

→ Series 492

492

Safety valves made of stainless steel, atmospheric discharge or with positionable angled body, with threaded connections

■ SUITABLE FOR

Air, gases and vapours

neutral and non-neutral



■ EXAMPLES OF USE

For the protection of:

- pressure tanks and
- pressure systems

for air and other neutral and non-neutral gases.

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

- high-pressure compressors
- pressure tanks
- pressure cylinder pack
- CNG-applications
- Hydrogen applications

Safety valves are set and sealed at the factory.

■ APPROVALS

TÜV Type test approval 2100	D/G (Full-lift)
EU type examination	S/G
ASME	G
CRN	G
TSG ZF001-2006	D/G (S/G)
KGS	G
TR ZU 032/2013 - TR ZU 010/2011	D/G (S/G)
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
American Bureau of Shipping	ABS
Bureau Veritas	BV
Russian Maritime Register of Shipping	RS
Registro Italiano Navale	RINA



■ MATERIAL



■ SPECIFICATION



1/4" – 1"



– 60°C to + 200°C



50 – 1500 bar
depending on version

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Stainless steel	1.4404	316 L
Outlet body	Stainless steel	1.4404 / 1.4408	316 L
Internal parts	Stainless steel	1.4404	316 L
Spring	Spring steel	51 Cr V4	

Series 492 ■ VALVE VERSION

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.
t	gastight version of spring housing	for neutral and non-neutral media, not counter pressure compensated. The environment is protected from being affected by the medium. Only available for version with angled body and without lifting device.

■ MEDIUM

G	gaseous	Air and similar neutral and non-neutral gases
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■ TYPE OF LIFTING MECHANISM

K	Standard with twist-type lifting mechanism (only for DN 10 and DN 15)
0	without lifting device

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		6				8					10					15				
Inlet		1/4" (8)	3/8" (10)	1/2" (15)	3/4" (20)	1/4" (8)	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1/4" (8)	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	
Atmospheric discharge via outlet apertures (up to 180 bar)											■	■	■	■	■	■	■	■	■	
Outlet	1/2" (15)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	3/4" (20)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	1" (25)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

m / –	Standard atmospheric discharge 50 – 180 bar	Male thread BSP-P / –	DIN EN ISO 228-1 / –
m / f	with positionable angled body 50 – 1500 bar	Male thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
NPT-m/NPT-f	with positionable angled body 50 – 1500 bar	Male thread NPT / Female thread NPT	ANSI B1.20.1 / ANSI B1.20.1
ct/f	with positionable angled body 50 – 1500 bar	cone & thread / Female thread BSP-P	Goetze ct / DIN EN ISO 228-1

Special connections for high pressure possible.

■ SEALS

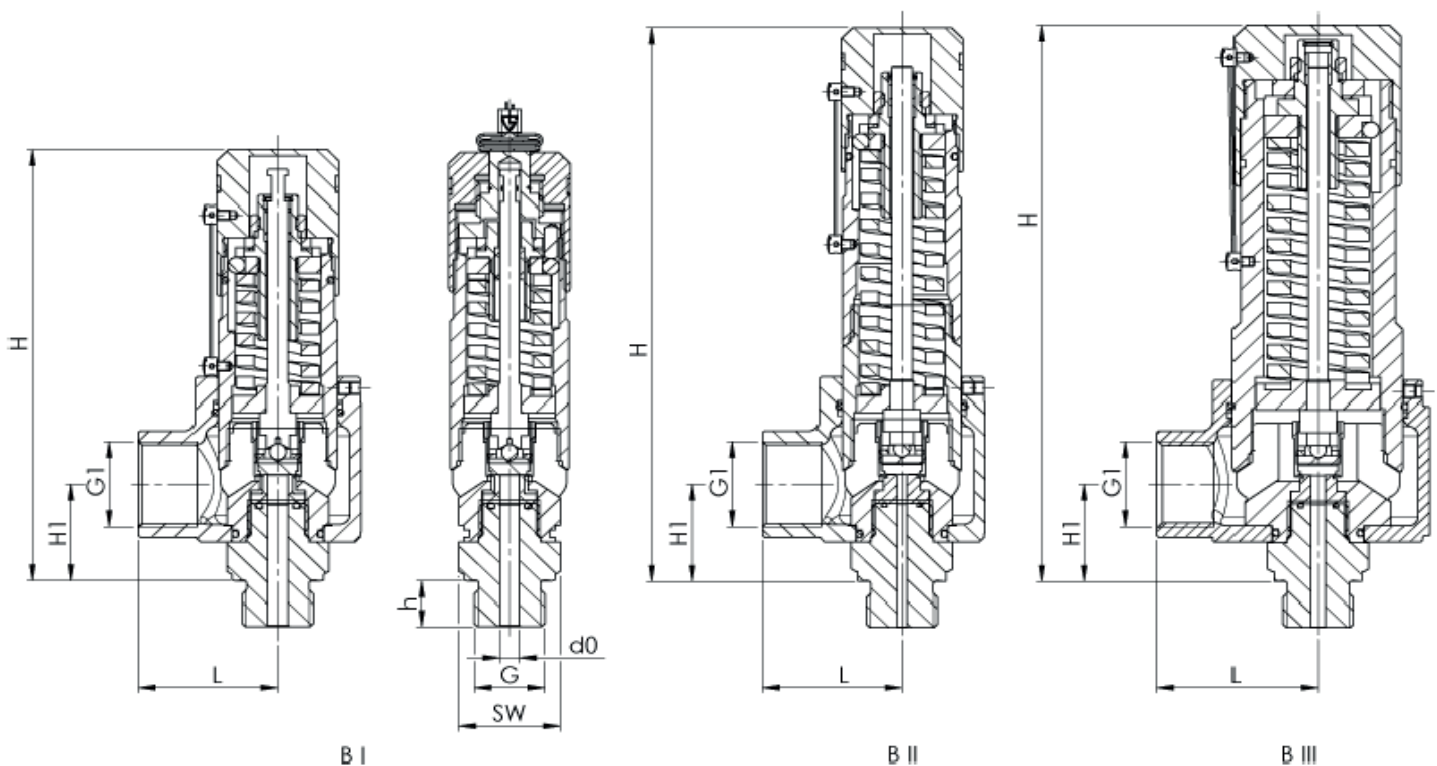
MD / PAI	Metal-to-metal sealing / Polyamidimide	Flat seal 50 – 630 bar (only for DN 10 and DN 15)	–60°C to +200°C
MD / PEEK	Metal-to-metal sealing / Polyetheretherketon	Flat seal 50 – 1500 bar	–60°C to +180°C

■ **NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS**

Series 492: Connection, installation dimensions, ranges of adjustment									
Nominal diameter	DN	6			8			10	15
Connection DIN EN ISO 228	G	1/4" (8)	3/8" (10) 1/2" (15) 3/4" (20) 1" (25)		1/4" (8) 3/8" (10) 1/2" (15) 3/4" (20) 1" (25)	1/4" (8) 3/8" (10) 1/2" (15) 3/4" (20) 1" (25)		1/4" (8) 3/8" (10) 1/2" (15) 3/4" (20) 1" (25)	1/4" (8) 3/8" (10) 1/2" (15) 3/4" (20) 1" (25)
Outlet DIN EN ISO 228	G1'	1/2" (15) 3/4" (20) 1" (25)			1/2" (15) 3/4" (20) 1" (25)			1/2" (15) 3/4" (20) 1" (25)	1/2" (15) 3/4" (20) 1" (25)
Form		B II	B II	B III	B II	B III		B I	B I
Installation dimensions in mm	H	172	172	174	172	174		133	134
	H1 max	41,5	43	48	43	48		ca. 28	ca. 30
	h	12/15/16	12/15/16		12/15/16			12/15/16	12/15/16
	L max	43	43	50	43	50		43	45
	SW		27			27		27	30
	d0		3			4,5		6	9
Weight	kg	1,4	1,4	2,2	1,4	2,2		0,7	0,9
Range of adjustment	bar	150-1100	150-1150	1150-1500	100-600	600-900	600-1000	50-500	50-630
Range of adjustment ASME	psi	2175-15950	2175 - 16675	16675-21750	1450-8700	8700-13050	8700-14500	725-7250	725-9135
		725-3625							

*only for the version with positionable angled body and according to choice of outlet connection size

■ **MAIN DIMENSIONS, INSTALLATION DIMENSIONS**



Series 492 ■ 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				
492	s	G	K	10	m	—	8	—	MD / PAI		70,0	5
492	t	G	O	15	m	f	15	20	MD / PAI		250,0	2
492		G			m				MD / PAI			
492		G			m				MD / PAI			

■ PROPERTIES

P01	Oil- and grease-free production	☐	☐
		☐	☐
		☐	☐

■ CERTIFICATES / APPROVALS

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

■ 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, Sec. XIII (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):	☐

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

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

Series 492: Blowing-off rates at 10% above set pressure					
Nominal diameter DN		6	8	10	15
Set pressure bar					
Air	50			787	1867
	60			941	2233
	70			1095	2600
Nm ³ /h	80			1250	2967
	90			1404	3333
	100		841	1559	3700
	110		924	1713	4067
	120		1008	1868	4433
	130		1091	2022	4800
	140		1174	2177	5167
	150	495	1258	2331	5533
	160	528	1341	2486	5900
	170	561	1424	2640	6266
	180	593	1508	2795	6633
	190	626	1591	2949	7000
	200	659	1674	3104	7366
	210	692	1758	3258	7733
	220	725	1841	3413	8100
	230	757	1924	3567	8466
	240	790	2008	3722	8833
	250	823	2091	3876	9200
	270	889	2258	4185	
	290	954	2424	4494	
	310	1020	2591	4803	
	330	1085	2757	5112	
	350	1151	2924	5421	
	370	1217	3091	5730	
	390	1282	3257	6039	
	410	1348	3424	6348	
	430	1414	3591	6657	
	450	1479	3757	6966	
	470	1545	3924	7275	
	490	1610	4091	7584	
	510	1676	4257	7893	
	530	1742	4424	8202	
	550	1807	4591	8511	
	570	1873	4757	8820	
	590	1938	4924	9129	
	610	2004	5091	9438	
	630	2070	5257	9747	
	650	2135	5424		
	700	2299	5841		
	750	2463	6257		
	800	2627	6674		
	850	2791	7091		
	900	2955	7507		
	950	3119	7924		
	1000	3283	8341		
	1050	3447			
	1100	3611			
	1150	3775			
	1200	3939			
	1250	4103			
	1300	4267			
	1350	4431			
	1400	4595			
	1450	4759			
	1500	4923			

■ CAPACITY TABLE FOR TECHNICAL GASES

Series 492: Blowing-off rates at 10% above set pressure and standard conditions (1,01325bar; 0°C)									
Nominal diameter DN Set pressure bar (g)	6		8		10		15		
	Hydrogen		Hydrogen		Hydrogen		Hydrogen		
	kg/h	Nm³/h	kg/h	Nm³/h	kg/h	Nm³/h	kg/h	Nm³/h	Nm³/h
50					268	2.984	637	7.081	
100			292	3.250	530	5.896	1.258	13.992	
150	168	1.865	426	4.738	790	8.784	1.875	20.847	
200	222	2.472	565	6.281	1.047	11.645	2.486	27.636	
250	276	3.073	702	7.806	1.302	14.472	3.089	34.347	
300	330	3.666	838	9.312	1.553	17.265			
350	382	4.251	971	10.799	1.801	20.021			
400	434	4.828	1.103	12.265	2.045	22.739			
450	485	5.397	1.233	13.711	2.286	25.420			
500	536	5.958	1.361	15.136	2.524	28.062			
550	586	6.511	1.488	16.541	2.758	30.666			
600	635	7.056	1.612	17.925	2.989	33.233			
650	683	7.593	1.735	19.289					
700	731	8.123	1.856	20.635					
750	778	8.645	1.975	21.961					
800	824	9.159	2.093	23.268					
850	869	9.667	2.209	24.557					
900	914	10.167	2.323	25.828					
950	959	10.661	2.436	27.083					
1000	1.003	11.149	2.547	28.321					
1050	1.046	11.629							
1100	1.089	12.104							
1150	1.131	12.573							
1200	1.172	13.036							
1250	1.214	13.494							
1300	1.254	13.945							
1350	1.294	14.392							
1400	1.334	14.834							
1450	1.373	15.271							
1500	1.412	15.703							

■ CAPACITY TABLE ASME

Series 492: Blowing-off rates at 10% above set pressure					
Nominal diameter DN		6	8	10	15
Set pressure psi					
Air	725			523	1176
	750			540	1216
SCFM	800			576	1295
	900			647	1455
	1000			717	1614
	1100			788	1773
	1200			859	1932
	1300			930	2092
	1400			1000	2251
	1450		583	1036	2331
	1500		603	1071	2410
	1600		642	1142	2570
	1700		682	1213	2729
	1800		722	1284	2888
	1900		762	1354	3047
	2000		802	1425	3207
	2100		841	1496	3366
	2175	387	871	1549	3485
	2200	392	881	1567	3525
	2300	409	921	1637	3684
	2400	427	961	1708	3844
	2500	445	1001	1779	4003
	2600	462	1041	1850	4162
	2700	480	1080	1921	4321
	2800	498	1120	1991	4481
	2900	516	1160	2062	4640
	3000	533	1200	2133	4799
	3100	551	1240	2204	4958
	3200	569	1279	2275	5118
	3300	586	1319	2345	5277
	3400	604	1359	2416	5436
	3500	622	1399	2487	5596
	3625	644	1449	2575	5795
	4000	710	1598	2841	
	5000	887	1996	3549	
	6000	1064	2394	4257	
	7000	1241	2792	4964	
	8000	1418	3191	5672	
	9000	1595	3589	6380	
	9135	1619	3643	6476	
	10000	1772	3987		
	11000	1949	4385		
	12000	2126	4783		
	13000	2303	5181		
	14000	2480	5580		
	14500	2568	5779		
	15000	2657			
	16000	2834			
	17000	3011			
	18000	3188			
	19000	3365			
	20000	3542			
	21000	3719			
	21750	3851			