

**452bGL**

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

→ **Series 452bGL**



■ SUITABLE FOR

Air, gases and vapours	neutral and non-neutral	
Steam		
Solar heating systems		

■ EXAMPLES OF USE

For the protection of:

- pressure tanks/-systems for neutral / non-neutral vapours and gases
- boilers
- closed-circuit solar systems with temperatures > 120°C and for all static heights.
- district heating systems with temperatures >120°C
- district heating systems primary side
- solar plants in building and industrial technology
- solar power stations
- steam- and industrial boiler plants

**Safety valves are set and sealed at the factory.**

■ APPROVALS

TÜV Type test approval 2007	D/G
EC type examination	S/G
TR ZU 032/2013 - TR ZU 010/2011	D/G (S/G)
<b>Requirements</b>	
AD 2000 Data sheet A2	DIN EN 12976
TRD 421	DIN EN 12977
AGFW 505	DIN EN ISO 4126-1
DIN 4747 Part 1	PED 2014/68/EU
DIN 4757 Part 1 and Part 2	

**Classification society**

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



■ MATERIAL



■ SPECIFICATION



DN 40 and DN 50 – 60°C to + 400°C depending on version 0,5 – 25 bar

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Stainless steel	1.4408	CF8M
Outlet body	Stainless steel	1.4408	CF8M
Internal parts	Stainless steel	1.4404	316 L
Spring	Stainless steel	1.4310	302
Bellows	Stainless steel	1.4571	316 Ti

#### ■ VALVE VERSION

<b>b</b>	with bellows	for neutral and non-neutral media and/or counter pressure up to 4 bar. Spring, moving parts and the environment are protected from being affected by the medium.
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#### ■ MEDIUM

<b>G</b>	gaseous	Air, vapours, gases and steam
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#### ■ TYPE OF LIFTING MECHANISM

<b>L</b>	Standard with lifting lever
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#### ■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		40	50
Inlet		40	50
Outlet	65	■	
	80		■

#### ■ TYPE OF CONNECTION INLET / OUTLET FLANGE CONNECTIONS

<b>FL / FL</b>	Standard	Flange connection / flange connection	DIN EN 1092 / DIN EN 1092
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#### ■ SEALS

<b>EPDM</b>	Ethylene propylene diene	Elastomere moulded seal with metallic support	-40°C to +170°C
<b>PTFE</b>	Polytetrafluoroethylene	Flat seal	-60°C to +225°C
<b>Against surcharge</b>			
<b>FFKM</b>	Perfluorinated rubber	Elastomere moulded seal with metallic support	-10°C to +260°C
<b>MD</b>	Metal-to-metal sealing	Flat seal	-60°C to +400°C

#### ■ OPTIONS

Special versions on request.

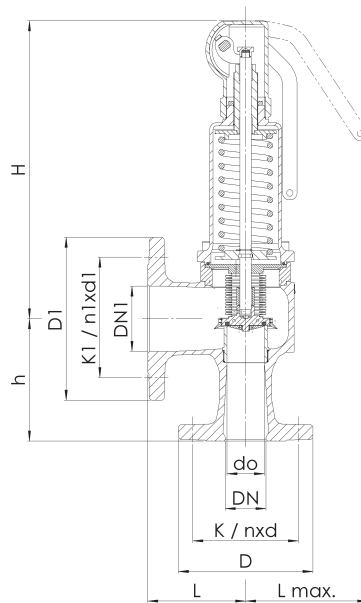
##### Against surcharge

Connection for condensate pipe G 1/4" with sealing plug	Order description: <b>AKL</b>
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■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 452bGL: Connection, installation dimensions, ranges of adjustment			
Nominal diameter	DN	40	50
Connection DIN EN 1092	DN / PN	40 / 40	50 / 40
Outlet DIN EN 1092	DN / PN	65 / 16	80 / 16
Installation dimensions in mm	L	115	120
	Lmax.	150	150
	H	345	345
	h	140	150
	D	150	165
	D1	185	200
	K / nxd	110 / 4x18	125 / 4x18
	K1 / n1xd1	145 / 4x18	160 / 8x18
	do	37	46
Weight	kg	17	19
Range of adjustment	bar	0,5-25	0,5-25

■ 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				
452	b	G	L	50	FL	FL	50	80	EPDM		5,0	2
452	b	G	L	40	FL	FL	40	65	PTFE	AKL	16,0	3
452	b	G	L		FL	FL						
452	b	G	L		FL	FL						

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 452bGL: Blowing-off rates at 10% above set pressure

Nominal diameter DN		40		50	
Set pressure bar		I	II	I	II
Air I	0,5	667	503	995	750
	1	983	785	1472	1176
Nm <sup>3</sup> /h	1,5	1299	1032	1948	1547
	2	1615	1273	2461	1939
Steam II	2,5	1926	1510	2926	2294
	3	2208	1726	3404	2661
kg/h	3,5	2491	1937	3839	2985
	4	2773	2151	4275	3315
	4,5	3056	2364	4710	3643
	5	3338	2575	5146	3970
	5,5	3621	2789	5581	4299
	6	3903	3003	6016	4629
	6,5	4186	3212	6452	4951
	7	4468	3420	6887	5272
	7,5	4751	3632	7323	5598
	8	5033	3843	7758	5923
	8,5	5316	4053	8194	6247
	9	5598	4263	8629	6570
	9,5	5881	4472	9064	6893
	10	6163	4681	9500	7215
	11	6728	5097	10371	7856
	12	7293	5511	11241	8494
	13	7858	5928	12112	9138
	14	8423	6348	12983	9784
	15	8988	6763	13854	10425
	16	9553	7181	14725	11069
	17	10118	7586	15595	11693
	18	10683	8002	16466	12334
	19	11248	8416	17337	12973
	20	11813	8835	18208	13617
	21	12378	9253	19079	14261
	22	12943	9670	19949	14905
	23	13508	10087	20820	15547
	24	14073	10503	21691	16190
	25	14638	10920	22562	16831