→ Series 810

810

Safety valves made of brass, atmospheric discharge, with threaded connections



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.

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

Safety valves are set and sealed at the factory.

APPROVALS

TÜV Type test approval 2055	**D/G**
ASME	**G (DN 8 – DN 50)**
CRN	**G (DN 8 – DN 25)**
EU type examination	**S/G**
TSG ZF001-2006	**D/G (S/G) (DN 8 – DN 25)**
KGS	**G**
KOSHA	**G (DN 8 – DN 25) (< 10 bar)**
TR ZU 032/2013 - TR ZU 010/2011	**D/G (S/G) (DN 8 – DN 50)**

Type approval Deutsche Bahn

Requirements

AD 2000 Data sheet A2	ASME-Code Sec. XIII
DIN EN ISO 4126-1	KGS AA 319
PED 2014/68/EU	

Classification society

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

MATERIAL

SPECIFICATION

1/4" – 2"

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

0,2 – 50 bar
depending on nominal diameter

MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Brass	CW617N	CW617N
Outlet body	Brass	CW617N	CW617N
Internal parts	Brass	CW617N	CW617N
Spring	Stainless steel	1.4568	631

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s	Standard	cylindrical form, atmospheric discharge, for air and similar neutral, non-toxic and non-flammable gases that can be freely discharged into the atmosphere.

■ MEDIUM

G	gaseous	Air and similar neutral gases

■ TYPE OF LIFTING MECHANISM

K	Standard with twist-type lifting mechanism
0	without lifting device

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN	**8**	**10**	**15**	**20**	**25**	**32**	**40**	**50**
Inlet	1/4“ (8)	3/8“ (10)	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

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

■ SEALS

FKM	Fluorocarbon	Elastomere flat seal 0,2 – 25 bar	–20°C to +200°C
PTFE	Polytetrafluoroethylene	Flat seal 0,2 – 50 bar	–60°C to +225°C

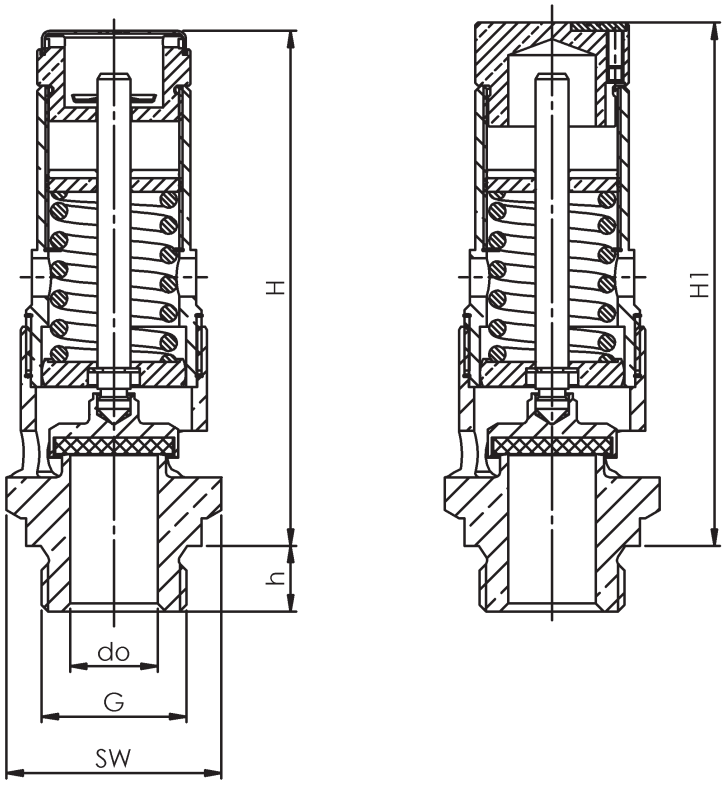
NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 810: Connection, installation dimensions, ranges of adjustment

Nominal diameter	**DN**	8	10		15		20		25	32	40	50
Connection DIN EN ISO 228	**G**	1/4“ (8)	3/8“ (10)		1/2“ (15)		3/4“ (20)		1“ (25)	1 1/4“ (32)	1 1/2“ (40)	2“ (50)
Installation dimensions in mm	**H**	60	65	78	66	79	94	104	111	133	161	165
	H1	63	68	81	68	82	96	106	113	135	161	165
	h	10	10	10	12	12	12	12	14	20	22	24
	SW	19	24	24	27	27	34	34	41	50	60	68
Coefficients of flow ISO 4126-1	α_w/K_{dr}[1]	0,77	0,79		0,8		0,79		0,77	0,67	0,71	0,74
Coefficients of flow ASME-Code Sec. VIII Div. 1	$(90\%)K_d$	0,758	0,758		0,758		0,758		0,758	0,758	0,758	0,758
	do	7,5	10	10	11	11	16	16	20	25	32	40
Weight	**kg**	0,1	0,14	0,16	0,17	0,19	0,35	0,4	0,6	0,97	1,85	2,45
Range of adjustment	**bar**	0,2-50	0,2-9	9,1-50	0,2-7	7,1-50	0,2-9	9,1-50	0,2-50	0,2-16	0,2-16	0,2-16
Range of adjustment ASME	**psi**	15-725	15-130	131-725	15-102	103-725	15-130	131-725	15-725	30-232	30-232	30-232

[1]Coefficients of flow for blow-off pressures for blow-off pressures > 4,0 bar. For lower pressures refer to values in the capacity table.

MAIN DIMENSIONS, INSTALLATION DIMENSIONS



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Series 810 ■ 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				
810	s	G	K	*10*	*m*	–	*10*	–	*FKM*		*11,5*	*50*
810	s	G	K			–		–				
810	s	G	K			–		–				
810	s	G	K			–		–				

■ PROPERTIES

GOX	Especially for gaseous O2 applications by employment of specific materials including oil- and grease free production process	☐	**P03**	Galvanically nickel-plated finish	☐
P01	Oil- and grease-free production	☐	**P04**	Chrome-plated finish	☐
P02	Chemically nickel-plated finish	☐			☐

■ CERTIFICATES / APPROVALS

C01	Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)	☐	**C06**	ATEX evaluation acc. to 2014/34/EU	☐
C02	Test certificate acc. DIN EN 10204 3.1 (WPZ 3.1)	☐	**C07**	SIL evaluation relating to IEC 61508-2	☐
C03	Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1) (pressure retaining part)	☐	**C09**	Seat tightness test with helium, leak detection method under vacuum incl. Factory Inspection Certificate 3.1 acc. to DIN EN 10204	☐
C04	TÜV/DEKRA individual inspection acc. EN 10204 3.2 (TÜV/DEKRA-APZ)	☐	**C10**	Certificate of oil- and grease free production	☐
C05	Manufacturer certification (FDA, USP 3, 3-A,…), Please indicate description of certificate:	☐	**C11**	Certification of the production process especially for gaseous oxygen applications by employment of specific materials	☐

■ ADMISSIONS / ACCREDITATIONS

AA1	EC Type examination acc. to Directive 2014/68/EU	☐	**AK1**	Det Norske Veritas (DNV) type approval	☐
AA2	TÜV component test acc. to VdTÜV specification sheet SV 100	☐	**AK2**	Lloyd's Register (LR) type approval	☐
AA3	Certification acc. to ASME Boiler and Pressure Vessel Code, Section VIII.Div 1 (ASME)	☐	**AK3**	American Bureau of Shipping (ABS) type approval	☐
AA4	EAC - certificate/declaration with passport for the valve and laser marking of the valve	☐	**AK4**	Bureau Veritas (BV) type approval	☐
AA5	Manufacture License of Special Equipment People's Republic of China (ML)	☐	**AK5**	Russian Maritime Register of Shipping (RMRS) type approval	☐
AA6	Certification acc. to. Korean Gas Safety Corporation (KGS)[3]	☐	**AK6**	Registro Italiano Navale (RINA) type approval	☐
AA7	Registration according to Canadian Registration Number (CRN)[4]	☐	**AL**	Individual inspection by notified body inspector – (body to be indicated):	☐
AA8	Certification according to "Deutsche Bahn"	☐			☐
AA9	Certification according to KOSHA	☐			☐

[3]KGS only in combination with ASME | [4]CRN only in combination with ASME

■ ENQUIRY

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

Series 810: Blowing-off rates at 10% above set pressure

Nominal diameter DN		8	10	15	20	25	32	40	50
Set pressure bar		d0 = 7,5 mm	d0 = 10 mm	d0 = 11 mm	d0 = 16 mm	d0 = 20 mm	d0 = 25 mm	d0 = 32 mm	d0 = 40 mm
Air Nm³/h	0,2	19	34	42	92	115	197	340	572
	0,5	32	59	75	157	190	297	510	841
	1,0	46	86	108	227	308	430	740	1212
	1,5	60	109	137	287	410	560	961	1592
	2,0	73	133	166	346	505	684	1173	1942
	2,5	86	158	194	406	604	810	1389	2299
	3,0	100	182	223	465	702	942	1621	2670
	3,5	112	205	251	525	797	1081	1872	3057
	4,0	125	228	280	584	890	1210	2101	3421
	4,5	138	251	308	644	980	1333	2314	3769
	5,0	151	275	337	703	1071	1456	2528	4118
	5,5	163	298	365	763	1162	1580	2742	4466
	6,0	176	321	394	822	1252	1703	2956	4814
	6,5	189	344	422	882	1343	1826	3170	5163
	7,0	202	368	451	941	1434	1949	3384	5511
	7,5	214	391	479	1001	1524	2072	3598	5860
	8,0	227	414	508	1060	1615	2196	3812	6208
	8,5	240	437	536	1120	1706	2319	4026	6556
	9,0	253	461	565	1179	1796	2442	4240	6905
	9,5	265	484	593	1239	1887	2565	4454	7253
	10,0	278	507	621	1298	1977	2689	4668	7602
	11,0	304	554	678	1417	2159	2935	5096	8299
	12,0	329	600	735	1537	2340	3181	5524	8995
	13,0	355	647	792	1656	2521	3428	5952	9692
	14,0	380	693	849	1775	2703	3674	6379	10389
	15,0	406	740	906	1894	2884	3921	6807	11086
	16,0	431	786	963	2013	3065	4167	7235	11783
	17,0	457	833	1020	2132	3246			
	18,0	482	879	1077	2251	3428			
	19,0	507	926	1134	2370	3609			
	20,0	533	972	1191	2489	3790			
	21,0	558	1019	1248	2608	3971			
	22,0	584	1065	1305	2727	4153			
	23,0	609	1112	1362	2846	4334			
	24,0	635	1158	1419	2965	4515			
	25,0	660	1205	1476	3084	4696			
	26,0	686	1251	1533	3203	4878			
	27,0	711	1298	1590	3322	5059			
	28,0	737	1344	1647	3441	5240			
	29,0	762	1391	1704	3560	5422			
	30,0	788	1437	1761	3679	5603			
	32,0	839	1530	1875	3917	5965			
	34,0	890	1623	1989	4155	6328			
	36,0	941	1716	2103	4393	6690			
	38,0	992	1809	2217	4631	7053			
	40,0	1043	1902	2331	4869	7416			
	42,0	1094	1995	2445	5107	7778			
	44,0	1145	2088	2558	5345	8141			
	46,0	1196	2181	2672	5583	8503			
	48,0	1247	2274	2786	5821	8866			
	50,0	1298	2367	2900	6059	9228			

CAPACITY TABLE ACC. TO ASME-CODE SEC. VIII DIV. 1

Series 810: Blowing-off rates at 10% above set pressure

	Nominal diameter DN	8	10	15	20	25	32	40	50
	Set pressure psi(g)	d0 = 0,2953 inch (7,5 mm)	d0 = 0,3937 inch (10 mm)	d0 = 0,4331 inch (11 mm)	d0 = 0,6299 inch (16 mm)	d0 = 07874 inch (20 mm)	d0 = 0,9843 inch (25 mm)	d0 = 1,2598 inch (32 mm)	d0 = 1,5748 inch (40 mm)
	15	31	55	67	142	221			
Air	30	45	81	98	207	323	505	827	1292
SCFM	40	56	99	120	254	397	621	1017	1590
	50	66	118	143	302	472	737	1208	1888
	60	77	137	165	350	546	854	1399	2185
	70	87	155	188	397	621	970	1589	2483
	80	98	174	210	445	695	1086	1780	2781
	90	108	192	233	493	770	1203	1971	3079
	100	119	211	255	540	844	1319	2161	3377
	110	129	230	278	588	919	1436	2352	3675
	120	140	248	300	636	993	1552	2543	3973
	130	150	267	323	683	1068	1668	2733	4271
	140	161	286	345	731	1142	1785	2924	4569
	150	171	304	368	779	1217	1901	3115	4866
	160	182	323	391	826	1291	2017	3305	5164
	170	192	341	413	874	1366	2134	3496	5462
	180	203	360	436	922	1440	2250	3686	5760
	190	213	379	458	969	1515	2366	3877	6058
	200	223	397	481	1017	1589	2483	4068	6356
	210	234	416	503	1065	1663	2599	4258	6654
	220	244	434	526	1112	1738	2715	4449	6952
	230	255	453	548	1160	1812	2832	4640	7250
	240	265	472	571	1208	1887			
	250	276	490	593	1255	1961			
	260	286	509	616	1303	2036			
	270	297	528	638	1351	2110			
	280	307	546	661	1398	2185			
	290	318	565	683	1446	2259			
	300	328	583	706	1494	2334			
	320	349	621	751	1589	2483			
	340	370	658	796	1684	2632			
	360	391	695	841	1780	2781			
	380	412	732	886	1875	2929			
	400	433	770	931	1970	3078			
	420	454	807	976	2066	3227			
	440	475	844	1021	2161	3376			
	460	496	881	1066	2256	3525			
	480	517	919	1111	2351	3674			
	500	538	956	1157	2447	3823			
	520	559	993	1202	2542	3972			
	540	580	1030	1247	2637	4121			
	560	600	1067	1292	2733	4270			
	580	621	1105	1337	2828	4419			
	600	642	1142	1382	2923	4568			
	620	663	1179	1427	3019	4717			
	640	684	1216	1472	3114	4866			
	660	705	1254	1517	3209	5015			
	680	726	1291	1562	3305	5164			
	700	747	1328	1607	3400	5313			
	725	773	1375	1663	3519	5499			