

→ Series 851bG

851bG

Safety valves made of
gunmetal, angle-type with
threaded connections



■ MATERIAL



SPECIFICATION



1/2" – 2"



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



0,5 – 50 bar

■ 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
- steam- and industrial boiler plants

Safety valves are set and sealed at the factory.

■ APPROVALS

TÜV Type test approval 666 D/G

EU type examination S/G

TR ZU 032/2013 - TR ZU 010/2011 D/G (S/G)

Requirements

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

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

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Gunmetal	CC499K	CC499K
Outlet body	Gunmetal	CC499K	CC499K
Internal parts	Brass	CW617N	CW617N
Spring	Stainless steel	1.4310	302
Bellows	Bronze	CW452K	C51900

Series 851bG ■ VALVE VERSION

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

G	gaseous	Air, vapours, gases and steam
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■ TYPE OF LIFTING MECHANISM

K	Standard with twist-type lifting mechanism
L	Lifting lever

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		15	20	25	32	
Inlet		1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40) 2" (50)
Outlet	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
m / f	On request	Male thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
Against surcharge			
BSP-Tf / f		Female thread BSP-T / Female thread BSP-P	DIN EN 10226, ISO 7-1 / DIN EN ISO 228-1
BSP-Tm / f		Male thread BSP-T / Female thread BSP-P	DIN EN 10226, ISO 7-1 / DIN EN ISO 228-1
Further connection types available on request.			

■ SEALS

EPDM	Ethylene propylene diene	Elastomere moulded seal with metallic support up to 25 bar	-40°C to +170°C
PTFE	Polytetrafluoroethylene	Flat seal up to 25 bar	-60°C to +225°C
PTFE+Kohle	Polytetrafluoroethylene + carbon	Flat seal from 25 bar	-60°C to +225°C
Against surcharge			
FFKM	Perfluorinated rubber	Elastomere moulded seal with metallic support up to 25 bar	-10°C to +225°C
MD	Metal-to-metal sealing	Flat seal	-60°C to +225°C

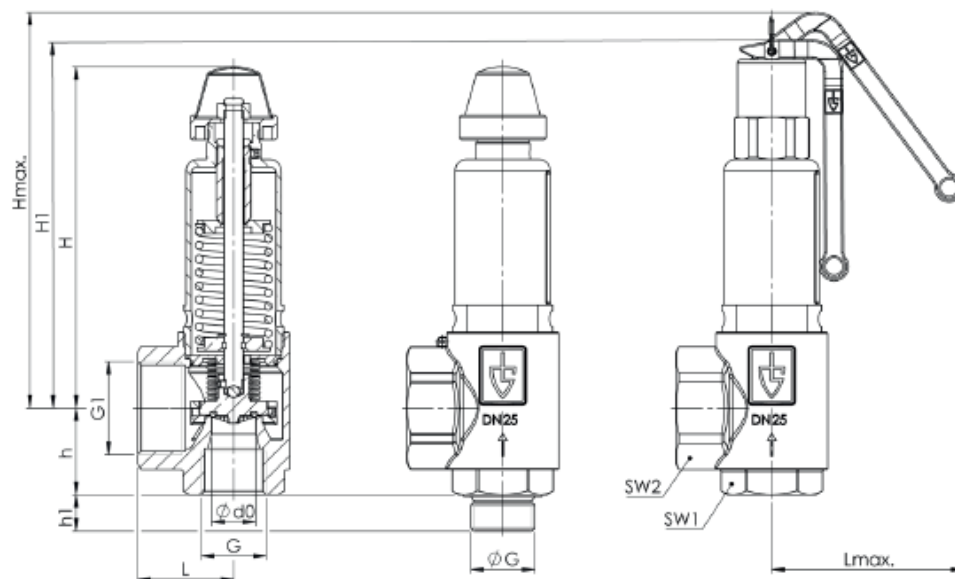
■ OPTIONS

Special versions on request.

NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 851bG: Connection, installation dimensions, ranges of adjustment								
Nominal diameter	DN	15	20	25	32	40	50	63
Connection DIN EN ISO 228	G	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)	2 1/2" (63)
Outlet DIN EN ISO 228	G1	1" (25)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)	2" (50)	2" (50)
Installation dimensions in mm	L	40	40	43	50	61	61	61
	Lmax	65	65	91	92	92	92	92
	H	77	131	138	178	241	241	241
	H1	91	149	158	192	264	264	264
	Hmax	103	164	173	207	277	277	277
	h	30	30	39	45	55	69	74
	h1	15	15	16	18	20	23	25
	SW1	30	30	36	46	55	55	70
	SW2	40	40	50	58	70	70	70
	d0	15,8	15,8	18	23	30,3	30,3	30,3
Weight	kg	0,4	0,8	1,0	1,8	4,0	4,0	4,0
Range of adjustment	bar	0,5-25	25,1-50	0,5-50	0,5-50	0,5-50	0,5-50	0,5-50

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				
851	b	G	K	20	m	f	20	32	PTFE		4,5	2
851	b	G	L	32	f	f	40	50	MD		10,0	1
851	b	G										
851	b	G										

■ CAPACITY TABLE ACC. TO ISO 4126-1 / AD2000 A2

Series 851bG: Blowing-off rates at 10% above set pressure									
Nominal diameter DN		15		20		25		32	
Set pressure bar		I	II	I	II	I	II	I	II
Air I	0,5	56	42	127	96	199	150	353	266
	1	88	70	189	151	291	232	515	411
Nm ³ /h	1,5	113	90	252	200	390	309	683	542
	2	141	111	316	249	489	385	832	656
Steam II	2,5	165	129	383	300	583	457	1012	793
	3	189	148	447	349	681	532	1182	924
kg/h	3,5	214	166	504	392	768	597	1333	1036
	4	238	184	561	435	855	663	1484	1151
	4,5	262	203	618	478	942	729	1635	1265
	5	286	221	675	521	1029	794	1786	1378
	5,5	310	239	732	564	1116	860	1937	1492
	6	335	257	790	608	1203	926	2088	1607
	6,5	359	275	847	650	1290	990	2239	1719
	7	383	293	904	692	1377	1054	2390	1830
	7,5	407	311	961	735	1464	1119	2542	1943
	8	431	329	1018	777	1552	1184	2693	2056
	8,5	456	347	1075	820	1639	1249	2844	2168
	9	480	365	1132	862	1726	1314	2995	2281
	9,5	504	383	1190	905	1813	1379	3146	2392
	10	528	401	1247	947	1900	1443	3297	2504
	11	577	437	1361	1031	2074	1571	3599	2727
	12	625	472	1475	1115	2248	1699	3902	2948
	13	674	508	1590	1199	2422	1827	4204	3172
	14	722	544	1704	1284	2596	1957	4506	3396
	15	770	580	1818	1368	2771	2085	4808	3618
	16	819	616	1932	1453	2945	2214	5111	3842
	17	867	650	2047	1535	3119	2339	5413	4059
	18	916	686	2161	1619	3293	2467	5715	4281
	19	964	721	2275	1703	3467	2594	6017	4503
	20	1013	757	2390	1787	3641	2723	6320	4726
	21	1061	793	2504	1872	3816	2852	6622	4950
	22	1109	829	2618	1956	3990	2981	6924	5173
	23	1158	865	2732	2040	4164	3109	7226	5396
	24	1206	900	2847	2125	4338	3238	7529	5619
	25	1255	936	2961	2209	4512	3366	7831	5842
	26	1303	-	3075	-	4686	-	8133	-
	27	1352	-	3190	-	4860	-	8435	-
	28	1400	-	3304	-	5035	-	8738	-
	29	1449	-	3418	-	5209	-	9040	-
	30	1497	-	3532	-	5383	-	9342	-
	32	1594	-	3761	-	5731	-	9947	-
	34	1691	-	3990	-	6080	-	10551	-
	36	1788	-	4218	-	6428	-	11156	-
	38	1884	-	4447	-	6776	-	11760	-
	40	1981	-	4675	-	7124	-	12365	-
	42	2078	-	4904	-	7473	-	12969	-
	44	2175	-	5132	-	7821	-	13574	-
	46	2272	-	5361	-	8169	-	14178	-
	48	2369	-	5589	-	8518	-	14783	-
	50	2466	-	5818	-	8866	-	15387	-