

→ Series 812



■ MATERIAL



■ SPECIFICATION



1/2" – 2"



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



0,2 – 50 bar  
depending on version

■ SUITABLE FOR

Air, gases and vapours neutral



■ EXAMPLES OF USE

For the protection of:

- pressure tanks and
- pressure systems

for air and other neutral, non-poisonous and non-flammable gases which can be freely discharged into the environment.

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

- pneumatic control units
- pressure booster plants air-side
- paint spray shops
- transport- and railway applications
- pneumatic braking systems

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

■ APPROVALS

TÜV Type test approval 2003	D/G
ASME	G
CRN	G
EC type examination	S/G
TSG ZF001-2006	D/G (S/G)
KGS	G
TR ZU 032/2013 - TR ZU 010/2011	D/G (S/G)
<b>Type approval Deutsche Bahn</b>	
<b>Requirements</b>	
AD 2000 Data sheet A2	ASME-Code Sec. VIII Div. 1
DIN EN ISO 4126-1	KGS AA 319
PED 2014/68/EU	

**Classification society**

DNVGL	DNVGL
Lloyd's Register EMEA	LR EMEA
American Bureau of Shipping	ABS
Bureau Veritas	BV
Russian Maritime Register of Shipping	RS
Registro Italiano Navale	RINA

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Brass	CW617N	CW617N
Outlet body	Brass	CW617N	CW617N
Internal parts	Brass / Stainless steel	CW617N / 1.4404	CW617N / 316 L
Spring	Stainless steel	1.4310 / 1.4568	302 / 631
Sealing cap	Stainless steel	1.4301	304

<b>s</b>	Standard	cylindrical form, atmospheric discharge, for air and similar neutral, non-toxic and non-flammable gases that can be freely discharged into the atmosphere.
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## ■ MEDIUM

<b>G</b>	gaseous	Air and similar neutral gases
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## ■ 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
Inlet	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Atmospheric discharge via outlet apertures	■	■	■	■	■	■

## ■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

<b>m / -</b>	Standard	Male thread BSP-P / -	DIN EN ISO 228-1 / -
<b>BSP-Tm / -</b>		Male thread BSP-T	DIN EN 10226, ISO 7-1 / -
<b>NPT-m / -</b>		Male thread NPT / -	ANSI B1.20.1 / -

## ■ SEALS

<b>NBR</b>	Nitrile rubber	Elastomere flat seal 0,2 – 30 bar	-30°C to +130°C
<b>FKM</b>	Fluorocarbon	Elastomere flat seal 0,2 – 30 bar	-20°C to +200°C
<b>EPDM</b>	Ethylene propylene diene	Elastomere flat seal 0,2 – 30 bar	-40°C to +170°C
<b>PTFE</b>	Polytetrafluoroethylene	Flat seal 0,2 – 50 bar	-60°C to +225°C

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 812: 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)
Installation dimensions in mm	H (H1)	144	177	177	215 (177 <sup>1</sup> )	215 (177 <sup>1</sup> )	282
	h	12	15	15	22,5	22,5	26
	SW	32	41	41	55	55	80
	d0	14	20	24	32	32	48
Coefficients of flow ISO 4126-1	$\alpha_w / K_{dr} (D/G)^2$	0,76	0,8	0,8	0,8	0,8	0,51 <sup>3</sup>
Coefficients of flow ASME-Code Sec. VIII Div. 1	$\alpha_w / K_{dr} (D/G)$	0,774	0,774	0,774	0,774	0,774	30,116 <sup>4</sup>
Weight	kg	0,6	1,3	1,3	2,6	2,6	5,4
Range of adjustment	bar	0,2-50	0,2-50	0,2-50	0,2-50	0,2-50	0,2-30
Range of adjustment ASME	psi	15-725	15-725	15-725	15-725	15-725	15-435

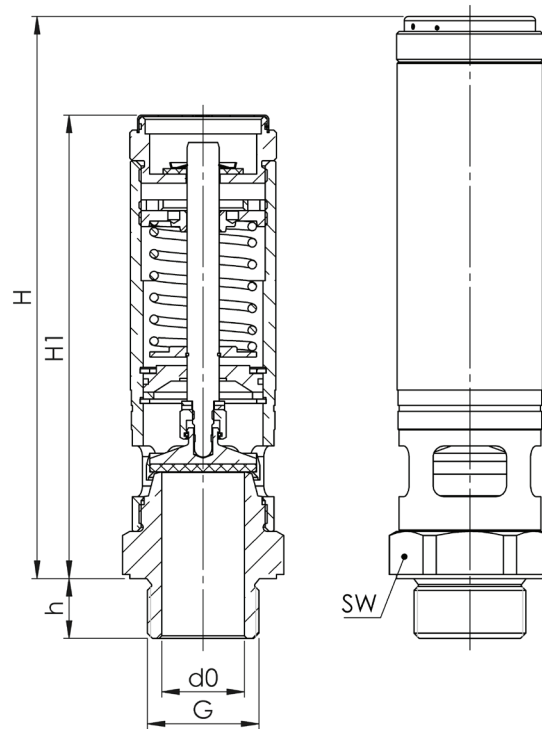
<sup>1</sup>Type 812 with the option SHORT for the pressure range 0,2 to 6 bar also available as short version

<sup>2</sup>Flow coefficients for blow-off pressures > 4,0 bar

<sup>3</sup>Flow coefficients for blow-off pressures > 7,0 bar

<sup>4</sup>Rated slope value for D/G in scfm/psia

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
812	s	G	K	40	m	–	40	–	FKM		5,0	3
812	s	G	K	32	m	–	32	–	NBR	SHORT	3,5	2
812	s	G	K			–		–				
812	s	G	K			–		–				

### ■ 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>C09</b>	Seat tightness test with helium, leak detection method under vacuum incl. Factory Inspection Certificate 3.1 acc. to DIN EN 10204	<input type="checkbox"/>
<b>C04</b>	TÜV/DEKRA individual inspection acc. EN 10204 3.2 (TÜV/DEKRA-APZ)	<input type="checkbox"/>	<b>C10</b>	Certificate of oil- and grease free production	<input type="checkbox"/>
<b>C05</b>	Manufacturer certification (FDA, USP 3, 3-A, ...), Please indicate description of certificate: .....	<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>	DNV-GL (DNVGL) 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>AA3</b>	Certification acc. to ASME Boiler and Pressure Vessel Code, Section VIII.Div 1 (ASME)	<input type="checkbox"/>	<b>AK3</b>	American Bureau of Shipping (ABS) 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>AK4</b>	Bureau Veritas (BV) type approval	<input type="checkbox"/>
<b>AA5</b>	Manufacture License of Special Equipment People's Republic of China (ML)	<input type="checkbox"/>	<b>AK5</b>	Russian Maritime Register of Shipping (RMRS) type approval	<input type="checkbox"/>
<b>AA6</b>	Certification acc. to. Korean Gas Safety Corporation (KGS) <sup>3</sup>	<input type="checkbox"/>	<b>AK6</b>	Registro Italiano Navale (RINA) type approval	<input type="checkbox"/>
<b>AA7</b>	Registration according to Canadian Registration Number (CRN) <sup>4</sup>	<input type="checkbox"/>	<b>AL</b>	Individual inspection by notified body inspector – (body to be indicated): .....	<input type="checkbox"/>
<b>AA8</b>	Certification according to "Deutsche Bahn"	<input type="checkbox"/>			

<sup>3</sup>KGS only in combination with ASME | <sup>4</sup>CRN only in combination with ASME

### ■ 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 812: Blowing-off rates at 10% above set pressure							
Nominal diameter DN		15	20	25	32	40	50
Set pressure bar		d <sub>0</sub> = 14 mm	d <sub>0</sub> = 20 mm	d <sub>0</sub> = 24 mm	d <sub>0</sub> = 31 mm	d <sub>0</sub> = 31 mm	d <sub>0</sub> = 48 mm
Air I		l	l	l	l	l	l
Nm <sup>3</sup> /h							
0,2	57,3	147,0	211,7	353,2	353,2	662,2	
0,5	100,3	220,2	317,1	529,1	529,1	926,9	
1,0	148,5	320,9	462,2	771,1	771,1	1382,7	
1,5	196,5	422,4	608,2	1014,7	1014,7	1852,6	
2,0	246,1	522,8	752,8	1256,0	1256,0	2334,0	
2,5	292,7	621,5	894,9	1493,1	1493,1	2760,6	
3,0	340,6	722,7	1040,7	1736,4	1736,4	3194,6	
3,5	389,8	826,6	1190,3	1985,9	1985,9	3636,1	
4,0	436,0	924,5	1331,3	2221,2	2221,2	4085,1	
4,5	480,4	1018,7	1466,9	2447,4	2447,4	4541,5	
5,0	524,9	1112,9	1602,5	2673,7	2673,7	4967,8	
5,5	569,3	1207,0	1738,1	2899,9	2899,9	5388,2	
6,0	613,7	1301,2	1873,7	3126,1	3126,1	5808,5	
6,5	658,1	1395,4	2009,3	3352,3	3352,3	6228,9	
7,0	702,5	1489,5	2144,9	3578,6	3578,6	6649,2	
7,5	746,9	1583,7	2280,5	3804,8	3804,8	5815,3	
8,0	791,3	1677,9	2416,1	4031,0	4031,0	6161,1	
8,5	835,7	1772,0	2551,7	4257,3	4257,3	6506,9	
9,0	880,1	1866,2	2687,3	4483,5	4483,5	6852,6	
9,5	924,5	1960,3	2822,9	4709,7	4709,7	7198,4	
10,0	969,0	2054,5	2958,5	4936,0	4936,0	7544,2	
11,0	1057,8	2242,8	3229,7	5388,4	5388,4	8235,7	
12,0	1146,6	2431,2	3500,9	5840,9	5840,9	8927,3	
13,0	1235,4	2619,5	3772,1	6293,4	6293,4	9618,8	
14,0	1324,2	2807,8	4043,3	6745,8	6745,8	10310,4	
15,0	1413,1	2996,2	4314,5	7198,3	7198,3	11001,9	
16,0	1501,9	3184,5	4585,7	7650,8	7650,8	11693,5	
17,0	1590,7	3372,8	4856,9	8103,2	8103,2	12385,0	
18,0	1679,5	3561,2	5128,1	8555,7	8555,7	13076,6	
19,0	1768,4	3749,5	5399,3	9008,1	9008,1	13768,1	
20,0	1857,2	3937,8	5670,5	9460,6	9460,6	14459,7	
21,0	1946,0	4126,1	5941,7	9913,1	9913,1	15151,2	
22,0	2034,8	4314,5	6212,9	10365,5	10365,5	15842,8	
23,0	2123,6	4502,8	6484,0	10818,0	10818,0	16534,3	
24,0	2212,5	4691,1	6755,2	11270,5	11270,5	17225,9	
25,0	2301,3	4879,5	7026,4	11722,9	11722,9	17917,4	
26,0	2390,1	5067,8	7297,6	12175,4	12175,4	18609,0	
27,0	2478,9	5256,1	7568,8	12627,9	12627,9	19300,5	
28,0	2567,7	5444,5	7840,0	13080,3	13080,3	19992,1	
29,0	2656,6	5632,8	8111,2	13532,8	13532,8	20683,6	
30,0	2745,4	5821,1	8382,4	13985,2	13985,2	21375,2	
32,0	2923,0	6197,8	8924,8	14890,2	14890,2		
34,0	3100,7	6574,4	9467,2	15795,1	15795,1		
36,0	3278,3	6951,1	10009,6	16700,0	16700,0		
38,0	3456,0	7327,8	10552,0	17605,0	17605,0		
40,0	3633,6	7704,4	11094,4	18509,9	18509,9		
42,0	3811,2	8081,1	11636,8	19414,8	19414,8		
44,0	3988,9	8457,7	12179,2	20319,7	20319,7		
46,0	4166,5	8834,4	12721,6	21224,7	21224,7		
48,0	4344,2	9211,1	13263,9	22129,6	22129,6		
50,0	4521,8	9587,7	13806,3	23034,5	23034,5		

Series 812: Blowing-off rates at 10% above set pressure

Nominal diameter DN		15	20	25	32	40	50
		d <sub>0</sub> = 0,551 inch (14 mm)	d <sub>0</sub> = 0,787 inch (20 mm)	d <sub>0</sub> = 0,945 inch (24 mm)	d <sub>0</sub> = 1,220 inch (31 mm)	d <sub>0</sub> = 1,220 inch (31 mm)	d <sub>0</sub> = 1,890 inch (48 mm)
Set pressure psi(g)		l	l	l	l	l	l
Air l	3	46,3	109,8	158,1	263,8	263,8	478,0
SCFM	10	80,8	175,0	252,0	420,5	420,5	695,4
	20	118,2	254,7	366,7	611,8	611,8	1112,8
	30	157,0	333,4	480,1	801,0	801,0	1487,5
	40	197,3	418,7	603,0	1006,0	1006,0	1855,3
	50	239,1	507,1	730,3	1218,4	1218,4	2232,0
	60	278,7	590,9	851,0	1419,7	1419,7	2617,4
	70	316,8	671,7	967,2	1613,7	1613,7	2998,4
	80	354,9	752,4	1083,5	1807,7	1807,7	3358,8
	90	392,9	833,2	1199,7	2001,7	2001,7	3719,2
	100	431,0	913,9	1316,0	2195,6	2195,6	4079,6
	120	507,2	1075,4	1548,5	2583,6	2583,6	3948,7
	140	583,3	1236,8	1781,0	2971,5	2971,5	4541,7
	160	659,5	1398,3	2013,6	3359,4	3359,4	5134,6
	180	735,6	1559,8	2246,1	3747,4	3747,4	5727,5
	200	811,8	1721,3	2478,6	4135,3	4135,3	6320,5
	220	887,9	1882,7	2711,1	4523,3	4523,3	6913,4
	240	964,1	2044,2	2943,7	4911,2	4911,2	7506,3
	260	1040,3	2205,7	3176,2	5299,1	5299,1	8099,2
	280	1116,4	2367,1	3408,7	5687,1	5687,1	8692,2
	300	1192,6	2528,6	3641,2	6075,0	6075,0	9285,1
	320	1268,7	2690,1	3873,7	6463,0	6463,0	9878,0
	340	1344,9	2851,6	4106,3	6850,9	6850,9	10471,0
	360	1421,0	3013,0	4338,8	7238,8	7238,8	11063,9
	380	1497,2	3174,5	4571,3	7626,8	7626,8	11656,8
	400	1573,3	3336,0	4803,8	8014,7	8014,7	12249,7
	420	1649,5	3497,5	5036,3	8402,6	8402,6	12842,7
	440	1725,6	3658,9	5268,9	8790,6	8790,6	
	460	1801,8	3820,4	5501,4	9178,5	9178,5	
	480	1878,0	3981,9	5733,9	9566,5	9566,5	
	500	1954,1	4143,4	5966,4	9954,4	9954,4	
	520	2030,3	4304,8	6198,9	10342,3	10342,3	
	540	2106,4	4466,3	6431,5	10730,3	10730,3	
	560	2182,6	4627,8	6664,0	11118,2	11118,2	
	580	2258,7	4789,2	6896,5	11506,2	11506,2	
	600	2334,9	4950,7	7129,0	11894,1	11894,1	
	620	2411,0	5112,2	7361,6	12282,0	12282,0	
	640	2487,2	5273,7	7594,1	12670,0	12670,0	
	660	2563,3	5435,1	7826,6	13057,9	13057,9	
	680	2639,5	5596,6	8059,1	13445,8	13445,8	
	700	2715,7	5758,1	8291,6	13833,8	13833,8	
	720	2791,8	5919,6	8524,2	14221,7	14221,7	
	725	2810,8	5959,9	8582,3	14318,7	14318,7	