

Safety valves made of stainless steel, angle-type with threaded connections

→ Series 420



■ SUITABLE FOR

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

■ EXAMPLES OF USE

For the protection of:

- pressure tanks and -systems for neutral / non-neutral vapours, gases and liquids
 - steam boilers and steam plants
- Please observe plant-specific regulations and use of appropriate valve version and sealing material.

- chemical plants, biogas plants
- process technology
- desalination plants
- process equipment construction and medical technology
- shipbuilding industry and marine equipment
- secondary areas in the food-, beverage-, pharmaceutical- and cosmetics-industries
- offshore-applications
- general applications with screwed pipe connections

Safety valves are set and sealed at the factory.

■ APPROVALS

TÜV-Type test approval 2069	D/G, F, F/K/S ¹
EC type examination	S/G, L, F/K/S ¹
GOST-R	D/G (S/G), F (L), F/K/S ¹

Requirements

AD 2000 Data sheet A2
TRD 421
TRB 801 No. 22 and No. 23¹
DIN EN ISO 4126-1
PED 97/23/EC

Classification society

Germanischer Lloyd	GL
Lloyd's Register EMEA	LR EMEA
American Bureau of Shipping	ABS
Det Norske Veritas	DNV



■ MATERIAL



■ SPECIFICATION



1/4" – 3/8"



– 60°C to + 400°C
depending on version



0,5 – 50 bar
depending on version

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Stainless steel	1.4404	316 L
Outlet body	Stainless steel	1.4404	316 L
Internal parts	Stainless steel	1.4404	316 L
Spring	Stainless steel	1.4310	302
Metallic bellows (optional)	Stainless steel	1.4571	316 Ti
PTFE-bellows (optional)	PTFE	PTFE	PTFE

¹only for versions with bellows



■ VALVE VERSION

t	gastight version of spring housing	for neutral and non-neutral media without counter pressure. The environment is protected from being affected by the medium.
tb	gastight version with bellows	for neutral and non-neutral media. spring and moving parts as the environment are protected from being affected by the medium. Version of bellows depend on set pressure: DN8: 0,5 to 9 bar PTFE bellows; 9,1 to 50 bar stainless steel bellows DN10: 0,5 to 7 bar PTFE bellows; 7,1 to 50 bar stainless steel bellows

■ MEDIUM

GF	gaseous and liquid	Air, vapours, gases, liquids and - depending on seal - also for steam Only for steam boilers <10l and d ₀ minimum 6mm, i.e. only DN10 usable.
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■ TYPE OF LIFTING MECHANISM

L	Lifting lever
0	without lifting device

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		8			10		
Inlet		1/4" (8)	SV (8mm)	SV (10mm)	3/8" (10)	SV (10mm)	SV (12mm)
Outlet	3/8" (10)	■	■	■	■	■	■
	SV (12mm)	■	■	■	■	■	■

■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

m / f	Standard	Male thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
Against surcharge			
SV / f		Cutting ring threaded connection / female thread BSP-P	EN ISO 8434-1 / DIN EN ISO 228-1
SV / SV		Cutting ring threaded connection / Cutting ring threaded connection	EN ISO 8434-1 / EN ISO 8434-1

■ SEALS

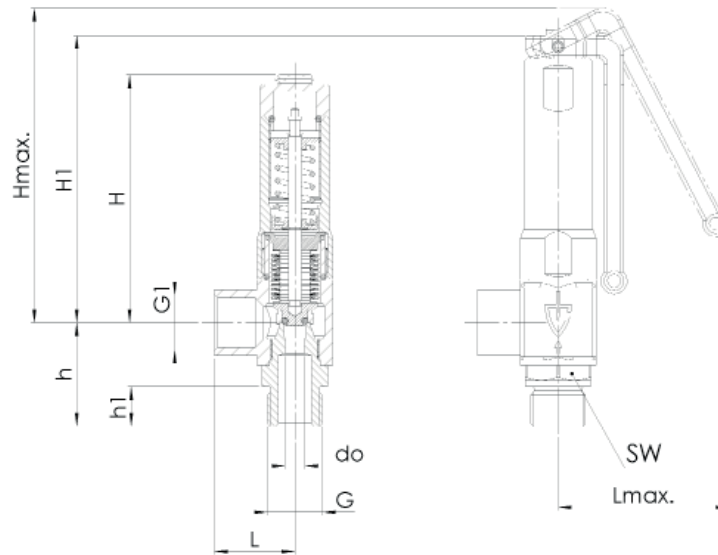
EPDM	Ethylene propylene diene	Elastomere moulded seal with metallic support	-40°C to +170°C
FKM	Fluorcarbon	Elastomere moulded seal with metallic support	-20°C to +200°C
Against surcharge			
FFKM	Perfluorinated rubber	Elastomere moulded seal with metallic support	-10°C to +260°C
MD	Metal-to-metal sealing	Flat seal	-60°C to +400°C *
Available end of 2013 In the case of seat sealing MD the o-rings for external sealing of individual sections are made of FKM.			* version with PTFE bellows only usable upto +260°C.

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 420: Connection, installation dimensions, ranges of adjustment			
Nominal diameter	DN	8	10
Connection DIN EN ISO 228	G	1/4" (8)	3/8" (10)
Outlet DIN EN ISO 228	G1	3/8" (10)	3/8" (10)
Installation dimensions in mm	L	25	25
	Lmax	45	45
	H	75	75
	H1	87	87
	Hmax	93	93
	h	32	32
	h1	12	12
	SW	20	20
Weight	do	4,5	6
	kg	0,31 / 0,36*	0,23 / 0,28*
Range of adjustment	bar	0,5-50	0,5-50

* Weight indications for valve with lever

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
420	tb	GF	L	8	m	f	8	10	FFKM		5,5	2
420	t	GF	O	10	SV	f	10mm	10	EPDM		22	1
420		GF										
420		GF										

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 420: Blowing-off rates at approx. 10% above set pressure

Nominal diameter DN		8			10		
Set pressure bar		I	II	III	I	II	III
Air I	0,5	11	-	0,35	16	13	2,80
	1	15	-	0,48	24	19	3,28
	1,5	20	-	0,58	32	25	3,69
Steam II	2	24	-	0,67	40	32	4,11
	2,5	28	-	0,75	47	37	4,45
	3	33	-	0,82	55	43	4,76
Water III	3,5	37	-	0,89	62	48	5,06
	4	41	-	0,95	69	53	5,34
	4,5	45	-	1,01	76	58	5,60
m ³ /h	5	49	-	1,06	83	64	5,86
	5,5	53	-	1,12	90	69	6,10
	6	58	-	1,16	96	74	6,33
	6,5	62	-	1,21	103	79	6,56
	7	66	-	1,26	110	85	6,78
	7,5	70	-	1,30	117	90	6,99
	8	74	-	1,35	124	95	7,19
	8,5	78	-	1,39	131	100	7,39
	9	83	-	1,43	138	105	7,59
	9,5	87	-	1,47	145	111	7,78
	10	91	-	1,50	152	116	7,96
	11	99	-	1,58	166	126	8,32
	12	108	-	1,65	180	136	8,66
	13	116	-	1,71	194	147	8,99
	14	124	-	1,78	208	157	9,31
	15	133	-	1,84	222	167	9,61
	16	141	-	1,90	236	178	9,91
	17	149	-	1,96	250	188	10,20
	18	158	-	2,02	264	198	10,48
	19	166	-	2,07	278	208	10,75
	20	174	-	2,13	292	218	11,02
	21	183	-	2,18	306	229	11,28
	22	191	-	2,23	320	239	11,53
	23	199	-	2,28	334	249	11,78
	24	208	-	2,33	348	260	12,03
	25	216	-	2,38	362	270	12,27
	26	224	-	2,43	376	280	12,50
	27	233	-	2,47	390	291	12,73
	28	241	-	2,52	404	301	12,96
	29	249	-	2,56	418	312	13,18
	30	258	-	2,60	432	321	13,40
	32	274	-	2,69	460	342	13,82
	34	291	-	2,77	488	363	14,24
	36	308	-	2,85	515	384	14,64
	38	324	-	2,93	543	404	15,03
	40	341	-	3,01	571	425	15,41
	42	358	-	3,08	599	446	15,79
	44	374	-	3,15	627	467	16,15
	46	391	-	3,23	655	488	16,51
	48	408	-	3,30	683	509	16,85
	50	424	-	3,36	711	530	17,19