



Job Name:	
Job Location:	
Engineer:	
Contractor:	
Tag:	
PO#:	
Rep:	
Wholesale Dist.:	

DESCRIPTION

ASME Sections I & VIII capacity certified safety valve for overpressure protection of steam power boilers, pressure piping systems, pressure vessels, piping and similar equipment. Suitable for steam, air and non-hazardous gases.

FEATURES

- ASME Section I & VIII Certified Capacities
- 5 - 300 psig Set Pressures @ -60°F min / 406°F max
- 1/2" - 2-1/2" Inlet Connections Available
- Stainless Steel Wetted Trim (19L, 19S)
- PFA and Metal Seat Styles Available
- **Made in the USA**

APPROVALS

- ASME Section I Power Boilers
- ASME Section VIII Div 1 Pressure Vessels
- Canadian Registration Number OG8547.5C
- Pressure Equipment Directive 2014/68/EU (PED)
- Oxygen Cleaning to CGA 4.1 (Optional)

**Set pressures and temperatures vary by model.
Refer to catalog for sizing and selection information*

STANDARD MATERIAL LIST

BODY	ASTM B584 Bronze
NOZZLE	ASTM B16 Brass/316 SS
SPRING	Stainless Steel
SEAT	PFA Teflon/B16 Brass/316 SS

CAPACITY, LB/HR (KG/HR)

NATIONAL BOARD CAPACITY CERTIFIED, SECTION I STEAM

SET PRESSURE PSIG (BAR)	15 (1.03)	100 (6.90)	250 (17.24)
D Orifice	174 (79)	646 (293)	1494 (678)
E Orifice	310 (141)	1152 (522)	2664 (1208)
F Orifice	484 (220)	1798 (816)	4185 (1886)
G Orifice	794 (360)	2950 (1338)	6822 (3094)
H Orifice	1240 (562)	4602 (2088)	7557 (3428)
J Orifice	2035 (923)	7557 (3428)	17477 (7928)

AVAILABLE CONFIGURATIONS

MODEL NUMBER	SIZE	WEIGHT LB. (KG)	HEIGHT IN. (MM)
19*DC	1/2M x 3/4F	1.6(.73)	6.5 (165)
19*DD	3/4M x 3/4F	1.6(.73)	6.5 (165)
19*ED	3/4M x 1F	2.0(.91)	7.1 (180)
19*EE	1M x 1F	2.2(1.1)	7.1 (180)
19*FE	1M x 1-1/4F	4.1(1.9)	9.3 (236)
19*FF	1-1/4M x 1-1/4F	4.3(2.0)	9.3 (236)
19*GF	1-1/4M x 1-1/2F	7.4(3.4)	11.0 (279)
19*GG	1-1/2M x 1-1/2F	7.6(3.4)	11.0 (279)
19*HG	1-1/2M x 2F	11.5(5.2)	12.0 (305)
19*HH	2M x 2F	11.6(5.3)	12.0 (305)
19*JG*	1-1/2F x 2-1/2F	20.0(9.1)	14.0(356)
19*JH	2M x 2-1/2F	19.9(9.0)	14.2 (360)
19*JJ	2-1/2M x 2-1/2F	20.8(9.4)	14.7 (373)

*19*JG available with brass trim only. 19KJG and 19MJG

PART NUMBER MATRIX

19	D	C	K	165	A
SERIES NUMBER	ORIFICE LETTER	INLET SIZE	ASME CODE & SERVICE	SET PRESSURE (PSI)	SPECIAL OPTIONS
19K - BRASS TRIM/TEFLON SEAT	ORIFICE LETTER FROM CAPACITY CHART	C - 1/2"	A - SEC I STEAM		A - ANTI-VIBRATION TRIM
19M - BRASS TRIM/METAL SEAT		D - 3/4"	K - SEC VIII AIR		CE - CE/PED COMPLIANT
19L - STAINLESS TRIM/TEFLON SEAT		E - 1"	L - SEC VIII STEAM		Q - PERFORMANCE (CALIBRATION) TEST REPORTS
19S - STAINLESS TRIM/METAL SEAT		F - 1-1/4"	N - NON CODE AIR		X - OXYGEN CLEANED
		G - 1-1/2"	P - NON CODE STEAM		*OTHER SUFFIXES - FACTORY ISSUED
		H - 2"			
	J - 2-1/2"				

*Not all configurations available together

ASME SECTION I - STEAM

• Pounds per hour (kilograms per hour) saturated steam @ 3% overpressure. National Board Certified. Ratings are 90% of actual.

US CUSTOMARY UNITS BTU/HR.

ORIFICE LETTER AREA IN. ²	D 0.129	E 0.230	F 0.359	G 0.589	H 0.919	J 1.509
SET PRESSURE PSIG						
15	174	310	484	794	1,240	2,035
20	201	359	561	920	1,435	2,356
25	229	408	637	1,045	1,631	2,677
30	256	457	713	1,170	1,826	2,998
35	284	506	790	1,296	2,022	3,319
40	311	555	866	1,421	2,217	3,641
45	339	604	942	1,546	2,413	3,962
50	366	653	1,019	1,672	2,608	4,283
55	394	702	1,095	1,797	2,804	4,604
60	421	751	1,172	1,922	2,999	4,925
65	448	800	1,248	2,048	3,195	5,246
70	476	849	1,326	2,175	3,394	5,573
75	505	900	1,405	2,304	3,596	5,904
80	533	950	1,483	2,433	3,797	6,234
85	561	1,001	1,562	2,563	3,998	6,565
90	590	1,051	1,641	2,692	4,200	6,896
95	618	1,101	1,719	2,821	4,401	7,226
100	646	1,152	1,798	2,950	4,602	7,557
105	674	1,202	1,877	3,079	4,804	7,888
110	703	1,253	1,955	3,208	5,005	8,218
115	731	1,303	2,034	3,337	5,207	8,549
120	759	1,353	2,113	3,466	5,408	8,880
125	787	1,404	2,191	3,595	5,609	9,210
130	816	1,454	2,270	3,724	5,811	9,541
135	844	1,505	2,349	3,853	6,012	9,872
140	872	1,555	2,427	3,982	6,213	10,202
145	900	1,605	2,506	4,111	6,415	10,533
150	929	1,656	2,585	4,240	6,616	10,864
160	985	1,757	2,742	4,499	7,019	11,525
170	1,042	1,857	2,899	4,757	7,422	12,186
180	1,098	1,958	3,057	5,015	7,824	12,848
190	1,155	2,059	3,214	5,273	8,227	13,509
200	1,211	2,160	3,371	5,531	8,630	14,170
210	1,268	2,261	3,529	5,789	9,033	14,832
220	1,324	2,361	3,686	6,047	9,436	15,493
230	1,381	2,462	3,843	6,305	9,838	16,154
240	1,438	2,563	4,001	6,564	10,241	16,816
250	1,494	2,664	4,158	6,822	10,644	17,477
255	1,522	2,714	4,237	6,951	10,845	17,808
260	1,551	2,765	4,315	7,080	11,047	18,138
265	1,579	2,815	4,394	7,209	11,248	18,469
270	1,607	2,865	4,473	7,338	11,449	18,800
275	1,635	2,916	4,551	7,467	11,651	19,130
280	1,664	2,966	4,630	7,596	11,852	19,461
285	1,692	3,017	4,709	7,725	12,053	19,792
290	1,720	3,067	4,787	7,854	12,255	20,122
295	1,748	3,117	4,866	7,983	12,456	20,453
300	1,777	3,168	4,945	8,112	12,658	20,784
Approx. 1 psi increments	5.7	10.0	15.6	25.8	40.2	66.0

METRIC UNITS Kcal/HR.

ORIFICE LETTER AREA CM. ²	D 0.835	E 1.483	F 2.315	G 3.800	H 5.932	J 9.733
SET PRESSURE BARG						
0.34	-	-	-	-	-	-
0.69	-	-	-	-	-	-
1.1	81	145	226	371	579	951
1.5	96	171	266	437	682	1,120
2	114	203	317	519	811	1,331
2.5	132	235	367	602	940	1,542
3	150	267	417	684	1,068	1,753
3.5	168	299	467	767	1,197	1,964
4	186	331	517	849	1,326	2,175
4.5	204	364	568	932	1,454	2,386
5	222	397	619	1,016	1,586	2,602
5.5	241	430	671	1,101	1,719	2,820
6	259	463	723	1,186	1,851	3,037
6.5	278	496	774	1,271	1,984	3,255
7	296	529	826	1,356	2,116	3,472
7.5	315	562	878	1,440	2,249	3,690
8	334	595	929	1,525	2,381	3,907
8.5	352	628	981	1,610	2,514	4,125
9	371	662	1,033	1,695	2,646	4,342
9.5	389	695	1,085	1,780	2,779	4,559
10	408	728	1,136	1,865	2,911	4,777
10.5	426	761	1,188	1,950	3,044	4,994
11	445	794	1,240	2,035	3,176	5,212
11.5	464	827	1,292	2,120	3,309	5,429
12	482	860	1,343	2,204	3,441	5,647
12.5	501	893	1,395	2,289	3,574	5,864
13	519	927	1,447	2,374	3,706	6,082
13.5	538	960	1,498	2,459	3,839	6,299
14	556	993	1,550	2,544	3,971	6,517
15	594	1,059	1,654	2,714	4,236	6,951
16	631	1,125	1,757	2,884	4,501	7,386
17	668	1,192	1,861	3,053	4,767	7,821
18	705	1,258	1,964	3,223	5,032	8,256
19	742	1,324	2,067	3,393	5,297	8,691
20	779	1,390	2,171	3,563	5,562	9,126
20.7	805	1,437	2,243	3,682	5,747	9,430
Approx. 0.1 barg increments	3.7	6.6	10.3	17.0	26.5	43.5

Note:
Specify model 19S with stainless steel wetted trim for steam settings beyond 250 psig / 17.2 barg.

SAFETY RELIEF VALVES

**19 SERIES
BRONZE SAFETY VALVE**

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 LB./HR.

ORIFICE LETTER AREA IN. ²	D 0.129	E 0.230	F 0.359	G 0.589	H 0.919	J 1.509
SET PRESSURE PSIG						
5*	122	218	340	558	871	1,429
10*	167	298	466	765	1,193	1,958
15	179	320	499	820	1,279	2,100
20	207	369	576	945	1,474	2,421
25	234	418	652	1,070	1,670	2,742
30	262	467	729	1,195	1,865	3,063
35	292	521	813	1,333	2,080	3,416
40	322	574	897	1,471	2,295	3,769
45	352	628	981	1,609	2,510	4,122
50	383	682	1,065	1,747	2,725	4,475
55	413	736	1,149	1,885	2,941	4,828
60	443	790	1,233	2,022	3,156	5,181
65	473	844	1,317	2,160	3,371	5,535
70	503	897	1,401	2,298	3,586	5,888
75	534	951	1,485	2,436	3,801	6,241
80	564	1,005	1,569	2,574	4,016	6,594
85	594	1,059	1,653	2,712	4,231	6,947
90	624	1,113	1,737	2,849	4,446	7,300
95	654	1,167	1,821	2,987	4,661	7,653
100	684	1,220	1,905	3,125	4,876	8,007
105	715	1,274	1,989	3,263	5,091	8,360
110	745	1,328	2,073	3,401	5,306	8,713
115	775	1,382	2,157	3,539	5,521	9,066
120	805	1,436	2,241	3,677	5,736	9,419
125	835	1,489	2,325	3,814	5,951	9,772
130	866	1,543	2,409	3,952	6,167	10,125
135	896	1,597	2,493	4,090	6,382	10,479
140	926	1,651	2,577	4,228	6,597	10,832
145	956	1,705	2,661	4,366	6,812	11,185
150	986	1,759	2,745	4,504	7,027	11,538
155	1,017	1,812	2,829	4,641	7,242	11,891
160	1,047	1,866	2,913	4,779	7,457	12,244
165	1,077	1,920	2,997	4,917	7,672	12,597
170	1,107	1,974	3,081	5,055	7,887	12,951
180	1,167	2,082	3,249	5,331	8,317	13,657
190	1,228	2,189	3,417	5,606	8,747	14,363
200	1,288	2,297	3,585	5,882	9,177	15,069
210	1,349	2,405	3,753	6,158	9,608	15,776
220	1,409	2,512	3,921	6,433	10,038	16,482
230	1,469	2,620	4,089	6,709	10,468	17,188
240	1,530	2,727	4,257	6,985	10,898	17,894
250	1,590	2,835	4,425	7,260	11,328	18,601
255	1,620	2,889	4,509	7,398	11,543	18,954
260	1,651	2,943	4,593	7,536	11,758	19,307
265	1,681	2,997	4,677	7,674	11,973	19,660
270	1,711	3,050	4,761	7,812	12,188	20,013
275	1,741	3,104	4,845	7,950	12,403	20,366
280	1,771	3,158	4,929	8,087	12,618	20,720
285	1,801	3,212	5,013	8,225	12,834	21,073
290	1,832	3,266	5,097	8,363	13,049	21,426
295	1,862	3,320	5,181	8,501	13,264	21,779
300	1,892	3,373	5,265	8,639	13,479	22,132
Approx. 1 psi increments	6.0	10.8	16.8	27.6	43.0	70.6

METRIC UNITS KG/HR.

ORIFICE LETTER AREA CM. ²	D 0.835	E 1.483	F 2.315	G 3.800	H 5.932	J 9.733
SET PRESSURE BARG						
0.34*	55	99	154	253	395	648
0.69*	76	135	211	347	541	888
1.1	84	149	233	382	597	980
1.5	98	175	273	448	700	1,149
2	116	207	323	531	829	1,360
2.5	136	242	378	620	968	1,589
3	156	277	433	711	1,110	1,821
3.5	175	313	489	802	1,251	2,054
4	195	348	544	892	1,393	2,286
4.5	215	384	599	983	1,535	2,518
5	235	419	654	1,074	1,676	2,750
5.5	255	454	709	1,164	1,818	2,982
6	274	490	765	1,255	1,959	3,215
6.5	294	525	820	1,346	2,101	3,447
7	314	561	875	1,436	2,242	3,679
7.5	334	596	930	1,527	2,384	3,911
8	354	631	986	1,618	2,525	4,144
8.5	374	667	1,041	1,708	2,667	4,376
9	393	702	1,096	1,799	2,808	4,608
9.5	413	737	1,151	1,890	2,950	4,840
10	433	773	1,207	1,980	3,091	5,072
10.5	453	808	1,262	2,071	3,233	5,305
11	473	844	1,317	2,162	3,374	5,537
11.5	493	879	1,372	2,252	3,516	5,769
12	512	914	1,428	2,343	3,657	6,001
12.5	532	950	1,483	2,434	3,799	6,234
13	552	985	1,538	2,524	3,941	6,466
13.5	572	1,021	1,593	2,615	4,082	6,698
14	592	1,056	1,649	2,706	4,224	6,930
15	631	1,127	1,759	2,887	4,507	7,395
16	671	1,197	1,870	3,068	4,790	7,859
17	711	1,268	1,980	3,250	5,073	8,324
18	750	1,339	2,091	3,431	5,356	8,788
19	790	1,410	2,201	3,612	5,639	9,253
20	830	1,480	2,312	3,794	5,922	9,717
20.7	857	1,530	2,389	3,920	6,120	10,042
Approx. 0.1 barg increments	4.0	7.1	11.5	18.1	28.3	46.4

Note:
Specify model 19S with stainless steel wetted trim for steam settings beyond 250 psig / 17.2 barg.
*Settings below 15 psi (1.1 barg) are non-ASME code.

SAFETY RELIEF VALVES

**19 SERIES
BRONZE SAFETY VALVE**

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 0.129	E 0.230	F 0.359	G 0.589	H 0.919	J 1.509
SET PRESSURE PSIG						
5*	39	69	108	178	277	455
10*	54	97	151	248	387	635
15	64	114	178	292	455	747
20	74	131	205	336	525	862
25	83	149	232	381	594	976
30	93	166	259	426	664	1,090
35	104	185	289	475	740	1,216
40	115	204	319	524	817	1,342
45	125	224	349	573	894	1,467
50	136	243	379	622	970	1,593
55	147	262	409	671	1,047	1,719
60	158	281	439	720	1,123	1,844
65	168	300	469	769	1,200	1,970
70	179	319	499	818	1,276	2,096
75	190	339	528	867	1,353	2,221
80	201	358	558	916	1,429	2,347
85	211	377	588	965	1,506	2,473
90	222	396	618	1,014	1,583	2,598
95	233	415	648	1,063	1,659	2,724
100	244	434	678	1,112	1,736	2,850
105	254	454	708	1,161	1,812	2,976
110	265	473	738	1,211	1,889	3,101
115	276	492	768	1,260	1,965	3,227
120	287	511	798	1,309	2,042	3,353
125	297	530	828	1,358	2,118	3,478
130	308	549	857	1,407	2,195	3,604
135	319	568	887	1,456	2,271	3,730
140	330	588	917	1,505	2,348	3,855
145	340	607	947	1,554	2,425	3,981
150	351	626	977	1,603	2,501	4,107
160	373	664	1,037	1,701	2,654	4,358
165	383	683	1,067	1,750	2,731	4,484
170	394	703	1,097	1,799	2,807	4,610
180	416	741	1,156	1,897	2,960	4,861
190	437	779	1,216	1,996	3,114	5,112
200	459	818	1,276	2,094	3,267	5,364
210	480	856	1,336	2,192	3,420	5,615
220	502	894	1,396	2,290	3,573	5,867
230	523	932	1,456	2,388	3,726	6,118
240	545	971	1,515	2,486	3,879	6,369
250	566	1,009	1,575	2,584	4,032	6,621
255	577	1,028	1,605	2,633	4,109	6,746
260	587	1,047	1,635	2,682	4,185	6,872
265	598	1,067	1,665	2,731	4,262	6,998
270	609	1,086	1,695	2,781	4,338	7,124
275	620	1,105	1,725	2,830	4,415	7,249
280	630	1,124	1,755	2,879	4,491	7,375
285	641	1,143	1,784	2,928	4,568	7,501
290	652	1,162	1,814	2,977	4,645	7,626
295	663	1,182	1,844	3,026	4,721	7,752
300	673	1,201	1,874	3,075	4,798	7,878
Approx. 1 psi increments	2.1	3.8	6.0	9.8	15.3	25.1

METRIC UNITS Nm³/HR.

ORIFICE LETTER AREA CM. ²	D 0.835	E 1.483	F 2.315	G 3.800	H 5.932	J 9.733
SET PRESSURE BARG						
0.34*	66	118	184	302	471	773
0.69*	92	164	256	421	657	1,078
1.1	112	199	311	510	796	1,306
1.5	131	233	364	598	933	1,531
2	155	276	431	708	1,105	1,813
2.5	181	323	504	827	1,291	2,119
3	207	370	578	948	1,480	2,428
3.5	234	417	651	1,069	1,669	2,738
4	260	464	725	1,190	1,857	3,047
4.5	287	511	799	1,311	2,046	3,357
5	313	559	872	1,431	2,235	3,667
5.5	340	606	946	1,552	2,423	3,976
6	366	653	1,020	1,673	2,612	4,286
6.5	392	700	1,093	1,794	2,801	4,596
7	419	747	1,167	1,915	2,989	4,905
7.5	445	795	1,241	2,036	3,178	5,215
8	472	842	1,314	2,157	3,367	5,524
8.5	498	889	1,388	2,278	3,555	5,834
9	525	936	1,461	2,398	3,744	6,144
9.5	551	983	1,535	2,519	3,933	6,453
10	577	1,030	1,609	2,640	4,122	6,763
10.5	604	1,078	1,682	2,761	4,310	7,072
11	630	1,125	1,756	2,882	4,499	7,382
11.5	657	1,172	1,830	3,003	4,688	7,692
12	683	1,219	1,903	3,124	4,876	8,001
12.5	710	1,266	1,977	3,245	5,065	8,311
13	736	1,313	2,051	3,365	5,254	8,621
13.5	763	1,361	2,124	3,486	5,442	8,930
14	789	1,408	2,198	3,607	5,631	9,240
15	842	1,502	2,345	3,849	6,008	9,859
16	895	1,596	2,493	4,091	6,386	10,478
17	948	1,691	2,640	4,332	6,763	11,097
18	1,000	1,785	2,787	4,574	7,141	11,717
19	1,053	1,879	2,935	4,816	7,518	12,336
20	1,106	1,974	3,082	5,058	7,895	12,955
20.7	1,143	2,040	3,185	5,227	8,160	13,389
Approx. 0.1 barg increments	5.3	9.4	14.7	24.2	37.7	61.9

Note:
To correct for temperature or specific gravities other than air (=1.0), multiply the SCFM from the capacity tables by factor Ksg
*Settings below 15 psi (1.1 barg) are non-ASME code.

SAFETY RELIEF VALVES