

Our KNG560/KNG570 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 VIII as well as CE and CRN Certifications.

### KNG560

Brass and bronze valve construction with stainless steel springs.  
ASME Section I for steam safety.

### KNG563

Stainless steel body and disc (trimming); Bronze bonnet with stainless steel spring.  
ASME Section I for steam safety

### KNG570

Brass and bronze construction with stainless steel springs.  
ASME Section VIII for steam and air/gas service

### KNG573

Stainless steel body and disc (trimming); Bronze bonnet with stainless steel springs.  
ASME Section VIII for steam and air/gas

#### 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
- 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)
- O-ring seating options (PTFE, EPDM, Viton, or as specified)
- Bubble tight seating options
- Anti-vibration spring for lift lever
- BSPT pipe threading



KNG560



KNG573



**KNG560 / KNG570 / KNG563 / KNG573 Part Numbers**

KNG		DC	1	M	1	L	1	250
Series Description		Orifice/Size ID	Connection	Seating	Cap	Service	Options	Set PSI
KNG560	Brass/Bronze Section I	DC- 1/2"x 3/4"	1- NPT MxF	M- Metal	1- Lift Lever	K- ASME VIII-Air/Gas	1- None	Ex. 250
KNG563	316 SS/Bronze Section I	DD- 3/4" x 3/4"	2- NPT FxF	P- PTFE	3- Packed lift lever	L- ASME VIII-Steam	2- Chrome Plating	
KNG570	Brass/Bronze Section VIII	DH- 1"x 3/4"	3- BSPT MxF	E- EPDM	4- Lift Lever with Anti-Vibe Spring	A- ASME   STEAM	3- O2 Cleaned	
KNG573	316 SS/Bronze Section VIII	DJ- 1-1/2" x 3/4"	4- BSPT FxF	V- Viton	6- Packed Lever with Test Gag	P- CE - Air/Gas	4- API Seating	
		ED- 3/4" x 1"	5- TriClamp X NPT	B-Buna	9- Easy Test Lever	E- CE - Steam	5- O2 Clean/API Seating	
		EE- 1" x 1"	6- TriClamp BSPT			N- Non-code Air/Gas	6- O2 Clean/Chrome	
		EJ- 1/1/2" x 1"	8- BSPP MxF			T- Non-code Steam	7- O2/API/Chrome	
		FE- 1" x 1-1/4"	9- BSPP FxF				8- API/Chrome	
		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"						

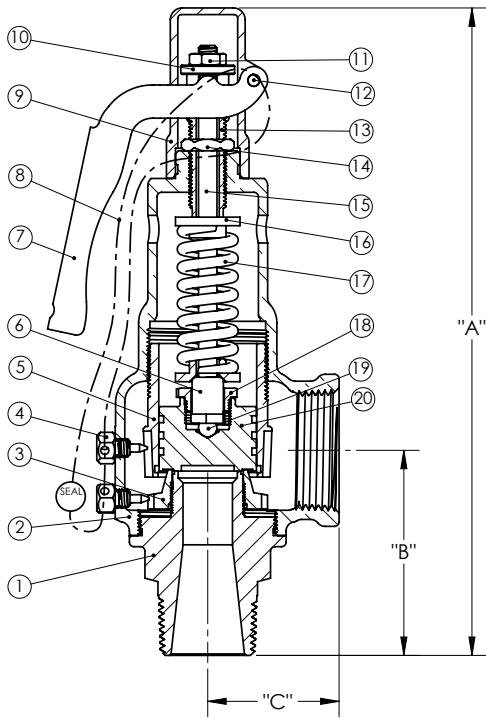
**Note:**  
 Tri-Clamp connections are KNG563/573 Only.  
 1/2" and 1-1/4" inlet are not available in Tri-Clamp.  
 Sizes DH - DJ - EJ - FG are Tri-Clamp only.

**Technical Specifications KNG560 / KNG563 / KNG570 / KNG573**

Orifice	Flow Area (in <sup>2</sup> )	Inlet	Outlet	DN	Size ID	Dimensions (in)			Weight (lb.)
						A	B	C	
D	.125	1/2"	3/4"	15	C	7-1/4"	2-1/2"	1-1/2"	2.5
D	.125	3/4"	3/4"	20	D	7-1/4"	2-1/2"	1-1/2"	2.5
E	.221	3/4"	1"	20	D	7-5/8"	2-1/2"	1-5/8"	3
E	.221	1"	1"	25	E	7-5/8"	2-1/2"	1-5/8"	3
F	.352	1"	1-1/4"	25	E	8-7/8"	2-7/8"	1-3/4"	4
F	.352	1-1/4"	1-1/4"	32	F	8-7/8"	2-7/8"	1-3/4"	4
G	.567	1-1/4"	1-1/2"	32	F	9-1/2"	3-1/4"	2-1/4"	6
G	.567	1-1/2"	1-1/2"	40	G	9-5/8"	3-1/4"	2-1/4"	6
H	.899	1-1/2"	2"	40	G	11"	3-5/8"	2-1/2"	10
H	.899	2"	2"	50	H	11"	3-5/8"	2-1/2"	10
J	1.463	2"	2-1/2"	50	H	12-5/8"	4"	3-1/8"	15
J	1.463	2-1/2"	2-1/2"	65	J	12-5/8"	4"	3-1/8"	15

Series	Inlet sizes	Metals	Min. Temp F°	Min. Temp F°	Max Pressure PSI	Services	Certifications
KNG560	1/2" to 2-1/2"	Brass/Bronze	-20°	406°	250	Steam	ASME I, CE CRN
KNG563	1/2" to 2-1/2"	Stainless/Bronze	-20°	425°	250	Steam	ASME I, CE CRN
KNG570	1/2" to 2-1/2"	Brass/Bronze	-20°	425°	300	Air/Gas/Steam	ASME VIII, CE CRN
KNG573	1/2" to 2-1/2"	Stainless/Bronze	-20°	425°	300	Air/Gas/Steam	ASME VIII, CE CRN

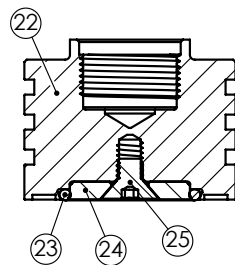
## Materials of Construction KNG560 / KNG570 / KNG563 / KNG573



#	Description	KNG560/570	KNG563/573
1	Body	B16-B62-C83600	A479-316 SS
2	Bonnet	B584-C84400	B584-C84400
3	Lower Ring	B584-C84400	B584-C84400
4	Lock Screw	B16	B16
5	Upper Ring	Steel/Plated	Steel/Plated
6	Spring Support	B16	B16
7	Lift Lever	Steel/Plated	Steel/Plated
8	Seal Wire	Steel/Galvanized	Steel/Galvanized
9	Hood	Aluminum/Plated	Aluminum/Plated
10	Lifter Nut	B16	B16
11	Jam Nut	18-8	18-8
12	Lever Pin	B16	B16
13	Pressure Screw	B16	B16
14	Lock Nut	B16	B16
15	Stem	B16	B16
16	Spring Plate	B16	B16
17	Spring	17-7	17-7
18	Disc Nut	B16	B16
19	Ball Bearing	440	440
20	Disc	B16	A479-316 SS
21	Name Plate	Stainless	Stainless

### Seating Materials

Material	Names	Min Temp F°	Max Temp F°	Use for
FKM	Viton-A	-13°	446°	Acetone, Air, Alcohol, Benzine, Butane, Ethylene, Ethylene Glycol, Ethyl Alcohol, Gasoline, Isobutyl Alcohol, Kerosene, Lube Oil, Natural Gas, Naphtha, Nitrogen, Propane, Water, Xylene
Nitrile	Buna-N	-40°	250°	Air, Butane, Carbon Dioxide, Diesel Oil, Ethyl Chloride, Ethyl Ether, Fuel Oil, Gasoline, Helium, Hydrogen Sulfide, Kerosene, Natural Gas, Nitrogen, Oxygen (Gas), Propane
EPDM		-40°	303°	Steam, Water, Hot Water, Acetone, Beer, Brake Fluid, Hydrogen Gas, Sulfur Dioxide, Acids, Alkalies
FFKM	Kalrez®	-10°	550°	Aromatic Hydrocarbons, Chlorinated Hydrocarbons, Polar Solvents (ketones, esters, ethers), Inorganic and Organic Acids, Water, and Steam (Steam service up to 380° F (193° C) (saturated)
PTFE		-300°	450°	Cryogenic Service including Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Oxygen, Steam



Soft Seat Option

### Soft Seat Option

#	Description	Material Options	
		KNG560/570	KNG563/573
22	Disc	B16	A479-316 SS
23	O-Ring	Various	Various
24	Center Insert	B16	A479-316 SS
25	Screw	18-8 Stainless	18-8 Stainless

# STEAMCAPACITY

## KNG560 Capacities Steam Lbs/hr- ASME Section I

	Orifice area in ^2 Flow Coefficient = .856					
Set PSI	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

Capacities are at 10% over set pressure

Set pressures on steam below 15 PSI and above 250 PSI are NON-Code.

Section I Lift levers can not be omitted.

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.

Lifting Device as required by the ASME: ASME Section VIII: UG136(3)

Each pressure relief valve on air, water at the valve inlet that exceeds 140°F, excluding overpressure or relief events, or steam service shall have a substantial lifting device which when activated will release the seating force on the disc when the pressure relief valve is subjected to a pressure of at least 75% of the set pressure of the valve.

## KNG570 Capacities Steam Lbs/hr- ASME Section VIII

	Orifice area in ^2 Flow Coefficient = .856					
Set PSI	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
260	1657	2930	4666	7516	11917	19394
270	1718	3037	4837	7791	12353	20103
280	1778	3144	5008	8066	12789	20813
290	1839	3251	5178	8341	13225	21522
300	1899	3358	5349	8616	13661	22231

# AIRCAPACITY

## KNG570 Capacities Air SCFM ASME Section VIII

Set PSI	Orifice area in ^2 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
260	590	1043	1661	2675	4242	6903
270	611	1081	1722	2773	4397	7156
280	633	1119	1782	2871	4552	7408
290	655	1157	1843	2969	4707	7661
300	676	1195	1904	3067	4863	7913

Capacities are at 10% over set pressure

Set pressures on steam below 15 PSI are NON-Code

Section I Lift levers can not be omitted.

Lifting Device as required by the ASME: ASME Section VIII: UG136(3)

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.

## FLOWCOEFFICIENT CHART

### KNG560/ 563/ 570/ 573

Model #	Orifice Size	Inlet x Outlet Size (in)	Flow Area (in)	Flow Coefficient (Kd)			
				Section I Steam	Section VIII Steam	Section VIII Air	Section VIII Liquid
KNG560 / KNG563	D	1/2" x 3/4" 3/4" x 3/4"	0.125	0.856	-	-	-
	E	3/4" x 1" 1" x 1"	0.221	0.856	-	-	-
	F	1" x 1-1/4" 1-1/4" x 1-1/4"	0.352	0.856	-	-	-
	G	1-1/4" x 1-1/2" 1-1/2" x 1-1/2"	0.567	0.856	-	-	-
	H	1-1/2" x 2" 2" x 2"	0.899	0.856	-	-	-
	J	2" x 2-1/2" 2-1/2" x 2-1/2"	1.463	0.856	-	-	-
KNG570 / KNG573	D	1/2" x 3/4" 3/4" x 3/4"	0.125	-	0.856	0.856	-
	E	3/4" x 1" 1" x 1"	0.221	-	0.856	0.856	-
	F	1" x 1-1/4" 1-1/4" x 1-1/4"	0.352	-	0.856	0.856	-
	G	1-1/4" x 1-1/2" 1-1/2" x 1-1/2"	0.567	-	0.856	0.856	-
	H	1-1/2" x 2" 2" x 2"	0.899	-	0.856	0.856	-
	J	2" x 2-1/2" 2-1/2" x 2-1/2"	1.463	-	0.856	0.856	-