

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

→ Series 417



■ 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" – 2"  
DN 10 – DN 50

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

0,2 – 20 bar

■ APPROVALS

European Pressure Equipment Directive

TR ZU 032/2013 - TR ZU 010/2011

Requirements

PED 2014/68/EU

Classification society

Germanischer Lloyd	GL
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	1.4404 / 1.4408	316 L / CF8M
Internal parts	Stainless steel	1.4404	316 L
Spring	Stainless steel	1.4310	302

## ■ VALVE VERSION

<b>t</b>	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. Adjustable under operating conditions without medium escaping into the atmosphere.
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Valves can be delivered unset within a pressure range or set and sealed at the factory.

## ■ MEDIUM

<b>GF</b>	gaseous and liquid	Air, vapours, gases, liquids and - depending on safety valve version and seal - also for steam
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## ■ TYPE OF LIFTING MECHANISM

<b>0</b>	without lifting device
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## ■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN	10	15	20	25	32	40	50
<b>Inlet</b>	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
<b>Outlet</b>	3/8" (10)	■					
	1/2" (15)		■				
	3/4" (20)			■			
	1" (25)				■		
	1 1/4" (32)					■	
	1 1/2" (40)						■
2" (50)							■

## ■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

<b>f / f</b>	Standard	Female thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
<b>m / f</b>	On request	Male thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
<b>Against surcharge</b>			
<b>KLSDIN / KLS DIN</b>	On request	Clamp connection DIN / clamp connection DIN	DIN 32676 / DIN 32676

## ■ SEALS

<b>NBR</b>	Nitrile rubber (standard)	Elastomere flat seal 0,2 – 12 bar	-30°C to +130°C
<b>FKM</b>	Fluorocarbon	Elastomere flat seal 0,2 – 12 bar	-20°C to +200°C
<b>EPDM</b>	Ethylene propylene diene	Elastomere flat seal 0,2 – 12 bar	-50°C to +150°C
<b>PTFE</b>	Polytetrafluoroethylene	Flat seal 0,5 – 12 bar	-60°C to +225°C
If the seat seal is made of PTFE the O-rings of the body and setting spindle seal are made of FPM.			
<b>Against surcharge</b>			
<b>PTFE</b>	Polytetrafluoroethylene	Flat seal 12 – 20 bar	-60°C to +225°C

## ■ OPTIONS

Special versions on request.

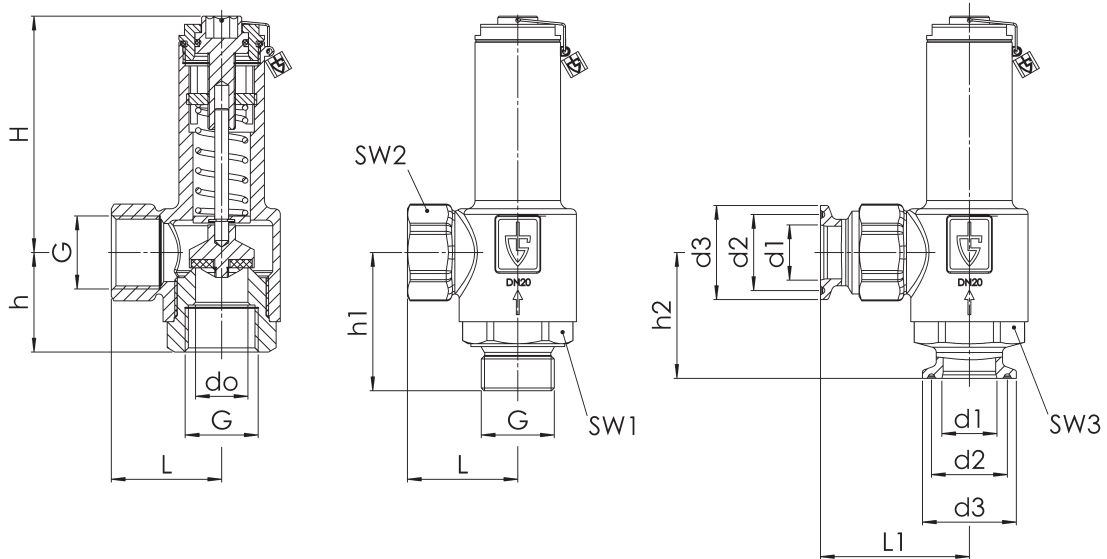
■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 417: Connection, installation dimensions, ranges of adjustment								
Nominal diameter	DN	10	15	20	25	32	40	50
Connection DIN EN ISO 228	G	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Outlet DIN EN ISO 228	G	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Installation dimensions in mm	L	30	34	40	46	50	61	67
	L1	41	44	54	57	61	75	82
	H	60	69	86	101	118	139	149
	h	29	33	36	67	52	60	66
	h1	42	49	50	67	71	85	91
	h2	41	46	46	61	63	76	80
	d1	10	16	20	26	32	38	50
	d2	27,5	27,5	27,5	43,5	43,5	43,5	56,5
	d3	34	34	34	50,5	50,5	50,5	64
	SW1	26	30	36	46	55	58	70
	SW2	24	27	32	41	50	65	70
	SW3	30	30	36	46	55	65	70
	do	10	13	19	25	30	38	50
	Weight	kg	0,3	0,4	0,7	1,2	1,9	2,5
Set pressure	bar	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20
Range of adjustment	bar	0,2 - 0,8 <sup>2</sup>	0,2 - 0,8 <sup>2</sup>	0,2 - 0,8 <sup>2</sup>	0,2 - 0,8 <sup>2</sup>	0,2 - 0,8 <sup>2</sup>	0,2 - 0,8 <sup>2</sup>	0,2 - 0,8 <sup>2</sup>
		0,5-2,5	0,5-2,5	0,5-2,5	0,5-2,5	0,5-2,5	0,5-2,5	0,5-2,5
		2-8	2-8	2-8	2-8	2-8	2-8	2-8
		2-12	2-12	2-12	2-12	2-12	2-12	2-12
		12-20 <sup>1</sup>	12-20 <sup>1</sup>	12-20 <sup>1</sup>	12-20 <sup>1</sup>	12-20 <sup>1</sup>	12-20 <sup>1</sup>	

<sup>1</sup>Against surcharge, with PTFE seal

<sup>2</sup> with PTFE flat seal only available from 0,5 bar

■ 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				
417	t	GF	0	20	f	f	20	20	NBR		2 - 8	5
417	t	GF	0	40	KLSDIN	f	40	40	PTFE		18,0	3
417	t	GF	0									
417	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 \_\_\_\_\_



Series 417: Kv values at 1 bar overpressure																																										
Nominal diameter DN	10						15						20						25						32						40						50					
	Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]			Steam [kg/h]											
	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20	0,2-0,8	2-8	12-20												
Set pressure bar	0,5-2,5	2-12	0,2-0,8	0,5-2,5	2-8	12-20	0,2-0,8	0,5-2,5	2-8	12-20	0,2-0,8	0,5-2,5	2-8	12-20	0,2-0,8	0,5-2,5	2-12	0,2-0,8	0,5-2,5	2-12	0,2-0,8	0,5-2,5	2-12	0,2-0,8	0,5-2,5	2-12	0,2-0,8	0,5-2,5	2-12													
0,2	18			41			138			156			468			726			1172																							
0,5	22	65		47	113		156	163		172	295		531	509		757	665		1265	1100																						
0,8	25	70		52	120		172	173		191	305		547	541		820	700		1359	1173																						
1		74			125			181			313			553			724			1222																						
1,5		81			135			200			345			615			798			1345																						
2		86	53	40	143	98	73	221	144	126	373	280	218	642	283	194	862	455	311	1451																						
2,5		93	60	45	157	104	79	235	161	141	384	302	244	619	301	218	940	510	349	1535	787	663																				
3			66	43		111	80		171	156		309	258		297	223		506	387		884	698																				
4			79	53		129	79		187	160		339	308		333	244		499	428		876	670																				
5			77	66		135	82		186	176		412	322		361	283		579	455		987	740																				
6			78	75		132	88		212	200		388	326		441	323		707	518		1145	859																				
7			84	81		118	93		225	198		275	298		429	363		740	635		1224	816																				
8			89	89		123	96		249	190		254	279		475	402		821	645		1284	916																				
9				89			98			193			250			441			707			1015																				
10				97			106			192			273			480			770			1002																				
11				94			106			189			262			472			833			1090																				
12			101	79		105	78		204	183		282	247		406	457		814	570		1179	987																				
13				84			68			174			189			489		610			1056																					
14				90			57			162			201			521		650			1125																					
15				95			54			123			213			552		590			1022																					
16				94			51			130			180			584		728			1261																					
17				99			46			110			142			615		768			1140																					
18				96			32			87			150			576		693			1399																					
19				101			28			61			105			604		606			1678																					
20				105			21			32			165			632		634			1537																					