

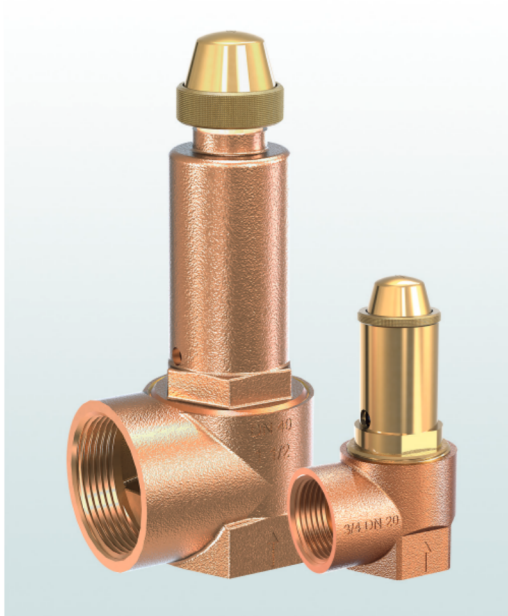
# Type test approved safety valves angle-type for industrial applications

3.4

**652**

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

## → Series 652



### ■ SUITABLE FOR

Liquids	neutral	
Air, gases and vapours	neutral	
Steam		

### ■ EXAMPLES OF USE

For the protection of:

- pressure tanks and systems for water and neutral liquids
- pressure tanks and systems for air, neutral gases and vapours
- steam boiler Cat.I < 10 liter up to 3 bar

Please observe plant-specific regulations and use of appropriate valve version and sealing material.

- pump protection
- pressure booster plants water-/air-side
- cooling-/chilling-systems
- mini steam generators

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



### ■ MATERIAL



### ■ SPECIFICATION



1/2" – 2"



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



1,0 – 16 bar

### ■ APPROVALS

TÜV-Type test approval 293, 312	F, D/G
EU type examination	L, S/G
KGS	G
TR ZU 032/2013 - TR ZU 010/2011	F (L), D/G (S/G)
<b>Requirements</b>	
AD 2000 Data sheet A2 TRD 421 DIN EN ISO 4126-1	PED 2014/68/EU KGS AA 319

### 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	Spring steel with anti-rust protection	1.1200	ASTM A228

Series 652 ■ VALVE VERSION

<b>s</b>	non-gastight version of spring housing	for neutral, gaseous media without counter pressure.
<b>m</b>	with diaphragm	for neutral liquids and liquids in cooling circuits without counter pressure. Spring, moving parts and the environment are protected from being affected by the medium.

■ MEDIUM

<b>F</b>	liquid	The temperature of the medium under atmospheric pressure must not reach boiling point
<b>G</b>	gaseous	Air, vapours, gases and - depending on safety valve version and seal - also for steam

■ TYPE OF LIFTING MECHANISM

<b>K</b>	Standard with twist-type lifting mechanism	
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN	15	20	25	32	40	50
<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
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■ SEALS

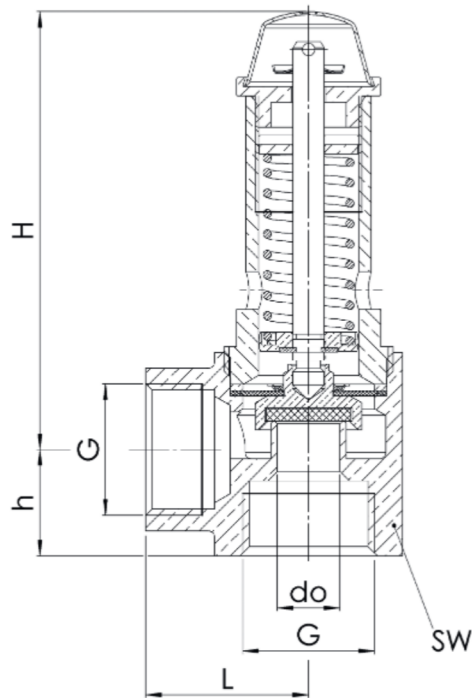
<b>NBR</b>	Nitrile rubber (Standard)	Elastomere flat seal (up to 30% glycol)	-30°C to +130°C
<b>EPDM</b>	Ethylene propylene diene	Elastomere flat seal (up to 100% Glykol)	-50°C to +150°C
<b>FKM</b>	Fluorcarbon	Elastomere flat seal	-20°C to +200°C

Only for type 652sGK for air, neutral vapours

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 652: Connection, installation dimensions, ranges of adjustment							
Nominal diameter	DN	15	20	25	32	40	50
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	G	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Installation dimensions in mm	L	26	31	35	40	46	54
	H	70	70	80	100	140	155
	h	17	18	22	25	28	34
	SW	27	32	40	49	56	68
	do	10	13	16	18	22	25
Weight	kg	0,2	0,3	0,5	0,7	1,2	1,6
Range of adjustment	bar	1-16	1-16	1-16	1-16	1-16	1-16

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



Series 652 ■ 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				
652	<i>m</i>	<i>F</i>	<b>K</b>	<i>15</i>	<b>f</b>	<b>f</b>	<i>15</i>	<i>15</i>	<i>NBR</i>		<i>5,5</i>	<i>2</i>
652	<i>s</i>	<i>G</i>	<b>K</b>	<i>25</i>	<b>f</b>	<b>f</b>	<i>25</i>	<i>25</i>	<i>FKM</i>		<i>3,5</i>	<i>4</i>
652			<b>K</b>		<b>f</b>	<b>f</b>						
652			<b>K</b>		<b>f</b>	<b>f</b>						

■ PROPERTIES

<b>GOX</b>	Especially for gaseous O2 applications by employment of specific materials including oil- and grease free production process	<input type="checkbox"/>	<b>P03</b>	Galvanically nickel-plated finish	<input type="checkbox"/>
<b>P01</b>	Oil- and grease-free production	<input type="checkbox"/>	<b>P04</b>	Chrome-plated finish	<input type="checkbox"/>
<b>P02</b>	Chemically nickel-plated finish	<input type="checkbox"/>			<input type="checkbox"/>

■ CERTIFICATES / APPROVALS

<b>C01</b>	Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)	<input type="checkbox"/>	<b>C06</b>	ATEX evaluation acc. to 2014/34/EU	<input type="checkbox"/>
<b>C02</b>	Test certificate acc. DIN EN 10204 3.1 (WPZ 3.1)	<input type="checkbox"/>	<b>C07</b>	SIL evaluation relating to IEC 61508-2	<input type="checkbox"/>
<b>C03</b>	Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1) (pressure retaining part)	<input type="checkbox"/>	<b>C10</b>	Certificate of oil- and grease free production	<input type="checkbox"/>
<b>C04</b>	TÜV/DEKRA individual inspection acc. EN 10204 3.2 (TÜV/DEKRA-APZ)	<input type="checkbox"/>	<b>C11</b>	Certification of the production process especially for gaseous oxygen applications by employment of specific materials	<input type="checkbox"/>

■ ADMISSIONS / ACCREDITATIONS

<b>AA1</b>	EC Type examination acc. to Directive 2014/68/EU	<input type="checkbox"/>	<b>AK1</b>	Det Norske Veritas (DNV) type approval	<input type="checkbox"/>
<b>AA2</b>	TÜV component test acc. to VdTÜV specification sheet SV 100	<input type="checkbox"/>	<b>AK2</b>	Lloyd's Register (LR) type approval	<input type="checkbox"/>
<b>AA4</b>	EAC - certificate/declaration with passport for the valve and laser marking of the valve	<input type="checkbox"/>	<b>AK3</b>	American Bureau of Shipping (ABS) type approval	<input type="checkbox"/>
		<input type="checkbox"/>	<b>AK4</b>	Bureau Veritas (BV) type approval	<input type="checkbox"/>
		<input type="checkbox"/>	<b>AK5</b>	Russian Maritime Register of Shipping (RMRS) type approval	<input type="checkbox"/>
		<input type="checkbox"/>	<b>AK6</b>	Registro Italiano Navale (RINA) type approval	<input type="checkbox"/>
		<input type="checkbox"/>	<b>AL</b>	Individual inspection by notified body inspector – (body to be indicated):	<input type="checkbox"/>

■ ENQUIRY

Copy and send to: [order@goetze-armaturen.de](mailto:order@goetze-armaturen.de).

Order form easily to be found online under the section for each series.

Series 652: Blowing-off rates at 10% above set pressure																			
Nominal diameter DN	Set pressure bar	15			20			25			32			40			50		
		I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Air I Nm <sup>3</sup> /h	1	31	25	1,51	53	42	2,55	80	64	3,87	102	81	4,89	152	121	7,31	196	157	9,44
	1,5	40	32	1,85	67	53	3,13	102	81	4,73	128	102	5,99	192	152	8,95	248	197	11,56
	2	48	38	2,14	81	64	3,61	123	97	5,47	155	122	6,92	232	183	10,33	299	236	13,35
Steam II kg/h	2,5	56	44	2,39	95	74	4,03	144	113	6,11	182	143	7,73	272	213	11,55	351	275	14,92
	3	64	50	2,62	109	85	4,42	165	129	6,69	208	163	8,47	311	243	12,66	402	314	16,34
	3,5	73	-	2,82	123	-	4,77	186	-	7,23	235	-	9,15	351	-	13,67	454	-	17,65
Water III m <sup>3</sup> /h	4	81	-	3,02	137	-	5,10	207	-	7,73	262	-	9,78	391	-	14,62	505	-	18,87
	4,5	89	-	3,20	150	-	5,41	228	-	8,20	288	-	10,38	431	-	15,50	556	-	20,02
	5	97	-	3,38	164	-	5,71	249	-	8,64	315	-	10,94	471	-	16,34	608	-	21,10
	5,5	105	-	3,54	178	-	5,98	270	-	9,06	342	-	11,47	511	-	17,14	659	-	22,13
	6	114	-	3,70	192	-	6,25	291	-	9,47	368	-	11,98	550	-	17,90	711	-	23,11
	6,5	122	-	3,85	206	-	6,51	312	-	9,85	395	-	12,47	590	-	18,63	762	-	24,06
	7	130	-	3,99	220	-	6,75	333	-	10,23	422	-	12,94	630	-	19,33	814	-	24,97
	7,5	138	-	4,13	234	-	6,99	354	-	10,59	448	-	13,40	670	-	20,01	865	-	25,84
	8	147	-	4,27	248	-	7,22	375	-	10,93	475	-	13,84	710	-	20,67	917	-	26,69
	8,5	155	-	4,40	262	-	7,44	396	-	11,27	502	-	14,26	750	-	21,30	968	-	27,51
	9	163	-	4,53	276	-	7,65	418	-	11,60	528	-	14,68	789	-	21,92	1019	-	28,31
	9,5	171	-	4,65	290	-	7,86	439	-	11,91	555	-	15,08	829	-	22,52	1071	-	29,08
	10	180	-	4,77	303	-	8,07	460	-	12,22	582	-	15,47	869	-	23,11	1122	-	29,84
	11	196	-	2,78	331	-	6,82	502	-	12,82	635	-	14,42	949	-	23,56	1225	-	31,30
	12	212	-	2,91	359	-	7,12	544	-	13,39	688	-	15,06	1028	-	24,61	1328	-	32,69
	13	229	-	3,02	387	-	7,41	586	-	13,94	742	-	15,68	1108	-	25,62	1431	-	34,02
14	245	-	3,14	415	-	7,69	628	-	14,46	795	-	16,27	1188	-	26,58	1534	-	35,31	
15	262	-	3,25	443	-	7,96	670	-	14,97	848	-	16,84	1267	-	27,52	1637	-	36,55	
16	278	-	3,36	470	-	8,22	713	-	15,46	902	-	17,39	1347	-	28,42	1740	-	37,75	