ANDERSON GREENWOOD SERIES 5200
PILOT OPERATED PRESSURE RELIEF VALVES

Serving economizer applications requiring pressure relief under stringent requirements.

TECHNICAL DATA

- Orifice sizes: **F** 0.307 in² (1.98 cm²) thru **P** 6.38 in² (41.16 cm²)
- Set pressure range: 15 to 6250 psig [1.03 to 431 barg]
- Relieving temperatures: to 1000°F [538°C]

GENERAL APPLICATION

Anderson Greenwood Crosby developed the new Series 5200 specifically to serve Economizer applications requiring pressure relief under the stringent requirements of ASME Section I and Code Case 2446. This unique and challenging application requires premium performance on a valve that must have ASME Section I certified capacities for both steam and water.

A modulating pilot operated pressure relief valve is the ideal solution to this difficult application. Since the ASME Section I valve on an Economizer historically was certified only on steam, the valve would chatter when exposed to either water or flashing water service. Instead of opening quickly (as occurs with a spring-loaded valve), a modulating pilot operated valve will only open proportional to the specific overpressure need, thereby eliminating valve chatter.

The Anderson Greenwood Series 5100 introduced in 2008, was the first non-flowing, modulating pilot operated pressure relief valve that became certified under ASME Section I. The new series 5200 uses a full nozzle design and metal main valve seat to address higher temperature requirements. The introduction of the Series 5200 compliments the Series 5100 by extending the temperature range to 1000°F in standard material (1200°F optional).

The standard condensate trap used on the Series 5200 condenses steam into water prior to entering the pilot, providing a liquid condensate temperature barrier between the plastic soft sealed pilot and main valve. In addition, this creates piston seal cooling via conduction cooling from condensing steam around liner. There are no pilot component changes required to handle service conditions changing to and from steam and water.

Its unique design enables the main valve to be tight at pressures up to set point. After relieving and reseating, it stays bubble-tight, cycle after cycle.

FEATURES AND BENEFITS

- **Reduced product loss and pollution:** soft seated pilot with a metal seated main valve for premium tightness before and after relief cycles.
- **All plastic pilot soft goods:** there are no elastomer seats or seals providing for chemical compatibility with corrosion inhibitors which may be found in feedwater service.
- **Increased system output:** because of total valve tightness to at least 96 percent of set pressure, the system can be operated closer to set pressure without valve leakage. The result is greater system production capability.
- **Balanced design:** proper valve operation and lift are unaffected by back pressure. The Series 5200 pilot is exhausted to the outlet of the main valve with no effect on its set pressure.
- **ASME Section I Stamp:** certified National Board capacities for steam and water per Code Case 2446 assures the user of independent third party flow rate verification.
- **ASME Section VIII Stamp:** certified National Board capacities for steam also available.
- **Reduced noise:** modulating action minimizes flow and resultant noise during normal system upset reducing noise abatement costs.
- **Non-flowing pilot:** minimizes entrance of dirt and debris in the pilot. Due to low velocities within the pilot and supply tubing, most particles will drop out upstream of the pilot inlet screen.
- **Ease of adjustment:** single adjustment for set pressure allows for accurate and dependable testing.
- **Rugged pilot mounting:** rigid, low profile bracket mounting protects against vibration and careless handling.

SPECIFICATIONS

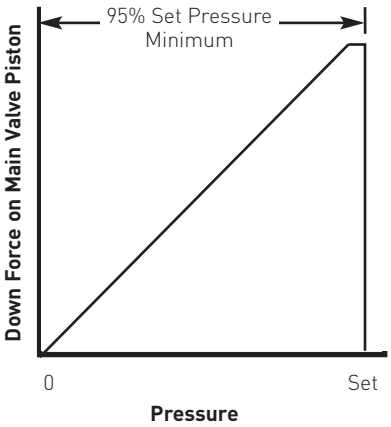
- Teflon®/PEEK seals throughout pilot for optimum chemical resistance, such as needed for various chemicals in boiler feedwater.
- Single point set pressure adjustment.
- Full nozzle design.
- Integral backflow preventer.
- Body bowl drain.
- Non-flowing, all plastic seat/seals, pilot.
- Lifting Lever standard on ASME Section I service.
- Pilot condensate trap standard.
- Remote sensing standard
- Optional accessories include:
  - Field test connection
  - Pilot gag
  - Sense ring (for sensing at valve inlet)

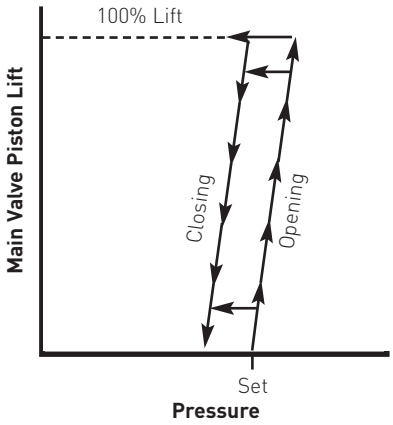
OPERATION

In normal operation, the system pressure acts on the area contained by the main valve seat at the bottom of the free-floating differential area piston and on the top of the piston. Since the top of the piston is larger than the bottom (seat area), there is a large downward net force holding the piston closed. Under static conditions, the seating force increases as the system pressure increases and approaches set point.

Just prior to set pressure the pilot opens and partially depressurizes the dome. This reduces the force on the top of the piston. The set pressure is the point where the upward force on the main valve seat area can overcome the reduced downward loading. This causes the piston to lift, resulting in modulated flow through the main valve. As the main valve is relieving the flow through the pilot stops.

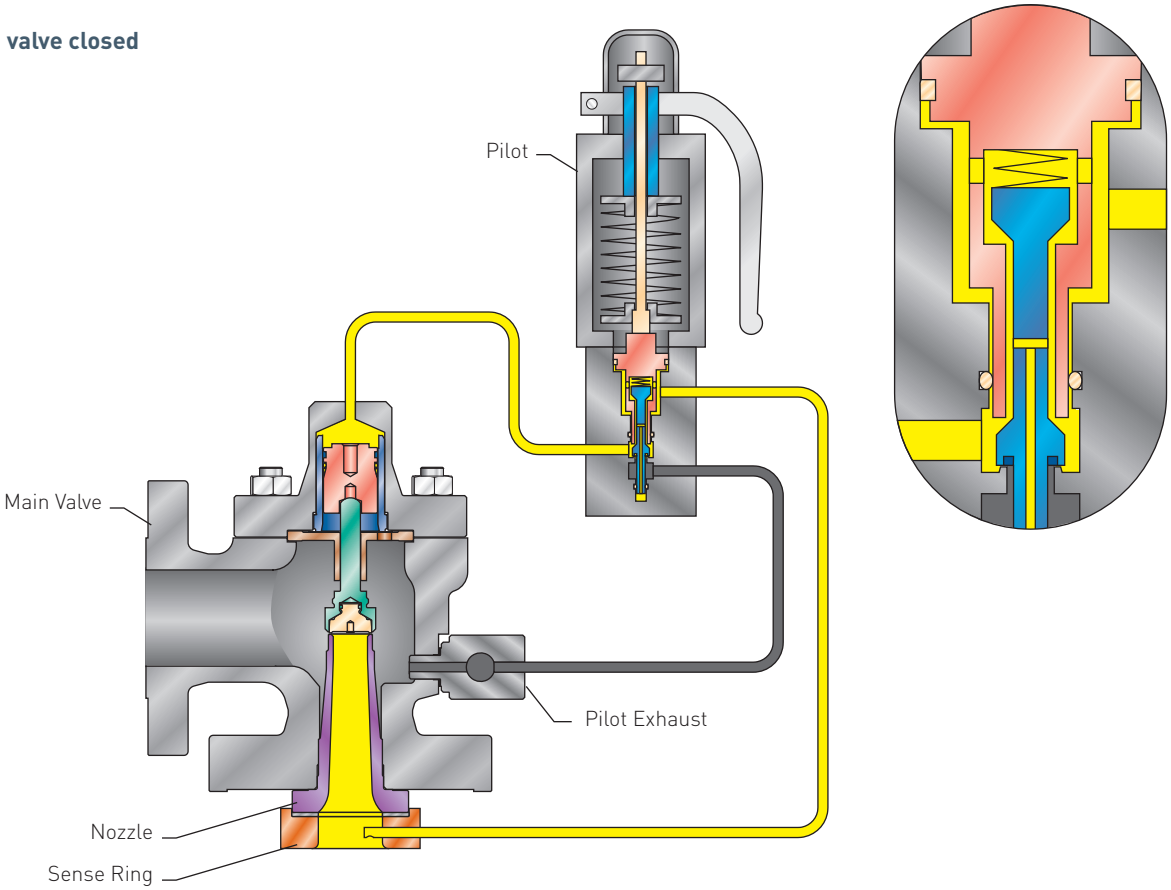
When the relief demand has been satisfied, the pilot closes, full system pressure is diverted to the dome, and the piston moves downward, closing the main valve.



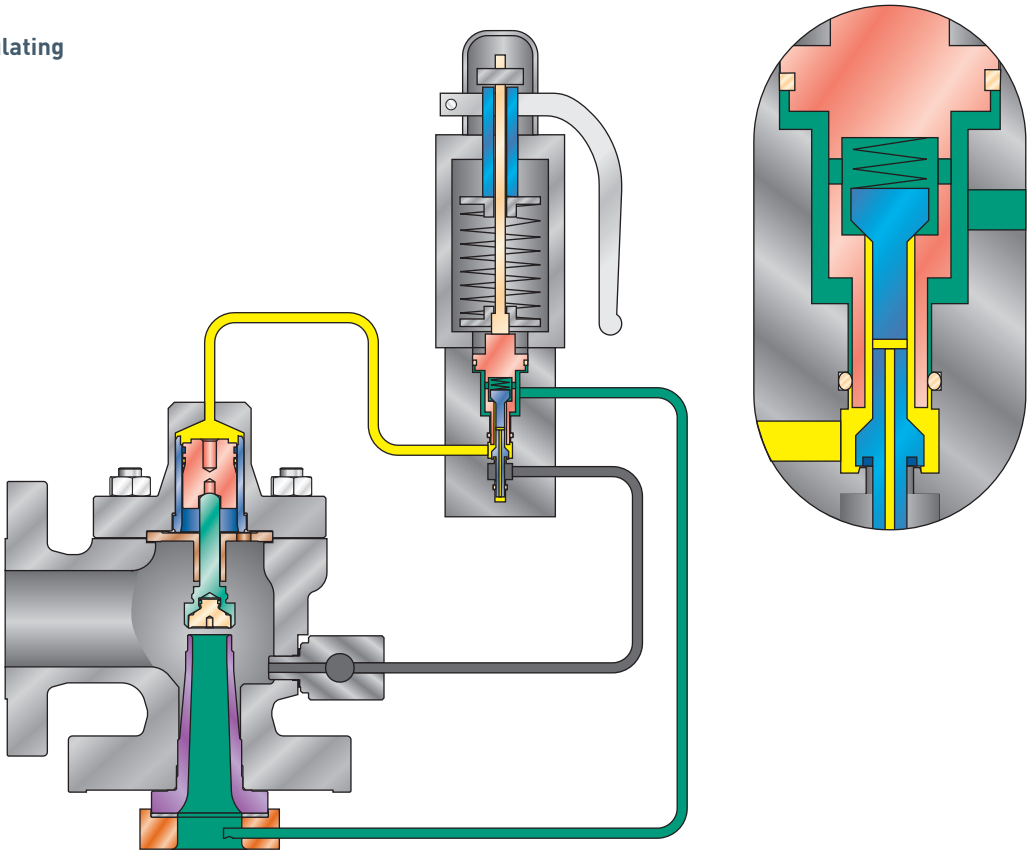


SERIES 5200 OPERATIONS

Main valve closed

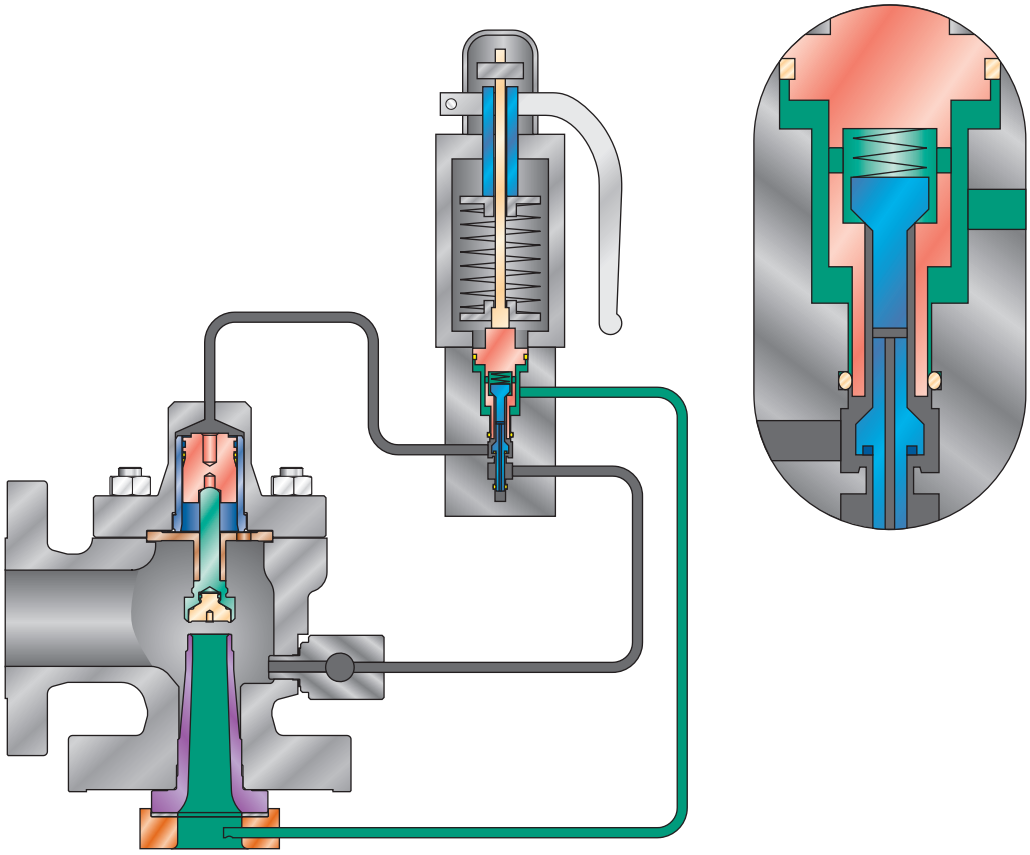


Main valve modulating



SERIES 5200 OPERATIONS

Main valve open



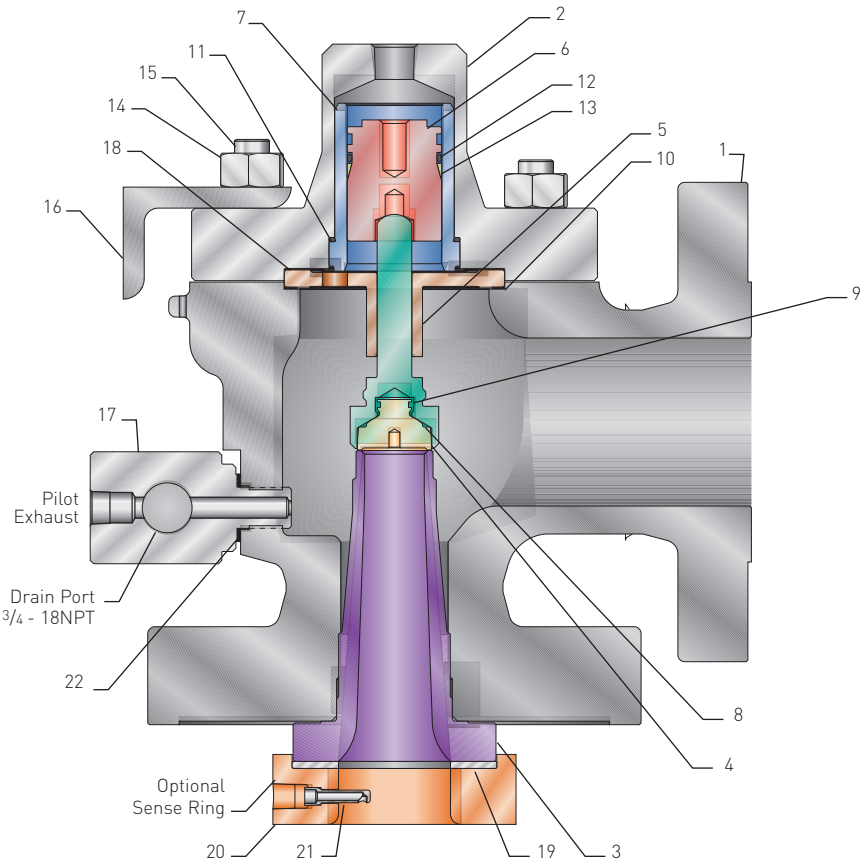
SIZING
EFFECTIVE API ORIFICE AREA, IN² [CM²]

Inlet size	Outlet size	Type 5247 flow area	Set pressure range
1.5	2[1], 2.5[2]	0.307 (F)	15 to 6250
1.5	2.5[3], 3[4]	0.503 (G)	15 to 3750
2	3	0.503 (G)	15 to 6250
1.5	3	0.785 (H)	15 to 3750
2	3	0.785 (H)	15 to 3750
2	3	1.287 (J)	15 to 290
2	4	1.287 (J)	15 to 3750
2.5	4	1.287 (J)	15 to 2250
3	4	1.287 (J)	15 to 3750
2.5	4	1.838 (K)	15 to 2250
3	4	1.838 (K)	15 to 2250
3	4	2.853 (L)	15 to 750
3	6	2.853 (L)	15 to 2250
4	6	2.853 (L)	15 to 2250
4	6	3.60 (M)	15 to 2250
4	6	4.34 (N)	15 to 1500
4	6	6.38 (P)	15 to 1500

Notes:

1. Set pressure range is 15 - 1500 psi
2. Set pressure range is 15 - 6250 psi
3. Set pressure range is 15 - 3750 psi
4. Set pressure range is 15 - 2250 psi

MATERIALS OF CONSTRUCTION



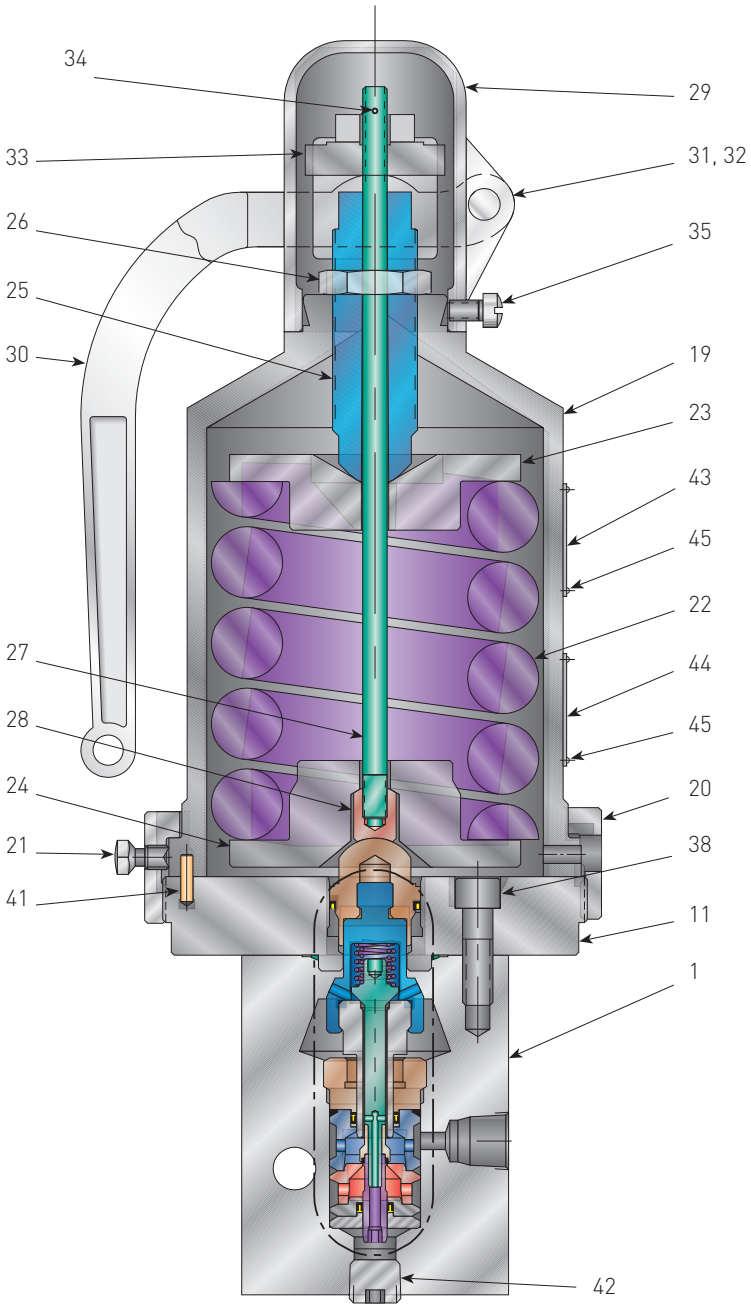
Item no.	Description	Material /S1 Trim	/S3 Trim
1	Body	STL SA216-WCB/WCC	STL SA217-WC6
2	Cap	STL SA105	STL SA105
3	Nozzle	SST SA351-CF8M	SST SA351-CF8M
4	Disc holder	SST SA351-CF3M	SST SA351-CF3M
5	Guide	SST A297-HE	SST A297-HE
6	Piston	SST 17-4 PH1150	SST 17-4 PH1150
7	Liner	SST 316[2]	SST 316[2]
8	Disc insert	SST 316	SST 316
9	Retaining clip	Inconel® X750	Inconel® X750
10	Gasket	SST 316	SST 316
11	Liner seal	EPDM	EPDM
12	Piston seal	EPDM	EPDM
13	Wedge ring	Teflon®[3]	Teflon®[3]
14	Nut	STL SA194-2H or NI ALY SB637-N07718[4]	
15	Stud	STL SA193-B7 or SB637-No7718[4]	
16	Bracket	STL A36	STL A36
17	Body drain fitting	SST 316	SST 316
18	Gasket	Organic Fiber	Organic Fiber
19	Gasket	SST 316L/Graphite	SST 316L/Graphite
20[1]	Sense ring	SST 316	SST 316
21[1]	Pitot tube	SST 316	SST 316
22[1]	Gasket	Organic Fiber	Organic Fiber

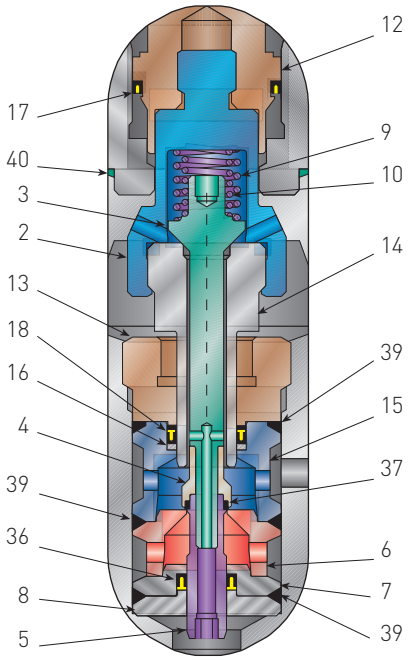
Notes:

1. Remote sense standard, internal sense optional.
2. SST 17-4 PH1150 for 900# through 2500# inlet.
3. 35% carbon filled.
4. Chrome-Moly studs and carbon steel nuts or Inconel® 718 studs and nuts, depending on valve size and pressure class.

Note - unless otherwise specified

PILOT MATERIALS OF CONSTRUCTION





PILOT MATERIALS OF CONSTRUCTION

Item	Description	Material
1	Body	SST 316
2	Piston connector	SST 316
3	Inlet seat	SST 316
4	Exhaust seat retainer	SST 316
5	Exhaust seat stem	SST 316
6	Exhaust nozzle	SST 316
7	Exhaust washer	SST 316
8	Stop washer	SST 316
9	Outer spool spring	Inconel® X750
10	Inner spool spring	Inconel® X750
11	Piston plate	SST 316
12	Piston	SST 316
13	Bushing	SST 316
14	Inlet nozzle	SST 316
15	Dome spool	SST 316
16	Dome seal backup ring	PEEK
17	Piston seal	Teflon®/Elgiloy
18	Dome seal	Teflon®/Elgiloy
19	Spring bonnet	SST 316
20	Bonnet ring	SST 316
21	Bonnet ring screw	SST 18-8
22	Spring	SST 316
23	Washer spring (upper)	SST 316
24	Washer spring (lower)	SST 316
25	Pressure set screw	SST 17-4 PH1150
26	Adjusting screw locknut	SST 316
27	Lifting rod	SST 17-4 PH1150
28	Spindle lift lever bushing	SST 316
29	Lift lever cap	SST SA351-CF8M
30	Lift lever	SST SA351-CF8M
31	Lift lever pin	SST 316
32	Cotter pin	SST 18-8
33	Spindle nut	SST 316
34	Cotter pin	SST 18-8
35	Lift lever cap screw	SST 18-8
36	Stem seal	Teflon®/Elgiloy
37	Exhaust seat	Teflon®/15% Graphite
38	Piston plate screw	SST 17-4 PH1150
39	Spool/body seal	Teflon® TFE
40	Body/piston plate seal	Teflon® TFE
41	Roll pin	SST 420
42	Pipe 1/4 NPT plug	SST 316
43	Pilot nameplate	SST 18-8
44	Nameplate – patents	SST 18-8
45	Drive pin	SST 18-8

DIMENSIONS AND WEIGHTS

Orifice	Size	Rating	A in. [mm]	B in. [mm]	C Max in. [mm] with remote sense[4][5]	D Max in. [mm]	E Max in. [mm]	F Max in. [mm]	Weight lbs (kg)
F	1.5 x 2	150 x 150[1]	4 7/8 [123.8]	4 3/4 [120.7]	18.58 [120.7]	10.96 [278]	17.50 445	17.50 445	87 40
		300/600 x 150	4 7/8 [123.8]	6 [152.4]	18.58 [152.4]	10.96 [278]	17.50 445	17.50 445	95 43
	1.5 x 2.5	900/1500 x 300	4 7/8 [123.8]	6 [152.4]	18.83 [152.4]	11.47 [291]	17.50 445	17.50 445	140 63
		2500 x 300	5 1/2 [139.7]	6 1/2 [165.1]	19.56 [165.1]	11.84 [301]	17.50 445	17.50 445	189 86
G	1.5 x 2.5	150 x 150[1]	4 7/8 [123.8]	4 3/4 [120.7]	19.05 [120.7]	10.96 [278]	17.50 445	17.50 445	102 46
		300/600 x 150	4 7/8 [123.8]	6 [152.4]	19.05 [152.4]	10.96 [278]	17.50 445	17.50 445	110 50
		900/1500 x 300	4 7/8 [123.8]	6 [152.4]	19.05 [152.4]	11.84 [301]	17.50 445	17.50 445	167 76
	1.5 x 3	150 x 150[1]	4 7/8 [123.8]	4 3/4 [120.7]	19.05 [120.7]	10.96 [278]	17.50 445	17.50 445	106 48
		300/600 x 150	4 7/8 [123.8]	6 [152.4]	19.05 [152.4]	10.96 [278]	17.50 445	17.50 445	110 50
		900 x 300	4 7/8 [123.8]	6 1/2 [165.1]	19.05 [165.1]	11.84 [301]	17.50 445	17.50 445	178 81
	2 x 3	2500 x 300	6 1/8 [155.6]	6 3/4 [171.5]	19.98 [171.5]	11.84 [301]	17.50 445	17.50 445	233 106
H	1.5 x 3	150 x 150[1]	5 1/8 [130.2]	4 7/8 [123.8]	18.74 [123.8]	10.96 [278]	17.50 445	17.50 445	100 45
		300/600 x 150	5 1/8 [130.2]	4 7/8 [123.8]	18.74 [123.8]	10.96 [278]	17.50 445	17.50 445	105 47
		900 x 150	6 9/16 [166.7]	6 3/8 [161.9]	20.55 [161.9]	11.84 [301]	17.50 445	17.50 445	177 80
		1500 x 300	6 9/16 [166.7]	6 3/8 [161.9]	20.55 [161.9]	11.84 [301]	17.50 445	17.50 445	184 84
	2 x 3	300/600 x 150	5 1/8 [130.2]	4 7/8 [123.8]	18.74 [123.8]	10.96 [278]	17.50 445	17.50 445	105 48
		900 x 150	6 1/16 [154.0]	6 3/8 [161.9]	20.05 [161.9]	11.84 [301]	17.50 445	17.50 445	201 91
		1500 x 300	6 1/16 [154.0]	6 3/8 [161.9]	20.05 [161.9]	11.84 [301]	17.50 445	17.50 445	210 95
J	2 x 3	150 x 150[1]	5 3/8 [136.5]	4 7/8 [123.8]	19.84 [123.8]	11.22 [285]	17.50 445	17.50 445	125 57
		300 x 150[1][3]	5 3/8 [136.5]	4 7/8 [123.8]	19.84 [123.8]	11.22 [285]	17.50 445	17.50 445	127 58
	2 x 4	300 x 150	5 7/8 [149.2]	5 5/8 [142.9]	20.43 [142.9	11.22 [285]	17.50 445	17.50 445	143 65
		600 x 150	6 1/8 [155.6]	6 3/4 [171.5]	20.68 [171.5]	12.06 [306]	17.50 445	17.50 445	169 77
		900 x 150[1]	7 1/4 [184.2]	7 1/8 [181.0]	22.49 [181.0]	12.39 [315]	17.50 445	17.50 445	278 126
		900 x 150[2]	6 1/8 [155.6]	6 3/4 [171.5]	20.68 [171.5]	12.06 [306]	17.50 445	17.50 445	201 91
		1500 x 300	7 1/4 [184.2]	7 1/8 [181.0]	22.49 [181.0]	12.39 [315]	17.50 445	17.50 445	295 134
	2.5 x 4	300 x 150	5 3/8 [184.2]	5 5/8 [142.9]	19.93 [142.9]	11.22 [285]	17.50 445	17.50 445	151 68
		600 x 150	6 1/8 [155.6]	6 3/4 [171.5]	20.68 [171.5]	12.06 [306]	17.50 445	17.50 445	182 83
		900 x 150[2]	6 1/8 [155.6]	6 3/4 [171.5]	20.68 [171.5]	12.06 [306]	17.50 445	17.50 445	220 100
	3 x 4	300 x 150	7 1/4 [184.2]	7 1/8 [181.0]	21.81 [181.0]	11.22 [285]	17.50 445	17.50 445	173 78
		600 x 150	7 1/4 [184.2]	7 1/8 [181.0]	21.81 [181.0]	12.06 [306]	17.50 445	17.50 445	198 90
		900 x 150	7 1/4 [184.2]	7 1/8 [181.0]	22.49 [181.0]	12.39 [315]	17.50 445	17.50 445	306 139
		1500 x 300	7 1/4 [184.2]	7 1/8 [181.0]	22.65 [181.0]	12.39 [315]	17.50 445	17.50 445	342 155
K	2.5 x 4	150 x 150[1]	6 1/8 [155.6]	6 1/8 [161.9]	20.74 [161.9]	12.06 [306]	17.50 445	17.50 445	165 75
		300 x 150	6 1/8 [155.6]	6 3/8 [161.9]	20.74 [161.9]	12.06 [306]	17.50 445	17.50 445	167 76
		600 x 150	7 1/4 [184.2]	7 1/8 [181.0]	21.99 [181.0]	12.39 [315]	17.50 445	17.50 445	201 91
		900 x 150	7 1/4 [184.2]	7 1/8 [181.0]	21.99 [181.0]	12.39 [315]	17.50 445	17.50 445	266 121
	3 x 4	150 x 150[1]	6 1/8 [155.6]	6 3/8 [161.9]	20.74 [161.9]	12.06 [306]	17.50 445	17.50 445	172 78
		300 x 150	6 1/8 [155.6]	6 3/8 [161.9]	20.74 [161.9]	12.06 [306]	17.50 445	17.50 445	178 81
		600 x 150	7 1/4 [184.2]	7 1/8 [181.0]	21.99 [181.0]	12.39 [315]	17.50 445	17.50 445	215 98
		900 x 150	7 1/4 [184.2]	7 1/8 [181.0]	21.99 [181.0]	12.39 [315]	17.50 445	17.50 445	240 109
L	3 x 4	150 x 150[1]	6 1/8 [155.6]	6 1/2 [165.1]	22.79 [165.1]	12.39 [315]	17.50 445	17.50 445	207 94
		300 x 150	6 1/8 [155.6]	6 1/2 [165.1]	22.79 [165.1]	12.39 [315]	17.50 445	17.50 445	212 96
	3 x 6	600 x 150	8 [203.2]	8 [203.2]	24.14 [203.2]	13.11 [333]	17.50 445	17.50 445	290 132
		900 x 150	8 [203.2]	8 [203.2]	24.14 [203.2]	13.11 [333]	17.50 445	17.50 445	314 142
	4 x 6	150 x 150[1]	7 1/16 [179.4]	7 1/8 [181.0]	23.01 [181.0]	12.39 [315]	17.50 445	17.50 445	243 110
		300 x 150	7 1/16 [179.4]	7 1/8 [181.0]	23.01 [181.0]	12.39 [315]	17.50 445	17.50 445	257 116
		600 x 150	7 1/16 [179.4]	8 [203.2]	23.20 [203.2]	13.11 [333]	17.50 445	17.50 445	321 145
		900 x 150	7 3/4 [196.9]	8 3/4 [222.3]	24.40 [222.3]	13.28 [337]	17.50 445	17.50 445	437 198
M	4 x 6	150 x 150[1]	7 [177.8]	7 1/4 [184.2]	24.01 [184.2]	13.11 [333]	17.50 445	17.50 445	287 130
		300 x 150	7 [177.8]	7 1/4 [184.2]	24.01 [184.2]	13.11 [333]	17.50 445	17.50 445	300 136
		600 x 150	7 [177.8]	8 [203.2]	24.01 [203.2]	13.11 [333]	17.50 445	17.50 445	323 146
		900 x 150	7 3/4 [196.9]	8 3/4 [222.3]	24.82 [222.3]	13.11 [333]	17.50 445	17.50 445	356 161
N	4 x 6	150 x 150[1]	7 3/4 [196.9]	8 1/4 [209.6]	25.21 [209.6]	13.11 [333]	17.50 445	17.50 445	310 141
		300 x 150	7 3/4 [196.9]	8 1/4 [209.6]	25.21 [209.6]	13.11 [333]	17.50 445	17.50 445	322 146
		600 x 150	7 3/4 [196.9]	8 3/4 [222.3]	25.21 [222.3]	13.11 [333]	17.50 445	17.50 445	343 156
P	4 x 6	150 x 150[1]	7 1/8 [181.0]	9 [228.6]	24.69 [228.6]	13.63 [346]	17.50 445	17.50 445	336 152
		300 x 150	8 7/8 [225.4]	10 [254.0]	26.44 [254.0]	13.63 [346]	17.50 445	17.50 445	369 167
		600 x 150	8 7/8 [225.4]	10 [254.0]	26.40 [254.0]	14.21 [361]	17.50 445	17.50 445	455 207

Notes:

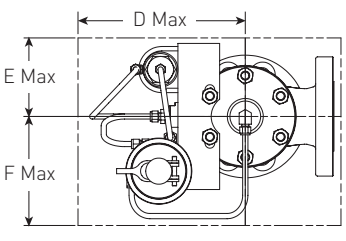
(1) Available in WCB/WCC body material only

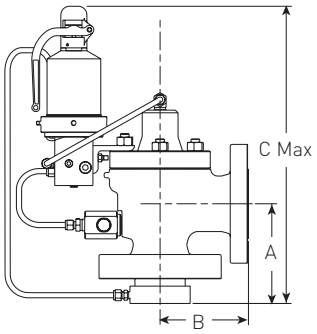
(2) Available in WC6 body material only

(3) Limited to 290 psig set pressure

(4) For set pressure above 3705 psig, increase C max dimension by 0.75 inches, and weight by 8 lbs.

(5) Sense ring and gasket for internal sense increases valve height (C max) by 1.06 inches.





CAPACITY TABLES – SECTION I STEAM

Orifice designation		F		G		H		J		K		L		M		N		P	
Orifice area		in² 0.307	cm² 1.981	in² 0.503	cm² 3.245	in² 0.785	cm² 5.065	in² 1.287	in² 8.303	in² 1.838	cm² 11.860	in² 2.853	cm² 18.410	in² 3.600	cm² 23.230	in² 4.340	cm² 28.000	in² 6.380	cm² 41.160
Set pressure										Orifice capacity									
psig	barg	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr
15	1.03	497	226	813	369	1,271	577	2,083	945	2,976	1,350	4,617	2,094	5,827	2,643	7,024	3,186	10,329	4,685
20	1.38	576	261	942	427	1,472	668	2,411	1,094	3,445	1,563	5,345	2,425	6,746	3,060	8,131	3,688	11,958	5,424
30	2.07	733	332	1,198	543	1,873	850	3,068	1,392	4,384	1,988	6,802	3,085	8,584	3,894	10,347	4,693	15,216	6,902
40	2.76	890	404	1,455	660	2,274	1,032	3,725	1,690	5,322	2,414	8,258	3,746	10,422	4,727	12,563	5,698	18,475	8,380
50	3.45	1,047	475	1,711	776	2,675	1,213	4,382	1,988	6,261	2,840	9,714	4,406	12,260	5,561	14,778	6,703	21,733	9,858
60	4.14	1,203	546	1,968	893	3,076	1,395	5,039	2,286	7,200	3,266	11,171	5,067	14,098	6,395	16,994	7,708	24,991	11,336
70	4.83	1,362	618	2,227	1,010	3,481	1,579	5,703	2,587	8,148	3,696	12,642	5,734	15,954	7,237	19,232	8,723	28,282	12,829
80	5.52	1,524	691	2,491	1,130	3,894	1,766	6,379	2,894	9,115	4,134	14,142	6,415	17,848	8,096	21,514	9,758	31,638	14,351
90	6.21	1,685	764	2,755	1,250	4,308	1,954	7,056	3,201	10,082	4,573	15,642	7,095	19,741	8,954	23,796	10,794	34,995	15,873
100	6.89	1,847	838	3,020	1,370	4,721	2,141	7,733	3,508	11,049	5,012	17,142	7,776	21,634	9,813	26,078	11,829	38,351	17,396
120	8.27	2,170	984	3,548	1,609	5,547	2,516	9,086	4,121	12,982	5,889	20,143	9,137	25,421	11,531	30,642	13,899	45,063	20,440
140	9.65	2,493	1,131	4,077	1,849	6,373	2,891	10,440	4,735	14,916	6,766	23,143	10,497	29,207	13,248	35,206	15,969	51,775	23,485
160	11.03	2,816	1,278	4,605	2,089	7,199	3,266	11,793	5,349	16,850	7,643	26,143	11,858	32,993	14,966	39,771	18,040	58,487	26,529
180	12.41	3,140	1,424	5,134	2,329	8,026	3,640	13,147	5,963	18,783	8,520	29,143	13,219	36,780	16,683	44,335	20,110	65,199	29,574
200	13.79	3,463	1,571	5,662	2,568	8,852	4,015	14,500	6,577	20,717	9,397	32,144	14,580	40,566	18,401	48,899	22,180	71,911	32,619
220	15.17	3,786	1,717	6,191	2,808	9,678	4,390	15,853	7,191	22,651	10,274	35,144	15,941	44,353	20,118	53,463	24,251	78,624	35,663
240	16.55	4,109	1,864	6,719	3,048	10,504	4,765	17,207	7,805	24,585	11,151	38,144	17,302	48,139	21,836	58,027	26,321	85,336	38,708
260	17.93	4,433	2,011	7,248	3,288	11,330	5,139	18,560	8,419	26,518	12,029	41,144	18,663	51,926	23,553	62,592	28,391	92,048	41,752
280	19.31	4,756	2,157	7,776	3,527	12,157	5,514	19,914	9,033	28,452	12,906	44,145	20,024	55,712	25,271	67,156	30,461	98,760	44,797
300	20.68	5,079	2,304	8,305	3,767	12,983	5,889	21,267	9,647	30,386	13,783	47,145	21,385	59,498	26,988	71,720	32,532	105,472	47,841
320	22.06	5,402	2,450	8,833	4,007	13,809	6,264	22,621	10,261	32,320	14,660	50,145	22,745	63,285	28,705	76,284	34,602	112,185	50,886
340	23.44	5,725	2,597	9,362	4,246	14,635	6,638	23,974	10,874	34,253	15,537	53,145	24,106	67,071	30,423	80,848	36,672	118,897	53,931
360	24.82	6,049	2,744	9,890	4,486	15,461	7,013	25,327	11,488	36,187	16,414	56,146	25,467	70,858	32,140	85,413	38,743	125,609	56,975
380	26.20	6,372	2,890	10,419	4,726	16,288	7,388	26,681	12,102	38,121	17,291	59,146	26,828	74,644	33,858	89,977	40,813	132,321	60,020
400	27.58	6,695	3,037	10,947	4,966	17,114	7,763	28,034	12,716	40,055	18,168	62,146	28,189	78,430	35,575	94,541	42,883	139,033	63,064
420	28.96	7,018	3,183	11,476	5,205	17,940	8,137	29,388	13,330	41,988	19,046	65,147	29,550	82,217	37,293	99,105	44,953	145,745	66,109
440	30.34	7,341	3,330	12,005	5,445	18,766	8,512	30,741	13,944	43,922	19,923	68,147	30,911	86,003	39,010	103,669	47,024	152,458	69,154
460	31.72	7,665	3,477	12,533	5,685	19,593	8,887	32,095	14,558	45,856	20,800	71,147	32,272	89,790	40,728	108,234	49,094	159,170	72,198
480	33.09	7,988	3,623	13,062	5,925	20,419	9,262	33,448	15,172	47,789	21,677	74,147	33,633	93,576	42,445	112,798	51,164	165,882	75,243
500	34.47	8,311	3,770	13,590	6,164	21,245	9,637	34,801	15,786	49,723	22,554	77,148	34,994	97,363	44,163	117,362	53,235	172,594	78,287
600	41.37	9,927	4,503	16,233	7,363	25,376	11,510	41,569	18,855	59,392	26,940	92,149	41,798	116,295	52,750	140,183	63,586	206,155	93,510
700	48.26	11,543	5,236	18,875	8,562	29,507	13,384	48,336	21,925	69,061	31,325	107,150	48,603	135,227	61,338	163,004	73,937	239,716	108,733
800	55.16	13,159	5,969	21,518	9,760	33,638	15,258	55,103	24,994	78,729	35,711	122,152	55,407	154,159	69,925	185,825	84,289	273,277	123,956
900	62.05	14,776	6,702	24,160	10,959	37,769	17,132	61,870	28,064	88,398	40,097	137,153	62,212	173,091	78,513	208,646	94,640	306,838	139,179
1000	68.95	16,392	7,435	26,803	12,158	41,900	19,006	68,637	31,133	98,067	44,482	152,154	69,016	192,023	87,100	231,467	104,992	340,398	154,402
1100	75.84	18,008	8,168	29,446	13,356	46,031	20,879	75,404	34,203	107,735	48,868	167,156	75,820	210,955	95,688	254,288	115,343	373,959	169,625
1200	82.74	19,624	8,901	32,088	14,555	50,162	22,753	82,171	37,272	117,404	53,253	182,157	82,625	229,888	104,275	277,109	125,695	407,520	184,848
1300	89.63	21,240	9,634	34,731	15,754	54,293	24,627	88,938	40,342	127,072	57,639	197,158	89,429	248,820	112,863	299,930	136,046	441,081	200,071
1400	96.53	22,856	10,367	37,373	16,952	58,425	26,501	95,706	43,411	136,741	62,025	212,160	96,234	267,752	121,450	322,751	146,398	474,642	215,294
1500	103.42	24,472	11,100	40,016	18,151	62,556	28,375	102,473	46,481	146,410	66,410	227,161	103,038	286,684	130,038	345,572	156,749	508,203	230,517
1750	120.66	28,917	13,117	47,284	21,448	73,917	33,528	121,084	54,923	173,002	78,472	268,419	121,753	338,753	153,656	–	–	–	–
2000	137.90	33,614	15,247	54,964	24,931	85,923	38,974	140,751	63,844	201,101	91,218	312,017	141,528	393,774	178,613	–	–	–	–
2250	155.13	38,610	17,513	63,134	28,637	98,695	44,767	161,673	73,334	230,994	104,777	358,396	162,566	452,307	205,163	–	–	–	–
2500	172.37	44,020	19,967	71,980	32,649	112,524	51,040	184,326	83,609	–	–	–	–	–	–	–	–	–	–
2750	189.61	0,022	22,690	81,794	37,101	127,867	57,999	209,460	95,009	–	–	–	–	–	–	–	–	–	–
3000	206.84	56,917	25,817	93,069	42,215	145,492	65,994	238,331	108,105	–	–	–	–	–	–	–	–	–	–
3200	220.63	63,428	28,770	103,714	47,044	162,133	73,542	265,591	120,470	–	–	–	–	–	–	–	–	–	–
3250	224.08	52,754	23,929	86,261	39,127	134,849	61,167	220,898	100,197	–	–	–	–	–	–	–	–	–	–
3500	241.32	56,794	25,761	92,867	42,124	145,177	65,851	237,815	107,871	–	–	–	–	–	–	–	–	–	–
3750	258.55	60,834	27,594	99,474	45,121	155,505	70,536	254,733	115,545	–	–	–	–	–	–	–	–	–	–
4000	275.79	64,875	29,427	106,080	48,117	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4250	293.03	68,915	31,259	112,687	51,114	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4500	310.26	72,955	33,092	119,293	54,111	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4750	327.50	76,995	34,925	125,900	57,107	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5000	344.74	81,036	36,757	132,506	60,104	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5250	361.97	85,076	38,590	139,113	63,100	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5500	379.21	89,116	40,422	145,719	66,097	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5750	396.45	93,156	42,255	152,326	69,094	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6000	413.69	97,197	44,088	158,932	72,090	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6250	430.92	101,237	45,920	165,538	75,087	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Notes:

1. The Napier correction factor has been supplied in the above table for set pressures between 1500 psig and 3200 psig.
2. For set pressures above 3100 psig, steam is considered supercritical, and the displayed flow capacity should be multiplied by the appropriate supercritical steam correction factor.

CAPACITY TABLES – SECTION I WATER

Orifice designation		F		G		H		J		K		L		M		N		P	
Orifice area		in^2 0.307	cm^2 1.981	in^2 0.503	cm^2 3.245	in^2 0.785	cm^2 5.065	in^2 1.287	in^2 8.303	in^2 1.838	cm^2 11.860	in^2 2.853	cm^2 18.410	in^2 3.600	cm^2 23.230	in^2 4.340	cm^2 28.000	in^2 6.380	cm^2 41.160
Set pressure		Orifice capacity																	
psig	barg	gpm	L/min	gpm	L/min	gpm	L/min	gpm	L/min	gpm	L/min	gpm	L/min	gpm	L/min	gpm	L/min	gpm	L/min
15	1.03	37	139	60	227	94	355	153	581	219	830	340	1,288	429	1,625	517	1,959	761	2,880
20	1.38	42	158	68	258	107	403	175	661	249	944	387	1,465	488	1,848	589	2,228	866	3,277
30	2.07	50	190	82	311	129	486	211	797	301	1,139	467	1,766	589	2,229	710	2,687	1,044	3,952
40	2.76	58	218	94	356	147	557	241	913	345	1,304	535	2,024	675	2,554	813	3,079	1,196	4,528
50	3.45	64	243	105	397	164	620	268	1,016	383	1,451	595	2,252	751	2,842	905	3,426	1,331	5,038
60	4.14	70	265	114	433	179	677	293	1,109	419	1,585	650	2,459	820	3,103	988	3,741	1,453	5,501
70	4.83	75	286	123	467	193	730	316	1,196	451	1,709	700	2,652	884	3,346	1,066	4,034	1,567	5,932
80	5.52	81	305	132	499	206	781	338	1,279	483	1,827	749	2,835	945	3,577	1,139	4,312	1,675	6,342
90	6.21	86	324	140	530	219	828	358	1,356	512	1,938	794	3,007	1,002	3,794	1,208	4,574	1,777	6,726
100	6.89	90	341	147	558	231	873	378	1,430	540	2,043	837	3,169	1,057	4,000	1,274	4,821	1,873	7,090
120	8.27	99	374	162	612	253	956	414	1,566	591	2,238	917	3,472	1,157	4,381	1,395	5,281	2,052	7,767
140	9.65	107	404	175	661	273	1,033	447	1,692	638	2,417	991	3,750	1,250	4,732	1,507	5,705	2,216	8,389
160	11.03	114	432	187	706	292	1,104	478	1,808	683	2,584	1,059	4,009	1,337	5,059	1,611	6,098	2,369	8,968
180	12.41	121	458	198	749	309	1,171	507	1,918	724	2,740	1,123	4,252	1,418	5,366	1,709	6,468	2,513	9,512
200	13.79	128	483	209	790	326	1,234	534	2,022	763	2,889	1,184	4,482	1,494	5,656	1,801	6,818	2,649	10,027
220	15.17	134	506	219	828	342	1,294	560	2,121	800	3,030	1,242	4,701	1,567	5,932	1,889	7,151	2,778	10,516
240	16.55	140	529	228	865	357	1,352	585	2,215	836	3,164	1,297	4,910	1,637	6,196	1,973	7,469	2,902	10,984
260	17.93	145	551	238	900	372	1,407	609	2,305	870	3,294	1,350	5,110	1,704	6,449	2,054	7,774	3,020	11,433
280	19.31	151	571	247	934	386	1,460	632	2,392	903	3,418	1,401	5,303	1,768	6,693	2,131	8,067	3,134	11,864
300	20.68	156	591	255	967	399	1,512	654	2,476	935	3,538	1,450	5,489	1,830	6,928	2,206	8,351	3,244	12,281
320	22.06	161	611	264	999	412	1,561	676	2,557	965	3,654	1,498	5,669	1,890	7,155	2,278	8,624	3,351	12,683
340	23.44	166	630	272	1,029	425	1,609	696	2,636	995	3,766	1,544	5,844	1,948	7,375	2,348	8,890	3,454	13,074
360	24.82	171	648	280	1,059	437	1,656	717	2,713	1,024	3,876	1,589	6,013	2,005	7,589	2,417	9,148	3,554	13,453
380	26.20	176	666	287	1,088	449	1,701	736	2,787	1,052	3,982	1,632	6,178	2,060	7,797	2,483	9,398	3,651	13,821
400	27.58	180	683	295	1,117	461	1,745	755	2,859	1,079	4,085	1,674	6,338	2,113	7,999	2,547	9,642	3,746	14,180
420	28.96	185	700	302	1,144	472	1,789	774	2,930	1,106	4,186	1,716	6,495	2,165	8,197	2,610	9,881	3,839	14,531
440	30.34	189	716	309	1,171	484	1,831	792	2,999	1,132	4,285	1,756	6,648	2,216	8,390	2,672	10,113	3,929	14,872
460	31.72	193	732	316	1,197	494	1,872	810	3,066	1,157	4,381	1,796	6,797	2,266	8,578	2,732	10,340	4,017	15,207
480	33.09	198	748	323	1,223	505	1,912	827	3,132	1,182	4,475	1,834	6,943	2,315	8,763	2,790	10,563	4,104	15,534
500	34.47	202	763	330	1,248	516	1,952	844	3,197	1,207	4,567	1,872	7,087	2,363	8,944	2,848	10,781	4,188	15,854
600	41.37	221	836	361	1,367	565	2,138	925	3,502	1,322	5,003	2,051	7,763	2,588	9,797	3,120	11,810	4,588	17,367
700	48.26	239	903	390	1,477	610	2,309	999	3,782	1,428	5,404	2,215	8,385	2,795	10,582	3,370	12,756	4,956	18,759
800	55.16	255	966	417	1,579	652	2,468	1,068	4,044	1,526	5,777	2,368	8,964	2,989	11,313	3,602	13,637	5,298	20,054
900	62.05	271	1,024	442	1,675	692	2,618	1,133	4,289	1,619	6,128	2,512	9,508	3,170	11,999	3,821	14,464	5,619	21,270
1000	68.95	285	1,080	466	1,765	729	2,760	1,194	4,521	1,706	6,459	2,648	10,022	3,341	12,648	4,028	15,246	5,923	22,421
1100	75.84	299	1,132	489	1,852	765	2,895	1,253	4,742	1,790	6,775	2,777	10,511	3,504	13,265	4,224	15,990	6,212	23,515
1200	82.74	312	1,183	511	1,934	799	3,023	1,308	4,952	1,869	7,076	2,900	10,979	3,660	13,855	4,412	16,701	6,488	24,561
1300	89.63	325	1,231	532	2,013	831	3,147	1,362	5,155	1,946	7,365	3,019	11,427	3,810	14,421	4,592	17,383	6,753	25,564
1400	96.53	337	1,277	552	2,089	863	3,265	1,413	5,349	2,019	7,643	3,133	11,858	3,953	14,965	4,766	18,039	7,008	26,529
1500	103.42	349	1,322	571	2,162	893	3,380	1,463	5,537	2,090	7,911	3,243	12,274	4,092	15,491	4,933	18,673	7,254	27,460
1750	120.66	377	1,428	617	2,335	964	3,651	1,580	5,981	2,257	8,545	3,502	13,258	4,420	16,732	–	–	–	–
2000	137.90	403	1,527	660	2,497	1,031	3,903	1,689	6,394	2,413	9,135	3,744	14,173	4,725	17,887	–	–	–	–
2250	155.13	428	1,620	700	2,648	1,094	4,140	1,791	6,781	2,560	9,689	3,971	15,033	5,012	18,972	–	–	–	–
2500	172.37	451	1,707	737	2,791	1,153	4,364	1,888	7,148	–	–	–	–	–	–	–	–	–	–
2750	189.61	473	1,790	773	2,928	1,209	4,577	1,981	7,497	–	–	–	–	–	–	–	–	–	–
3000	206.84	494	1,870	808	3,058	1,263	4,780	2,069	7,830	–	–	–	–	–	–	–	–	–	–
3200	220.63	510	1,931	834	3,158	1,304	4,937	2,136	8,087	–	–	–	–	–	–	–	–	–	–
3250	224.08	514	1,946	841	3,183	1,314	4,975	2,153	8,150	–	–	–	–	–	–	–	–	–	–
3500	241.32	534	2,020	873	3,303	1,364	5,163	2,234	8,458	–	–	–	–	–	–	–	–	–	–
3750	258.55	552	2,091	903	3,419	1,412	5,344	2,313	8,755	–	–	–	–	–	–	–	–	–	–
4000	275.79	570	2,159	933	3,531	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4250	293.03	588	2,226	961	3,640	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4500	310.26	605	2,290	989	3,745	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4750	327.50	622	2,353	1,016	3,848	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5000	344.74	638	2,414	1,043	3,948	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5250	361.97	654	2,474	1,069	4,045	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5500	379.21	669	2,532	1,094	4,140	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5750	396.45	684	2,589	1,118	4,233	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6000	413.69	699	2,645	1,142	4,324	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6250	430.92	713	2,699	1,166	4,414	–	–	–	–	–	–	–	–	–	–	–	–	–	–

CAPACITY TABLES – SECTION VIII STEAM

Orifice designation		F		G		H		J		K		L		M		N		P	
Orifice area		in^2 0.307	cm^2 1.981	in^2 0.503	cm^2 3.245	in^2 0.785	cm^2 5.065	in^2 1.287	in^2 8.303	in^2 1.838	cm^2 11.860	in^2 2.853	cm^2 18.410	in^2 3.600	cm^2 23.230	in^2 4.340	cm^2 28.00	in^2 6.380	cm^2 41.160
Set pressure		Orifice capacity																	
psig	barg	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr	lbs/hr	kg/hr
15	1.03	513	233	839	381	1,312	595	2,148	974	3,070	1,392	4,763	2,160	6,010	2,726	7,245	3,286	10,655	4,833
20	1.38	592	268	967	439	1,512	686	2,477	1,124	3,539	1,605	5,491	2,491	6,930	3,143	8,353	3,789	12,284	5,572
30	2.07	748	339	1,224	555	1,913	868	3,134	1,422	4,478	2,031	6,947	3,151	8,768	3,977	10,569	4,794	15,542	7,050
40	2.76	921	418	1,506	683	2,354	1,068	3,857	1,749	5,510	2,499	8,549	3,878	10,789	4,894	13,006	5,899	19,126	8,676
50	3.45	1,094	496	1,788	811	2,795	1,268	4,579	2,077	6,543	2,968	10,151	4,605	12,811	5,811	15,443	7,005	22,711	10,301
60	4.14	1,266	574	2,070	939	3,237	1,468	5,302	2,405	7,575	3,436	11,753	5,331	14,833	6,728	17,880	8,110	26,295	11,927
70	4.83	1,439	653	2,353	1,067	3,678	1,668	6,025	2,733	8,608	3,904	13,356	6,058	16,855	7,645	20,317	9,216	29,879	13,553
80	5.52	1,611	731	2,635	1,195	4,119	1,868	6,747	3,061	9,640	4,373	14,958	6,785	18,877	8,562	22,755	10,321	33,463	15,179
90	6.21	1,784	809	2,917	1,323	4,560	2,068	7,470	3,388	10,673	4,841	16,560	7,511	20,899	9,480	25,192	11,427	37,047	16,804
100	6.89	1,957	887	3,199	1,451	5,001	2,269	8,193	3,716	11,706	5,310	18,162	8,238	22,921	10,397	27,629	12,532	40,631	18,430
120	8.27	2,302	1,044	3,764	1,707	5,884	2,669	9,638	4,372	13,771	6,246	21,366	9,691	26,965	12,231	32,503	14,743	47,800	21,682
140	9.65	2,647	1,201	4,328	1,963	6,766	3,069	11,084	5,027	15,836	7,183	24,570	11,145	31,008	14,065	37,378	16,954	54,968	24,933
160	11.03	2,992	1,357	4,893	2,219	7,648	3,469	12,529	5,683	17,901	8,120	27,774	12,598	35,052	15,899	42,252	19,165	62,136	28,185
180	12.41	3,337	1,514	5,457	2,475	8,531	3,870	13,974	6,339	19,966	9,057	30,978	14,052	39,096	17,734	47,127	21,376	69,305	31,436
200	13.79	3,683	1,670	6,021	2,731	9,413	4,270	15,420	6,994	22,031	9,993	34,183	15,505	43,140	19,568	52,001	23,587	76,473	34,688
220	15.17	4,028	1,827	6,586	2,987	10,296	4,670	16,865	7,650	24,097	10,930	37,387	16,958	47,183	21,402	56,875	25,798	83,642	37,939
240	16.55	4,373	1,984	7,150	3,243	11,178	5,070	18,311	8,306	26,162	11,867	40,591	18,412	51,227	23,236	61,750	28,009	90,810	41,191
260	17.93	4,718	2,140	7,715	3,499	12,060	5,470	19,756	8,961	28,227	12,803	43,795	19,865	55,271	25,070	66,624	30,220	97,978	44,442
280	19.31	5,063	2,297	8,279	3,755	12,943	5,871	21,201	9,617	30,292	13,740	46,999	21,319	59,315	26,905	71,498	32,431	105,147	47,694
300	20.68	5,408	2,453	8,844	4,011	13,825	6,271	22,647	10,272	32,357	14,677	50,203	22,772	63,358	28,739	76,373	34,642	112,315	50,945
320	22.06	5,754	2,610	9,408	4,267	14,707	6,671	24,092	10,928	34,422	15,614	53,408	24,225	67,402	30,573	81,247	36,853	119,483	54,197
340	23.44	6,099	2,766	9,973	4,523	15,590	7,071	25,538	11,584	36,487	16,550	56,612	25,679	71,446	32,407	86,122	39,064	126,652	57,448
360	24.82	6,444	2,923	10,537	4,779	16,472	7,472	26,983	12,239	38,553	17,487	59,816	27,132	75,490	34,241	90,996	41,275	133,820	60,700
380	26.20	6,789	3,080	11,101	5,036	17,355	7,872	28,429	12,895	40,618	18,424	63,020	28,585	79,533	36,076	95,870	43,486	140,988	63,951
400	27.58	7,134	3,236	11,666	5,292	18,237	8,272	29,874	13,551	42,683	19,361	66,224	30,039	83,577	37,910	100,745	45,697	148,157	67,203
420	28.96	7,480	3,393	12,230	5,548	19,119	8,672	31,319	14,206	44,748	20,297	69,428	31,492	87,621	39,744	105,619	47,908	155,325	70,454
440	30.34	7,825	3,549	12,795	5,804	20,002	9,073	32,765	14,862	46,813	21,234	72,633	32,946	91,665	41,578	110,494	50,119	162,493	73,706
460	31.72	8,170	3,706	13,359	6,060	20,884	9,473	34,210	15,517	48,878	22,171	75,837	34,399	95,708	43,413	115,368	52,330	169,662	76,957
480	33.09	8,515	3,862	13,924	6,316	21,766	9,873	35,656	16,173	50,944	23,108	79,041	35,852	99,752	45,247	120,242	54,541	176,830	80,209
500	34.47	8,860	4,019	14,488	6,572	22,649	10,273	37,101	16,829	53,009	24,044	82,245	37,306	103,796	47,081	125,117	56,752	183,998	83,460
600	41.37	10,586	4,802	17,310	7,852	27,061	12,274	44,328	20,107	63,334	28,728	98,266	44,573	124,015	56,252	149,489	67,807	219,840	99,718
700	48.26	12,312	5,585	20,132	9,132	31,472	14,276	51,555	23,385	73,660	33,412	114,287	51,840	144,233	65,423	173,861	78,862	255,682	115,975
800	55.16	14,038	6,368	22,955	10,412	35,884	16,277	58,782	26,663	83,986	38,095	130,308	59,107	164,452	74,594	198,233	89,917	291,523	132,233
900	62.05	15,764	7,150	25,777	11,692	40,296	18,278	66,009	29,941	94,312	42,779	146,328	66,373	184,671	83,765	222,605	100,972	327,365	148,490
1000	68.95	17,490	7,933	28,599	12,972	44,708	20,279	73,236	33,219	104,637	47,463	162,349	73,640	204,890	92,936	246,977	112,027	363,207	164,748
1100	75.84	19,216	8,716	31,421	14,252	49,120	22,280	80,463	36,497	114,963	52,146	178,370	80,907	225,109	102,108	271,349	123,082	399,049	181,005
1200	82.74	20,942	9,499	34,243	15,532	53,531	24,281	87,690	39,776	125,289	56,830	194,391	88,174	245,327	111,279	295,721	134,137	434,890	197,263
1300	89.63	22,668	10,282	37,065	16,813	57,943	26,283	94,917	43,054	135,615	61,514	210,412	95,441	265,546	120,450	320,092	145,192	470,732	213,520
1400	96.53	24,394	11,065	39,888	18,093	62,355	28,284	102,144	46,332	145,940	66,197	226,433	102,708	285,765	129,621	344,464	156,246	506,574	229,778
1500	103.42	26,120	11,848	42,710	19,373	66,767	30,285	109,371	49,610	156,266	70,881	242,453	109,975	305,984	138,792	368,836	167,301	542,415	246,035
1750	120.66	31,119	14,116	50,885	23,081	79,547	36,082	130,307	59,106	186,178	84,449	288,863	131,026	364,554	165,359	–	–	–	–
2000	137.90	36,287	16,459	59,335	26,914	92,757	42,074	151,945	68,921	217,094	98,472	336,831	152,784	425,091	192,818	–	–	–	–
2250	155.13	41,861	18,988	68,449	31,048	107,004	48,536	175,283	79,507	250,439	113,597	388,567	176,251	490,384	222,434	–	–	–	–
2500	172.37	48,020	21,781	78,520	35,616	122,748	55,678	201,074	91,206	–	–	–	–	–	–	–	–	–	–
2750	189.61	55,069	24,979	90,046	40,844	140,767	63,851	230,591	104,594	–	–	–	–	–	–	–	–	–	–
3000	206.84	63,566	28,833	103,940	47,146	162,487	73,703	266,170	120,733	–	–	–	–	–	–	–	–	–	–
3200	220.63	72,140	32,722	117,960	53,506	184,403	83,644	302,072	137,017	–	–	–	–	–	–	–	–	–	–

SUPERCRITICAL CORRECTION FACTOR – PSIA

Flowing pressure psia	Total temperature, °F, of supercritical steam 750	800	850	900	950	1000
3,208.20	1.059	0.971	0.913	0.872	0.839	0.811
3,250	1.064	0.975	0.916	0.874	0.841	0.813
3,300	1.070	0.980	0.919	0.876	0.842	0.814
3,350	1.077	0.985	0.922	0.878	0.844	0.815
3,400	1.084	0.990	0.925	0.881	0.846	0.817
3,450	1.091	0.996	0.929	0.883	0.848	0.818
3,500	1.100	1.002	0.932	0.885	0.849	0.819
3,550	1.109	1.008	0.935	0.888	0.851	0.821
3,600	1.118	1.014	0.939	0.890	0.853	0.822
3,650	1.129	1.020	0.943	0.893	0.855	0.824
3,700	1.141	1.027	0.946	0.895	0.857	0.825
3,750	1.153	1.034	0.95	0.898	0.859	0.827
3,800	1.168	1.041	0.954	0.900	0.861	0.828
3,850	1.186	1.048	0.958	0.903	0.862	0.830
3,900	1.205	1.056	0.962	0.906	0.864	0.831
3,950	1.227	1.064	0.966	0.908	0.866	0.833
4,000	1.251	1.072	0.970	0.911	0.868	0.834
4,050	1.279	1.080	0.974	0.914	0.870	0.836
4,100	1.310	1.089	0.978	0.916	0.872	0.837
4,150	1.343	1.098	0.983	0.919	0.874	0.839
4,200	1.395	1.107	0.987	0.922	0.876	0.840
4,250	1.444	1.116	0.992	0.925	0.878	0.842
4,300	1.491	1.125	0.997	0.928	0.881	0.844
4,350	1.538	1.135	1.002	0.931	0.883	0.845
4,400	—	1.146	1.007	0.934	0.885	0.847
4,450	—	1.157	1.012	0.937	0.887	0.848
4,500	—	1.169	1.017	0.940	0.889	0.850
4,550	—	1.181	1.022	0.943	0.892	0.852
4,600	—	1.194	1.027	0.947	0.894	0.853
4,650	—	1.207	1.033	0.950	0.896	0.855
4,700	—	1.220	1.038	0.953	0.898	0.857
4,750	—	1.234	1.044	0.957	0.900	0.858
4,800	—	1.248	1.050	0.960	0.903	0.860
4,850	—	1.263	1.056	0.963	0.905	0.862
4,900	—	1.278	1.062	0.967	0.908	0.863
4,950	—	1.294	1.069	0.970	0.910	0.865
5,000	—	1.310	1.075	0.974	0.912	0.867
5,050	—	1.326	1.082	0.978	0.915	0.869
5,100	—	1.343	1.088	0.981	0.917	0.871
5,150	—	1.360	1.095	0.985	0.920	0.872
5,200	—	1.377	1.102	0.989	0.922	0.874
5,250	—	1.393	1.109	0.993	0.925	0.876
5,300	—	1.411	1.116	0.997	0.927	0.878
5,350	—	1.427	1.123	1.001	0.930	0.880
5,400	—	1.443	1.131	1.004	0.933	0.882
5,450	—	1.460	1.139	1.009	0.935	0.884
5,500	—	1.476	1.146	1.013	0.938	0.886
5,550	—	1.491	1.154	1.017	0.941	0.887
5,600	—	1.507	1.162	1.021	0.943	0.889
5,650	—	1.522	1.171	1.025	0.946	0.891
5,700	—	1.536	1.179	1.03	0.949	0.893
5,750	—	1.551	1.187	1.034	0.952	0.895
5,800	—	1.565	1.195	1.038	0.955	0.897
5,850	—	1.578	1.204	1.043	0.957	0.899
5,900	—	1.591	1.212	1.047	0.96	0.901
5,950	—	1.603	1.221	1.052	0.963	0.903
6,000	—	1.615	1.229	1.057	0.966	0.906

SUPERCRITICAL CORRECTION FACTOR – MPA

Flowing pressure MPa	Total temperature, °C, of supercritical steam 400	425	450	475	500	525
22.12	1.056	0.976	0.922	0.883	0.851	0.824
22.25	1.058	0.978	0.924	0.884	0.852	0.825
22.5	1.063	0.982	0.926	0.886	0.853	0.826
22.75	1.067	0.985	0.929	0.887	0.855	0.827
23	1.072	0.989	0.931	0.889	0.856	0.828
23.25	1.077	0.993	0.934	0.891	0.858	0.830
23.5	1.082	0.997	0.937	0.893	0.859	0.831
23.75	1.087	1.001	0.939	0.895	0.860	0.832
24	1.093	1.006	0.942	0.897	0.862	0.833
24.25	1.099	1.01	0.945	0.899	0.863	0.834
24.5	1.106	1.014	0.948	0.901	0.865	0.835
24.75	1.112	1.019	0.950	0.903	0.866	0.836
25	1.120	1.024	0.953	0.905	0.868	0.837
25.25	1.128	1.029	0.956	0.907	0.869	0.839
25.5	1.136	1.034	0.959	0.909	0.871	0.840
25.75	1.145	1.039	0.962	0.911	0.872	0.841
26	1.155	1.045	0.966	0.913	0.874	0.842
26.25	1.166	1.05	0.969	0.915	0.875	0.843
26.5	1.178	1.056	0.972	0.917	0.877	0.845
26.75	1.192	1.062	0.975	0.919	0.879	0.846
27	1.206	1.068	0.979	0.921	0.880	0.847
27.25	1.222	1.074	0.982	0.924	0.882	0.848
27.5	1.239	1.081	0.985	0.926	0.883	0.850
27.75	1.258	1.088	0.989	0.928	0.885	0.851
28	1.278	1.095	0.992	0.930	0.887	0.852
28.25	1.300	1.102	0.996	0.933	0.888	0.854
28.5	1.323	1.109	1.000	0.935	0.890	0.855
28.75	1.354	1.117	1.004	0.937	0.892	0.856
29	1.390	1.126	1.007	0.940	0.893	0.857
29.25	1.424	1.134	1.011	0.942	0.895	0.859
29.5	1.457	1.143	1.015	0.945	0.897	0.860
29.75	1.49	1.151	1.019	0.947	0.899	0.861
30	—	1.158	1.023	0.950	0.900	0.863
30.25	—	1.098	1.028	0.952	0.902	0.864
30.5	—	1.083	1.032	0.955	0.904	0.865
30.75	—	1.09	1.036	0.957	0.906	0.867
31	—	1.099	1.041	0.960	0.908	0.868
31.25	—	1.107	1.046	0.963	0.910	0.870
31.5	—	1.115	1.050	0.966	0.911	0.871
31.75	—	1.124	1.055	0.968	0.913	0.872

Flowing pressure MPa	Total temperature, °C, of supercritical steam 400	425	450	475	500	525
32	—	1.133	1.060	0.971	0.915	0.874
32.25	—	1.142	1.065	0.974	0.917	0.875
32.5	—	1.151	1.070	0.977	0.919	0.877
32.75	—	1.160	1.075	0.980	0.921	0.878
33	—	1.170	1.080	0.983	0.923	0.879
33.25	—	1.180	1.085	0.986	0.925	0.881
33.5	—	1.190	1.091	0.988	0.927	0.882
33.75	—	1.201	1.096	0.992	0.929	0.884
34	—	1.211	1.102	0.995	0.931	0.885
34.25	—	1.222	1.108	0.998	0.933	0.887
34.5	—	1.233	1.114	1.001	0.935	0.888
34.75	—	1.244	1.119	1.004	0.937	0.890
35	—	1.255	1.125	1.007	0.939	0.891
35.25	—	1.267	1.131	1.011	0.941	0.893
35.5	—	1.278	1.137	1.014	0.944	0.894
35.75	—	1.290	1.144	1.017	0.946	0.896
36	—	1.301	1.150	1.021	0.948	0.898
36.25	—	1.313	1.156	1.024	0.950	0.899
36.5	—	1.324	1.162	1.027	0.952	0.901
36.75	—	1.336	1.169	1.031	0.955	0.902
37	—	1.347	1.175	1.034	0.957	0.904
37.25	—	1.358	1.182	1.038	0.959	0.906
37.5	—	1.369	1.188	1.042	0.961	0.907
37.75	—	1.380	1.195	1.045	0.964	0.909
38	—	1.391	1.201	1.049	0.966	0.910
38.25	—	1.402	1.208	1.053	0.968	0.912
38.5	—	1.412	1.215	1.056	0.971	0.914
38.75	—	1.422	1.222	1.060	0.973	0.915
39	—	1.433	1.228	1.064	0.975	0.917
39.25	—	1.443	1.235	1.068	0.978	0.919
39.5	—	1.453	1.242	1.072	0.980	0.921
39.75	—	1.463	1.248	1.076	0.983	0.922
40	—	1.472	1.255	1.080	0.985	0.924
40.25	—	1.481	1.262	1.084	0.988	0.926
40.5	—	1.490	1.268	1.088	0.990	0.928
40.75	—	1.499	1.275	1.092	0.993	0.929
41	—	1.507	1.282	1.096	0.995	0.931
41.25	—	1.515	1.288	1.100	0.998	0.933

SUPERHEAT CORRECTION FACTOR – PSIA

Flowing pressure psia	Superheat correction factor, K_{sh}, total temperature, °F, of superheated steam												
	400	450	500	550	600	650	700	750	800	850	900	950	1000
50	0.987	0.957	0.930	0.905	0.882	0.861	0.841	0.823	0.805	0.789	0.774	0.759	0.745
100	0.998	0.963	0.935	0.909	0.885	0.864	0.843	0.825	0.807	0.790	0.775	0.760	0.746
50	0.984	0.970	0.940	0.913	0.888	0.866	0.846	0.826	0.808	0.792	0.776	0.761	0.747
200	0.979	0.977	0.945	0.917	0.892	0.869	0.848	0.828	0.810	0.793	0.777	0.762	0.748
250	—	0.972	0.951	0.921	0.895	0.871	0.850	0.830	0.812	0.794	0.778	0.763	0.749
300	—	0.968	0.957	0.926	0.898	0.874	0.852	0.832	0.813	0.796	0.780	0.764	0.750
350	—	0.968	0.963	0.930	0.902	0.877	0.854	0.834	0.815	0.797	0.781	0.765	0.750
400	—	—	0.963	0.935	0.906	0.880	0.857	0.836	0.816	0.798	0.782	0.766	0.751
450	—	—	0.961	0.940	0.909	0.883	0.859	0.838	0.818	0.800	0.783	0.767	0.752
500	—	—	0.961	0.946	0.914	0.886	0.862	0.840	0.820	0.801	0.784	0.768	0.753
550	—	—	0.962	0.952	0.918	0.889	0.864	0.842	0.822	0.803	0.785	0.769	0.754
600	—	—	0.964	0.958	0.922	0.892	0.867	0.844	0.823	0.804	0.787	0.770	0.755
650	—	—	0.968	0.958	0.927	0.896	0.869	0.846	0.825	0.806	0.788	0.771	0.756
700	—	—	—	0.958	0.931	0.899	0.872	0.848	0.827	0.807	0.789	0.772	0.757
750	—	—	—	0.958	0.936	0.903	0.875	0.850	0.828	0.809	0.790	0.774	0.758
800	—	—	—	0.960	0.942	0.906	0.878	0.852	0.830	0.810	0.792	0.774	0.759
850	—	—	—	0.962	0.947	0.910	0.880	0.855	0.832	0.812	0.793	0.776	0.760
900	—	—	—	0.965	0.953	0.914	0.883	0.857	0.834	0.813	0.794	0.777	0.760
950	—	—	—	0.969	0.958	0.918	0.886	0.860	0.836	0.815	0.796	0.778	0.761
1000	—	—	—	0.974	0.959	0.923	0.890	0.862	0.838	0.816	0.797	0.779	0.762
1050	—	—	—	—	0.960	0.927	0.893	0.864	0.840	0.818	0.798	0.780	0.763
1100	—	—	—	—	0.962	0.931	0.896	0.867	0.842	0.820	0.800	0.781	0.764
1150	—	—	—	—	0.964	0.936	0.899	0.870	0.844	0.821	0.801	0.782	0.765
1200	—	—	—	—	0.966	0.941	0.903	0.872	0.846	0.823	0.802	0.784	0.766
1250	—	—	—	—	0.969	0.946	0.906	0.875	0.848	0.825	0.804	0.785	0.767
1300	—	—	—	—	0.973	0.952	0.910	0.878	0.850	0.826	0.805	0.786	0.768
1350	—	—	—	—	0.977	0.958	0.914	0.880	0.852	0.828	0.807	0.787	0.769
1400	—	—	—	—	0.982	0.963	0.918	0.883	0.854	0.830	0.808	0.788	0.770
1450	—	—	—	—	0.987	0.968	0.922	0.886	0.857	0.832	0.809	0.790	0.771
1500	—	—	—	—	0.993	0.970	0.926	0.889	0.859	0.833	0.811	0.791	0.772
1550	—	—	—	—	—	0.972	0.930	0.892	0.861	0.835	0.812	0.792	0.773
1600	—	—	—	—	—	0.973	0.934	0.894	0.863	0.836	0.813	0.792	0.774
1650	—	—	—	—	—	0.973	0.936	0.895	0.863	0.836	0.812	0.791	0.772
1700	—	—	—	—	—	0.973	0.938	0.895	0.863	0.835	0.811	0.790	0.771
1750	—	—	—	—	—	0.974	0.940	0.896	0.862	0.835	0.810	0.789	0.770
1800	—	—	—	—	—	0.975	0.942	0.897	0.862	0.834	0.810	0.788	0.768
1850	—	—	—	—	—	0.976	0.944	0.897	0.862	0.833	0.809	0.787	0.767
1900	—	—	—	—	—	0.977	0.946	0.898	0.862	0.832	0.807	0.785	0.766
1950	—	—	—	—	—	0.979	0.949	0.898	0.861	0.832	0.806	0.784	0.764
2000	—	—	—	—	—	0.982	0.952	0.899	0.861	0.831	0.805	0.782	0.762
2050	—	—	—	—	—	0.985	0.954	0.899	0.860	0.830	0.804	0.781	0.761
2100	—	—	—	—	—	0.988	0.956	0.900	0.860	0.828	0.802	0.779	0.759
2150	—	—	—	—	—	—	0.956	0.900	0.859	0.827	0.801	0.778	0.757
2200	—	—	—	—	—	—	0.955	0.901	0.859	0.826	0.799	0.776	0.755
2250	—	—	—	—	—	—	0.954	0.901	0.858	0.825	0.797	0.774	0.753
2300	—	—	—	—	—	—	0.953	0.901	0.857	0.823	0.795	0.772	0.751
2350	—	—	—	—	—	—	0.952	0.902	0.856	0.822	0.794	0.769	0.748
2400	—	—	—	—	—	—	0.952	0.902	0.855	0.820	0.791	0.767	0.746
2450	—	—	—	—	—	—	0.951	0.902	0.854	0.818	0.789	0.765	0.743
2500	—	—	—	—	—	—	0.951	0.902	0.852	0.816	0.787	0.762	0.740
2550	—	—	—	—	—	—	0.951	0.902	0.851	0.814	0.784	0.759	0.738
2600	—	—	—	—	—	—	0.951	0.903	0.849	0.812	0.782	0.756	0.735
2650	—	—	—	—	—	—	0.952	0.903	0.848	0.809	0.779	0.754	0.731
2700	—	—	—	—	—	—	0.952	0.903	0.846	0.807	0.776	0.750	0.728
2750	—	—	—	—	—	—	0.953	0.903	0.844	0.804	0.773	0.747	0.724
2800	—	—	—	—	—	—	0.956	0.903	0.842	0.801	0.769	0.743	0.721
2850	—	—	—	—	—	—	0.959	0.902	0.839	0.798	0.766	0.739	0.717
2900	—	—	—	—	—	—	0.963	0.902	0.836	0.794	0.762	0.735	0.713
2950	—	—	—	—	—	—	—	0.902	0.834	0.790	0.758	0.731	0.708
3000	—	—	—	—	—	—	—	0.901	0.831	0.786	0.753	0.726	0.704
3050	—	—	—	—	—	—	—	0.899	0.827	0.782	0.749	0.722	0.699
3100	—	—	—	—	—	—	—	0.896	0.823	0.777	0.744	0.716	0.693
3150	—	—	—	—	—	—	—	0.894	0.819	0.772	0.738	0.711	0.688
3200	—	—	—	—	—	—	—	0.889	0.815	0.767	0.733	0.705	0.682

SUPERHEAT CORRECTION FACTOR – MPA

Flowing pressure MPa	Superheat correction factor, K_{sh}, total temperature, °C, of superheated steam													
	205	225	250	275	300	325	350	375	400	425	450	475	500	525
0.5	0.991	0.968	0.942	0.919	0.896	0.876	0.857	0.839	0.823	0.807	0.792	0.778	0.765	0.752
0.75	0.995	0.972	0.946	0.922	0.899	0.878	0.859	0.841	0.824	0.808	0.793	0.779	0.766	0.753
1	0.985	0.973	0.950	0.925	0.902	0.880	0.861	0.843	0.825	0.809	0.794	0.780	0.766	0.753
1.25	0.981	0.976	0.954	0.928	0.905	0.883	0.863	0.844	0.827	0.810	0.795	0.781	0.767	0.754
1.5	—	—	0.957	0.932	0.907	0.885	0.865	0.846	0.828	0.812	0.796	0.782	0.768	0.755
1.75	—	—	0.959	0.935	0.910	0.887	0.866	0.847	0.829	0.813	0.797	0.782	0.769	0.756
2	—	—	0.960	0.939	0.913	0.889	0.868	0.849	0.831	0.814	0.798	0.784	0.769	0.756
2.25	—	—	0.963	0.943	0.916	0.892	0.870	0.850	0.832	0.815	0.799	0.785	0.770	0.757
2.5	—	—	—	0.946	0.919	0.894	0.872	0.852	0.834	0.816	0.800	0.785	0.771	0.757
2.75	—	—	—	0.948	0.922	0.897	0.874	0.854	0.835	0.817	0.801	0.786	0.772	0.758
3	—	—	—	0.949	0.925	0.899	0.876	0.855	0.837	0.819	0.802	0.787	0.772	0.759
3.25	—	—	—	0.951	0.929	0.902	0.879	0.857	0.838	0.820	0.803	0.788	0.773	0.759
3.5	—	—	—	0.953	0.933	0.905	0.881	0.859	0.840	0.822	0.804	0.789	0.774	0.760
3.75	—	—	—	0.956	0.936	0.908	0.883	0.861	0.841	0.823	0.806	0.790	0.775	0.761
4	—	—	—	0.959	0.940	0.910	0.885	0.863	0.842	0.824	0.807	0.791	0.776	0.762
4.25	—	—	—	0.961	0.943	0.913	0.887	0.864	0.844	0.825	0.808	0.792	0.776	0.762
4.5	—	—	—	—	0.944	0.917	0.890	0.866	0.845	0.826	0.809	0.793	0.777	0.763
4.75	—	—	—	—	0.946	0.919	0.892	0.868	0.847	0.828	0.810	0.793	0.778	0.764
5	—	—	—	—	0.947	0.922	0.894	0.870	0.848	0.829	0.811	0.794	0.779	0.765
5.25	—	—	—	—	0.949	0.926	0.897	0.872	0.850	0.830	0.812	0.795	0.780	0.765
5.5	—	—	—	—	0.952	0.930	0.899	0.874	0.851	0.831	0.813	0.797	0.780	0.766
5.75	—	—	—	—	0.954	0.933	0.902	0.876	0.853	0.833	0.815	0.798	0.782	0.767
6	—	—	—	—	0.957	0.937	0.904	0.878	0.855	0.834	0.816	0.798	0.783	0.768
6.25	—	—	—	—	0.960	0.940	0.907	0.880	0.856	0.836	0.817	0.799	0.783	0.768
6.5	—	—	—	—	0.964	0.944	0.910	0.882	0.859	0.837	0.818	0.801	0.784	0.769
6.75	—	—	—	—	0.966	0.946	0.913	0.885	0.860	0.839	0.819	0.802	0.785	0.769
7	—	—	—	—	—	0.947	0.916	0.887	0.862	0.840	0.820	0.802	0.786	0.770
7.25	—	—	—	—	—	0.949	0.919	0.889	0.863	0.842	0.822	0.803	0.787	0.771
7.5	—	—	—	—	—	0.951	0.922	0.891	0.865	0.843	0.823	0.805	0.788	0.772
7.75	—	—	—	—	—	0.953	0.925	0.893	0.867	0.844	0.824	0.806	0.788	0.772
8	—	—	—	—	—	0.955	0.928	0.896	0.869	0.846	0.825	0.806	0.789	0.773
8.25	—	—	—	—	—	0.957	0.932	0.898	0.871	0.847	0.827	0.807	0.790	0.774
8.5	—	—	—	—	—	0.960	0.935	0.901	0.873	0.849	0.828	0.809	0.791	0.775
8.75	—	—	—	—	—	0.963	0.939	0.903	0.875	0.850	0.829	0.810	0.792	0.776
9	—	—	—	—	—	0.966	0.943	0.906	0.877	0.852	0.83	0.811	0.793	0.776
9.25	—	—	—	—	—	0.970	0.947	0.909	0.879	0.853	0.832	0.812	0.794	0.777
9.5	—	—	—	—	—	0.973	0.950	0.911	0.881	0.855	0.833	0.813	0.795	0.778
9.75	—	—	—	—	—	0.977	0.954	0.914	0.883	0.857	0.834	0.814	0.796	0.779
10	—	—	—	—	—	0.981	0.957	0.917	0.885	0.859	0.836	0.815	0.797	0.780
10.25	—	—	—	—	—	0.984	0.959	0.920	0.887	0.860	0.837	0.816	0.798	0.780
10.5	—	—	—	—	—	—	0.961	0.923	0.889	0.862	0.838	0.817	0.799	0.781
10.75	—	—	—	—	—	—	0.962	0.925	0.891	0.863	0.839	0.818	0.799	0.782
11	—	—	—	—	—	—	0.963	0.928	0.893	0.865	0.840	0.819	0.800	0.782
11.25	—	—	—	—	—	—	0.964	0.930	0.893	0.865	0.840	0.819	0.799	0.781
11.5	—	—	—	—	—	—	0.964	0.931	0.894	0.865	0.840	0.818	0.798	0.780
11.75	—	—	—	—	—	—	0.965	0.932	0.894	0.865	0.839	0.817	0.797	0.780
12	—	—	—	—	—	—	0.966	0.933	0.894	0.864	0.839	0.817	0.797	0.779
12.25	—	—	—	—	—	—	0.967	0.935	0.895	0.864	0.839	0.816	0.796	0.778
12.5	—	—	—	—	—	—	0.967	0.936	0.896	0.864	0.838	0.816	0.796	0.777
12.75	—	—	—	—	—	—	0.968	0.937	0.896	0.864	0.838	0.815	0.795	0.776
13	—	—	—	—	—	—	0.969	0.939	0.896	0.864	0.837	0.814	0.794	0.775
13.25	—	—	—	—	—	—	0.971	0.940	0.897	0.864	0.837	0.813	0.792	0.774
13.5	—	—	—	—	—	—	0.972	0.942	0.897	0.863	0.837	0.813	0.792	0.773
14	—	—	—	—	—	—	0.976	0.946	0.897	0.863	0.835	0.811	0.790	0.771
14.25	—	—	—	—	—	—	0.978	0.947	0.898	0.862	0.834	0.810	0.789	0.770
14.5	—	—	—	—	—	—	—	0.948	0.898	0.862	0.833	0.809	0.787	0.768
14.75	—	—	—	—	—	—	—	0.948	0.898	0.862	0.832	0.808	0.786	0.767
15	—	—	—	—	—	—	—	0.948	0.899	0.861	0.832	0.807	0.785	0.766
15.25	—	—	—	—	—	—	—	0.947	0.899	0.861	0.831	0.806	0.784	0.764
15.5	—	—	—	—	—	—	—	0.947	0.899	0.861	0.830	0.804	0.782	0.763
15.75	—	—	—	—	—	—	—	0.946	0.899	0.860	0.829	0.803	0.781	0.761
16	—	—	—	—	—	—	—	0.945	0.900	0.859	0.828	0.802	0.779	0.759
16.25	—	—	—	—	—	—	—	0.945	0.900	0.859	0.827	0.801	0.778	0.757
16.5	—	—	—	—	—	—	—	0.945	0.900	0.858	0.826	0.799	0.776	0.756
16.75	—	—	—	—	—	—	—	0.944	0.900	0.857	0.825	0.797	0.774	0.754

Continued on page 16

SUPERHEAT CORRECTION FACTOR – MPA (CONTINUED)

Flowing pressure MPa	Superheat correction factor, K_{sh}, total temperature, °C, of superheated steam													
	205	225	250	275	300	325	350	375	400	425	450	475	500	525
17	—	—	—	—	—	—	—	0.944	0.900	0.856	0.823	0.796	0.773	0.752
17.25	—	—	—	—	—	—	—	0.944	0.900	0.855	0.822	0.794	0.771	0.750
17.5	—	—	—	—	—	—	—	0.944	0.900	0.854	0.820	0.792	0.769	0.748
17.75	—	—	—	—	—	—	—	0.944	0.900	0.853	0.819	0.791	0.767	0.746
18	—	—	—	—	—	—	—	0.944	0.901	0.852	0.817	0.789	0.765	0.744
18.25	—	—	—	—	—	—	—	0.945	0.901	0.851	0.815	0.787	0.763	0.742
18.5	—	—	—	—	—	—	—	0.945	0.901	0.850	0.814	0.785	0.761	0.739
18.75	—	—	—	—	—	—	—	0.945	0.901	0.849	0.812	0.783	0.758	0.737
19	—	—	—	—	—	—	—	0.946	0.901	0.847	0.810	0.781	0.756	0.734
19.25	—	—	—	—	—	—	—	0.948	0.901	0.846	0.808	0.778	0.753	0.732
19.5	—	—	—	—	—	—	—	0.950	0.900	0.844	0.806	0.776	0.750	0.729
19.75	—	—	—	—	—	—	—	0.952	0.899	0.842	0.803	0.773	0.748	0.726
20	—	—	—	—	—	—	—	—	0.899	0.840	0.801	0.770	0.745	0.723
20.25	—	—	—	—	—	—	—	—	0.899	0.839	0.798	0.767	0.742	0.720
20.5	—	—	—	—	—	—	—	—	0.899	0.837	0.795	0.764	0.738	0.717
20.75	—	—	—	—	—	—	—	—	0.898	0.834	0.792	0.761	0.735	0.713
21	—	—	—	—	—	—	—	—	0.896	0.832	0.790	0.758	0.732	0.710
21.25	—	—	—	—	—	—	—	—	0.894	0.829	0.786	0.754	0.728	0.706
21.5	—	—	—	—	—	—	—	—	0.892	0.826	0.783	0.750	0.724	0.702
21.75	—	—	—	—	—	—	—	—	0.891	0.823	0.779	0.746	0.720	0.698
22	—	—	—	—	—	—	—	—	0.887	0.820	0.776	0.743	0.716	0.694

MODEL NUMBERING

52 4 7 10 J 23 /S1

Pilot series

52 – Series 5200

Main valve lift

4 – Full lift, API orifice

Main valve piston type

7 – Metal seat

Inlet flange rating, ANSI

05 – 150#
10 – 300#
12 – 600#
14 – 900#
16 – 1500#
18 – 2500#

Orifice designation

Letter – API equivalent

Inlet x outlet, inches

Main valve materials

/S – WCB/WCC body, SS trim (up to 800°F [427°C])
/S3 – WC6 body, SS trim (800°F to 1000°F [538°C])
/SPL – Special

