



FULL LIFT SAFETY VALVES zARMAK 600

ANSIclass150

Body material F (SA-216 Grade WCB)

-29°C ÷ +427°C (-20°F ÷ +800°F)

Body material I (SA-351 Grade CF8M)

-196°C ÷ +538°C (-320,8°F ÷ +1000°F)



CE 0343 UK
CA 0038



ANSIclass300L

Body material F (SA-216 Grade WCB)

-29°C ÷ +427°C (-20°F ÷ +800°F)

Body material Q (SA-217 Grade WC6)

425°C ÷ +538°C (+800°F ÷ +1000°F)

Body material I (SA-351 Grade CF8M)

-196°C ÷ +538°C (-320,8°F ÷ +1000°F)



CE 0343 UK
CA 0038



ANSIclass300

Body material F (SA-216 Grade WCB)

-29°C ÷ +427°C (-20°F ÷ +800°F)

Body material Q (SA-217 Grade WC6)

425°C ÷ +538°C (+800°F ÷ +1000°F)

Body material I (SA-351 Grade CF8M)

-196°C ÷ +538°C (-320,8°F ÷ +1000°F)



CE 0343 UK
CA 0038



ANSIclass600

Body material F (SA-216 Grade WCB)

-29°C ÷ +427°C (-20°F ÷ +800°F)

Body material Q (SA-217 Grade WC6)

425°C ÷ +538°C (+800°F ÷ +1000°F)

Body material I (SA-351 Grade CF8M)

-196°C ÷ +538°C (-320,8°F ÷ +1000°F)



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CA 0038



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ANSI class 150, 300L, 300, 600

600

Full lift spring flanged safety valves



Closed bonnet



Open bonnet

Application

Industries



INDUSTRIAL



SHIPBUILDING
INDUSTRY



PETROCHEMICAL
INDUSTRY



POWER ENGINEERING



PHARMACEUTICAL
INDUSTRY



CHEMICAL INDUSTRY

Media



INDUSTRY WATER



SEWAGE



GLYCOL



CRUDE OIL



HYDROCARBON



INDUSTRIAL OILS



DIATHERMIC OIL

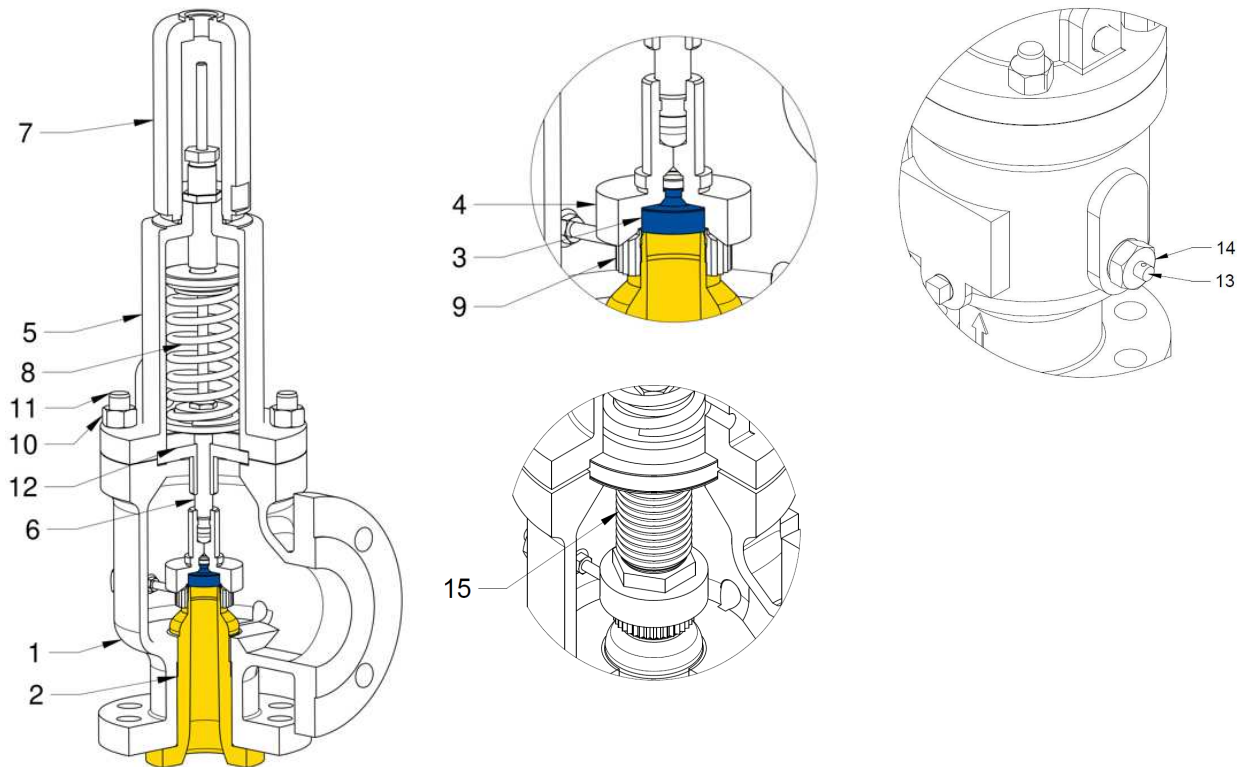
Technical data

Figure	Types	Approval	Body material		Class inlet/outlet	DN	Temp. range	Ends	
								Inlet	Outlet
600	According to the list of types on page 43	-1	F	SA-216 WCB	1 150/150	1" – 8"	-29°C ÷ +427°C		
					2 300L/150	1½" - 6"			
					3 300/150	1" – 8"			
					6 600/150	1" – 4"			
			Q	SA-217 WC6	2 300L/150	6"	+427°C ÷ +538°C		
					3 300/150	1" – 8"			
					6 600/150	1" – 4"			
			I	SA-351 CF8M	1 150/150	1" – 8"	-196°C ÷ +538°C		
					2 300L/150	1½" - 6"			
					3 300/150	1" – 8"			
					6 600/150	1" – 4"			

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Materials



	Body material →		F	Q	I
	Detail ↓		600		
1	Body		SA-216 Grade WCB 1.0619	SA-217 Grade WC6 1.7357	SA-351 Grade CF8M 1.4408
2	Inlet nozzle	Inlet ≤ 3"	SA-479 Grade 316L stellited X39CrMo17-1 (1.4122) hardened *		
		Inlet > 3"	SA-351 Grade CF8M stellited 1.4408		
3	Disc		X39CrMo17-1 / X17CrNi16-2 1.4122 / 1.4057		X6CrNiTi18-10 1.4541
4	Bell		X20Cr13 / X17CrNi16-2 1.4021 / 1.4057	X17CrNi16-2 1.4057	X6CrNiTi18-10 1.4541
5	Bonnet		SA-216 Grade WCB 1.0619	SA-217 Grade WC6 1.7357	SA-351 Grade CF8M 1.4408
6	Spindle		X20Cr13 / X17CrNi16-2 1.4021 / 1.4057	X17CrNi16-2 1.4057	X6CrNiTi18-10 1.4541
7	Cap		SA-216 Grade WCB / P250GH 1.0619 / 1.460		SA-351 Grade CF8M 1.4408
8	Spring		51CrV4 / FDSiCr 1.8159 / -	X10CrNi18-10 1.4310	
9	Adjusting ring		GX5CrNiMo19-11-2 / X5CrNi18-10 / X6CrNiTi18-10 / X6CrNiMoTi17-12-2 1.4408 / 1.4301 / 1.4541 / 1.4571		
10	Nut		SA194 Grade 2H		SA194 Grade 8M
11	Stud		SA193 Grade B7		SA193 Grade B8M
12	Guide		GX5CrNiMo19-11-2 / X39CrMo17-1 / X17CrNi16-2 1.4408 / 1.4122 / 1.4057		GX5CrNiMo19-11-2 1.4408
13	Lock pin		X20Cr13 1.4021		X6CrNiTi18-10 1.4541
14	Lock screw		X2CrNiMo17-12-2 / 316L 1.4404		
15	Bellow		X6CrNiTi18-10 / X6CrNiMoTi17-12-2 1.4541 / 1.4571		

* On request - only for valves without UV marking

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Pressure-temperature ratings

Metric units	class	-29 to 38°C	50°C	100°C	150°C	200°C	250°C	300°C	350°C	400°C	425°C	450°C	500°C	538°C
		barg												
SA 216 WCB acc. to B16.34 Table 2-1.1	150	19,6	19,2	17,7	15,8	13,8	12,1	10,2	8,4	6,5	5,5			
	300	51,1	50,1	46,6	45,1	43,8	41,9	39,8	37,6	34,7	28,8			
	600	102,1	100,2	93,2	90,2	87,6	83,9	79,6	75,1	69,4	57,5			
SA 217 WC6 acc. to B16.34 Table 2-1.9	300	51,7	51,7	51,5	49,7	48,0	46,3	42,9	40,3	36,5	35,2	33,7	25,7	14,9
	600	103,4	103,4	103,0	99,5	95,9	92,7	85,7	80,4	73,3	70,0	67,7	51,5	29,8
SA 351 CF8M acc. to B16.34 Table 2-2.2	150	19,0	18,4	16,2	14,8	13,7	12,1	10,2	8,4	6,5	5,5	4,6	2,8	1,4
	300	49,6	48,1	42,2	38,5	35,7	33,4	31,6	30,3	29,4	29,1	28,8	28,2	25,2
	600	99,3	96,2	84,4	77,0	71,3	66,8	63,2	60,7	58,9	58,3	57,7	56,5	50,0
US units	class	-20 to 100°F	200°F	300°F	400°F	500°F	600°F	650°F	700°F	750°F	800°F	900°F	950°F	1000°F
		psig												
SA 216 WCB acc. to B16.34 Table VII-2-1.1	150	285	260	230	200	170	140	125	110	95	80			
	300	740	680	655	635	605	570	550	530	505	410			
	600	1480	1360	1310	1265	1205	1135	1100	1060	1015	825			
SA 217 WC6 acc. to B16.34 Table VII-2-1.9	300	750	750	720	695	665	605	590	570	530	510	450	320	215
	600	1500	1500	1445	1385	1330	1210	1175	1135	1065	1015	900	640	430
SA 351 CF8M acc. to B16.34 Table VII-2-2.2	150	275	235	215	195	170	140	125	110	95	80	50	35	20
	300	720	620	560	515	480	450	440	435	425	420	415	385	365
	600	1440	1240	1120	1025	955	900	885	870	855	845	830	775	725

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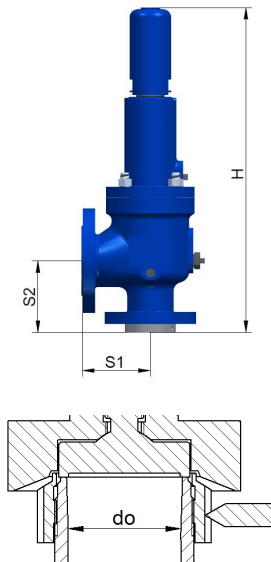
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Orifice D

1D2 DN25x50

Dimensions

Metric units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	12	Use a valve 1D2 ANSI class 300 / 150	12	
Orifice area A	[mm ²]	113		113	
S ₁	[mm]	114		114	
S ₂	[mm]	105		105	
H	[mm]	484		493	
Weight without bellows	[kg]	19,1		20,5	
Weight with bellows	[kg]	19,6	21,1		
US units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	0,472	Use a valve 1D2 ANSI class 300 / 150	0,472	
Orifice area A	[inch ²]	0,175		0,175	
S ₁	[inch]	4 1/2		4 1/2	
S ₂	[inch]	4 1/8		4 1/8	
H	[inch]	19,055		19,409	
Weight without bellows	[lbm]	42,108		45,195	
Weight with bellows	[lbm]	43,211	46,518		



The technical drawing illustrates the Orifice D valve in two views. The top view is a perspective drawing of the blue valve, showing its vertical structure with a flange at the base and a side inlet/outlet. Dimensions are indicated with arrows: S1 is the horizontal distance from the centerline to the side connection; S2 is the vertical distance from the base flange to the side connection; H is the total height from the base flange to the top of the valve body. The bottom view is a cross-sectional diagram showing the internal orifice and the valve's mounting. The dimension do represents the orifice diameter.

Set pressure

Body material: F (SA-216 WCB)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5	Use a valve 1D2 ANSI class 300 / 150	0,5	
P _{min} with bellows		3,0		3,0	
P _{max}		19,7		51	102,1
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25	Use a valve 1D2 ANSI class 300 / 150	7,25	
P _{min} with bellows		43,5		43,5	
P _{max}		285		740	1480
Body material: Q (SA-217 WC6)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,5	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		7,25	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5	Use a valve 1D2 ANSI class 300 / 150	0,5	
P _{min} with bellows		3,0		3,0	
P _{max}		19,0		49,7	99,3
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25	Use a valve 1D2 ANSI class 300 / 150	7,25	
P _{min} with bellows		43,5		43,5	
P _{max}		275		720	1440

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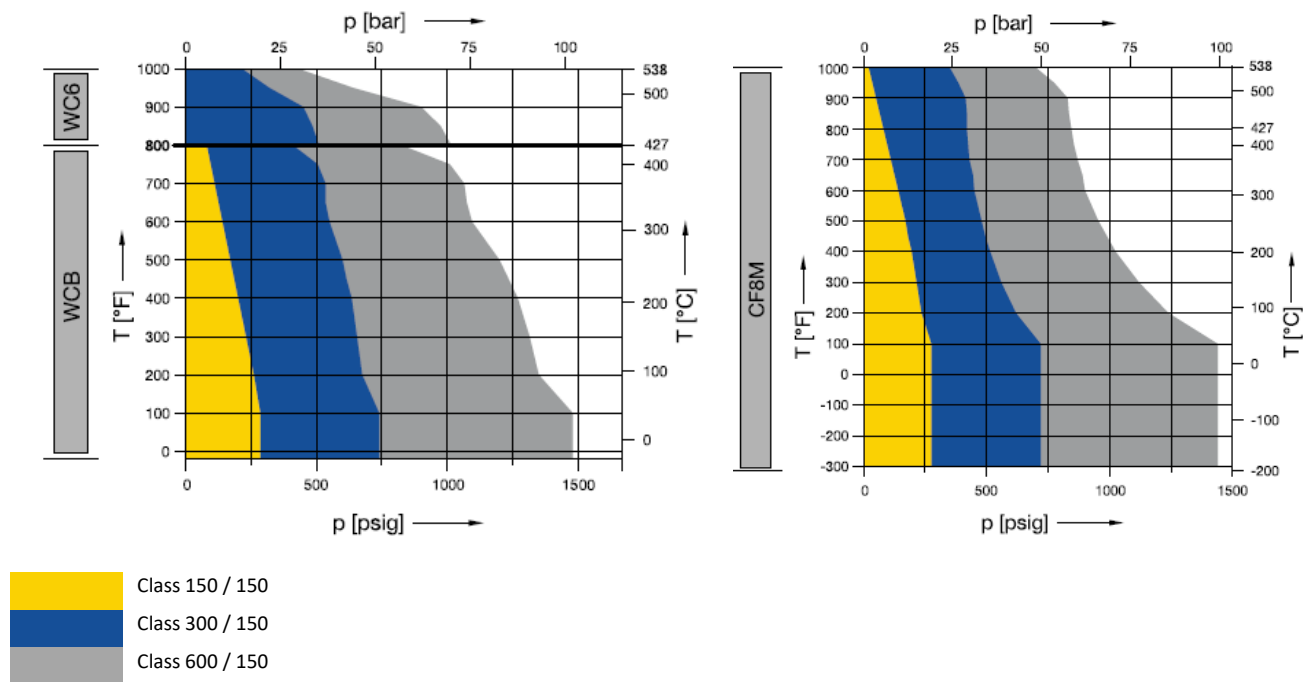
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150			600 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	Use a valve 1D2 ANSI class 300 / 150			19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		15,9						15,9					
US units			150 / 150			300L / 150			300 / 150			600 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	Use a valve 1D2 ANSI class 300 / 150			285	275	285	285	275	285
	with bellows		230						230					

Discharge coefficients

	Liquids (L)			
	ANSI class			
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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Orifice E

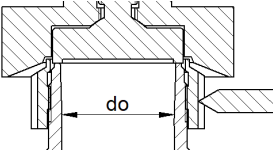
1E2 DN25x50

Dimensions

Metric units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	13	Use a valve 1E2 ANSI class 300 / 150	13	
Orifice area A	[mm ²]	133		133	
S ₁	[mm]	114		114	
S ₂	[mm]	105		105	
H	[mm]	493		493	
Weight without bellows	[kg]	19,8		20,5	
Weight with bellows	[kg]	20,4		21,1	
US units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	0,512	Use a valve 1E2 ANSI class 300 / 150	0,512	
Orifice area A	[inch ²]	0,206		0,206	
S ₁	[inch]	4 1/2		4 1/2	
S ₂	[inch]	4 1/8		4 1/8	
H	[inch]	19,409		19,409	
Weight without bellows	[lbm]	43,652		45,195	
Weight with bellows	[lbm]	44,974		46,518	



3D perspective view of the Orifice E valve. Dimensions indicated: S1 (main body diameter), S2 (orifice diameter), H (total height), and I (stem height).



Cross-sectional view of the Orifice E valve. Dimension indicated: do (orifice diameter).

Set pressure

Body material: F (SA-216 WCB)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5	Use a valve 1E2 ANSI class 300 / 150	0,5	
P _{min} with bellows		3,0		3,0	
P _{max}		19,7		51,0	102,1
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25	Use a valve 1E2 ANSI class 300 / 150	7,25	
P _{min} with bellows		43,5		43,5	
P _{max}		285		740	1480
Body material: Q (SA-217 WC6)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,5	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		7,25	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5	Use a valve 1E2 ANSI class 300 / 150	0,5	
P _{min} with bellows		3,0		3,0	
P _{max}		19,0		49,7	99,3
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25	Use a valve 1E2 ANSI class 300 / 150	7,25	
P _{min} with bellows		43,5		43,5	
P _{max}		275		720	1440

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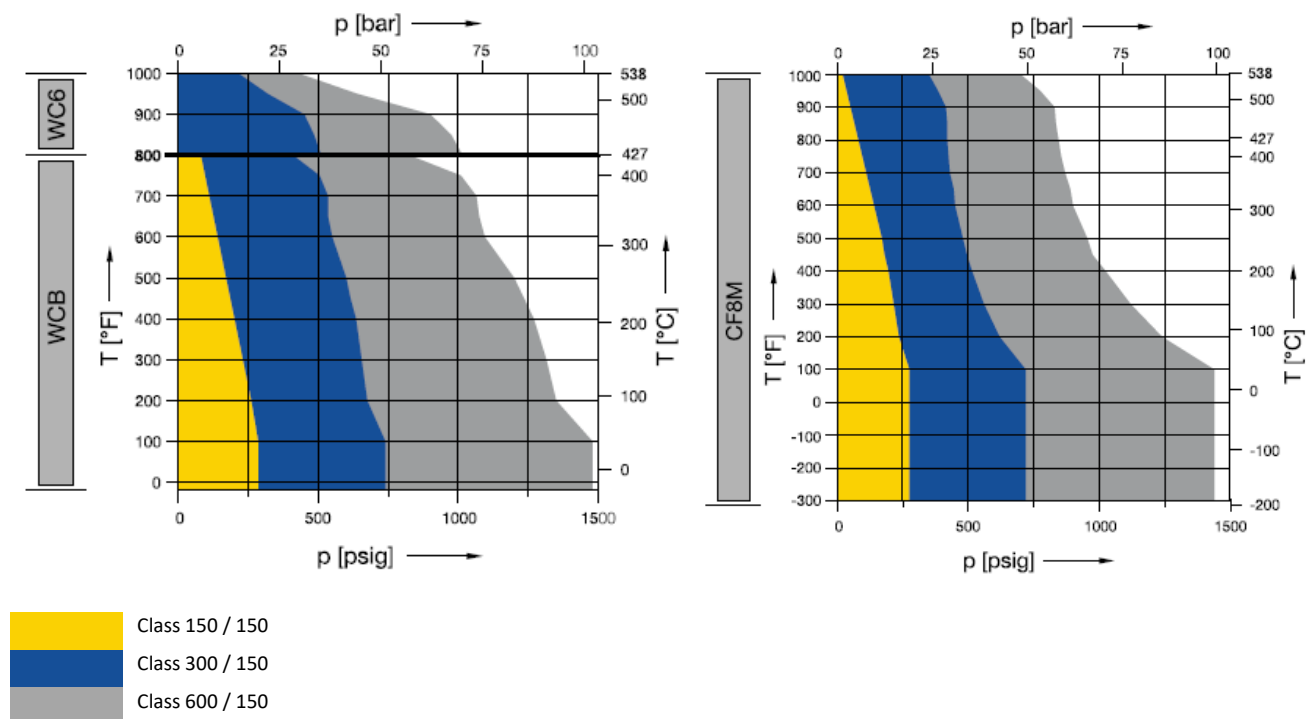
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	Use a valve 1E2 ANSI class 300 / 150			19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		15,9						15,9					
US units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	Use a valve 1E2 ANSI class 300 / 150			285	275	285	285	275	285
	with bellows		230						230					

Discharge coefficients

	Liquids (L)			
	ANSI class			
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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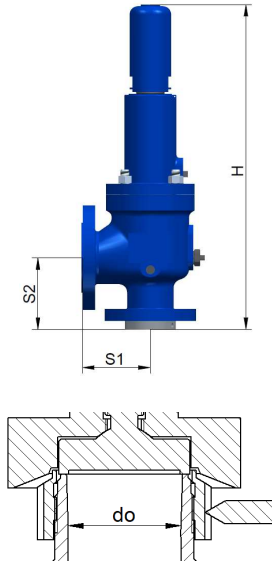
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Orifice F

1½F2 DN40x50

Dimensions

Metric units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	17			
Orifice area A	[mm ²]	227			
S ₁	[mm]	121		152	
S ₂	[mm]	124			
H	[mm]	576		798	
Weight without bellows	[kg]	28,9	29,7	54,6	
Weight with bellows	[kg]	29,5	30,3	55,3	
US units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	0,669			
Orifice area A	[inch ²]	0,352			
S ₁	[inch]	4 ¾		6	
S ₂	[inch]	4 7/8			
H	[inch]	22,677		31,417	
Weight without bellows	[lbm]	63,714	65,478	120,372	
Weight with bellows	[lbm]	65,036	66,800	121,916	



Set pressure

Body material: F (SA-216 WCB)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4			
P _{min} with bellows		3,0			
P _{max}		19,7	51,0	102,1	
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,80			
P _{min} with bellows		43,5			
P _{max}		285	740	1480	
Body material: Q (SA-217 WC6)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,4	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		5,8	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4			
P _{min} with bellows		3,0			
P _{max}		19,0	49,7	99,3	
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,8			
P _{min} with bellows		43,5			
P _{max}		275	720	1440	

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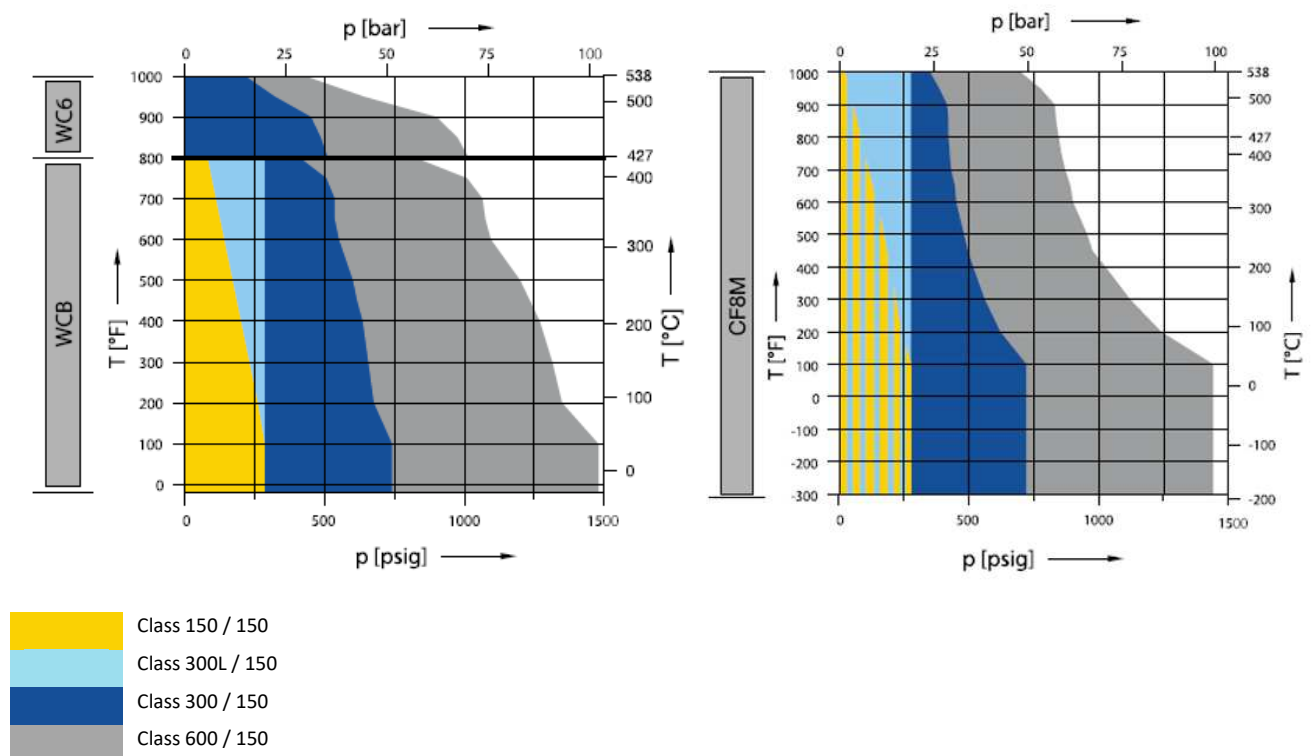
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	19,7	19,0	-	19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		15,9											
US units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	285	275	-	285	275	285	285	275	285
	with bellows		230											

Discharge coefficients

	Liquids (L)			
	ANSI class			
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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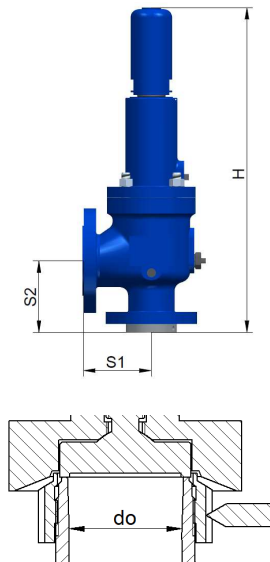
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Orifice G

1½G3 DN40x80

Dimensions

Metric units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	22			
Orifice area A	[mm ²]	380			
S ₁	[mm]	121		152	
S ₂	[mm]	124		124	
H	[mm]	605		800	
Weight without bellows	[kg]	32,6	34,2	56,9	
Weight with bellows	[kg]	33,4	35,0	57,7	
US units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	0,866			
Orifice area A	[inch ²]	0,589			
S ₁	[inch]	4 3/4		6	
S ₂	[inch]	4 7/8		4 7/8	
H	[inch]	23,819		31,496	
Weight without bellows	[lbm]	71,871	75,398	125,443	
Weight with bellows	[lbm]	73,634	77,162	127,207	



Technical drawing of the Orifice G valve. The top view shows the valve body with dimensions S1 (horizontal distance from centerline to side port) and S2 (vertical distance from base to side port). The side view shows the valve body with dimensions H (total height) and do (orifice diameter). The valve is shown in a closed position with the handle on top.

Set pressure

Body material: F (SA-216 WCB)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5		1,0	
P _{min} with bellows		3,0			
P _{max}		19,7		51,0	102,1
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25		14,5	
P _{min} with bellows		43,5			
P _{max}		285		740	1480
Body material: Q (SA-217 WC6)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		1,0	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		14,5	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5		1,0	
P _{min} with bellows		3,0			
P _{max}		19,0		49,7	99,3
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25		14,5	
P _{min} with bellows		43,5			
P _{max}		275		720	1440

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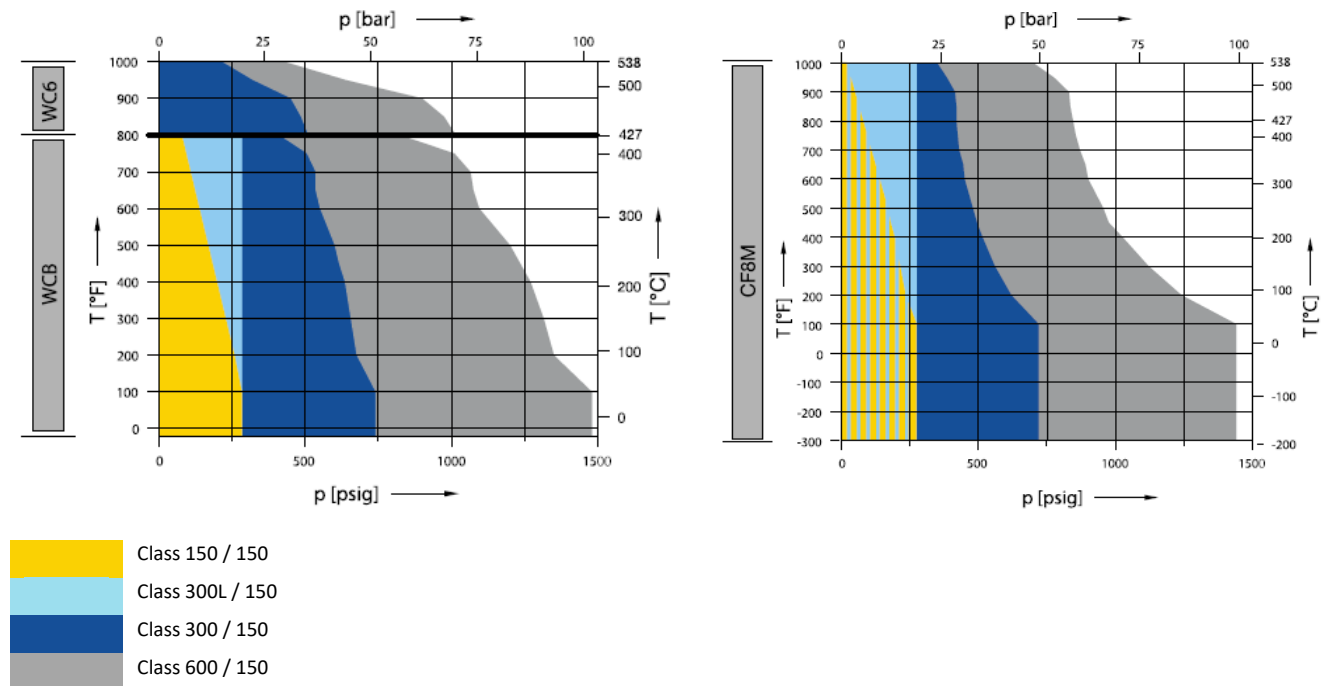
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	19,7	19,0	-	19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		15,9											
US units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	285	275	-	285	275	285	285	275	285
	with bellows		230											

Discharge coefficients

	Liquids (L)			
	ANSI class			
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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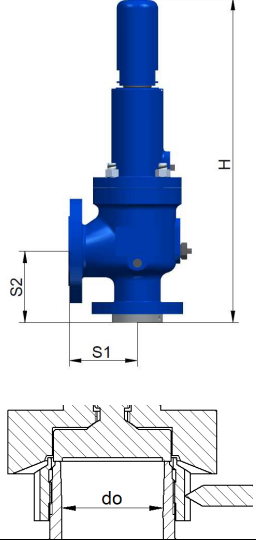
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Orifice H

1½H3 DN40x80 2H3 DN50x80

Dimensions

Metric units		ANSI class (inlet / outlet)			
		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	29			
Orifice area A	[mm²]	661			
S ₁	[mm]	124		162	
S ₂	[mm]	130		154	
H	[mm]	615		851	
Weight without bellows	[kg]	32,9	34,2	34,4	61,8
Weight with bellows	[kg]	33,8	35,1	35,3	62,2
US units		ANSI class (inlet / outlet)			
		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	1,142			
Orifice area A	[inch²]	1,025			
S ₁	[inch]	4 7/8		6 3/8	
S ₂	[inch]	5 1/8		6 1/16	
H	[inch]	24,213		33,504	
Weight without bellows	[lbm]	72,532	75,398	75,839	136,246
Weight with bellows	[lbm]	74,516	77,382	77,823	137,128



Set pressure

Body material: F (SA-216 WCB)					
Metric units		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,3			
P _{min} with bellows		3,0			
P _{max}		19,7		51,0	102,1
US units		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	4,35			
P _{min} with bellows		43,5			
P _{max}		285		740	1480
Body material: Q (SA-217 WC6)					
Metric units		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,3	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		4,35	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,3			
P _{min} with bellows		3,0			
P _{max}		19,0		49,7	99,3
US units		1½H3		2H3	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	4,35			
P _{min} with bellows		43,5			
P _{max}		275		720	1440

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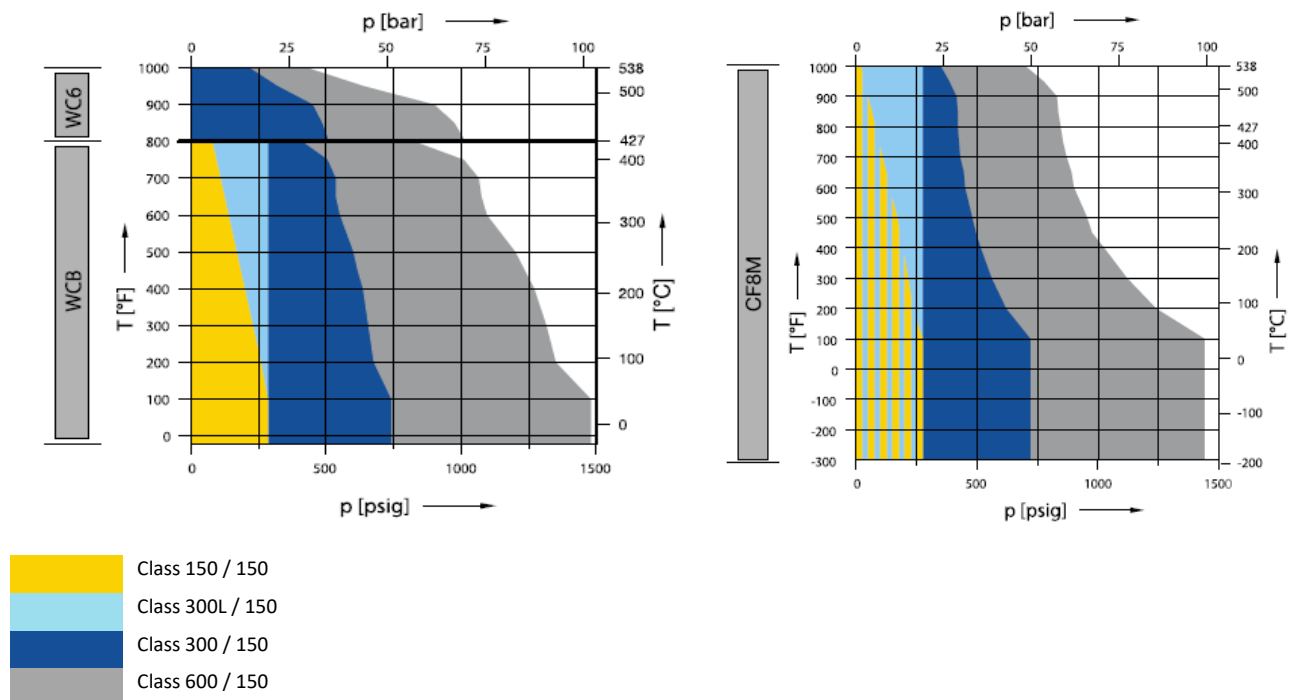
Pressure limit

Metric units			1½H3						2H3					
			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	19,7	19,0	-	19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		15,9											
US units			1½H3						2H3					
			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	285	275	-	285	275	285	285	275	285
	with bellows		230											

Discharge coefficients

	Liquids (L)			
	ANSI class			
	1½H3		2H3	
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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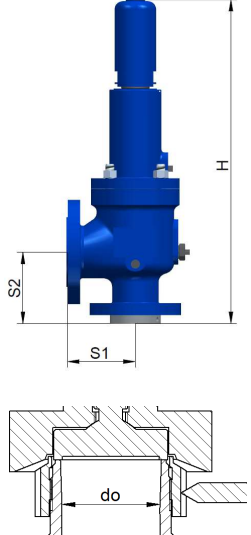
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Orifice J

2J3 DN50x80 3J4 DN80x100

Dimensions

Metric units		ANSI class (inlet / outlet)			
		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	35			
Orifice area A	[mm ²]	962			
S ₁	[mm]	124		181	
S ₂	[mm]	137		184	
H	[mm]	620		880	
Weight without bellows	[kg]	35,0	36,0	72,1	72,5
Weight with bellows	[kg]	35,9	36,9	73,2	73,7
US units		ANSI class (inlet / outlet)			
		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	1,378			
Orifice area A	[inch ²]	1,491			
S ₁	[inch]	4 ⁷ / ₈		7 ¹ / ₈	
S ₂	[inch]	5 ³ / ₈		7 ¹ / ₄	
H	[inch]	24,409		34,646	
Weight without bellows	[lbm]	77,162	79,366	158,953	159,835
Weight with bellows	[lbm]	79,146	81,351	161,378	162,481



Set pressure

Body material: F (SA-216 WCB)					
Metric units		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4		0,45	
P _{min} with bellows		3,0			
P _{max}		19,7		51,0	102,1
US units		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,8		6,53	
P _{min} with bellows		43,5			
P _{max}		285		740	1480
Body material: Q (SA-217 WC6)					
Metric units		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,45	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		6,53	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4		0,45	
P _{min} with bellows		3,0			
P _{max}		19,0		49,7	99,3
US units		2J3		3J4	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,8		6,53	
P _{min} with bellows		43,5			
P _{max}		275		720	1440

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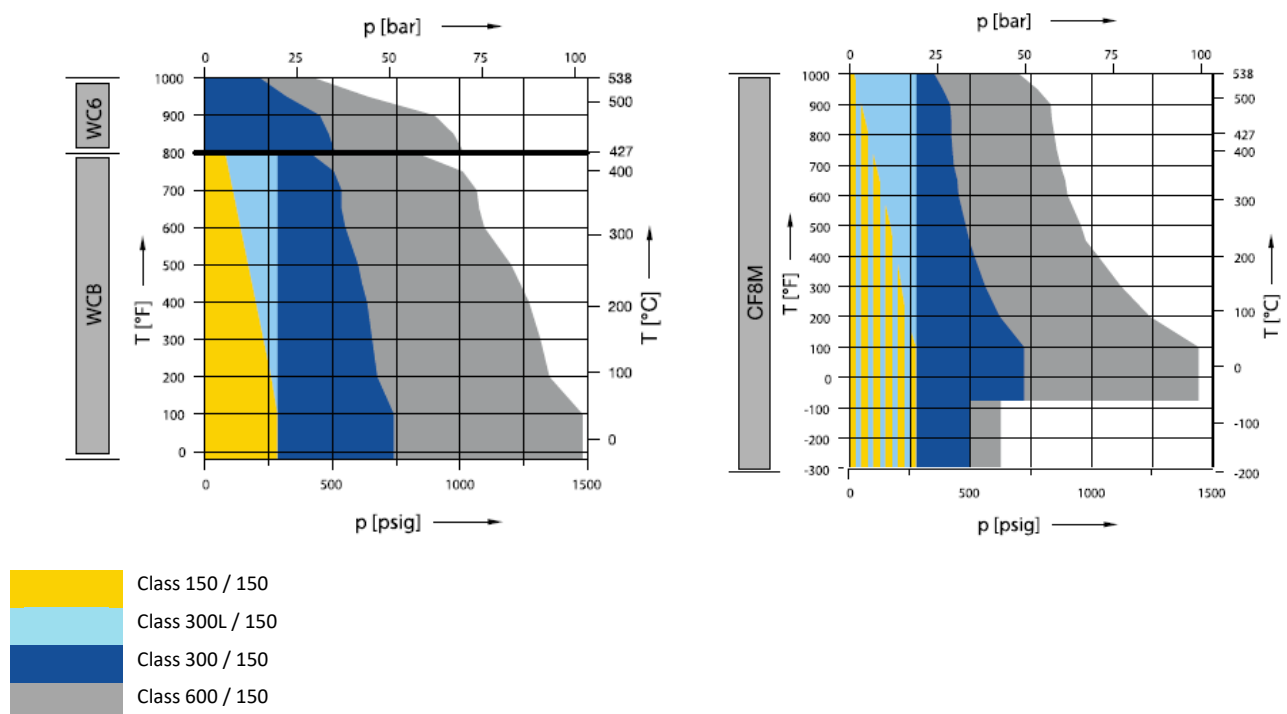
Pressure limit

Metric units			2J3						3J4					
			150 / 150			300L / 150			300 / 150			600 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	19,7	19,0	-	19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		15,9											
US units			2J3						3J4					
			150 / 150			300L / 150			300 / 150			600 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	285	275	-	285	275	285	285	275	285
	with bellows		230											

Discharge coefficients

	Liquids (L)			
	ANSI class			
	2J3		3J4	
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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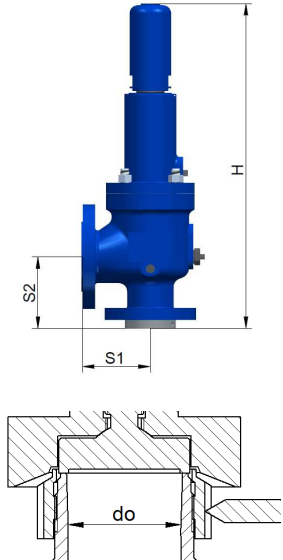
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Orifice K

3K4 DN80x100

Dimensions

Metric units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	41	Use a valve 3K4 ANSI class 300 / 150	41	
Orifice area A	[mm ²]	1320		1320	
S ₁	[mm]	162		162	181
S ₂	[mm]	156		156	184
H	[mm]	852		852	882
Weight without bellows	[kg]	67,7		70,1	73,2
Weight with bellows	[kg]	69,2		71,6	74,8
US units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	1,614	Use a valve 3K4 ANSI class 300 / 150	1,614	
Orifice area A	[inch ²]	2,046		2,046	
S ₁	[inch]	6 3/8		6 3/8	7 1/8
S ₂	[inch]	6 1/8		6 1/8	7 1/4
H	[inch]	33,543		33,543	34,724
Weight without bellows	[lbm]	149,253		154,544	161,378
Weight with bellows	[lbm]	152,560		157,851	164,906



The technical drawing illustrates the Orifice K valve in two views. The top view is a perspective drawing of the blue valve, showing its vertical structure with a flange at the base and a side inlet/outlet. Dimensions are indicated: S1 is the horizontal distance from the centerline to the side connection; S2 is the vertical distance from the base flange to the side connection; H is the total height from the base flange to the top of the valve body. The bottom view is a cross-sectional diagram showing the internal orifice and the valve's mounting. The dimension do represents the orifice diameter.

Set pressure

Body material: F (SA-216 WCB)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4	Use a valve 3K4 ANSI class 300 / 150	0,5	
P _{min} with bellows		3,0		3,0	
P _{max}		19,7		51,0	102,1
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,8	Use a valve 3K4 ANSI class 300 / 150	7,25	
P _{min} with bellows		43,5		43,5	
P _{max}		285		740	1480
Body material: Q (SA-217 WC6)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,5	
P _{min} with bellows				3,0	
P _{max}				35,2	70,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		7,25	
P _{min} with bellows				43,5	
P _{max}				510	1015
Body material: I (SA-351 CF8M)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4	Use a valve 3K4 ANSI class 300 / 150	0,5	
P _{min} with bellows		3,0		3,0	
P _{max}		19,0		49,7	99,3
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,8	Use a valve 3K4 ANSI class 300 / 150	7,25	
P _{min} with bellows		43,5		43,5	
P _{max}		275		720	1440

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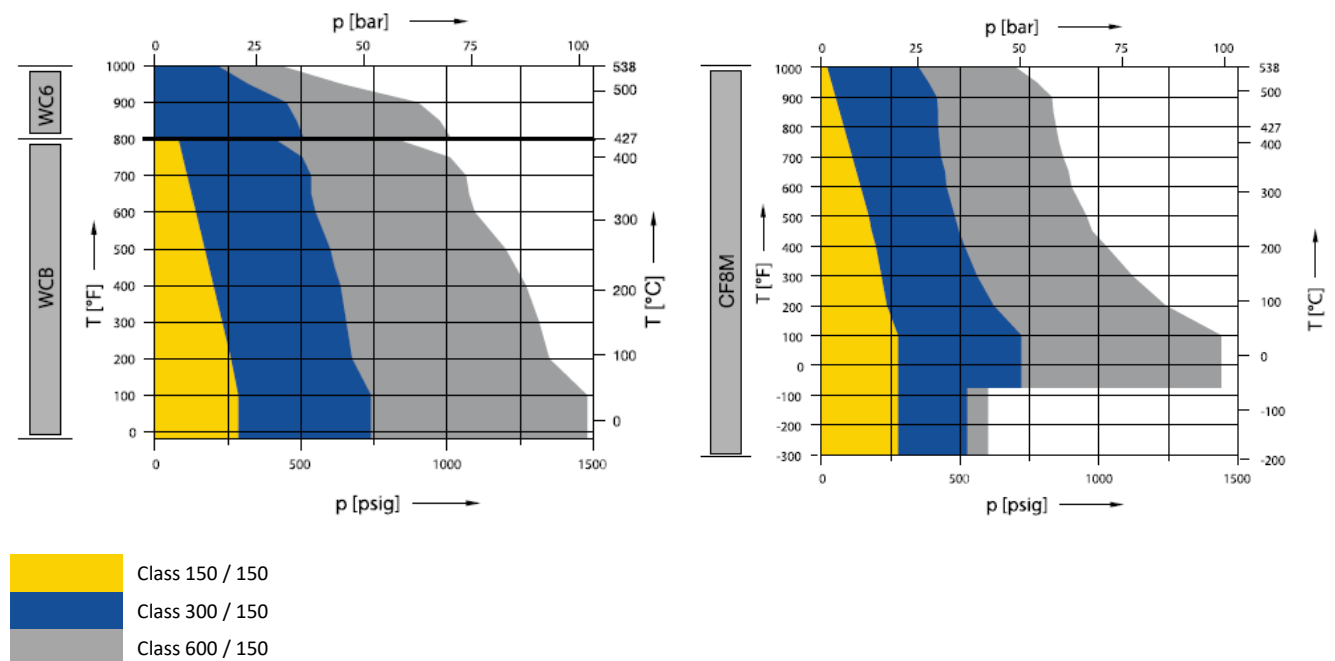
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	Use a valve 3K4 ANSI class 300 / 150			19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		10,3						10,3			13,8		
US units			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	Use a valve 3K4 ANSI class 300 / 150			285	275	285	285	275	285
	with bellows		150						150			200		

Discharge coefficients

	Liquids (L)			
	ANSI class			
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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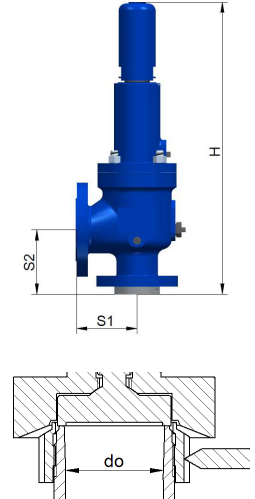
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Orifice L

3L4 DN80x100 4L6 DN100x150

Dimensions

Metric units		ANSI class (inlet / outlet)			
		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	50			
Orifice area A	[mm ²]	1963			
S ₁	[mm]	165		181	203
S ₂	[mm]	156		179	
H	[mm]	855		915	1027
Weight without bellows	[kg]	68,3	70,7	88,3	139,9
Weight with bellows	[kg]	69,9	71,9	90,1	141,3
US units		ANSI class (inlet / outlet)			
		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	1,969			
Orifice area A	[inch ²]	3,043			
S ₁	[inch]	6 1/2		7 1/8	8
S ₂	[inch]	6 1/8		7 1/16	
H	[inch]	33,661		36,024	40,433
Weight without bellows	[lbm]	150,576	155,867	88,3	308,427
Weight with bellows	[lbm]	154,103	158,512	198,636	311,513



Set pressure

Body material: F (SA-216 WCB)					
Metric units		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5			
P _{min} with bellows		3,0			
P _{max}		19,7	51,0	69,0	
US units		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25			
P _{min} with bellows		43,5			
P _{max}		285	740	1000	
Body material: Q (SA-217 WC6)					
Metric units		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,5	
P _{min} with bellows				3,0	
P _{max}				35,2	69,0
US units		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		7,25	
P _{min} with bellows				43,5	
P _{max}				510	1000
Body material: I (SA-351 CF8M)					
Metric units		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,5			
P _{min} with bellows		3,0			
P _{max}		19,0	49,7	69,0	
US units		3L4		4L6	
		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	7,25			
P _{min} with bellows		43,5			
P _{max}		275	720	1000	

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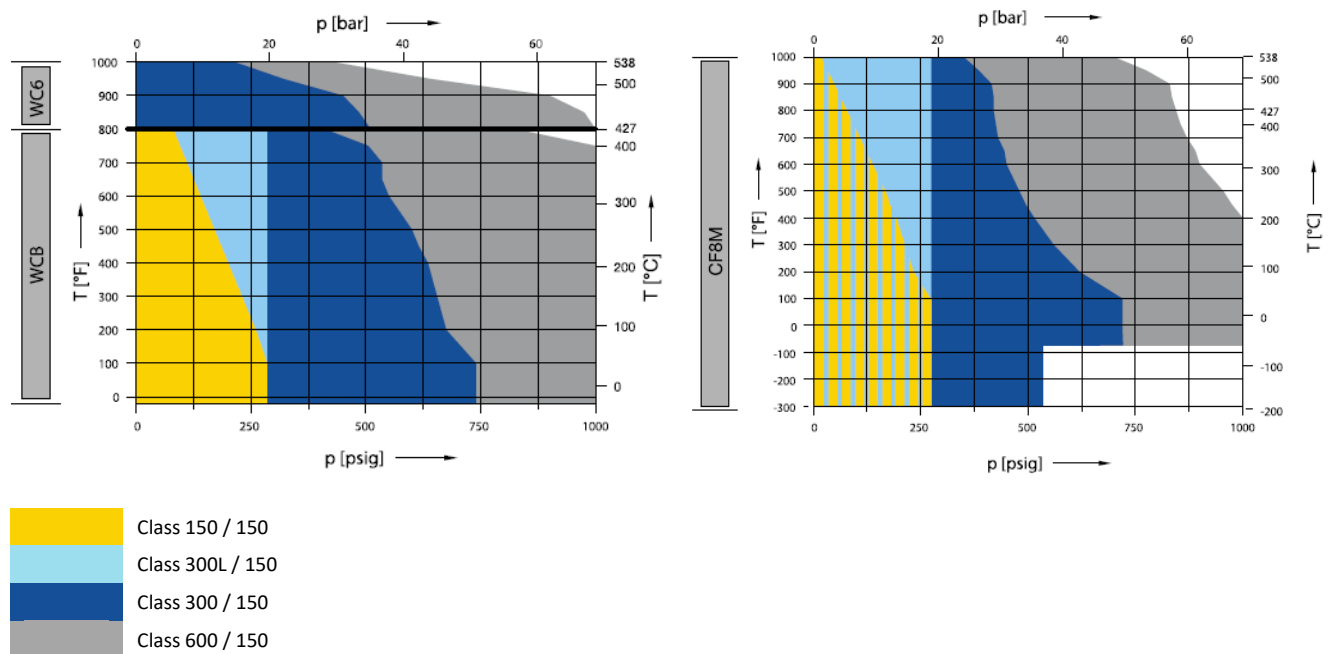
Pressure limit

Metric units			3L4						4L6					
			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	19,7	19,0	-	19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		6,9						11,7					
US units			3L4						4L6					
			150 / 150			300L / 150			300 / 150			600 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	285	275	-	285	275	285	285	275	285
	with bellows		100						170					

Discharge coefficients

	Liquids (L)			
	ANSI class			
	3L4		4L6	
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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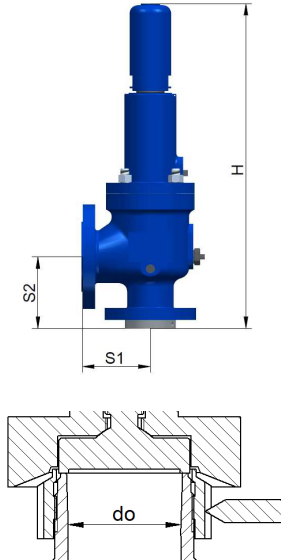
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Orifice M

4M6 DN100x150

Dimensions

Metric units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[mm]	55,5	Use a valve 4M6 ANSI class 300 / 150	55,5	
Orifice area A	[mm ²]	2419		2419	
S ₁	[mm]	184		184	203
S ₂	[mm]	178		178	
H	[mm]	915		915	1025
Weight without bellows	[kg]	84,7		89,9	140,5
Weight with bellows	[kg]	86,1		91,3	142,1
US units		ANSI class (inlet / outlet)			
		150 / 150	300L / 150	300 / 150	600 / 150
Orifice diameter d _o	[inch]	2,185	Use a valve 4M6 ANSI class 300 / 150	2,185	
Orifice area A	[inch ²]	3,749		3,749	
S ₁	[inch]	7 1/4		7 1/4	8
S ₂	[inch]	7		7	
H	[inch]	36,024		36,024	40,354
Weight without bellows	[lbm]	186,732		198,196	309,749
Weight with bellows	[lbm]	189,818		201,282	313,277



Technical drawing of the Orifice M valve. The top view shows the valve body with dimensions S1 (horizontal distance from centerline to side port) and S2 (vertical distance from base to side port). The side view shows the valve body with dimensions H (total height) and do (orifice diameter).

Set pressure

Body material: F (SA-216 WCB)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,45	Use a valve 4M6 ANSI class 300 / 150	0,45	
P _{min} with bellows		3,0		3,0	
P _{max}		19,7		51,0	75,9
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	6,53	Use a valve 4M6 ANSI class 300 / 150	6,53	
P _{min} with bellows		43,5		43,5	
P _{max}		285		740	1100
Body material: Q (SA-217 WC6)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	N/A		0,45	
P _{min} with bellows				3,0	
P _{max}				35,2	69,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	N/A		6,53	
P _{min} with bellows				43,5	
P _{max}				510	1000
Body material: I (SA-351 CF8M)					
Metric units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[barg]	0,4	Use a valve 4M6 ANSI class 300 / 150	0,45	
P _{min} with bellows		3,0		3,0	
P _{max}		19,0		49,7	69,0
US units		150 / 150	300L / 150	300 / 150	600 / 150
P _{min} standard	[psig]	5,8	Use a valve 4M6 ANSI class 300 / 150	6,53	
P _{min} with bellows		43,5		43,5	
P _{max}		275		720	1000

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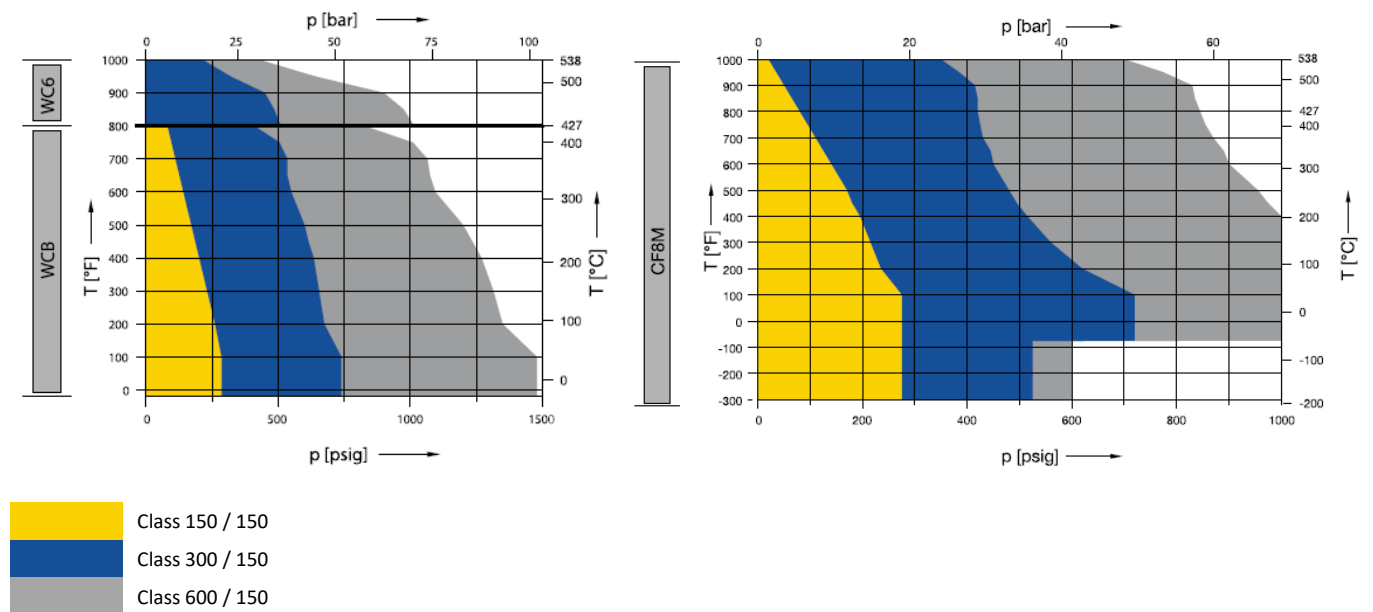
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150			600 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	Use a valve 4M6 ANSI class 300 / 150			19,7	19,0	19,7	19,7	19,0	19,7
	with bellows		5,5						11,0					
US units			150 / 150			300L / 150			300 / 150			600 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	Use a valve 4M6 ANSI class 300 / 150			285	275	285	285	275	285
	with bellows		80						160					

Discharge coefficients

	Liquids (L)			
	ANSI class			
	150 / 150	300L / 150	300 / 150	600 / 150
ASME Sec. VIII Div. 1	0,718			
PED / EN ISO 4126-1				

Selection charts



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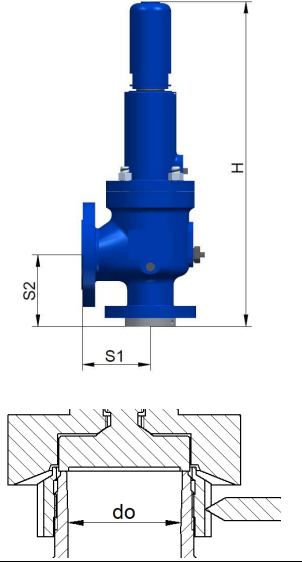
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Orifice N

4N6 DN100x150

Dimensions

Metric units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[mm]	63,5	Use a valve 4N6 ANSI class 300 / 150	63,5
Orifice area A	[mm ²]	3167		3167
S_1	[mm]	210		210
S_2	[mm]	197		197
H	[mm]	1045		1045
Weight without bellows	[kg]	130,2		134,4
Weight with bellows	[kg]	132,4		136,8
US units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[inch]	2,500	Use a valve 4N6 ANSI class 300 / 150	2,500
Orifice area A	[inch ²]	4,909		4,909
S_1	[inch]	8 1/4		8 1/4
S_2	[inch]	7 3/4		7 3/4
H	[inch]	41,142		41,142
Weight without bellows	[lbm]	287,042		296,301
Weight with bellows	[lbm]	291,892		301,592



Set pressure

Body material: F (SA-216 WCB)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,65	Use a valve 4N6 ANSI class 300 / 150	0,65
P _{min} with bellows		3,0		3,0
P _{max}		19,7		51,0
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	9,43	Use a valve 4N6 ANSI class 300 / 150	9,43
P _{min} with bellows		43,5		43,5
P _{max}		285		740
Body material: Q (SA-217 WC6)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	N/A		0,65
P _{min} with bellows				3,0
P _{max}				35,2
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	N/A		9,43
P _{min} with bellows				43,5
P _{max}				510
Body material: I (SA-351 CF8M)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,65	Use a valve 4N6 ANSI class 300 / 150	0,65
P _{min} with bellows		3,0		3,0
P _{max}		19,0		49,7
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	9,43	Use a valve 4N6 ANSI class 300 / 150	9,43
P _{min} with bellows		43,5		43,5
P _{max}		275		720

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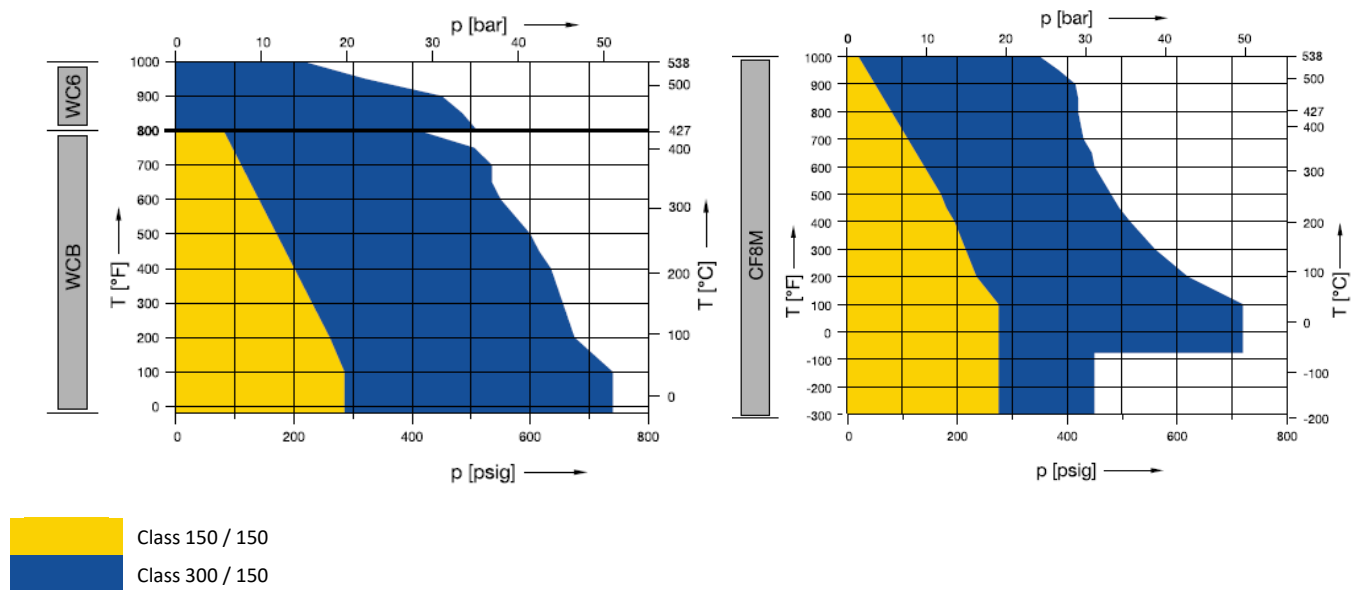
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	Use a valve 4N6 ANSI class 300 / 150			19,7	19,0	19,7
	with bellows		5,5						11,0		
US units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	Use a valve 4N6 ANSI class 300 / 150			285	275	285
	with bellows		80						160		

Discharge coefficients

	Liquids (L)		
	ANSI class		
	150 / 150	300L / 150	300 / 150
ASME Sec. VIII Div. 1	0,718		
PED / EN ISO 4126-1			

Selection charts



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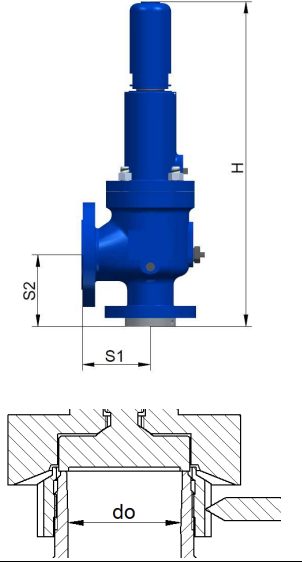
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Orifice P

4P6 DN100x150

Dimensions

Metric units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[mm]	76		
Orifice area A	[mm ²]	4536		
S_1	[mm]	229		278
S_2	[mm]	181		225
H	[mm]	1028		1216
Weight without bellows	[kg]	131,8	136,8	197,0
Weight with bellows	[kg]	133,6	138,4	198,8
US units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[inch]	2,992		
Orifice area A	[inch ²]	7,031		
S_1	[inch]	9		10
S_2	[inch]	$7 \frac{1}{8}$		$8 \frac{7}{8}$
H	[inch]	40,472		47,874
Weight without bellows	[lbm]	290,569	301,592	434,311
Weight with bellows	[lbm]	294,538	305,120	438,279



Set pressure

Body material: F (SA-216 WCB)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,5		0,6
P _{min} with bellows		3,0		3,0
P _{max}		19,7		36,2
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	7,25		8,70
P _{min} with bellows		43,5		43,5
P _{max}		285		525
Body material: Q (SA-217 WC6)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	N/A		0,6
P _{min} with bellows				3,0
P _{max}				35,2
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	N/A		8,70
P _{min} with bellows				43,5
P _{max}				510
Body material: I (SA-351 CF8M)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,5		0,6
P _{min} with bellows		3,0		3,0
P _{max}		19,0		36,2
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	7,25		8,70
P _{min} with bellows		43,5		43,5
P _{max}		275		525

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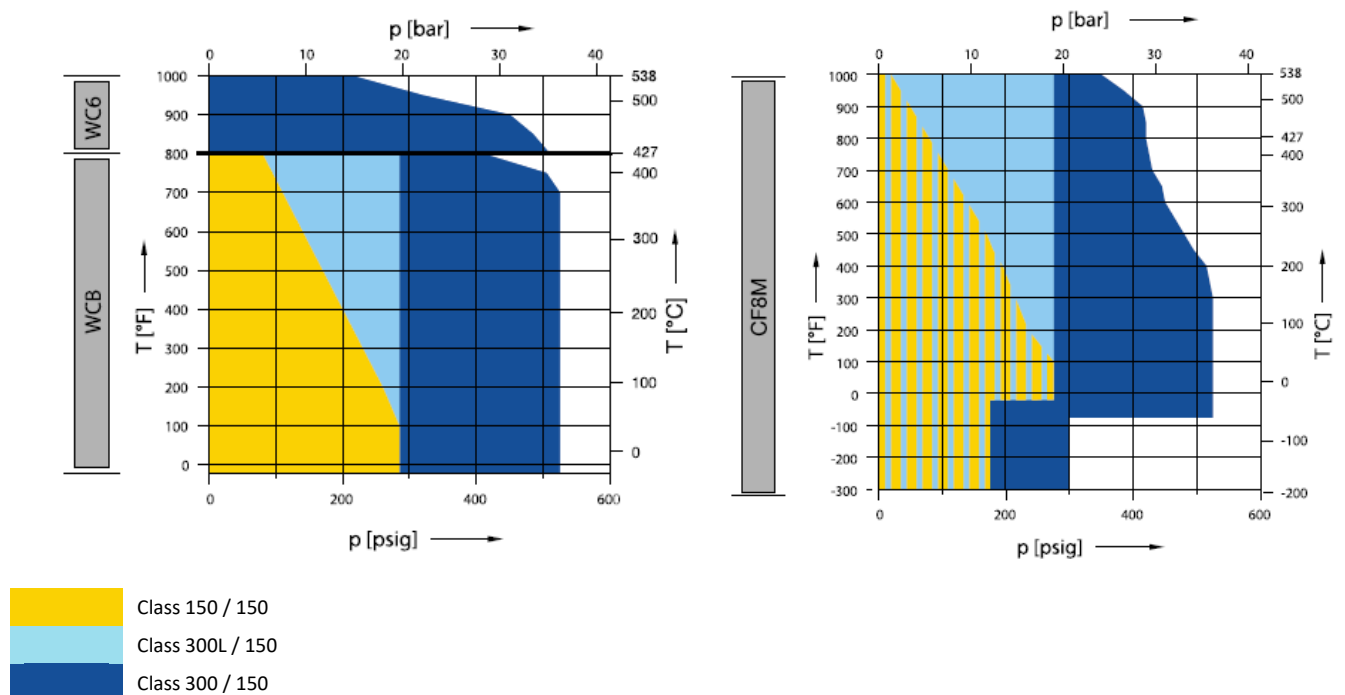
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	19,7	19,0	-	19,7	19,0	-	19,7	19,0	19,7
	with bellows		5,5						10,3		
US units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	285	275	-	285	275	-	285	275	285
	with bellows		80						150		

Discharge coefficients

	Liquids (L)		
	ANSI class		
	150 / 150	300L / 150	300 / 150
ASME Sec. VIII Div. 1	0,718		
PED / EN ISO 4126-1			

Selection charts



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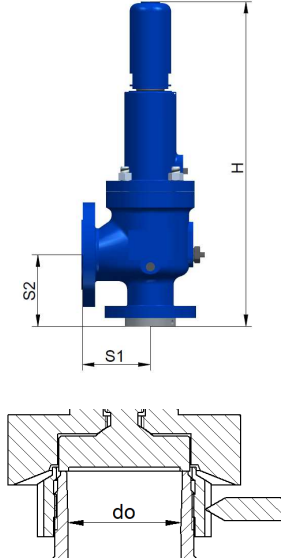
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Orifice Q

6Q8 DN150x200

Dimensions

Metric units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[mm]	100	Use a valve 6Q8 ANSI class 300 / 150	100
Orifice area A	[mm ²]	7854		7854
S_1	[mm]	241		241
S_2	[mm]	240		240
H	[mm]	1230		1230
Weight without bellows	[kg]	218,5		231,4
Weight with bellows	[kg]	221,0		233,9
US units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[inch]	3,937	Use a valve 6Q8 ANSI class 300 / 150	3,937
Orifice area A	[inch ²]	12,174		12,174
S_1	[inch]	9 1/2		9 1/2
S_2	[inch]	9 7/16		9 7/16
H	[inch]	48,425		48,425
Weight without bellows	[lbm]	481,710		510,150
Weight with bellows	[lbm]	487,222		515,661



Set pressure

Body material: F (SA-216 WCB)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,45	Use a valve 6Q8 ANSI class 300 / 150	0,45
P _{min} with bellows		1,0		1,0
P _{max}		11,4		20,7
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	6,53	Use a valve 6Q8 ANSI class 300 / 150	6,53
P _{min} with bellows		14,5		14,5
P _{max}		165		300
Body material: Q (SA-217 WC6)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	N/A		0,45
P _{min} with bellows				1,0
P _{max}				11,4
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	N/A		6,53
P _{min} with bellows				14,5
P _{max}				165
Body material: I (SA-351 CF8M)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,45	Use a valve 6Q8 ANSI class 300 / 150	0,45
P _{min} with bellows		1,0		1,0
P _{max}		11,4		20,7
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	6,53	Use a valve 6Q8 ANSI class 300 / 150	6,53
P _{min} with bellows		14,5		14,5
P _{max}		165		300

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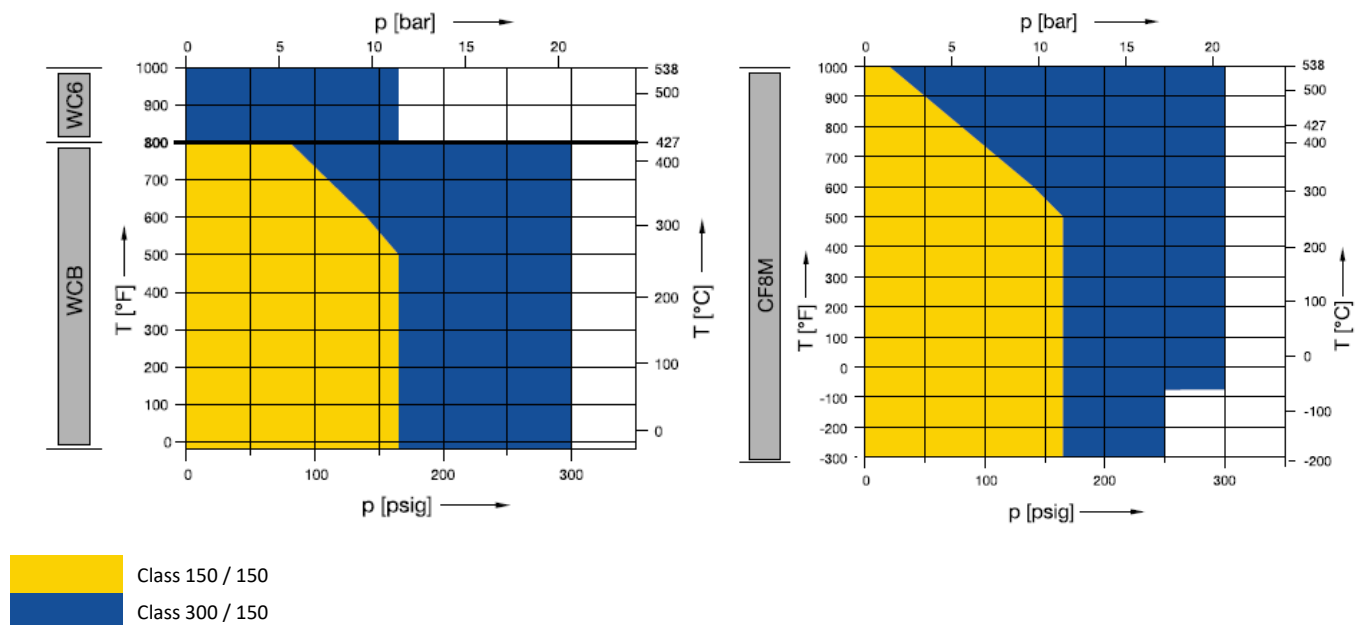
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	7,9		-	Use a valve 6Q8 ANSI class 300 / 150			7,9		
	with bellows		4,8								
US units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	115		-	Use a valve 6Q8 ANSI class 300 / 150			115		
	with bellows		70								

Discharge coefficients

	Liquids (L)		
	ANSI class		
	150 / 150	300L / 150	300 / 150
ASME Sec. VIII Div. 1	0,718		
PED / EN ISO 4126-1			

Selection charts



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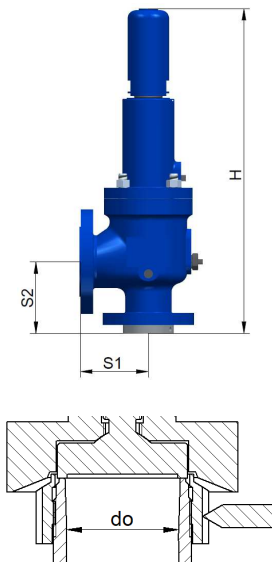
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Orifice R

6R8 DN150x200 6R10 DN150x250

Dimensions

Metric units		ANSI class (inlet / outlet)		
		6R8		6R10
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[mm]	121		
Orifice area A	[mm ²]	11499		
S_1	[mm]	241		267
S_2	[mm]	240		240
H	[mm]	1236		1287
Weight without bellows	[kg]	216,9	226,8	237,5
Weight with bellows	[kg]	219,4	229,3	240,0
US units		ANSI class (inlet / outlet)		
		6R8		6R10
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[inch]	4,764		
Orifice area A	[inch ²]	17,824		
S_1	[inch]	9 1/2		10 1/2
S_2	[inch]	9 7/16		9 7/16
H	[inch]	48,661		50,669
Weight without bellows	[lbm]	478,183	500,008	523,598
Weight with bellows	[lbm]	483,694	505,520	529,109



Set pressure

Body material: F (SA-216 WCB)				
Metric units		6R8		6R10
		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,45		
P _{min} with bellows		1,0		
P _{max}		6,9		15,9
US units		6R8		6R10
		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	6,53		
P _{min} with bellows		14,5		
P _{max}		100		230
Body material: Q (SA-217 WC6)				
Metric units		6R8		6R10
		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	N/A	0,45	N/A
P _{min} with bellows			1,0	
P _{max}			6,9	
US units		6R8		6R10
		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	N/A	6,53	N/A
P _{min} with bellows			1,0	
P _{max}			100	
Body material: I (SA-351 CF8M)				
Metric units		6R8		6R10
		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,45		
P _{min} with bellows		1,0		
P _{max}		6,9		15,9
US units		6R8		6R10
		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	6,53		
P _{min} with bellows		14,5		
P _{max}		100		230

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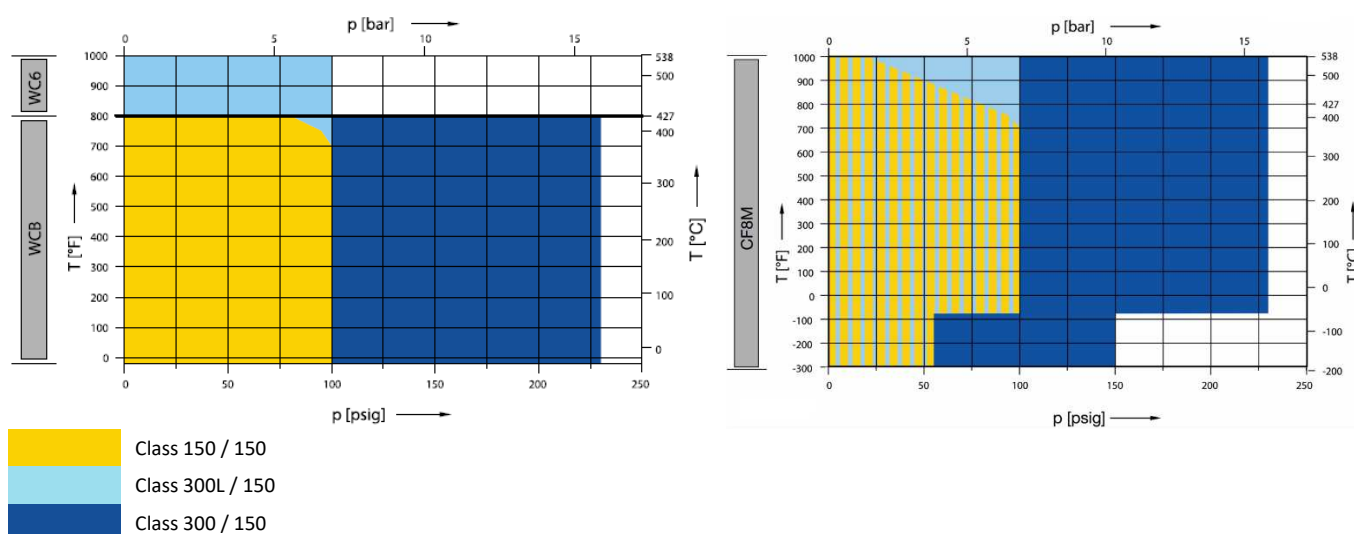
Pressure limit

Metric units			6R8						6R10		
			150 / 150			300L / 150			300 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	4,1						6,1		
	with bellows										
US units			6R8						6R10		
			150 / 150			300L / 150			300 / 150		
			WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357	WC6 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	60						100		
	with bellows										

Discharge coefficients

	Liquids (L)		
	ANSI class		
	6R8		6R10
	150 / 150	300L / 150	300 / 150
ASME Sec. VIII Div. 1	0,718		
PED / EN ISO 4126-1			

Selection charts



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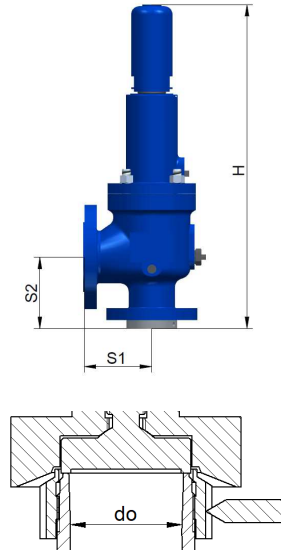
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Orifice T

8T10 DN200x250

Dimensions

Metric units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[mm]	152	Use a valve 8T10 ANSI class 300 / 150	152
Orifice area A	[mm ²]	18146		18146
S_1	[mm]	279.4		279.4
S_2	[mm]	276,225		276,225
H	[mm]	max. 1350		max. 1350
Weight without bellows	[kg]	308		320
Weight with bellows	[kg]	311		323
US units		ANSI class (inlet / outlet)		
		150 / 150	300L / 150	300 / 150
Orifice diameter d_o	[inch]	5,984	Use a valve 8T10 ANSI class 300 / 150	5,984
Orifice area A	[inch ²]	28,126		28,126
S_1	[inch]	11		11
S_2	[inch]	10 ⁷ / ₈		10 ⁷ / ₈
H	[inch]	max. 53,14		max. 53,14
Weight without bellows	[lbm]	679,012		705,467
Weight with bellows	[lbm]	685,626		712,081



Set pressure

Body material: F (SA-216 WCB)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,5	Use a valve 8T10 ANSI class 300 / 150	1,0
P _{min} with bellows		1,0		1,0
P _{max}		4,5		20,7
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	7,25	Use a valve 8T10 ANSI class 300 / 150	14,5
P _{min} with bellows		14,5		14,5
P _{max}		65		300
Body material: Q (SA-217 WC6)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	N/A	Use a valve 8T10 ANSI class 300 / 150	1,0
P _{min} with bellows				1,0
P _{max}				20,7
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	N/A	Use a valve 8T10 ANSI class 300 / 150	14,5
P _{min} with bellows				14,5
P _{max}				300
Body material: I (SA-351 CF8M)				
Metric units		150 / 150	300L / 150	300 / 150
P _{min} standard	[barg]	0,5	Use a valve 8T10 ANSI class 300 / 150	1,0
P _{min} with bellows		1,0		1,0
P _{max}		4,5		8,3
US units		150 / 150	300L / 150	300 / 150
P _{min} standard	[psig]	7,25	Use a valve 8T10 ANSI class 300 / 150	14,5
P _{min} with bellows		14,5		14,5
P _{max}		65		120

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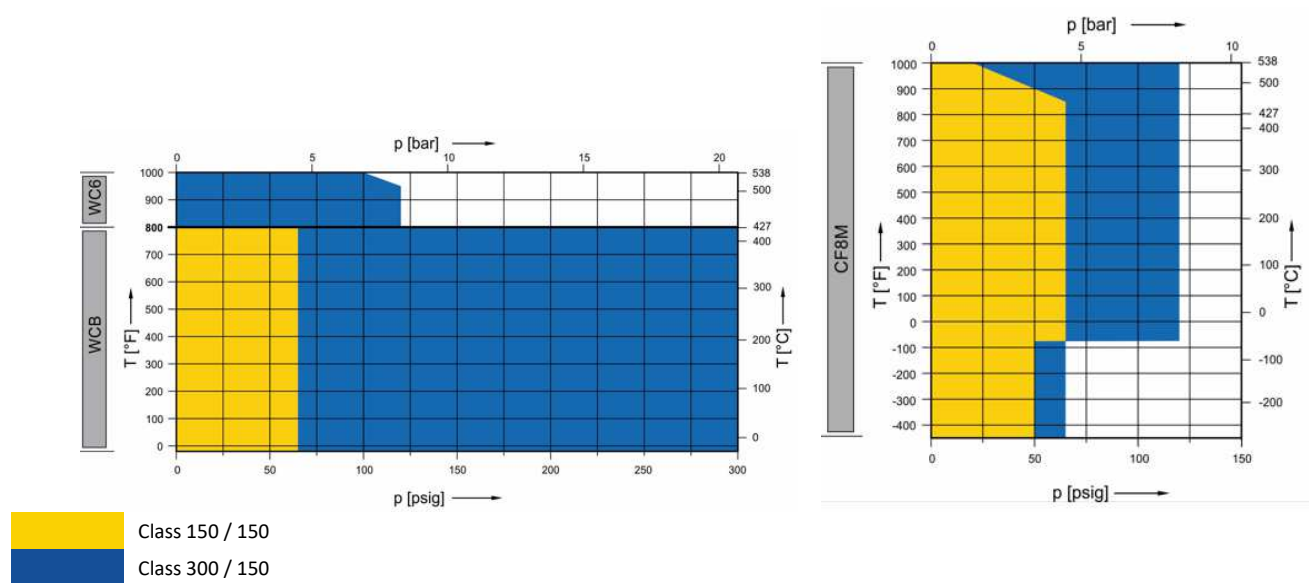
Pressure limit

Metric units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[barg]	2,1	-	Use a valve 8T10 ANSI class 300 / 150			6,9	4,1	6,9	
	with bellows										
US units			150 / 150			300L / 150			300 / 150		
			WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357	WCB 1.0619	CF8M 1.4408	WC6 1.7357
Outlet	standard	[psig]	30	-	Use a valve 8T10 ANSI class 300 / 150			100	60	100	
	with bellows										

Discharge coefficients

	Liquids (L)		
	ANSI class		
	150 / 150	300L / 150	300 / 150
ASME Sec. VIII Div. 1	0,718		
PED / EN ISO 4126-1			

Selection charts



Data given can be changed without notice.

Edition 01/2024

Capacity tables

Capacity tables for safety valves ANSI class 150, 300L, 300, 600

US units

Capacity for water acc. to ASME Section VIII (UV), based on the set pressure plus 10% overpressure at 21°C

Orifice	D	E	F	G	H	J	K	L	M	N	P	Q	R	T
d _o - orifice diameter [in]	0,472	0,512	0,669	0,866	1,142	1,378	1,614	1,969	2,185	2,500	2,992	3,937	4,764	5,984
A - orifice area [in²]	0,175	0,206	0,352	0,589	1,025	1,491	2,046	3,043	3,749	4,909	7,031	12,174	17,824	28,126
Set pressure [psig]	Water [US-G.P.M.]													
15	20,3	22,8	40,7	68,1	118,6	172,5	236,7	352,1	433,8	568,0	813,5	1408,5	2062,2	3254,1
20	22,9	26,9	46,0	77,0	134,1	195,0	267,6	398,0	490,3	642,0	919,5	1592,2	2331,1	3678,4
30	27,4	32,3	55,1	92,3	160,6	233,6	320,5	476,7	587,3	769,0	1101,5	1907,1	2792,2	4406,1
40	31,7	37,3	63,7	106,5	185,4	269,7	370,1	550,5	678,2	888,0	1271,8	2202,2	3224,4	5087,7
50	35,4	41,7	71,2	119,1	207,3	301,5	413,8	615,4	758,2	992,8	1422,0	2462,1	3604,8	5688,3
60	38,8	45,6	78,0	130,5	227,1	330,3	453,3	674,2	830,6	1087,6	1557,7	2697,1	3948,8	6231,2
70	41,9	49,3	84,2	140,9	245,3	356,8	489,6	728,2	897,1	1174,7	1682,5	2913,2	4265,2	6730,5
80	44,8	52,7	90,0	150,7	262,2	381,4	523,4	778,5	959,1	1255,8	1798,7	3114,3	4559,7	7195,2
90	47,5	55,9	95,5	159,8	278,1	404,6	552,2	825,7	1017,2	1332,0	1907,8	3303,3	4836,3	7631,6
100	50,0	58,2	100,7	168,5	293,2	426,4	585,2	870,3	1072,3	1404,0	2011,0	3481,9	5097,9	8044,4
120	54,8	66,5	110,3	184,5	321,1	467,1	641,0	953,4	1174,6	1538,1	2202,9	3814,3	5584,5	8812,2
140	59,2	69,7	119,1	199,3	346,9	504,6	692,4	1029,8	1268,7	1661,3	2379,4	4119,9	6031,9	9518,3
160	63,3	74,5	127,3	213,1	370,8	539,4	740,2	1100,9	1356,3	1776,0	2543,7	4404,3	6448,4	10175,5
180	67,2	79,0	135,1	226,0	393,3	572,1	785,1	1167,7	1438,6	1883,7	2698,0	4671,5	6839,6	10792,7
200	70,8	83,3	142,4	238,2	414,6	603,1	827,6	1230,8	1516,4	1985,6	2843,9	4924,2	7209,5	11376,5
220	74,2	87,4	149,3	249,9	434,8	632,5	868,0	1290,9	1590,4	2082,5	2982,7	5164,5	7561,4	11931,8
240 / 230 (for orifice R)	77,5	91,3	156,0	261,0	454,2	660,6	906,6	1348,3	1661,1	2175,1	3115,4	5394,2	7731,4	12462,4
260	80,7	95,0	162,3	271,6	472,7	687,6	943,6	1403,4	1729,0	2264,0	3242,6	5614,5		12971,3
280	83,7	98,6	168,5	281,9	490,6	713,6	979,2	1456,4	1794,2	2349,4	3365,0	5826,4		13460,9
300	86,7	102,0	174,4	291,8	507,8	738,6	1013,6	1507,5	1857,2	2431,9	3483,1	6030,9		13933,4
350	93,6	110,2	188,3	315,2	548,5	797,8	1094,8	1628,3	2006,0	2627,7	3762,2			
400	100,1	117,8	201,3	336,9	586,3	852,9	1170,4	1740,7	2144,5	2808,1	4021,9			
450	106,2	125,0	213,6	357,4	621,9	904,6	1241,4	1846,3	2274,6	2978,4	4265,9			
500	111,9	131,7	225,1	376,7	655,5	953,6	1308,5	1946,1	2397,7	3139,5	4496,7			
525	114,7	135,0	230,7	386,0	671,7	977,1	1340,8	1994,2	2456,9	3217,1	4607,7			
550	117,4	138,2	236,1	395,1	687,5	1000,1	1372,4	2041,1	2514,7	3292,8				
600	122,6	144,3	246,6	412,6	718,1	1044,6	1433,4	2131,9	2625,5	3439,2				
700	132,4	155,9	266,4	445,7	775,6	1128,3	1548,3	2302,7	2837,0	3714,7				
740	136,2	160,3	273,9	458,3	797,5	1160,1	1591,9	2367,6	2916,9	3819,4				
800	141,6	166,6	284,8	476,5	829,2	1206,2	1655,2	2461,7	3032,8					
900	150,2	176,8	302,0	505,4	879,5	1279,3	1755,6	2611,0	3216,8					
1000	158,3	186,3	318,4	532,7	927,1	1348,5	1850,5	2752,3	3390,8					
1100	166,0	195,4	333,9	558,7	972,3	1414,4	1940,8	2886,6	3556,3					
1200	173,4	204,1	348,8	583,6	1015,6	1477,3	2027,1	3014,9						
1300	180,5	212,4	363,0	607,4	1057,0	1537,6	2109,9	3138,1						
1400	187,3	220,4	376,7	630,3	1096,9	1595,6	2189,6	3256,5						
1480	192,6	226,7	387,3	648,1	1127,8	1640,6	2251,3	3348,3						

$$Q = \frac{A \cdot 38 \cdot K_d \cdot K_w \cdot K_c \cdot K_v}{\sqrt{p_1 - p_2}} \quad \left[\frac{gal}{min} \right]$$

Q	[gal/min]	Flow rate
A	[in²]	Required actual discharge area
K _d	-	Rated coefficient of discharge
K _w	-	Correction factor due to backpressure
K _c	-	Combination correction factor for installations with a rupture disk upstream of the PRV
K _v	-	Correction factor for viscosity
p ₁	[psig]	Relieving pressure
p ₂	[psig]	Total backpressure
G	-	Specific gravity of the liquid at the flowing temperature referred to water at standard conditions

Data given can be changed without notice.

Edition 01/2024

Capacity tables for safety valves ANSI class 150, 300L, 300, 600

Metric units

Capacity for water acc. to ASME Section VIII (UV), based on the set pressure plus 10% overpressure at 21°C

Orifice	D	E	F	G	H	J	K	L	M	N	P	Q	R
d _o - orifice diameter [mm]	12	13	17	22	29	35	41	50	55,5	63,5	76	100	121
A - orifice area [mm ²]	113	133	227	380	661	962	1320	1963	2419	3167	4536	7854	11499
Set pressure [kPa]	Water [l/min]												
100	75,4	88,8	151,5	253,6	441,1	642,0	880,9	1310,0	1614,3	2113,5	3027,1	5241,4	7673,8
200	102,1	120,2	205,1	343,4	597,3	869,3	1192,7	1773,8	2185,8	2861,7	4098,7	7096,8	10390,4
300	125,1	147,2	251,2	420,5	731,5	1064,6	1460,8	2172,4	2677,0	3504,8	5019,9	8691,8	12725,6
400	144,4	170,0	290,1	485,6	844,7	1229,3	1686,8	2508,5	3091,2	4047,0	5796,4	10036,4	14694,3
500	161,4	190,0	324,3	542,9	944,4	1374,4	1885,9	2804,6	3456,0	4524,7	6480,6	11221,1	16428,7
600	176,9	208,2	355,3	594,7	1035,4	1505,6	2065,9	3072,2	3785,9	4956,6	7099,2	12292,1	17996,8
700	191,0	224,8	383,7	642,4	1117,4	1626,2	2231,4	3318,4	4089,2	5353,7	7668,0	13227,0	19438,7
800	204,2	240,4	410,2	686,7	1194,6	1738,5	2385,5	3547,5	4371,6	5723,4	8197,4	14193,7	20780,9
900	216,6	254,9	435,1	728,4	1267,0	1844,0	2530,2	3762,7	4636,8	6070,5	8694,7	15054,6	22041,4
1000	228,3	268,7	458,7	767,8	1335,5	1943,7	2667,1	3966,2	4887,6	6398,9	9165,0	15869,0	23233,7
1100	239,5	281,8	481,0	805,3	1400,7	2038,6	2797,2	4159,8	5126,1	6711,2	9612,0	16643,5	24367,7
1200	250,1	294,4	502,4	841,1	1463,0	2129,2	2921,6	4344,8	5354,1	7009,7	10039,7	17383,6	25451,3
1300	260,3	306,4	522,9	875,4	1522,8	2216,2	3040,9	4522,2	5572,7	7259,9	10449,7	18093,4	26490,5
1400	270,1	318,0	542,7	908,5	1580,2	2299,8	3155,7	4692,9	5783,1	7571,3	10844,2	18776,4	27490,5
1500	279,6	329,1	561,7	940,3	1635,7	2380,6	3266,5	4857,6	5986,0	7837,0	11224,8	19435,5	28455,4
1600 / 1590 (for orifice R)	288,8	339,9	580,2	971,2	1689,4	2458,6	3373,6	5016,9	6182,4	8094,1	11592,9	20072,9	29296,6
1800	306,3	360,5	615,3	1030,1	1791,8	2607,8	3578,2	5321,3	6557,4	8585,0	12296,1	21290,5	
2000	322,9	380,0	648,6	1085,8	1888,8	2748,8	3771,8	5609,1	6912,1	9049,4	12961,2	22442,1	
2070	328,5	386,6	659,9	1104,7	1921,5	2796,5	3837,5	5706,4	7032,0	9206,4	13186,1	22831,5	
2500	361,0	424,9	725,2	1214,0	2111,7	3073,3	4217,0	6271,2	7728,0	10117,6	14491,1		
3000	395,5	465,4	794,4	1329,9	2313,2	3366,6	4619,5	6869,7	8465,5	11083,3	15874,2		
3500	427,1	502,7	858,1	1436,4	2498,6	3634,4	4989,6	7420,2	9143,8	11971,3	17146,1		
3620	434,4	511,3	872,6	1460,8	2541,1	3698,2	5074,4	7546,3	9299,3	12174,8	17437,6		
4000	456,6	537,5	917,3	1535,6	2671,1	3887,4	5334,1	7932,5	9775,2	12797,8			
4500	484,3	570,1	973,0	1628,7	2833,1	4123,3	5657,7	8413,7	10368,1	13574,2			
5000	510,5	600,9	1025,6	1716,8	2986,4	4346,3	5963,7	8868,8	10929,0	14308,4			
5100	515,6	606,9	1035,8	1733,9	3016,1	4389,5	6023,1	8957,0	11037,7	14450,8			
5500	535,4	630,2	1075,6	1800,6	3132,1	4558,4	6254,8	9301,7	11462,4				
6000	559,3	658,2	1123,5	1880,7	3271,4	4761,1	6532,9	9715,3	11972,1				
7000	604,1	711,0	1213,5	2031,4	3533,5	5142,6	7056,6	10493,7	12931,3				
7590	629,0	740,3	1263,6	2115,3	3679,4	5354,9	7347,7	10927,0	13465,3				
8000	645,8	760,1	1297,3	2171,6	3777,5	5497,7	7543,6	11218,2					
9000	684,9	806,2	1376,0	2303,4	4006,6	5831,2	8001,2	11898,7					
10210	729,5	858,7	1465,5	2453,3	4248,6	6183,3	8522,1	12617,4					

$$Q = \frac{A \cdot K_d \cdot K_w \cdot K_c \cdot K_v}{11,78 \cdot \sqrt{\frac{G}{p_1 - p_2}}} \left[\frac{l}{min} \right]$$

Q [l/min] Flow rate
 A [mm²] Required actual discharge area
 K_d - Rated coefficient of discharge
 K_w - Correction factor due to backpressure
 K_c - Combination correction factor for installations with a rupture disk upstream of the PRV
 K_v - Correction factor for viscosity
 p₁ [kPa g] Reliving pressure
 p₂ [kPa g] Total backpressure
 G - Specific gravity of the liquid at the flowing temperature referred to water at standard conditions

Data given can be changed without notice.

Edition 01/2024

Capacity tables for safety valves ANSI class 150, 300L, 300, 600

Metric units

Capacity for water acc. to EN ISO 4126 based on the set pressure plus 10% overpressure at 20°C

Orifice	D	E	F	G	H	J	K	L	M	N	P	Q	R	T
d _o - orifice diameter [mm]	12	13	17	22	29	35	41	50	55,5	63,5	76	100	121	152
A - orifice area [mm²]	113	133	227	380	661	962	1320	1963	2419	3167	4536	7854	11499	18146
Set pressure [barg]	Water [kg/h]													
1	4330	5097	8699	14562	25330	36864	50583	75223	92697	121361	173821	300968	440646	695361
2	6124	7208	12302	20593	35822	52134	71535	106381	131093	171630	245820	425633	623167	983389
3	7500	8828	15067	25222	43872	63851	87612	130290	160556	210203	301067	521292	763221	1204401
4	8660	10193	17397	29123	50660	73728	101166	150446	185394	242721	347642	601936	881292	1390723
5	9683	11396	19451	32561	56639	82431	113107	168203	207277	271371	388676	672985	985314	1554875
6	10607	12484	21307	35669	62045	90298	123902	184258	227060	297272	425773	737218	1079358	1703280
7	11457	13484	23015	38527	67016	97533	133830	199021	245253	321090	459888	796287	1165839	1839753
8	12248	14415	24604	41187	71643	104268	143070	212762	262187	343260	491641	851266	1246335	1966779
9	12991	15290	26096	43685	75989	110593	151749	225669	278091	364082	521464	902904	1321938	2086084
10	13693	16117	27508	46048	80100	116575	159957	237876	293134	383776	549671	951745	1393445	2198926
11	14362	16904	28850	48296	84009	122265	167764	249486	307441	402508	576500	998198	1461457	2306253
12	15000	17655	30133	50443	87745	127701	175224	260580	321112	420405	602134	1042584	1526442	2408802
13	15613	18376	31364	52503	91328	132916	182379	271220	334224	437572	626721	1085156	1588771	2507161
14	16202	19070	32548	54485	94775	137933	189264	281458	346840	454090	650379	1126120	1648746	2601804
15	16771	19739	33690	56397	98102	142774	195907	291337	359014	470028	673206	1165645	1706614	2693123
16 / 15,9 (for orifice R)	17321	20386	34795	58247	101319	147457	202332	300891	370788	485442	695285	1203873	1757067	2772740
18	18371	21623	36906	61780	107465	156402	214605	319144	393280	514889	737461	1276900		2950168
20	19365	22793	38902	65122	113278	164862	226214	336407	414553	542741	777352	1345970		3109750
20,7	19701	23188	39577	66252	115243	167722	230138	342243	421746	552157	790839	1369322		3163703
25	21651	25483	43494	72809	126649	184321	252914	376114	463485	606803	869106			
30	23717	27915	47645	79758	138737	201913	277054	412013	507722	664719	952058			
35	25618	30152	51462	86148	149853	218091	299252	445025	548403	717979	1028340			
36,2	26053	30664	52337	87613	152400	221799	304339	452589	557725	730183	1045820			
40	27387	32234	55016	92097	160199	233150	319914	475751	586267	767552				
45	29048	34189	58353	97683	169917	247293	339320	504610	621830	814112				
50	30619	36038	61509	102967	179108	260669	357675	531906	655466	858149				
51	30924	36397	62121	103992	180891	263263	361234	537199	661989	866688				
55	32114	37797	64511	107993	187851	273392	375133	557868	687459					
60	33542	39478	67380	112795	196203	285549	391813	582674	718028					
70	36229	42641	72779	121832	211924	308428	423207	629360	775558					
75,9	37725	44402	75784	126863	220674	321163	440681	655346	807582					
80	38730	45585	77804	130244	226556	329723	452427	672814						
90	41080	48351	82523	138145	240299	349724	479871	713627						
102,1	43754	51498	87896	147138	255943	372493	511112	760086						

$$Q_m = A \cdot 1,61 \cdot K_{dr} \cdot K_v \cdot \sqrt{\frac{P_0 - P_b}{v}}$$

Q _m	[kg/h]	Flow rate
A	[mm²]	Required actual discharge area
K _{dr}	-	Coefficient of discharge
K _v	-	Correction factor for viscosity
p ₀	[bar a]	Reliving pressure
p _b	[bar a]	Total backpressure
v	[m³/kg]	Volume

Data given can be changed without notice.

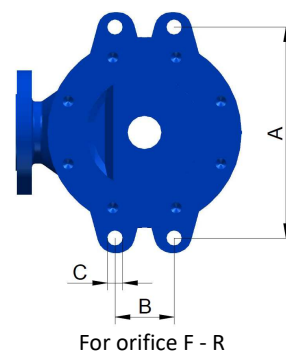
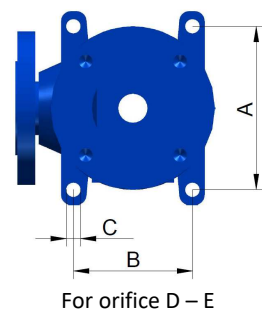
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Dimension of supported lug

Orifice	Inlet class	A	B	C
		[mm]		
D	300, 600	160	116	14
E				
F		254	70	18
G				
H	300	176	57	14
	600	254	70	18
J	300, 600	256	65	
K	300	254		
	600	256		
L	300		330	
	600	65		
M	300	254	95	
	600	330	90	
N	300		400	
P	300			
R	300			
T		20		

For orifice D – E

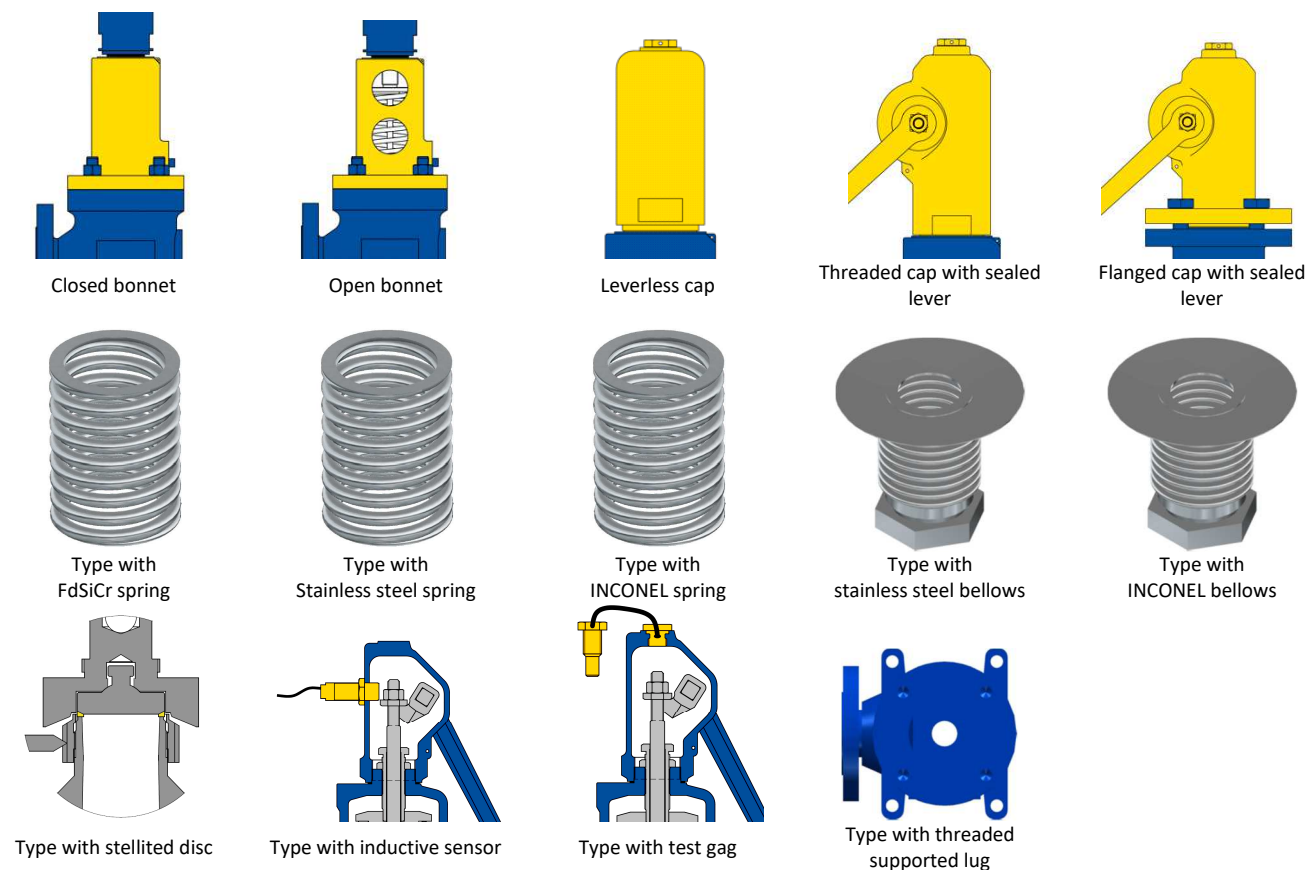
For orifice F – R



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Available options



Valve type	SA 216 WCB				SA 217 WC6			SA 351 CF8M			
	class 150	class 300L	class 300	class 600	class 300L*	class 300	class 600	class 150	class 300L	class 300	class 600
Closed bonnet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Open bonnet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Leverless cap	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Threaded cap with sealed lever	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Flanged cap with sealed lever	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type with stellited disc	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type with inductive sensor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type with FdSiCr spring	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗
Type with stainless steel spring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type with INCONEL spring	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓
Type with stainless steel bellows	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type with INCONEL bellows	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓
Type with threaded supported lug	✗	✗	✓	✓	✗	✓	✓	✗	✗	✓	✓

- ✓ Standard type
- ✓ Option
- ✗ Not available

* Applies to valve 6R8

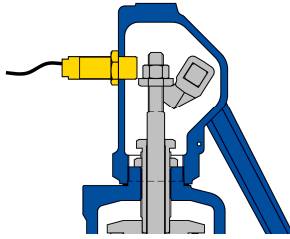
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Standard inductive sensors



Operating range:
depending on valve type and diameter

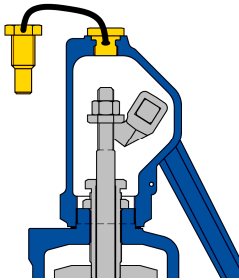
Supply voltage:
10 ÷ 30 V [DC]

Level of protection:
IP67, IP68 (depending on sensor type)

Working temperature:
-25 ÷ 70°C
Other upon agreement with the manufacturer

Standard cable length
2000 mm

Other sensors on request



Test gag is for doing pressure tests in the installation without dismantling the safety valve.

It prevents the opening elements from lifting and keeps the safety valve tight when the sySpindle pressure exceeds the set pressure.



After the installation has been pressure tested, the test gag must be removed, otherwise the safety valve cannot protect the installation against unacceptable overpressure!

CDTP

When "cold setting" valves at operating temperatures above 100°C (e.g. on a test stand using compressed air), corrections for the operating temperature and static backpressure should be taken into account.

Set pressure is corrected for static backpressure based on the formula:

$$p_n = p_{po} \cdot K_1 - p_b$$

Where:

- p_n – set pressure (CTDP) – to be set on a test stand
- p_{po} – Set pressure in the operating conditions of the installation
- K_1 – temperature correction coefficient
- p_b – static back pressure

The setting should be adjusted according to the media given in the table below:

Working medium temperature °C	K_1
Up to 100	1,00
100 – 250	1,02
250 - 500	1,03
Over 500	1,04

Data required for valve selection

Liquids L	US	Set pressure [psig], back pressure [psig], back pressure type (constant/variable), mass flow [gal/min], Fluids and its data: density [kg/m ³], viscosity, temperature [°C]
	EU	Set pressure [psig], back pressure [psig], back pressure type (constant/variable), mass flow [gal/min], Fluids and its data: density [kg/m ³], viscosity, temperature [°C]

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Approvals



Certificate number: 61550

Validity: April 24, 2027



Validity: February 19, 2034

EN ISO 4126:2013, ASME B16.34 : 2022, EN 12516-1 :2014, EN 12516-2 :2014, ASME XIII



Validity: February 19, 2034

EN ISO 4126:2013, ASME B16.34 : 2022, EN 12516-1 :2014, EN 12516-2 :2014, ASME XIII

Trade markings

D	1 D 2											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F1D21	-	600I1D21	Use a valve 1D2 class 300x150			600F1D23	600Q1D23	600I1D23	600F1D26	600Q1D26	600I1D26
E	1 E 2											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F1E21	-	600I1E21	Use a valve 1E2 class 300x150			600F1E23	600Q1E23	600I1E23	600F1E26	600Q1E26	600I1E26
F	1½ F 2											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F1F21	-	600I1F21	600F1F22	-	600I1F22	600F1F23	600Q1F23	600I1F23	600F1F26	600Q1F26	600I1F26
G	1½ G 3											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F1G31	-	600I1G31	600F1G32	-	600I1G32	600F1G33	600Q1G33	600I1G33	600F1G36	600Q1G36	600I1G36
H	1½ H 3						2 H 3					
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F1H31	-	600I1H31	600F1H32	-	600I1H32	600F2H33	600Q2H33	600I2H33	600F2H36	600Q2H36	600I2H36
J	2 J 3						3 J 4					
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F2J31	-	600I2J31	600F2J32	-	600I2J32	600F3J43	600Q3J43	600I3J43	600F3J46	600Q3J46	600I3J46
K	3 K 4											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F3K41	-	600I3K41	Use a valve 3K4 class 300x150			600F3K43	600Q3K43	600I3K43	600F3K46	600Q3K46	600I3K46
L	3 L 4						4 L 6					
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F3L41	-	600I3L41	600F3L42	-	600I3L42	600F4L63	600Q4L63	600I4L63	600F4L66	600Q4L66	600I4L66
M	4 M 6											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F4M61	-	600I4M61	Use a valve 4M6 class 300x150			600F4M63	600Q4M63	600I4M63	600F4M66	600Q4M66	600I4M66
N	4 N 6											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F4N61	-	600I4N61	Use a valve 4N6 class 300x150			600F4N63	600Q4N63	600I4N63	N/A		
P	4 P 6											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F4P61	-	600I4P61	600F4P62	-	600I4P62	600F4P63	600Q4P63	600I4P63	N/A		
Q	6 Q 8											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F6Q81	-	600I6Q81	Use a valve 6Q8 class 300x150			600F6Q83	600Q6Q83	600I6Q83	N/A		
R	6 R 8						6 R 10					
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	600F6R81	-	600I6R81	600F6R82	600I6R82	600I6R82	600F6R03	-	600I6R03	N/A		
T	8 T 10											
	150x150			300Lx150			300x150			600x150		
	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M	WCB	WC6	CF8M
	6008T01	-	600I8T01	Use a valve 8T10 class 300x150			600F8T03	600Q8T03	600I8T03	N/A		

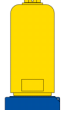
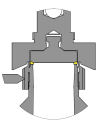
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List of types

Type ↓	 Gas-tight	 Closed bonnet	 Open bonnet	 Bellows	 Leverless cap	 Threaded cap with sealed lever	 Flanged cap with sealed lever	 Test gag	 Stellited disc
03	✗	✓	✗	✗	✗	✓	✗	✗	✗
04	✓	✓	✗	✗	✗	✓	✗	✗	✗
08	✗	✓	✗	✓	✗	✓	✗	✗	✗
09	✓	✓	✗	✓	✗	✓	✗	✗	✗
13	✗	✗	✓	✗	✗	✓	✗	✗	✗
18	✗	✗	✓	✓	✗	✓	✗	✗	✗
43	✗	✓	✗	✗	✗	✗	✓	✗	✗
44	✓	✓	✗	✗	✗	✗	✓	✗	✗
48	✗	✓	✗	✓	✗	✗	✓	✗	✗
49	✓	✓	✗	✓	✗	✗	✓	✗	✗
53	✗	✗	✓	✗	✗	✗	✓	✗	✗
58	✗	✗	✓	✓	✗	✗	✓	✗	✗
83	✗	✓	✗	✗	✓	✗	✗	✗	✗
84	✓	✓	✗	✗	✓	✗	✗	✗	✗
88	✗	✓	✗	✓	✓	✗	✗	✗	✗
89	✓	✓	✗	✓	✓	✗	✗	✗	✗
93	✗	✗	✓	✗	✓	✗	✗	✗	✗
98	✗	✗	✓	✓	✓	✗	✗	✗	✗
A3	✗	✓	✗	✗	✗	✓	✗	✓	✗
A4	✓	✓	✗	✗	✗	✓	✗	✓	✗
A8	✗	✓	✗	✓	✗	✓	✗	✓	✗
A9	✓	✓	✗	✓	✗	✓	✗	✓	✗
B3	✗	✗	✓	✗	✗	✓	✗	✓	✗
B8	✗	✗	✓	✓	✗	✓	✗	✓	✗
E3	✗	✓	✗	✗	✗	✗	✓	✓	✗
E4	✓	✓	✗	✗	✗	✗	✓	✓	✗
E8	✗	✓	✗	✓	✗	✗	✓	✓	✗
E9	✓	✓	✗	✓	✗	✗	✓	✓	✗
F3	✗	✗	✓	✗	✗	✗	✓	✓	✗
F8	✗	✗	✓	✓	✗	✗	✓	✓	✗
J3	✗	✓	✗	✗	✓	✗	✗	✓	✗
J4	✓	✓	✗	✗	✓	✗	✗	✓	✗
J8	✗	✓	✗	✓	✓	✗	✗	✓	✗
J9	✓	✓	✗	✓	✓	✗	✗	✓	✗
K3	✗	✗	✓	✗	✓	✗	✗	✓	✗
K8	✗	✗	✓	✓	✓	✗	✗	✓	✗
3A	✗	✓	✗	✗	✗	✓	✗	✗	✓
4A	✓	✓	✗	✗	✗	✓	✗	✗	✓
8A	✗	✓	✗	✓	✗	✓	✗	✗	✓
9A	✓	✓	✗	✓	✗	✓	✗	✗	✓
3B	✗	✗	✓	✗	✗	✓	✗	✗	✓
8B	✗	✗	✓	✓	✗	✓	✗	✗	✓
3E	✗	✓	✗	✗	✗	✗	✓	✗	✓
4E	✓	✓	✗	✗	✗	✗	✓	✗	✓
8E	✗	✓	✗	✓	✗	✗	✓	✗	✓
9E	✓	✓	✗	✓	✗	✗	✓	✗	✓
3F	✗	✗	✓	✗	✗	✗	✓	✗	✓
8F	✗	✗	✓	✓	✗	✗	✓	✗	✓
3J	✗	✓	✗	✗	✓	✗	✗	✗	✓
4J	✓	✓	✗	✗	✓	✗	✗	✗	✓
8J	✗	✓	✗	✓	✓	✗	✗	✗	✓

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9J	✓	✓	✗	✓	✓	✗	✗	✗	✓
3K	✗	✗	✓	✗	✓	✗	✗	✗	✓
8K	✗	✗	✓	✓	✓	✗	✗	✗	✓
3L	✗	✓	✗	✗	✗	✓	✗	✓	✓
4L	✓	✓	✗	✗	✗	✓	✗	✓	✓
8L	✗	✓	✗	✓	✗	✓	✗	✓	✓
9L	✓	✓	✗	✓	✗	✓	✗	✓	✓
3M	✗	✗	✓	✗	✗	✓	✗	✓	✓
8M	✗	✗	✓	✓	✗	✓	✗	✓	✓
3Q	✗	✓	✗	✗	✗	✗	✓	✓	✓
4Q	✓	✓	✗	✗	✗	✗	✓	✓	✓
8Q	✗	✓	✗	✓	✗	✗	✓	✓	✓
9Q	✓	✓	✗	✓	✗	✗	✓	✓	✓
3R	✗	✗	✓	✗	✗	✗	✓	✓	✓
8R	✗	✗	✓	✓	✗	✗	✓	✓	✓
3U	✗	✓	✗	✗	✓	✗	✗	✓	✓
4U	✓	✓	✗	✗	✓	✗	✗	✓	✓
8U	✗	✓	✗	✓	✓	✗	✗	✓	✓
9U	✓	✓	✗	✓	✓	✗	✗	✓	✓
3V	✗	✗	✓	✗	✓	✗	✗	✓	✓
8V	✗	✗	✓	✓	✓	✗	✗	✓	✓