

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"



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



0,5 – 20 bar

■ APPROVALS

European Pressure Equipment Directive

GOST-R

Requirements

PED 97/23/EC

Classification society

Germanischer Lloyd
Lloyd's Register EMEA
American Bureau of Shipping
Bureau Veritas

GL
LR EMEA
ABS
BV

■ MATERIALS

Component	Material	DIN EN	ASTM / AISI
Inlet body	Stainless steel	1.4401	AISI 316
Outlet body	Stainless steel	1.4408	ASTM A 351 CF-8M
Internal parts	Stainless steel	1.4401	AISI 316
Spring	Stainless steel	1.4310	AISI 301

■ 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. 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

GF	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

0	without lifting device
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

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

f / f	Standard	Female thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
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■ SEALS

NBR	Nitrile rubber (standard)	Elastomere flat seal 0,5 – 12 bar	-30°C to +130°C
FKM	Fluorocarbon	Elastomere flat seal 0,5 – 12 bar	-20°C to +200°C
PTFE	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.

Against surcharge

PTFE	Polytetrafluoroethylene	Flat seal 12 – 20 bar	-60°C to +225°C
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■ OPTIONS

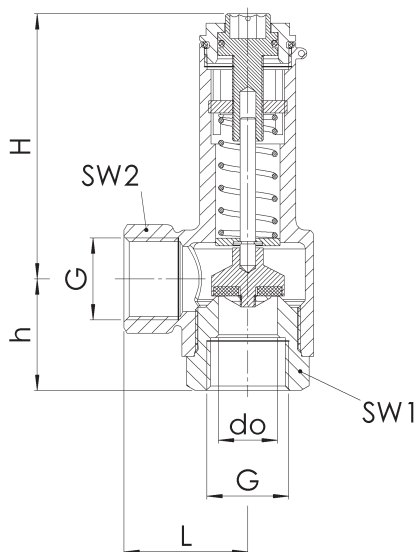
Special versions on request.

■ 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	27	30	33	40	45	50	60
	H	60	69	86	101	118	139	149
	h	26	30	35	41	45	51	60
	SW1	26	30	36	41	52	58	70
	SW2	24	27	32	46	50	65	70
	do	10	13	19	25	30	38	50
Weight	kg	0,3	0,4	0,7	1,2	1,9	2,5	3,8
Set pressure	bar	0,5 - 20	0,5 - 20	0,5 - 20	0,5 - 20	0,5 - 20	0,5 - 20	0,5 - 20
Range of adjustment	bar	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 ¹	12-20 ¹	12-20 ¹	12-20 ¹	12-20 ¹	12-20 ¹	12-20 ¹

¹Against surcharge, with PTFE seal

■ 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	f	f	40	40	PTFE		18,0	3
417	t	GF	0		f	f						
417	t	GF	0		f	f						

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 417: Kv values at 1 bar overpressure																						
Nominal diameter DN	10			15			20			25			32			40			50			
	Air [Nm³/h]			Air [Nm³/h]			Air [Nm³/h]			Air [Nm³/h]			Air [Nm³/h]			Air [Nm³/h]			Air [Nm³/h]			
Pressure range	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	
bar	2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		
Set pressure bar																						
0,5	83			147			209			375			717			847			1376			
1	95			158			228			390			808			899			1546			
1,5	101			173			257			433			901			1033			1734			
2	111	62	48	180	126	86	287	180	159	462	335	302	977	353	233	1104	552	426	1904	1001	788	
2,5	119	68	50	202	132	89	306	197	168	495	351	311	1031	361	257	1205	564	447	1953	1082	802	
3		75	51		143	95		226	188		376	322		369	272		577	481		1170	821	
4		83	62		166	101		239	213		423	341		417	311		601	527		1339	878	
5		95	80		169	105		233	242		466	361		459	352		726	566		1508	942	
6		101	90		173	111		269	250		402	380		502	397		893	597		1846	994	
7		106	96		150	118		303	257		398	391		549	437		994	764		2224	1050	
8		112	114		139	117		324	314		391	347		606	492		1113	910		2666	1123	
9			115			123			324			301			546			949			1187	
10			122			133			331			288			600			1023			1280	
11			121			138			339			274			569			1070			1358	
12			126	96		138	112		354	221		261	305		538	594		1095	682		1480	1237
13				109			103			206			291			625			758			1277
14				116			94			166			282			656			834			1388
15				120			85			140			269			687			911			1499
16				122			76			132			257			716			987			1609
17				124			57			115			245			737			954			1821
18				129			56			84			233			758			922			2033
19				134			44			50			220			779			889			2245
20				140			36			45			208			801			851			2357

Kv values at 1 bar overpressure																						
Nominal diameter DN	10			15			20			25			32			40			50			
	Water [m³/h]			Water [m³/h]			Water [m³/h]			Water [m³/h]			Water [m³/h]			Water [m³/h]			Water [m³/h]			
Pressure range	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	0,5-2,5	2-12	12-20	
bar	2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		
Set pressure bar																						
0,5	2,7			4,3			6,1			10,8			16,0			21,7			31,6			
1	3,0			4,6			6,5			11,9			16,7			23,3			35,6			
1,5	3,2			4,8			6,7			12,6			17,5			24,0			37,7			
2	3,4	1,9	1,6	5,0	2,2	1,8	6,9	4,5	3,7	13,0	8,5	4,2	18,1	7,6	6,2	25,2	10,9	8,8	40,6	24,3	17,9	
2,5	3,7	2,2	1,7	5,2	2,1	1,8	7,3	4,8	3,8	13,7	8,9	4,3	18,9	7,5	6,2	26,1	11,3	9,1	43,0	26,2	19,4	
3		2,3	1,9		1,9	1,8		5,2	4,1		9,3	4,3		7,4	6,1		11,8	9,3		28,2	21,1	
4		2,7	2,2		1,6	1,7		5,7	4,6		10,0	4,5		7,3	6,1		12,2	9,7		31,1	24,7	
5		2,9	2,5		1,4	1,6		6,5	5,1		10,4	4,6		7,2	6,0		12,5	10,3		34,7	28,9	
6		3,4	2,8		1,3	1,5		7,1	6,1		11,0	4,7		7,0	5,9		12,8	10,6		36,3	30,1	
7		3,6	2,9		1,1	1,5		7,9	6,5		11,2	5,0		6,7	5,8		13,7	11,9		41,1	31,7	
8		3,9	3,1		1,0	1,4		8,5	7,1		11,3	5,1		6,5	5,6		15,1	13,1		47,4	34,2	
9			3,2			1,4			7,3			5,3			5,5			14,3			37,5	
10			3,4			1,4			8,3			5,5			5,3			15,7			39,3	
11			3,5			1,4			9,1			5,8			5,2			17,2			42,4	
12			3,7	1,7		1,3	0,4		9,3	2,8		5,9	2,2		5,0	6,8		17,6	10,1		43,9	18,9
13				1,4			0,4			2,4			2,2			6,5			10,3			21,2
14				1,3			0,5			2,2			1,9			6,3			10,5			24,1
15				1,1			0,5			1,7			1,6			6,1			10,6			25,7
16				0,8			0,5			1,4			1,3			6,0			10,9			27,6
17				0,6			0,5			1,1			1,1			5,8			11,0			29,3
18				0,4			0,6			0,9			1,0			5,6			11,3			31,8
19				0,2			0,6			0,7			0,8			5,1			11,4			34,6
20				0,2			0,6			0,7			0,7			5,0			11,5			36,6

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]			
Pressure range bar	0,5-2,5	2-12		0,5-2,5	2-12		0,5-2,5	2-12		0,5-2,5	2-12		0,5-2,5	2-12		0,5-2,5	2-12		0,5-2,5	2-12		
	2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		2-8	12-20		
Set pressure bar																						
0,5	65			113			163			295			509			665			1100			
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	52		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		1282	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