

→ Series 645



■ SUITABLE FOR

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

■ EXAMPLES OF USE

For the protection of:

- Pressure-vessels/-systems for neutral / non-neutral vapours, gases and liquids
- Steam boilers and steam plants taking into account the plant-specific regulations and making use of the suitable valve versions and sealing materials.

- Mechanical engineering
- pump protection
- Pressure booster systems water- / air-side
- cooling-/chilling-systems
- Steam- and industrial-boiler systems

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

■ APPROVALS

EC type examination	S/G, L
Type approval WRAS	
Type approval ACS	
<b>Requirements</b>	
	AD 2000 Data sheet A2 TRD 421 DIN EN ISO 4126-1 PED 97/23/EC
<b>Classification society</b>	
	Germanischer Lloyd Lloyd's Register EMEA Det Norske Veritas
	GL LR EMEA DNV



■ MATERIAL



■ SPECIFICATION



1/2" – 1"  
1 1/4" – 2"  
planned



– 50°C to + 200°C  
depending on version



0,5 – 16 bar

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Gunmetal	CC499K	CC499K
Outlet body	Gunmetal	CC499K	CC499K
Internal parts	Brass	CW617N	CW617N
Internal wetted parts	Dezincification resistant brass	CW602N	CW602N
Spring	Stainless steel	1.4310	302

#### ■ VALVE VERSION

<b>m</b>	Standard with diaphragm	The diaphragm prevents the medium entering into the spring housing and protects moving parts from being affected by the medium.
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#### ■ MEDIUM

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

<b>L</b>	Lifting lever
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#### ■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		15	20	25
Inlet		1/2" (15)	3/4" (20)	1" (25)
Outlet	3/4" (20)	■		
	1" (25)		■	
	1 1/4" (32)			■

#### ■ 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
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#### ■ SEAT SEALS / DIAPHRAGMS

<b>PTFE / EPDM</b>	Polytetrafluorethylen / Ethylen-Propylene-Diene (Standard)	Flat seal and moulded diaphragm	-50°C to +200°C
<b>PTFE / FKM</b>	Polytetrafluorethylen / Fluorcarbon	Flat seal and moulded diaphragm	-30°C to +200°C
<b>FKM / FKM</b>	Fluorcarbon / Fluorcarbon	Elastomere seals and moulded diaphragm	-20°C to +200°C

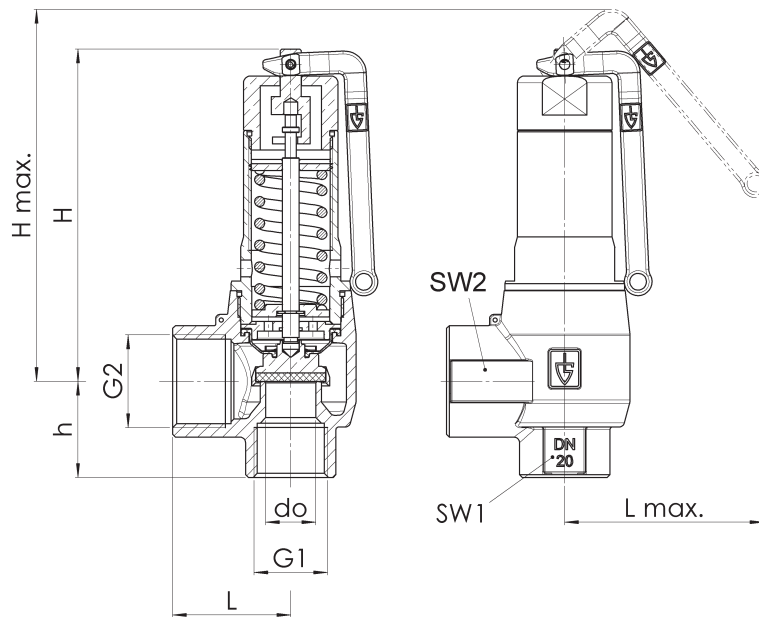
#### ■ OPTIONS

Special versions on request.
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■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 645: Connection, installation dimensions, ranges of adjustment				
Nominal diameter	DN	15	20	25
Connection DIN EN ISO 228	G	1/2" (15)	3/4" (20)	1" (25)
Outlet DIN EN ISO 228	G	3/4" (20)	1" (25)	1 1/4" (32)
Installation dimensions in mm	L	36	43	47
	Lmax	63	78	100
	H	90	115	143
	h	30	35	37
	Hmax	102	133	145
	SW1	27	34	41
	SW2	34	41	50
	do	13	18	23
Weight	kg	0,5	0,9	1,6
Range of adjustment	bar	0,5 - 16	0,5 - 16	0,5 - 16

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal / diaphragm	Options	Set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
645	m	GF	L	15	f	f	15	20	PTFE/EPDM		6	2
645	m	GF	L	25	f	f	25	32	FKM/FKM		2	4
645	m	GF	L		f	f						
645	m	GF	L		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 645: Blowing-off rates at approx. 10% above set pressure														
Nominal diameter DN		15				20				25				
Set pressure bar		I	II	III	IV	I	II	III	IV	I	II	III	IV	
Air I	0,5	77	58	2,3	37	141	106	4,3	68	208	157	6,6	101	
	1	114	91	3,0	57	222	177	5,8	112	315	251	8,9	158	
	Nm <sup>3</sup> /h	2	188	148	4,3	91	366	288	8,3	177	525	413	12,6	254
Steam II	3	256	200	5,3	121	499	390	10,1	235	729	570	15,4	344	
	4	327	253	6,1	151	626	486	11,7	290	916	710	17,7	423	
	kg/h	5	393	303	6,8	178	754	582	13,1	342	1103	851	19,8	500
Water III	6	460	354	7,5	206	882	678	14,3	394	1289	992	21,7	576	
	7	526	403	8,1	232	1009	773	15,5	445	1476	1130	23,5	650	
	m <sup>3</sup> /h	8	593	453	8,6	258	1137	868	16,5	495	1662	1269	25,1	724
Heating IV	9	660	502	9,1	283	1265	963	17,5	543	1849	1408	26,6	795	
	kW	10	726	551	9,6	309	1392	1057	18,5	592	2036	1546	28,1	865
	11	793	601	10,1	335	1520	1151	19,4	642	2222	1683	29,4	938	
	12	859	649	10,6	359	1647	1245	20,2	689	2409	1820	30,7	1008	
	13	926	698	11,0	385	1775	1339	21,1	737	2595	1958	32,0	1078	
	14	992	748	11,4	408	1903	1434	21,9	783	2782	2097	33,2	1145	
	15	1059	797	11,8	433	2030	1528	22,6	830	2969	2234	34,4	1213	
	16	1126	846	12,2	457	2158	1622	23,4	877	3155	2372	35,5	1282	