

MODEL : 6301 [Steam Safety Valve]

Connection : Flange PN 16



APPLICATION AND KINDS OF EXECUTION

- Si 6301** - for air, steam and other neutral gases and vapours.
Working temperature: from -10°C up to + 300°C¹.
- Si 6301C** - valves with reduction of disc leap to the value 0,12 of seat diameter „d₀”,
applied to water and other neutral liquids.
Working temperature: from -10°C up to + 300°C¹.

Valves are produced in the following executions:

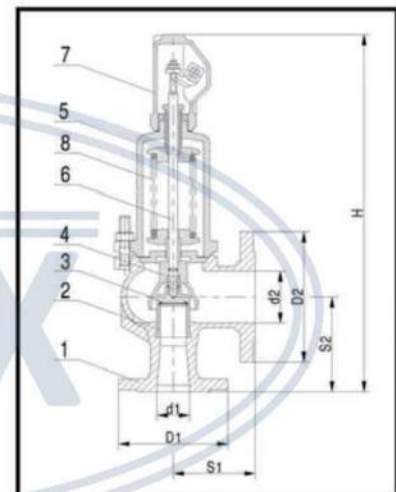
- Si 6301** - in execution **P** – normal; **G** – gas-tight; **WM** – for marine conditions
Si 6301C - in execution **P** – normal; **G** – gas-tight

LIST OF APPLIED MATERIALS

Position No	Name of detail	Material
1	Body	EN-GJL-250
2	Seat	X39CrMo17-1
3	Disc	X39CrMo17-1
4	Bell	EN-GJS-400-15
5	Cap	EN-GJL-250
6	Stem	X20Cr13 ¹⁾
7	Hood	EN-GJS-400-15
8	Spring	51CrV4 ²⁾

¹⁾ For marine execution (WM) stem made of: X17CrNi16-2

²⁾ Springs with wire diameter up to Φ 6 of patent wire BI,
Max. working temperature is 250°C.



OVERALL DIMENSIONS

Size DN	Seat		Inlet flange		Outlet flange		Length of construction		Height of construction	Dehydration	Opening pressure		Mass ca.
	Passage	Section	PN 16	PN 10	S ₁	S ₂	E	min			max. ¹⁾		
d ₁ x d ₂	d ₀ mm	A mm ²	D ₁	D ₂	mm		cal	bar		A			
20 x 32	16	201	105	140	85	95	345	G ¹ / ₄	0,45	16	7,5		
25 x 40	20	314	115	150	95	105	395	G ¹ / ₄	0,45	16	9,0		
32 x 50	25	491	140	165	100	110	420	G ¹ / ₄	0,45	16	13,0		
40 x 65	32	804	150	185	115	130	495	G ¹ / ₄	0,45	16	19,0		
50 x 80	40	1257	165	200	125	145	550	G ¹ / ₄	0,45	16	25,0		
65 x 100	50	1964	185	220	140	150	660	G ¹ / ₄	0,45	16	37,0		
80 x 125	63	3117	200	250	155	170	710	G ¹ / ₄	0,45	16	52,0		
100 x 150	77	4657	220	285	175	180	810	G ¹ / ₄	0,45	16	77,0		
125 x 200	93	6793	250	340	215	220	860	G ¹ / ₄	0,45	12,5	90,0		
150 x 250	110	9503	285	395	225	245	1000	G ¹ / ₄	0,45	10	140,0		

¹⁾ For steam boilers valid are restrictions according to WUDT-UC-WO-M - it is 10 bar and 200°C.

TECHNICAL DATA

Discharge coefficients

Type of valve	DN	Valves in execution					
		For vapours and gases α		with reduction of leap (Si 6301C)			For vapours and gases α
				For liquids α_c		For vapours and gases α	
		$b_1 = 0,1\text{bar}$ ($p \leq 1\text{bar}$) or $b_1 = 10\%$ $1 < p \leq 1,4 \text{ bar}$	$b_1 = 10\%$ $p > 1,4 \text{ bar}$	$b_1 = 10\%$			$b_1 = 25\%$
$p \leq 6 \text{ bar}$	$p > 6 \text{ bar}$						
Si 6301 Si 6301C	20 x 32 to 150 x 250	0,72	0,78	0,01	0,28	0,28	0,36

Pressure ranges.

DN	Pressure ranges [bar]
20 x 32	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
25 x 40	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
32 x 50	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
40 x 65	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
50 x 80	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
65 x 100	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
80 x 125	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
100 x 150	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
125 x 200	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16
150 x 250	0,45...0,68; 0,66...1; 0,95...1,4; 1,3...1,9; 1,8...2,6; 2,5...3,6; 3,5...5; 4,8...6,3; 6...8; 7,5...10; 9,5...12,5; 12...16

If the required opening pressure appears in two neighbouring pressure ranges, one should to apply valve with spring of higher pressure range.

NOTES!

1. If condensate accumulates, in the lowest point of blow-out installation should be foreseen dehydration. The dehydration in valve's body is made only on special request of the client. In case of liquids, the blow-out installation should be inclined

2. The valve should be assembled in vertical position.

ORDERING

The order should specify: name and catalogue number of the valve, DN, opening pressure or range of pressures, working temperature and kind of medium. **Because of variety of objective norms, it is advisable to give the norms according to which should be executed the connected flanges of valve.**

Onto client's wish we can deliver counter flanges together with connection elements and gaskets.

For special order are produced valves with inductive proximity detector which signals moment of operation.

Basic data of detector:

Working range [mm]	3 (M8); 6 (M12); 10 (M18)
Supply tension [V]	10 + 30 DC
Protection grade	IP67 (M8); IP68 (M12 and M18)
Working temperature	-25 + +70°C
Standard length of cable [mm]	2000

The other executions of detector for special order after co-ordination with manufacturer.

Onto client's wish are used detectors working in range of temperature: -25 + +230°C.

