→ Series 420

420

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



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.

MATERIAL

SPECIFICATION

1/4“ – 3/8“	– 60°C to + 400°C depending on version	0,5 – 50 bar depending on version

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. 23[1]
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

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

[1]only 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 dependign 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.

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

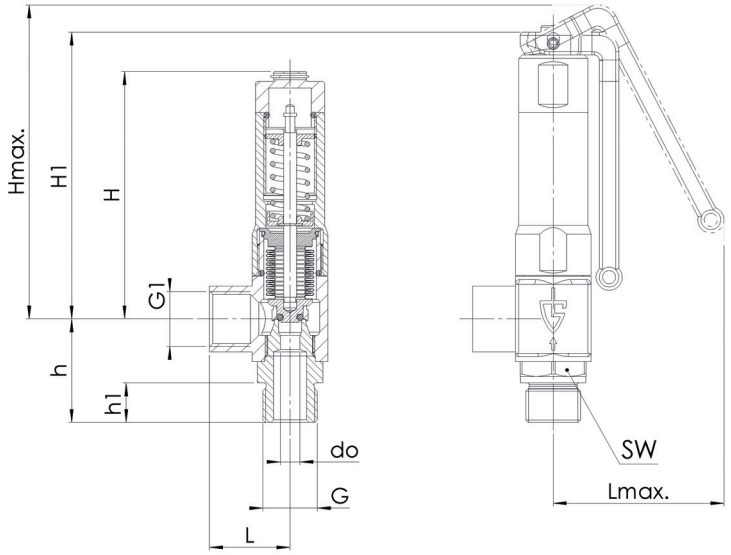
EPDM	Ethylene propylene diene	Elastomere moulded seal with metallic support	–40°C to +170°C
FKM	Fluorcarbon	Elastomere moulded seal with metallic support	–20°C to +200°C
Against surcharge			
FFKM	Perfluorinated rubber	Elastomere moulded seal with metallic support	–10°C to +260°C

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
	do	4,5	6
Weight	**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**	*0*	*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 10% above set pressure

Nominal diameter DN		8			10		
Set pressure bar		I	II	III	I	II	III
	0,5	11	-	0,35	16	13	2,80
Air l	1	15	-	0,48	24	19	3,28
Nm³/h	1,5	20	-	0,58	32	25	3,69
	2	24	-	0,67	40	32	4,11
Steam II	2,5	28	-	0,75	47	37	4,45
kg/h	3	33	-	0,82	55	43	4,76
	3,5	37	-	0,89	62	48	5,06
Water III	4	41	-	0,95	69	53	5,34
m³/h	4,5	45	-	1,01	76	58	5,60
	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