

Overflow and pressure control valves
made of stainless steel, angle-type
with threaded connections
-externally adjustable-

→ Series 418



■ SUITABLE FOR

Liquids	neutral and non-neutral	
Air, gases and vapours	neutral and non-neutral	
Steam		

■ EXAMPLES OF USE

For the protection of:

- pumps against overloading in closed circuits for neutral / non-neutral, non-sticking liquids

For the control of:

- systems under pressure for neutral/ non-neutral gases and vapours and – depending on the sealing material – also for steam.

- chemical plants, biogas plants
- desalination plants
- mechanical engineering and process equipment construction
- shipbuilding industry and marine equipment
- industrial applications
- secondary areas in the food-, beverage-, pharmaceutical- and cosmetics-industries



■ MATERIAL



■ SPECIFICATION



3/8" – 1 1/4"
DN 10 – DN 32

– 60°C to + 225°C
depending on version

0,2 – 30 bar

■ APPROVALS

European Pressure Equipment Directive

TR ZU 032/2013 - TR ZU 010/2011

Requirements

PED 2014/68/EU

Classification society

Germanischer Lloyd	GL
Lloyd's Register EMEA	LR EMEA
American Bureau of Shipping	ABS
Bureau Veritas	BV
Russian Maritime Register of Shipping	RS

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Stainless steel	1.4404	316 L
Outlet body	Stainless steel	1.4408	CF8M
Internal parts	Stainless steel	1.4404	316 L
Spring	Stainless steel	1.4310	302

■ VALVE VERSION

t	gastight version of spring housing	for neutral and non-neutral media, not counter pressure compensated. The environment is protected from being affected by the medium. Only available without lifting device. Adjustable under operating conditions without medium escaping into the atmosphere.
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Complete functional cartridge available as replacement part (order code: 418 cartridge-DN.-seal) can be exchanged without removing the valve.

Valves can be delivered unset within a pressure range or set and sealed at the factory.

■ MEDIUM

GF	gaseous and liquid	Air, vapours, gases, liquids and - depending on seal - also for steam
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■ TYPE OF LIFTING MECHANISM

0	without lifting device
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		10	15	20	25	32
Inlet		3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)
Outlet	3/8" (10)	■				
	1/2" (15)		■			
	3/4" (20)			■		
	1" (25)				■	
	1 1/4" (32)					■

■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

f / f	Standard	Female thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
m / f	On request	Male thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
KLSDIN / KLSDIN	On request	Clamp connection DIN / clamp connection DIN	DIN 32676 / DIN 32676

■ SEALS

NBR	Nitrile rubber (standard)	Elastomere flat seal 0,2 – 30 bar	-30°C to +130°C
EPDM	Ethylene propylene diene	Elastomere flat seal 0,2 – 30 bar	-50°C to +150°C
Against surcharge			
FKM	Fluorocarbon	Elastomere flat seal 0,2 – 30 bar	-20°C to +200°C
PTFE	Polytetrafluoroethylene	Flat seal 0,5 – 30 bar	-60°C to +225°C

If the seal is made of PTFE the O-rings of the cartridge are as standard made of FPM. FFPM possible on request against surcharge.

■ OPTIONS

Special versions on request.

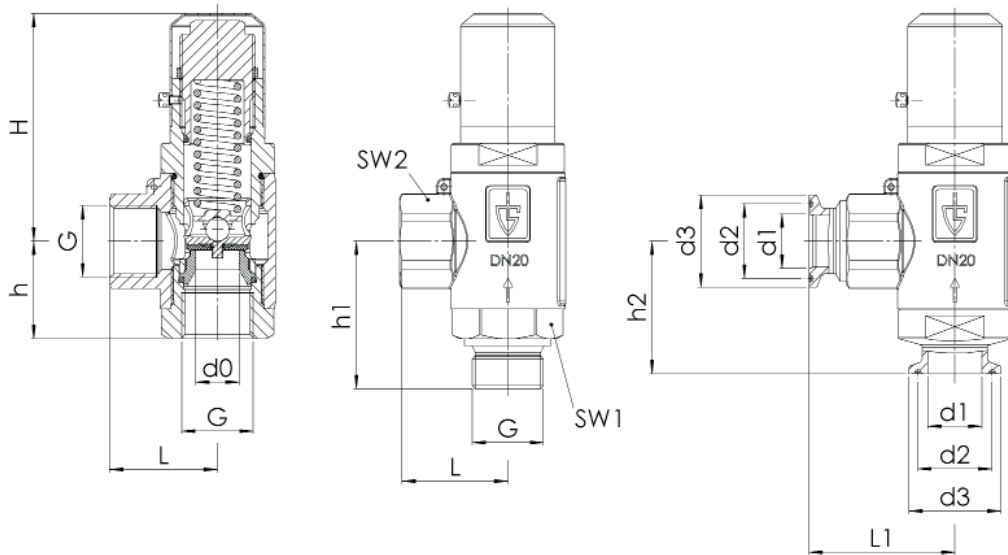
Against surcharge

O-rings of valve cartridge made of FFPM	Order code: in options FFKM
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■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 418: Connection, installation dimensions, ranges of adjustment							
Nominal diameter	DN	10	15	20	25	32	
Connection DIN EN ISO 228	G	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	
Outlet DIN EN ISO 228	G	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	
Installation dimensions in mm	L	34	34	40	50	50	
	L1	45	43,5	54	61	61	
	H	73	73	84	98	98	
	h	33	33	36	48	48	
	h1	47,5	50	54,5	69	75	
	h2	42,5	42,5	49	63	66	
	d1	10	16	20	26	32	
	d2	27,5	27,5	27,5	43,5	43,5	
	d3	34	34	34	50,5	50,5	
	SW1	30	30	36	50	50	
	SW2	28	28	32	41	50	
	do	10	14	16	25	25	
	Weight	kg	0,5	0,5	0,8	1,8	1,9
	Set pressure	bar	0,2 - 30	0,2 - 30	0,2 - 30	0,2 - 30	0,2 - 30
Range of adjustment	bar	0,2-1,2	0,2-1,2	0,2-1,2	0,2-1,2	0,2-1,2	
		1,2-3	1,2-3	1,2-3	1,2-3	1,2-3	
		2-12	2-12	2-12	2-12	2-12	
		12-30	12-30	12-30	12-30	12-30	

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Pressure range / set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
418	t	GF	0	15	f	f	15	15	NBR		2 - 12	5
418	t	GF	0	25	KLSDIN	f	25	25	PTFE	FFKM	8	2
418	t	GF	0									
418	t	GF	0									

In this table you can configure a valve according to your individual requirements (similar to the *example* shown, which should be deleted before you enter your own data). Please complete the table by hand using the abbreviations in this datasheet and then fax it to: +49(0)7141.4889488
Please do not forget to add your personal data so that our sales team can contact you.

Name _____

First Name _____

Company _____

Telephone _____

E-Mail _____

■ CAPACITY TABLE

Series 418: Kv values at 1 bar overpressure												
Nominal diameter DN	10				10				10			
	Air [Nm³/h]				Water [m³/h]				Steam [kg/h]			
Pressure range bar	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30
Set pressure bar												
0,2	87				2,9				62,0			
0,7	106				3,0				74,7			
1,2	113	81			3,2	2,3			79,3	56,9		
2,0		96	47			2,6				67,0		
3,0		99	51			2,6	1,2			68,7	35,4	
4,0			56				1,2				38,8	
5,0			62				1,1				42,7	
6,0			65				1,1				44,7	
7,0			70				1,0				48,0	
8,0			77				1,0				52,6	
9,0			86				0,8				58,6	
10,0			94				0,7				63,9	
11,0			105				0,5				71,3	
12,0			108	81			0,4	0,7			73,1	54,9
13,0				78				0,6				52,9
14,0				74				0,6				50,1
15,0				72				0,6				48,6
16,0				62				0,6				41,8
17,0				55				0,6				37,1
18,0				48				0,5				32,3
19,0				40				0,4				26,9
20,0				29				0,4				19,5
21,0				22				0,4				14,8
22,0				16				0,3				10,8
23,0				12				0,3				8,1
24,0				6				0,2				4,0
25,0				3				0,2				2,0
26,0				< 1				0,2				< 1
27,0				< 1				0,1				< 1
28,0				< 1				0,1				< 1
29,0				< 1				0,1				< 1
30,0				< 1				0,1				< 1

Kv values at 1 bar overpressure												
Nominal diameter DN	15				15				15			
	Air [Nm³/h]				Water [m³/h]				Steam [kg/h]			
Pressure range bar	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30
Set pressure bar												
0,2	107				3,4				76,3			
0,7	119				3,7				83,9			
1,2	126	92			3,8	2,8			88,5	64,6		
2,0		107	47			2,4				74,7		
3,0		115	54			2,1	1,4			79,8	37,5	
4,0			63				1,4				43,6	
5,0			70				1,5				48,2	
6,0			81				1,5				55,7	
7,0			98				1,4				67,3	
8,0			103				1,3				70,4	
9,0			107				1,2				72,9	
10,0			112				1,1				76,2	
11,0			118				0,9				80,1	
12,0			122	61			0,8	0,7			82,6	41,3
13,0				70				0,6				47,5
14,0				78				0,6				52,8
15,0				85				0,5				57,4
16,0				97				0,5				65,4
17,0				105				0,5				70,7
18,0				114				0,5				76,8
19,0				78				0,5				52,5
20,0				34				0,4				22,9
21,0				12				0,4				8,1
22,0				< 1				0,4				< 1
23,0				< 1				0,3				< 1
24,0				< 1				0,3				< 1
25,0				< 1				0,2				< 1
26,0				< 1				0,2				< 1
27,0				< 1				0,2				< 1
28,0				< 1				0,1				< 1
29,0				< 1				0,1				< 1
30,0				< 1				0,1				< 1

Series 418: Kv values at 1 bar overpressure												
Nominal diameter DN	20				20				20			
	Air [Nm³/h]				Water [m³/h]				Steam [kg/h]			
Pressure range bar	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30
Set pressure bar												
0,2	151				4,7				107,7			
0,7	166				5,4				117,0			
1,2	182	123			5,8	3,5			127,8	86,4		
2,0		139	88			3,4				97,0		
3,0		150	97			2,8	1,7			104,1	67,3	
4,0			102				1,6				70,6	
5,0			111				1,6				76,4	
6,0			124				1,4				85,2	
7,0			132				1,3				90,6	
8,0			136				1,0				93,0	
9,0			143				0,8				97,5	
10,0			148				0,7				100,6	
11,0			153				0,6				103,9	
12,0			159	114			0,6	0,4			107,7	77,2
13,0				118				0,5				80,0
14,0				121				0,7				81,9
15,0				124				0,8				83,7
16,0				129				0,9				87,0
17,0				125				0,9				84,2
18,0				136				1,1				91,6
19,0				141				1,0				94,9
20,0				144				0,7				96,9
21,0				130				0,6				87,5
22,0				115				0,5				77,4
23,0				100				0,4				67,3
24,0				87				0,3				58,5
25,0				55				0,3				37,0
26,0				36				0,2				24,2
27,0				29				0,2				19,5
28,0				20				0,1				13,4
29,0				12				0,1				8,1
30,0				4				0,1				2,7

Kv values at 1 bar overpressure												
Nominal diameter DN	25				25				25			
	Air [Nm³/h]				Water [m³/h]				Steam [kg/h]			
Pressure range bar	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30
Set pressure bar												
0,2	348				10,3				248,1			
0,7	402				11,6				283,3			
1,2	431	381			11,2	9,4			302,6	267,5		
2,0		398	179			9,8				277,8		
3,0		372	212			8,5	4,3			258,3	147,2	
4,0			244				4,3				169,0	
5,0			288				4,4				198,3	
6,0			308				4,5				211,6	
7,0			314				4,7				215,5	
8,0			319				4,9				218,0	
9,0			331				5,2				225,7	
10,0			346				5,6				235,3	
11,0			351				5,3				238,3	
12,0			363	142			4,8	1,9			245,8	96,2
13,0				160				1,9				108,5
14,0				187				1,9				126,5
15,0				208				2,0				140,4
16,0				223				2,0				150,3
17,0				229				2,2				154,3
18,0				234				2,4				157,6
19,0				240				2,0				161,6
20,0				247				1,3				166,3
21,0				252				1,0				169,6
22,0				258				0,9				173,6
23,0				265				0,8				178,2
24,0				270				0,7				181,6
25,0				276				0,6				185,5
26,0				287				0,5				192,9
27,0				300				0,4				201,6
28,0				310				0,3				208,2
29,0				328				0,2				220,3
30,0				336				0,1				225,6

Series 418: Kv values at 1 bar overpressure

Nominal diameter DN	32 Air [Nm³/h]				32 Water [m³/h]				32 Steam [kg/h]			
	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30	0,2 - 1,2	1,2 - 3	2 - 12	12 - 30
Set pressure bar												
0,2	426				12,1				303,7			
0,7	457				14,2				322,0			
1,2	460	386			14,5	10,3			322,9	271,0		
2,0		441	187			10,9				307,8		
3,0		477	229			12,0	4,3			331,2	159,0	
4,0			278				4,4				192,5	
5,0			303				4,5				208,6	
6,0			326				4,6				224,0	
7,0			345				4,7				236,8	
8,0			369				4,8				252,2	
9,0			397				5,0				270,7	
10,0			413				5,2				280,8	
11,0			431				5,7				292,6	
12,0			448	167			6,5	2,1			303,4	113,1
13,0				192				2,5				130,2
14,0				220				2,7				148,8
15,0				245				3,1				165,3
16,0				252				3,2				169,9
17,0				261				2,6				175,9
18,0				267				2,2				179,8
19,0				275				1,9				185,1
20,0				283				1,7				190,5
21,0				307				1,5				206,6
22,0				328				1,3				220,7
23,0				347				1,2				233,4
24,0				359				1,0				241,4
25,0				373				0,8				250,7
26,0				381				0,6				256,1
27,0				394				0,5				264,7
28,0				401				0,4				269,4
29,0				406				0,3				272,7
30,0				412				0,2				276,6