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01 - 09.8

07.09.GB

Check valves ZV 116 and ZV 216 LDM





ZV 116

ZV 216

Check valves

DN 15 to 300

PN 16, 25

Description

Check valves ZV x16 are self-acting shut-off valves for application at long-lasting and maintenance-free operation. Valves meet the ČSN EN 12334 (03/2002).

Valves in execution ZV x16 P are closed by back pressure with spring with weight of plug assistance, Opening overpressure is 0,05 - 0,1 bar. Valves in execution ZV x16 T are closed by back pressure only with weight of plug assistance.

Application

The valve is designed for application as self-acting reverse shut-off valve. In the valve is not warranted 100% of tightness in closed position, therefore in the case of higher tightness request is necessary to install into pipeline the shut off valve. The valves are especially designed for applications in hot-water and steam circuits in power plants, heating plants, heat exchange stations, heat transferring stations and common heating applications.

Process media

The valves ZV x16 are suitable to use for water, steam and other liquids and gases which are compatible with used material of the valve body and inner parts.

Installation

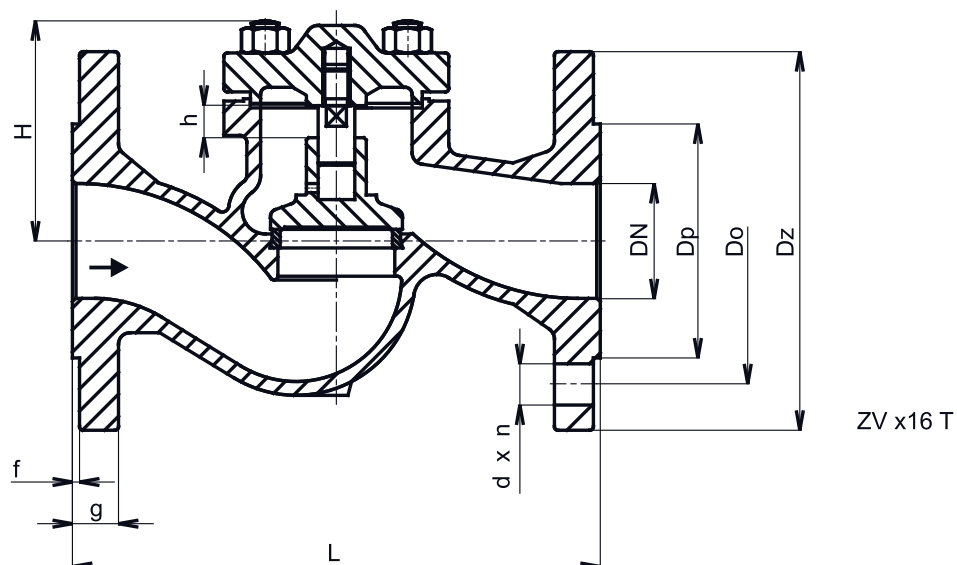
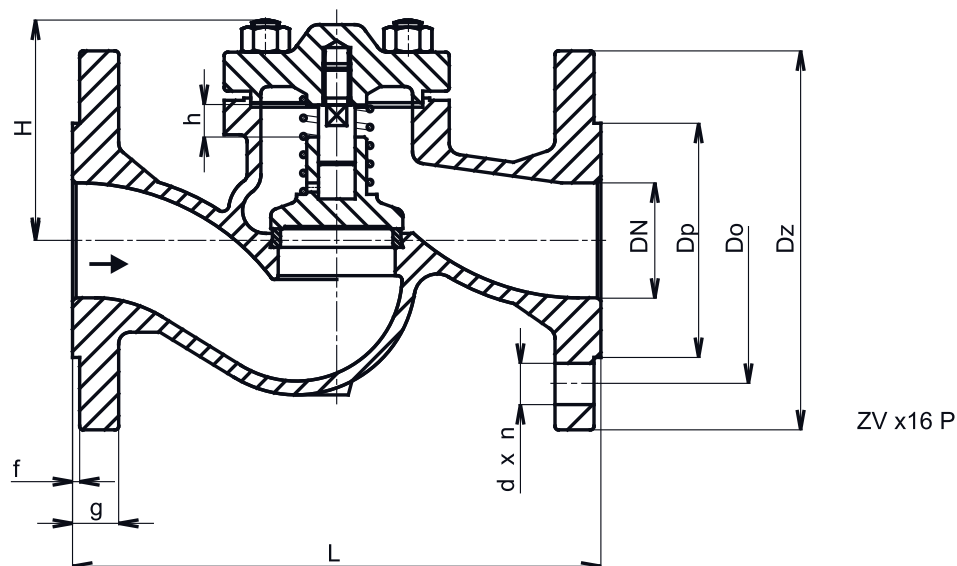
The valves are designed for mounting in a horizontal pipeline by the bonnet upwards, flow direction is always to under the plug and is determined by the arrow on the body.

Technical data

Series	ZV 116	ZV 216
Type of valve	Check valve	
Nominal size range	DN 15 to 300	DN 15 to 200
Nominal pressure	PN 16	PN 25
Body material	Grey cast iron EN-JL1040	Nodular cast iron EN-JS1025
Plug material	Stainless steel 1.4028	
Seat material	Stainless steel 1.4006	
Stem material	Stainless steel 1.4021	
Spring material	Stainless steel 1.4057	
Sealing material	Graphite	
Operating temperature range	+2°C to +300°C	+2°C to +350°C
Connection	Flanges Type B1 (raised-faised) acc. to ČSN-EN 1092-2, Face to face dimensions acc. to ČSN-EN 558, serie 1	
Type of plug	Disc	
Kvs values	5,9 to 1460 m³/h	
Leakage rate	Acc. to ČSN-EN 12334 (03/2002)	

Dimensions and weights for the ZV x16

	PN 16						PN 25						PN 16, PN 25						
DN	D _z	D _p	D _o	d	n	g	D _z	D _p	D _o	d	n	g	H	L	h	f	m		
	mm	mm	mm	mm		mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	kg		
15	95	46	65	14	4	14	95	46	65	14	4	14	56	130	5	2	3		
20	105	56	75			16	105	56	75			16	150	4					
25	115	65	85			115	65	85	67			160	8	4.5					
32	140	76	100	19		18	140	76	100	19		18	76	180				7.5	
40	150	84	110				150	84	110			19	89	200	11			8	
50	165	99	125			20	165	99	125				96	230	14			13.5	
65	185	118	145				185	118	145				104	290	17			17	
80	200	132	160			8	22	200	132				160	8	20	124	310	21	3
100	220	156	180	24	235		156	190	161	350	25	40							
125	250	184	210	26	270		184	220	174	400	32	71							
150	285	211	240	300	211		250	197	480	38	95								
200	340	266	295	23	8	30	360	274	310	12	22	248	600	50			221		
250	405	319	355																95
300	460	370	410			12	32	---	---		---	---	---	---	333	730	65	4	221
													375	800	95				



The valve complete specification No. for ordering ZV x16

		XX	XXX	XXX	XX	/	XXX	-	XXX
1. Valve	Check valve, direct	ZV							
2. Type	Check valve made of grey cast iron		116						
	Check valve made of nodular cast iron		216						
3. Function	Check valve with spring			P					
	Check valve without spring			T					
4. Connection	Raised-faised flange			1					
5. Material body	Grey cast iron EN-JL1040		116	3					
	Nodular cast iron EN-JS1025		216	4					
6. Nominal pressure PN	PN 16		116		16				
	PN 25		216		25				
7. Max. temperature °C	300°C		116				300		
	350°C		216				350		
8. Nominal size DN	DN 15 to 300		116					XXX	
	DN 15 to 200		216					XXX	

Ordering example: **ZV 216 P14 25/350-065**

Kvs, differential pressure values and loss coefficient ζ (zeta)

DN	Kvs [m³/h]	ζ	Δp _{max} [MPa] PN 16	Δp _{max} [MPa] PN 25
15	5.9	2.3	1.6	2.5
20	7.4	4.7		
25	13.0	3.7		
32	18.0	5.2		
40	30.0	4.5		
50	41.0	5.9		
65	79.0	4.6		
80	115.0	4.9		
100	181.0	4.9		
125	225.0	7.7		
150	364.0	6.1		2.1
200	690.0	5.4	1.4	1.4
250	1010	6.1	1.6	---
300	1460	6.1		

Max. permissible pressure values [MPa]

Material	PN	Temperature [°C]					
		120	150	200	250	300	350
Grey cast iron EN-JL1040 (EN-GJL-250)	16	1.60	1.44	1.28	1.12	0.96	---
Nodular cast iron EN-JS1025 (EN-GJS-400-18-LT)	25	2.50	2.43	2.30	2.18	2.00	1.75

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