



SV66H Safety Valve

Description

SV66H Safety Valves are high-capacity full nozzle valves with standard F to Q orifices.

The SV66H has a modern design with two adjustment rings, allowing precise adjustment of the blowdown differential.

Designed for application in boilers and organic fluid vaporisers (ASME Section I).

Available types

SV66H Safety Valves have flanged connections in accordance with ASME B16.5 and can be supplied with a closed bonnet.

The materials of construction are selected to meet the temperature and pressure characteristics of the process fluid.

Applications

SV66H Safety Valves are designed for effective overpressure protection in boilers and vaporisers, including service conditions such as high pressures and high temperatures.

Consult Spirax Sarco to confirm compatibility of construction materials / service conditions.

Standards and construction

The SV66H are designed in accordance with ASME Boiler and Pressure Vessel Code, Section I. Capacities are certified by the National Board of Boiler and Pressure Vessel Inspectors.

For steam service, the valve can be stamped with 'V' and 'NB' marks.

The construction materials meet the requirements of ASME Code Section I PG-73.3 and the sealing tests (watertightness) are carried out in accordance with the requirements of item PG-73.5.3 of this code.

Certificates

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.

Options

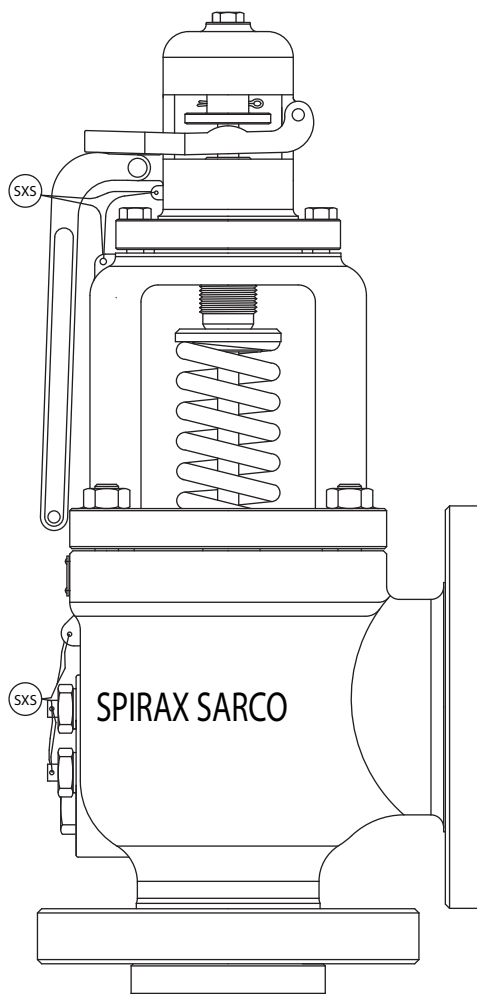
Hardened seat - Stellite 6

Closed bonnet

Cooling spacer

Installation and maintenance

Consult the latest revision of the Installation and Maintenance Manual IM-P276-03.



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Operating pressure/temperature limits

Pressure

Minimum set pressure	21 bar g
* Maximum set pressure	83 bar g
Hydrostatic test pressure	1.5 x design pressure

* Based on SA 217 Gr WC9 alloy steel @ 538 °C (ASME B16.34 and ASME B16.5). The values depend on the pressure class of the valve inlet flange.

Temperature

Body material	Specification	Max °C
Carb. steel	SA 216 Gr WCB	425
Alloy steel	SA 217 Gr WC9	538
*Alloy steel	SA 217 Gr WC9	538

* Option available on request.

Temperature limits based on ASME B16.34 and ASME B16.5 standards

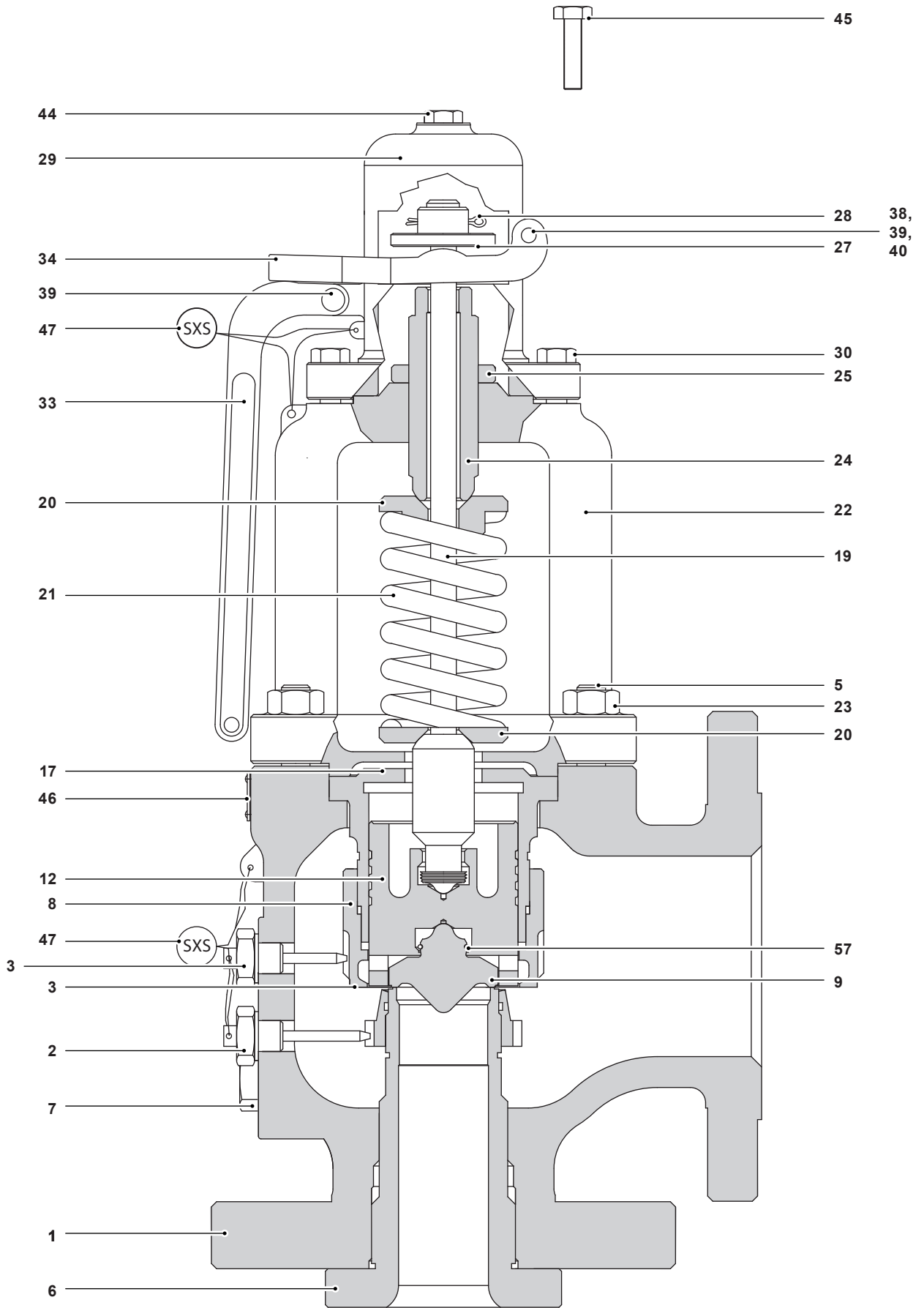
Materials

N°	Part	Material
1	Body	up to 425 °C SA 216 Gr WCB
		426 °C to 538 °C SA 217 Gr WC9
2	Pipe plug	Carbon Steel
3	Lower Locking Screw.	Stainless Steel
4	Upper Locking Screw.	Stainless Steel
5	Stud	SA 193 Gr B7
6	Nozzle	Stainless Steel T 316
7	Lower Adjustment Ring.	Stainless Steel T 316
8	Upper Adjustment Ring.	Stainless Steel T 316
9	Disc	up to 425 °C Hardened Stainless Steel (17-4-PH)
		426 °C to 538 °C Inconel
12	Disk Holder	up to 425 °C Stainless Steel T 316
		426 °C to 538 °C Monel
17	Guide	up to 425 °C Stainless Steel T 316
		426 °C to 538 °C Monel
19	Stem	Stainless Steel
20	Spring Washer	Carbon Steel
21	Spring	up to 230 °C Carbon Steel
		231 °C to 400 °C High Temperature Alloy Steel
		400 °C to 538 °C Inconel
22	Bonnet	SA 216 Gr WCB

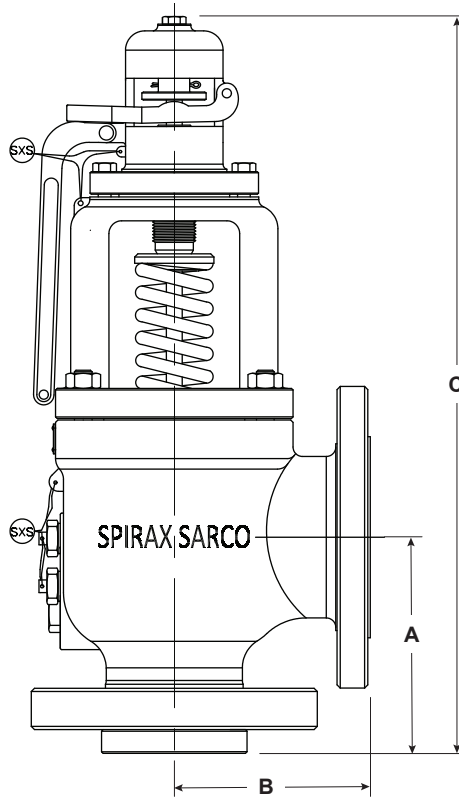
N°	Part	Material
23	Nut	SA 194 Gr 2H
24	Adjustment Screw	Stainless Steel
25	Lock Nut	Stainless Steel
27	Lever Disc	Carbon Steel
28	Cotter pin	Carbon Steel
29	Hood	ASTM A 216 Gr WCB
30	Screw	ASTM A 193 Gr B7
33	Lever	Carbon Steel
34	Fork	Carbon Steel
38	Washer	Carbon Steel
39	Pin	Carbon Steel
40	Cotter pin	Carbon Steel
44	Screw Cap	Carbon Steel
45	Test Gag	Carbon Steel
46	Nameplate	Stainless Steel
47	Seal	Plastic / Lead
57	Retaining ring	until 425 °C Inox T 302
		426 °C to 538 °C Inconel

** Other materials on request

Safety Valve SV66H

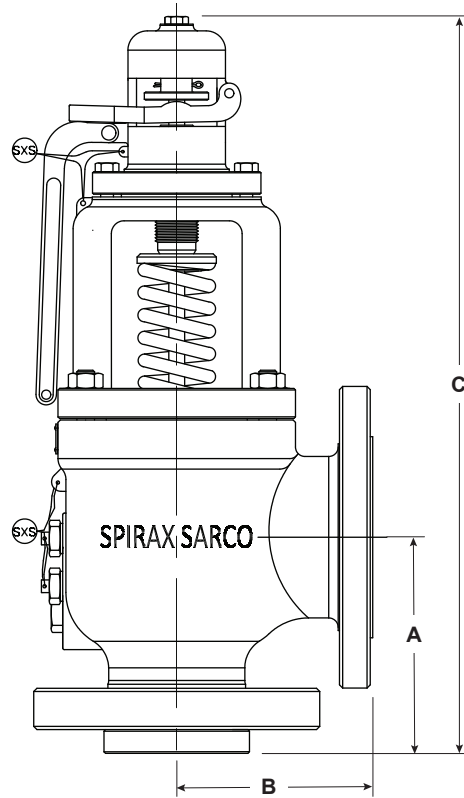


Dimensions / Weights
(approximate) in mm and kg



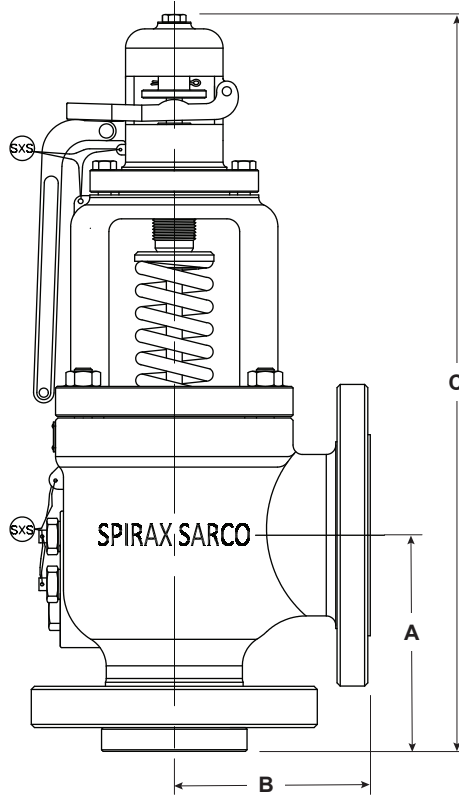
Orifice	Size		Class	A	B	C	D	Weight		
	Inlet	Outlet								
F	1½"	2"	300 x 150	123.8	152.4	460	36	25		
			600 x 150							
			900 x 150	143.8		480	49	30		
			1500 x 150							
G	1½"	3"	300 x 150	123.8	152.4	476	38	29		
			600 x 150							
			900 x 150	148.8		501	49	34		
			1500 x 150							
H	1½"	3"	600 x 150	154	161.9	555	41	42		
			900 x 150		181.9		50	45		
			1500 x 150		161.9		44	42		
	300 x 150									
	600 x 150									
	2"		900 x 150		181.9		56	46		
1500 x 150		181.9	56	46						
300 x 150										
600 x 150										
J	2"	3"	300 x 150	136.5	123.8	490	39	34		
			600 x 150							
			900 x 150							
	2½"	4"	1500 x 150	184.2	181	690	44	60		
			600 x 150						61	78
			900 x 150							
3"	4"	600 x 150	48				62			
		900 x 150								
		1500 x 150						63	80	

Dimensions / Weights
(approximate) in mm and kg
(continued)



Orifice	Size		Class	A	B	C	D	Weight
	Inlet	Outlet						
K	2½"	4"	300 x 150	184.2	181	690	39	62
			600 x 150				44	
			900 x 150				54	72
			1500 x 150				54	80
	3"	4"	300 x 150				44	62
			600 x 150				47	
			900 x 150				57	72
			1500 x 150				63	80
K2	2½"	6"	300# x 150#	195.4	215.9	805	40	75
			600# x 150#				45	
			900# x 150#				58	82
			1500# x 150#				58	82
	3"	6"	300# x 150#				43	77
			600# x 150#				43	77
			900# x 150#				53	84
			1500# x 150#				63	94

Dimensions / Weights
(approximate) in mm and kg
(continued)



Orifice	Size		Class	A	B	C	D	Weight
	Inlet	Outlet						
L	3"	6"	300 x 150	197.4	215.9	807	45	78
			600 x 150				55	85
			900 x 150				65	95
			1500 x 150					
M	3"	6"	300 x 150	177.8	203.2	780	48	95
	4"		600 x 150				55	
	3"		900 x 150	196.9	222.3	800	60	115
			1500 x 150					
N	4"	6"	300 x 150	196.9	209.6	882	48	92
			600 x 150		222.3		55	125
			900 x 150				62	
P	4"	6"	300 x 150	225.4	254	912	49	125
			600 x 150			985	57	170
			900 x 150				63	175
Q	6"	8"	300 x 150	238.7	241.3	1060	57	235
			600 x 150				70	240
			900 x 150	253.7	241.3	1075	76	260

Pressure/Temperature Limits

Orifice	Size		Class	Body material and maximum temperature ⁽¹⁾		
				Maximum set pressure (bar g) ⁽²⁾		
	Inlet	Outlet		300 °C SA 216 WCB	425 °C SA 216 WCB	538 °C SA 217 WC9
F	1½"	2"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
G	1½"	3"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
H	1½"	3"	900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
	2"		300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
J	2"	3"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
	2.1/2"	4"	900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
	3"	4"	600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
1500# x 150#			82.7			
K	2.1/2"	4"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
	3"	4"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
K2	2.1/2"	6"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
	3"	6"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7

Pressure/Temperature Limits continued on next page

Notes: (1) SA 217 WC9 is the Spirax Sarco standard for high temperature. SA 217 WC6 can be supplied as an alternative on request.

(2) The maximum set pressure is the pressure limit for the inlet flange class according to ASME B16.34 / ASME B16.5 or the maximum pressure of the model, whichever is lower.

Pressure/Temperature Limits (continued)

Orifice	Size		Class	Body material and maximum temperature ⁽¹⁾		
				Maximum set pressure (bar g) ⁽²⁾		
	Inlet	Outlet		300 °C SA 216 WCB	425 °C SA 216 WCB	538 °C SA 217 WC9
L	3"	6"	300# x 150#	39.8	28.2	18.4
			600# x 150#	79.6	57.5	36.9
			900# x 150#	82.7	82.7	55.3
			1500# x 150#			82.7
M	3"	6"	300# x 150#	39.8	28.2	18.4
	4"		600# x 150#	75.8	57.5	36.9
	3"		900# x 150#	75.8	75.8	55.3
			1500# x 150#			75.8
N	4"	6"	300# x 150#	39.8	28.2	18.4
			600# x 150#	68.9	57.5	36.9
			900# x 150#		68.9	55.3
P	4"	6"	300# x 150#	39.8	28.2	18.4
			600# x 150#	68.9	57.5	36.9
			900# x 150#		68.9	55.3
Q	6"	8"	300# x 150#	39.8	28.2	18.4
			600# x 150#	51.0	51.0	36.9
			900# x 150#			51.0

- Notes:**
- (1) SA 217 WC9 is the Spirax Sarco standard for high temperature. SA 217 WC6 can be supplied as an alternative on request.
 - (2) The maximum set pressure is the pressure limit for the inlet flange class according to ASME B16.34 / ASME B16.5 or the maximum pressure of the model, whichever is lower.

Capacity Table - Steam - 3% Overpressure - kg/h

Set Pressure (bar g)	Orifice Designation / Actual Area (cm ²)										
	F	G	H	J	K	K2	L	M	N	P	Q
	2.116	3.464	5.432	8.864	12.69	16.47	19.70	24.81	29.89	44.06	76.20
1.0	206	337	528	862	1,234	1,602	1,916	2,414	2,908	4,286	7,413
1.5	254	415	651	1,063	1,521	1,974	2,361	2,974	3,583	5,282	9,134
2.0	301	493	774	1,263	1,808	2,346	2,807	3,535	4,258	6,277	10,856
2.5	349	572	897	1,463	2,095	2,718	3,252	4,095	4,933	7,272	12,577
3.0	397	650	1,019	1,663	2,381	3,091	3,697	4,656	5,609	8,268	14,299
3.5	445	728	1,142	1,864	2,668	3,463	4,142	5,216	6,284	9,263	16,020
4.0	493	807	1,265	2,064	2,955	3,835	4,587	5,777	6,959	10,258	17,742
4.5	540	885	1,387	2,264	3,241	4,207	5,032	6,337	7,635	11,254	19,463
5.0	589	965	1,513	2,468	3,534	4,586	5,486	6,909	8,323	12,269	21,219
5.5	638	1,045	1,639	2,675	3,829	4,970	5,944	7,486	9,019	13,294	22,992
6.0	688	1,126	1,765	2,881	4,124	5,353	6,403	8,063	9,714	14,320	24,765
6.5	737	1,206	1,892	3,087	4,420	5,736	6,861	8,641	10,410	15,345	26,538
7.0	786	1,287	2,018	3,293	4,715	6,119	7,319	9,218	11,105	16,370	28,312
7.5	835	1,368	2,145	3,500	5,010	6,503	7,778	9,795	11,801	17,395	30,085
8.0	885	1,448	2,271	3,706	5,305	6,886	8,236	10,373	12,496	18,421	31,858
8.5	934	1,529	2,397	3,912	5,601	7,269	8,695	10,950	13,192	19,446	33,631
9.0	983	1,609	2,524	4,118	5,896	7,652	9,153	11,527	13,888	20,471	35,404
9.5	1,032	1,690	2,650	4,325	6,191	8,036	9,611	12,105	14,583	21,496	37,177
10	1,082	1,771	2,777	4,531	6,487	8,419	10,070	12,682	15,279	22,522	38,950
12	1,279	2,093	3,282	5,356	7,668	9,952	11,903	14,991	18,061	26,623	46,043
14	1,476	2,416	3,788	6,181	8,849	11,485	13,737	17,300	20,843	30,724	53,135
16	1,672	2,738	4,293	7,006	10,030	13,018	15,571	19,610	23,625	34,825	60,228
18	1,869	3,060	4,799	7,831	11,211	14,551	17,404	21,919	26,407	38,926	67,320
20	2,066	3,383	5,305	8,656	12,392	16,084	19,238	24,228	29,189	43,027	74,413
22	2,263	3,705	5,810	9,481	13,574	17,617	21,072	26,537	31,971	47,128	81,506
24	2,460	4,028	6,316	10,306	14,755	19,150	22,905	28,847	34,753	51,229	88,598
26	2,657	4,350	6,821	11,131	15,936	20,683	24,739	31,156	37,535	55,330	95,691
28	2,854	4,672	7,327	11,956	17,117	22,216	26,573	33,465	40,317	59,431	102,783
30	3,051	4,995	7,833	12,781	18,298	23,749	28,406	35,774	43,100	63,532	109,876
32	3,248	5,317	8,338	13,606	19,479	25,282	30,240	38,084	45,882	67,633	116,968

Capacity Table - Steam - 3% Overpressure - kg/h continued on next page

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.865
 lb/h = Kg/h / 0.4536

Capacity Table - Steam - 3% Overpressure - kg/h (continued)

Set Pressure (bar g)	Orifice Designation / Actual Area (cm ²)										
	F	G	H	J	K	K2	L	M	N	P	Q
	2.116	3.464	5.432	8.864	12.69	16.47	19.70	24.81	29.89	44.06	76.20
34	3,445	5,640	8,844	14,431	20,661	26,815	32,073	40,393	48,664	71,734	124,061
36	3,642	5,962	9,349	15,256	21,842	28,348	33,907	42,702	51,446	75,835	131,153
38	3,839	6,285	9,855	16,082	23,023	29,881	35,741	45,012	54,228	79,936	138,246
40	4,036	6,607	10,361	16,907	24,204	31,414	37,574	47,321	57,010	84,037	145,338
42	4,233	6,929	10,866	17,732	25,385	32,947	39,408	49,630	59,792	88,138	152,431
44	4,430	7,252	11,372	18,557	26,566	34,480	41,242	51,939	62,574	92,239	159,523
46	4,627	7,574	11,877	19,382	27,747	36,013	43,075	54,249	65,356	96,340	166,616
48	4,824	7,897	12,383	20,207	28,929	37,546	44,909	56,558	68,138	100,441	173,708
50	5,021	8,219	12,889	21,032	30,110	39,079	46,743	58,867	70,920	104,542	180,801
55	5,513	9,025	14,153	23,094	33,063	42,911	51,327	64,640	77,876	114,794	
60	6,005	9,831	15,417	25,157	36,016	46,744	55,911	70,413	84,831	125,047	
65	6,498	10,637	16,681	27,220	38,968	50,576	60,495	76,187	91,786	135,299	
70	6,990	11,443	17,945	29,282	41,921	54,409	65,079	81,960	98,741	145,552	
75	7,483	12,249	19,209	31,345	44,874	58,241	69,663	87,733			
80	7,975	13,055	20,473	33,407	47,827	62,074	74,247				
85	8,467	13,861	21,737	35,470	50,780	65,906	78,831				

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.865
 lb/h = Kg/h / 0.4536

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

Set Pressure (bar g)	Orifice Designation / Actual Area (cm ²)										
	F	G	H	J	K	K2	L	M	N	P	Q
	2.116	3.464	5.432	8.864	12.69	16.47	19.70	24.81	29.89	44.06	76.20
1.0	212	347	545	889	1,273	1,652	1,976	2,489	2,998	4,420	7,643
1.5	260	426	668	1,089	1,560	2,024	2,421	3,049	3,673	5,415	9,365
2.0	308	504	790	1,290	1,846	2,396	2,866	3,610	4,349	6,410	11,086
2.5	356	589	924	1,507	2,158	2,800	3,349	4,218	5,082	7,491	12,956
3.0	403	675	1,059	1,727	2,473	3,210	3,839	4,835	5,825	8,586	14,850
3.5	451	761	1,194	1,948	2,788	3,619	4,329	5,451	6,568	9,681	16,743
4.0	499	847	1,329	2,168	3,104	4,028	4,818	6,068	7,310	10,776	18,637
4.5	547	933	1,464	2,388	3,419	4,437	5,308	6,685	8,053	11,871	20,530
5.0	595	1,019	1,599	2,608	3,734	4,847	5,797	7,301	8,796	12,966	22,424
5.5	642	1,105	1,734	2,829	4,050	5,256	6,287	7,918	9,539	14,061	24,318
6.0	690	1,192	1,869	3,049	4,365	5,665	6,776	8,534	10,282	15,156	26,211
6.5	738	1,278	2,003	3,269	4,680	6,075	7,266	9,151	11,024	16,251	28,105
7.0	786	1,364	2,138	3,490	4,996	6,484	7,756	9,767	11,767	17,346	29,999
7.5	835	1,450	2,273	3,710	5,311	6,893	8,245	10,384	12,510	18,441	31,892
8.0	885	1,536	2,408	3,930	5,627	7,303	8,735	11,000	13,253	19,536	33,786
8.5	934	1,622	2,543	4,150	5,942	7,712	9,224	11,617	13,996	20,630	35,680
9.0	983	1,708	2,678	4,371	6,257	8,121	9,714	12,233	14,738	21,725	37,573
9.5	1,032	1,794	2,813	4,591	6,573	8,530	10,203	12,850	15,481	22,820	39,467
10	1,082	1,880	2,948	4,811	6,888	8,940	10,693	13,467	16,224	23,915	41,360
12	1,279	2,225	3,488	5,692	8,149	10,577	12,651	15,933	19,195	28,295	48,935
14	1,476	2,569	4,028	6,573	9,411	12,214	14,609	18,399	22,166	32,675	56,510
16	1,672	2,913	4,568	7,455	10,672	13,851	16,568	20,865	25,137	37,054	64,084
18	1,869	3,258	5,108	8,336	11,934	15,488	18,526	23,331	28,109	41,434	71,659
20	2,066	3,602	5,648	9,217	13,195	17,126	20,484	25,798	31,080	45,814	79,233
22	2,263	3,946	6,188	10,098	14,457	18,763	22,442	28,264	34,051	50,194	86,808
24	2,460	4,291	6,728	10,979	15,718	20,400	24,401	30,730	37,022	54,573	94,382
26	2,657	4,635	7,268	11,860	16,979	22,037	26,359	33,196	39,993	58,953	101,957
28	2,854	4,979	7,808	12,741	18,241	23,674	28,317	35,662	42,964	63,333	109,531
30	3,051	5,324	8,348	13,622	19,502	25,311	30,275	38,129	45,936	67,712	117,106
32	3,248	5,668	8,888	14,504	20,764	26,949	32,234	40,595	48,907	72,092	124,680

Capacity Table - Steam - 10% Overpressure - kg/h continued on next page

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.865
 lb/h = Kg/h / 0.4536

Capacity Table - Steam - 10% Overpressure - kg/h (continued)

Set Pressure (bar g)	Orifice Designation / Actual Area (cm ²)										
	F	G	H	J	K	K2	L	M	N	P	Q
	2.116	3.464	5.432	8.864	12.69	16.47	19.70	24.81	29.89	44.06	76.20
34	3,445	6,012	9,428	15,385	22,025	28,586	34,192	43,061	51,878	76,472	132,255
36	3,642	6,357	9,968	16,266	23,287	30,223	36,150	45,527	54,849	80,852	139,830
38	3,839	6,701	10,508	17,147	24,548	31,860	38,108	47,993	57,820	85,231	147,404
40	4,036	7,045	11,048	18,028	25,809	33,497	40,067	50,460	60,791	89,611	154,979
42	4,233	7,390	11,588	18,909	27,071	35,135	42,025	52,926	63,763	93,991	162,553
44	4,430	7,734	12,128	19,790	28,332	36,772	43,983	55,392	66,734	98,370	170,128
46	4,627	8,078	12,668	20,671	29,594	38,409	45,941	57,858	69,705	102,750	177,702
48	4,824	8,423	13,208	21,552	30,855	40,046	47,900	60,324	72,676	107,130	185,277
50	5,021	8,767	13,748	22,434	32,117	41,683	49,858	62,791	75,647	111,510	192,851
55	5,513	9,628	15,098	24,636	35,270	45,776	54,754	68,956	83,075	122,459	
60	6,005	10,489	16,447	26,839	38,424	49,869	59,649	75,122	90,503	133,408	
65	6,498	11,349	17,797	29,042	41,577	53,962	64,545	81,287	97,931	144,357	
70	6,990	12,210	19,147	31,245	44,731	58,055	69,440	87,453	105,359	155,307	
75	7,483	13,071	20,497	33,447	47,884	62,148	74,336	93,618			
80	7,975	13,932	21,847	35,650	51,038	66,241	79,232				
85	8,467	14,793	23,197	37,853	54,192	70,334	84,127				

For sizing purpose using the ASME actual areas, the certified coefficient of discharge Kd for air, gas and steam is 0.865
 lb/h = Kg/h / 0.4536

Run Factor (Ks) for Superheated Steam

Set Pressure (bar g)	Saturated Steam Temp. °C	Temperature °C																																		
		160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	
1.1	122	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77
1.5	128	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77
2.0	134	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77
2.5	140	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77
3.0	144	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77
3.5	149	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77
4.0	152	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
4.5	156	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
5.0	160	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
5.5	162	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
6.0	166	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
6.5	168	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
7.0	171	1.00	1.00	0.99	0.99	0.99	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
7.5	173	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
8.0	176	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
8.5	178	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
9.0	180	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
9.5	182	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
10	184	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77
12	192	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.78	0.77
14	198	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.77	
16	205	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78
18	210	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.85	0.84	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78
20	216	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.85	0.84	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78
22	220	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78

For capacity in superheated steam, multiply capacity of saturated steam by the flow factor (Ks).

Run Factor (Ks) for Superheated Steam continued on next page

Run Factor (Ks) for Superheated Steam (continued)

Set Pressure (bar g)	Saturated Steam Temp. °C	Temperature °C																																						
		160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490					
24	224									1.00	0.99	0.97	0.96	0.94	0.93	0.92	0.91	0.91	0.89	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.83	0.82	0.81	0.81	0.80	0.79	0.78	0.78						
26	228									1.00	0.99	0.98	0.96	0.95	0.93	0.92	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78						
28	232										1.00	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78					
30	236										1.00	0.99	0.97	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78					
32	240										1.00	0.99	0.97	0.96	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78					
34	243											1.00	0.98	0.96	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78					
36	246											1.00	0.99	0.97	0.95	0.94	0.93	0.92	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78				
38	249											1.00	0.99	0.97	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78				
40	252											1.00	0.99	0.98	0.96	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78				
42	255												1.00	0.98	0.97	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78			
44	258												1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.78	0.78			
46	261												1.00	0.99	0.98	0.96	0.95	0.93	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.79			
48	263													1.00	0.98	0.96	0.95	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.79			
50	265													1.00	0.98	0.97	0.95	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.79			
55	272														1.00	0.98	0.96	0.95	0.93	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.85	0.84	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79			
60	277															1.00	0.99	0.97	0.96	0.94	0.92	0.90	0.89	0.88	0.87	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79			
65	282																1.00	1.00	0.98	0.96	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.79			
70	287																	1.00	0.99	0.98	0.96	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80			
75	292																		1.00	0.99	0.97	0.95	0.94	0.92	0.91	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80			
80	296																			1.00	0.97	0.95	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.80		
85	300																				1.00	0.98	0.96	0.95	0.93	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.80	0.80	
90	304																					1.00	0.98	0.97	0.96	0.94	0.92	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.80

For capacity in superheated steam, multiply capacity of saturated steam by the flow factor (Ks).

Purchasing Information

The following information is required for the correct sizing and selection of SV66H Safety Valves:

- 1) Required Capacity (Flow) per Valve or Boiler Production Capacity
- 2) Operating Pressure and Set Pressure or MAWP of the boiler
- 3) Available connections.

Spirax Sarco offers the PSV Calc sizing software for selecting safety valves.