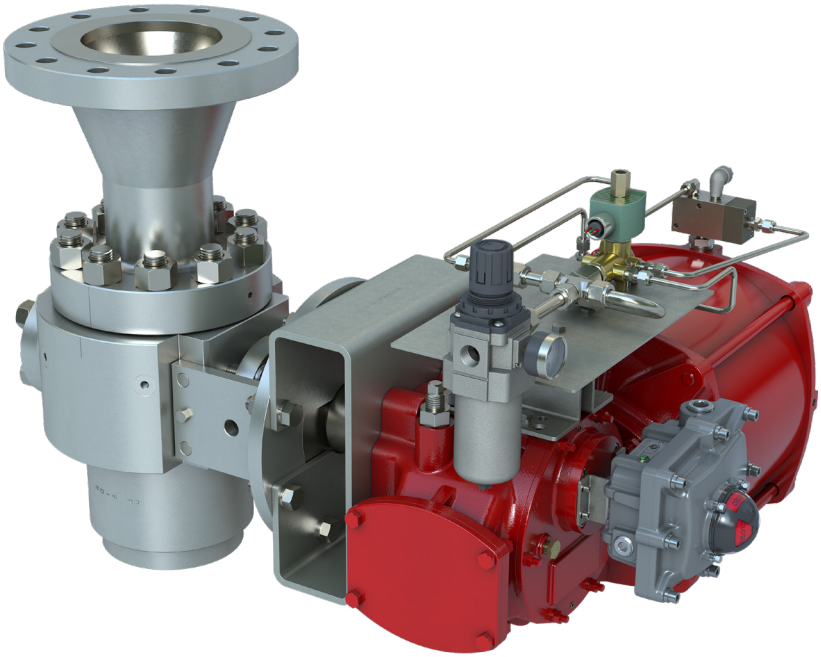
Technical Specifications
Rev. A - 04/2026

Consolidated™ 3500-6 Series EBV

Electromatic™ Ball Valve System

Provides automatic or manual overpressure start up for steam boiler systems and assists start up and shutdown venting



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Why 3500-6 Series Electromatic Ball Valves?

3500-6 Series Electromatic Ball Valves deliver predictable reliability and performance

Advanced Engineering Design

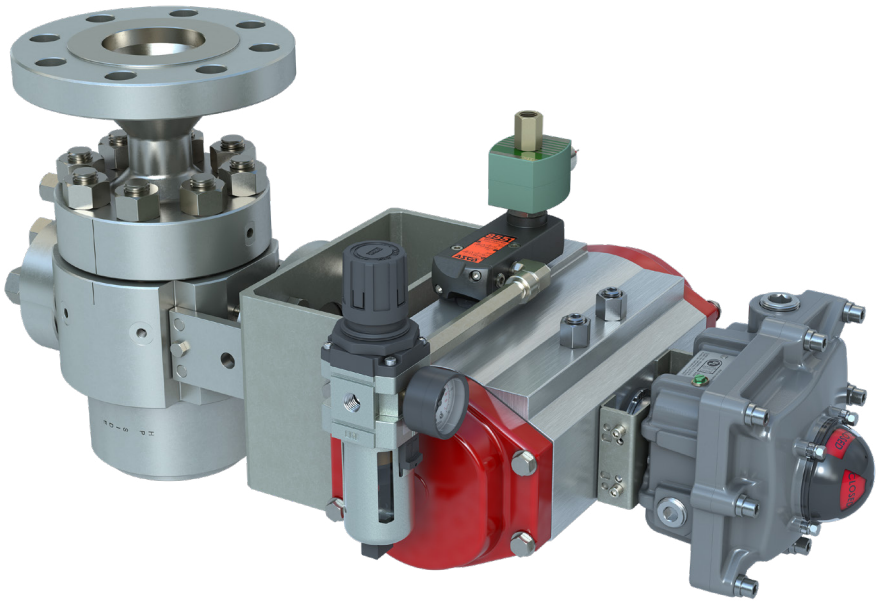
The forged valve body is engineered to endure extreme temperatures and pressures. Its fully pressure-rated body and joints, combined with precise stem alignment through the mounting flange and stuffing box, prevent misalignment and side loading.

The Inconel 718 ball and seats feature a spray-and-fuse coating that delivers exceptional strength, hardness, and resistance to thermal shock. The blowout-proof Inconel 718 stem provides a heavy-duty drivetrain, eliminating the pin-failure risks associated with competitor pinned designs.

Body joints are secured with B8M CL1 bolting, suitable for service temperatures up to 1200°F (649°C). A 360° spherical mate-lapping process ensures zero leakage and bubble-tight shutoff performance.

Superior Coating

High-performance coatings deliver exceptional resistance to erosion and corrosion even under extreme temperatures. Proprietary coating technology, featuring uniformly distributed hard phases, ensures outstanding wear resistance, superior high-temperature strength, and strong corrosion protection. Its fine microstructure also offers excellent finishability, adding further value to the coating's performance.



3500-6 Electromatic Ball Valve with S92 Actuator

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Features & Benefits

Body/End Connection
- Machined from forgings for highest material integrity
- End connections: RF-raised face flange, BW-butt weld – standard. Options available upon request: RTJ, hub connectors, male and female torque and groove.

Ball and Seat
- Inconel 718 Ball and Seats spray and fused with proprietary coating technology are 360° spherical mate lapped.
- Excellent corrosion, erosion, wear resistant, and uniform coating results in high strength, hard surfaces which results in zero leakage, bubble tight shut off.

Seat Spring
- The large seat spring energizes the ball and seats to create a tight seal at low pressure and compensates for thermal expansion of the seat and ball during thermal cycling.

Stem
- Features a highly corrosion resistant super alloy, blowout-proof, one-piece stem design. The stem is designed to meet the requirements of API 608 and API 6D.

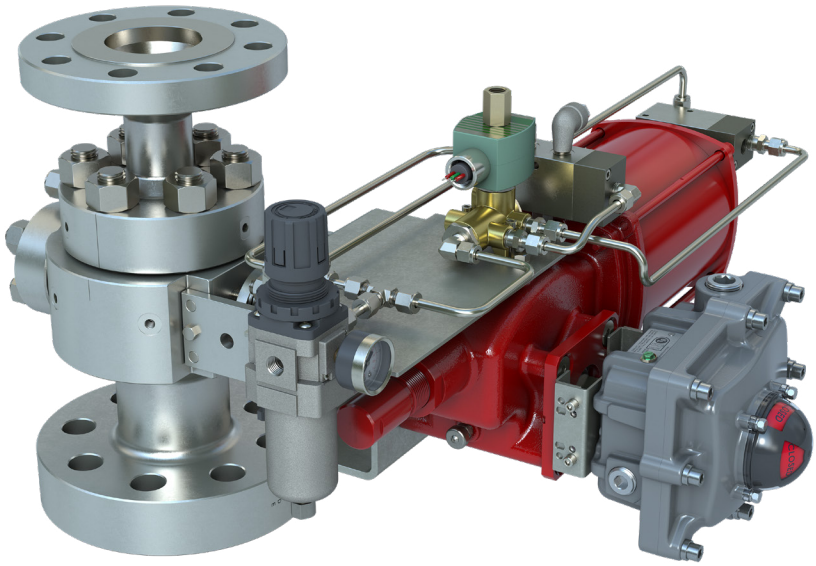
Inner Stem Bearings
- Inner stem bearing ring is used as thrust washers with ultra-hard, gall resistant material for rotational movement.

Packing
- Low emission packing rings reduce the carbon footprint in conjunction with Belleville washers that compensate for packing compression fluctuations during temperature and pressure swings.

Bearing Retainer
- To eliminate stem side loading during valve cycling caused by the operator, the bearing retainer and outer stem bushing maintain concentric alignment of the valve stem.

Outer Stem Bushing
- Gall resistant materials to withstand high cycles.

Mounting Flange
- A large, robust mounting flange is built into the valve body to support heavy operators and is critical to the drive train sealing feature.



3500-6 Electromatic Ball Valve
with S98 Actuator

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Digital Controller

The Electromatic Ball Valve Digital Controller is a highly programmable system to automatically control an open/close actuator in Power Automated Relief Valve applications. It uses industry standard digital controller and 4-20mA analog I/O, programmable Digital I/Os, and a Modbus RTU serial communication port.

Features

- Locally Programmable Interface with Touchscreen Display
- Open/Auto Switch and Open and Close Indicators on front cover
- Transducer interface and Solenoid Controls
- DCS and Modbus compatible
- Universal power supply (85 to 264 VAC 50/60 Hz)
- Both ASME and non-ASME certified versions
- Separate terminal strip for easy field installation
- 4-inch Remote Touchscreen Panel vis Modbus (Optional)
- DCS Push Button Remote Panel (Optional)

Technical Specifications

- Operating temperature: -4°F to 122°F or 158°F (optional) / -20°C to 50°C or 70°C (optional)
- Enclosure rated to Nema 4X (UL Type 4X), IP66
- CE marked
- Enclosure material: 316 Stainless Steel

Digital Controller Function

The EBV Digital Controller continuously monitors system pressure through a high precision ADC and automatically actuates the EBV according to the user defined set point and blowdown parameters. The system is compatible with both ASME and non-ASME capacity certified EBVs. The controller also offers DCS integration capabilities and includes a manual override for local control.

3500-6 EBV Digital Controller

External Controls

The ASME certified Digital Controller is sealed once installed, which prevents access to the local touchscreen during normal operation. To retain local operating capability, an external turn control provides hand operated functionality without removing the housing cover. This turn control features a three position, normally closed selector switch. Two positions—Auto and Open—send commands to the controller, while the center position removes both signals, enabling other devices to assume control.

Remote Panel Options

The remote panels, which are offered in two varieties (DCS push buttons and Modbus touchscreen), are small units that can be mounted on the plant control panel. The DCS control station is hardwired to the digital controllers's discrete I/O, while the Modbus control station is connected to the digital controllers serial port. Both versions provide for remote control and communication with the digital controller.

DCS Push Button Remote Panel

DCS Remote Panel

The DCS remote panel consists of two lights and a three-position switch. The Open and Closed lights indicate actual valve position. The selector switch is used to command the controller either in Auto mode or Open mode. In Auto mode, the controller operates the valve autonomously in response to system pressure. In Open mode, the controller manually opens the valve, regardless of system pressure.

Modbus Touchscreen Remote Panel

The Modbus touchscreen remote panel includes a 4-inch color display that replicates the interface of the local digital controller. From this remote station, operators can select Auto or Open modes and modify all device configuration parameters. The panel also provides remote indication of Seat/Re-Seat status along with real-time system pressure.

Modbus Touchscreen Remote Panel

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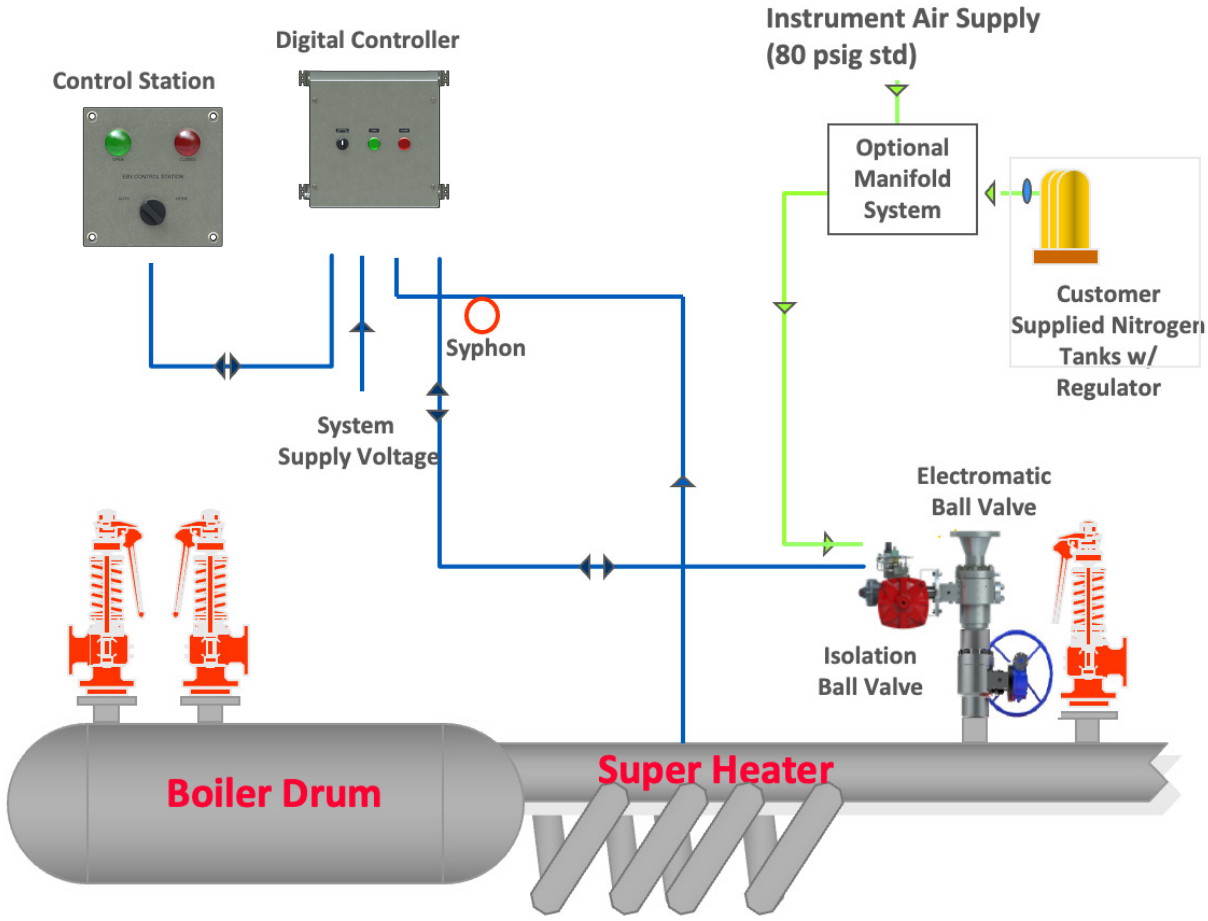
How the EBV System Works

Applications

- Automatic or manual overpressure protection
- Start up and shutdown venting assist

Operation

- Set at a lower pressure than spring-loaded safety valve
- Reduces lifts, maintenance
- Increases boiler efficiency



Specifications

Inlet Sizes

- 1.5"- 6"

Bore Size

- 0.875", 1", 1.75", 2.", 2.5", 3" & 4.5"

Outlet Sizes

- 3" - 8"

ASME Pressure Class

- 1500 - 4500 in standard, special and limited class

End Connections

- Butt weld
- Raised face flange, ring joint flange
- Tongue and groove

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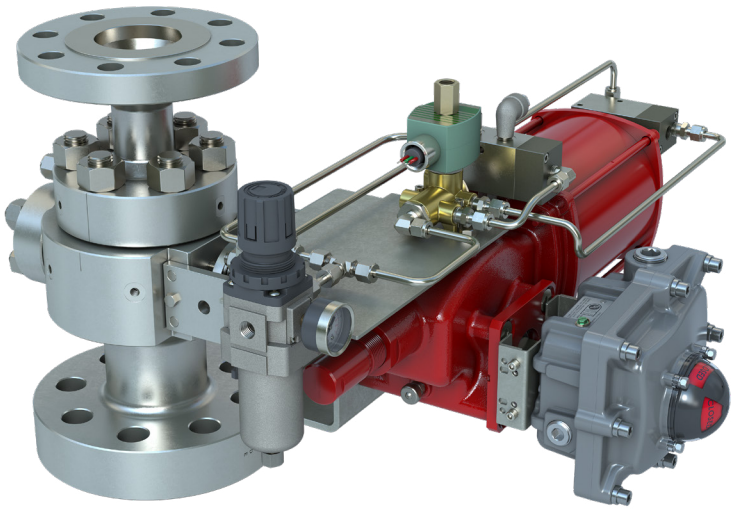
Scope of Design



Standard Valve Connections											
No	Valve Type	Bore Size		Orifice Area		Inlet			Outlet		
						Size		ASME Class	Size		ASME Standard Class
		in	mm	in^2	cm^2	in	mm		in	mm	
1	3515F	0.88	22.2	0.601	3.879	1.50	38.1	1500 Flanged	3.00	76.2	300 Flanged
2	3525F	0.88	22.2	0.601	3.879	1.50	38.1	2500 Flanged	3.00	76.2	300 Flanged
3	3525W	0.88	22.2	0.601	3.879	1.50	38.1	3100 LTD Butt weld	3.00	76.2	300 Flanged
4	3516F	1.00	25.4	0.785	5.067	2.00	50.8	1500 Flanged	3.00	76.2	300 Flanged
5	3526F	1.00	25.4	0.785	5.067	2.00	50.8	2500 Flanged	3.00	76.2	300 Flanged
6	3526W	1.00	25.4	0.785	5.067	2.00	50.8	3100 LTD Butt weld	3.00	76.2	300 Flanged
7	3517F	1.75	44.5	2.405	15.518	2.50	63.5	1500 Flanged	4.00	101.6	300 Flanged
8	3527F	1.75	44.5	2.405	15.518	2.50	63.5	2500 Flanged	4.00	101.6	300 Flanged
9	3537W	1.75	44.5	2.405	15.518	2.50	63.5	3100 LTD Butt weld	4.00	101.6	300 Flanged
10	3547W	1.75	44.5	2.405	15.518	2.50	63.5	4500 LTD Butt weld	4.00	101.6	900 Flanged
11	3538W	2.00	50.8	3.142	20.268	2.50	63.5	3100 LTD Butt weld	4.00	101.6	900 Flanged
12	3548W	2.00	50.8	3.142	20.268	3.00	76.2	4500 SPL Butt weld	6.00	152.4	900 Flanged
13	3549W	2.50	63.5	4.909	31.669	4.00	101.6	4500 SPL Butt weld	6.00	152.4	900 Flanged
14	3511W	3.00	76.2	7.069	45.604	4.00	101.6	1500 SPL Butt weld	6.00	152.4	300 Flanged
15	3512W	4.50	114.3	15.90	102.6	6.00	152.4	1500 SPL Butt weld	8.00	203.2	300 Flanged

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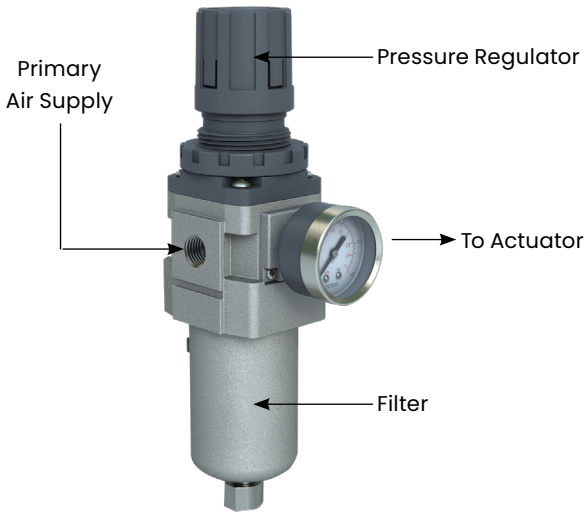
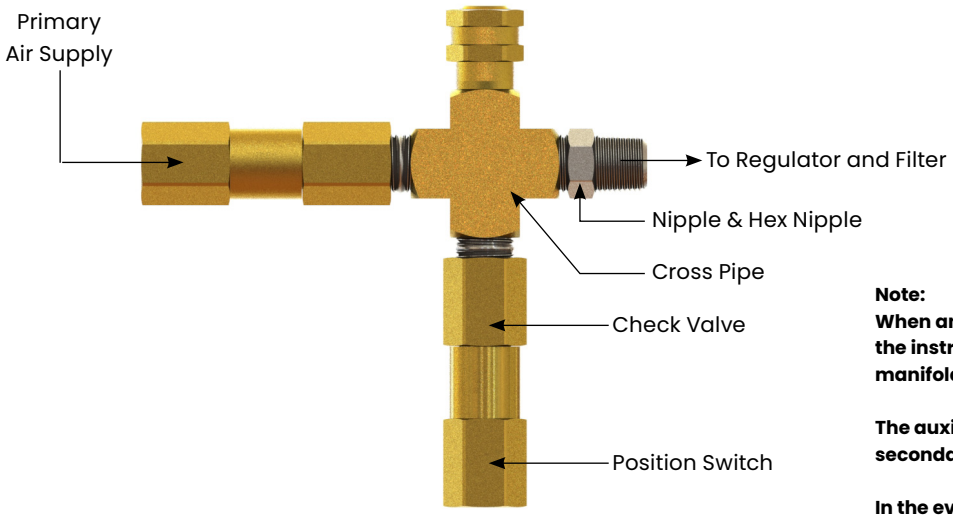
Accessories

Pressure Regulator and Filter



Note:
Pressure regulator and filter are standard supply with the 3500 EBV

Auxiliary Supply Manifold



Note:
When an alternate or backup is required to the instrument air supply, an auxiliary supply manifold can be quoted.

The auxiliary supply can be connected to a secondary air supply or nitrogen bottle.

In the event that the regulator on the auxiliary supply pressure fails, a relief valve is supplied as standard on the auxiliary supply manifold.

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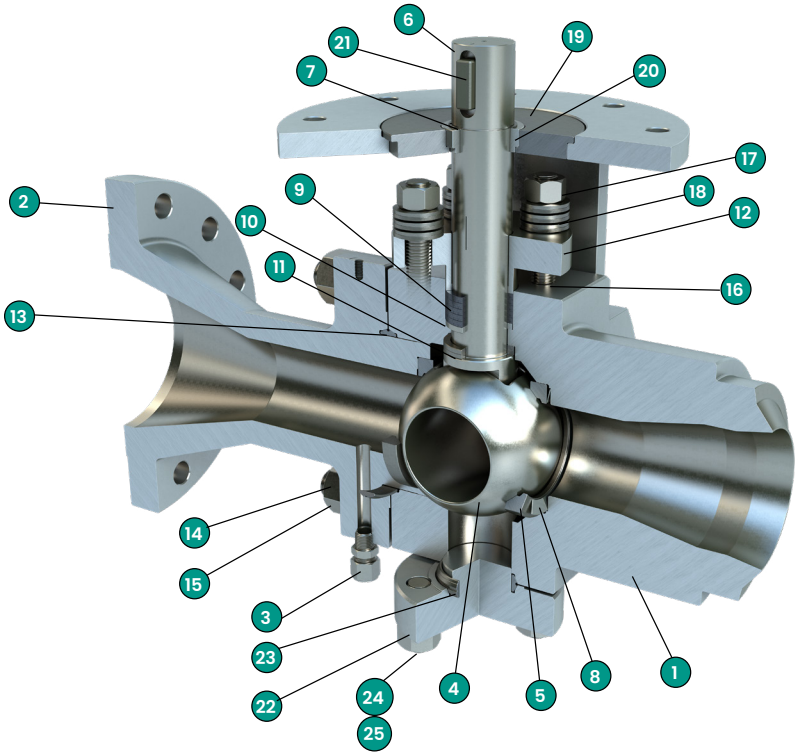
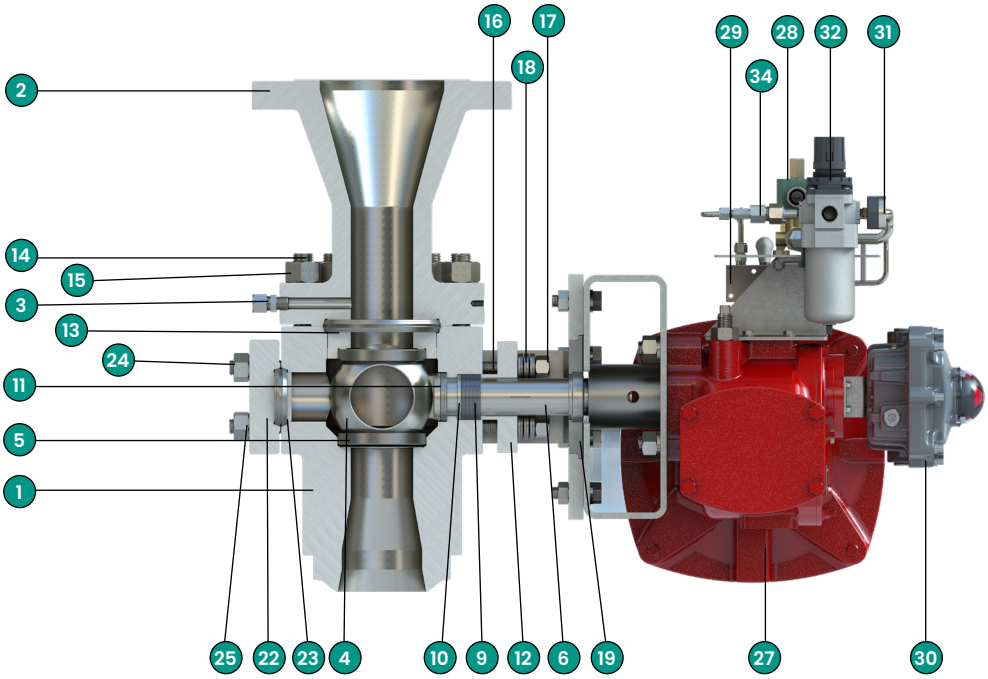
Materials





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Materials

Materials of Construction			
Ref No.	**Part Name**	**Material**	**Optional**
1	Body 3600 – Flanged (F)	SA182 F22 CL 3	
	Body 3600 – Butt weld (W)	SA182 F22 CL 3	SA182 F91 / SA182 F92
2	End Cap	SA182 F22 CL 3	
3	Drain, Fitting	316 SS	
4	Ball	Inconel 718 - Fused	
5	Seat	Inconel 718 - Fused	
6	Stem	Inconel 718	
7	Stem Retaining Ring	316 SS	
8	Seat Spring	Inconel 718	
9	Packing Set	Graphite	
10	Anti-Extrusion Ring	316 SS	
11	Inner Stem Bush	Cobalt 3	
12	Gland Retainer	316 SS	
13	Gasket	Inconel 718	
14	Stud (Body)	A193 GR B8M CL 1	
15	Nut (Body)	A194 Gr 8M	
16	Stud (Gland)	A193 Gr B8M CL 1	
17	Nut (Gland)	A194 Gr 8M	
18	Live Load Washer	Inconel 718	
19	Bearing Retainer	316 SS	
20	Bearing Insert	416/QPQ	
21	Key	17-4 PH	
22	Bottom Plate	SA182 F22 CL 3	
23	Gasket	Inconel 718	
24	Stud (Bottom Plate)	A193 Gr B8M CL 1	
25	Nut (Bottom Plate)	A194 Gr 8M	
Actuator : S92 and S98/S98C			
26	Rack and Pinion for S92 Actuator, not shown	Extruded Aluminum Alloy	
27	Scotch Yoke Actuator S98/S98C	Ductile Iron and Carbon Steel	
28	Solenoid	Brass	
29	Poppet Valves	Aluminum	
30	Position Switch	Die Cast Aluminum with Polyester Powder Coat	
31	Tubing and Fittings	Stainless Steel	
32	Pressure Regulator and Filter	Zinc	
33	Nipple (not shown)	Stainless Steel	
34	Hex Nipple	Stainless Steel	

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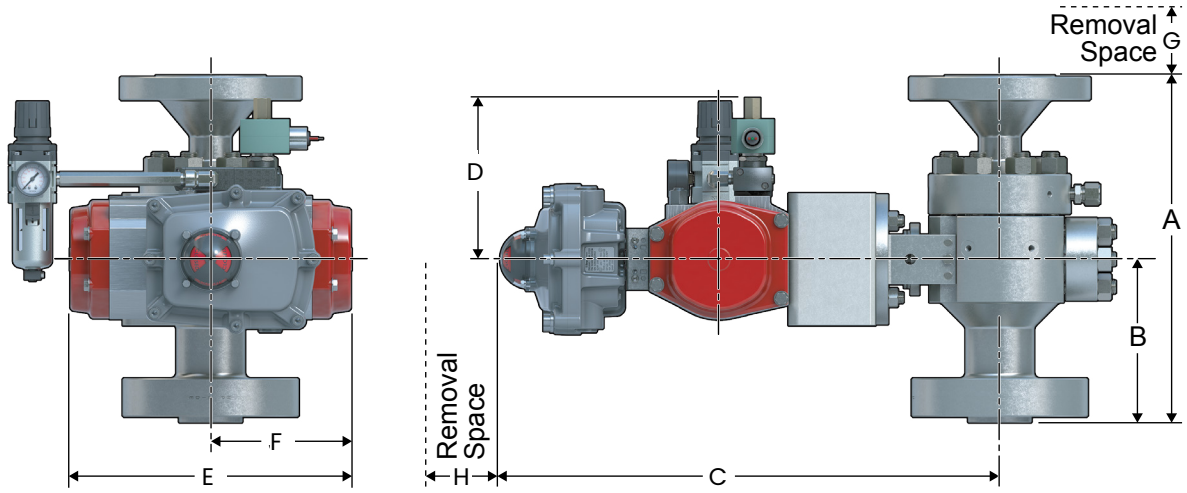
Dimensions & Weights

3500 Flange x Flange

3515, 3525 and 3516 with S92 Actuator



Valve Type	Size Inlet x Outlet	Bore	Class	Actuator Model	A		B		C		D		E	
					in	mm	in	mm	in	mm	in	mm	in	mm
3515F	1.5 x 3	0.875	1500 x 300	S92-119-DA	15.25	387	6.90	175	21.73	552	11.00	279	12.40	315
3525F	1.5 x 3	0.875	2500 x 300	S92-128-DA	15.75	400	7.40	188	22.53	572	11.10	282	12.81	325
3516F	2 x 3	1.000	1500 x 300	S92-128-DA	15.50	393	7.15	182	22.88	581	11.10	282	12.81	325

Valve Type	Actuator Model	F		G		H	
		in	mm	in	mm	in	mm
3515F	S92-119-DA	6.20	157	4.40	112	6.00	152
3525F	S92-128-DA	6.41	163	4.40	112	6.00	152
3516F	S92-128-DA	6.41	163	4.60	117	6.00	152

Valve Assembly		Mounting Kit		Actuator		Total Weight Valve + Actuator	
lbs	kg	lbs	kg	lbs	kg	lbs	kg
105	48	8	4	18	8	131	60
116	53	8	4	22	10	146	67
123	56	8	4	22	10	153	70

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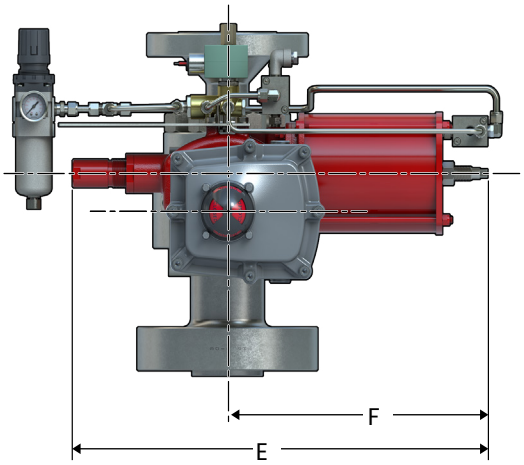
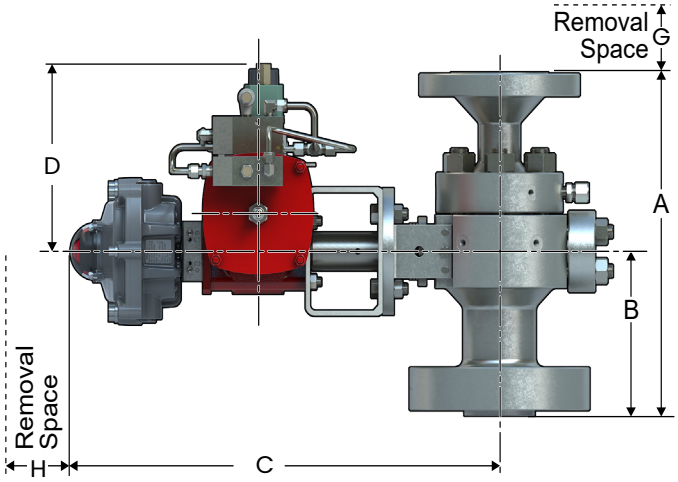
Dimensions & Weights

3500 Flange x Flange

3526, 3517 and 3527 with S98/S98C Actuator





Valve Type	Size Inlet x Outlet	Bore	Class	Actuator Model	A		B		C		D		E	
					in	mm	in	mm	in	mm	in	mm	in	mm
3526F	2 x 3	1.000	2500 x 300	50E1-125-DA	16.00	406	7.65	194	21.44	545	10.00	254	24.17	614
3517F	2.5 x 4	1.750	1500 x 300	45E2-08-DA	19.00	482	7.34	186	27.86	708	12.46	316	26.06	662
3527F	2.5 x 4	1.750	2500 x 300	45E2-09-DA	19.63	498	7.97	202	27.86	708	12.46	316	26.65	677

Valve Type	Actuator Model	F		G		H	
		in	mm	in	mm	in	mm
3526F	50E1-125-DA	15.51	394	4.60	112	6.00	152
3517F	45E2-08-DA	19.21	488	6.00	152	6.00	152
3527F	45E2-09-DA	19.21	488	6.00	152	6.00	152

Valve Assembly		Mounting Kit		Actuator		Total Weight Valve + Actuator	
lbs	kg	lbs	kg	lbs	kg	lbs	kg
134	61	7	3	46	21	187	85
316	143	25	11	143	65	484	219
333	151	25	11	152	69	510	231

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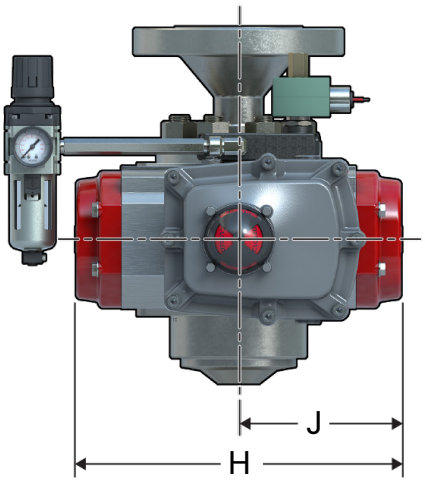
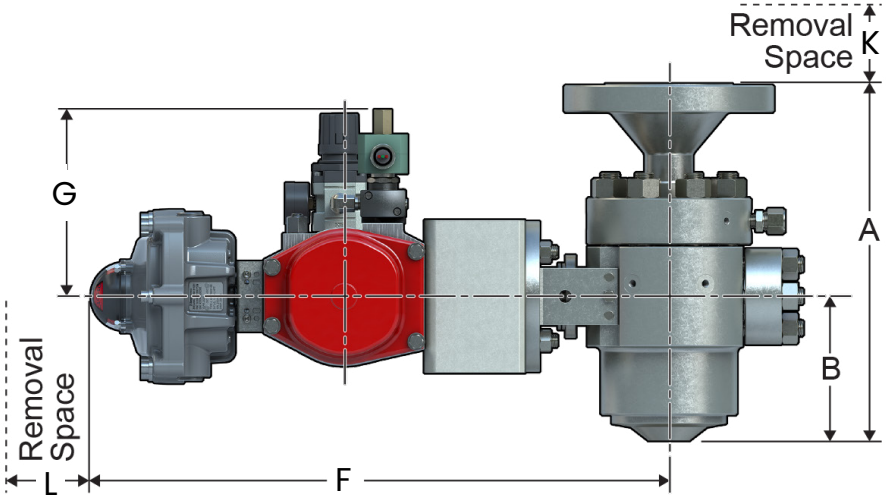
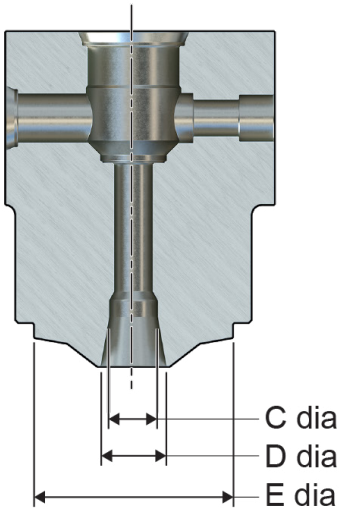
Dimensions & Weights

3500 Butt Weld x Flange

3525 with S92 Actuator







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3500 Butt Weld x Flange

3525 with S92 Actuator

Valve Type	Size Inlet x Outlet	Bore	Class	Actuator Model	A		B		C		D		E		F		G	
					in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
3525W	1.5 x 3	0.875	3100 x 300	S92-128-DA	14.00	356	5.65	144	0.87	22	1.50	38	4.50	114	22.53	572	12	305

Valve Type	Actuator Model	H		J		K		L	
		in	mm	in	mm	in	mm	in	mm
3525W	S92-128-DA	12.81	325	6.41	163	4.40	112	6	152

Valve Assembly		Mounting Kit		Actuator		Total Weight Valve + Actuator	
lbs	kg	lbs	kg	lbs	kg	lbs	kg
104	48	8	4	22	10	134	62

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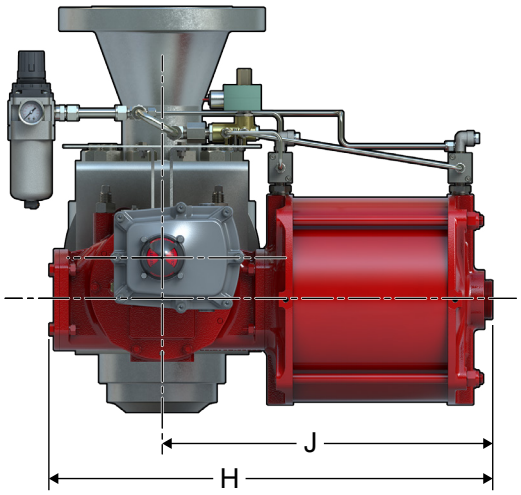
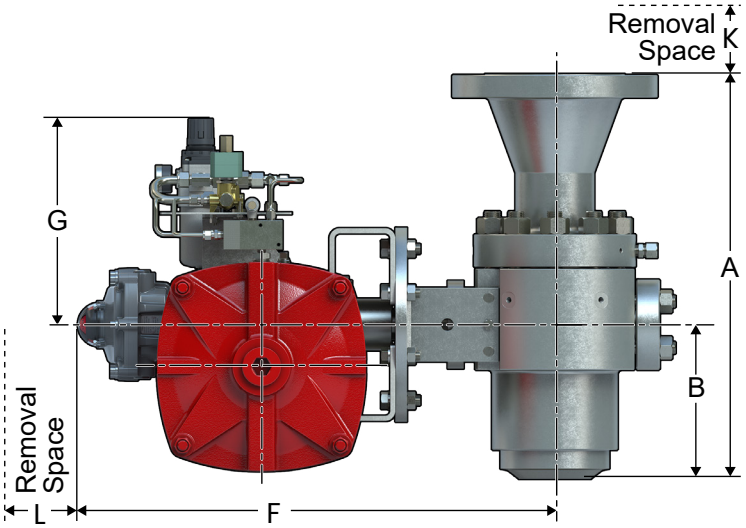
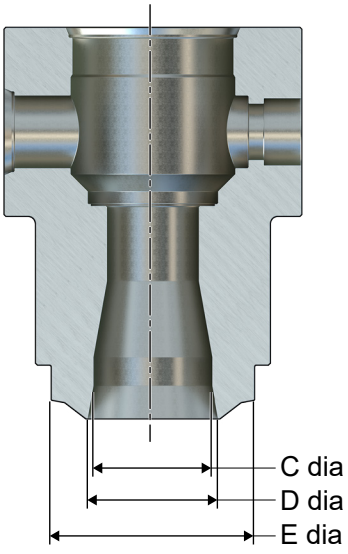
Dimensions & Weights

3500 Butt Weld x Flange

3526, 3537, 3547, 3538, 3548, 3549, 3511 and 3512 with S98/S98C Actuator







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3500 Butt Weld x Flange

3526, 3537, 3547, 3538, 3548, 3549, 3511 and 3512 with S98/S98C Actuator

Valve Type	Size Inlet x Outlet	Bore	Class	Actuator Model	A		B		C		D		E		F	
					in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
3526W	2 x 3	1	3100 x 300	10E2-125-DA	14.00	356	5.65	144	1.00	25	2.00	51	4.50	114	23.17	589
3537W	2.5 x 4	1.75	3100 x 300	45E2-09-DA	20.25	514	8.59	218	1.75	44	2.75	70	6.62	168	27.86	708
3547W	2.5 x 4	1.75	4500 x 900	73E2-16-DA	24.63	626	9.37	238	1.75	44	2.75	70	6.62	168	30.42	773
3538W	2.5 x 4	2	3100 x 900	45E2-12-DA	24.63	626	9.370	238	2.00	51	2.75	70	6.62	168	29.37	746
3548W	3 x 6	2	4500 x 900	14E3-18-DA	24.63	626	8.87	225	2.00	51	3.25	83	7.625	194	34.63	880
3549W	4 x 6	2.5	4500 x 900	14E3-18-DA	27.50	698	10.37	263	2.50	63	4.00	102	10.25	260	35.43	900
3511W	4 x 6	3	1500 x 300	45E2-12-DA	24.63	626	9.37	238	3.00	76	4.25	108	6.62	168	28.98	736
3512W	6 x 8	4.5	1500 x 300	24E3-16-DA	30.00	762	11.000	279	4.50	114	5.87	149	9.84	250	37.64	956

Valve Type	Actuator Model	G		H		J		K		L	
		in	mm	in	mm	in	mm	in	mm	in	mm
3526W	10E2-125-DA	10.59	269	10.59	269	29	737	4.60	117	6	152
3537W	45E2-09-DA	12.46	316	26.06	662	19.21	488	6	152	6	152
3547W	73E2-16-DA	13.32	338	32.29	820	23.67	601	7	178	6	152
3538W	45E2-12-DA	12.73	323	26.92	684	20.08	510	6	152	6	152
3548W	14E3-18-DA	13.95	354	38	965	28.04	712	7	178	6	152
3549W	14E3-18-DA	13.95	354	38	965	28.04	712	7.50	191	6	152
3511W	45E2-12-DA	12.73	323	26.92	684	20.08	510	5	127	6	152
3512W	24E3-16-DA	15.21	386	44.79	1138	31.86	809	6.5	165	6	152

Valve Assembly		Mounting Kit		Actuator		Total Weight Valve + Actuator	
lbs	kg	lbs	kg	lbs	kg	lbs	kg
109	50	8	4	73	33	190	87
325	148	25	12	152	69	502	229
502	228	48	22	399	181	949	431
484	220	38	18	209	95	731	333
715	324	109	50	591	268	1415	642
1036	470	112	51	591	268	1739	789
369	167	40	19	209	95	618	281
897	407	187	85	721	327	1805	819

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Pressure/Temperature

Flanged End

Pressure / Temperature Limit For Flanged End					
Valve Types: 3515, 3516, 3525, 3526, 3517, and 3527					
Applicable Base Material: ASME SA182 F22 Class 3, Standard Class, B16.34 (latest adopted)					
Temperature		Pressure			
		1500# Pressure Class		2500# Pressure Class	
°F	°C	psig	barg	psig	barg
600	316	2000	137.9	2500	172.4
650	343	2000	137.9	2500	172.4
700	371	2000	137.9	2500	172.4
750	399	2000	137.9	2500	172.4
800	427	2000	137.9	2500	172.4
850	454	2000	137.9	2500	172.4
900	482	2000	137.9	2500	172.4
920	493	2000	137.9	2500	172.4
940	504	2000	137.9	2500	172.4
950	510	1955	134.8	2500	172.4
960	516	1831	126.2	2500	172.4
970	521	1707	117.7	2500	172.4
980	527	1583	109.1	2500	172.4
990	532	1459	100.6	2435	167.9
1000	538	1335	92.0	2230	153.8
1010	543	1243	85.7	2075	143.1
1020	549	1151	79.4	1920	132.4
1030	554	1059	73.0	1765	121.7
1040	560	967	66.7	1610	111.0
1050	566	875	60.3	1455	100.3
1060	571	810	55.8	1347	92.9
1070	577	745	51.4	1239	85.4
1080	582	680	46.9	1131	78.0
1100	593	550	37.9	915	63.1
1150	621	345	23.8	570	39.3
1200	649	205	14.1	345	23.8

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Pressure/Temperature

Butt Weld End

Pressure/Temperature Limit For Butt Weld End, NPS 2 ½ and Smaller					
Valve Types: 3525, 3526, 3537, 3547, and 3538					
Applicable Base Material: ASME SA182 F22 Class 3, Limited Class, B16.34 (latest adopted)					
Temperature		Pressure			
		3100# Pressure Class		4500# Pressure Class	
°F	°C	psig	barg	psig	barg
600	316	3000	206.8	6000	413.7
650	343	3000	206.8	6000	413.7
700	371	3000	206.8	6000	413.7
750	399	3000	206.8	6000	413.7
800	427	3000	206.8	6000	413.7
850	454	3000	206.8	6000	413.7
900	482	3000	206.8	6000	413.7
920	493	3000	206.8	6000	413.7
940	504	3000	206.8	6000	413.7
950	510	3000	206.8	6000	413.7
960	516	3000	206.8	6000	413.7
970	521	3000	206.8	6000	413.7
980	527	3000	206.8	6000	413.7
990	532	3000	206.8	6000	413.7
1000	538	3000	206.8	6000	413.7
1010	543	3000	206.8	5783	398.7
1020	549	3000	206.8	5353	369.1
1030	554	3000	206.8	4924	339.5
1040	560	2880	198.6	4494	309.8
1050	566	2604	179.5	4064	280.2
1060	571	2410	166.2	3760	259.3
1070	577	2216	152.8	3457	238.3
1080	582	2023	139.5	3153	217.4
1090	588	1829	126.1	2850	196.5
1100	593	1635	112.7	2546	175.5
1150	621	1022	70.4	1592	109.8
1200	649	614	42.3	954	65.8

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Pressure/Temperature

Butt Weld End

Pressure/Temperature Limit For Butt Weld End, NPS 3 and Larger					
Valve Types: 3548, 3549, 3511 and 3512					
Applicable Base Material: ASME SA182 F22 Class 3, Special Class, B16.34 (latest adopted)					
Temperature		Pressure			
		1500# Pressure Class		4500# Pressure Class	
°F	°C	psig	barg	psig	barg
600	316	2000	137.9	6000	413.7
650	343	2000	137.9	6000	413.7
700	371	2000	137.9	6000	413.7
750	399	2000	137.9	6000	413.7
800	427	2000	137.9	6000	413.7
850	454	2000	137.9	6000	413.7
900	482	2000	137.9	6000	413.7
920	493	2000	137.9	6000	413.7
940	504	2000	137.9	6000	413.7
950	510	2000	137.9	6000	413.7
960	516	2000	137.9	6000	413.7
970	521	2000	137.9	6000	413.7
980	527	1980	136.5	6000	413.7
990	532	1825	125.8	6000	413.7
1000	538	1670	115.1	5015	345.8
1010	543	1555	107.2	4668	321.8
1020	549	1440	99.3	4321	297.9
1030	554	1325	91.4	3974	274.0
1040	560	1210	83.4	3627	250.1
1050	566	1095	75.5	3280	226.1
1060	571	1013	69.8	3035	209.3
1070	577	931	64.2	2790	192.4
1080	582	849	58.5	2545	175.5
1100	593	685	47.2	2055	141.7
1150	621	430	29.6	1285	88.6
1200	649	255	17.6	770	53.1

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Pressure/Temperature

Flanged End

Pressure/Temperature Limit For Flanged End					
Valve Types: 3515, 3516, 3525, 3526, 3517, and 3527					
Applicable Base Material: ASME SA182 F91, Standard Class; B16.34 (latest adopted)					
Temperature		Pressure			
		1500# Pressure Class		2500# Pressure Class	
°F	°C	psig	barg	psig	barg
600	316	2000	137.9	2500	172.4
650	343	2000	137.9	2500	172.4
700	371	2000	137.9	2500	172.4
750	399	2000	137.9	2500	172.4
800	427	2000	137.9	2500	172.4
850	454	2000	137.9	2500	172.4
900	482	2000	137.9	2500	172.4
920	493	2000	137.9	2500	172.4
940	504	2000	137.9	2500	172.4
950	510	2000	137.9	2500	172.4
960	516	2000	137.9	2500	172.4
970	521	2000	137.9	2500	172.4
980	527	2000	137.9	2500	172.4
990	532	2000	137.9	2500	172.4
1000	538	2000	137.9	2500	172.4
1010	543	2000	137.9	2500	172.4
1020	549	2000	137.9	2500	172.4
1030	554	2000	137.9	2500	172.4
1040	560	2000	137.9	2500	172.4
1050	566	2000	137.9	2500	172.4
1060	571	1938	133.6	2500	172.4
1070	577	1826	125.9	2500	172.4
1080	582	1714	118.2	2500	172.4
1090	588	1602	110.5	2500	172.4
1100	593	1490	102.7	2485	171.3
1150	621	975	67.2	1630	112.4
1200	649	600	41.4	1000	68.9

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Pressure/Temperature

Butt Weld End

Pressure/Temperature Limit For Butt Weld End, NPS 2 ½ and Smaller					
Valve Types: 3525, 3526, 3537, 3547, and 3538					
Applicable Base Material: ASME SA182 F91, Limited Class; B16.34 (latest adopted)					
Temperature		Pressure			
		3100# Pressure Class		4500# Pressure Class	
°F	°C	psig	barg	psig	barg
600	316	3000	206.8	6000	413.7
650	343	3000	206.8	6000	413.7
700	371	3000	206.8	6000	413.7
750	399	3000	206.8	6000	413.7
800	427	3000	206.8	6000	413.7
850	454	3000	206.8	6000	413.7
900	482	3000	206.8	6000	413.7
920	493	3000	206.8	6000	413.7
940	504	3000	206.8	6000	413.7
950	510	3000	206.8	6000	413.7
960	516	3000	206.8	6000	413.7
970	521	3000	206.8	6000	413.7
980	527	3000	206.8	6000	413.7
990	532	3000	206.8	6000	413.7
1000	538	3000	206.8	6000	413.7
1010	543	3000	206.8	6000	413.7
1020	549	3000	206.8	6000	413.7
1030	554	3000	206.8	6000	413.7
1040	560	3000	206.8	6000	413.7
1050	566	3000	206.8	6000	413.7
1060	571	3000	206.8	6000	413.7
1070	577	3000	206.8	6000	413.7
1080	582	3000	206.8	6000	413.7
1090	588	3000	206.8	6000	413.7
1100	593	3000	206.8	6000	413.7
1150	621	2911	200.7	4541	313.1
1200	621	1787	123.2	2788	192.2

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Pressure/Temperature

Butt Weld End

Pressure/Temperature Limit For Butt Weld End, NPS 3 and Larger					
Valve Types: 3548, 3549, 3511 and 3512					
Applicable Base Material: ASME SA182 F91, Special Class; B16.34 (latest adopted)					
Temperature		Pressure			
		1500# Pressure Class		4500# Pressure Class	
°F	°C	psig	barg	psig	barg
700	371	2000	137.9	6000	413.7
750	399	2000	137.9	6000	413.7
800	427	2000	137.9	6000	413.7
850	454	2000	137.9	6000	413.7
900	482	2000	137.9	6000	413.7
920	493	2000	137.9	6000	413.7
940	504	2000	137.9	6000	413.7
950	510	2000	137.9	6000	413.7
960	516	2000	137.9	6000	413.7
970	521	2000	137.9	6000	413.7
980	527	2000	137.9	6000	413.7
990	532	2000	137.9	6000	413.7
1000	538	2000	137.9	6000	413.7
1010	543	2000	137.9	6000	413.7
1020	549	2000	137.9	6000	413.7
1030	554	2000	137.9	6000	413.7
1040	560	2000	137.9	6000	413.7
1050	566	2000	137.9	6000	413.7
1060	571	2000	137.9	6000	413.7
1070	577	2000	137.9	6000	413.7
1080	582	2000	137.9	6000	413.7
1090	588	1972	136.0	5915	407.8
1100	593	1865	128.6	5595	385.8
1110	599	1736	119.7	5209	359.1
1120	604	1607	110.8	4823	332.5
1130	610	1478	101.9	4437	305.9
1140	616	1349	93.0	4051	279.3
1150	621	1220	84.1	3665	252.7
1200	649	750	51.7	2250	155.1

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Pressure/Temperature

Butt Weld End

Pressure/Temperature Limit For Butt Weld End, NPS 2 ½ and Smaller					
Valve Types: 3525, 3526, 3537, 3547, and 3538 with or without isolation valve					
Applicable Base Material: ASME SA182 F92, Limited Class; 16.34 (latest Adopted)					
Temperature		Pressure			
		3200# Pressure Class		4500# Presure Class	
°F	°C	psig	barg	psig	barg
600	316	8000	551.6	11250	775.7
650	343	8000	551.6	11250	775.7
700	371	7975	549.8	11215	773.2
750	399	7926	546.5	11150	768.8
800	427	7833	540.1	11015	759.5
850	454	7372	508.3	10365	714.6
900	482	6528	450.1	9180	632.9
920	493	6162	424.8	8727	601.7
940	504	5795	399.6	8274	570.5
950	510	5612	387.0	8047	554.8
960	516	5675	391.3	8221	566.8
970	521	5739	395.7	8394	578.8
980	527	5802	400.0	8567	590.7
990	532	5865	404.4	8741	602.7
1000	538	5928	408.7	8914	614.6
1010	543	5928	408.7	8914	614.6
1020	549	5928	408.7	8914	614.6
1030	554	5928	408.7	8914	614.6
1040	560	5928	408.7	8914	614.6
1050	566	5928	408.7	8914	614.6
1060	571	5899	406.7	8868	611.4
1070	577	5869	404.7	8822	608.3
1080	582	5840	402.7	8777	605.1
1090	588	5811	400.6	8731	602.0
1100	593	5781	398.6	8685	598.8
1150	621	4398	303.2	6610	455.7
1200	648	2809	193.7	4219	290.9

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Pressure/Temperature

Butt Weld End

Pressure/Temperature Limit For Butt Weld End, NPS 3 and Larger					
Valve Types: 3548, 3549, 3511 and 3512 with or without isolation valve					
Applicable Base Material: ASME SA182 F92, Special Class; 16.34 (latest Adopted)					
Temperature		Pressure			
		1500# Pressure Class		4500# Pressure Class	
°F	°C	psig	barg	psig	barg
600	316	2000	137.9	6000	413.7
650	343	2000	137.9	6000	413.7
700	371	2000	137.9	6000	413.7
750	399	2000	137.9	6000	413.7
800	427	2000	137.9	6000	413.7
850	454	2000	137.9	6000	413.7
900	482	2000	137.9	6000	413.7
920	493	2000	137.9	6000	413.7
940	504	2000	137.9	6000	413.7
950	510	2000	137.9	6000	413.7
960	516	2000	137.9	6000	413.7
970	521	2000	137.9	6000	413.7
980	527	2000	137.9	6000	413.7
990	532	2000	137.9	6000	413.7
1000	538	2000	137.9	6000	413.7
1010	543	2000	137.9	6000	413.7
1020	549	2000	137.9	6000	413.7
1030	554	2000	137.9	6000	413.7
1040	560	2000	137.9	6000	413.7
1050	566	2000	137.9	6000	413.7
1060	571	2000	137.9	6000	413.7
1070	577	2000	137.9	6000	413.7
1080	582	2000	137.9	6000	413.7
1090	588	2000	137.9	6000	413.7
1100	593	2000	137.9	6000	413.7
1150	621	1780	122.7	5335	367.8
1200	649	1135	78.3	3405	234.8

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Orifice Capacities

Definitions

A = nozzle throat area, in^2 (mm^2)

P = flowing pressure at inlet of the valve, psia (MPa)

K = coefficient of discharge for the design (K_d x 0.9)

W = rated relieving capacity, lb/hr (kg/hr)

S, slope = $\frac{W}{P} = \frac{\text{measured capacity}}{\text{absolute flow rating pressure}}$

Supercritical correction factor, K_{sc} for ASME BPVC.I (latest adopted)

Superheat correction factor K_{sh} for Saturated Steam, Ksh = 1.0

$K_d = \frac{\text{actual flow}}{\text{theoretic flow}}$ = individual coefficient of discharge

K_n = Napier factor. A dimensionless correction factor to the Napier steam flow equation used only for steam in the range of P >1500psig.

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1

Flow Area (A)		in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
100	6.9	2958	1341	3863	1752	11837	5369	15459	7012	24157	10956	34793	15781	78279	35504
110	7.6	3216	1460	4201	1908	12873	5845	16812	7634	26271	11930	37838	17182	85129	38658
120	8.3	3475	1580	4539	2063	13909	6322	18165	8257	28385	12903	40883	18584	91979	41812
130	9.0	3734	1699	4878	2219	14945	6799	19518	8880	30499	13876	43927	19986	98829	44965
140	9.7	3993	1818	5216	2375	15980	7276	20871	9503	32613	14849	46972	21388	105680	48119
150	10.3	4252	1920	5554	2508	17016	7685	22224	10037	34727	15683	50017	22589	112530	50822
160	11.0	4511	2039	5892	2664	18052	8162	23577	10660	36841	16657	53062	23991	119380	53976
170	11.7	4770	2158	6230	2819	19088	8639	24930	11283	38955	17630	56107	25393	126230	57130
180	12.4	5029	2278	6568	2975	20124	9116	26283	11905	41069	18603	59151	26794	133081	60283
190	13.1	5287	2397	6906	3131	21160	9593	27636	12528	43183	19576	62196	28196	139931	63437
200	13.8	5546	2516	7244	3286	22196	10069	28989	13151	45297	20550	65241	29598	146781	66591
210	14.5	5805	2635	7583	3442	23232	10546	30341	13774	47411	21523	68286	31000	153631	69745
220	15.2	6064	2754	7921	3598	24268	11023	31694	14397	49525	22496	71331	32402	160482	72898
230	15.9	6323	2873	8259	3753	25303	11500	33047	15020	51639	23469	74375	33803	167332	76052
240	16.5	6582	2976	8597	3887	26339	11909	34400	15554	53753	24304	77420	35005	174182	78755
250	17.2	6841	3095	8935	4042	27375	12386	35753	16176	55867	25277	80465	36407	181032	81909
260	17.9	7099	3214	9273	4198	28411	12863	37106	16799	57981	26250	83510	37808	187883	85063
270	18.6	7358	3333	9611	4354	29447	13340	38459	17422	60095	27223	86555	39210	194733	88216
280	19.3	7617	3452	9949	4509	30483	13817	39812	18045	62209	28197	89599	40612	201583	91370
290	20.0	7876	3572	10288	4665	31519	14293	41165	18668	64323	29170	92644	42014	208434	94524
300	20.7	8135	3691	10626	4821	32555	14770	42518	19291	66437	30143	95689	43415	215284	97678
310	21.4	8394	3810	10964	4976	33591	15247	43871	19914	68551	31116	98734	44817	222134	100831
320	22.1	8653	3929	11302	5132	34627	15724	45223	20536	70665	32090	101779	46219	228984	103985
330	22.8	8912	4048	11640	5288	35662	16201	46576	21159	72779	33063	104823	47621	235835	107139
340	23.4	9170	4150	11978	5421	36698	16610	47929	21693	74893	33897	107868	48822	242685	109842
350	24.1	9429	4270	12316	5577	37734	17087	49282	22316	77007	34870	110913	50224	249535	112996
360	24.8	9688	4389	12654	5733	38770	17564	50635	22939	79121	35844	113958	51626	256385	116149
370	25.5	9947	4508	12992	5888	39806	18041	51988	23562	81235	36817	117003	53028	263236	119303
380	26.2	10206	4627	13331	6044	40842	18517	53341	24185	83349	37790	120047	54429	270086	122457
390	26.9	10465	4746	13669	6200	41878	18994	54694	24807	85463	38763	123092	55831	276936	125611
400	27.6	10724	4865	14007	6355	42914	19471	56047	25430	87577	39737	126137	57233	283786	128764
410	28.3	10982	4985	14345	6511	43950	19948	57400	26053	89691	40710	129182	58635	290637	131918
420	29.0	11241	5104	14683	6666	44985	20425	58753	26676	91805	41683	132226	60036	297487	135072
430	29.6	11500	5206	15021	6800	46021	20834	60105	27210	93919	42517	135271	61238	304337	137775
440	30.3	11759	5325	15359	6956	47057	21311	61458	27833	96033	43490	138316	62640	311187	140929
450	31.0	12018	5444	15697	7111	48093	21788	62811	28456	98147	44464	141361	64041	318038	144083
460	31.7	12277	5563	16036	7267	49129	22265	64164	29078	100261	45437	144406	65443	324888	147236
470	32.4	12536	5683	16374	7423	50165	22742	65517	29701	102375	46410	147450	66845	331738	150390
480	33.1	12795	5802	16712	7578	51201	23218	66870	30324	104489	47383	150495	68247	338588	153544

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1

Flow Area (A)		in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
490	33.8	13053	5921	17050	7734	52237	23695	68223	30947	106603	48357	153540	69648	345439	156697
500	34.5	13312	6040	17388	7890	53273	24172	69576	31570	108717	49330	156585	71050	352289	159851
510	35.2	13571	6159	17726	8045	54309	24649	70929	32193	110831	50303	159630	72452	359139	163005
520	35.9	13830	6279	18064	8201	55344	25126	72282	32816	112945	51276	162674	73854	365989	166159
530	36.5	14089	6381	18402	8334	56380	25535	73634	33349	115059	52111	165719	75055	372840	168862
540	37.2	14348	6500	18741	8490	57416	26012	74987	33972	117173	53084	168764	76457	379690	172016
550	37.9	14607	6619	19079	8646	58452	26489	76340	34595	119287	54057	171809	77859	386540	175169
560	38.6	14865	6738	19417	8801	59488	26966	77693	35218	121401	55030	174854	79261	393390	178323
570	39.3	15124	6857	19755	8957	60524	27442	79046	35841	123515	56004	177898	80662	400241	181477
580	40.0	15383	6977	20093	9113	61560	27919	80399	36464	125629	56977	180943	82064	407091	184630
590	40.7	15642	7096	20431	9268	62596	28396	81752	37087	127743	57950	183988	83466	413941	187784
600	41.4	15901	7215	20769	9424	63632	28873	83105	37709	129857	58923	187033	84868	420791	190938
610	42.1	16160	7334	21107	9580	64667	29350	84458	38332	131971	59897	190078	86269	427642	194092
620	42.7	16419	7436	21445	9713	65703	29759	85811	38866	134085	60731	193122	87471	434492	196795
630	43.4	16678	7555	21784	9869	66739	30236	87164	39489	136199	61704	196167	88873	441342	199949
640	44.1	16936	7675	22122	10024	67775	30713	88516	40112	138313	62677	199212	90274	448193	203102
650	44.8	17195	7794	22460	10180	68811	31190	89869	40735	140427	63651	202257	91676	455043	206256
660	45.5	17454	7913	22798	10336	69847	31666	91222	41358	142541	64624	205302	93078	461893	209410
670	46.2	17713	8032	23136	10491	70883	32143	92575	41980	144655	65597	208346	94480	468743	212563
680	46.9	17972	8151	23474	10647	71919	32620	93928	42603	146769	66570	211391	95882	475594	215717
690	47.6	18231	8270	23812	10803	72955	33097	95281	43226	148883	67544	214436	97283	482444	218871
700	48.3	18490	8390	24150	10958	73991	33574	96634	43849	150997	68517	217481	98685	489294	222025
710	49.0	18748	8509	24489	11114	75026	34051	97987	44472	153111	69490	220526	100087	496144	225178
720	49.6	19007	8611	24827	11247	76062	34460	99340	45006	155225	70324	223570	101288	502995	227882
730	50.3	19266	8730	25165	11403	77098	34937	100693	45629	157339	71298	226615	102690	509845	231035
740	51.0	19525	8849	25503	11559	78134	35414	102046	46251	159453	72271	229660	104092	516695	234189
750	51.7	19784	8969	25841	11714	79170	35891	103398	46874	161567	73244	232705	105494	523545	237343
760	52.4	20043	9088	26179	11870	80206	36367	104751	47497	163681	74217	235750	106895	530396	240497
770	53.1	20302	9207	26517	12026	81242	36844	106104	48120	165795	75191	238794	108297	537246	243650
780	53.8	20560	9326	26855	12181	82278	37321	107457	48743	167909	76164	241839	109699	544096	246804
790	54.5	20819	9445	27193	12337	83314	37798	108810	49366	170023	77137	244884	111101	550946	249958
800	55.2	21078	9564	27532	12493	84349	38275	110163	49988	172137	78110	247929	112503	557797	253111
810	55.8	21337	9667	27870	12626	85385	38684	111516	50522	174251	78944	250974	113704	564647	255815
820	56.5	21596	9786	28208	12782	86421	39161	112869	51145	176365	79918	254018	115106	571497	258968
830	57.2	21855	9905	28546	12938	87457	39638	114222	51768	178479	80891	257063	116508	578347	262122
840	57.9	22114	10024	28884	13093	88493	40115	115575	52391	180593	81864	260108	117909	585198	265276
850	58.6	22373	10143	29222	13249	89529	40591	116928	53014	182707	82837	263153	119311	592048	268430
860	59.3	22631	10262	29560	13405	90565	41068	118280	53637	184821	83811	266198	120713	598898	271583
870	60.0	22890	10382	29898	13560	91601	41545	119633	54259	186935	84784	269242	122115	605748	274737

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1

Flow Area (A)		in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
880	60.7	23149	10501	30237	13716	92637	42022	120986	54882	189049	85757	272287	123516	612599	277891
890	61.4	23408	10620	30575	13872	93673	42499	122339	55505	191163	86730	275332	124918	619449	281044
900	62.1	23667	10739	30913	14027	94708	42976	123692	56128	193277	87704	278377	126320	626299	284198
910	62.7	23926	10841	31251	14161	95744	43385	125045	56662	195391	88538	281422	127521	633149	286901
920	63.4	24185	10960	31589	14316	96780	43862	126398	57285	197505	89511	284466	128923	640000	290055
930	64.1	24443	11080	31927	14472	97816	44339	127751	57908	199619	90484	287511	130325	646850	293209
940	64.8	24702	11199	32265	14628	98852	44815	129104	58530	201733	91458	290556	131727	653700	296363
950	65.5	24961	11318	32603	14783	99888	45292	130457	59153	203847	92431	293601	133129	660550	299516
960	66.2	25220	11437	32942	14939	100924	45769	131810	59776	205961	93404	296646	134530	667401	302670
970	66.9	25479	11556	33280	15095	101960	46246	133162	60399	208075	94377	299690	135932	674251	305824
980	67.6	25738	11676	33618	15250	102996	46723	134515	61022	210189	95351	302735	137334	681101	308977
990	68.3	25997	11795	33956	15406	104031	47200	135868	61645	212303	96324	305780	138736	687951	312131
1000	68.9	26256	11897	34294	15539	105067	47609	137221	62179	214417	97158	308825	139937	694802	314834
1010	69.6	26514	12016	34632	15695	106103	48086	138574	62801	216531	98131	311870	141339	701652	317988
1020	70.3	26773	12135	34970	15851	107139	48563	139927	63424	218645	99105	314914	142741	708502	321142
1030	71.0	27032	12254	35308	16006	108175	49040	141280	64047	220759	100078	317959	144142	715353	324296
1040	71.7	27291	12374	35646	16162	109211	49516	142633	64670	222873	101051	321004	145544	722203	327449
1050	72.4	27550	12493	35985	16318	110247	49993	143986	65293	224987	102024	324049	146946	729053	330603
1060	73.1	27809	12612	36323	16473	111283	50470	145339	65916	227101	102998	327094	148348	735903	333757
1070	73.8	28068	12731	36661	16629	112319	50947	146692	66539	229215	103971	330138	149749	742754	336911
1080	74.5	28326	12850	36999	16785	113355	51424	148044	67161	231329	104944	333183	151151	749604	340064
1090	75.2	28585	12969	37337	16940	114390	51901	149397	67784	233443	105917	336228	152553	756454	343218
1100	75.8	28844	13072	37675	17074	115426	52310	150750	68318	235557	106751	339273	153755	763304	345921
1110	76.5	29103	13191	38013	17229	116462	52787	152103	68941	237671	107725	342318	155156	770155	349075
1120	77.2	29362	13310	38351	17385	117498	53264	153456	69564	239785	108698	345362	156558	777005	352229
1130	77.9	29621	13429	38690	17541	118534	53740	154809	70187	241899	109671	348407	157960	783855	355382
1140	78.6	29880	13548	39028	17696	119570	54217	156162	70810	244013	110644	351452	159362	790705	358536
1150	79.3	30139	13667	39366	17852	120606	54694	157515	71432	246127	111618	354497	160763	797556	361690
1160	80.0	30397	13787	39704	18008	121642	55171	158868	72055	248241	112591	357542	162165	804406	364844
1170	80.7	30656	13906	40042	18163	122678	55648	160221	72678	250355	113564	360586	163567	811256	367997
1180	81.4	30915	14025	40380	18319	123713	56125	161574	73301	252469	114537	363631	164969	818106	371151
1190	82.0	31174	14127	40718	18452	124749	56534	162926	73835	254583	115372	366676	166170	824957	373854
1200	82.7	31433	14246	41056	18608	125785	57011	164279	74458	256697	116345	369721	167572	831807	377008
1210	83.4	31692	14366	41395	18764	126821	57488	165632	75081	258811	117318	372766	168974	838657	380162
1220	84.1	31951	14485	41733	18919	127857	57964	166985	75703	260925	118291	375810	170376	845507	383315
1230	84.8	32209	14604	42071	19075	128893	58441	168338	76326	263039	119265	378855	171777	852358	386469
1240	85.5	32468	14723	42409	19231	129929	58918	169691	76949	265153	120238	381900	173179	859208	389623
1250	86.2	32727	14842	42747	19386	130965	59395	171044	77572	267267	121211	384945	174581	866058	392777
1260	86.9	32986	14961	43085	19542	132001	59872	172397	78195	269381	122184	387990	175983	872908	395930

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1

Flow Area (A)		in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
1270	87.6	33245	15081	43423	19698	133037	60349	173750	78818	271495	123158	391034	177384	879759	399084
1280	88.3	33504	15200	43761	19853	134072	60826	175103	79441	273609	124131	394079	178786	886609	402238
1290	88.9	33763	15302	44099	19987	135108	61235	176456	79974	275723	124965	397124	179988	893459	404941
1300	89.6	34022	15421	44438	20143	136144	61712	177808	80597	277837	125938	400169	181389	900309	408095
1310	90.3	34280	15540	44776	20298	137180	62188	179161	81220	279951	126912	403214	182791	907160	411248
1320	91.0	34539	15659	45114	20454	138216	62665	180514	81843	282065	127885	406258	184193	914010	414402
1330	91.7	34798	15779	45452	20610	139252	63142	181867	82466	284179	128858	409303	185595	920860	417556
1340	92.4	35057	15898	45790	20765	140288	63619	183220	83089	286293	129831	412348	186996	927710	420710
1350	93.1	35316	16017	46128	20921	141324	64096	184573	83712	288407	130805	415393	188398	934561	423863
1360	93.8	35575	16136	46466	21077	142360	64573	185926	84334	290521	131778	418437	189800	941411	427017
1370	94.5	35834	16255	46804	21232	143395	65050	187279	84957	292635	132751	421482	191202	948261	430171
1380	95.1	36092	16357	47143	21366	144431	65459	188632	85491	294749	133585	424527	192403	955112	432874
1390	95.8	36351	16477	47481	21521	145467	65936	189985	86114	296863	134558	427572	193805	961962	436028
1400	96.5	36610	16596	47819	21677	146503	66413	191338	86737	298977	135532	430617	195207	968812	439181
1410	97.2	36869	16715	48157	21833	147539	66889	192690	87360	301091	136505	433661	196609	975662	442335
1420	97.9	37128	16834	48495	21988	148575	67366	194043	87983	303205	137478	436706	198010	982513	445489
1430	98.6	37387	16953	48833	22144	149611	67843	195396	88605	305319	138451	439751	199412	989363	448643
1440	99.3	37646	17073	49171	22300	150647	68320	196749	89228	307433	139425	442796	200814	996213	451796
1450	100.0	37905	17192	49509	22455	151683	68797	198102	89851	309547	140398	445841	202216	1003063	454950
1460	100.7	38163	17311	49847	22611	152719	69274	199455	90474	311661	141371	448885	203617	1009914	458104
1470	101.4	38422	17430	50186	22767	153754	69751	200808	91097	313775	142344	451930	205019	1016764	461258
1480	102.0	38681	17532	50524	22900	154790	70160	202161	91631	315889	143179	454975	206221	1023614	463961
1490	102.7	38940	17651	50862	23056	155826	70637	203514	92254	318003	144152	458020	207622	1030464	467114
1500	103.4	39155	17751	51142	23185	156685	71033	204635	92772	319755	144962	460543	208789	1036142	469738
1510	104.1	39435	17880	51509	23354	157808	71551	206102	93447	322048	146017	463846	210309	1043572	473159
1520	104.8	39717	18009	51876	23523	158934	72069	207572	94124	324344	147075	467154	211832	1051014	476585
1530	105.5	39998	18139	52244	23693	160061	72588	209044	94802	326645	148134	470467	213357	1058469	480017
1540	106.2	40280	18269	52613	23862	161190	73107	210519	95481	328949	149194	473786	214885	1065935	483455
1550	106.9	40563	18399	52982	24032	162321	73628	211996	96161	331257	150257	477110	216416	1073413	486898
1560	107.6	40846	18529	53351	24202	163454	74150	213475	96842	333568	151321	480439	217948	1080903	490346
1570	108.2	41130	18641	53722	24349	164588	74597	214957	97426	335884	152235	483774	219264	1088406	493307
1580	108.9	41414	18772	54093	24519	165725	75120	216441	98110	338203	153303	487114	220802	1095921	496766
1590	109.6	41698	18903	54464	24690	166863	75645	217928	98794	340526	154372	490460	222342	1103449	500232
1600	110.3	41983	19034	54836	24862	168003	76169	219417	99480	342853	155443	493812	223885	1110990	503703
1610	111.0	42268	19165	55209	25033	169145	76695	220909	100166	345184	156516	497169	225431	1118543	507180
1620	111.7	42554	19297	55583	25205	170290	77222	222403	100854	347519	157591	500532	226979	1126109	510663
1630	112.4	42841	19429	55957	25377	171436	77750	223900	101544	349858	158668	503901	228530	1133689	514153
1640	113.1	43128	19561	56332	25550	172584	78278	225400	102234	352201	159747	507276	230084	1141281	517648
1650	113.8	43415	19693	56707	25723	173734	78808	226902	102926	354548	160827	510656	231640	1148887	521150

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1

Flow Area (A)		in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
1660	114.5	43703	19826	57083	25896	174886	79338	228407	103618	356900	161910	514043	233200	1156507	524659
1670	115.1	43991	19940	57460	26045	176041	79794	229914	104213	359255	162840	517436	234538	1164140	527671
1680	115.8	44280	20073	57837	26218	177197	80326	231425	104908	361615	163926	520835	236103	1171788	531191
1690	116.5	44570	20206	58216	26392	178356	80859	232938	105605	363979	165014	524240	237671	1179449	534718
1700	117.2	44860	20340	58594	26567	179516	81394	234454	106303	366348	166105	527652	239241	1187124	538251
1710	117.9	45151	20473	58974	26742	180679	81929	235972	107002	368721	167197	531070	240815	1194814	541791
1720	118.6	45442	20607	59354	26917	181844	82465	237494	107702	371099	168292	534494	242391	1202518	545337
1730	119.3	45733	20742	59735	27092	183011	83003	239018	108404	373480	169388	537925	243970	1210236	548891
1740	120.0	46026	20876	60117	27268	184181	83541	240546	109107	375867	170487	541362	245553	1217970	552451
1750	120.7	46318	21011	60499	27444	185352	84081	242076	109812	378258	171588	544806	247139	1225718	556019
1760	121.3	46612	21127	60882	27595	186526	84544	243609	110417	380654	172533	548257	248500	1233481	559082
1770	122.0	46906	21262	61266	27772	187703	85085	245145	111124	383054	173638	551714	250092	1241260	562662
1780	122.7	47200	21398	61651	27949	188881	85628	246685	111833	385460	174745	555178	251686	1249054	566250
1790	123.4	47495	21534	62037	28126	190062	86171	248227	112543	387870	175855	558650	253284	1256864	569845
1800	124.1	47791	21670	62423	28304	191246	86716	249772	113254	390285	176966	562128	254885	1264689	573447
1810	124.8	48087	21806	62810	28482	192431	87262	251321	113967	392705	178080	565613	256490	1272530	577057
1820	125.5	48384	21943	63198	28661	193620	87809	252873	114681	395129	179197	569106	258098	1280388	580674
1830	126.2	48682	22080	63586	28840	194810	88357	254428	115397	397559	180315	572605	259709	1288262	584299
1840	126.9	48980	22217	63976	29019	196003	88907	255986	116115	399994	181436	576112	261323	1296152	587932
1850	127.6	49279	22355	64366	29199	197199	89457	257548	116834	402434	182560	579627	262941	1304059	591572
1860	128.2	49578	22473	64757	29353	198397	89930	259113	117451	404880	183525	583149	264331	1311983	594699
1870	128.9	49878	22611	65149	29533	199598	90483	260681	118173	407330	184653	586679	265956	1319924	598354
1880	129.6	50179	22749	65542	29714	200802	91037	262253	118896	409786	185783	590216	267584	1327882	602017
1890	130.3	50481	22888	65936	29896	202008	91592	263828	119622	412247	186916	593761	269216	1335857	605688
1900	131.0	50783	23027	66330	30077	203216	92148	265407	120348	414714	188052	597314	270851	1343851	609368
1910	131.7	51085	23166	66726	30259	204428	92706	266989	121077	417186	189190	600874	272490	1351862	613056
1920	132.4	51389	23306	67122	30442	205642	93265	268575	121807	419664	190330	604443	274133	1359891	616752
1930	133.1	51693	23446	67519	30624	206859	93825	270164	122538	422148	191474	608020	275780	1367939	620457
1940	133.8	51998	23586	67917	30808	208079	94387	271757	123272	424637	192620	611605	277431	1376005	624170
1950	134.4	52303	23707	68316	30965	209301	94869	273354	123902	427132	193604	615199	278848	1384089	627360
1960	135.1	52609	23848	68716	31149	210527	95433	274954	124638	429633	194755	618801	280506	1392193	631090
1970	135.8	52916	23989	69117	31334	211755	95998	276559	125377	432139	195909	622411	282168	1400316	634829
1980	136.5	53224	24131	69519	31519	212986	96565	278167	126117	434652	197065	626030	283834	1408458	638577
1990	137.2	53533	24273	69922	31704	214221	97133	279779	126859	437171	198225	629658	285504	1416620	642334
2000	137.9	53842	24415	70326	31890	215458	97703	281394	127603	439696	199387	633295	287178	1424802	646100
2010	138.6	54152	24558	70731	32077	216698	98274	283014	128348	442227	200552	636941	288856	1433004	649876
2020	139.3	54462	24701	71137	32263	217942	98846	284638	129096	444765	201720	640595	290538	1441227	653661
2030	140.0	54774	24844	71543	32451	219188	99420	286266	129845	447308	202891	644259	292225	1449470	657455
2040	140.7	55086	24988	71951	32638	220438	99995	287898	130597	449859	204065	647932	293916	1457733	661260

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1															
Flow Area (A)		in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
2050	141.3	55399	25112	72360	32800	221691	100489	289535	131242	452415	205074	651615	295369	1466018	664529
2060	142.0	55713	25256	72770	32988	222947	101068	291175	131997	454979	206254	655307	297068	1474325	668352
2070	142.7	56028	25401	73181	33178	224206	101647	292820	132754	457549	207437	659008	298772	1482653	672185
2080	143.4	56343	25546	73593	33367	225469	102228	294469	133513	460126	208623	662720	300480	1491003	676028
2090	144.1	56660	25692	74007	33558	226735	102811	296122	134274	462709	209812	666441	302193	1499375	679881
2100	144.8	56977	25838	74421	33748	228004	103395	297780	135038	465300	211005	670172	303910	1507770	683745
2110	145.5	57295	25984	74836	33940	229277	103981	299443	135803	467897	212200	673914	305633	1516187	687620
2120	146.2	57614	26131	75253	34131	230553	104569	301110	136570	470502	213399	677665	307360	1524627	691505
2130	146.9	57934	26278	75671	34324	231833	105158	302781	137340	473114	214602	681427	309091	1533091	695402
2140	147.5	58255	26405	76090	34489	233117	105664	304458	138001	475733	215635	685200	310580	1541579	698750
2150	148.2	58576	26553	76510	34682	234404	106257	306138	138775	478360	216844	688983	312321	1550090	702667
2160	148.9	58899	26701	76931	34876	235695	106851	307824	139550	480994	218056	692777	314067	1558626	706595
2170	149.6	59222	26850	77354	35071	236989	107447	309515	140329	483636	219272	696582	315818	1567186	710535
2180	150.3	59547	26999	77777	35266	238287	108044	311210	141109	486285	220491	700398	317574	1575771	714486
2190	151.0	59872	27149	78202	35461	239589	108643	312911	141892	488942	221714	704225	319336	1584382	718449
2200	151.7	60198	27299	78629	35657	240895	109244	314617	142677	491607	222941	708063	321102	1593018	722424
2210	152.4	60526	27450	79056	35854	242205	109847	316327	143464	494281	224171	711913	322875	1601679	726411
2220	153.1	60854	27601	79485	36052	243519	110452	318043	144254	496962	225406	715775	324652	1610368	730411
2230	153.8	61183	27753	79915	36250	244837	111059	319764	145046	499651	226644	719648	326435	1619082	734422
2240	154.4	61514	27883	80347	36420	246159	111580	321491	145727	502349	227708	723534	327968	1627824	737871
2250	155.1	61845	28036	80780	36619	247485	112190	323223	146524	505055	228953	727431	329762	1636593	741906
2260	155.8	62178	28189	81214	36819	248815	112803	324960	147324	507769	230202	731341	331561	1645389	745954
2270	156.5	62511	28342	81649	37019	250150	113417	326703	148126	510493	231456	735264	333366	1654214	750015
2280	157.2	62846	28496	82086	37220	251488	114033	328451	148930	513225	232713	739199	335177	1663067	754090
2290	157.9	63181	28650	82525	37422	252831	114651	330205	149738	515966	233974	743147	336994	1671949	758177
2300	158.6	63518	28805	82965	37625	254179	115271	331965	150548	518716	235240	747107	338817	1680860	762279
2310	159.3	63856	28961	83406	37828	255531	115894	333731	151361	521475	236510	751081	340646	1689801	766394
2320	160.0	64195	29117	83849	38032	256888	116518	335503	152176	524243	237784	755069	342481	1698772	770523
2330	160.6	64535	29251	84293	38207	258249	117055	337280	152877	527021	238880	759070	344060	1707773	774074
2340	161.3	64876	29408	84739	38412	259615	117683	339064	153698	529809	240163	763084	345907	1716805	778230
2350	162.0	65219	29566	85186	38618	260985	118314	340854	154522	532606	241450	767113	347760	1725869	782400
2360	162.7	65562	29724	85635	38824	262361	118947	342651	155348	535412	242741	771155	349621	1734964	786585
2370	163.4	65907	29883	86086	39032	263741	119582	344453	156178	538229	244037	775212	351488	1744091	790785
2380	164.1	66254	30042	86538	39240	265126	120219	346262	157010	541056	245338	779284	353361	1753252	795001
2390	164.8	66601	30202	86991	39449	266516	120859	348078	157846	543893	246644	783370	355242	1762445	799232
2400	165.5	66950	30362	87447	39658	267911	121501	349900	158685	546740	247954	787471	357129	1771672	803478
2410	166.2	67300	30523	87904	39869	269312	122146	351729	159526	549598	249270	791588	359024	1780933	807741
2420	166.9	67651	30685	88363	40080	270718	122793	353565	160371	552467	250590	795719	360925	1790228	812019
2430	167.5	68003	30824	88823	40261	272129	123349	355408	161098	555346	251726	799867	362561	1799559	815699

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1															
Flow Area (A)		in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²	in²	mm²
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
2440	168.2	68357	30987	89286	40474	273545	124001	357258	161949	558237	253056	804030	364477	1808925	820008
2450	168.9	68713	31150	89750	40688	274967	124655	359115	162804	561139	254391	808209	366399	1818328	824334
2460	169.6	69069	31315	90216	40902	276394	125312	360979	163661	564052	255731	812405	368330	1827767	828677
2470	170.3	69428	31479	90683	41117	277827	125971	362851	164522	566976	257076	816617	370268	1837244	833038
2480	171.0	69787	31645	91153	41333	279266	126633	364730	165387	569912	258427	820845	372214	1846758	837416
2490	171.7	70148	31811	91625	41550	280710	127298	366616	166255	572860	259784	825091	374168	1856310	841811
2500	172.4	70511	31978	92098	41768	282161	127966	368511	167127	575820	261146	829355	376129	1865902	846225
2510	173.1	70874	32145	92573	41987	283617	128636	370413	168002	578792	262514	833635	378100	1875533	850658
2520	173.7	71240	32289	93051	42175	285080	129213	372323	168756	581777	263691	837934	379795	1885204	854472
2530	174.4	71607	32458	93530	42396	286548	129888	374241	169638	584774	265070	842251	381780	1894916	858939
2540	175.1	71976	32628	94011	42617	288023	130567	376167	170524	587784	266454	846586	383775	1904670	863426
2550	175.8	72346	32798	94495	42840	289505	131248	378102	171414	590807	267845	850940	385778	1914465	867932
2560	176.5	72717	32969	94981	43063	290992	131933	380045	172308	593843	269242	855313	387789	1924303	872458
2570	177.2	73091	33141	95468	43287	292487	132620	381996	173206	596892	270645	859705	389810	1934185	877004
2580	177.9	73466	33313	95958	43513	293988	133311	383956	174108	599955	272054	864117	391840	1944110	881571
2590	178.6	73843	33487	96450	43739	295495	134004	385926	175014	603032	273470	868548	393879	1954081	886159
2600	179.3	74221	33661	96945	43967	297010	134701	387904	175924	606123	274892	873000	395927	1964096	890767
2610	180.0	74601	33836	97441	44195	298531	135401	389891	176838	609228	276321	877472	397985	1974158	895398
2620	180.6	74983	33987	97940	44392	300060	136004	391887	177626	612348	277551	881966	399757	1984267	899384
2630	181.3	75367	34163	98442	44622	301596	136711	393893	178548	615482	278992	886480	401833	1994424	904055
2640	182.0	75753	34340	98945	44854	303139	137420	395909	179475	618631	280441	891016	403920	2004629	908748
2650	182.7	76140	34519	99451	45087	304690	138134	397934	180407	621796	281896	895574	406016	2014883	913465
2660	183.4	76530	34698	99960	45321	306248	138850	399969	181343	624976	283359	900154	408123	2025188	918205
2670	184.1	76921	34878	100471	45556	307814	139571	402014	182284	628171	284829	904757	410240	2035543	922969
2680	184.8	77314	35059	100985	45792	309388	140295	404070	183229	631383	286307	909382	412368	2045950	927756
2690	185.5	77710	35241	101501	46030	310969	141022	406135	184180	634611	287792	914031	414507	2056410	932568
2700	186.2	78107	35423	102020	46269	312559	141754	408212	185135	637855	289284	918704	416657	2066923	937405
2710	186.8	78506	35581	102542	46474	314157	142384	410299	185958	641117	290570	923401	418509	2077491	941572
2720	187.5	78908	35765	103066	46715	315764	143123	412397	186922	644395	292078	928123	420680	2088114	946456
2730	188.2	79311	35951	103593	46958	317379	143865	414506	187892	647691	293593	932870	422863	2098793	951367
2740	188.9	79717	36138	104123	47201	319002	144612	416626	188867	651004	295117	937642	425057	2109530	956304
2750	189.6	80125	36325	104656	47446	320635	145362	418758	189848	654335	296649	942440	427264	2120324	961268
2760	190.3	80535	36514	105192	47693	322276	146117	420902	190834	657685	298189	947265	429482	2131179	966260
2770	191.0	80948	36703	105730	47941	323926	146876	423058	191825	661053	299738	952116	431714	2142093	971280
2780	191.7	81362	36894	106272	48190	325586	147640	425225	192822	664440	301296	956994	433958	2153069	976329

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 1500 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P > 1500 psig
Kd = 0.812

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Ksh = 1 / Ksc = 1 / Kn = 1 for P ≤ 10.3 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P > 10.3 Mpa
Kd = 0.812

3500 Orifice Capacities SubCritical ASME - For non-ASME applications multiply capacity by 1.1															
Flow Area (A)		in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2	in^2	mm^2
		0.601	387.741	0.785	506.451	2.405	1551.61	3.141	2026.448	4.908	3166.445	7.069	4560.636	15.904	10260.625
Flow Orifice		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0.875	22.2	1	25.4	1.75	44.45	2	50.8	2.5	63.5	3	76.2	4.5	76.2
Designation		35X5		35X6		35X7		35X8		35X9		35X1		35X2	
Set Pressure		Orifice Capacity (W)													
psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
2790	192.4	81779	37086	106817	48440	327255	148408	427405	193825	667847	302863	961901	436215	2164107	981406
2800	193.1	82199	37279	107365	48693	328934	149180	429598	194834	671273	304439	966835	438485	2175209	986514
2810	193.7	82621	37445	107916	48910	330623	149846	431803	195703	674719	305798	971799	440441	2186376	990915
2820	194.4	83045	37641	108471	49165	332322	150626	434022	196723	678185	307391	976791	442736	2197608	996079
2830	195.1	83472	37837	109028	49421	334030	151412	436253	197749	681672	308994	981814	445045	2208908	1001273
2840	195.8	83902	38034	109589	49679	335749	152202	438499	198781	685180	310607	986867	447368	2220276	1006500
2850	196.5	84334	38233	110154	49939	337479	152998	440757	199819	688710	312230	991950	449706	2231713	1011759
2860	197.2	84769	38433	110722	50200	339219	153798	443030	200865	692262	313863	997066	452058	2243222	1017050
2870	197.9	85207	38634	111294	50463	340970	154603	445317	201916	695835	315506	1002213	454425	2254803	1022376
2880	198.6	85647	38837	111869	50727	342733	155414	447619	202975	699432	317160	1007393	456807	2266457	1027735
2890	199.3	86090	39041	112448	50993	344506	156229	449936	204040	703051	318825	1012606	459204	2278186	1033129
2900	199.9	86537	39216	113030	51223	346292	156933	452267	204959	706695	320261	1017854	461272	2289991	1037781
2910	200.6	86986	39423	113617	51493	348089	157758	454614	206037	710362	321946	1023135	463699	2301875	1043242
2920	201.3	87438	39631	114207	51764	349898	158590	456977	207123	714054	323642	1028453	466143	2313837	1048740
2930	202.0	87893	39840	114802	52037	351719	159427	459355	208216	717770	325351	1033806	468603	2325881	1054275
2940	202.7	88351	40050	115400	52312	353552	160270	461750	209317	721512	327071	1039195	471080	2338007	1059848
2950	203.4	88812	40262	116003	52589	355399	161118	464161	210425	725280	328803	1044622	473575	2350216	1065461
2960	204.1	89277	40476	116610	52868	357258	161973	466590	211542	729075	330547	1050088	476087	2362512	1071113
2970	204.8	89745	40691	117221	53149	359131	162834	469035	212666	732896	332304	1055592	478618	2374895	1076806
2980	205.5	90216	40908	117837	53432	361017	163701	471499	213799	736745	334073	1061135	481167	2387367	1082540
2990	206.2	90691	41126	118457	53717	362917	164575	473980	214939	740622	335856	1066719	483734	2399930	1088317
3000	206.8	91169	41315	119082	53964	364830	165329	476479	215924	744528	337395	1072345	485950	2412586	1093302
3010	207.5	91651	41536	119711	54253	366759	166214	478998	217081	748463	339202	1078012	488554	2425337	1099160
3020	208.2	92137	41759	120345	54544	368701	167107	481535	218247	752427	341024	1083722	491177	2438184	1105062
3030	208.9	92626	41984	120984	54838	370659	168006	484092	219421	756422	342859	1089476	493821	2451130	1111010
3040	209.6	93119	42210	121628	55133	372632	168913	486668	220605	760448	344709	1095275	496485	2464176	1117005
3050	210.3	93616	42439	122277	55432	374620	169827	489265	221799	764506	346574	1101120	499171	2477326	1123047
3060	211.0	94117	42669	122931	55732	376625	170748	491883	223002	768597	348453	1107011	501878	2490580	1129138
3070	211.7	94622	42901	123591	56035	378645	171676	494522	224214	772720	350348	1112950	504608	2503941	1135279
3080	212.4	95131	43135	124256	56341	380682	172613	497182	225437	776877	352259	1118938	507360	2517412	1141471
3090	213.0	95644	43337	124926	56605	382736	173421	499865	226494	781069	353910	1124975	509737	2530995	1146819
3100	213.7	96161	43575	125602	56915	384807	174372	502570	227736	785296	355851	1131063	512532	2544692	1153108

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7

Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		750	400	760	404.4	770	410	780	415.6	790	421.1	800	426.7
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	341371	154523	335563	152474	330078	149840	324593	147206	319108	144719	313623	142378
3150	217.2	348763	157861	342863	155780	337290	153104	331390	150429	325818	147753	319918	145226
3200	220.6	356272	161378	350278	159113	344618	156396	338625	153528	332631	150810	326971	148395
3250	224.1	364181	164847	358094	162700	352008	159786	346259	157026	340173	154112	334086	151506
3300	227.5	372162	168426	365982	166092	359803	163290	353280	160332	347100	157374	340920	154728
3350	231.0	380565	172113	373943	169742	367322	166739	361049	163736	354427	160733	347806	157889
3400	234.4	389404	175918	382330	173513	375610	170466	368890	167259	362170	164212	355450	161325
3450	237.9	398336	179999	391159	177558	383982	174140	376805	170885	369986	167793	362809	164701
3500	241.3	407726	184212	400081	181570	392800	178104	385155	174638	377511	171171	370230	168035
3550	244.8	417588	188715	409835	185868	401712	182184	393589	178500	385835	174984	377713	171635
3600	248.2	427939	193193	419702	190137	411091	186232	402480	182497	393869	178763	385632	175197
3650	251.7	439173	198144	430064	194873	420954	190742	411844	186610	402734	182651	393624	178863
3700	255.1	451322	203253	441319	199764	431315	195227	421696	190866	411692	186504	401688	182317
3750	258.6	464417	208860	453498	204970	442580	200195	431662	195420	420744	190645	409825	186224
3800	262.0	478883	214821	466634	210700	454781	205504	442532	200129	430679	194934	418430	190096
3850	265.4	493967	221410	480757	216691	467547	210884	453937	205076	440727	199269	427117	194187
3900	268.9	511306	228732	496304	223583	481301	217148	466298	210529	451296	204093	436293	198393
3950	272.3	530568	236640	513731	230868	496484	223607	479647	216160	462399	208899	445151	202568
4000	275.8	551814	245517	532686	239105	513141	230620	494013	222323	474469	214214	454924	206860
4050	279.2	578475	255977	555740	248342	533005	238797	510271	229062	487957	219709	465222	211501
4100	282.7	608180	268452	581330	259561	554906	247965	528482	236562	501631	225352	475207	215882
4150	286.1	638003	281449	607375	271082	576747	257587	546120	244287	515492	231183	484865	220230
4200	289.6	667491	294976	633003	282900	598515	267656	564027	252413	529540	237367	495052	225093
4250	293.0	695288	307641	657299	294222	619310	277197	581321	260173	543774	243549	505784	229930
4300	296.5	722211	320221	681095	305426	639979	286780	598863	268135	557747	249894	516631	235099
4350	299.9	748665	331876	704360	316092	660055	296003	616202	275709	571897	256030	527592	239836
4400	303.4	774618	343824	727519	326819	680420	305252	633321	283686	586680	262534	539580	245322
4450	306.8	799578	355004	750096	336970	700151	314114	650206	291258	600724	268821	550779	250578
4500	310.3	823965	366251	772058	347376	719684	323200	667777	299236	615402	275483	563027	256397
4550	313.7	847749	377112	793375	357174	739002	332090	684629	306792	630256	282137	575883	261984
4600	317.2	870897	387593	814494	366999	758092	340769	701689	314540	644808	288960	588405	267933
4650	320.6	893863	398088	835399	376836	776936	349669	718472	322502	660009	295773	602029	274083
4700	324.1	916142	408179	856075	386253	796008	358347	735941	330441	675386	302978	615319	280609
4750	327.5	938197	418043	876506	395664	814815	367019	753124	338149	691433	310175	629742	286901
4800	330.9	959513	427797	896676	404734	833340	375566	770503	346172	707666	317456	644330	293488
4850	334.4	980564	437564	916067	414029	852073	384325	787575	354392	723582	325145	659084	300696
4900	337.8	1001334	446847	936173	422842	870504	392606	805343	362370	740183	332596	674513	307669
4950	341.3	1021293	456127	954955	431875	889131	401326	822793	370545	756456	340230	690118	315045
5000	344.7	1040929	465133	973923	440639	906917	409552	839911	378465	772905	348084	705899	322178
5050	348.2	1060751	474124	993077	449383	925403	418219	857729	386817	790055	355890	722381	329722
5100	351.6	1080230	482824	1011888	457842	943546	426375	875204	394667	806862	363679	739049	337256
5150	355.1	1098816	491499	1030340	466511	961330	434731	892855	402951	823844	371656	755369	344728
5200	358.5	1117557	500110	1048418	474884	979280	442801	910141	410962	841003	379614	771865	352428
5250	362.0	1135907	508442	1066651	483217	996850	451069	927594	419168	857793	387514	788537	360064
5300	365.4	1153853	516449	1084490	491238	1014576	459038	944662	426838	875299	395387	805385	367430
5350	368.9	1171933	524659	1101917	499459	1031901	467203	961885	434948	891869	403196	822409	375224
5400	372.3	1189026	532533	1118918	507102	1048810	474804	978703	442506	908595	410971	839048	382742
5450	375.8	1206233	540607	1136044	515194	1065855	482850	995666	450506	925476	418675	855287	390181
5500	379.2	1222982	548334	1152722	522692	1082462	490315	1012202	457938	941942	426338	871682	397588
5550	382.7	1240412	555996	1170091	530641	1099771	498227	1028873	465814	958553	433923	888232	405430
5600	386.1	1256793	563561	1186421	537980	1116050	505543	1045679	473370	975308	441460	904937	412451
5650	389.6	1273266	571051	1202855	545506	1132444	513307	1062033	480843	991622	448911	921211	419906
5700	393.0	1289241	578170	1218801	552938	1148360	520460	1078511	487982	1008070	456040	937630	427051
5750	396.4	1305299	585596	1234839	560147	1164379	527659	1093919	495442	1023459	463495	953000	434256
5800	399.9	1321440	592665	1250971	567265	1180502	535037	1110033	502536	1039565	470855	969698	441358
5850	403.3	1336448	599620	1266589	574280	1196121	542054	1125654	509828	1055187	477878	984719	448407
5900	406.8	1352132	607034	1282289	581474	1211834	549247	1141378	517020	1070923	485349	1001080	455622
5950	410.2	1367270	613776	1296837	588564	1227021	556068	1156588	523852	1086772	492197	1016339	462503
6000	413.7	1382470	620695	1312069	595269	1242292	563061	1171891	530854	1102113	499212	1031713	469547

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7

Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		810	432.2	820	437.8	830	443.3	840	448.9	850	454.4	860	460
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	309751	140622	305879	138719	302007	136963	298135	135207	294586	133744	291682	132427
3150	217.2	315984	143442	312051	141510	308118	139726	304184	137794	300251	136307	297301	134969
3200	220.6	322642	146432	318647	144470	314318	142507	310323	140545	305994	139035	302997	137526
3250	224.1	329690	149512	325294	147365	320898	145372	316502	143225	311768	141691	308725	140158
3300	227.5	336457	152549	331650	150370	327187	148190	322724	146011	317917	144299	314827	142742
3350	231.0	343275	155676	338396	153463	333517	151251	328638	148880	324107	147141	320622	145561
3400	234.4	350145	158920	345194	156514	340242	154109	335291	151543	330339	149779	326802	148175
3450	237.9	357426	162097	352043	159655	346660	157051	341636	154610	336253	152657	332665	150867
3500	241.3	364769	165394	358944	162753	353484	160112	348023	157471	342563	155490	338558	153675
3550	244.8	371805	168788	366267	166109	360359	163262	354452	160583	348544	158406	344852	156564
3600	248.2	379267	172311	373277	169256	367286	166370	361296	163484	354931	161277	351187	159239
3650	251.7	387171	175765	380718	172666	374265	169567	367812	166469	361360	164231	357184	162165
3700	255.1	395147	179176	388222	176036	381681	172721	374755	169581	368214	167138	363597	165045
3750	258.6	402806	182863	395787	179503	388769	176143	381750	172606	374731	170130	370051	168008
3800	262.0	410923	186513	403415	182929	396303	179346	388796	175763	381289	173254	376547	170925
3850	265.4	419512	190376	411506	186565	403500	182754	395894	178942	387888	176220	383085	173861
3900	268.9	427778	194348	419669	190303	411153	186258	403044	182213	394529	179271	389663	176881
3950	272.3	436528	198286	427904	194004	418869	189722	410246	185439	401622	182460	396283	179854
4000	275.8	445776	202523	436628	197809	427063	193471	417915	188757	408351	185740	402945	183100
4050	279.2	455117	206729	445434	201766	435330	196993	425646	192221	415542	188976	410069	186113
4100	282.7	464552	210857	454324	205639	443669	200807	433440	195589	422785	192303	416818	189404
4150	286.1	474080	215145	462865	209668	452080	204387	441296	199107	430080	195586	424041	192457
4200	289.6	483265	219549	471915	213808	460564	208265	449214	202722	437863	198960	431315	195793
4250	293.0	493416	223921	481489	218113	469562	212304	457194	206296	445267	202490	438641	199085
4300	296.5	503671	228816	491157	222533	478197	216251	465683	209968	452722	205914	445572	202469
4350	299.9	514481	233276	500918	226717	487355	220157	473793	213597	460230	209293	452996	205603
4400	303.4	525405	238271	510772	231428	496597	224377	482421	217326	468246	212972	460930	209239
4450	306.8	535981	243239	520720	235900	505921	228561	491123	221222	475862	216609	468463	212624
4500	310.3	547595	248550	531696	240703	515796	233069	499897	225222	483998	220344	476048	216315
4550	313.7	559334	253838	542313	245476	525765	237330	509216	228968	492668	224037	484157	219750
4600	317.2	570719	259262	553034	250591	535826	241920	518141	233032	500455	227830	491851	223278
4650	320.6	583185	264881	564825	255679	545981	246477	527620	237056	508777	231579	499597	226978
4700	324.1	595785	270864	576251	261119	556717	251374	536695	241408	517161	235650	507882	230777
4750	327.5	609013	276830	588285	266312	567557	256018	546829	245499	526101	239457	516230	234534
4800	330.9	622387	282635	600444	271782	578501	260929	556557	249849	535113	243518	524640	238318
4850	334.4	635905	289272	612726	277619	589548	266194	566873	254312	543694	247686	533112	242202
4900	337.8	650078	295436	625643	283203	601207	271201	576772	258737	552337	251813	541647	246273
4950	341.3	664406	302219	638693	289160	612981	276334	587269	263509	561556	256280	550243	250217
5000	344.7	679408	308754	652398	295094	625388	281670	598378	268010	571368	260474	559421	254351
5050	348.2	694052	315686	665723	301412	637395	287139	609066	272865	580737	265014	568147	258591
5100	351.6	708851	322363	679183	307470	649515	292577	619848	277444	590180	269276	577465	262791
5150	355.1	724341	329202	693313	313676	662285	298150	631257	282381	600229	273890	586855	266855
5200	358.5	739456	336264	707047	319855	675179	303691	642770	287282	610362	278465	596318	271362
5250	362.0	754727	343247	721462	326431	687652	309615	653842	292552	620577	283154	605853	275735
5300	365.4	770703	350207	735471	332484	700239	315261	665557	297538	630325	288053	615461	280066
5350	368.9	785734	357332	749615	338936	713495	321045	677376	302649	641257	292821	625697	284757
5400	372.3	801471	364177	763893	345358	726315	326793	689298	307974	651721	297547	635456	289155
5450	375.8	816797	371186	778306	351933	739249	332681	700758	313429	662267	302647	645852	293919
5500	379.2	832268	378162	792282	358217	752868	338532	712883	318588	672897	307709	655761	298644
5550	382.7	847307	385303	806959	364652	766035	344786	725111	324135	684186	312895	666318	303484
5600	386.1	863063	391882	821190	371048	779316	350742	737442	329645	695568	318041	676958	308284
5650	389.6	878378	398884	835544	377596	792124	356574	749291	335286	706457	323046	687681	312934
5700	393.0	893826	405578	849431	383836	805628	362631	761824	340889	718021	328273	698487	317805
5750	396.4	908216	412597	863432	390397	818648	368468	773864	346538	729080	333543	709375	322714
5800	399.9	923924	419235	878149	396840	832374	374717	786600	352322	740825	339212	720347	328014
5850	403.3	938551	426096	892383	403235	845607	380925	799439	358064	753271	344568	731402	333000
5900	406.8	953293	432841	906118	409782	858944	387001	811769	363942	764594	350051	742539	338105
5950	410.2	968148	439532	920575	416280	872383	393029	824810	369778	776619	355491	753759	343165
6000	413.7	983117	446381	934522	422649	885927	399482	837955	375751	789360	361060	765062	348629

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		870	465.6	880	471.1	890	476.7	900	482.2	910	487.8	920	493.3
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	289101	131110	286197	129793	283615	128476	281034	127452	278776	126428	276517	125403
3150	217.2	294678	133632	291728	132294	289106	130956	286156	129916	283861	128726	281567	127686
3200	220.6	300001	136016	297337	134657	294340	133299	291344	132242	289013	131034	286682	129978
3250	224.1	305682	138625	302639	137244	299595	135864	296552	134638	294185	133564	291818	132337
3300	227.5	311737	141186	308304	139785	305214	138228	301781	137138	299378	135893	296974	134648
3350	231.0	317486	143980	314001	142400	310864	140820	307379	139555	304940	138291	302152	137184
3400	234.4	323265	146572	319729	144968	316192	143365	313009	142082	310179	140799	307703	139516
3450	237.9	329076	149240	325487	147449	321899	145822	318310	144520	315798	143218	312927	141916
3500	241.3	334918	151859	331277	150043	327637	148393	323996	146907	321084	145586	318172	144266
3550	244.8	340790	154555	337098	152713	333406	150871	329345	149532	326391	148192	323806	146685
3600	248.2	347069	157372	342950	155335	339206	153467	335088	152109	332093	150581	329098	149223
3650	251.7	353009	160099	348833	158033	344658	156140	340483	154762	337446	153213	334409	151664
3700	255.1	359365	162951	355132	160858	350515	158938	346283	157368	343205	155798	339742	154053
3750	258.6	365372	165709	361083	163587	356404	161641	352114	159873	348605	158281	345485	156689
3800	262.0	371806	168596	367064	166267	362323	164117	357582	162504	354421	160892	350865	159100
3850	265.4	378281	171320	373477	168961	368274	166783	363470	165150	360268	163335	356665	161702
3900	268.9	384392	174307	379526	171916	374661	169526	369389	167871	365740	166033	362496	164194
3950	272.3	390945	177247	385606	174641	380678	172406	375340	170545	371644	168683	367948	166821
4000	275.8	397539	180272	392133	177632	386727	175180	381321	173295	377163	171409	373420	169523
4050	279.2	404175	183250	398701	180386	392807	177905	387334	175805	383124	173896	379335	171987
4100	282.7	410852	186312	405311	183413	399344	180707	393378	178774	389116	176648	385280	174716
4150	286.1	418002	189523	411531	186393	405492	183655	399452	181504	395139	179352	390825	177201
4200	289.6	424767	192625	418218	189260	412107	186488	405558	184311	401193	182133	396827	179955
4250	293.0	431573	195680	424947	192275	418321	189271	411695	187068	407278	184865	402861	182662
4300	296.5	438868	198821	431718	195375	425014	192335	417863	189903	413394	187674	408925	185242
4350	299.9	445763	201913	438529	198428	431296	195148	424062	192689	419541	190434	414568	187974
4400	303.4	453156	205299	445840	201566	438523	198248	430750	195760	425720	193271	421147	190783
4450	306.8	460601	208640	452740	204656	444878	201092	437016	198575	431929	196059	426842	193543
4500	310.3	468098	212073	459681	208044	451731	204227	443314	201682	438170	198925	433026	196380
4550	313.7	475647	215462	467136	211174	458626	207529	450115	204742	444441	201955	439240	199168
4600	317.2	482769	218725	474166	214390	465562	210488	456958	207670	451222	204852	445486	202034
4650	320.6	490416	222377	481719	217776	472539	213613	463359	210765	457561	207698	451763	204850
4700	324.1	498604	225905	488837	221254	479558	216824	470279	213724	464419	210844	458071	207744
4750	327.5	506360	229386	496489	224463	486618	219987	476748	216854	470826	213721	464903	210588
4800	330.9	514666	233117	504193	227917	494219	223169	483746	220003	477762	216838	471278	213446
4850	334.4	522531	236718	511949	231463	501367	226665	490786	223237	484235	219810	477685	216611
4900	337.8	530447	240503	519757	234964	508557	229886	497358	226424	490740	222961	484122	219499
4950	341.3	538930	244387	527616	238557	516303	233427	504989	229696	497790	226198	491105	222467
5000	344.7	547474	248227	535527	242104	523581	236687	512153	232919	504881	229151	497609	225618
5050	348.2	556081	251930	544015	245745	531425	240035	519359	236229	512014	232423	504670	228617
5100	351.6	564750	256065	552035	249579	539320	243574	526605	239730	519188	235647	511242	231803
5150	355.1	574016	260062	560642	253270	547268	246962	533894	243081	525869	238956	518380	234832
5200	358.5	582814	264015	568771	256912	555267	250790	541223	246381	533121	242218	525019	238054
5250	362.0	591675	268317	577497	260898	563318	254221	548595	250017	540415	245565	532235	241114
5300	365.4	600598	272328	585734	264590	570871	257850	556007	253357	547750	248864	538941	244371
5350	368.9	610138	276693	594579	268629	579576	261573	564017	257037	555126	252249	546235	247713
5400	372.3	619751	280762	603486	272624	587782	265249	572078	260417	562544	255585	553570	251008
5450	375.8	629437	285192	612456	276721	596041	269020	579625	264142	570003	259265	560946	254131
5500	379.2	638624	289578	621487	280513	604351	272742	587214	267821	578075	262641	568364	257460
5550	382.7	648449	294074	631157	284925	613289	276822	595421	271332	585622	266104	575823	260876
5600	386.1	658929	298526	640318	288769	621708	280330	603679	275055	593210	269517	583324	264243
5650	389.6	668318	303088	649542	293242	630765	284461	611402	278873	600841	273285	590279	267697
5700	393.0	678953	307337	658827	297137	639293	288011	619759	282374	609104	276469	597857	270832
5750	396.4	689073	311884	668771	301326	648469	292121	628167	286165	617419	280209	606074	274252
5800	399.9	699267	316816	678186	305892	657106	296059	636628	290051	625184	284042	613740	278034
5850	403.3	709532	321431	688271	310139	666401	300223	645140	293888	632990	287553	621448	281493
5900	406.8	720483	326159	697815	314490	675759	304211	653704	297821	641451	291431	629197	285042
5950	410.2	730899	331119	708039	319074	685179	308428	662319	301705	649963	294982	637606	288539
6000	413.7	741388	335915	717713	323485	694038	312466	670364	305968	657904	298905	644820	292125

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		930	498.9	940	504.4	950	510	960	515.6	970	521.1	980	526.7
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	274258	124379	272000	123501	270064	122623	268128	121745	266192	120867	264579	119989
3150	217.2	279272	126645	277306	125605	275011	124713	273045	123821	271078	122929	269111	122037
3200	220.6	284351	128921	282021	127864	279690	126958	277692	126053	276027	124996	274029	124090
3250	224.1	289451	131264	287084	130190	284717	129270	282688	128350	280659	127430	278630	126510
3300	227.5	294571	133402	292168	132468	289765	131534	287705	130445	285645	129511	283585	128577
3350	231.0	299712	135920	297273	134814	294485	133707	292394	132759	290303	131811	288560	130705
3400	234.4	304874	138233	302398	137110	299569	135988	297447	135026	295324	133903	293202	132941
3450	237.9	310056	140614	307544	139475	304673	138335	302520	137196	300367	136220	298214	135080
3500	241.3	315623	142945	312711	141790	309799	140634	307615	139479	305430	138324	302882	137333
3550	244.8	320853	145345	317899	144173	314945	143001	312730	141829	310145	140657	307930	139652
3600	248.2	326102	147695	322733	146507	319737	145319	317491	144130	315245	142942	312998	141754
3650	251.7	331373	150114	328336	148909	324920	147704	322642	146499	320365	145294	317708	144089
3700	255.1	336664	152483	333586	151262	330508	150041	327815	148645	325506	147424	322813	146202
3750	258.6	341976	154921	338856	153683	335737	152445	333007	151030	330278	149792	327548	148554
3800	262.0	347704	157488	344148	156054	340987	154800	338221	153367	335455	152113	332689	150858
3850	265.4	353062	159887	349460	158435	346257	157164	343455	155713	340653	154442	337851	152990
3900	268.9	358847	162539	355198	161068	351548	159597	348710	158126	345872	156655	343033	155368
3950	272.3	364252	164959	360556	163470	356860	161980	353986	160491	351111	159001	347826	157698
4000	275.8	369678	167638	365935	165940	362193	164432	359282	162923	355955	161415	353044	160095
4050	279.2	375546	169888	371335	168361	367546	166834	364599	165306	361231	163779	358284	162252
4100	282.7	381018	172590	377182	171044	372920	169497	369937	167758	366527	166212	363544	164666
4150	286.1	386943	175049	382629	173485	378315	171724	375295	170160	371844	168595	368825	167030
4200	289.6	392462	177778	388096	175996	383731	174412	380675	172630	377182	171046	373690	169463
4250	293.0	398443	180459	393584	178656	389167	176853	386075	175051	382541	173448	379007	171846
4300	296.5	404456	183012	399540	181188	395071	179364	391495	177540	387920	175919	384345	174095
4350	299.9	410047	185719	405527	183669	400554	181824	396937	179979	393320	178339	389703	176495
4400	303.4	416117	188294	411087	186428	406057	184561	402399	182695	398741	180829	395083	178962
4450	306.8	421755	191026	416668	188930	411581	187042	407882	185155	404182	183268	400483	181381
4500	310.3	427882	193623	422738	191714	417126	189594	413385	187685	409644	185776	405903	183868
4550	313.7	434039	196381	428839	194237	423638	192308	419382	190164	415127	188234	411345	186305
4600	317.2	440228	199216	434492	197048	429234	194880	424933	192929	420631	190761	416807	188810
4650	320.6	445965	202002	440650	199592	434852	197620	430503	195429	426155	193238	422290	191266
4700	324.1	452211	204643	446350	202428	440490	200214	436095	197999	431700	195784	427305	193791
4750	327.5	458487	207455	452565	204993	446643	202755	442201	200517	437759	198279	433317	196265
4800	330.9	464795	210280	458811	207793	452327	205532	447839	203045	443351	200784	438862	198749
4850	334.4	471638	213184	465087	210670	458537	208157	454002	205872	448963	203587	444428	201302
4900	337.8	477504	216037	470886	213267	464268	210959	459687	208420	454596	206112	450015	203804
4950	341.3	483905	218969	477220	216170	470021	213605	465392	211273	460250	208708	455622	206376
5000	344.7	490857	221850	483585	219024	476313	216434	471119	213843	466444	211488	461250	208897
5050	348.2	497325	224810	489981	221955	482112	219339	477390	216722	472144	214105	466898	211726
5100	351.6	503825	227720	496408	224837	488991	222195	483693	219312	478395	216670	473097	214028
5150	355.1	510355	230708	502866	227797	494841	224886	489492	222217	484142	219306	478792	216880
5200	358.5	517457	233646	509355	230707	501253	227768	495311	224829	489910	222135	484508	219441
5250	362.0	524055	236910	515875	233695	507150	230727	501697	227760	496243	224792	490245	222072
5300	365.4	530684	239878	521876	236633	513618	233388	507563	230392	502058	227397	496002	224651
5350	368.9	537900	242925	529009	239649	520118	236373	514005	233349	508449	230325	502336	227301
5400	372.3	544596	246176	535622	242615	526648	239309	520479	236257	514309	232951	508140	229899
5450	375.8	551323	249254	542267	245660	532644	242323	526418	238986	520191	235906	513965	232825
5500	379.2	558653	252280	548942	248654	539232	245287	532948	241920	526665	238552	520381	235444
5550	382.7	566024	255648	555649	251727	545850	248329	539510	244931	532593	241533	526253	238396
5600	386.1	572855	258705	562387	254749	552500	251321	545521	247629	539124	244201	532145	240772
5650	389.6	579717	262109	569156	258117	559181	254392	552140	250666	545098	247207	538057	243748
5700	393.0	587202	265195	576547	260901	565893	257411	558789	253654	551686	249896	544583	246406
5750	396.4	594729	268296	583384	264235	572635	260445	565470	256655	557708	252864	550542	249345
5800	399.9	602297	271752	590853	267382	579409	263558	571580	259461	564352	255638	557124	252087
5850	403.3	609906	275158	597757	270751	586215	266620	578317	262488	571028	258632	563130	254776
5900	406.8	616944	278374	605304	273929	593051	269762	585086	265594	577122	261705	569770	257815
5950	410.2	624631	281816	612275	277053	599918	272851	591886	268649	583854	264447	575822	260525
6000	413.7	632360	285344	619900	280542	606816	276304	598717	271784	590618	267546	582519	263590

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7

Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		990	532.2	1000	537.8	1010	543.3	1020	548.9	1030	554.4	1040	560
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	262643	119258	261029	118526	259416	117794	257803	117063	256190	116331	254576	115599
3150	217.2	267472	121294	265506	120551	263867	119808	262228	118916	260589	118321	259278	117578
3200	220.6	272032	123335	270367	122580	268702	121826	267037	121071	265372	120316	263708	119561
3250	224.1	276940	125590	274911	124823	273220	123903	271529	123137	269839	122370	268148	121603
3300	227.5	281525	127643	279465	126865	277748	125931	276032	125152	274315	124374	272598	123596
3350	231.0	286469	129914	284378	128966	282636	128176	280893	127227	278802	126437	277059	125805
3400	234.4	291080	131979	288958	131177	287190	130215	285421	129413	283653	128611	281885	127809
3450	237.9	295702	134267	293549	133290	291754	132476	289960	131500	288166	130686	286371	129872
3500	241.3	300698	136343	298514	135517	296693	134527	294509	133537	292689	132711	290869	132051
3550	244.8	305714	138647	303130	137643	301284	136805	299438	135801	297222	134963	295376	134126
3600	248.2	310377	140905	308131	139886	306259	138868	304013	137849	302141	137000	299894	136151
3650	251.7	315430	143056	312773	142023	310875	140990	308598	139957	306700	139097	304423	138236
3700	255.1	320504	145156	317811	144109	315502	143062	313578	142015	311270	141143	309346	140270
3750	258.6	325209	147493	322479	146432	320529	145371	318190	144310	316240	143249	313900	142364
3800	262.0	329923	149783	327553	148708	325182	147454	323206	146379	320836	145483	318860	144588
3850	265.4	335049	151901	332247	150812	330245	149724	327843	148453	325442	147546	323440	146638
3900	268.9	340195	154265	337357	152978	334924	151875	332491	150771	330464	149668	328031	148749
3950	272.3	344951	156581	342077	155278	339613	154160	337559	152857	335095	151926	332631	150809
4000	275.8	350134	158775	347223	157643	344728	156323	342233	155192	339738	154061	337243	153118
4050	279.2	355337	161107	351969	159771	349443	158625	347337	157289	344811	156335	342285	155189
4100	282.7	360134	163506	357151	162153	354594	160800	352037	159641	349480	158481	346922	157321
4150	286.1	365374	165661	362354	164488	359766	163119	357178	161750	354589	160576	351570	159598
4200	289.6	370634	168077	367142	166691	364522	165503	361903	164118	359284	162930	356664	161742
4250	293.0	375915	170444	372381	169042	369731	167640	367080	166238	364430	165036	361338	163835
4300	296.5	380769	172879	377194	171257	374513	170041	371831	168420	369150	167204	366468	166191
4350	299.9	386087	175060	382470	173625	379757	172190	377045	170755	373880	169525	371167	168295
4400	303.4	391424	177511	387766	176059	385023	174608	381822	172949	379078	171704	375877	170460
4450	306.8	396783	179913	392621	178235	389846	176768	386609	175300	383834	174042	380597	172784
4500	310.3	402162	182171	397953	180686	395148	179202	391874	177505	389068	176233	385795	174960
4550	313.7	407089	184804	403307	183089	399997	181588	396687	179873	393851	178587	390541	177300
4600	317.2	412505	187293	408681	185559	405335	184041	401989	182307	398643	180790	395297	179489
4650	320.6	417941	189732	414076	187980	410693	186227	407311	184693	403929	183160	400547	181626
4700	324.1	423398	192019	419003	190469	415584	188697	412166	186925	408748	185375	405329	184046
4750	327.5	428876	194475	424434	192685	420979	190894	417524	189104	414070	187761	410615	186195
4800	330.9	434374	196940	429886	195131	426395	193322	422904	191513	419413	189931	415922	188574
4850	334.4	439893	199474	435358	197646	431831	195818	427800	193762	424273	192391	420745	190791
4900	337.8	444924	201958	440342	200111	436779	198265	433215	196188	429143	194572	425579	192956
4950	341.3	450479	204511	445851	202645	442251	200546	438652	198681	434538	197048	430938	195416
5000	344.7	456575	207013	451380	204894	447744	203009	443589	201125	439953	199241	435798	197828
5050	348.2	462177	209585	456931	207444	453258	205541	449062	203400	444865	201734	441192	200069
5100	351.6	467799	212106	462502	209944	458263	207782	454555	205620	450316	203939	446078	202257
5150	355.1	472908	214697	467558	212513	463813	210330	459534	208389	455254	206449	451509	204750
5200	358.5	479107	217237	473165	215032	469384	212828	465063	210624	460742	208910	456421	207195
5250	362.0	484792	219846	478793	217621	474431	215395	470613	213169	466251	211191	461888	209460
5300	365.4	490497	222405	484442	219909	480038	217662	475634	215416	471230	213668	466826	211672
5350	368.9	496224	225033	490667	222766	485666	220498	481220	217978	476775	215962	472329	214198
5400	372.3	501971	227611	496362	225322	491314	223033	486827	220490	482340	218455	477293	216675
5450	375.8	508304	230258	502078	227948	496983	225381	492455	223071	487361	221017	482832	218963
5500	379.2	513527	232854	507243	230523	502673	227933	497532	225602	492963	223530	487822	221457
5550	382.7	519336	235782	512995	233168	507808	230554	503197	228201	498585	225849	493398	224019
5600	386.1	525166	238399	518768	235762	513534	233124	508881	230487	503647	228378	498995	226268
5650	389.6	531603	241087	524562	238426	519281	235765	514000	232837	509306	230709	504025	228580
5700	393.0	537480	243722	530376	241038	525049	238354	519721	235670	514986	233254	509658	231106
5750	396.4	543377	246367	536211	243660	530837	240952	525463	237974	520089	235808	514715	233642
5800	399.9	549295	249083	542067	246352	536646	243348	531226	240616	525805	238158	520384	235973
5850	403.3	555841	252022	547944	248992	542476	246238	537009	243208	531542	241005	525467	238526
5900	406.8	561805	254759	553841	251703	548327	248925	542813	245869	537299	243369	531172	241146
5950	410.2	567791	257444	559759	254642	554198	251561	548020	248479	542459	245958	536899	243717
6000	413.7	573796	260483	565697	257375	560090	254267	553860	251160	548253	248617	542646	246074

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		1050	565.6	1060	571.1	1070	576.7	1080	582.2	1090	587.8	1100	593.3
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	253286	114868	251672	114282	250382	113551	249091	112965	247800	112380	246510	111795
3150	217.2	257639	116835	256000	116240	254689	115497	253377	114902	252066	114308	250755	113713
3200	220.6	262043	118957	260711	118203	259046	117448	257714	116844	256382	116240	255050	115636
3250	224.1	266457	120836	265105	120223	263414	119456	262061	118843	260709	118229	259356	117616
3300	227.5	270882	122973	269509	122195	267792	121416	266419	120794	265045	120171	263672	119548
3350	231.0	275317	125015	273923	124225	272180	123592	270786	122802	269392	122170	267998	121538
3400	234.4	280116	127007	278348	126206	276933	125404	275165	124762	273396	124121	271981	123479
3450	237.9	284577	129059	282783	128245	281347	127594	279553	126780	277759	126129	276323	125478
3500	241.3	289048	131226	287228	130400	285772	129575	283952	128915	282132	128090	280676	127429
3550	244.8	293530	133121	291684	132284	290207	131447	288361	130777	286884	130107	285038	129438
3600	248.2	298022	135303	296150	134454	294653	133605	292781	132756	291283	132077	289411	131398
3650	251.7	302525	137375	300627	136514	299108	135654	297211	134793	295692	134104	293794	133244
3700	255.1	307038	139398	305114	138526	303575	137653	301651	136781	300112	136083	298188	135211
3750	258.6	311951	141480	310001	140596	308051	139712	306102	138827	304542	138120	302592	137236
3800	262.0	316489	143513	314514	142617	312538	141721	310958	141004	308982	140108	307006	139213
3850	265.4	321038	145549	319037	144642	317436	143735	315434	142827	313433	142101	311431	141194
3900	268.9	325598	147830	323570	146726	321948	145807	319921	145072	317894	144152	315866	143233
3950	272.3	330168	149878	328114	148947	326061	148016	324008	147085	321954	146154	320312	145224
4000	275.8	334748	151986	332668	150855	330589	149912	328510	148969	326431	148215	324352	147272
4050	279.2	339759	154044	337654	153090	335549	151944	333444	151181	330918	150226	328813	149272
4100	282.7	344365	156355	342234	155195	340103	154229	337972	153263	335415	152296	333284	151330
4150	286.1	348982	158425	346825	157251	344668	156273	342511	155295	339923	154317	337766	153339
4200	289.6	353608	160554	351426	159366	349243	158376	347060	157386	344877	156397	342258	155407
4250	293.0	358687	162633	356479	161631	353828	160430	351619	159428	349411	158427	346760	157425
4300	296.5	363340	164975	361105	163758	358871	162542	356189	161529	353955	160516	351273	159502
4350	299.9	368003	167065	365742	166040	363482	164810	360769	163785	358509	162760	355796	161735
4400	303.4	372676	169216	370390	167972	368103	166727	365360	165690	363073	164654	360330	163617
4450	306.8	377360	171316	375048	170267	372735	169009	369961	167961	367648	166912	364874	165654
4500	310.3	382522	173688	380183	172416	377378	171143	375040	170083	372234	168810	369428	167750
4550	313.7	387704	176014	384867	174513	382030	173441	379666	172155	376829	171083	374465	170011
4600	317.2	392429	177972	389561	176671	386693	175370	384303	174286	381435	172986	379046	171902
4650	320.6	397648	180312	394749	178997	391850	177463	388951	176368	386052	175272	383636	173958
4700	324.1	402399	182496	399469	181167	396539	179838	393609	178730	390679	177402	388237	176294
4750	327.5	407160	184852	404199	183285	401238	181943	398277	180824	395316	179481	392848	178362
4800	330.9	412431	186991	409439	185635	406446	184278	403454	182921	400462	181565	397470	180434
4850	334.4	417218	189192	414195	187821	411172	186450	408148	185079	405125	183708	402102	182565
4900	337.8	422016	191571	418961	189956	415907	188340	412853	187186	409798	185801	406744	184647
4950	341.3	427338	193784	424253	192151	421167	190752	418082	189353	414996	188187	411911	186788
5000	344.7	432162	196180	429045	194531	425929	192883	422812	191469	419695	190292	416579	188879
5050	348.2	436996	198404	433848	196739	430700	195311	427553	193884	424405	192457	421257	191029
5100	351.6	442370	200576	439191	199135	435482	197453	432304	196012	429125	194571	425946	193129
5150	355.1	447230	203052	444020	201354	440275	199656	437065	198200	433855	196745	430646	195289
5200	358.5	452100	205481	448859	203767	445618	202052	441837	200583	438596	199113	435355	197644
5250	362.0	457526	207729	454254	205998	450436	204267	447164	202783	443347	201052	440075	199568
5300	365.4	462422	209924	459119	208177	455265	206430	451962	204932	448109	203434	444806	201937
5350	368.9	467884	212182	463994	210418	460660	208654	456770	207142	453436	205630	449546	204118
5400	372.3	472806	214641	468880	212860	465515	210826	461589	209300	458223	207774	454297	206248
5450	375.8	478304	217167	474342	215113	470380	213316	466417	211776	463021	209979	459059	208439
5500	379.2	483252	219385	479253	217572	475826	215500	471828	213946	467829	212133	464402	210579
5550	382.7	488787	221928	484752	219837	480717	218007	477259	216177	473224	214609	469189	212779
5600	386.1	493760	224158	489689	222048	486200	220202	482129	218620	478058	216774	473987	215192
5650	389.6	498745	226717	494637	224588	491117	222460	487009	220863	482902	219266	478795	217404
5700	393.0	504331	228959	500187	226812	496044	224933	491900	223054	487757	221175	483613	219565
5750	396.4	509341	231477	505161	229311	500981	227145	496802	225520	492622	223625	488442	221730
5800	399.9	514964	233788	510748	231603	506532	229692	502315	227780	497497	225868	493281	224229
5850	403.3	520000	236322	515747	234119	511495	231915	507243	229987	502990	228059	498130	226131
5900	406.8	525659	238646	521370	236423	517081	234201	512793	232534	507892	230589	503603	228644
5950	410.2	530720	241196	526396	238955	522071	236714	517746	234753	513421	232792	508478	230831
6000	413.7	536416	243814	532054	241271	527693	239011	522709	237034	518348	235056	513364	233078

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 2.405 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 1551.61 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X7

Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		1110	598.9	1120	604.4	1130	610	1140	615.6	1150	621.1
Set Pressure		Orifice Capacity									
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	245219	111209	243929	110770	242961	110185	241670	109600	240702	109015
3150	217.2	249444	113119	248133	112524	246822	112078	245511	111483	244527	110889
3200	220.6	253719	115032	252387	114428	251055	113825	250056	113372	248724	112768
3250	224.1	258003	117003	256651	116389	255298	115776	253946	115316	252931	114702
3300	227.5	262299	118770	260925	118303	259552	117680	258179	117058	256806	116435
3350	231.0	266604	120748	265210	120273	263816	119641	262422	119009	261028	118377
3400	234.4	270567	122678	269152	122036	267737	121555	266676	120914	265261	120272
3450	237.9	274888	124665	273452	124014	272017	123363	270581	122874	269505	122223
3500	241.3	279219	126604	277763	125944	276307	125283	274851	124623	273395	123963
3550	244.8	283561	128600	282084	127931	280607	127261	279131	126591	277654	125921
3600	248.2	287913	130549	286416	129870	284918	129191	283421	128512	281923	127833
3650	251.7	292276	132555	290758	131694	289239	131006	287721	130317	286203	129628
3700	255.1	296649	134513	295110	133815	293186	133117	291647	132419	290108	131722
3750	258.6	301032	136352	299473	135644	297523	134937	295963	134229	294403	133522
3800	262.0	305426	138496	303846	137779	301870	137063	300289	136167	298709	135450
3850	265.4	309830	140286	307829	139560	306227	138835	304626	138109	303025	137383
3900	268.9	314244	142497	312217	141578	310595	140843	308973	140107	306946	139372
3950	272.3	318259	144293	316616	143548	314973	142803	312920	142058	311277	141127
4000	275.8	322688	146329	321025	145575	319362	144821	317283	144066	315619	143124
4050	279.2	327129	148318	325445	147554	323340	146791	321656	145836	319971	145073
4100	282.7	331579	150364	329448	149591	327744	148817	326039	148044	323908	147078
4150	286.1	336040	152361	333883	151579	332158	150797	330432	149819	328276	149036
4200	289.6	340512	154417	338766	153625	336583	152635	334837	151843	332654	151051
4250	293.0	344993	156424	343227	155623	341018	154822	339251	153820	337042	153019
4300	296.5	349486	158489	347251	157678	345463	156665	343229	155854	341441	154841
4350	299.9	353988	160505	351728	159685	349919	158661	347659	157636	345398	156816
4400	303.4	358501	162580	356214	161543	354385	160714	352099	159677	349813	158847
4450	306.8	363024	164606	360712	163767	358862	162718	356550	161670	354237	160831
4500	310.3	367557	166690	365219	165629	363349	164781	361011	163721	358672	162872
4550	313.7	372101	168725	369737	167653	367846	166795	365482	165723	363591	164651
4600	317.2	376656	170818	374266	169734	371876	168650	369486	167566	367574	166699
4650	320.6	381220	172862	378804	171767	376388	170891	373973	169795	372040	168700
4700	324.1	385795	174965	383353	174079	380912	172972	378470	171865	376516	170757
4750	327.5	390380	177019	387913	175900	385445	174781	382977	173886	381003	172767
4800	330.9	394976	179077	392483	177947	389989	176816	387495	175912	385501	174781
4850	334.4	399582	181195	397063	180052	394543	178910	392024	177767	390008	176853
4900	337.8	404199	183262	401653	182108	399108	180954	396563	179800	394017	178877
4950	341.3	409340	185622	406254	184223	403683	183057	401112	181891	398540	180725
5000	344.7	413982	187466	410865	186288	408268	185111	405671	183933	403074	182756
5050	348.2	418634	189840	415487	188412	412864	187223	410241	186033	407618	184844
5100	351.6	423297	191688	420119	190487	417470	189286	414821	188085	412172	186884
5150	355.1	427971	193834	424761	192621	422086	191408	419411	190195	416737	188982
5200	358.5	432655	196174	429414	194705	426713	193480	423472	192256	420771	191031
5250	362.0	437349	198084	434077	196848	431350	195611	428078	194375	425351	193138
5300	365.4	442053	200439	438750	198941	435998	197693	432694	196445	429942	194947
5350	368.9	446768	202606	443434	201094	440655	199834	437321	198574	434543	197314
5400	372.3	451493	204722	448128	203197	445324	201925	441958	200399	439154	199127
5450	375.8	456229	206899	452832	205615	450002	204075	446606	202791	443776	201251
5500	379.2	460974	209025	458118	207471	454691	206176	451835	204880	448408	203326
5550	382.7	466307	211210	462849	209642	459390	208335	456508	207028	453050	205460
5600	386.1	470497	213346	467589	212027	464100	210445	460610	208863	457702	207544
5650	389.6	475274	215807	472340	214210	468820	212614	465299	211283	461779	209687
5700	393.0	480061	217686	477102	216075	473550	214733	469999	213123	466447	211780
5750	396.4	484859	220106	481874	218481	478291	216857	474708	215503	471125	213879
5800	399.9	489667	222317	486656	220679	483042	219040	479428	217401	475814	216036
5850	403.3	495093	224203	491448	222826	487803	221173	484158	219521	480514	217868
5900	406.8	499927	226700	496251	225033	492575	223366	488899	221699	485223	220310
5950	410.2	504771	228870	501064	227189	497357	225508	493650	223828	489943	222427
6000	413.7	509626	231101	505888	229406	502150	227710	498412	226015	494674	224320

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		750	400	760	404.4	770	410	780	415.6	790	421.1	800	426.7
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	445841	201811	438256	199136	431092	195696	423928	192256	416764	189007	409600	185949
3150	217.2	455495	206171	447789	203453	440511	199959	432806	196464	425528	192970	417822	189670
3200	220.6	465301	210764	457474	207807	450081	204258	442254	200512	434426	196963	427034	193808
3250	224.1	475631	215295	467682	212491	459732	208686	452225	205081	444275	201276	436326	197871
3300	227.5	486055	219970	477984	216921	469913	213261	461393	209398	453322	205536	445251	202080
3350	231	497029	224785	488381	221688	479733	217767	471540	213845	462892	209923	454244	206207
3400	234.4	508573	229755	499335	226613	490558	222634	481782	218445	473005	214466	464229	210696
3450	237.9	520239	235084	510865	231896	501492	227432	492118	223181	483213	219142	473839	215104
3500	241.3	532502	240586	522518	237136	513009	232609	503024	228082	493040	223555	483531	219459
3550	244.8	545383	246467	535256	242749	524648	237938	514039	233127	503912	228534	493304	224160
3600	248.2	558901	252315	548144	248324	536897	243225	525651	238347	514404	233469	503647	228813
3650	251.7	573574	258782	561676	254510	549778	249114	537880	243718	525982	238547	514084	233601
3700	255.1	589440	265454	576375	260897	563310	254973	550747	249276	537682	243580	524617	238111
3750	258.6	606542	272778	592282	267697	578023	261460	563763	255224	549503	248988	535244	243214
3800	262	625435	280563	609438	275181	593957	268395	577960	261375	562479	254589	546482	248271
3850	265.4	645135	289168	627883	283005	610631	275420	592855	267836	575603	260251	557828	253614
3900	268.9	667781	298730	648187	292006	628593	283602	608999	274957	589406	266552	569812	259108
3950	272.3	692937	309059	670948	301521	648422	292038	626433	282311	603907	272828	581381	264560
4000	275.8	720686	320652	695703	312279	670178	301196	645195	290360	619670	279770	594145	270165
4050	279.2	755505	334314	725813	324342	696121	311877	666428	299162	637286	286946	607593	276226
4100	282.7	794301	350606	759234	338995	724723	323850	690212	308957	655145	294317	620635	281949
4150	286.1	833250	367580	793250	354042	753249	336416	713249	319046	673248	301932	633247	287627
4200	289.6	871763	385248	826720	369476	781678	349567	736636	329658	691594	310008	646552	293978
4250	293	908067	401788	858452	384262	808837	362028	759222	339794	710184	318082	660569	300295
4300	296.5	943229	418218	889530	398896	835831	374544	782133	350192	728434	326369	674735	307046
4350	299.9	977778	433440	919914	412825	862051	386588	804777	360084	746914	334383	689050	313233
4400	303.4	1011674	449044	950162	426836	888649	398669	827136	370502	766221	342877	704708	320397
4450	306.8	1044272	463645	979647	440093	914418	410242	849189	380392	784563	351089	719334	327263
4500	310.3	1076123	478335	1008331	453684	939928	422109	872136	390811	803733	359790	735330	334862
4550	313.7	1107185	492519	1036172	466479	965159	433719	894146	400679	823133	368479	752120	342159
4600	317.2	1137417	506208	1063753	479312	990090	445055	916426	410798	842138	377391	768474	349929
4650	320.6	1167411	519915	1091056	492159	1014701	456678	938346	421197	861991	386288	786267	357960
4700	324.1	1196508	533094	1118059	504458	1039610	468012	961161	431566	882074	395699	803625	366484
4750	327.5	1225313	545977	1144742	516749	1064172	479337	983602	441633	903031	405098	822461	374701
4800	330.9	1253152	558715	1171085	528594	1088367	490500	1006300	452110	924232	414607	841514	383305
4850	334.4	1280645	571471	1196410	540734	1112832	501940	1028596	462847	945019	424649	860783	392718
4900	337.8	1307771	583595	1222670	552245	1136903	512756	1051802	473266	966700	434380	880934	401824
4950	341.3	1333838	595715	1247199	564041	1161231	524144	1074592	483942	987953	444350	901314	411458
5000	344.7	1359483	607477	1271972	575488	1184460	534887	1096948	494286	1009437	454608	921925	420774
5050	348.2	1385372	619220	1296988	586908	1208603	546206	1120219	505194	1031835	464803	943451	430627
5100	351.6	1410813	630583	1321556	597956	1232299	556858	1143042	515446	1053785	474976	965220	440467
5150	355.1	1435086	641912	1345655	609278	1255525	567772	1166094	526266	1075965	485394	986534	450225
5200	358.5	1459562	653159	1369265	620213	1278968	578311	1188671	536729	1098375	495787	1008078	460282
5250	362	1483528	664040	1393078	631096	1301915	589109	1211465	547445	1120302	506104	1029852	470254
5300	365.4	1506966	674498	1416375	641572	1325066	599517	1233756	557463	1143166	516387	1051856	479875
5350	368.9	1530579	685220	1439136	652308	1347693	610181	1256250	568054	1164807	526586	1074090	490054
5400	372.3	1552903	695504	1461340	662290	1369777	620108	1278214	577926	1186652	536741	1095822	499873
5450	375.8	1575375	706049	1483706	672858	1392037	630616	1300368	588374	1208699	546802	1117030	509589
5500	379.2	1597251	716141	1505489	682651	1413727	640366	1321966	598081	1230204	556810	1138442	519261
5550	382.7	1620014	726148	1528173	693032	1436332	650699	1343739	608366	1251898	566716	1160057	529504
5600	386.1	1641408	736027	1549501	702618	1457594	660254	1365688	618235	1273781	576560	1181874	538674
5650	389.6	1662923	745810	1570964	712446	1479005	670395	1387046	627995	1295087	586291	1203128	548410
5700	393	1683787	755107	1591789	722154	1499792	679736	1408567	637318	1316570	595602	1224572	557741
5750	396.4	1704759	764805	1612736	731568	1520713	689138	1428691	647061	1336668	605338	1244645	567151
5800	399.9	1725839	774038	1633805	740865	1541770	698775	1449736	656327	1357702	614950	1266454	576427
5850	403.3	1745441	783121	1654202	750027	1562169	707939	1470137	665851	1378105	624123	1286072	585632
5900	406.8	1765924	792804	1674707	759423	1582690	717333	1490673	675244	1398656	633880	1307439	595056
5950	410.2	1785694	801609	1693707	768681	1602526	726241	1510538	684167	1419357	642824	1327369	604042
6000	413.7	1805546	810646	1713601	777438	1622469	735375	1530524	693311	1439392	651986	1347447	613243

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8

Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		810	432.2	820	437.8	830	443.3	840	448.9	850	454.4	860	460
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	404544	183656	399487	181172	394430	178878	389373	176585	384738	174674	380945	172954
3150	217.2	412685	187340	407548	184816	402411	182487	397274	179963	392136	178021	388283	176274
3200	220.6	421380	191245	416162	188682	410509	186119	405290	183556	399637	181584	395724	179613
3250	224.1	430585	195267	424844	192463	419103	189860	413362	187056	407179	185053	403204	183051
3300	227.5	439422	199233	433145	196387	427316	193541	421487	190695	415209	188459	411174	186426
3350	231.0	448327	203318	441955	200428	435583	197538	429211	194442	423294	192171	418742	190107
3400	234.4	457300	207554	450833	204412	444366	201271	437899	197920	431433	195616	426813	193522
3450	237.9	466809	211703	459779	208515	452749	205114	446187	201926	439157	199375	434470	197037
3500	241.3	476399	216010	468792	212560	461660	209111	454529	205662	447397	203075	442167	200704
3550	244.8	485588	220442	478355	216943	470640	213226	462924	209726	455209	206883	450387	204478
3600	248.2	495334	225044	487510	221053	479687	217284	471863	213515	463551	210632	458661	207972
3650	251.7	505657	229554	497229	225507	488802	221460	480374	217413	471946	214490	466493	211792
3700	255.1	516074	234010	507029	229908	498486	225579	489441	221478	480899	218288	474869	215553
3750	258.6	526077	238825	516910	234437	507743	230048	498576	225429	489409	222195	483298	219423
3800	262.0	536677	243591	526872	238911	517584	234231	507779	229551	497974	226275	491782	223233
3850	265.4	547895	248637	537439	243659	526983	238682	517049	233704	506593	230149	500320	227068
3900	268.9	558691	253825	548099	248542	536979	243259	526387	237976	515266	234133	508912	231012
3950	272.3	570118	258968	558855	253375	547056	247782	535793	242189	524530	238299	517558	234895
4000	275.8	582197	264501	570248	258344	557757	252680	545809	246523	533318	242582	526258	239134
4050	279.2	594397	269994	581750	263512	568553	257279	555907	251047	542710	246809	535562	243069
4100	282.7	606719	275386	593360	268571	579444	262260	566085	255445	552170	251154	544377	247368
4150	286.1	619163	280985	604515	273833	590430	266936	576345	260039	561697	255441	553810	251354
4200	289.6	631158	286738	616334	279240	601510	272000	586686	264761	571862	259848	563310	255711
4250	293.0	644416	292447	628839	284862	613262	277276	597109	269428	581532	264458	572878	260011
4300	296.5	657809	298841	641465	290635	624539	282430	608196	274224	591269	268930	581930	264430
4350	299.9	671927	304666	654214	296099	636500	287532	618787	278965	601074	273342	591626	268524
4400	303.4	686194	311189	667084	302251	648570	293043	630057	283835	611543	278147	601988	273272
4450	306.8	700007	317678	680075	308092	660748	298507	641421	288922	621490	282897	611826	277694
4500	310.3	715176	324614	694411	314366	673645	304395	652880	294147	632115	287776	621732	282514
4550	313.7	730507	331519	708277	320599	686664	309959	665052	299039	643439	292599	632324	286999
4600	317.2	745376	338604	722278	327280	699805	315955	676707	304347	653609	297553	642372	291607
4650	320.6	761657	345942	737677	333924	713067	321906	689088	309602	664478	302449	652488	296440
4700	324.1	778113	353757	752601	341030	727089	328303	700939	315286	675427	307766	663309	301402
4750	327.5	795389	361549	768318	347812	741246	334367	714175	320630	687103	312738	674212	306308
4800	330.9	812855	369130	784197	354955	755539	340781	726880	326311	698873	318042	685195	311250
4850	334.4	830511	377797	800239	362578	769967	347657	740352	332139	710080	323485	696260	316323
4900	337.8	849021	385848	817108	369871	785194	354196	753281	337918	721368	328875	707406	321640
4950	341.3	867733	394707	834152	377652	800571	360901	766990	344150	733409	334709	718633	326790
5000	344.7	887327	403241	852051	385402	816775	367869	781499	350030	746223	340187	730620	332190
5050	348.2	906452	412295	869454	393654	832456	375012	795458	356370	758460	346117	742017	337728
5100	351.6	925781	421016	887033	401565	848286	382114	809539	362350	770792	351683	754186	343213
5150	355.1	946010	429948	905487	409670	864964	389393	824440	368798	783917	357709	766450	348521
5200	358.5	965751	439171	923425	417740	881804	396629	839477	375198	797150	363683	778809	354407
5250	362.0	985695	448291	942250	426329	898094	404367	853937	382081	810492	369808	791262	360119
5300	365.4	1006561	457381	960547	434234	914532	411740	869237	388594	823223	376206	803811	365774
5350	368.9	1026191	466687	979019	442661	931846	419294	884673	395268	837500	382433	817179	371901
5400	372.3	1046744	475626	997666	451048	948589	426802	900244	402223	851166	388605	829924	377645
5450	375.8	1066760	484780	1016490	459635	965481	434491	915211	409347	864941	395266	843502	383868
5500	379.2	1086966	493890	1034744	467842	983268	442133	931046	416085	878823	401878	856443	390038
5550	382.7	1106608	503217	1053913	476246	1000464	450300	947016	423330	893567	408650	870231	396360
5600	386.1	1127186	511809	1072498	484600	1017809	458079	963121	430526	908433	415371	884127	402627
5650	389.6	1147187	520955	1091245	493152	1034537	465697	978595	437894	922654	421907	898131	408701
5700	393.0	1167363	529696	1109382	501301	1052173	473607	994965	44521l	937756	428735	912244	415063
5750	396.4	1186156	538864	1127667	509870	1069178	481230	1010689	452589	952200	435617	926465	421474
5800	399.9	1206671	547534	1146888	518285	1087105	489392	1027322	460142	967539	443021	940794	428396
5850	403.3	1225775	556494	1165478	526637	1104388	497499	1044091	467642	983794	450016	955232	434907
5900	406.8	1245028	565303	1183417	535188	1121805	505435	1060194	475319	998583	457177	969777	441575
5950	410.2	1264430	574041	1202297	543675	1139358	513308	1077226	482941	1014287	464282	984431	448184
6000	413.7	1283980	582986	1220513	551992	1157047	521736	1094394	490742	1030927	471555	999194	455320

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		870	465.6	880	471.1	890	476.7	900	482.2	910	487.8	920	493.3
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	377574	171234	373781	169514	370410	167794	367039	166456	364089	165118	361139	163781
3150	217.2	384859	174527	381006	172780	377581	171033	373728	169674	370732	168121	367735	166762
3200	220.6	391810	177641	388331	175867	384417	174092	380503	172712	377459	171135	374415	169755
3250	224.1	399230	181048	395255	179245	391280	177443	387306	175841	384214	174439	381123	172837
3300	227.5	407138	184393	402654	182563	398619	180530	394135	179107	390996	177480	387857	175854
3350	231.0	414646	188043	410094	185979	405998	183915	401446	182263	398260	180612	394619	179167
3400	234.4	422194	191427	417575	189333	412956	187238	408798	185563	405103	183887	401870	182212
3450	237.9	429783	194911	425096	192573	420409	190448	415722	188747	412442	187047	408692	185346
3500	241.3	437412	198332	432658	195961	427903	193805	423149	191865	419345	190140	415542	188416
3550	244.8	445082	201853	440260	199448	435438	197042	430134	195293	426276	193543	422901	191575
3600	248.2	453282	205533	447903	202872	443013	200433	437635	198659	433723	196664	429811	194890
3650	251.7	461040	209094	455587	206396	450134	203923	444680	202124	440715	200101	436749	198077
3700	255.1	469341	212819	463813	210085	457783	207578	452256	205528	448236	203477	443713	201198
3750	258.6	477187	216421	471585	213649	465474	211108	459872	208799	455288	206720	451214	204641
3800	262.0	485589	220191	479397	217149	473205	214341	467012	212235	462884	210129	458240	207790
3850	265.4	494046	223749	487772	220668	480976	217824	474702	215690	470520	213320	465815	211187
3900	268.9	502027	227650	495672	224528	489318	221406	482433	219245	477667	216844	473431	214442
3950	272.3	510585	231490	503613	228086	497177	225168	490205	222736	485378	220305	480551	217873
4000	275.8	519198	235440	512137	231992	505077	228791	498017	226328	492586	223865	487698	221402
4050	279.2	527864	239330	520716	235590	513018	232349	505870	229607	500371	227114	495422	224621
4100	282.7	536584	243329	529348	239543	521556	236009	513763	233485	508197	230708	503187	228184
4150	286.1	545922	247523	537472	243435	529584	239859	521697	237049	516063	234240	510429	231430
4200	289.6	554758	251574	546206	247179	538223	243559	529671	240715	523970	237871	518268	235027
4250	293.0	563647	255564	554994	251118	546340	247194	537686	244316	531917	241439	526148	238562
4300	296.5	573175	259666	563836	255166	555081	251196	545742	248019	539905	245108	534068	241931
4350	299.9	582179	263705	572732	259153	563285	254870	553838	251657	547933	248712	541439	245500
4400	303.4	591835	268126	582280	263251	572724	258918	562572	255668	556003	252418	550030	249168
4450	306.8	601559	272491	591291	267287	581024	262632	570756	259345	564112	256059	557469	252773
4500	310.3	611350	276974	600357	271712	589974	266726	578981	263402	572263	259802	565544	256478
4550	313.7	621209	281399	610094	275799	598979	271039	587864	267399	580453	263759	573661	260119
4600	317.2	630511	285662	619274	279999	608037	274903	596800	271223	589309	267542	581818	263862
4650	320.6	640498	290431	629140	284422	617150	278986	605160	275266	597588	271260	590016	267540
4700	324.1	651191	295038	638435	288964	626317	283179	614199	279129	606545	275369	598254	271320
4750	327.5	661321	299586	648429	293155	635538	287310	622647	283218	614912	279126	607177	275034
4800	330.9	672169	304458	658491	297666	645464	291465	631787	287331	623971	283196	615503	278767
4850	334.4	682440	309161	668620	302298	654801	296031	640981	291555	632425	287078	623870	282900
4900	337.8	692779	314104	678817	306869	664191	300238	649564	295716	640921	291194	632278	286673
4950	341.3	703858	319176	689082	311563	674307	304862	659531	299989	650128	295421	641397	290548
5000	344.7	715017	324192	699415	316195	683812	309121	668887	304200	659390	299278	649892	294664
5050	348.2	726258	329028	710500	320950	694056	313494	678298	308522	668706	303551	659113	298580
5100	351.6	737580	334428	720974	325958	704368	318115	687762	313095	678075	307762	667697	302742
5150	355.1	749682	339649	732215	330778	714748	322540	697281	317470	686801	312084	677019	306698
5200	358.5	761173	344811	742831	335535	725195	327539	706854	321781	696272	316344	685690	310906
5250	362.0	772745	350429	754228	340740	735710	332020	716481	326529	705797	320716	695114	314902
5300	365.4	784398	355668	764986	345562	745574	336760	726162	330892	715377	325024	703873	319156
5350	368.9	796859	361369	776538	350838	756943	341622	736622	335698	725011	329445	713399	323521
5400	372.3	809414	366684	788171	356055	767661	346423	747151	340113	734698	333802	722978	327823
5450	375.8	822063	372469	799885	361405	778447	351348	757008	344978	744440	338608	732612	331903
5500	379.2	834062	378198	811681	366358	789300	356210	766919	349782	754982	343017	742300	336251
5550	382.7	846894	384069	824310	372121	800973	361537	777637	354368	764839	347540	752042	340712
5600	386.1	860581	389884	836275	377140	811969	366119	788422	359230	774750	351998	761838	345109
5650	389.6	872843	395842	848320	382983	823798	371515	798509	364216	784715	356918	770922	349620
5700	393.0	886732	401391	860447	388070	834935	376151	809423	368789	795508	361077	780819	353715
5750	396.4	899950	407330	873435	393540	846920	381518	820405	373740	806368	365961	791551	358182
5800	399.9	913263	413771	885731	399503	858199	386662	831454	378815	816509	370967	801563	363120
5850	403.3	926670	419799	898902	405050	870340	392100	842572	383826	826704	375553	811630	367639
5900	406.8	940972	425973	911367	410734	882561	397309	853756	388963	837753	380618	821750	372273
5950	410.2	954576	432452	924720	416719	894864	402817	865009	394036	848870	385255	832732	376840
6000	413.7	968274	438716	937354	422481	906434	408090	875515	399604	859241	390379	842154	381524

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		930	498.9	940	504.4	950	510	960	515.6	970	521.1	980	526.7
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	358190	162443	355240	161296	352711	160150	350183	159003	347655	157856	345548	156710
3150	217.2	364738	165403	362170	164044	359173	162879	356604	161714	354036	160549	351467	159384
3200	220.6	371371	168374	368327	166994	365283	165811	362674	164628	360500	163248	357891	162065
3250	224.1	378031	171435	374940	170033	371849	168831	369199	167629	366549	166428	363899	165226
3300	227.5	384719	174228	381580	173008	378441	171788	375751	170365	373061	169145	370370	167925
3350	231.0	391433	177516	388247	176071	384606	174626	381875	173387	379144	172149	376868	170704
3400	234.4	398174	180536	394941	179070	391246	177604	388474	176348	385702	174882	382931	173625
3450	237.9	404943	183646	401662	182158	397912	180670	395100	179182	392288	177907	389476	176419
3500	241.3	412214	186691	408410	185182	404606	183673	401754	182164	398901	180655	395573	179361
3550	244.8	419043	189825	415185	188294	411327	186764	408434	185233	405059	183702	402165	182390
3600	248.2	425899	192895	421498	191343	417587	189791	414653	188239	411719	186687	408785	185135
3650	251.7	432783	196054	428817	194480	424355	192906	421381	191332	418406	189758	414936	188185
3700	255.1	439693	199148	435673	197553	431653	195958	428135	194135	425120	192540	421603	190945
3750	258.6	446631	202331	442556	200715	438482	199098	434917	197250	431352	195633	427788	194016
3800	262.0	454111	205684	449467	203812	445339	202174	441726	200302	438114	198664	434502	197026
3850	265.4	461110	208817	456404	206921	452222	205261	448562	203365	444903	201706	441243	199810
3900	268.9	468665	212281	463899	210360	459132	208439	455426	206518	451719	204596	448012	202916
3950	272.3	475724	215442	470897	213496	466070	211551	462316	209606	458561	207660	454271	205958
4000	275.8	482810	218940	477922	216723	473035	214753	469233	212783	464888	210813	461087	209089
4050	279.2	490474	221878	484975	219884	480026	217890	476177	215895	471778	213901	467929	211906
4100	282.7	497621	225407	492611	223388	487045	221369	483149	219097	478696	217078	474799	215058
4150	286.1	505358	228620	499725	226576	494091	224277	490147	222234	485640	220190	481696	218147
4200	289.6	512567	232183	506865	229856	501163	227787	497172	225460	492611	223392	488050	221323
4250	293.0	520379	235684	514033	233330	508263	230976	504225	228622	499610	226529	494994	224436
4300	296.5	528231	239020	521811	236637	515974	234255	511304	231873	506635	229755	501966	227373
4350	299.9	535534	242555	529630	239877	523135	237468	518411	235058	513688	232917	508964	230507
4400	303.4	543461	245918	536892	243480	530322	241043	525545	238605	520767	236168	515989	233730
4450	306.8	550825	249486	544181	246748	537537	244283	532706	241818	527874	239353	523042	236889
4500	310.3	558826	252877	552108	250385	544779	247615	539893	245122	535007	242629	530122	240137
4550	313.7	566868	256479	560076	253679	553283	251159	547726	248359	542168	245839	537228	243319
4600	317.2	574951	260181	567460	257350	560593	254519	554974	251971	549356	249140	544362	246592
4650	320.6	582443	263820	575502	260673	567929	258097	562250	255236	556571	252375	551523	249799
4700	324.1	590600	267270	582947	264377	575293	261485	569553	258592	563813	255700	558073	253097
4750	327.5	598798	270942	591063	267727	583328	264804	577527	261882	571726	258959	565925	256328
4800	330.9	607036	274633	599220	271384	590753	268431	584891	265183	579029	262230	573167	259572
4850	334.4	615973	278424	607418	275141	598863	271859	592940	268875	586359	265891	580436	262906
4900	337.8	623634	282151	614991	278534	606348	275519	600364	272203	593716	269189	587732	266174
4950	341.3	631994	285980	623263	282325	613861	278975	607816	275929	601100	272579	595055	269533
5000	344.7	641073	289743	631576	286052	622079	282669	615295	279285	609189	276209	602405	272826
5050	348.2	649521	293609	639929	289880	629652	286463	623486	283045	616634	279627	609783	276520
5100	351.6	658010	297409	648323	293644	638636	290193	631717	286429	624798	282978	617879	279527
5150	355.1	666539	301312	656757	297510	646277	293708	639291	290222	632304	286420	625317	283252
5200	358.5	675814	305148	665232	301310	654651	297472	646891	293633	639837	290115	632782	286596
5250	362.0	684431	309411	673748	305213	662353	301337	655231	297461	648109	293585	640274	290033
5300	365.4	693089	313288	681585	309050	670801	304812	662892	300899	655702	296987	647794	293401
5350	368.9	702513	317268	690901	312989	679289	308711	671306	304761	664049	300812	656066	296863
5400	372.3	711258	321513	699538	316863	687818	312545	679761	308559	671703	304241	663646	300256
5450	375.8	720045	325533	708216	320839	695649	316481	687517	312123	679385	308100	671253	304077
5500	379.2	729617	329485	716935	324750	704252	320352	696046	315954	687840	311557	679633	307497
5550	382.7	739244	333884	725694	328763	712896	324325	704616	319887	695582	315449	687301	311352
5600	386.1	748166	337876	734494	332710	721581	328233	712466	323411	704111	318933	694997	314456
5650	389.6	757128	342322	743334	337109	730306	332243	721111	327378	711915	322860	702719	318342
5700	393.0	766903	346353	752988	340744	739072	336187	729795	331279	720518	326371	711241	321814
5750	396.4	776733	350403	761916	345099	747879	340149	738521	335199	728382	330249	719024	325652
5800	399.9	786617	354916	771672	349209	756726	344215	746500	338864	737060	333871	727621	329234
5850	403.3	796555	359365	780688	353609	765613	348214	755299	342818	745779	337781	735465	332745
5900	406.8	805747	363565	790545	357759	774542	352317	764140	346874	753738	341794	744136	336715
5950	410.2	815787	368059	799649	361840	783510	356352	773021	350864	762531	345376	752041	340254
6000	413.7	825881	372668	809607	366396	792520	360861	781942	354957	771364	349423	760787	344257

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		990	532.2	1000	537.8	1010	543.3	1020	548.9	1030	554.4	1040	560
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	343019	155754	340912	154798	338805	153843	336698	152887	334591	151932	332484	150976
3150	217.2	349327	158414	346758	157443	344618	156472	342477	155308	340337	154531	338624	153560
3200	220.6	355281	161080	353107	160094	350933	159108	348758	158122	346584	157136	344410	156151
3250	224.1	361691	164024	359042	163023	356833	161821	354625	160820	352417	159819	350209	158817
3300	227.5	367680	166705	364989	165689	362748	164469	360506	163453	358264	162436	356022	161420
3350	231.0	374137	169672	371406	168434	369130	167401	366855	166163	364124	165131	361848	164305
3400	234.4	380159	172368	377388	171321	375078	170064	372769	169017	370459	167970	368150	166923
3450	237.9	386195	175356	383383	174081	381040	173018	378696	171743	376353	170680	374010	169617
3500	241.3	392720	178068	389868	176990	387490	175696	384638	174403	382260	173325	379883	172463
3550	244.8	399272	181078	395897	179765	393486	178672	391075	177360	388181	176266	385770	175173
3600	248.2	405362	184026	402428	182696	399983	181365	397050	180035	394605	178926	391671	177818
3650	251.7	411961	186836	408491	185487	406013	184138	403038	182789	400559	181664	397585	180540
3700	255.1	418588	189578	415070	188210	412055	186843	409543	185476	406528	184337	404015	183197
3750	258.6	424732	192631	421167	191245	418621	189859	415565	188473	413019	187087	409963	185932
3800	262.0	430890	195622	427793	194218	424697	192580	422117	191176	419021	190006	416441	188836
3850	265.4	437584	198388	433924	196966	431310	195544	428173	193884	425036	192699	422422	191514
3900	268.9	444305	201475	440598	199794	437420	198353	434243	196912	431595	195471	428418	194271
3950	272.3	450516	204499	446762	202797	443544	201338	440863	199636	437645	198420	434427	196961
4000	275.8	457285	207365	453483	205887	450225	204163	446966	202685	443707	201208	440449	199976
4050	279.2	464080	210411	459681	208665	456382	207170	453633	205424	450334	204178	447035	202682
4100	282.7	470346	213544	466450	211777	463110	210010	459770	208495	456431	206981	453091	205466
4150	286.1	477189	216359	473245	214826	469865	213038	466485	211250	463104	209717	459161	208440
4200	289.6	484059	219514	479498	217704	476077	216152	472656	214342	469235	212791	465814	211240
4250	293.0	490956	222605	486340	220774	482879	218943	479417	217112	475956	215542	471918	213973
4300	296.5	497296	225785	492627	223667	489125	222079	485623	219962	482120	218373	478618	217050
4350	299.9	504240	228633	499517	226759	495974	224885	492431	223011	488298	221405	484756	219798
4400	303.4	511212	231834	506434	229939	502851	228043	498670	225876	495087	224251	490907	222626
4450	306.8	518210	234972	512774	232781	509151	230864	504923	228947	501299	227304	497071	225660
4500	310.3	525236	237921	519739	235982	516075	234043	511799	231827	508135	230165	503860	228504
4550	313.7	531671	241359	526731	239119	522408	237159	518086	234919	514381	233239	510058	231559
4600	317.2	538743	244610	533749	242345	529379	240363	525010	238099	520640	236117	516270	234418
4650	320.6	545843	247796	540795	245507	536378	243218	531961	241215	527543	239212	523126	237209
4700	324.1	552970	250783	547230	248758	542765	246444	538301	244130	533836	242105	529372	240369
4750	327.5	560124	253990	554323	251652	549811	249314	545299	246975	540787	245222	536275	243176
4800	330.9	567305	257210	561443	254847	556884	252485	552325	250122	547765	248055	543206	246283
4850	334.4	574513	260519	568591	258132	563984	255744	558719	253059	554113	251268	549506	249179
4900	337.8	581084	263763	575100	261351	570446	258940	565792	256227	560473	254117	555819	252007
4950	341.3	588339	267097	582295	264661	577593	261920	572892	259483	567519	257351	562818	255219
5000	344.7	596300	270365	589516	267597	584767	265136	579340	262676	574592	260215	569165	258370
5050	348.2	603616	273724	596765	270928	591969	268442	586488	265646	581006	263471	576210	261296
5100	351.6	610960	277017	604041	274193	598505	271370	593662	268546	588127	266350	582591	264154
5150	355.1	617631	280401	610645	277549	605754	274697	600165	272163	594575	269628	589684	267410
5200	358.5	625728	283718	617968	280839	613030	277960	607386	275081	601743	272842	596099	270603
5250	362.0	633152	287126	625318	284219	619620	281312	614635	278406	608937	275822	603240	273561
5300	365.4	640604	290467	632695	287207	626943	284273	621192	281339	615440	279057	609688	276449
5350	368.9	648083	293900	640825	290938	634294	287976	628488	284685	622682	282052	616876	279748
5400	372.3	655588	297266	648263	294277	641671	291288	635811	287966	629951	285309	623358	282984
5450	375.8	663860	300724	655728	297707	649075	294354	643161	291337	636508	288655	630593	285973
5500	379.2	670681	304114	662475	301070	656506	297687	649792	294642	643824	291936	637110	289230
5550	382.7	678268	307938	669987	304524	663212	301110	657190	298038	651167	294965	644392	292575
5600	386.1	685882	311356	677527	307912	670691	304468	664614	301023	657778	298268	651702	295513
5650	389.6	694289	314866	685093	311391	678196	307916	671299	304093	665169	301312	658272	298532
5700	393.0	701964	318308	692687	314803	685729	311297	678771	307792	672587	304636	665629	301832
5750	396.4	709666	321762	700308	318227	693289	314691	686270	310801	679252	307973	672233	305144
5800	399.9	717395	325310	707955	321743	700876	317819	693796	314252	686717	311042	679637	308188
5850	403.3	725944	329148	715630	325191	708490	321594	701349	317637	694209	314759	686275	311522
5900	406.8	733734	332723	723332	328732	716131	325104	708930	321112	701728	317847	693727	314944
5950	410.2	741551	336229	731061	332571	723799	328546	715730	324522	708468	321229	701206	318302
6000	413.7	749395	340198	738817	336139	731494	332081	723357	328022	716034	324701	708711	321380

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8

Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		1050	565.6	1060	571.1	1070	576.7	1080	582.2	1090	587.8	1100	593.3
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	330799	150021	328692	149256	327006	148301	325320	147536	323635	146772	321949	146007
3150	217.2	336484	152590	334343	151813	332631	150842	330918	150066	329206	149289	327494	148513
3200	220.6	342236	155362	340496	154376	338322	153390	336582	152602	334843	151813	333103	151024
3250	224.1	348001	157816	346234	157015	344026	156013	342260	155212	340493	154411	338727	153610
3300	227.5	353780	160606	351986	159590	349744	158573	347951	157760	346157	156947	344364	156134
3350	231.0	359572	163273	357751	162241	355476	161415	353655	160383	351834	159558	350014	158732
3400	234.4	365840	165876	363530	164828	361683	163781	359373	162943	357063	162106	355216	161268
3450	237.9	371666	168555	369323	167492	367448	166642	365105	165579	362761	164729	360886	163878
3500	241.3	377506	171385	375129	170307	373227	169229	370850	168367	368472	167289	366571	166427
3550	244.8	383359	173861	380948	172767	379019	171674	376608	170799	374679	169924	372268	169049
3600	248.2	389226	176709	386781	175601	384825	174492	382380	173383	380424	172497	377979	171610
3650	251.7	395106	179416	392628	178292	390645	177168	388166	176044	386183	175144	383704	174020
3700	255.1	401000	182058	398488	180919	396478	179780	393965	178640	391955	177729	389442	176590
3750	258.6	407417	184777	404870	183623	402324	182468	399778	181313	397741	180389	395194	179234
3800	262.0	413344	187432	410764	186262	408184	185092	406120	184156	403540	182986	400960	181816
3850	265.4	419286	190092	416672	188907	414580	187722	411966	186537	409352	185589	406738	184403
3900	268.9	425240	193070	422592	191629	420474	190428	417826	189468	415179	188267	412531	187066
3950	272.3	431209	195745	428527	194530	425845	193314	423164	192098	420482	190882	418337	189666
4000	275.8	437190	198499	434475	197021	431759	195790	429044	194558	426328	193573	423613	192342
4050	279.2	443736	201186	440986	199940	438237	198444	435488	197447	432189	196200	429439	194954
4100	282.7	449751	204204	446968	202690	444185	201428	441402	200166	438062	198904	435279	197642
4150	286.1	455780	206907	452963	205375	450146	204097	447329	202820	443949	201543	441132	200266
4200	289.6	461823	209688	458972	208137	456121	206844	453271	205552	450420	204259	446999	202966
4250	293.0	468456	212404	465571	211096	462110	209526	459225	208218	456341	206910	452879	205602
4300	296.5	474533	215462	471614	213874	468696	212285	465194	210962	462275	209638	458773	208315
4350	299.9	480623	218192	477670	216853	474718	215247	471175	213908	468223	212570	464681	211231
4400	303.4	486726	221001	483740	219376	480754	217751	477171	216397	474185	215043	470601	213688
4450	306.8	492843	223743	489823	222374	486803	220731	483180	219362	480160	217992	476536	216349
4500	310.3	499585	226842	496531	225180	492866	223518	489813	222133	486148	220471	482484	219086
4550	313.7	506353	229879	502648	227919	498943	226519	495855	224839	492150	223439	489063	222039
4600	317.2	512524	232436	508779	230738	505033	229039	501912	227623	498166	225925	495045	224509
4650	320.6	519340	235492	515554	233775	511768	231773	507981	230342	504195	228911	501040	227194
4700	324.1	525545	238345	521718	236609	517891	234874	514065	233427	510238	231692	507049	230246
4750	327.5	531763	241422	527896	239376	524029	237622	520161	236161	516294	234407	513071	232946
4800	330.9	538647	244216	534739	242444	530831	240673	526923	238901	523015	237129	519107	235652
4850	334.4	544899	247090	540951	245300	537002	243509	533054	241719	529105	239928	525156	238436
4900	337.8	551165	250198	547176	248088	543187	245978	539198	244471	535209	242662	531219	241155
4950	341.3	558116	253087	554086	250955	550057	249128	546027	247301	541997	245778	537968	243951
5000	344.7	564416	256217	560346	254063	556275	251910	552205	250065	548135	248527	544064	246681
5050	348.2	570729	259121	566618	256947	562507	255082	558396	253218	554286	251354	550175	249490
5100	351.6	577748	261958	573596	260076	568753	257880	564601	255997	560450	254115	556298	252233
5150	355.1	584095	265192	579903	262974	575012	260757	570820	258856	566628	256955	562436	255054
5200	358.5	590456	268364	586223	266125	581990	263886	577052	261967	572819	260048	568587	258129
5250	362.0	597542	271300	593269	269039	588283	266778	584010	264841	579024	262580	574751	260642
5300	365.4	603936	274167	599622	271885	594590	269603	590276	267647	585243	265691	580929	263735
5350	368.9	611070	277116	605990	274812	601635	272508	596555	270533	592201	268559	587121	266584
5400	372.3	617498	280327	612371	278002	607976	275345	602848	273352	598453	271359	593326	269366
5450	375.8	624679	283626	619504	280944	614330	278597	609155	276586	604719	274239	599544	272227
5500	379.2	631141	286524	625919	284156	621443	281450	616221	279420	610998	277052	606522	275022
5550	382.7	638370	289844	633100	287113	627831	284723	623314	282334	618044	280285	612775	277895
5600	386.1	644866	292757	639549	290002	634991	287591	629674	285524	624357	283113	619041	281047
5650	389.6	651375	296099	646011	293319	641413	290539	636049	288454	630684	286368	625320	283936
5700	393.0	658671	299028	653259	296223	647848	293769	642436	291315	637025	288861	631613	286758
5750	396.4	665214	302315	659755	299487	654296	296658	648837	294536	643378	292061	637919	289586
5800	399.9	672558	305335	667051	302481	661545	299984	656039	297487	649746	294990	644239	292850
5850	403.3	679135	308644	673581	305766	668027	302888	662474	300370	656920	297852	650573	295334
5900	406.8	686526	311679	680924	308776	675323	305873	669722	303696	663321	301156	657720	298616
5950	410.2	693136	315009	687488	312082	681840	309155	676191	306594	670543	304033	664088	301472
6000	413.7	700574	318428	694879	315108	689183	312156	682674	309573	676978	306990	670468	304407

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 3.141 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 2026.448 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X8											
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		1110	598.9	1120	604.4	1130	610	1140	615.6	1150	621.1
Set Pressure		Orifice Capacity									
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	320264	145243	318578	144670	317314	143905	315628	143141	314364	142376
3150	217.2	325781	147736	324069	146960	322357	146377	320644	145601	319360	144824
3200	220.6	331364	150236	329625	149447	327885	148658	326581	148067	324841	147278
3250	224.1	336960	152809	335194	152008	333427	151207	331661	150606	330336	149805
3300	227.5	342570	155117	340776	154507	338983	153694	337189	152881	335396	152068
3350	231.0	348193	157700	346373	157081	344552	156255	342731	155429	340911	154604
3400	234.4	353368	160221	351520	159383	349673	158755	348287	157917	346439	157079
3450	237.9	359012	162816	357137	161965	355262	161115	353387	160478	351981	159627
3500	241.3	364669	165349	362767	164486	360865	163624	358963	162762	357062	161899
3550	244.8	370339	167956	368411	167081	366482	166206	364553	165332	362624	164457
3600	248.2	376024	170501	374068	169614	372112	168727	370156	167841	368200	166954
3650	251.7	381721	173121	379738	171997	377755	171097	375772	170198	373789	169299
3700	255.1	387432	175678	385422	174767	382910	173855	380900	172944	378890	172032
3750	258.6	393157	178079	391120	177155	388574	176231	386537	175308	384500	174384
3800	262.0	398895	180880	396831	179944	394251	179008	392187	177838	390123	176902
3850	265.4	404647	183218	402033	182270	399942	181322	397851	180374	395760	179426
3900	268.9	410412	186106	407765	184905	405646	183945	403528	182984	400880	182024
3950	272.3	415655	188451	413510	187478	411364	186505	408683	185533	406537	184317
4000	275.8	421441	191110	419268	190125	417096	189140	414380	188155	412208	186924
4050	279.2	427240	193707	425040	192710	422291	191713	420092	190466	417892	189469
4100	282.7	433052	196379	430269	195370	428043	194360	425816	193350	423033	192088
4150	286.1	438879	198989	436062	197967	433808	196945	431555	195668	428738	194646
4200	289.6	444718	201673	442438	200639	439587	199346	437306	198312	434456	197278
4250	293.0	450572	204294	448264	203248	445379	202202	443072	200894	440187	199848
4300	296.5	456438	206991	453520	205933	451185	204609	448267	203550	445932	202227
4350	299.9	462319	209625	459367	208554	457005	207215	454053	205877	451100	204806
4400	303.4	468213	212334	465227	210980	462838	209897	459852	208543	456866	207459
4450	306.8	474120	214980	471100	213884	468684	212515	465664	211146	462644	210050
4500	310.3	480041	217702	476987	216317	474544	215209	471491	213824	468437	212716
4550	313.7	485975	220359	482888	218959	480418	217839	477330	216439	474860	215039
4600	317.2	491923	223094	488802	221678	485681	220262	482559	218847	480062	217714
4650	320.6	497885	225764	494730	224333	491574	223188	488419	221758	485895	220327
4700	324.1	503860	228510	500671	227353	497482	225907	494293	224460	491742	223014
4750	327.5	509848	231192	506626	229731	503403	228269	500180	227100	497602	225639
4800	330.9	515850	233881	512594	232404	509337	230928	506081	229746	503475	228270
4850	334.4	521866	236645	518576	235153	515285	233661	511995	232169	509362	230976
4900	337.8	527895	239346	524571	237839	521247	236332	517922	234824	514598	233619
4950	341.3	534609	242428	530580	240600	527222	239078	523864	237555	520505	236032
5000	344.7	540672	244836	536602	243298	533210	241760	529818	240222	526426	238684
5050	348.2	546749	247936	542638	246072	539212	244519	535787	242965	532361	241412
5100	351.6	552839	250350	548687	248782	545228	247213	541768	245645	538309	244076
5150	355.1	558942	253153	554750	251568	551257	249984	547764	248400	544270	246816
5200	358.5	565060	256209	560827	254290	557300	252691	553067	251092	549540	249492
5250	362.0	571190	258704	566917	257089	563356	255474	559083	253859	555522	252244
5300	365.4	577334	261779	573020	259823	569426	258193	565112	256563	561517	254607
5350	368.9	583492	264609	579138	262634	575509	260989	571154	259343	567526	257698
5400	372.3	589663	267374	585268	265381	581606	263720	577211	261727	573548	260066
5450	375.8	595848	270216	591412	268540	587716	266528	583280	264852	579584	262840
5500	379.2	602046	272992	598316	270963	593840	269271	590110	267580	585633	265550
5550	382.7	609011	275847	604494	273799	599977	272092	596213	270385	591696	268336
5600	386.1	614483	278636	610685	276914	606128	274847	601571	272781	597773	271059
5650	389.6	620722	281850	616890	279765	612292	277680	607695	275942	603097	273857
5700	393.0	626974	284304	623109	282201	618470	280448	613832	278344	609193	276592
5750	396.4	633240	287465	629341	285343	624662	283222	619983	281454	615304	279332
5800	399.9	639520	290353	635587	288213	630867	286073	626147	283933	621428	282149
5850	403.3	646606	292816	641846	291017	637085	288859	632325	286701	627565	284542
5900	406.8	652919	296077	648118	293899	643318	291722	638517	289545	633716	287731
5950	410.2	659246	298911	654405	296716	649563	294521	644722	292325	639880	290496
6000	413.7	665586	301824	660704	299610	655822	297397	650940	295183	646058	292969

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		750	400	760	404.4	770	410	780	415.6	790	421.1	800	426.7
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	696653	315343	684801	311162	673607	305787	662413	300412	651219	295335	640025	290557
3150	217.2	711738	322155	699697	317908	688326	312448	676285	306987	664913	301527	652872	296370
3200	220.6	727061	329331	714831	324710	703279	319165	691048	313312	678817	307766	667266	302837
3250	224.1	743202	336411	730781	332030	718359	326084	706628	320451	694207	314505	681786	309185
3300	227.5	759490	343717	746879	338952	734267	333233	720955	327198	708344	321162	695732	315762
3350	231.0	776638	351240	763125	346402	749612	340273	736810	334145	723297	328017	709784	322211
3400	234.4	794676	359006	780241	354097	766527	347879	752813	341333	739099	335115	725386	329225
3450	237.9	812905	367333	798258	362351	783611	355376	768964	348734	755049	342423	740402	336113
3500	241.3	832067	375930	816465	370540	801607	363466	786006	356392	770405	349318	755546	342918
3550	244.8	852193	385119	836370	379310	819794	371792	803217	364274	787394	357098	770817	350264
3600	248.2	873317	394258	856508	388022	838934	380054	821361	372432	803788	364810	786978	357534
3650	251.7	896243	404363	877652	397688	859061	389256	840470	380825	821879	372744	803288	365016
3700	255.1	921036	414788	900621	407668	880206	398410	860576	389509	840160	380608	819745	372063
3750	258.6	947758	426232	925477	418292	903195	408548	880914	398803	858632	389059	836351	380036
3800	262.0	977280	438396	952284	429987	928094	419383	903097	408414	878907	397811	853911	387939
3850	265.4	1008063	451842	981105	442212	954147	430361	926372	418509	899414	406658	871639	396287
3900	268.9	1043448	466784	1012832	456278	982215	443145	951598	429636	920982	416503	890365	404871
3950	272.3	1082756	482924	1048397	471145	1013199	456327	978839	441128	943641	426310	908443	413392
4000	275.8	1126114	501038	1087078	487954	1047193	470637	1008157	453705	968272	437158	928387	422149
4050	279.2	1180523	522385	1134127	506803	1087730	487326	1041334	467459	995797	448371	949401	431620
4100	282.7	1241143	547843	1186348	529700	1132423	506035	1078498	482764	1023704	459888	969779	440562
4150	286.1	1302003	574366	1239500	553211	1176997	525671	1114494	498529	1051990	471786	989487	449434
4200	289.6	1362181	601973	1291800	577328	1221420	546220	1151039	515111	1080658	484406	1010277	459358
4250	293.0	1418909	627818	1341383	600433	1263856	565690	1186330	530948	1109706	497023	1032179	469229
4300	296.5	1473852	653491	1389944	623298	1306037	585247	1222129	547196	1138222	509971	1054314	479778
4350	299.9	1527837	677275	1437421	645064	1347006	604068	1257513	562653	1167098	522493	1076682	489445
4400	303.4	1580802	701658	1484684	666956	1388567	622944	1292450	578931	1197266	535766	1101149	500640
4450	306.8	1631738	724473	1530757	687672	1428833	641028	1326908	594385	1225927	548597	1124002	511368
4500	310.3	1681506	747427	1575577	708908	1468694	659570	1362764	610665	1255881	562193	1148997	523242
4550	313.7	1730042	769591	1619080	728902	1508118	677713	1397156	626086	1286194	575771	1175232	534645
4600	317.2	1777282	790980	1662179	748953	1547075	695425	1431971	641897	1315891	589696	1200787	546785
4650	320.6	1824150	812398	1704841	769029	1585531	713587	1466222	658145	1346913	603598	1228589	559334
4700	324.1	1869616	832992	1747034	788246	1624453	731297	1501871	674348	1378293	618303	1255712	572653
4750	327.5	1914624	853121	1788728	807451	1662833	748993	1536937	690078	1411041	632990	1285145	585493
4800	330.9	1958126	873026	1829891	825960	1700638	766436	1572403	706450	1444169	647848	1314916	598936
4850	334.4	2001085	892958	1869462	844929	1738867	784311	1607244	723226	1476649	663540	1345025	613646
4900	337.8	2043471	911902	1910495	862915	1776480	801211	1643503	739507	1510527	678745	1376512	627874
4950	341.3	2084202	930841	1948823	881348	1814494	819007	1679115	756189	1543736	694323	1408358	642927
5000	344.7	2124274	949219	1987532	899235	1850790	835793	1714047	772352	1577305	710352	1440563	657484
5050	348.2	2164727	967568	2026621	917078	1888515	853480	1750410	789396	1612304	726283	1474198	672880
5100	351.6	2204479	985323	2065010	934341	1925540	870124	1786071	805416	1646602	742179	1508214	688255
5150	355.1	2242407	1003026	2102666	952033	1961833	887178	1822092	822322	1681259	758458	1541518	703504
5200	358.5	2280652	1020600	2139558	969120	1998464	903646	1857370	838671	1716276	774696	1575182	719218
5250	362.0	2318102	1037602	2176768	986126	2034321	920518	1892987	855416	1750540	790818	1609205	734800
5300	365.4	2354724	1053943	2213171	1002494	2070494	936782	1927818	871070	1786265	806885	1643588	749833
5350	368.9	2391621	1070697	2248736	1019271	2105851	953445	1962966	887619	1820081	822822	1678330	765738
5400	372.3	2426503	1086767	2283431	1034868	2140359	968956	1997287	903044	1854215	838689	1712287	781081
5450	375.8	2461618	1103243	2318380	1051381	2175142	985375	2031903	919369	1888665	854411	1745427	796263
5500	379.2	2495800	1119013	2352417	1066683	2209034	1000610	2065650	934537	1922267	870050	1778884	811377
5550	382.7	2531370	1134649	2387863	1082905	2244356	1016757	2099672	950609	1956165	885528	1812658	827382
5600	386.1	2564798	1150086	2421188	1097882	2277578	1031687	2133969	966029	1990359	900909	1846749	841710
5650	389.6	2598417	1165372	2454725	1113240	2311034	1047532	2167343	981280	2023651	916115	1879960	856923
5700	393.0	2631017	1179899	2487266	1128409	2343514	1062128	2200970	995848	2057219	930663	1913467	871504
5750	396.4	2663787	1195054	2519997	1143119	2376206	1076819	2232415	1011072	2088624	945877	1944833	886207
5800	399.9	2696727	1209481	2552918	1157646	2409108	1091877	2265299	1025551	2121490	960896	1978910	900701
5850	403.3	2727355	1223674	2584789	1171961	2440983	1106197	2297177	1040432	2153371	975229	2009565	915085
5900	406.8	2759361	1238803	2616830	1186643	2473048	1120876	2329266	1055109	2185484	990475	2042952	929811
5950	410.2	2790254	1252562	2646518	1201111	2504042	1134795	2360306	1069051	2217830	1004451	2074093	943852
6000	413.7	2821274	1266683	2677604	1214794	2535205	1149067	2391535	1083340	2249137	1018766	2105466	958228

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		810	432.2	820	437.8	830	443.3	840	448.9	850	454.4	860	460
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	632124	286974	624222	283092	616321	279508	608419	275925	601176	272939	595250	270251
3150	217.2	644845	292730	636818	288786	628791	285146	620764	281203	612737	278169	606716	275439
3200	220.6	658432	298832	650278	294827	641445	290822	633291	286817	624457	283736	618342	280656
3250	224.1	672815	305117	663844	300736	654873	296668	645902	292286	636241	289157	630031	286028
3300	227.5	686624	311314	676815	306867	667707	302420	658598	297972	648790	294478	642484	291301
3350	231.0	700539	317696	690582	313180	680625	308665	670668	303827	661422	300279	654310	297054
3400	234.4	714559	324316	704454	319407	694349	314498	684244	309262	674139	305662	666922	302389
3450	237.9	729417	330799	718432	325817	707447	320503	697194	315521	686209	311535	678885	307882
3500	241.3	744402	337528	732516	332139	721372	326749	710228	321359	699085	317317	690912	313612
3550	244.8	758761	344455	747459	338987	735403	333178	723347	327710	711291	323268	703757	319509
3600	248.2	773989	351645	761764	345409	749540	339519	737315	333629	724326	329126	716685	324968
3650	251.7	790119	358692	776951	352368	763782	346045	750613	339721	737445	335154	728924	330938
3700	255.1	806397	365655	792263	359246	778915	352481	764782	346072	751433	341088	742011	336815
3750	258.6	822027	373179	807703	366321	793379	359464	779056	352246	764732	347193	755183	342862
3800	262.0	838590	380626	823270	373313	808756	366000	793435	358688	778115	353569	768439	348816
3850	265.4	856118	388510	839780	380732	823442	372955	807921	365177	791583	359622	781780	354807
3900	268.9	872988	396616	856438	388361	839061	380106	822512	371851	805135	365848	795205	360970
3950	272.3	890844	404653	873245	395914	854808	387175	837209	378436	819610	372356	808715	367037
4000	275.8	909717	413299	891048	403678	871529	394827	852860	385207	833342	379049	822310	373662
4050	279.2	928781	421882	909020	411753	888399	402014	868638	392276	848017	385653	836848	379810
4100	282.7	948035	430307	927161	419658	905417	409797	884543	399148	862799	392443	850622	386527
4150	286.1	967479	439057	944591	427881	922582	417104	900574	406327	877686	399142	865361	392756
4200	289.6	986223	448046	963059	436329	939896	425017	916733	413705	893569	406029	880206	399564
4250	293.0	1006938	456967	982599	445113	958259	433260	933018	420998	908678	413232	895156	406283
4300	296.5	1027865	466957	1002328	454135	975879	441313	950342	428492	923893	420220	909301	413188
4350	299.9	1049926	476059	1022248	462672	994570	449286	966892	435899	939214	427114	924452	419584
4400	303.4	1072220	486252	1042358	472286	1013430	457897	984501	443509	955573	434622	940642	427004
4450	306.8	1093802	496390	1062659	481413	1032459	466436	1002259	451458	971115	442044	956015	433914
4500	310.3	1117505	507229	1085058	491215	1052611	475635	1020165	459622	987718	449668	971494	441445
4550	313.7	1141461	518019	1106725	500956	1072954	484330	1039183	467267	1005412	457204	988044	448454
4600	317.2	1164695	529089	1128603	511394	1093487	493699	1057395	475561	1021303	464944	1003745	455654
4650	320.6	1190134	540555	1152665	521777	1114210	502998	1076741	483772	1038286	472595	1019552	463205
4700	324.1	1215848	552766	1175984	532879	1136120	512992	1095260	492654	1055396	480902	1036461	470959
4750	327.5	1242844	564942	1200543	543477	1158242	522468	1115941	501003	1073640	488672	1053496	478625
4800	330.9	1270136	576788	1225355	554639	1180575	532490	1135794	509880	1092032	496960	1070659	486347
4850	334.4	1297723	590331	1250421	566550	1203119	543235	1156845	518988	1109543	505465	1087949	494274
4900	337.8	1326646	602910	1276780	577946	1226913	553453	1177047	528017	1127181	513887	1105365	502582
4950	341.3	1355885	616753	1303413	590103	1250941	563929	1198468	537755	1145996	523003	1122908	510630
5000	344.7	1386502	630089	1331381	602213	1276260	574818	1221139	546942	1166018	531562	1141638	519066
5050	348.2	1416386	644236	1358575	615107	1300763	585978	1242951	556849	1185140	540828	1159445	527720
5100	351.6	1446588	657862	1386043	627469	1325498	597076	1264953	566193	1204409	549526	1178461	536290
5150	355.1	1478198	671819	1414878	640134	1351558	608449	1288238	576269	1224917	558941	1197624	544584
5200	358.5	1509044	686231	1442907	652744	1377871	619757	1311733	586270	1245595	568277	1216936	553783
5250	362.0	1540208	700482	1472323	666165	1403325	631847	1334327	597025	1266442	577847	1236395	562707
5300	365.4	1572812	714684	1500912	678517	1429012	643369	1358235	607202	1286335	587844	1256002	571544
5350	368.9	1603486	729226	1529775	691684	1456065	655172	1382354	617630	1308644	597574	1276892	581118
5400	372.3	1635600	743195	1558914	704789	1482227	666903	1406685	628498	1329998	607219	1296805	590092
5450	375.8	1666877	757497	1588327	718208	1508622	678919	1430072	639629	1351522	617627	1318022	599816
5500	379.2	1698449	771733	1616849	731032	1536415	690859	1454815	650158	1373214	627958	1338243	609457
5550	382.7	1729142	786306	1646802	744163	1563285	703621	1479769	661478	1396252	638540	1359788	619336
5600	386.1	1761296	799732	1675842	757216	1590388	715776	1504934	672722	1419481	649042	1381501	629130
5650	389.6	1792548	814023	1705136	770579	1616526	727679	1529114	684235	1441702	659255	1403384	638619
5700	393.0	1824075	827682	1733476	783313	1644084	740039	1554692	695669	1465300	669924	1425436	648561
5750	396.4	1853440	842007	1762048	796702	1670655	751950	1579263	707198	1487870	680678	1447657	658578
5800	399.9	1885496	855554	1792082	809851	1698667	764704	1605253	719000	1511838	692247	1470048	669395
5850	403.3	1915347	869556	1821129	822902	1725672	777373	1631454	730719	1537236	703177	1492607	679569
5900	406.8	1945431	883320	1849160	836263	1752888	789772	1656617	742715	1560345	714367	1515335	689988
5950	410.2	1975747	896974	1878662	849524	1780316	802074	1683231	754624	1584884	725468	1538233	700314
6000	413.7	2006296	910951	1907125	862521	1807955	815244	1710056	766813	1610885	736832	1561300	711464

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		870	465.6	880	471.1	890	476.7	900	482.2	910	487.8	920	493.3
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	589982	267563	584056	264876	578788	262188	573521	260098	568911	258008	564302	255917
3150	217.2	601365	272709	595345	269979	589993	267249	583973	265125	579290	262699	574608	260575
3200	220.6	612226	277575	606790	274802	600675	272030	594560	269873	589803	267408	585047	265252
3250	224.1	623820	282898	617610	280082	611399	277265	605188	274762	600358	272571	595527	270068
3300	227.5	636178	288125	629172	285266	622866	282089	615860	279865	610955	277324	606051	274783
3350	231.0	647909	293828	640797	290603	634396	287378	627284	284797	622306	282217	616616	279959
3400	234.4	659704	299117	652486	295844	645268	292571	638772	289953	632998	287335	627946	284717
3450	237.9	671562	304561	664238	300907	656915	297586	649591	294929	644465	292272	638606	289615
3500	241.3	683483	309906	676054	306201	668625	302832	661196	299801	655252	297106	649309	294411
3550	244.8	695468	315408	687933	311649	680398	307890	672110	305157	666082	302423	660808	299347
3600	248.2	708280	321157	699876	317000	692235	313189	683831	310417	677718	307299	671606	304528
3650	251.7	720403	326722	711882	322506	703361	318642	694840	315831	688643	312670	682446	309508
3700	255.1	733374	332543	724736	328270	715314	324354	706677	321149	700395	317945	693329	314385
3750	258.6	745633	338170	736880	333840	727331	329870	718577	326260	711415	323012	705049	319764
3800	262.0	758763	344062	749087	339309	739411	334921	729735	331631	723284	328340	716027	324684
3850	265.4	771977	349622	762174	344807	751554	340363	741751	337029	735216	333326	727864	329993
3900	268.9	784448	355716	774518	350838	764588	345960	753831	342583	746384	338831	739764	335079
3950	272.3	797820	361718	786926	356398	776869	351839	765975	348039	758432	344240	750890	340440
4000	275.8	811278	367890	800245	362502	789213	357499	778181	353651	769695	349803	762058	345955
4050	279.2	824819	373967	813650	368124	801621	363060	790452	358774	781860	354879	774127	350984
4100	282.7	838445	380216	827139	374300	814962	368778	802785	364834	794088	360495	786260	356551
4150	286.1	853037	386769	839832	380383	827507	374795	815182	370404	806379	366013	797576	361623
4200	289.6	866842	393100	853479	386232	841006	380576	827643	376132	818734	371688	809825	367244
4250	293.0	880733	399335	867211	392386	853689	386255	840167	381759	831152	377263	822138	372767
4300	296.5	895620	405744	881027	398712	867347	392508	852754	387545	843634	382995	834514	378032
4350	299.9	909690	412054	894928	404943	880167	398249	865405	393229	856179	388628	846030	383608
4400	303.4	924778	418963	909847	411346	894916	404575	879052	399496	868787	394418	859456	389340
4450	306.8	939972	425783	923928	417652	907884	410378	891841	405243	881459	400108	871078	394973
4500	310.3	955271	432789	938093	424566	921870	416776	904692	411582	894195	405956	883697	400762
4550	313.7	970676	439704	953308	430953	935940	423515	918572	417828	906993	412140	896380	406452
4600	317.2	985211	446364	967653	437516	950095	429553	932537	423802	920831	418051	909126	412300
4650	320.6	1000817	453816	983069	444427	964334	435932	945600	430119	933767	423860	921935	418047
4700	324.1	1017525	461015	997593	451524	978658	442484	959723	436157	947763	430281	934808	423953
4750	327.5	1033353	468120	1013210	458073	993066	448939	972923	442545	960837	436151	948751	429757
4800	330.9	1050304	475734	1028932	465122	1008577	455431	987205	448971	974992	442511	961761	435590
4850	334.4	1066354	483083	1044760	472358	1023165	462566	1001571	455571	988203	448577	974835	442049
4900	337.8	1082510	490806	1060693	479502	1037838	469139	1014983	462074	1001477	455009	987972	447943
4950	341.3	1099820	498732	1076732	486835	1053644	476366	1030557	468751	1015864	461613	1002222	453999
5000	344.7	1117258	506570	1092877	494074	1068497	483020	1045176	475330	1030336	467640	1015496	460431
5050	348.2	1134822	514127	1110198	501504	1084504	489852	1059881	482085	1044893	474317	1029904	466549
5100	351.6	1152513	522564	1126565	509329	1100618	497073	1074670	489230	1059534	480896	1043316	473053
5150	355.1	1171423	530722	1144130	516860	1116836	503988	1089543	496067	1073167	487650	1057883	479234
5200	358.5	1189378	538788	1160718	524294	1133161	511799	1104501	502803	1087967	494306	1071432	485809
5250	362.0	1207460	547567	1178526	532427	1149591	518801	1119544	510221	1102851	501137	1086158	492053
5300	365.4	1225669	555752	1195337	539961	1165004	526207	1134671	517038	1117820	507869	1099845	498700
5350	368.9	1245139	564661	1213387	548205	1182769	533805	1151017	524549	1132873	514778	1114729	505521
5400	372.3	1264757	572966	1231565	556358	1199516	541307	1167468	531446	1148010	521586	1129697	512244
5450	375.8	1284523	582005	1249869	564718	1216370	549002	1182870	539049	1163233	529095	1144750	518618
5500	379.2	1303271	590957	1268300	572457	1233328	556599	1198357	546556	1179705	535984	1159888	525413
5550	382.7	1323323	600132	1288034	581461	1251569	564924	1215104	553721	1195107	543052	1175110	532383
5600	386.1	1344709	609217	1306729	589304	1268750	572083	1231957	561319	1210594	550017	1190417	539254
5650	389.6	1363869	618527	1325551	598434	1287234	580514	1247719	569110	1226165	557706	1204611	546302
5700	393.0	1385572	627198	1344500	606382	1304636	587758	1264773	576255	1243029	564204	1220077	552701
5750	396.4	1406226	636478	1364795	614930	1323364	596145	1281932	583990	1259998	571836	1236845	559681
5800	399.9	1427028	646543	1384008	624248	1340988	604183	1299198	591921	1275844	579659	1252490	567397
5850	403.3	1447978	655961	1404588	632915	1359958	612680	1316569	599752	1291774	586824	1268220	574458
5900	406.8	1470326	665608	1424065	641796	1379055	620819	1334045	607779	1309040	594739	1284034	581699
5950	410.2	1491582	675732	1444930	651149	1398279	629425	1351628	615705	1326411	601984	1301194	588835
6000	413.7	1512986	685519	1464672	660151	1416358	637666	1368044	624405	1342616	609991	1315916	596154

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		930	498.9	940	504.4	950	510	960	515.6	970	521.1	980	526.7
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	559693	253827	555084	252035	551133	250243	547182	248452	543231	246660	539939	244868
3150	217.2	569925	258452	565912	256328	561229	254508	557216	252688	553202	250868	549189	249048
3200	220.6	580290	263095	575534	260939	570777	259090	566700	257242	563303	255085	559226	253237
3250	224.1	590697	267877	585867	265686	581036	263809	576896	261931	572755	260054	568615	258176
3300	227.5	601146	272241	596242	270335	591337	268429	587133	266205	582930	264299	578726	262393
3350	231.0	611638	277379	606659	275121	600970	272864	596702	270928	592435	268993	588879	266736
3400	234.4	622171	282099	617119	279808	611345	277517	607014	275554	602683	273263	598353	271299
3450	237.9	632747	286958	627621	284633	621762	282308	617368	279983	612974	277991	608580	275666
3500	241.3	644109	291716	638165	289358	632222	287000	627765	284642	623307	282284	618107	280263
3550	244.8	654780	296614	648752	294222	642724	291830	638203	289437	632929	287045	628408	284995
3600	248.2	665493	301410	658617	298985	652504	296559	647920	294134	643336	291709	638751	289284
3650	251.7	676249	306346	670052	303887	663080	301428	658433	298968	653785	296509	648362	294050
3700	255.1	687047	311180	680765	308688	674484	306196	668987	303347	664276	300855	658780	298363
3750	258.6	697887	316155	691521	313629	685155	311102	679585	308215	674014	305689	668444	303162
3800	262.0	709576	321393	702319	318468	695868	315908	690224	312983	684580	310424	678935	307864
3850	265.4	720512	326289	713159	323326	706624	320733	700906	317771	695188	315178	689469	312215
3900	268.9	732317	331702	724870	328700	717422	325698	711630	322696	705838	319694	700045	317068
3950	272.3	743347	336640	735805	333601	728262	330561	722396	327522	716530	324482	709825	321822
4000	275.8	754420	342106	746783	338643	739145	335564	733205	332486	726416	329407	720475	326714
4050	279.2	766394	346698	757803	343582	750070	340466	744056	337349	737182	334233	731168	331116
4100	282.7	777562	352213	769735	349057	761037	345902	754949	342352	747991	339197	741902	336042
4150	286.1	789653	357232	780850	354039	772046	350447	765884	347254	758842	344061	752679	340867
4200	289.6	800916	362800	792007	359164	783098	355931	776862	352295	769735	349063	762607	345831
4250	293.0	813123	368271	803207	364592	794192	360914	787882	357235	780670	353965	773458	350695
4300	296.5	825393	373483	815361	369760	806240	366038	798944	362315	791648	359006	784351	355284
4350	299.9	836804	379006	827578	374823	817429	371058	810049	367293	802668	363946	795287	360181
4400	303.4	849191	384261	838926	380453	828661	376644	821195	372835	813730	369026	806265	365218
4450	306.8	860697	389837	850316	385558	839934	381707	832385	377856	824835	374004	817285	370153
4500	310.3	873200	395136	862702	391241	851250	386913	843616	383018	835981	379123	828347	375228
4550	313.7	885766	400765	875152	396389	864538	392452	855854	388077	847170	384139	839451	380201
4600	317.2	898396	406549	886690	402125	875960	397702	867181	393720	858402	389296	850598	385315
4650	320.6	910103	412235	899256	407317	887424	403293	878550	398822	869675	394350	861787	390326
4700	324.1	922848	417625	910889	413106	898930	408586	889961	404066	880991	399546	872022	395479
4750	327.5	935658	423364	923572	418340	911486	413773	902421	409206	893357	404639	884292	400528
4800	330.9	948531	429130	936318	424054	923087	419440	913928	414364	904768	409750	895608	405597
4850	334.4	962495	435054	949127	429925	935759	424796	926504	420133	916221	415470	906966	410807
4900	337.8	974466	440878	960961	435226	947456	430515	938106	425334	927717	420624	918367	415914
4950	341.3	987529	446860	973887	441150	959194	435915	949749	431156	939255	425921	929810	421162
5000	344.7	1001716	452741	986876	446974	972035	441687	961435	436400	951895	431594	941295	426307
5050	348.2	1014916	458782	999928	452956	983869	447615	974234	442275	963528	436935	952822	432080
5100	351.6	1028180	464719	1013044	458837	997908	453445	987096	447562	976284	442170	965473	436777
5150	355.1	1041507	470818	1026223	464877	1009847	458936	998930	453490	988013	447549	977095	442598
5200	358.5	1056000	476813	1039466	470815	1022931	464817	1010806	458820	999783	453322	988760	447824
5250	362.0	1069465	483474	1052772	476913	1034966	470857	1023837	464801	1012709	458745	1000467	453194
5300	365.4	1082993	489531	1065018	482908	1048166	476286	1035809	470174	1024574	464061	1012216	458457
5350	368.9	1097718	495750	1079574	489064	1061430	482379	1048956	476208	1037616	470037	1025142	463866
5400	372.3	1111384	502383	1093071	495117	1074758	488370	1062167	482142	1049577	475395	1036986	469167
5450	375.8	1125113	508665	1106631	501331	1086993	494521	1074286	487711	1061580	481424	1048873	475138
5500	379.2	1140071	514841	1120254	507441	1100437	500569	1087614	493697	1074791	486826	1061968	480483
5550	382.7	1155114	521714	1133940	513713	1113943	506778	1101004	499843	1086889	492908	1073950	486507
5600	386.1	1169054	527952	1147690	519879	1127514	512883	1113272	505349	1100216	498352	1085974	491356
5650	389.6	1183058	534898	1161504	526752	1141148	519150	1126779	511547	1112409	504488	1098040	497428
5700	393.0	1198333	541198	1176589	532433	1154845	525312	1140349	517643	1125853	509975	1111357	502854
5750	396.4	1213692	547526	1190540	539238	1168605	531503	1153983	523768	1138141	516033	1123518	508851
5800	399.9	1229137	554577	1205783	545660	1182430	537857	1166451	529496	1151701	521693	1136951	514447
5850	403.3	1244666	561529	1219871	552536	1196317	544105	1180201	535673	1165324	527804	1149208	519935
5900	406.8	1259029	568092	1235273	559020	1210268	550516	1194014	542012	1177761	534074	1162757	526137
5950	410.2	1274716	575115	1249499	565396	1224282	556821	1207891	548246	1191500	539671	1175109	531667
6000	413.7	1290488	582317	1265060	572515	1238360	563867	1221831	554642	1205303	545994	1188775	537922

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		990	532.2	1000	537.8	1010	543.3	1020	548.9	1030	554.4	1040	560
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	535988	243375	532696	241882	529404	240389	526111	238896	522819	237403	519527	235910
3150	217.2	545844	247531	541830	246014	538486	244498	535141	242678	531797	241464	529121	239947
3200	220.6	555149	251697	551751	250156	548354	248616	544956	247076	541559	245535	538161	243995
3250	224.1	565164	256298	561024	254734	557574	252856	554123	251291	550673	249726	547223	248162
3300	227.5	574522	260487	570318	258899	566815	256993	563312	255405	559809	253816	556305	252228
3350	231.0	584612	265123	580345	263188	576789	261575	573232	259640	568965	258027	565409	256737
3400	234.4	594022	269336	589691	267700	586083	265736	582474	264100	578865	262463	575256	260827
3450	237.9	603454	274005	599059	272012	595398	270352	591736	268359	588074	266698	584413	265038
3500	241.3	613649	278242	609192	276558	605477	274536	601019	272515	597305	270831	593590	269484
3550	244.8	623887	282945	618612	280894	614845	279186	611078	277135	606557	275427	602789	273718
3600	248.2	633403	287552	628819	285473	624998	283394	620414	281316	616594	279583	612009	277851
3650	251.7	643715	291942	638292	289834	634419	287726	629771	285618	625898	283862	621250	282105
3700	255.1	654069	296226	648572	294090	643861	291954	639935	289818	635224	288037	631298	286257
3750	258.6	663669	300997	658099	298831	654120	296666	649346	294501	645367	292335	640592	290531
3800	262.0	673291	305671	668453	303477	663615	300917	659583	298724	654745	296895	650714	295067
3850	265.4	683751	309993	678032	307771	673948	305549	669046	302956	664145	301104	660060	299252
3900	268.9	694253	314816	688461	312190	683496	309938	678531	307687	674393	305436	669429	303560
3950	272.3	703959	319542	698093	316883	693065	314603	688874	311943	683846	310044	678818	307764
4000	275.8	714535	324020	708595	321711	703503	319017	698411	316708	693320	314399	688228	312475
4050	279.2	725153	328779	718280	326052	713125	323715	708829	320988	703674	319040	698519	316703
4100	282.7	734944	333675	728856	330914	723637	328153	718419	325787	713200	323420	707982	321054
4150	286.1	745637	338073	739474	335679	734192	332885	728910	330091	723628	327696	717466	325700
4200	289.6	756371	343003	749244	340175	743899	337751	738553	334923	733208	332499	727862	330075
4250	293.0	767148	347834	759936	344973	754528	342112	749119	339251	743710	336798	737400	334346
4300	296.5	777055	352802	769759	349494	764287	347012	758814	343703	753342	341222	747870	339154
4350	299.9	787906	357253	780525	354325	774990	351396	769454	348468	762996	345958	757460	343448
4400	303.4	798799	362255	791334	359293	785735	356330	779202	352945	773603	350406	767071	347867
4450	306.8	809735	367158	801241	363734	795578	360739	788972	357743	783310	355176	776703	352608
4500	310.3	820712	371766	812123	368736	806398	365706	799717	362244	793991	359647	787311	357051
4550	313.7	830767	377139	823048	373639	816294	370576	809540	367076	803751	364451	796996	361826
4600	317.2	841819	382218	834015	378679	827187	375582	820359	372043	813531	368947	806703	366292
4650	320.6	852913	387197	845025	383620	838123	380043	831220	376913	824318	373783	817416	370654
4700	324.1	864049	391863	855080	388699	848104	385083	841128	381467	834151	378304	827175	375592
4750	327.5	875228	396875	866163	393221	859113	389567	852063	385914	845013	383174	837963	379977
4800	330.9	886449	401906	877289	398214	870165	394523	863041	390831	855916	387601	848792	384833
4850	334.4	897712	407077	888457	403346	881259	399616	873032	395419	865834	392621	858636	389357
4900	337.8	907978	412145	898628	408377	891356	404609	884084	400370	875773	397073	868501	393776
4950	341.3	919315	417355	909870	413548	902524	409265	895178	405458	886782	402127	879436	398795
5000	344.7	931755	422462	921154	418137	913734	414292	905254	410447	897834	406602	889354	403718
5050	348.2	943187	427711	932481	423341	924987	419457	916422	415088	907857	411690	900363	408291
5100	351.6	954661	432856	943850	428444	935200	424032	927632	419620	918983	416188	910334	412757
5150	355.1	965086	438143	954169	433687	946527	429231	937793	425271	929059	421310	921417	417845
5200	358.5	977737	443326	965612	438828	957896	434329	949077	429831	940259	426333	931441	422834
5250	362.0	989338	448652	977097	444110	968194	439567	960404	435025	951501	430988	942598	427455
5300	365.4	1000982	453873	988624	448779	979637	444194	970649	439610	961662	436044	952674	431969
5350	368.9	1012668	459237	1001328	454609	991122	449980	982050	444838	972978	440724	963906	437124
5400	372.3	1024396	464497	1012950	459826	1002649	455155	993493	449965	984336	445813	974035	442180
5450	375.8	1037322	469900	1024615	465185	1014219	459946	1004978	455232	994581	451041	985340	446850
5500	379.2	1047979	475197	1035156	470440	1025831	465154	1015339	460397	1006013	456168	995522	451939
5550	382.7	1059834	481172	1046895	475838	1036309	470503	1026898	465702	1017488	460901	1006901	457167
5600	386.1	1071732	486512	1058676	481131	1047994	475749	1038500	470367	1027818	466062	1018323	461756
5650	389.6	1084869	491998	1070499	486567	1059723	481137	1048946	475163	1039366	470819	1028589	466474
5700	393.0	1096861	497376	1082365	491898	1071493	486420	1060621	480943	1050957	476013	1040085	471631
5750	396.4	1108896	502773	1094273	497248	1083306	491723	1072339	485646	1061372	481226	1050404	476806
5800	399.9	1120973	508316	1106223	502743	1095161	496612	1084099	491038	1073036	486022	1061974	481563
5850	403.3	1134332	514314	1118215	508131	1107058	502510	1095901	496327	1084743	491830	1072346	486771
5900	406.8	1146504	519900	1130250	513664	1118998	507994	1107745	501758	1096493	496655	1083990	492119
5950	410.2	1158718	525378	1142327	519662	1130979	513373	1118371	507084	1107023	501939	1095676	497366
6000	413.7	1170975	531580	1154446	525238	1143004	518896	1130289	512554	1118847	507365	1107404	502176

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9													
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		1050	565.6	1060	571.1	1070	576.7	1080	582.2	1090	587.8	1100	593.3
Set Pressure		Orifice Capacity											
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	516893	234417	513601	233222	510967	231729	508333	230534	505699	229340	503065	228146
3150	217.2	525776	238431	522432	237217	519756	235701	517080	234487	514404	233274	511729	232060
3200	220.6	534764	242762	532046	241222	528648	239682	525930	238449	523212	237217	520494	235985
3250	224.1	543772	246597	541012	245345	537562	243781	534802	242529	532041	241277	529281	240025
3300	227.5	552802	250957	550000	249369	546496	247781	543694	246510	540891	245239	538089	243969
3350	231.0	561853	255124	559008	253512	555452	252221	552607	250609	549763	249319	546918	248029
3400	234.4	571647	259191	568038	257554	565151	255918	561542	254609	557933	253300	555046	251991
3450	237.9	580751	263377	577089	261716	574160	260388	570498	258727	566836	257399	563907	256070
3500	241.3	589876	267799	586161	266115	583189	264431	579475	263083	575760	261399	572789	260052
3550	244.8	599022	271668	595254	269959	592240	268251	588473	266884	585459	265517	581692	264150
3600	248.2	608189	276119	604369	274387	601312	272654	597492	270922	594436	269536	590616	268151
3650	251.7	617377	280349	613504	278592	610406	276836	606533	275079	603434	273674	599561	271917
3700	255.1	626587	284477	622661	282697	619520	280917	615594	279136	612453	277712	608527	275932
3750	258.6	636613	288726	632634	286921	628656	285117	624677	283312	621494	281869	617515	280064
3800	262.0	645876	292873	641844	291045	637812	289217	634587	287755	630555	285926	626523	284098
3850	265.4	655159	297030	651075	295178	647807	293327	643722	291475	639638	289993	635553	288142
3900	268.9	664464	301683	660326	299432	657016	297556	652879	296055	648742	294179	644604	292303
3950	272.3	673789	305864	669599	303964	665409	302065	661219	300165	657028	298265	653676	296365
4000	275.8	683136	310166	678893	307857	674650	305933	670407	304009	666164	302470	661921	300546
4050	279.2	693364	314366	689068	312418	684772	310081	680476	308523	675321	306575	671025	304627
4100	282.7	702763	319082	698415	316715	694066	314743	689717	312771	684498	310799	680150	308827
4150	286.1	712184	323305	707783	320910	703381	318915	698979	316919	693697	314923	689296	312927
4200	289.6	721626	327651	717172	325227	712717	323207	708263	321187	703808	319167	698463	317147
4250	293.0	731991	331893	727484	329850	722075	327397	717567	325354	713060	323310	707651	321266
4300	296.5	741486	336672	736926	334190	732365	331709	726893	329641	722333	327573	716861	325505
4350	299.9	751002	340938	746389	338847	741776	336337	736240	334245	731627	332153	726091	330062
4400	303.4	760539	345327	755873	342788	751207	340249	745608	338133	740942	336017	735343	333901
4450	306.8	770097	349613	765378	347473	760660	344906	754997	342766	750279	340626	744616	338059
4500	310.3	780631	354454	775859	351857	770133	349260	765362	347097	759636	344500	753910	342336
4550	313.7	791207	359201	785418	356138	779628	353950	774804	351325	769015	349138	764190	346950
4600	317.2	800850	363196	794997	360541	789144	357887	784267	355675	778414	353021	773537	350809
4650	320.6	811500	367971	805584	365288	799668	362159	793751	359923	787835	357687	782905	355005
4700	324.1	821196	372428	815216	369716	809236	367004	803257	364744	797277	362032	792294	359773
4750	327.5	830912	377236	824869	374040	818826	371299	812783	369016	806740	366276	801705	363992
4800	330.9	841668	381603	835562	378834	829455	376065	823349	373297	817242	370528	811136	368221
4850	334.4	851438	386093	845268	383295	839098	380498	832928	377700	826758	374902	820589	372571
4900	337.8	861229	390949	854995	387652	848762	384355	842529	382000	836296	379174	830062	376819
4950	341.3	872090	395464	865793	392133	859497	389278	853200	386422	846903	384043	840607	381188
5000	344.7	881934	400354	875574	396989	869214	393625	862854	390741	856493	388338	850133	385455
5050	348.2	891799	404893	885375	401494	878952	398582	872528	395669	866105	392756	859681	389843
5100	351.6	902766	409326	896279	406384	888711	402953	882224	400012	875737	397070	869250	394129
5150	355.1	912683	414379	906133	410913	898491	407448	891941	404477	885390	401507	878840	398537
5200	358.5	922622	419335	916008	415837	909395	412338	901679	409339	895065	406340	888451	403342
5250	362.0	933695	423923	927018	420390	919228	416857	912551	413829	904761	410297	898083	407269
5300	365.4	943687	428403	936946	424837	929082	421271	922341	418215	914477	415159	907737	412102
5350	368.9	954834	433010	946896	429410	940091	425810	932153	422724	925349	419639	917411	416553
5400	372.3	964878	438028	956866	434395	949999	430243	941987	427129	935119	424015	927107	420901
5450	375.8	976099	443183	968013	438992	959927	435325	951841	432182	944910	428515	936824	425372
5500	379.2	986196	447711	978036	444010	971042	439782	962882	436610	954722	432910	947728	429739
5550	382.7	997491	452899	989257	448632	981023	444897	973965	441163	965731	437963	957497	434228
5600	386.1	1007641	457451	999333	453145	992212	449378	983904	446149	975596	442382	967288	439153
5650	389.6	1017813	462673	1009431	458329	1002246	453984	993864	450726	985482	447468	977100	443667
5700	393.0	1029213	467248	1020757	462866	1012301	459032	1003845	455198	995389	451363	986933	448076
5750	396.4	1039437	472386	1030907	467966	1022377	463546	1013847	460231	1005317	456363	996787	452496
5800	399.9	1050912	477104	1042308	472645	1033704	468743	1025100	464842	1015267	460940	1006663	457596
5850	403.3	1061189	482274	1052511	477778	1043833	473281	1035155	469346	1026477	465412	1016559	461477
5900	406.8	1072737	487017	1063985	482481	1055233	477945	1046482	474544	1036479	470575	1027727	466606
5950	410.2	1083067	492221	1074241	487647	1065415	483074	1056589	479072	1047764	475070	1037677	471068
6000	413.7	1094690	497564	1085790	492375	1076890	487762	1066719	483726	1057819	479690	1047647	475655

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Orifice Capacities

W = Sd x P x Ksh x Ksc x Kn (lb/hr)
W = 51.5 x Kd x A x P x Ksh x Ksc x Kn (lb/hr)
P = (1.03 x set pressure) + 14.7 psia
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 3200 psig
Kn = [(0.1906 x P)-1000]/[(0.2292 x P)-1061] for P ≤ 3200 psig
A = 4.908 in^2
For Non-code applications multiply capacity by 1.1

W = Sd x P x Ksh x Ksc x Kn (kg/hr)
W = 5.25 x Kd x A x P x Ksh x Ksc x Kn (kg/hr)
P = (1.03 x set pressure) + 0.101 Mpa
Kd = 0.812
Ksh = 1 / Ksc = from Ksc_US table
Kn = 1 for P > 22.1 Mpa
Kn = [(27.6 x P)-1000]/[(33.2 x P)-1061] for P ≤ 22.1 Mpa
A = 3166.445 mm^2

Valve Capacity, ASME B&PV Code Section I, for Supercritical Steam Applies to Valve 35X9											
Temperature		°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
		1110	598.9	1120	604.4	1130	610	1140	615.6	1150	621.1
Set Pressure		Orifice Capacity									
psig	barg	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
3100.5	213.8	500431	226951	497797	226055	495822	224861	493188	223666	491213	222472
3150	217.2	509053	230847	506377	229634	503702	228724	501026	227510	499019	226297
3200	220.6	517776	234753	515058	233520	512340	232288	510302	231364	507584	230131
3250	224.1	526521	238774	523760	237522	521000	236270	518240	235331	516170	234079
3300	227.5	535286	242380	532484	241427	529681	240157	526879	238886	524076	237615
3350	231.0	544073	246416	541228	245448	538383	244158	535538	242868	532694	241578
3400	234.4	552159	250355	549272	249046	546385	248064	544219	246755	541332	245446
3450	237.9	560977	254409	558048	253081	555119	251752	552189	250756	549992	249428
3500	241.3	569817	258367	566845	257020	563874	255673	560902	254325	557930	252978
3550	244.8	578678	262441	575664	261075	572650	259708	569636	258341	566622	256974
3600	248.2	587559	266418	584503	265033	581447	263647	578391	262261	575335	260875
3650	251.7	596462	270512	593364	268755	590265	267350	587167	265945	584068	264540
3700	255.1	605387	274508	602246	273084	598320	271659	595179	270235	592038	268811
3750	258.6	614332	278260	611149	276816	607170	275372	603987	273929	600804	272485
3800	262.0	623298	282636	620073	281173	616041	279711	612816	277882	609590	276420
3850	265.4	632286	286290	628201	284808	624933	283327	621666	281845	618398	280364
3900	268.9	641294	290802	637157	288926	633847	287425	630537	285924	626400	284423
3950	272.3	649486	294465	646134	292946	642782	291426	638591	289906	635239	288006
4000	275.8	658526	298622	655132	297082	651737	295543	647494	294004	644100	292080
4050	279.2	667588	302679	664151	301121	659855	299563	656419	297615	652982	296057
4100	282.7	676671	306855	672322	305277	668843	303700	665364	302122	661015	300150
4150	286.1	685774	310932	681373	309335	677851	307739	674330	305743	669928	304146
4200	289.6	694899	315127	691336	313511	686881	311490	683318	309874	678863	308258
4250	293.0	704045	319223	700439	317588	695932	315953	692326	313909	687819	312274
4300	296.5	713213	323437	708652	321782	705004	319714	700444	318060	696796	315992
4350	299.9	722401	327552	717788	325878	714097	323787	709484	321695	704871	320022
4400	303.4	731610	331785	726945	329669	723212	327976	718546	325860	713880	324168
4450	306.8	740841	335919	736122	334207	732347	332068	727629	329928	722910	328217
4500	310.3	750093	340172	745321	338008	741504	336277	736732	334113	731961	332382
4550	313.7	759366	344325	754541	342137	750682	340387	745857	338200	741998	336012
4600	317.2	768660	348597	763782	346385	758905	344173	754028	341961	750126	340192
4650	320.6	777975	352769	773045	350534	768115	348745	763185	346510	759240	344274
4700	324.1	787311	357061	782328	355253	777345	352993	772362	350733	768376	348473
4750	327.5	796669	361252	791633	358968	786597	356685	781561	354858	777533	352574
4800	330.9	806047	365453	800959	363145	795870	360838	790781	358992	786710	356685
4850	334.4	815447	369773	810306	367441	805164	365110	800022	362778	795909	360913
4900	337.8	824868	373993	819674	371637	814479	369282	809285	366927	804090	365043
4950	341.3	835359	378808	829063	375953	823816	373573	818568	371194	813321	368814
5000	344.7	844833	382571	838473	380168	833173	377765	827873	375362	822573	372959
5050	348.2	854328	387415	847905	384503	842552	382075	837199	379648	831846	377220
5100	351.6	863844	391188	857357	388737	851951	386286	846546	383835	841140	381384
5150	355.1	873381	395566	866831	393091	861372	390615	855914	388140	850455	385665
5200	358.5	882940	400343	876326	397344	870814	394845	864201	392346	858689	389847
5250	362.0	892519	404241	885842	401717	880277	399194	873600	396670	868036	394147
5300	365.4	902120	409046	895379	405989	889762	403442	883021	400895	877404	397839
5350	368.9	911741	413468	904937	410382	899267	407811	892463	405239	886793	402668
5400	372.3	921384	417787	914517	414673	908794	412078	901926	408964	896203	406370
5450	375.8	931048	422229	924117	419609	918342	416466	911411	413847	905635	410704
5500	379.2	940733	426567	934905	423396	927910	420753	922082	418110	915088	414938
5550	382.7	951616	431028	944558	427827	937500	425160	931619	422492	924561	419292
5600	386.1	960167	435385	954233	432695	947112	429465	939990	426236	934056	423546
5650	389.6	969916	440408	963928	437150	956744	433892	949559	431177	942375	427918
5700	393.0	979685	444242	973645	440955	966397	438217	959149	434930	951901	432191
5750	396.4	989476	449181	983383	445866	976072	442551	968760	439788	961449	436473
5800	399.9	999288	453694	993142	450350	985768	447006	978393	443662	971018	440875
5850	403.3	1010361	457542	1002923	454732	995484	451359	988046	447987	980608	444614
5900	406.8	1020226	462637	1012724	459236	1005222	455834	997721	452432	990219	449597
5950	410.2	1030112	467066	1022547	463636	1014982	460206	1007416	456776	999851	453918
6000	413.7	1040019	471619	1032390	468159	1024762	464700	1017133	461241	1009505	457781

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Valve Configuration Code

SAFETY VALVE	PRESSURE CLASS & BORE SIZE	INLET TYPE	MATERIAL CLASS	INTER-CHANGEABILITY NUMBER	DESIGN CODE		BORE TYPE	ORIFICE SIZE	DEVIATION FROM STANDARD	ACTUTOR TYPE	AUXILIARY MANIFOLD	PRESSURE REGULATOR WITH FILTER
A	B	C	D	E	F	G	H	I	J	K	L	M
			H			100	RB					
35	15	F	F	6	(V)	X1	FB	0875	*	S92-119-DA	AM	PR

A — Safety Valve

35 = 3500

B — Pressure Class & Bore Size

1	5
1 = 1500 CLASS 2 = 2500 CLASS 3 = 3100 CLASS 4 = 4500 CLASS	5 = 0.875″ 6 = 1″ 7 = 1.75″ 8 = 2″ 9 = 2.5″ 1 = 3.0″ 2 = 4.5"

C — Inlet Type

F = FLANGED

W = BUTT WELD END

D — Material Class

F = SA182 GRADE F22

H = SA182 GRADE F91

J = SA182 GRADE F92

E — Interchangeability Number

6

F — Design Code

(V) = ASME SECTION I
BLANK = NON-CODE

G

INLET FLANGED FACING	BUTT WELD END DETAIL IDENTIFICATION
X1 = RF SPIRAL SERRATED X2 = RF SMOOTH FINISH X3 = RING JOINT X4 = LARGE TONGUE X5 = LARGE GROOVE X6 = SMALL TONGUE X7 = SMALL GROOVE X8 = LARGE FEMALE X9 = LARGE MALE	100 – STANDARD DESIGN ??? – TO BE DETERMINED OR APPROVED BY THE CUSTOMER

H — Bore Type

FB = FULL BORE

RB = REDUCED BORE

I — Orifice Size

0.875	2.000
1.000	2.500
1.750	3.000
	4.500

J — Deviation from Standard

*

K — Actuator Type

S98/S98C Models:

45E2-12-DA
73E2-16-DA
14E3-18-DA
24E3-16-DA
50E1-125-DA
10E2-125-DA
45E2-08-DA
45E2-09-DA

S92 Models:

S92-119-DA
S92-128-DA

L — Auxiliary Manifold

AM = AUXILIARY MANIFOLD

M — Pressure Regulator with Filter

(INCLUDED)

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Digital Controller Configuration Code

PN	6F	1	A	6	1	-	124	1	1	M	0	0
Field	I	II	III	IV	V	-	VI	VII	VIII	IX	X	XI

I
Series
6F

II
Generation
1

III	
Design Code	
A	ASME Sec. 1
N	Non-ASME

IV	
Enclosure Rating	
6	IP66

V	
Enclosure Material	
1	316 Stainless Steel

VI
Control Assembly
124

VII	
Siphon Material	
0	No Siphon Included
1	P22 material
2	P91 material
3	TP316SS material
4	P92 material

VII	
Pressure Transducer	
0	No Transducer Included
1	Transducer Included

IX	
Remote Panel	
0	No Remote Panel
D	DCS Remote Panel
M	Modbus Remote Panel

X	
Panel Voltage	
0	85-264 VAC, 50/60 Hz

XI	
Special Options	
0	None
1	70C Option

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Product Quality

Valves manufactured to ASME B16.34

Certifications

- PED/CE
- CRN
- ASME B & PVC Section I V Stamp
- IBR
- China Manufacturing License & Type Testing Approval

Conversion Table

All United States Customary System (USCS) values are converted to metric values using the following conversion factors:		
USCS Unit	Conversion Factor	Metric Unit
in.	25.4	mm
lb.	0.4535924	kg
in^2	6.4516	cm^2
ft^3 / min	0.02831685	m^3 / min
gal / min	3.785412	L / min
lb / hr	0.4535924	kg / hr
psig	0.06894757	barg
ft lb	1.3558181	Nm
°F	5/9 (°F-32)	°C

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Notes:

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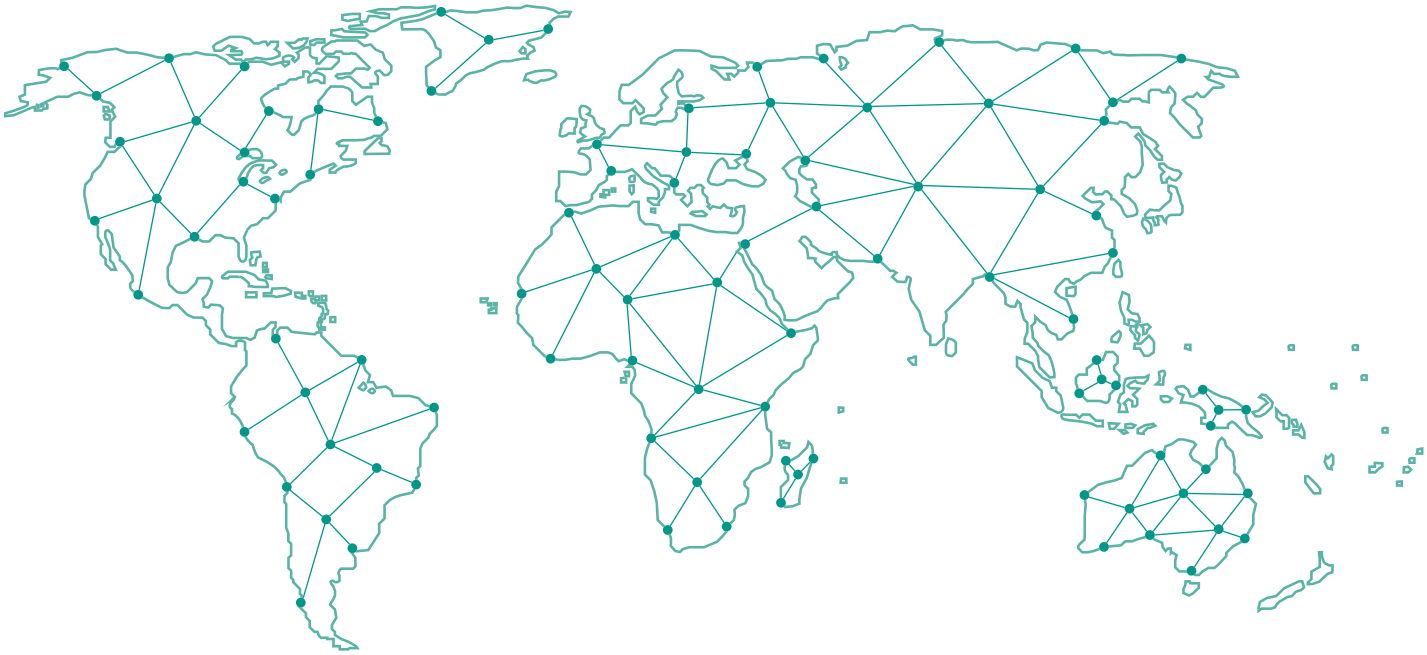

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