612	116.647	174.713
7,5	425	719	1.019	1.468	2.303	3.759	5.379	8.355	10.517	12.674	18.677	32.301	46.671	75.809	81.540	88.890	124.010	185.742
8,0	450	762	1.080	1.556	2.440	3.982	5.699	8.851	11.141	13.427	19.786	34.219	49.442	80.310	86.382	94.168	131.373	196.770
8,5	476	805	1.141	1.643	2.577	4.205	6.018	9.347	11.766	14.180	20.895	36.136	52.213	84.812	91.223	99.446	138.736	207.799
9,0	501	847	1.201	1.730	2.713	4.428	6.337	9.843	12.390	14.932	22.004	38.054	54.984	89.313	96.065	104.724	146.100	218.827
9,5	526	890	1.262	1.817	2.850	4.651	6.657	10.339	13.015	15.685	23.113	39.972	57.755	93.814	100.906	110.002	153.463	229.856
10	551	933	1.322	1.904	2.987	4.875	6.976	10.835	13.639	16.437	24.221	41.890	60.526	98.315	105.748	115.280	160.826	240.885
12	652	1.104	1.564	2.253	3.534	5.767	8.254	12.820	16.137	19.447	28.657	49.562	71.611	116.320	125.114	136.392	190.279	
14	753	1.275	1.806	2.602	4.081	6.660	9.531	14.804	18.635	22.458	33.093	57.233	82.695	134.325	144.480	157.504		
16	854	1.445	2.049	2.951	4.628	7.553	10.809	16.788	21.132	25.468	37.529	64.905	93.780	152.330	163.846	178.616		
18	955	1.616	2.291	3.299	5.175	8.445	12.087	18.773	23.630	28.478	41.965	72.576	104.864	170.335	183.212	199.728		
20	1.056	1.787	2.533	3.648	5.722	9.338	13.364	20.757	26.128	31.488	46.401	80.248	115.949	188.340	202.578	220.839		
22	1.157	1.958	2.775	3.997	6.269	10.231	14.642	22.741	28.626	34.499	50.836	87.919						
24	1.258	2.129	3.017	4.345	6.816	11.123	15.919	24.726	31.123	37.509	55.272	95.591						
26	1.359	2.300	3.259	4.694	7.363	12.016	17.197	26.710	33.621	40.519	59.708	103.262						
28	1.460	2.471	3.501	5.043	7.910	12.909	18.474	28.694	36.119	43.529	64.144	110.934						
30	1.561	2.641	3.743	5.392	8.456	13.802	19.752	30.679	38.617	46.539	68.580	118.606						
32	1.662	2.812	3.986	5.740	9.003	14.694	21.030	32.663	41.115	49.550	73.015	126.277						
34	1.763	2.983	4.228	6.089	9.550	15.587	22.307	34.647	43.612	52.560	77.451	133.949						
36	1.864	3.154	4.470	6.438	10.097	16.480	23.585	36.632	46.110	55.570	81.887	141.620						
38	1.965	3.325	4.712	6.787	10.644	17.372	24.862	38.616	48.608	58.580	86.323	149.292						
40	2.066	3.496	4.954	7.135	11.191	18.265	26.140	40.600	51.106	61.591	90.759	156.963						
42	2.167	3.666	5.196	7.484	11.738	19.158	27.418	42.585	53.604	64.601	95.194							
44	2.268	3.837	5.438	7.833	12.285	20.050	28.695	44.569	56.101	67.611	99.630							
46	2.369	4.008	5.680	8.182	12.832	20.943	29.973	46.553	58.599	70.621	104.066							
48	2.470	4.179	5.923	8.530	13.379	21.836	31.250	48.538	61.097	73.631	108.502							
50	2.571	4.350	6.165	8.879	13.926	22.728	32.528	50.522	63.595	76.642	112.938							
55	2.823	4.777	6.770	9.751	15.294	24.960	35.722	55.483	69.839	84.167	124.027							
60	3.076	5.204	7.375	10.623	16.661	27.192	38.916	60.444	76.084	91.693	135.117							
65	3.328	5.631	7.981	11.495	18.029	29.424	42.110	65.404	82.328	99.218	146.206							
70	3.581	6.058	8.586	12.367	19.396	31.655	45.304	70.365	88.572									
75	3.833	6.485	9.191	13.238	20.763	33.887	48.498	75.326	94.817									
80	4.086	6.913	9.797	14.110	22.131	36.119	51.692	80.287										
85	4.338	7.340	10.402	14.982	23.498	38.351	54.886	85.248										
90	4.591	7.767	11.007	15.854	24.866	40.582	58.080	90.209										
95	4.843	8.194	11.613	16.726	26.233	42.814	61.273	95.169										
100	5.095	8.621	12.218	17.598	27.601	45.046	64.467	100.130										
110	5.295	8.959	12.697	18.288	28.682	46.812	66.994											
120	5.774	9.770	13.845	19.942	31.278	51.047	73.056											
130	6.254	10.581	14.995	21.598	33.874	55.285	79.121											
140	6.733	11.392	16.145	23.254	36.472	59.525	85.190											
150	7.213	12.204	17.296	24.912	39.072	63.768	91.262											
160	7.693	13.017	18.447	26.571	41.674	68.014	97.338											
170	8.174	13.830	19.600	28.230	44.277	72.262	103.418											
180	8.655	14.643	20.753	29.891	46.881	76.513	109.502											
190	9.136	15.458	21.907	31.553														
200	9.618	16.272	23.061	33.215														
220	10.581	17.903	25.372	36.544														

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.870.

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Capacity Table - Steam - 10% Overpressure - lb/h

Set Pressure (psig)	Orifice Designation / Actual Area (pol²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	0,155	0,263	0,373	0,537	0,842	1,374	1,967	3,056	3,845	4,634	6,829	11,811	17,066	27,721	29,816	32,503	45,346	67,918
15	227	385	546	787	1.234	2.013	2.882	4.477	5.633	6.789	10.005	17.305	25.004	40.615	43.684	47.621	66.437	99.508
20	262	444	630	907	1.422	2.321	3.323	5.162	6.495	7.828	11.535	19.951	28.827	46.825	50.364	54.902	76.596	114.724
25	297	503	714	1.027	1.611	2.629	3.763	5.847	7.356	8.866	13.065	22.596	32.650	53.035	57.043	62.184	86.755	129.939
30	331	562	797	1.148	1.800	2.937	4.204	6.531	8.218	9.904	14.595	25.242	36.473	59.245	63.723	69.465	96.913	145.154
35	369	627	889	1.280	2.007	3.275	4.689	7.284	9.165	11.046	16.278	28.153	40.679	66.076	71.070	77.475	108.088	161.891
40	408	692	981	1.412	2.215	3.614	5.173	8.037	10.113	12.188	17.961	31.064	44.884	72.908	78.418	85.485	119.262	178.628
45	446	757	1.073	1.545	2.422	3.952	5.658	8.791	11.060	13.330	19.643	33.974	49.090	79.739	85.765	93.494	130.437	195.365
50	484	821	1.165	1.677	2.629	4.291	6.143	9.544	12.008	14.472	21.326	36.885	53.296	86.570	93.113	101.504	141.611	212.102
55	522	886	1.257	1.809	2.837	4.629	6.627	10.297	12.955	15.614	23.009	39.795	57.501	93.401	100.460	109.514	152.786	228.839
60	560	951	1.349	1.942	3.044	4.968	7.112	11.050	13.903	16.755	24.692	42.706	61.707	100.233	107.808	117.523	163.960	245.575
65	599	1.016	1.441	2.074	3.252	5.307	7.597	11.803	14.850	17.897	26.375	45.616	65.912	107.064	115.155	125.533	175.135	262.312
70	637	1.081	1.533	2.206	3.459	5.645	8.082	12.556	15.798	19.039	28.058	48.527	70.118	113.895	122.503	133.542	186.309	279.049
75	675	1.145	1.624	2.339	3.667	5.984	8.566	13.309	16.745	20.181	29.741	51.437	74.323	120.726	129.850	141.552	197.484	295.786
80	713	1.210	1.716	2.471	3.874	6.322	9.051	14.062	17.693	21.323	31.423	54.348	78.529	127.557	137.198	149.562	208.658	312.523
85	751	1.275	1.808	2.603	4.082	6.661	9.536	14.815	18.640	22.465	33.106	57.259	82.734	134.389	144.545	157.571	219.833	329.260
90	790	1.340	1.900	2.736	4.289	7.000	10.021	15.568	19.588	23.607	34.789	60.169	86.940	141.220	151.892	165.581	231.007	345.997
95	828	1.405	1.992	2.868	4.497	7.338	10.505	16.321	20.535	24.749	36.472	63.080	91.145	148.051	159.240	173.591	242.182	362.733
100	866	1.469	2.084	3.000	4.704	7.677	10.990	17.074	21.483	25.891	38.155	65.990	95.351	154.882	166.587	181.600	253.356	379.470
110	942	1.599	2.268	3.265	5.119	8.354	11.959	18.581	23.378	28.175	41.521	71.811	103.762	168.545	181.282	197.619	275.705	412.944
120	1.019	1.729	2.452	3.530	5.534	9.031	12.929	20.087	25.273	30.459	44.886	77.632	112.173	182.207	195.977	213.639	298.054	446.418
130	1.095	1.858	2.636	3.794	5.949	9.708	13.898	21.593	27.168	32.743	48.252	83.454	120.584	195.870	210.672	229.658	320.403	479.892
140	1.172	1.988	2.819	4.059	6.364	10.386	14.868	23.099	29.063	35.027	51.618	89.275	128.995	209.532	225.367	245.677	342.752	513.365
150	1.248	2.118	3.003	4.324	6.779	11.063	15.837	24.605	30.958	37.310	54.983	95.096	137.406	223.194	240.062	261.697	365.101	
160	1.324	2.247	3.187	4.588	7.194	11.740	16.807	26.111	32.853	39.594	58.349	100.917	145.817	236.857	254.757	277.716	387.450	
170	1.401	2.377	3.371	4.853	7.609	12.417	17.776	27.618	34.748	41.878	61.715	106.738	154.228	250.519	269.452	293.735		
180	1.477	2.506	3.555	5.118	8.024	13.094	18.746	29.124	36.643	44.162	65.081	112.559	162.639	264.182	284.147	309.754		
190	1.554	2.636	3.739	5.382	8.439	13.771	19.715	30.630	38.538	46.446	68.446	118.380	171.050	277.844	298.842	325.774		
200	1.630	2.766	3.922	5.647	8.854	14.449	20.684	32.136	40.433	48.730	71.812	124.201	179.462	291.507	313.537	341.793		
210	1.706	2.895	4.106	5.912	9.269	15.126	21.654	33.642	42.328	51.014	75.178	130.022	187.873	305.169	328.232	357.812		
220	1.783	3.025	4.290	6.176	9.684	15.803	22.623	35.148	44.223	53.298	78.543	135.844	196.284	318.832	342.927	373.831		
230	1.859	3.155	4.474	6.441	10.099	16.480	23.593	36.655	46.118	55.582	81.909	141.665	204.695	332.494	357.622	389.851		
240	1.936	3.284	4.658	6.706	10.514	17.157	24.562	38.161	48.013	57.865	85.275	147.486	213.106	346.156	372.317	405.870		
250	2.012	3.414	4.842	6.970	10.929	17.835	25.532	39.667	49.908	60.149	88.640	153.307	221.517	359.819	387.012	421.889		
260	2.088	3.543	5.025	7.235	11.344	18.512	26.501	41.173	51.803	62.433	92.006	159.128	229.928	373.481	401.707	437.908		
270	2.165	3.673	5.209	7.500	11.759	19.189	27.471	42.679	53.698	64.717	95.372	164.949	238.339	387.144	416.402	453.928		
280	2.241	3.803	5.393	7.764	12.174	19.866	28.440	44.185	55.593	67.001	98.738	170.770	246.750	400.806	431.097	469.947		
290	2.317	3.932	5.577	8.029	12.589	20.543	29.409	45.692	57.488	69.285	102.103	176.591	255.161	414.469	445.792	485.966		
300	2.394	4.062	5.761	8.294	13.004	21.220	30.379	47.198	59.383	71.569	105.469	182.412	263.572	428.131	460.487	501.986		
320	2.547	4.321	6.128	8.823	13.834	22.575	32.318	50.210	63.173	76.137	112.200	194.055						
340	2.699	4.580	6.496	9.352	14.664	23.929	34.257	53.222	66.963	80.704	118.932	205.697						
360	2.852	4.840	6.864	9.882	15.494	25.284	36.196	56.235	70.753	85.272	125.663	217.339						
380	3.005	5.099	7.231	10.411	16.324	26.638	38.134	59.247	74.543	89.840	132.395	228.981						
400	3.158	5.358	7.599	10.940	17.154	27.992	40.073	62.259	78.334	94.408	139.126	240.624						
420	3.311	5.617	7.967	11.470	17.984	29.347	42.012	65.272	82.124	98.975	145.857	252.266						
440	3.463	5.877	8.334	11.999	18.814	30.701	43.951	68.284	85.914	103.543	152.589	263.908						
460	3.616	6.136	8.702	12.528	19.644	32.055	45.890	71.296	89.704	108.111	159.320	275.550						
480	3.769	6.395	9.070	13.058	20.474	33.410	47.829	74.309	93.494	112.679	166.052	287.192						
500	3.922	6.654	9.437	13.587	21.304	34.764	49.768	77.321	97.284	117.247	172.783	298.835						
600	4.686	7.950	11.276	16.233	25.454	41.536	59.462	92.383	116.234	140.086	206.440	357.046						
700	5.450	9.247	13.114	18.880	29.603	48.308	69.157	107.444	135.184	162.924	240.097							
800	6.213	10.543	14.952	21.527	33.753	55.080	78.851	122.506	154.135	185.763	273.754							
900	6.977	11.839	16.791	24.173	37.903	61.851	88.546	137.568	173.085	208.602	307.411							
1000	7.741	13.135	18.629	26.820	42.053	68.623	98.240	152.629	192.035	231.441	341.068							
1100	8.505	14.432	20.468	29.467	46.203	75.395	107.935	167.691	210.985	254.280	374.726							
1200	9.269	15.728	22.306	32.113	50.353	82.167	117.629	182.753										
1300	10.033	17.024	24.144	34.760	54.502	88.939	127.323	197.814										
1400	10.797	18.320	25.983	37.407	58.652	95.711	137.018	212.876										
1500	11.616	19.710	27.954	40.245	63.103	102.974	147.416	229.030										
2000	16.061	27.252	38.650	55.644	87.248	142.375	203.822											
2500	21.254	36.064	51.148	73.636	115.459	188.409												
3000	28.135	47.739	67.706	97.475														

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.870.

Capacity Table - Water - 10% Overpressure - m3/h

Set Pressure (bar g)	Orifice Designation / Actual Area (cm²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	1,003	1,697	2,405	3,464	5,433	8,867	12,69	19,71	24,81	29,90	44,06	76,20	110,10	178,84	192,36	292,55	292,55	438,18
1,0	3,6	6,1	8,7	12,6	19,7	32,1	46,0	71,4	89,9	108	160	276	399	648	697	760	1.060	1.588
1,5	4,3	7,3	10,4	14,9	23,4	38,2	54,7	84,9	107	129	190	328	474	771	829	904	1.261	1.888
2,0	4,9	8,3	11,8	17,0	26,6	43,4	62,2	96,6	122	147	216	373	539	876	943	1.028	1.433	2.147
2,5	5,5	9,3	13,2	18,9	29,7	48,5	69,4	108	136	164	241	417	602	978	1.052	1.147	1.600	2.397
3,0	6,0	10,2	14,4	20,8	32,6	53,1	76,0	118	149	179	264	457	660	1.072	1.153	1.256	1.753	2.625
3,5	6,5	11,0	15,6	22,4	35,2	57,4	82,1	128	161	194	285	493	713	1.157	1.245	1.357	1.893	2.836
4,0	6,9	11,7	16,6	24,0	37,6	61,3	87,8	136	172	207	305	527	762	1.237	1.331	1.451	2.024	3.032
4,5	7,4	12,5	17,6	25,4	39,9	65,1	93,1	145	182	219	323	559	808	1.312	1.412	1.539	2.147	3.215
5,0	7,8	13,1	18,6	26,8	42,0	68,6	98	152	192	231	341	589	852	1.383	1.488	1.622	2.263	3.389
5,5	8,1	13,8	19,5	28,1	44,1	71,9	103	160	201	243	357	618	893	1.451	1.561	1.701	2.373	3.555
6,0	8,5	14,4	20,4	29,4	46,0	75,1	108	167	210	253	373	646	933	1.515	1.630	1.777	2.479	3.713
6,5	8,8	15,0	21,2	30,6	47,9	78,2	112	174	219	264	389	672	971	1.577	1.697	1.849	2.580	3.865
7,0	9,2	15,5	22,0	31,7	49,7	81,2	116	180	227	274	403	697	1.008	1.637	1.761	1.919	2.678	4.010
7,5	9,5	16,1	22,8	32,8	51,5	84,0	120	187	235	283	417	722	1.043	1.694	1.822	1.987	2.772	4.151
8,0	9,8	16,6	23,5	33,9	53,2	86,8	124	193	243	293	431	746	1.077	1.750	1.882	2.052	2.862	4.287
8,5	10,1	17,1	24,3	34,9	54,8	89,4	128	199	250	302	444	769	1.110	1.804	1.940	2.115	2.951	4.419
9,0	10,4	17,6	25,0	35,9	56,4	92,0	132	205	257	310	457	791	1.143	1.856	1.996	2.176	3.036	4.547
9,5	10,7	18,1	25,6	36,9	57,9	94,5	135	210	265	319	470	812	1.174	1.907	2.051	2.236	3.119	4.672
10	11,0	18,6	26,3	37,9	59,4	97,0	139	216	271	327	482	834	1.204	1.956	2.104	2.294	3.200	4.793
12	12,0	20,3	28,8	41,5	65,1	106	152	236	297	358	528	913	1.319	2.143	2.305	2.513	3.506	
14	13,0	22,0	31,1	44,8	70,3	115	164	255	321	387	570	986	1.425	2.315	2.490			
16	13,9	23,5	33,3	47,9	75,2	123	176	273	343	414	610	1.054	1.523	2.475	2.662			
18	14,7	24,9	35,3	50,8	79,7	130	186	289	364	439	647	1.118	1.616	2.625	2.823			
20	15,5	26,3	37,2	53,6	84,1	137	196	305	384	463	682	1.179	1.703	2.767	2.976			
22	16,3	27,5	39,0	56,2	88,2	144	206	320	403	485	715	1.236						
24	17,0	28,8	40,8	58,7	92,1	150	215	334	420	507	747	1.291						
26	17,7	29,9	42,4	61,1	95,8	156	224	348	438	527	777	1.344						
28	18,4	31,1	44,0	63,4	99	162	232	361	454	547	807	1.395						
30	19,0	32,2	45,6	65,6	103	168	240	373	470	567	835	1.444						
32	19,6	33,2	47,1	67,8	106	174	248	386	486	585	862	1.491						
34	20,2	34,2	48,5	69,9	110	179	256	398	500	603	889	1.537						
36	20,8	35,2	49,9	71,9	113	184	263	409	515	621	915	1.582						
38	21,4	36,2	51,3	73,9	116	189	271	420	529	638	940	1.625						
40	21,9	37,1	52,6	75,8	119	194	278	431	543	654	964	1.667						
42	22,5	38,0	53,9	77,7	122	199	284	442	556	670	988							
44	23,0	38,9	55,2	79,5	125	203	291	452	569	686	1.011							
46	23,5	39,8	56,4	81,3	127	208	298	462	582	702	1.034							
48	24,0	40,7	57,6	83,0	130	213	304	472	595	717	1.056							
50	24,5	41,5	58,8	84,7	133	217	310	482	607	731	1.078							
55	25,7	43,5	61,7	88,9	139	227	326	506	636	767	1.130							
60	26,9	45,5	64,4	92,8	146	238	340	528	665	801	1.181							
65	28,0	47,3	67,1	96,6	152	247	354	550	692	834	1.229							
70	29,0	49,1	69,6	100	157	257	367	570	718									
75	30,0	50,8	72,1	104	163	266	380	590	743									
80	31,0	52,5	74,4	107	168	274	393	610										
85	32,0	54,1	76,7	110	173	283	405	629										
90	32,9	55,7	78,9	114	178	291	416	647										
95	33,8	57,2	81,1	117	183	299	428	665										
100	34,7	58,7	83,2	120	188	307	439	682										
110	36,4	61,6	87,3	126	197	322	460											
120	38,0	64,3	91,1	131	206	336	481											
130	39,6	66,9	94,9	137	214	350	501											
140	41,1	69,5	98	142	222	363	519											
150	42,5	71,9	102	147	230	376	538											
160	43,9	74,3	105	152	238	388												
170	45,2	76,5	108	156	245	400												
180	46,6	78,8	112	161	252	412												
190	47,8	80,9	115	165														
200	49,1	83,0	118	169														
250	54,9	92,8	132	189														
300	60,1	102	144															
350	64,9	110																
400	69,4	117																
414	70,6	119																

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for liquids is 0.661.

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Capacity Table - Water - 25% Overpressure - m3/h

Set Pressure (bar g)	Orifice Designation / Actual Area (cm²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	1,003	1,697	2,405	3,464	5,433	8,867	12,69	19,71	24,81	29,90	44,06	76,20	110,10	178,84	192,36	209,70	292,55	438,18
1,0	3,7	6,3	8,9	12,8	20,0	32,7	46,8	72,7	91,5	110	162	281	406	659	709	773	1.079	1.616
1,5	4,5	7,7	10,9	15,6	24,5	40,0	57,3	89,0	112	135	199	344	497	808	869	947	1.321	1.979
2,0	5,2	8,9	12,5	18,1	28,3	46,2	66,2	102,8	129	156	230	397	574	933	1.003	1.094	1.526	2.285
2,5	5,8	9,9	14,0	20,2	31,7	51,7	74,0	115	145	174	257	444	642	1.043	1.122	1.223	1.706	2.555
3,0	6,4	10,8	15,4	22,1	34,7	56,6	81,1	126	158	191	281	487	703	1.142	1.229	1.339	1.869	2.799
3,5	6,9	11,7	16,6	23,9	37,5	61,2	87,5	136	171	206	304	526	760	1.234	1.327	1.447	2.018	3.023
4,0	7,4	12,5	17,7	25,5	40,1	65,4	93,6	145	183	221	325	562	812	1.319	1.419	1.547	2.158	3.232
4,5	7,8	13,3	18,8	27,1	42,5	69,4	99,3	154	194	234	345	596	861	1.399	1.505	1.640	2.289	3.428
5,0	8,3	14,0	19,8	28,6	44,8	73,1	105	163	205	247	363	628	908	1.475	1.586	1.729	2.412	3.613
5,5	8,7	14,7	20,8	30,0	47,0	76,7	110	170	215	259	381	659	952	1.547	1.664	1.814	2.530	3.789
6,0	9,1	15,3	21,7	31,3	49,1	80,1	115	178	224	270	398	688	995	1.615	1.738	1.894	2.643	3.958
6,5	9,4	16,0	22,6	32,6	51,1	83,4	119	185	233	281	414	716	1.035	1.681	1.809	1.972	2.750	4.120
7,0	9,8	16,6	23,5	33,8	53,0	86,5	124	192	242	292	430	743	1.074	1.745	1.877	2.046	2.854	4.275
7,5	10,1	17,1	24,3	35,0	54,9	89,5	128	199	251	302	445	770	1.112	1.806	1.943	2.118	2.954	4.425
8,0	10,5	17,7	25,1	36,1	56,7	92,5	132	206	259	312	460	795	1.148	1.865	2.006	2.187	3.051	4.570
8,5	10,8	18,2	25,9	37,2	58,4	95,3	136	212	267	321	474	819	1.184	1.923	2.068	2.255	3.145	4.711
9,0	11,1	18,8	26,6	38,3	60,1	98,1	140	218	274	331	487	843	1.218	1.978	2.128	2.320	3.236	4.848
9,5	11,4	19,3	27,3	39,4	61,8	100,8	144	224	282	340	501	866	1.251	2.033	2.186	2.383	3.325	4.980
10	11,7	19,8	28,0	40,4	63,4	103,4	148	230	289	349	514	889	1.284	2.086	2.243	2.445	3.412	5.110
12	12,8	21,7	30,7	44,3	69,4	113	162	252	317	382	563	973	1.406	2.285	2.457	2.679	3.737	
14	13,8	23,4	33,2	47,8	75,0	122	175	272	342	413	608	1.051	1.519	2.468	2.654	2.893		
16	14,8	25,0	35,5	51,1	80,1	131	187	291	366	441	650	1.124	1.624	2.638	2.837	3.093		
18	15,7	26,6	37,6	54,2	85,0	139	199	308	388	468	689	1.192	1.723	2.798	3.010	3.281		
20	16,5	28,0	39,7	57,1	89,6	146	209	325	409	493	727	1.257	1.816	2.949	3.172	3.458		
22	17,3	29,4	41,6	59,9	94,0	153	219	341	429	517	762	1.318						
24	18,1	30,7	43,4	62,6	98,2	160	229	356	448	540	796	1.377						
26	18,9	31,9	45,2	65,1	102,2	167	239	371	467	562	828	1.433						
28	19,6	33,1	46,9	67,6	106	173	248	385	484	583	860	1.487						
30	20,3	34,3	48,6	70,0	110	179	256	398	501	604	890	1.539						
32	20,9	35,4	50,2	72,3	113	185	265	411	518	624	919	1.590						
34	21,6	36,5	51,7	74,5	117	191	273	424	533	643	947	1.638						
36	22,2	37,5	53,2	76,6	120	196	281	436	549	662	975	1.686						
38	22,8	38,6	54,7	78,7	124	202	288	448	564	680	1.002	1.732						
40	23,4	39,6	56,1	80,8	127	207	296	460	579	697	1.028	1.777						
42	24,0	40,6	57,5	82,8	130	212	303	471	593	715	1.053							
44	24,5	41,5	58,8	84,7	133	217	310	482	607	731	1.078							
46	25,1	42,4	60,2	86,6	136	222	317	493	621	748	1.102							
48	25,6	43,4	61,4	88,5	139	227	324	504	634	764	1.126							
50	26,2	44,3	62,7	90,3	142	231	331	514	647	780	1.149							
55	27,4	46,4	65,8	94,7	149	242	347	539	679	818	1.205							
60	28,6	48,5	68,7	98,9	155	253	362	563	709	854	1.259							
65	29,8	50,5	71,5	103,0	162	264	377	586	738	889	1.310							
70	30,9	52,4	74,2	107	168	274	392	608	765									
75	32,0	54,2	76,8	111	174	283	405	629	792									
80	33,1	56,0	79,3	114	179	292	419	650										
85	34,1	57,7	81,8	118	185	301	431	670										
90	35,1	59,4	84,1	121	190	310	444	690										
95	36,1	61,0	86,4	125	195	319	456	708										
100	37,0	62,6	88,7	128	200	327	468	727										
110	38,8	65,6	93,0	134	210	343	491											
120	40,5	68,6	97,2	140	219	358	513											
130	42,2	71,4	101,1	146	228	373	534											
140	43,8	74,0	105	151	237	387	554											
150	45,3	76,6	109	156	245	400	573											
160	46,8	79,2	112	162	253	414												
170	48,2	81,6	116	167	261	426												
180	49,6	84,0	119	171	269	439												
190	51,0	86,3	122	176														
200	52,3	88,5	125	181														
250	58,5	98,9	140	202														
300	64,1	108	154															
350	69,2	117																
400	74,0	125																
414	75,3	127																

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for liquids is 0.661.

Capacity Table - Water - 10% Overpressure - GPM

Set Pressure (psig)	Orifice Designation / Actual Area (pol²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	0,155	0,263	0,373	0,537	0,842	1,374	1,967	3,056	3,845	4,634	6,829	11,811	17,066	27,721	29,816	32,503	45,346	67,918
15	16	27	39	56	88	144	205	319	402	484	713	1.234	1.783	2.896	3.115	3.396	4.737	7.095
20	18	31	44	63	99	162	232	361	454	547	806	1.395	2.015	3.274	3.521	3.838	5.355	8.021
25	20	34	49	70	110	179	256	398	501	604	890	1.539	2.224	3.612	3.885	4.235	5.908	8.850
30	22	37	53	76	119	194	278	432	544	655	966	1.671	2.414	3.921	4.218	4.598	6.414	9.607
35	24	40	57	82	129	210	301	467	587	708	1.043	1.805	2.607	4.235	4.556	4.966	6.928	10.377
40	25	43	61	88	138	224	321	499	628	757	1.115	1.929	2.788	4.528	4.870	5.309	7.407	11.094
45	27	46	65	93	146	238	341	529	666	803	1.183	2.046	2.957	4.803	5.165	5.631	7.856	11.766
50	28	48	68	98	154	251	359	558	702	846	1.247	2.157	3.117	5.062	5.445	5.936	8.281	12.403
55	30	50	71	103	161	263	377	585	736	888	1.308	2.262	3.269	5.309	5.711	6.225	8.685	13.008
60	31	53	75	107	168	275	393	611	769	927	1.366	2.363	3.414	5.545	5.965	6.502	9.071	13.587
65	32	55	78	112	175	286	410	636	801	965	1.422	2.459	3.553	5.772	6.208	6.768	9.442	14.142
70	33	57	81	116	182	297	425	660	831	1.001	1.476	2.552	3.688	5.990	6.442	7.023	9.798	14.675
75	35	59	83	120	188	307	440	684	860	1.036	1.527	2.642	3.817	6.200	6.669	7.270	10.142	15.190
80	36	61	86	124	194	317	454	706	888	1.070	1.577	2.728	3.942	6.403	6.887	7.508	10.475	15.689
85	37	63	89	128	200	327	468	728	916	1.103	1.626	2.812	4.063	6.600	7.099	7.739	10.797	16.171
90	38	64	91	132	206	337	482	749	942	1.135	1.673	2.894	4.181	6.792	7.305	7.963	11.110	16.640
95	39	66	94	135	212	346	495	769	968	1.166	1.719	2.973	4.296	6.978	7.505	8.182	11.414	17.096
100	40	68	96	139	217	355	508	789	993	1.197	1.764	3.050	4.407	7.159	7.700	8.394	11.711	17.540
110	42	71	101	145	228	372	533	828	1.041	1.255	1.850	3.199	4.623	7.509	8.076	8.804	12.283	18.397
120	44	74	106	152	238	389	556	865	1.088	1.311	1.932	3.341	4.828	7.842	8.435	9.195	12.829	19.215
130	46	77	110	158	248	405	579	900	1.132	1.365	2.011	3.478	5.025	8.163	8.780	9.571	13.353	19.999
140	47	80	114	164	257	420	601	934	1.175	1.416	2.087	3.609	5.215	8.471	9.111	9.932	13.857	20.754
150	49	83	118	170	266	435	622	967	1.216	1.466	2.160	3.736	5.398	8.768	9.431	10.281	14.343	
160	51	86	122	175	275	449	643	998	1.256	1.514	2.231	3.858	5.575	9.056	9.740	10.618		
170	52	89	126	181	284	463	662	1.029	1.295	1.560	2.300	3.977	5.747	9.334	10.040	10.945		
180	54	91	129	186	292	476	682	1.059	1.332	1.606	2.366	4.092	5.913	9.605	10.331	1.262		
190	55	94	133	191	300	489	700	1.088	1.369	1.650	2.431	4.205	6.075	9.868	10.614	11.571		
200	57	96	136	196	308	502	718	1.116	1.404	1.692	2.494	4.314	6.233	10.125	10.890	11.871		
210	58	98	140	201	315	514	736	1.144	1.439	1.734	2.556	4.420	6.387	10.375	11.159	12.164		
220	59	101	143	206	323	526	753	1.171	1.473	1.775	2.616	4.524	6.537	10.619	11.421	12.451		
230	61	103	146	210	330	538	770	1.197	1.506	1.815	2.675	4.626	6.684	10.857	11.678	12.730		
240	62	105	149	215	337	550	787	1.223	1.538	1.854	2.732	4.725	6.828	11.091	11.929	13.004		
250	63	107	152	219	344	561	803	1.248	1.570	1.892	2.789	4.823	6.969	11.320	12.175	13.272		
260	65	110	155	224	351	572	819	1.273	1.601	1.930	2.844	4.918	7.107	11.544	12.416	13.535		
270	66	112	158	228	357	583	835	1.297	1.632	1.966	2.898	5.012	7.242	11.764	12.653	13.793		
280	67	114	161	232	364	594	850	1.321	1.662	2.003	2.951	5.104	7.375	11.980	12.885	14.046		
290	68	116	164	236	370	604	865	1.344	1.691	2.038	3.003	5.194	7.506	12.192	13.113	14.295		
300	69	118	167	240	377	615	880	1.367	1.720	2.073	3.055	5.283	7.634	12.400	13.337	14.539		
320	72	122	172	248	389	635	909	1.412	1.776	2.141	3.155	5.457						
340	74	125	178	256	401	654	937	1.455	1.831	2.207	3.252	5.624						
360	76	129	183	263	413	673	964	1.497	1.884	2.271	3.346	5.788						
380	78	132	188	270	424	692	990	1.539	1.936	2.333	3.438	5.946						
400	80	136	193	277	435	710	1.016	1.578	1.986	2.394	3.527	6.101						
420	82	139	197	284	446	727	1.041	1.617	2.035	2.453	3.614	6.251						
440	84	142	202	291	456	744	1.066	1.656	2.083	2.510	3.699	6.398						
460	86	146	207	297	466	761	1.090	1.693	2.130	2.567	3.783	6.542						
480	88	149	211	304	476	777	1.113	1.729	2.176	2.622	3.864	6.683						
500	90	152	215	310	486	793	1.136	1.765	2.220	2.676	3.944	6.821						
600	98	166	236	340	533	869	1.244	1.933	2.432	2.931	4.320	7.472						
700	106	180	255	367	575	939	1.344	2.088	2.627	3.166	4.666							
800	113	192	272	392	615	1.004	1.437	2.232	2.809	3.385	4.988							
900	120	204	289	416	652	1.065	1.524	2.368	2.979	3.590	5.291							
1000	127	215	305	439	688	1.122	1.606	2.496	3.140	3.785	5.577							
1100	133	225	319	460	721	1.177	1.685	2.618	3.293									
1200	139	235	334	480	753	1.229	1.760	2.734										
1300	144	245	347	500	784	1.279	1.832	2.846										
1400	150	254	360	519	814	1.328	1.901	2.953										
1500	155	263	373	537	842	1.374	1.967	3.057										
2000	179	304	431	620	972	1.587	2.272											
2500	200	340	482	693	1.087	1.774												
3000	219	372	528	760														
4000	253	430	609															
5000	283	480	681															
6000	310	526																

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for liquids is 0.661.

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Capacity Table - Water - 25% Overpressure - GPM

Set Pressure (psig)	Orifice Designation / Actual Area (pol²)																	
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	U	V	W
	0,155	0,263	0,373	0,537	0,842	1,374	1,967	3,056	3,845	4,634	6,829	11,811	17,066	27,721	29,816	32,503	45,346	67,918
15	17	28	40	57	90	147	210	326	410	494	728	1.259	1.820	2.956	3.179	3.466	4.835	7.242
20	19	32	46	66	104	169	242	376	473	571	841	1.454	2.101	3.413	3.671	4.002	5.583	8.362
25	21	36	51	74	116	189	271	421	529	638	940	1.626	2.349	3.816	4.104	4.474	6.242	9.349
30	23	40	56	81	127	207	297	461	580	699	1.030	1.781	2.573	4.180	4.496	4.901	6.838	10.241
35	25	43	61	87	137	224	320	498	626	755	1.112	1.924	2.780	4.515	4.856	5.294	7.386	11.062
40	27	46	65	94	147	239	342	532	669	807	1.189	2.057	2.971	4.827	5.192	5.659	7.896	11.826
45	29	49	69	99	156	254	363	564	710	856	1.261	2.181	3.152	5.120	5.506	6.003	8.374	12.543
50	30	51	73	105	164	267	383	595	749	902	1.329	2.299	3.322	5.396	5.804	6.327	8.827	13.222
55	32	54	76	110	172	281	402	624	785	946	1.394	2.411	3.484	5.660	6.088	6.636	9.258	13.867
60	33	56	80	115	180	293	419	652	820	988	1.456	2.519	3.639	5.912	6.358	6.931	9.670	14.484
65	34	58	83	119	187	305	437	678	853	1.029	1.516	2.622	3.788	6.153	6.618	7.214	10.065	15.075
70	36	61	86	124	194	316	453	704	886	1.067	1.573	2.721	3.931	6.385	6.868	7.487	10.445	15.644
75	37	63	89	128	201	328	469	729	917	1.105	1.628	2.816	4.069	6.609	7.109	7.749	10.811	16.193
80	38	65	92	132	207	338	484	753	947	1.141	1.682	2.908	4.202	6.826	7.342	8.004	11.166	16.724
85	39	67	95	136	214	349	499	776	976	1.176	1.733	2.998	4.332	7.036	7.568	8.250	11.510	17.239
90	40	69	97	140	220	359	514	798	1.004	1.210	1.784	3.085	4.457	7.240	7.787	8.489	11.843	17.739
95	42	71	100	144	226	369	528	820	1.032	1.243	1.832	3.169	4.579	7.438	8.001	8.722	12.168	18.225
100	43	72	103	148	232	378	542	841	1.059	1.276	1.880	3.252	4.698	7.632	8.208	8.948	12.484	18.698
110	45	76	108	155	243	397	568	882	1.110	1.338	1.972	3.410	4.928	8.004	8.609	9.385	13.093	19.611
120	47	79	112	162	254	414	593	922	1.160	1.398	2.059	3.562	5.147	8.360	8.992	9.802	13.676	20.483
130	49	83	117	169	264	431	617	959	1.207	1.455	2.144	3.707	5.357	8.702	9.359	10.203	14.234	21.319
140	50	86	122	175	274	448	641	995	1.252	1.510	2.225	3.847	5.559	9.030	9.712	10.588	14.771	22.124
150	52	89	126	181	284	463	663	1.030	1.296	1.562	2.303	3.982	5.754	9.347	10.053	10.959	15.290	22.900
160	54	92	130	187	293	478	685	1.064	1.339	1.614	2.378	4.113	5.943	9.653	10.383	11.319	15.791	23.651
170	56	94	134	193	302	493	706	1.097	1.380	1.663	2.451	4.240	6.126	9.951	10.703	11.667	16.277	24.379
180	57	97	138	198	311	508	727	1.129	1.420	1.712	2.522	4.363	6.303	10.239	11.013	12.005	16.749	25.086
190	59	100	142	204	320	521	746	1.160	1.459	1.759	2.591	4.482	6.476	10.520	11.315	12.334	17.208	25.774
200	60	102	145	209	328	535	766	1.190	1.497	1.804	2.659	4.598	6.644	10.793	11.609	12.655	17.655	26.443
210	62	105	149	214	336	548	785	1.219	1.534	1.849	2.724	4.712	6.809	11.059	11.895	12.967	18.091	27.096
220	63	107	152	219	344	561	803	1.248	1.570	1.892	2.789	4.823	6.969	11.320	12.175	13.272	18.517	27.734
230	65	110	156	224	352	574	821	1.276	1.605	1.935	2.851	4.931	7.125	11.574	12.449	13571	18.933	
240	66	112	159	229	359	586	839	1.303	1.640	1.976	2.913	5.037	7.279	11.823	12.717	13.863		
250	67	114	162	234	367	598	856	1.330	1.674	2.017	2.973	5.141	7.429	12.067	12.979	14.148		
260	69	117	166	238	374	610	873	1.357	1.707	2.057	3.031	5.243	7.576	12.306	13.236	14.429		
270	70	119	169	243	381	622	890	1.382	1.739	2.096	3.089	5.343	7.720	12.540	13.488	14.703		
280	71	121	172	247	388	633	906	1.408	1.771	2.135	3.146	5.441	7.862	12.770	13.735	14.973		
290	73	123	175	252	395	644	922	1.433	1.803	2.173	3.202	5.537	8.001	12.996	13.979	15.238		
300	74	125	178	256	402	655	938	1.457	1.833	2.210	3.256	5.632	8.138	13.219	14.218	15.499		
320	76	130	184	264	415	677	969	1.505	1.894	2.282	3.363	5.817						
340	79	134	189	273	427	697	999	1.551	1.952	2.352	3.467	5.996						
360	81	137	195	281	440	718	1.027	1.596	2.008	2.421	3.567	6.170						
380	83	141	200	288	452	737	1.056	1.640	2.063	2.487	3.665	6.339						
400	85	145	205	296	464	757	1.083	1.683	2.117	2.552	3.760	6.503						
420	87	148	210	303	475	775	1.110	1.724	2.169	2.615	3.853	6.664						
440	90	152	215	310	486	793	1.136	1.765	2.220	2.676	3.944	6.821						
460	92	155	220	317	497	811	1.161	1.804	2.270	2.736	4.032	6.974						
480	93	159	225	324	508	829	1.186	1.843	2.319	2.795	4.119	7.124						
500	95	162	230	331	518	846	1.211	1.881	2.367	2.853	4.204	7.271						
600	105	177	252	362	568	927	1.326	2.061	2.593	3.125	4.605	7.965						
700	113	192	272	391	613	1.001	1.433	2.226	2.801	3.375	4.974							
800	121	205	290	418	656	1.070	1.532	2.380	2.994	3.608	5.318							
900	128	217	308	444	695	1.135	1.625	2.524	3.176	3.827	5.640							
1000	135	229	325	468	733	1.196	1.712	2.661	3.347	4.034	5.945							
1100	142	240	341	490	769	1.255	1.796	2.790	3.511									
1200	148	251	356	512	803	1.310	1.876	2.914										
1300	154	261	370	533	836	1.364	1.952	3.033										
1400	160	271	384	553	867	1.415	2.026	3.148										
1500	165	280	398	573	898	1.465	2.097	3.258										
2000	191	324	459	661	1.037	1.692	2.422											
2500	213	362	513	739	1.159	1.891												
3000	234	397	562	810														
4000	270	458	649															
5000	302	512	726															
6000	331	561																

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for liquids is 0.661.