Multi-Purpose Safety Relief Valves

500 SERIES

Versatile safety relief valve available in bronze, carbon steel or all stainless steel construction, suitable for a wide range of steam, air, gas and liquid applications. High capacity full nozzle design is available with metal to metal, PCTFE or elastomer O-ring seating. Short tuned blowdown and backpressure tight body minimizes fugitive emissions and product losses in the event of valve operation.

ASME Section VIII Air, Steam, and Liquid service
Sizes 1/2" through 2" NPT
Factory set pressure range 5-1200 psig @ 800°F max.
(See press. / temp. limit chart below for specific ratings for each model).

Section VIII Pressure Vessels

APPLICATIONS:

- Pressure Vessels and Pressure Piping Systems
- Pumps, Tanks and Hydraulic Systems
- Thermal Relief of Liquid Filled Vessels
- Chemical, Process and other Industrial Plants.
- Power Plant Auxiliary Systems
- Cryogenic and Industrial Gases
- Air and Gas Compressors and Dryers
- Vacuum Relief

FEATURES:

- Wide Range of Materials and Options
- One Trim Design is Suitable for Steam, Air / Gas and Liquid Service
- High Capacity Full Nozzle Design
- Stainless Steel Springs
- Integral Lift Stop
- Self - Aligning Pivoting Disc
- API 527 Seat Tightness, standard for all models
- Tuned Blowdown - Short and Adjustable, reduces product losses.
- Backpressure Tight Design Minimizes Fugitive Emissions
- CSA B51 CRN OG8547.5C

HOW TO SELECT:

1. Determine the orifice letter that corresponds to your required flow rate from the capacity charts on pages 46-48.
2. Select the inlet x outlet connection options from the list of models available for that orifice from page 45.
3. Enter this base model number into the matrix below. Complete by specifying the Code, service and set pressure requirements.

OPTIONS:

- Screwed Cap (standard), Packed Lift Lever
- Test gags
- Elastomer or PCTFE Soft Seat for Exceptional Seat Tightness
- High Temperature Alloy Springs for 550°F - 800°F Service
- Special Cleaning Available
- European Pressure Equipment Directive compliant option (CE/PED)

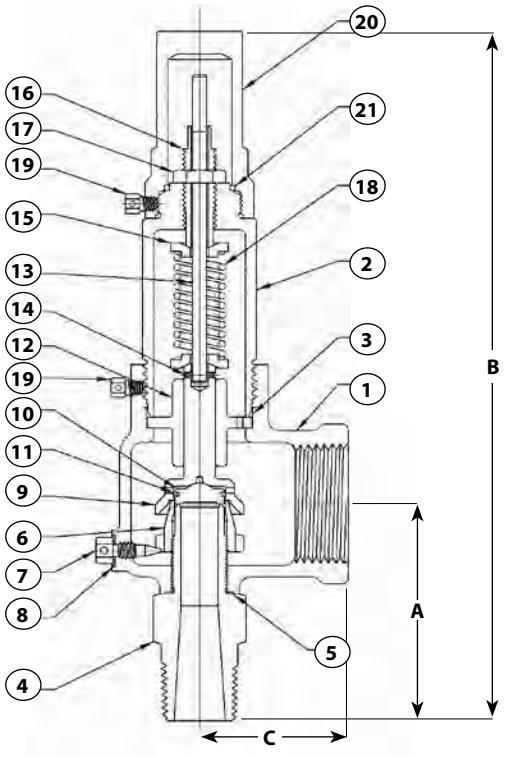
500 SERIES MODEL NUMBERING SYSTEM

52	3	J	H	B	K	M	AA	0425	Q
SERIES BODY/ TRIM MATERIAL	**CAP**	**ORIFICE LETTER**	**INLET SIZE**	**CONNECTION**	**SERVICE**	**SEAT**	**SPECIAL OPTIONS**	**SET PRESSURE**	**SUFFIX**
51 = Bronze/Brass	1 = Screwed Cap	D	C = 1/2	B = MNPT x NPT	J = Sec VIII Liquid	M = Metal	Factory Issued Letters/Numbers for Special Options or Features	Set Pressure, PSIG (4 digits)	Q = Performance (Calibration) Test Reports
52 = Bronze/Stainless	2 = Screwed + Gag	E	D = 3/4	D = 3/4 Outlet (Model 510 & 520 D Orifice Only)	K = Sec VIII Air/Gas	B = BUNA-N			
53 = Carbon/Stainless	3 = Packed Lever	F	E = 1		L = Sec VIII Steam	E = EPR		Vacuum "HG"	
54 = All Stainless	4 = Packed + Gag	G	F = 1-1/4		M = Non Code Liquid	K = PCTFE		Prefix + 2 digits	
		H	G = 1-1/2		N = Non Code Air	N = Neoprene	"AA" = Default Setting		
		J	H = 2		P = Non Code Steam	Z = Kalrez®	"CE" = CE/PED		
					Q = Vacuum	S = Silicone	"HT" = High Temp Spring		
						V = Viton	"OX" = Cleaned for Oxygen		

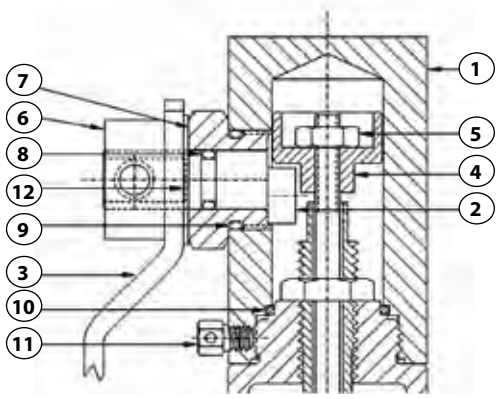
Notes:
1. The ASME Code Section VIII requires a lift lever for the following services: air, steam, or hot water over 140°F
2. Maximum back pressure is 50 psig.
3. High temperature stainless steel alloy spring is required above 550°F / 288°C. Specify option "HT"
4. Contact factory for pricing and availability.

Multi-Purpose Safety Relief Valves

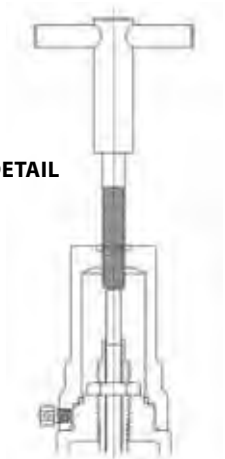
500 SERIES



500 ASSEMBLY W/SCREWED CAP



PACKED LEVER DETAIL



TEST GAG DETAIL

MATERIALS

Item	Component	Material 510 Series	Material 520 Series	Material 530 Series	Material 540 Series
1	Body	Bronze B-584-C844	Bronze B-584-C844	Steel SA-216 WCB	SS SA-351-CF8M
2	Bonnet	Brass*	Brass*	Steel**	SS Type 316***
3	Bonnet Seal	PTFE	PTFE	PTFE	PTFE
4	Nozzle	Brass B-16	SS Type 316	SS Type 316	SS Type 316
5	Nozzle Seal	PTFE	PTFE	PTFE	PTFE
6	Nozzle Ring	SS Type 316	SS Type 316	SS Type 316	SS Type 316
7	Set Screw	Brass	Brass	SS Type 316	SS Type 316
8	Set Screw Seal	PTFE	PTFE	PTFE	PTFE
9	Disc Holder	Brass	SS Type 316	SS Type 316	SS Type 316
10	Disc	SS Type 316	SS type 316	SS Type 316	SS Type 316
11	Retaining Ring	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
12	Disc Guide	Brass	Brass	SS Type 316	SS Type 316
13	Stem	Brass	Brass	SS Type 316	SS Type 316
14	Spring Pin	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
15	Spring Washer	Brass	Brass	SS Type 316	SS Type 316
16	Adjusting Bolt	Brass	Brass	SS Type 316	SS Type 316
17	Lock nut	Brass	Brass	SS Type 316	SS Type 316
18	Spring	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Spring, High Temp.	Inconel	Inconel	Inconel	Inconel
19	Lock Screw	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
20	Cap, Screwed	Brass	Brass	Steel	SS Type 316
21	Seal, Cap	Viton	Viton	Viton	Viton
-	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
-	Drive Screw	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
-	Seal & Wire	Lead/SS	Lead/SS	Lead/SS	Lead/SS
-	Seal & Wire (CE)			Alum/SS	Alum/SS

Notes:

* *Sizes G, H and J are Cast Bronze*

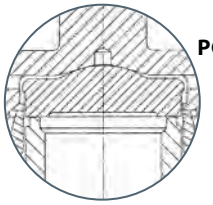
** *Sizes H and J are Cast Steel*

*** *Sizes H and J are Cast Stainless Steel Type 316*

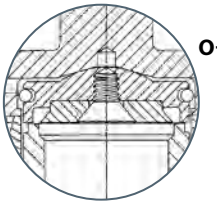
MATERIALS, LIFT LEVER OPTION

Item	Component	Material 513, 523 Series	Material 533 Series	Material 543 Series
1	Cap, Packed Lever	Brass	Steel	SS Type 316
2	Cam Bushing	Stainless Steel	Stainless Steel	Stainless Steel
3	Lever	Stainless Steel	Stainless Steel	Stainless Steel
4	Lift Washer	Stainless Steel	Stainless Steel	Stainless Steel
5	Locknut	Stainless Steel	Stainless Steel	Stainless Steel
6	Collar	Stainless Steel	Stainless Steel	Stainless Steel
7	Cam Bushing	Brass	Stainless Steel	Stainless Steel
8	Cam O-Ring	Viton	Viton	Viton
9	Bushing O-Ring	Viton	Viton	Viton
10	Seal, Cap	Viton	Viton	Viton
11	Set Screw	Stainless Steel	Stainless Steel	Stainless Steel
12	Washer	PTFE	PTFE	PTFE

500 SERIES SOFT SEAT DETAIL



PCTFE



O-RING

Multi-Purpose Safety Relief Valves

500 SERIES

Soft Seat Pressure & Temperature Limits* - 500 Series

Seat Material	Set Pressure		Temperature		Service Recommendations**
	Min.	Max.	Min.	Max.	
Viton	15	900	-15°F	400°F	Air, Benzene, Butane, Carbon Dioxide, Carbon Disulphide, Carbon Tetrachloride, Dowtherm A, Ethyl Alcohol, Ethyl Chloride, Ethylene, Ethylene Glycol, Fuel Oil, Gasoline, Hydraulic Fluid, JP-4 and -5 Fuel, Kerosene, Lube Oil, Natural Gas, Naphtha, Nitrogen, Propane, Propyl Alcohol, Propylene, Propylene Glycol, Sulphur Dioxide, Toluene, Trichlorethylene, Turpentine, Vinyl Chloride, Water
EPDM	15	900	-70°F	250°F	Steam, Water, Hot Water, Acetone, Beer, Brake Fluid, Hydrogen Gas, Hydrogen Sulphide, Phosphate Ester Hydraulic Fluid, Sulphur Dioxide, Acids, Alkalis
Silicone	15	900	-60°F	450°F	Air, Helium, Nitrogen, Oxygen (gaseous)
Neoprene	15	900	-35°F	225°F	Air, Anhydrous Ammonia, Butane, Butyl Alcohol, Castor Oil, Denatured Alcohol, Ethanol, Ethyl Alcohol, Freon 12, 13, 14 & 22, Glycols, Natural Gas, Oxygen (gaseous), Silicate Esters
Nitrile / Buna-N	15	900	-30°F	250°F	Air, Anhydrous Ammonia, Butane, Carbon Dioxide, Diesel Oil, Freon 11 & 12, Fuel Oil, Gasoline, Helium, Hydraulic Fluid (petroleum based), Hydrogen Sulphide, Hydrogen Gas, Kerosene, Lube Oil, Natural Gas, Nitrogen, Oxygen (gaseous), Propane, Propylene, Sulphur Dioxide, Vinyl Chloride
PCTFE	15	500	-320°F	250°F	Cryogenic Service including Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Oxygen

Notes:

* *Subject to valve body material pressure / temperature limitations. See chart below.*

** *Service recommendations are provided for guidance only. Material suitability and selection should be determined by the end user based on their prior experience with the service and materials involved.*

PRESSURE AND TEMPERATURE RATINGS

Series Body Trim	510 Bronze Brass	520 Bronze Stainless	530 Carbon Steel Stainless	540 Stainless Steel Stainless
Max. Set-Steam	250 PSI	300 PSI	900 PSI (D/E) 600 PSI (F/G) 500 PSI (H/J)	900 PSI (D/E) 600 PSI (F/G) 500 PSI (H/J)
Max. Set-Air/Gas/Liquid	300 PSI	1200 PSI (D)[1] 900 PSI (E) 600 PSI (F/G) 500 PSI (H/J)	1200 PSI (D)[1] 900 PSI (E) 600 PSI (F/G) 500 PSI (H/J)	1200 PSI (D)[1] 900 PSI (E) 600 PSI (F/G) 500 PSI (H/J)
Temp. Limits*	-320/406˚F	-320/422˚F	-20/800˚F	-320/800˚F

[1]*Max set pressure for liquids is 1000 psi.*

Notes:

- *Limits based upon materials of construction and use of metal to metal seating. Refer to 500 series soft seat chart for limitations based upon elastomer.*
- *Specify "HT" high temperature Inconel springs for service temperature beyond 422˚F.*

* *Models 510, 520 and 540 are suitable for cryogenic service to -320˚F, with choice of either "M" metal or "K" PCTFE seat options.*

DIMENSIONS AND WEIGHTS

Model Number	Orifice Letter	Size Inlet x Outlet	Dimensions (in./mm.)			Weight (Lb../kg.)
			A	B	C	
5xxDC	D	1/2 X 1	2.38	7.5	1.63	2
			60	191	41	0.9
5xxDCD*	D	1/2 X 3/4	2.38	7.5	1.63	2
			60	191	41	0.9
5xxDD	D	3/4 X 1	2.38	7.5	1.63	2
			60	191	41	0.9
5xxDDD*	D	3/4 X 3/4	2.38	7.5	1.63	2
			60	191	41	0.9
5xxED	E	3/4 X 1-1/4	2.63	9	2	3
			67	229	51	1.4
5xxEE	E	1 X 1-1/4	2.63	9	2	3
			67	229	51	1.4
5xxFE	F	1 X 1-1/2	2.83	10.25	2.38	5
			73	260	60	2.3
5xxFF	F	1-1/4 X 1-1/2	2.83	10.25	2.38	5
			73	260	60	2.3
5xxGF	G	1-1/4 X 2	3.25	13.25	2.63	9
			83	337	67	4.1
5xxGG	G	1-1/2 X 2	3.25	13.25	2.68	9.5
			83	337	67	4.31
5xxHG	H	1-1/2 X 2-1/2	3.5	15	2.75	15.5
			89	381	70	7.0
5xxHH	H	2 X 2-1/2	3.5	15	2.75	16
			89	381	70	7.3
5xxJH	J	2 X 3	4	17	3.25	24
			102	432	83	10.9

** 3/4" Outlet option available with 510 and 520 bronze bodied models only.*

Multi-Purpose Safety Relief Valves

UV

500 SERIES

ASME SECTION VIII STEAM

Pounds per hour (Kilograms per hour) saturated steam at 10% overpressure. National Board Certified. Ratings are 90% of actual.

US Customary Units Lbs./Hr.

Orifice Letter Area (in.²)	D 0.1295	E 0.2282	F 0.3589	G 0.5890	H 0.9195	J 1.5044
Set Pressure psig						
5*	122	216	339	557	869	1,422
10*	168	295	465	762	1,190	1,947
15	188	331	520	853	1,332	2,180
20	216	381	600	984	1,536	2,513
25	245	432	679	1,114	1,740	2,846
30	274	482	759	1,245	1,943	3,180
35	305	538	846	1,388	2,168	3,546
40	337	593	934	1,532	2,392	3,913
45	368	649	1,021	1,676	2,616	4,280
50	400	705	1,108	1,819	2,840	4,646
55	431	760	1,196	1,963	3,064	5,013
60	463	816	1,283	2,106	3,288	5,380
65	494	872	1,371	2,250	3,512	5,746
70	526	927	1,458	2,393	3,736	6,113
75	558	983	1,546	2,537	3,960	6,479
80	589	1,038	1,633	2,680	4,184	6,846
85	621	1,094	1,721	2,824	4,408	7,213
90	652	1,150	1,808	2,968	4,632	7,579
95	684	1,205	1,896	3,111	4,857	7,946
100	715	1,261	1,983	3,255	5,081	8,313
125	873	1,539	2,421	3,972	6,201	10,146
150	1,031	1,817	2,858	4,690	7,322	11,979
175	1,189	2,095	3,295	5,408	8,442	13,812
200	1,346	2,373	3,733	6,126	9,562	15,645
225	1,504	2,651	4,170	6,843	10,683	17,478
250	1,662	2,929	4,607	7,561	11,803	19,312
275	1,820	3,207	5,045	8,279	12,924	21,145
300	1,977	3,485	5,482	8,997	14,044	22,978
325	2,135	3,763	5,919	9,714	15,165	24,811
350	2,293	4,041	6,357	10,432	16,285	26,644
375	2,451	4,319	6,794	11,150	17,405	28,477
400	2,608	4,597	7,231	11,867	18,526	30,311
425	2,766	4,875	7,669	12,585	19,646	32,144
450	2,924	5,153	8,106	13,303	20,767	33,977
475	3,082	5,431	8,543	14,021	21887	35,810
500	3,239	5,709	8,981	14,738	23,008	37,643
525	3,397	5,987	9,418	15,456	-	-
550	3,555	6,266	9,855	16,174	-	-
575	3,713	6,544	10,293	16,892	-	-
600	3,870	6,822	10,730	17,609	-	-
625	4,028	7,100	-	-	-	-
650	4,186	7,378	-	-	-	-
675	4,344	7,656	-	-	-	-
700	4,501	7,934	-	-	-	-
725	4,659	8,212	-	-	-	-
750	4,817	8,490	-	-	-	-
775	4,975	8,768	-	-	-	-
800	5,132	9,046	-	-	-	-
825	5,290	9,324	-	-	-	-
850	5,448	9,602	-	-	-	-
875	5,606	9,880	-	-	-	-
900	5,763	10,158	-	-	-	-
Approx. 1 psi Increment	6.3	11.1	17.5	28.7	44.8	73.3

Metric Units Kg./Hr.

Orifice Letter Area (cm.²)	D 0.8352	E 1.4721	F 2.3155	G 3.8001	H 5.9321	J 9.7058
Set Pressure barg						
0.4*	60	105	165	271	423	692
0.8*	82	145	228	374	583	955
1.1	88	154	243	398	622	1,018
2	122	214	337	553	863	1,412
3	163	287	451	741	1,156	1,892
4	204	360	566	930	1,451	2,374
5	246	433	681	1,118	1,746	2,857
6	287	506	797	1,307	2,041	3,339
7	329	580	912	1,496	2,336	3,821
8	370	653	1,027	1,685	2,630	4,304
9	412	726	1,142	1,874	2,925	4,786
10	453	799	1,257	2,063	3,220	5,269
12	536	945	1,487	2,441	3,810	6,233
14	619	1,092	1,717	2,818	4,400	7,198
16	702	1,238	1,947	3,196	4,989	8,163
18	786	1,384	2,178	3,574	5,579	9,128
20	869	1,531	2,408	3,952	6,169	10,093
22	952	1,677	2,638	4,329	6,758	11,058
24	1,035	1,823	2,868	4,707	7,348	12,022
26	1,118	1,970	3,098	5,085	7,938	12,987
28	1,201	2,116	3,329	5,463	8,527	13,952
30	1,284	2,262	3,559	5,840	9,117	14,917
32	1,367	2,409	3,789	6,218	9,707	15,882
34	1,450	2,555	4,019	6,596	10,297	16,846
36	1,533	2,701	4,249	6,974	-	-
38	1,616	2,848	4,479	7,351	-	-
40	1,699	2,994	4,710	7,729	-	-
42	1,782	3,140	-	-	-	-
44	1,865	3,287	-	-	-	-
46	1,948	3,433	-	-	-	-
48	2,031	3,579	-	-	-	-
50	2,114	3,726	-	-	-	-
52	2,197	3,872	-	-	-	-
54	2,280	4,019	-	-	-	-
58	2,446	4,311	-	-	-	-
62	2,612	4,604	-	-	-	-
65	2,736	-	-	-	-	-
69	2,902	-	-	-	-	-
72	3,026	-	-	-	-	-
76	3,192	-	-	-	-	-
79	3,316	-	-	-	-	-
82	3,441	-	-	-	-	-
Approx. 0.1 bar Increment	4.15	7.32	11.51	18.89	29.48	48.24

Maximum Set Pressure Limits for Steam Service

510 Series - 250 psig/17.3 barg
520 Series - 300 psig/20.7 barg
530 Series - 900 psig/62.1 barg
540 Series - 900 psig/62.1 barg

Note: For steam service beyond 300 psig or 550˚F specify option "HT" high temperature stainless steel alloy spring.

**Pressure settings below 15 psig/1.03 barg are non-ASME code.*

Multi-Purpose Safety Relief Valves

UV

500 SERIES

ASME SECTION VIII AIR

Standard cubic feet per minute (Normalized cubic meters per hour) of air at 10% overpressure. National Board Certified. Ratings are 90% of actual.

US Customary Units SCFM

Orifice Letter Area (in.²)	D 0.1295	E 0.2282	F 0.3589	G 0.5890	H 0.9195	J 1.5044
Set Pressure psig						
5*	39	69	108	178	277	454
10*	54	96	151	248	387	633
15	67	118	185	304	474	776
20	77	136	213	350	547	895
25	87	154	242	397	619	1,013
30	97	172	270	443	692	1,132
35	109	191	301	494	772	1,262
40	120	211	332	545	851	1,393
45	131	231	363	596	931	1,523
50	142	251	395	648	1,011	1,654
55	154	271	426	699	1,091	1,784
60	165	290	457	750	1,170	1,915
65	176	310	488	801	1,250	2,045
70	187	330	519	852	1,330	2,176
75	198	350	550	903	1,410	2,306
80	210	370	581	954	1,489	2,437
85	221	389	612	1,005	1,569	2,567
90	232	409	644	1,056	1,649	2,698
95	243	429	675	1,107	1,729	2,828
100	255	449	706	1,158	1,808	2,959
125	311	548	862	1,414	2,207	3,611
150	367	647	1,017	1,669	2,606	4,264
175	423	746	1,173	1,925	3,005	4,916
200	479	845	1,329	2,180	3,404	5,569
225	535	944	1,484	2,436	3,802	6,221
250	592	1,043	1,640	2,691	4,201	6,874
275	648	1,142	1,796	2,947	4,600	7,526
300	704	1,240	1,951	3,202	4,999	8,179
325	760	1,339	2,107	3,458	5,398	8,831
350	816	1,438	2,263	3,713	5,796	9,484
375	872	1,537	2,418	3,969	6,195	10,136
400	928	1,636	2,574	4,224	6,594	10,789
425	985	1,735	2,730	4,480	6,993	11,441
450	1,041	1,834	2,885	4,735	7,392	12,094
475	1,097	1,933	3,041	4,991	7,791	12,746
500	1,153	2,032	3,197	5,246	8,189	13,399
525	1,209	2,131	3,352	5,501	-	-
550	1,265	2,230	3,508	5,757	-	-
575	1,321	2,329	3,664	6,012	-	-
600	1,378	2,428	3,819	6,268	-	-
625	1,434	2,527	-	-	-	-
650	1,490	2,626	-	-	-	-
675	1,546	2,725	-	-	-	-
700	1,602	2,824	-	-	-	-
725	1,658	2,923	-	-	-	-
750	1,715	3,022	-	-	-	-
775	1,771	3,121	-	-	-	-
800	1,827	3,220	-	-	-	-
825	1,883	3,319	-	-	-	-
850	1,939	3,418	-	-	-	-
875	1,995	3,517	-	-	-	-
900	2,051	3,616				
950	2,163	-	-	-	-	-
1000	2,276	-	-	-	-	-
1050	2,388	-	-	-	-	-
1100	2,501	-	-	-	-	-
1150	2,613	-	-	-	-	-
1200	2,725	-	-	-	-	-
Approx.1 psi Increment	2.2	4.0	6.2	10.2	16.0	26.1

Metric Units Nm³/Hr.

Orifice Letter Area (cm²)	D 0.8352	E 1.4721	F 2.3155	G 3.8001	H 5.9321	J 9.7058
Set Pressure barg						
0.4*	67	119	187	307	479	784
0.8*	94	165	260	427	667	1,091
1.1	110	195	306	503	784	1,283
2	153	270	425	697	1,089	1,781
3	205	362	569	934	1,458	2,386
4	258	454	714	1,172	1,830	2,994
5	310	546	859	1,411	2,202	3,603
6	362	639	1,005	1,649	2,574	4,211
7	415	731	1,150	1,887	2,946	4,819
8	467	823	1,295	2,125	3,317	5,428
9	519	916	1,440	2,363	3,689	6,036
10	572	1,008	1,585	2,601	4,061	6,644
12	676	1,192	1,875	3,078	4,805	7,861
14	781	1,377	2,166	3,554	5,548	9,078
16	886	1,561	2,456	4,031	6,292	10,295
18	991	1,746	2,746	4,507	7,036	11,511
20	1,095	1,931	3,037	4,983	7,779	12,728
22	1,200	2,115	3,327	5,460	8,523	13,945
24	1,305	2,300	3,617	5,936	9,267	15,162
26	1,409	2,484	3,907	6,413	10,010	16,378
28	1,514	2,669	4,198	6,889	10,754	17,595
30	1,619	2,853	4,488	7,365	11,498	18,812
32	1,724	3,038	4,778	7,842	12,241	20,029
34	1,828	3,222	5,069	8,318	12,985	21,245
36	1,933	3,407	5,359	8,795	-	-
38	2,038	3,591	5,649	9,271	-	-
40	2,142	3,776	5,939	9,747	-	-
42	2,247	3,961	-	-	-	-
44	2,352	4,145	-	-	-	-
46	2,457	4,330	-	-	-	-
48	2,561	4,514	-	-	-	-
50	2,666	4,699	-	-	-	-
52	2,771	4,883	-	-	-	-
54	2,875	5,068	-	-	-	-
58	3,085	5,437	-	-	-	-
62	3,294	5,806	-	-	-	-
65	3,450	-	-	-	-	-
69	3,659	-	-	-	-	-
72	3,815	-	-	-	-	-
76	4,020	-	-	-	-	-
79	4,177	-	-	-	-	-
82	4,381	-	-	-	-	-
Approx. 0.1 bar Increment	5.24	9.23	14.51	23.82	37.18	60.84

Maximum Set Pressure Limits for Air/Gas Service

510 Series - 300 psig/20.7 barg
520 Series - 1200 psig/82.7 barg
530 Series - 1200 psig/82.7 barg
540 Series - 1200 psig/82.7 barg

**Pressure settings below 15 psig/1.03 barg are non-ASME code.*

Multi-Purpose Safety Relief Valves

UV

500 SERIES

ASME SECTION VIII WATER

U.S. gallons per minute (Cubic meters per hour) of water at 10% over pressure. National Board Certified. Ratings are 90% of actual.

US Customary Units GPM

Orifice Letter Area (in.²)	D 0.1295	E 0.2282	F 0.3589	G 0.5890	H 0.9195	J 1.5044
Set Pressure psig						
5*	13	24	37	61	95	156
10*	14	24	38	63	98	161
15	14	25	40	65	102	167
20	16	29	45	74	115	189
25	18	32	50	82	127	208
30	19	34	54	89	138	226
35	21	37	58	96	149	244
40	22	40	62	102	160	261
45	24	42	66	108	169	277
50	25	44	70	114	178	292
55	26	46	73	120	187	306
60	28	48	76	125	195	320
65	29	50	79	130	203	333
70	30	52	82	135	211	345
75	31	54	85	140	218	357
80	32	56	88	145	226	369
85	33	58	91	149	233	381
90	34	59	93	153	239	392
95	35	61	96	158	246	402
100	36	63	98	162	252	413
125	40	70	110	181	282	462
150	44	77	121	198	309	506
175	47	83	130	214	334	546
200	50	89	139	229	357	584
225	53	94	148	242	378	619
250	56	99	156	256	399	653
275	59	104	163	268	418	685
300	62	108	171	280	437	715
325	64	113	178	291	455	744
350	66	117	184	302	472	772
375	69	121	191	313	489	799
400	71	125	197	323	505	826
425	73	129	203	333	520	851
450	75	133	209	343	535	876
475	77	136	215	352	550	900
500	79	140	220	361	564	923
525	81	143	226	370	-	-
550	83	147	231	379	-	-
575	85	150	236	388	-	-
600	87	153	241	396	-	-
625	89	157	-	-	-	-
650	91	160	-	-	-	-
675	92	163	-	-	-	-
700	94	166	-	-	-	-
725	96	169	-	-	-	-
750	97	171	-	-	-	-
775	99	174	-	-	-	-
800	100	177	-	-	-	-
825	102	180	-	-	-	-
850	104	183	-	-	-	-
875	105	185	-	-	-	-
900	107	188	-	-	-	-
950	109	-	-	-	-	-
1000	112	-	-	-	-	-

Metric Units M³/Hr.

Orifice Letter Area (cm²)	D 0.8352	E 1.4721	F 2.3155	G 3.8001	H 5.9321	J 9.7058
Set Pressure barg						
0.4*	2.0	3.6	5.6	9.2	14.4	23.6
0.8*	2.9	5.1	8.0	13.1	20.4	33.3
1.1	3.3	5.9	9.3	15.2	23.8	38.9
2	4.4	7.7	12.1	19.8	30.9	50.6
3	5.3	9.4	14.8	24.2	37.8	61.8
4	6.1	10.8	17.0	28.0	43.6	71.4
5	6.9	12.1	19.0	31.3	48.8	79.8
6	7.5	13.3	20.9	34.2	53.4	87.4
7	8.1	14.3	22.5	37.0	57.7	94.5
8	8.7	15.3	24.1	39.5	61.7	101.0
9	9.2	16.2	25.6	41.9	65.5	107.1
10	9.7	17.1	26.9	44.2	69.0	112.9
12	10.6	18.8	29.5	48.4	75.6	123.7
14	11.5	20.3	31.9	52.3	81.6	133.6
16	12.3	21.7	34.1	55.9	87.3	142.8
18	13.0	23.0	36.1	59.3	92.6	151.5
20	13.7	24.2	38.1	62.5	97.6	159.7
22	14.4	25.4	39.9	65.6	102.3	167.5
24	15.1	26.5	41.7	68.5	106.9	174.9
26	15.7	27.6	43.4	71.3	111.3	182.0
28	16.3	28.7	45.1	74.0	115.5	188.9
30	16.8	29.7	46.7	76.6	119.5	195.5
32	17.4	30.6	48.2	79.1	123.4	202.0
34	17.9	31.6	49.7	81.5	127.2	208.2
36	18.4	32.5	51.1	83.9	-	-
38	18.9	33.4	52.5	86.2	-	-
40	19.4	34.2	53.9	88.4	-	-
42	19.9	35.1	-	-	-	-
44	20.4	35.9	-	-	-	-
46	20.8	36.7	-	-	-	-
48	21.3	37.5	-	-	-	-
50	21.7	38.3	-	-	-	-
52	22.2	39.0	-	-	-	-
54	22.6	39.8	-	-	-	-
58	23.4	41.2	-	-	-	-
62	24.2	42.6	-	-	-	-
65	24.8	-	-	-	-	-
69	25.6	-	-	-	-	-

Maximum Set Pressure Limits for Liquid Service

510 Series - 300 psig/20.7 barg
520 Series - 1000 psig/68.9 barg
530 Series - 1000 psig/68.9 barg
540 Series - 1000 psig/68.9 barg

Note: To determine water capacity at 25% overpressure, multiply the capacity at 10% by 1.066.

**Pressure settings below 15 psig/1.03 barg are non-ASME code.*