

# SERIES 560/570 SAFETY VALVES

Our 560 / 570 valve line is a high capacity safety valve used for boilers, piping lines and vessel protection. Designed and engineered for heavy-duty industrial use. ASME and National Board Certified for Section I and XIII "UV" for ASME Section VIII Div. 1 service as well as CE and CRN Certifications.

**SERIES  
560**



## **SERIES 560**

Use for ASME Section I applications, .  
Boilers, or most areas where steam safety valves are required.  
Set pressure up to 250 psig (17.2 barg)

## **SERIES 563**

Same as Series 560 except with Stainless Steel wetted trimming (Nozzle and Disc),  
Set pressure up to 300 psig (20.7 barg)

## **SERIES 570**

ASME Section XIII "UV" for Section VIII Div. 1, CE, CRN certified for unfired vessel protection.  
Used for many applications to protect or relieve pressure for Air / Gas or Steam.  
Set pressures: Air up to 300 psig (20.7 barg), Steam to 250 psig (17.2 barg).

## **SERIES 573**

Same as Series 570 except with Stainless Steel wetted trimming (Nozzle and Disc),  
Set pressure for air and steam up to 300 psig (20.7 barg)

**SERIES  
573**



**Usages:** Steam Boilers, Air Compressors, Dryers, Receivers, Pressure Vessels, Piping Systems, Accumulators, Reducing Stations, Tanks, Inter/After Coolers, Cooking Equipment, Autoclaves, Sterilizers or wherever higher capacity pressure protection or relief may be required.

**Features:**

- Designed for durability
- 6 orifices – 12 sizes of piping options
- Top guided seating and discharge
- Full nozzle, high capacity levels
- Short, tuned blow-down with dual-ring technology
- Heavy duty hood and lever mechanism
- Standard 17-7 stainless steel springs

**Options:**

- O-ring seating options (see charts)
- Packed lift lever
- Stainless steel trimming package, nozzle, disc (all sizes)
- Bubble tight seating options
- Anti-vibration spring for lift lever
- BSPT and BSPP pipe threading
- Tri-Clamp Inlets
- O2 Cleaning



# SEATING OPTIONS

## SEATING MATERIALS

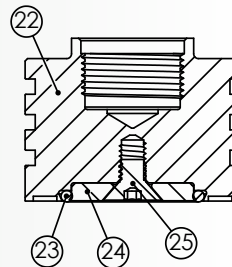
MATERIAL	NAMES	MIN TEMP °F (°C)	MAX TEMP °F (°C)	USE FOR:
FKM	Viton-A	-13° (-25°)	446° (230°)	Acetone, Air, Alcohol, Benzene, Butane, Ethylene, Ethylene Glycol, Ethyl Alcohol, Gasoline, Isobutyl Alcohol, Kerosene, Lube Oil, Natural Gas, Naphtha, Nitrogen, Propane, Water, Xylene
Nitrile	Buna-N	-40° (-40°)	250° (121°)	Air, Butane, Carbon Dioxide, Diesel Oil, Ethyl Chloride, Ethyl Ether, Fuel Oil, Gasoline, Helium, Hydrogen Sulphide, Kerosene, Natural Gas, Nitrogen, Oxygen (Gas), Propane
EPDM		-40° (-40°)	303° (151°)	Steam (under 55 psig), Water, Hot Water, Acetone, Beer, Brake Fluid, Hydrogen Gas, Sulfur Dioxide, Acids, Alkalies
FFKM	Markez®	5° (-15°)	500° (260°)	Aromatic Hydrocarbons, Chlorinated Hydrocarbons, Polar Solvents (ketones, esters, ethers), Inorganic and Organic Acids, Water, and Steam.
	Kalrez®	-10° (-23°)	550° (288°)	
PTFE		-450° (-268°)	500° (260°)	Cryogenic Service including Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Oxygen, Steam

Note:

This is just a partial listing. Visit [www.aquatrol.com](http://www.aquatrol.com) for links to websites with more specific applications.

## SOFT SEAT OPTION

ITEM	DESCRIPTION	560 / 570	563 / 573
22	Disc	B16 Brass	A479-316 SS
23	O-Ring	Various	Various
24	Center Insert	B16 Brass	A479-316 SS
25	Screw	18-8 SS	18-8 SS



Soft Seat Option



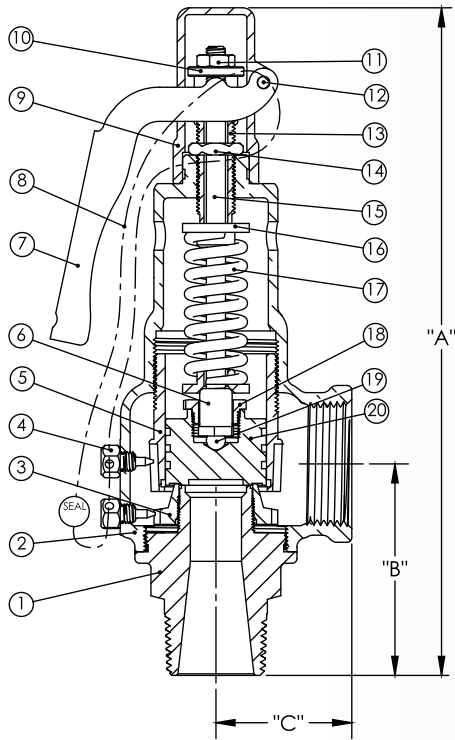
## SERIES 560-563-570-573 PART NUMBERS

573		DC	1	M	1	L	1	250
SERIES/DESCRIPTION	ORIFICE/SIZE ID	CONNECTION	SEATING	CAP	SERVICE	OPTIONS	SET	
560- Brass/bronze Section I	DC- 1/2" x 3/4"	1- NPT MxF	M- Metal	1- Lift lever	K- ASME XIII "UV"- Air/gas	1- None	Ex. 250	
	DD- 3/4" x 3/4"	2- NPT FxF	P- PTFE	3- Packed lift lever	L- ASME XIII "UV"- Steam	2- Chrome Plating		
563- 316 SS/Bronze Section I	DE- 1/2" x 1"	3- BSPT MxF	E- EPDM	4- Lift Lever with Anti Vibe Spring	A- ASME I Steam	3- O2 Cleaned		
	DF- 3/4" x 1"	4- BSPT FxF	V- Viton	6- Packed Lever with Test Gag	P- CE - Air/gas	4- API Seating		
570- Brass/bronze Section VIII	DH- 1" x 3/4"	5- Tri-Clamp x NPT	B- Buna		9- Easy Test Lever	E- CE - Steam		5- O2 Clean / API Seating
	DJ- 1-1/2" x 3/4"	6- Tri-Clamp x BSPT	K- Kalrez	N- Non-code Air/gas		6- O2 Clean / Chrome		
573- 316 SS/bronze Section VIII	ED- 3/4" x 1"	8- BSPP MxF	Z- Markez	A- Open Lever with Test Gag	T- Non-code Steam	7- O2 / API / Chrome		
	EE- 1" x 1"	9- BSPP FxF			8- API/Chrome			
	EJ- 1-1/2" x 1"							
	FE- 1" x 1-1/4"							
	FF- 1-1/4" x 1-1/4"							
	FG- 1-1/2" x 1-1/4"							
	GF- 1-1/4" x 1-1/2"							
	GG- 1-1/2" x 1-1/2"							
	HG- 1-1/2" x 2"							
	HH- 2" x 2"							
JH- 2" x 2-1/2"								
JJ- 2-1/2" x 2-1/2"								

Note:

Tri-Clamp connections are Series 563 / 573 Only.  
1/2" and 1-1/4" inlet not available in Tri-Clamp.  
Sizes DH - DJ - EJ - FG are Tri-Clamp only.

# DIMENSIONS AND MATERIALS



SERIES 560 / 570 / 563 / 573			
ITEM	DESCRIPTION	560 / 570	563 / 573
1	Body	B16/B62-C83600	SA479-316 SS
2	Bonnet	B584-C84400	B584-C84400
3	Lower Ring	B584-C84400	B584-C84400
4	Lock Screw	B16 Brass	B16 Brass
5	Upper Ring	B584-C84400	B584-C84400
6	Spring Support	B16 Brass	B16 Brass
7	Lift Lever	Steel / Plated	Steel / Plated
8	Seal Wire	Steel / Galvanized	Steel / Galvanized
9	Hood	Aluminum / Plated	Aluminum / Plated
10	Lifter Nut	B16 Brass	B16 Brass
11	Jam Nut	18-8 SS	18-8 SS
12	Lever Pin	B16 Brass	B16 Brass
13	Pressure Screw	B16 Brass	B16 Brass
14	Lock Nut	B16 Brass	B16 Brass
15	Stem	B16 Brass	B16 Brass
16	Spring Plate	B16 Brass	B16 Brass
17	Spring	302/17-7 SS	302/17-7 SS
18	Disc Nut	B16 Brass	B16 Brass
19	Ball Bearing	440 SS	440 SS
20	Disc	B16 Brass	SA479-316 SS
21	Name Plate	Stainless	Stainless

SERIES 560-563-570-573									
ORIFICE	FLOW AREA In <sup>2</sup> (mm <sup>2</sup> )	INLET	OUTLET	DN	SIZE ID	DIMENSIONS – in (mm)			WEIGHT Lbs. (Kg)
						A	B	C	
D	.125 (80.6)	1/2"	3/4"	15	C	7-1/4" (184)	2-1/2" (64)	1-1/2" (38)	2.5 (1.1)
D	.125 (80.6)	3/4"	3/4"	20	D	7-1/4" (184)	2-1/2" (64)	1-1/2" (38)	2.5 (1.1)
D	.125 (80.6)	1/2"	1"	15	E	7-1/4" (184)	2-1/2" (64)	1-1/2" (38)	2.5 (1.1)
D	.125 (80.6)	3/4"	1"	20	F	7-1/4" (184)	2-1/2" (64)	1-1/2" (38)	2.5 (1.1)
E	.221 (142.6)	3/4"	1"	20	D	7-5/8" (194)	2-1/2" (64)	1-5/8" (41)	3 (1.4)
E	.221 (142.6)	1"	1"	25	E	7-5/8" (194)	2-1/2" (64)	1-5/8" (41)	3 (1.4)
F	.352 (227.1)	1"	1-1/4"	25	E	8-7/8" (225)	2-7/8" (73)	1-3/4" (44)	4 (1.8)
F	.352 (227.1)	1-1/4"	1-1/4"	32	F	8-7/8" (225)	2-7/8" (73)	1-3/4" (44)	4 (1.8)
G	.567 (365.8)	1-1/4"	1-1/2"	32	F	9-1/2" (241)	3-1/4" (83)	2-1/4" (57)	6 (2.7)
G	.567 (365.8)	1-1/2"	1-1/2"	40	G	9-1/2" (241)	3-1/4" (83)	2-1/4" (57)	6 (2.7)
H	.899 (580.0)	1-1/2"	2"	40	G	11" (279)	3-5/8" (92)	2-1/2" (64)	10 (4.5)
H	.899 (580.0)	2"	2"	50	H	11" (279)	3-5/8" (92)	2-1/2" (64)	10 (4.5)
J	1.463 (943.9)	2"	2-1/2"	50	H	12-5/8" (321)	4" (102)	3-1/8" (79)	15 (6.8)
J	1.463 (943.9)	2-1/2"	2-1/2"	65	J	12-5/8" (321)	4" (102)	3-1/8" (79)	15 (6.8)

SERIES	METALS	MIN. TEMP °F (°C)	MAX. TEMP °F (°C)	MAX PRESSURE psig (barg)	SERVICES	CERTIFICATIONS
560	Brass/Bronze	-20° (-29°)	406° (208°)	250 (17.2)	Steam	ASME I, CE, CRN
563	Stainless/Bronze	-20° (-29°)	425° (218°)	300 (20.7)	Steam	ASME I, CE, CRN
570	Brass/Bronze	-20° (-29°)	406° (208°)	250 (17.2)	Air / Gas / Steam	ASME XIII "UV", CE, CRN
573	Stainless/Bronze	-20° (-29°)	425° (218°)	300 (20.7)	Air / Gas / Steam	ASME XIII "UV", CE, CRN

# SECTION I STEAM CAPACITY

## SERIES 560 / 563 CAPACITIES STEAM LBS/HR - ASME SECTION I

SET psig	ORIFICE AREA in <sup>2</sup> FLOW COEFFICIENT = .856					
	"D" .125	"E" .221	"F" .352	"G" .567	"H" .899	"J" 1.463
5	120	211	337	542	860	1400
10	147	260	414	667	1058	1722
15	175	309	492	792	1256	2044
20	202	358	569	917	1454	2367
25	230	406	647	1042	1653	2689
30	257	455	725	1167	1851	3012
35	285	504	802	1292	2049	3334
40	312	552	880	1417	2247	3657
45	340	601	957	1542	2445	3979
50	368	650	1035	1667	2643	4302
55	395	699	1113	1792	2842	4624
60	423	747	1190	1917	3040	4947
65	450	796	1268	2042	3238	5269
70	478	846	1347	2170	3440	5598
75	507	896	1427	2298	3644	5930
80	535	946	1507	2427	3848	6262
85	563	996	1587	2556	4052	6595
90	592	1046	1667	2685	4256	6927
95	620	1097	1747	2813	4461	7259
100	649	1147	1826	2942	4665	7591
110	705	1247	1986	3199	5073	8255
120	762	1347	2146	3457	5481	8920
130	819	1448	2306	3714	5889	9584
140	876	1548	2466	3972	6297	10248
150	932	1648	2626	4229	6706	10913
160	989	1749	2785	4487	7114	11577
170	1046	1849	2945	4744	7522	12241
180	1103	1949	3105	5002	7930	12905
190	1159	2050	3265	5259	8338	13570
200	1216	2150	3425	5517	8747	14234
210	1273	2251	3585	5774	9155	14898
220	1330	2351	3744	6031	9563	15563
230	1386	2451	3904	6289	9971	16227
240	1443	2552	4064	6546	10379	16891
250	1500	2652	4224	6804	10788	17556
270	1613	2853	4544	7319	11604	18884
290	1727	3053	4863	7834	12421	20213
300	1784	3154	5023	8091	12829	20877

## SERIES 560 / 563 CAPACITIES STEAM KG/HR - ASME SECTION I

SET barg	ORIFICE AREA mm <sup>2</sup> FLOW COEFFICIENT = .856					
	"D" 80.6	"E" 142.6	"F" 227.1	"G" 365.8	"H" 580.0	"J" 943.9
0.2	49	87	138	222	352	573
0.5	60	106	169	272	431	701
1	78	138	220	354	561	913
2	114	202	322	518	822	1337
3	150	266	424	683	1082	1761
4	187	330	526	847	1343	2185
5	223	395	629	1013	1607	2615
6	261	461	734	1183	1875	3052
7	298	527	839	1352	2144	3489
8	335	593	944	1521	2412	3926
9	373	659	1050	1691	2681	4362
10	410	725	1155	1860	2949	4799
11	447	791	1260	2029	3218	5236
12	484	857	1365	2199	3486	5673
13	522	923	1470	2368	3755	6110
14	559	989	1575	2537	4023	6547
15	596	1055	1680	2707	4292	6984
16	634	1121	1785	2876	4560	7421
17	671	1187	1891	3045	4829	7858
18	708	1253	1996	3215	5097	8295
19	746	1319	2101	3384	5365	8732
20	783	1385	2206	3553	5634	9169
20.7	809	1431	2280	3672	5822	9475

Set pressures not limited to this chart. Specify when ordering.  
 Capacities are at 2 psig or 3% (whichever is greater) over set pressure  
 Set pressures below 15 psig (1.03 barg) are NON-Code.  
 Section I Lift levers can not be omitted.  
 Set pressure above 250 psig (17.2 barg) are Series 563 Only

Lifting Device as required by the ASME:  
 ASME Section I - PG-73.2.4

Each safety valve shall have a substantial lifting device, which when activated will release the seating force on the disc when the valve is subjected to a pressure of at least 75% of the set pressure.



# SECTION VIII STEAM CAPACITY

## SERIES 570 / 573 CAPACITIES STEAM LBS/HR - ASME SECTION VIII

SET psig	ORIFICE AREA in <sup>2</sup> FLOW COEFFICIENT = .856					
	"D" .125	"E" .221	"F" .352	"G" .567	"H" .899	"J" 1.463
5	125	221	352	567	900	1464
10	153	270	430	692	1098	1787
15	180	319	507	817	1296	2109
20	208	367	585	942	1494	2431
25	235	416	663	1067	1692	2754
30	263	465	740	1192	1890	3076
35	293	518	826	1330	2108	3431
40	323	572	911	1467	2326	3786
45	354	625	996	1605	2544	4141
50	384	679	1082	1742	2762	4495
55	414	733	1167	1880	2980	4850
60	445	786	1252	2017	3198	5205
65	475	840	1338	2155	3416	5559
70	505	893	1423	2292	3634	5914
75	536	947	1508	2430	3852	6269
80	566	1001	1594	2567	4070	6624
85	596	1054	1679	2705	4288	6978
90	627	1108	1764	2842	4506	7333
95	657	1161	1850	2979	4724	7688
100	687	1215	1935	3117	4942	8043
110	748	1322	2106	3392	5378	8752
120	808	1429	2276	3667	5814	9461
130	869	1536	2447	3942	6250	10171
140	930	1644	2618	4217	6686	10880
150	990	1751	2789	4492	7122	11590
160	1051	1858	2959	4767	7558	12299
170	1111	1965	3130	5042	7994	13009
180	1172	2072	3301	5317	8430	13718
190	1233	2179	3471	5592	8866	14428
200	1293	2287	3642	5866	9302	15137
210	1354	2394	3813	6141	9737	15846
220	1415	2501	3983	6416	10173	16556
230	1475	2608	4154	6691	10609	17265
240	1536	2715	4325	6966	11045	17975
250	1596	2822	4495	7241	11481	18684
270	1718	3037	4837	7791	12353	20103
290	1839	3251	5178	8341	13225	21522
300	1899	3358	5349	8616	13661	22231

## SERIES 570 / 573 CAPACITIES STEAM KG/HR - ASME SECTION VIII

Set barg	ORIFICE AREA mm <sup>2</sup> FLOW COEFFICIENT = .856					
	"D" 80.6	"E" 142.6	"F" 227.1	"G" 365.8	"H" 580.0	"J" 943.9
0.2	51	91	145	234	370	603
0.5	62	110	176	283	449	730
1	80	142	227	365	579	942
2	117	206	329	529	840	1366
3	156	276	440	709	1124	1830
4	196	347	553	890	1411	2297
5	236	417	665	1071	1698	2763
6	276	488	777	1252	1985	3230
7	316	558	889	1433	2271	3696
8	355	629	1002	1613	2558	4163
9	395	699	1114	1794	2845	4630
10	435	770	1226	1975	3132	5096
11	475	840	1338	2156	3418	5563
12	515	911	1451	2337	3705	6030
13	555	981	1563	2518	3992	6496
14	595	1052	1675	2698	4279	6963
15	634	1122	1788	2879	4565	7430
16	674	1193	1900	3060	4852	7896
17	714	1263	2012	3241	5139	8363
18	754	1334	2124	3422	5425	8829
19	794	1404	2237	3603	5712	9296
20	834	1475	2349	3783	5999	9763
20.7	862	1524	2427	3910	6200	10089

Capacities are at 3 psig or 10% (whichever is greater) over set pressure  
Set pressures below 15 psig (1.03 barg) are NON-Code.  
Set pressures above 250 psig are Series 573 only.

Lifting Device as required by the ASME Section XIII: 3.2.7(a)  
Section VIII (UV Designator) pressure relief valves intended for use on air or steam service, or on water service where the valve inlet temperature exceeds 60°C(140°F) excluding overpressure or relief events, shall have a substantial lifting device that, when activated, will release the seating force on the disk when the pressure relief valve is subjected to a pressure of at least 75% of the set pressure of the valve.



# SECTION VIII AIR CAPACITY

## SERIES 570 / 573 CAPACITIES AIR SCFM - ASME SECTION VIII

SET psig	ORIFICE AREA in <sup>2</sup> FLOW COEFFICIENT = .856					
	"D" .125	"E" .221	"F" .352	"G" .567	"H" .899	"J" 1.463
5	45	79	125	202	320	521
10	54	96	153	246	391	636
15	64	113	181	291	461	751
20	74	131	208	335	532	865
25	84	148	236	380	602	980
30	94	165	263	424	673	1095
35	104	184	294	473	750	1221
40	115	204	324	522	828	1348
45	126	223	355	571	906	1474
50	137	242	385	620	983	1600
55	147	261	415	669	1061	1726
60	158	280	446	718	1138	1853
65	169	299	476	767	1216	1979
70	180	318	506	816	1294	2105
75	191	337	537	865	1371	2231
80	201	356	567	914	1449	2358
85	212	375	598	963	1526	2484
90	223	394	628	1012	1604	2610
95	234	413	658	1061	1681	2736
100	245	432	689	1109	1759	2863
110	266	471	750	1207	1914	3115
120	288	509	810	1305	2069	3368
130	309	547	871	1403	2225	3620
140	331	585	932	1501	2380	3873
150	352	623	993	1599	2535	4125
160	374	661	1053	1697	2690	4378
170	396	699	1114	1795	2845	4630
180	417	738	1175	1892	3000	4883
190	439	776	1236	1990	3156	5135
200	460	814	1296	2088	3311	5388
210	482	852	1357	2186	3466	5640
220	503	890	1418	2284	3621	5893
230	525	928	1479	2382	3776	6145
240	547	966	1539	2480	3931	6398
250	568	1005	1600	2577	4087	6650
270	611	1081	1722	2773	4397	7156
290	655	1157	1843	2969	4707	7661
300	676	1195	1904	3067	4863	7913

## SERIES 570 / 573 CAPACITIES AIR NM<sup>3</sup>/HR - ASME SECTION VIII

SET barg	ORIFICE AREA mm <sup>2</sup> FLOW COEFFICIENT = .856					
	"D" 80.6	"E" 142.6	"F" 227.1	"G" 365.8	"H" 580.0	"J" 943.9
0.2	69	121	193	311	494	803
0.5	83	147	234	377	598	973
1	107	190	302	487	772	1256
2	156	275	438	706	1119	1821
3	208	369	587	945	1499	2440
4	261	463	737	1187	1881	3062
5	315	557	886	1428	2264	3684
6	368	651	1036	1669	2646	4306
7	421	744	1186	1910	3028	4928
8	474	838	1335	2151	3410	5550
9	527	932	1485	2392	3793	6172
10	580	1026	1635	2633	4175	6794
11	633	1120	1784	2874	4557	7416
12	686	1214	1934	3115	4939	8038
13	740	1308	2084	3356	5322	8660
14	793	1402	2233	3597	5704	9282
15	846	1496	2383	3838	6086	9905
16	899	1590	2533	4079	6468	10527
17	952	1684	2682	4321	6851	11149
18	1005	1778	2832	4562	7233	11771
19	1058	1872	2982	4803	7615	12393
20	1111	1966	3131	5044	7997	13015
20.7	1149	2032	3236	5213	8265	13450

Capacities are at 3 psig or 10% (whichever is greater) over set pressure  
Set pressures below 15 psig (1.03 barg) are NON-Code.

Lifting Device as required by the ASME Section XIII: 3.2.7(a)  
Section VIII (UV Designator) pressure relief valves intended for use on air or steam service, or on water service where the valve inlet temperature exceeds 60°C(140°F) excluding overpressure or relief events, shall have a substantial lifting device that, when activated, will release the seating force on the disk when the pressure relief valve is subjected to a pressure of at least 75% of the set pressure of the valve.

