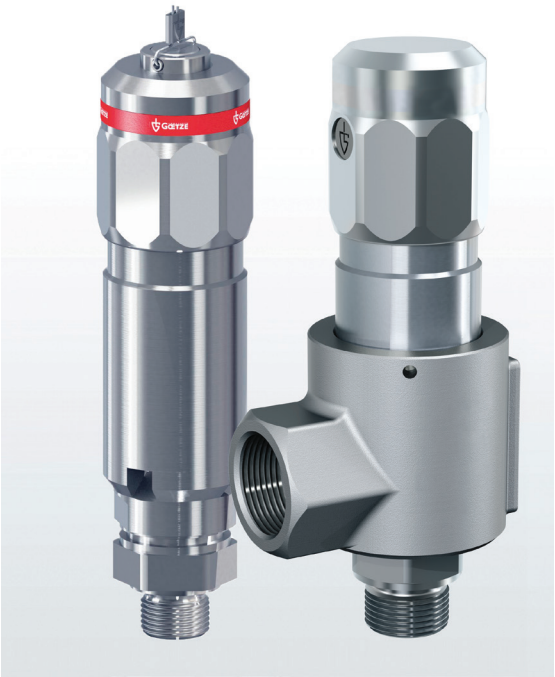
Type test approved atmospheric discharge safety valves for industrial applications

→ 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 2076	**D/G**
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. VIII Div. 1
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	

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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-netral gases

■ 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

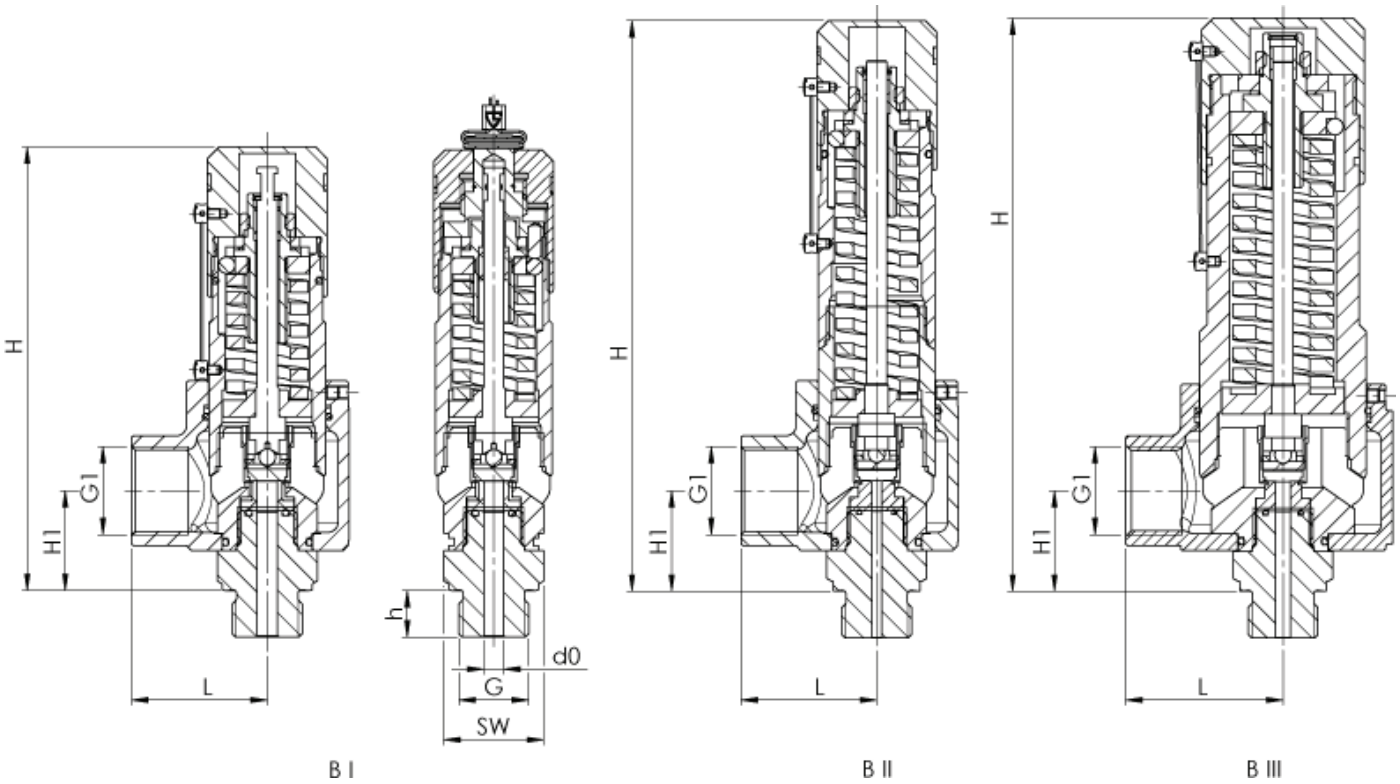
NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

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)		1/4" (8)		1/4" (8)		3/8" (10)		3/8" (10)
			1/2"(15)		3/8" (10)				1/2"(15)		1/2" (15)
			3/4"(20)		1/2"(15)				3/4"(20)		3/4" (20)
					3/4"(20)				1" (25)		1" (25)
Outlet DIN EN ISO 228	G1[1]	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 II	B I	B II	B I
Installation dimensions in mm	H	172	172	174	172	174	133	170	133	170	134
	H1 max	41,5	43	48	43	48	ca. 28	ca. 28	ca. 28	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	43	43	43	45
	SW		27		27		27				30
Coefficient of discharge ISO 4126-1			0,62		0,69		0,73				0,77
Coefficient of discharge ASME Code Sec. VIII Div. 1 (rated slope in scfm/psia)							0,669				1,470
	do		3		4,5		6	6	6	6	9
Weight	kg	1,4	1,4	2,2	1,4	2,2	0,7	1,4	0,7	1,4	0,9
Range of adjustment	bar	100-1100	100-1150	1150-1500	150-600	600-1000	50-500	50 -500	50-630	50-630	50-250
Range of adjustment ASME	psi						725-7250	725-7250	725-9135	725-9135	725-3625

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

MAIN DIMENSIONS, INSTALLATION DIMENSIONS



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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		*300*	*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, 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):	☐

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

■ ENQUIRY

Copy and send to: order@goetze-armaturen.de.

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

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					
	50			787	1867
Air	60			941	2233
Nm³/h	70			1095	2600
	80			1250	2967
	90			1404	3333
	100	320		1559	3700
	110	352		1713	4067
	120	384		1868	4433
	130	416		2022	4800
	140	447		2177	5167
	150	479	1240	2331	5533
	160	511	1322	2486	5900
	170	543	1404	2640	6266
	180	574	1486	2795	6633
	190	606	1568	2949	7000
	200	638	1650	3104	7366
	210	670	1732	3258	7733
	220	701	1815	3413	8100
	230	733	1897	3567	8466
	240	765	1979	3722	8833
	250	797	2061	3876	9200
	270	860	2225	4185	
	290	923	2390	4494	
	310	987	2554	4803	
	330	1050	2718	5112	
	350	1114	2882	5421	
	370	1177	3047	5730	
	390	1241	3211	6039	
	410	1304	3375	6348	
	430	1368	3540	6657	
	450	1431	3704	6966	
	470	1495	3868	7275	
	490	1558	4032	7584	
	510	1622	4197	7893	
	530	1685	4361	8202	
	550	1749	4525	8511	
	570	1812	4689	8820	
	590	1876	4854	9129	
	610	1939	5018	9438	
	630	2003	5182	9747	
	650	2066	5347		
	700	2225	5757		
	750	2384	6168		
	800	2542	6579		
	850	2701	6989		
	900	2860	7400		
	950	3019	7811		
	1000	3177	8222		
	1050	3336			
	1100	3495			
	1150	3654			
	1200	3812			
	1250	3971			
	1300	4130			
	1350	4288			
	1400	4447			
	1450	4606			
	1500	4765			

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	6		8		10		15	
Set pressure bar (g)	Hydrogen		Hydrogen		Hydrogen		Hydrogen	
	kg/h	Nm³/h	kg/h	Nm³/h	kg/h	Nm³/h	kg/h	Nm³/h
50					268	2.984	637	7.081
100	113	1.252			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						