

→ **Series 851bH**

**851bH**

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



■ SUITABLE FOR

Hot water 

■ EXAMPLES OF USE

- For the protection of:
- thermostatically protected closed-circuit water heating systems with flow temperatures of up to 120°C for all static heights or rated output above 350 kW according to TRD 721, DIN 4751 and DIN EN 12828. Should the thermostatic limiting and control unit fail, the safety valve has to blow-off the total heating output of the boiler as hot water and steam.
  - Closed-circuit solar heating plants according DIN 4757-1 and 2 with flow temperatures up to 120°C for all static heights.
  - district heating sub-stations, district heating building substations and domestic systems suitable for connection to a hot water district heating network according to DIN 4747-1 and AGFW 505.
- heating systems for building technology and industrial applications
  - co-generation plants (CHP)
  - biogas plants
  - district heating transfer stations, building sub-stations
  - solar plants
- Safety valves are set and sealed at the factory.**



■ MATERIAL



■ SPECIFICATION



1/2" – 2"



– 10°C to + 120°C



0,5 – 25 bar

■ APPROVALS

TÜV Type test approval 665	D/G/H
EC type examination	D/G/H
TR ZU 032/2013 - TR ZU 010/2011	D/G/H
<b>Requirements</b>	
TRD 721	DIN 4757 Part 1 and Part 2
AGFW 505	DIN EN 12828
DIN 4751 Part 2	DIN EN ISO 4126-1
DIN 4747 Part 1	PED 2014/68/EU
<b>Classification society</b>	
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

■ 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

### ■ 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.
----------	--------------	---

### ■ MEDIUM

<b>H</b>	Hot water	Flow temperature ≤ 120°C in water heating systems
----------	-----------	---

### ■ TYPE OF LIFTING MECHANISM

<b>K</b>	Standard with twist-type lifting mechanism	
<b>L</b>	Lifting lever	

### ■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN	15	20	25	32		
<b>Inlet</b>	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
<b>Outlet</b>	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

<b>f / f</b>	Standard	Female thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
<b>m / f</b>	On request	Male thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
<b>Against surcharge</b>			
<b>BSP-Tm / f</b>		Male thread BSP-T / Female thread BSP-P	DIN EN 10226, ISO 7-1 / DIN EN ISO 228-1
<b>Further connection types available on request</b>			

### ■ SEALS

<b>EPDM</b>	Ethylene propylene diene	Elastomere moulded seal with metallic support up to 25 bar	-10°C to +120°C
-------------	--------------------------	--	-----------------

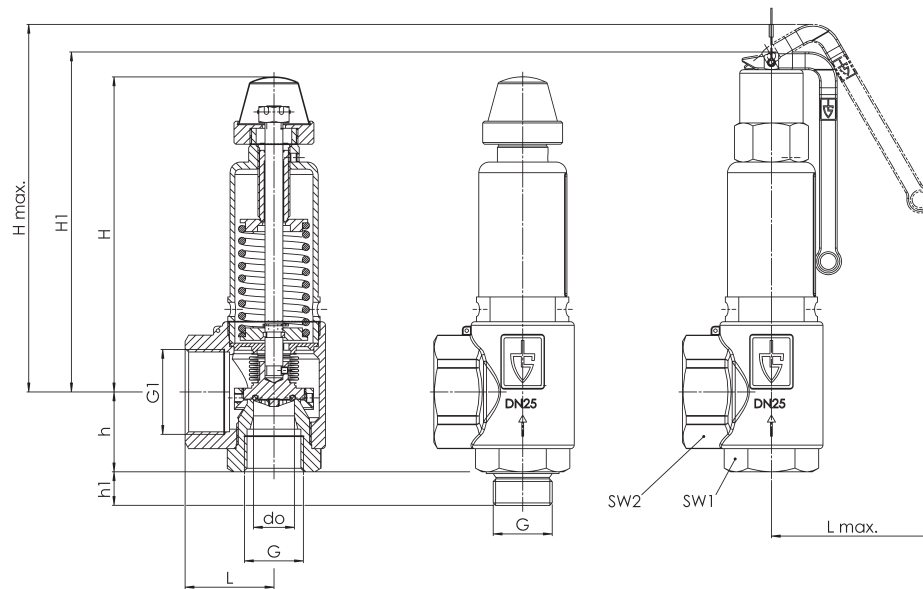
### ■ OPTIONS

Special versions on request.
------------------------------

## NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

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

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 851bH: 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	
Heating I	0,5	27	42	62	96	96	150	171	266	
	1	44	69	95	151	146	232	258	411	
kW	1,5	56	90	124	200	192	309	336	542	
	2	68	111	152	249	236	385	401	656	
Steam II	2,5	79	129	182	300	277	457	481	793	
	3	89	148	210	349	320	532	555	924	
kg/h	3,5	99	166	234	392	357	597	619	1036	
	4	109	184	258	435	393	663	682	1151	
	4,5	119	203	282	478	430	729	746	1265	
	5	129	221	305	521	465	794	808	1378	
	5,5	139	239	329	564	501	860	870	1492	
	6	149	257	352	608	537	926	931	1607	
	6,5	159	275	375	650	571	990	992	1719	
	7	168	293	397	692	605	1054	1051	1830	
	7,5	178	311	420	735	640	1119	1111	1943	
	8	187	329	442	777	674	1184	1170	2056	
	8,5	197	347	465	820	708	1249	1229	2168	
	9	206	365	487	862	742	1314	1287	2281	
	9,5	215	383	508	905	775	1379	1345	2392	
	10	225	401	530	947	808	1443	1402	2504	
	11	243	437	573	1031	873	1571	1516	2727	
	12	261	472	615	1115	938	1699	1628	2948	
	13	279	508	658	1199	1002	1827	1739	3172	
	14	296	544	699	1284	1066	1957	1849	3396	
	15	314	580	740	1368	1127	2085	1957	3618	
	16	331	616	781	1453	1190	2214	2065	3842	
	17	348	650	820	1535	1250	2339	2169	4059	
	18	364	686	860	1619	1311	2467	2274	4281	
	19	381	721	899	1703	1370	2594	2378	4503	
	20	398	757	938	1787	1430	2723	2482	4726	
	21	414	793	978	1872	1490	2852	2586	4950	
	22	431	829	1017	1956	1549	2981	2689	5173	
	23	447	865	1055	2040	1608	3109	2791	5396	
	24	463	900	1093	2125	1666	3238	2891	5619	
	25	479	936	1131	2209	1723	3366	2990	5842	

In order to achieve the highest possible heating output, up to three valves per system can be installed.

To protect indirectly heated heat generators in accordance with DIN 4751 Part 2 the safety valves have to be rated for the flow rate of the expansion water. For the valid blow-off capacities in m<sup>3</sup>/h water see capacity chart **851bHF on datasheet 10.9**