

→ Series 618

618

Overflow and pressure control valves made of gunmetal, angle-type or straight form with threaded connections



■ SUITABLE FOR

Liquids	neutral and non-neutral	
Air, gases and vapours	neutral and non-neutral	
Steam		

■ EXAMPLES OF USE

For the protection of:

- pumps against overloading in closed circuits for neutral / non-neutral, non-sticking liquids

For the control of:

- systems under pressure for neutral/ non-neutral gases and vapours and – depending on the sealing material – also for steam

- pump protection
- test rig construction
- process equipment construction
- shipbuilding industry and marine equipment
- de-icing technology
- mechanical engineering
- industrial applications



■ MATERIAL



■ SPECIFICATION



3/8" – 2"



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



0,2 – 20 bar

■ APPROVALS

European Pressure Equipment Directive

TR ZU 032/2013 - TR ZU 010/2011

Requirements

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

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Gunmetal	CC499K	CC499K
Outlet body	Gunmetal	CC499K	CC499K
Internal parts	Brass / Gunmetal	CW617N / CC499K	CW617N / CC499K
Spring	Stainless steel	1.4310	302

Series 618 ■ VALVE VERSION

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.
yt	gastight version of spring housing Body in straightway form	for neutral and non-neutral media, not counter pressure compensated. The environment is protected from being affected by the medium. Only available for DN 10 to DN 25.

Valves can be delivered unset within a pressure range or set and sealed at the factory.

■ MEDIUM

GF	gaseous and liquid	Air, vapours, gases, liquids and - depending on safety valve version and seal - also for steam
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■ TYPE OF LIFTING MECHANISM

0	without lifting device, standard for gastight versions
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		10		15		20		25		32		40		50	
Inlet		3/8" (10)		1/2" (15)		3/4" (20)		1" (25)		1 1/4" (32)		1 1/2" (40)		2" (50)	
Version		t	yt	t	yt	t	yt	t	yt	t	yt	t	yt	t	yt
Outlet	3/8" (10)	■	■												
	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

f/f	Standard	Female thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1
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■ SEALS

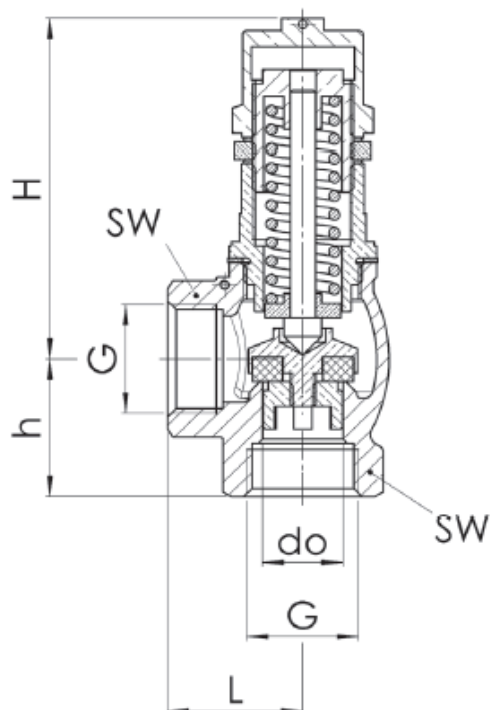
NBR	Nitrile rubber	Elastomere flat seal up to 12 bar	-30°C to +130°C
FKM	Fluorocarbon	Elastomere flat seal up to 12 bar	-20°C to +200°C
PTFE	Polytetrafluoroethylene	Flat seal 0,2 – 12 bar	-60°C to +225°C
PTFE	Polytetrafluoroethylene	Flat seal 12 – 20 bar	-60°C to +225°C

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

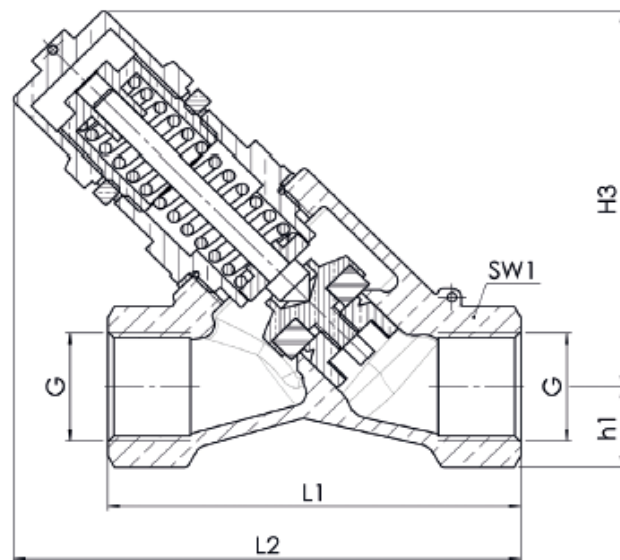
Series 618: Connection, installation dimensions, ranges of adjustment								
Nominal diameter	DN	10	15	20	25	32	40	50
Connection DIN EN ISO 228	G	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Outlet DIN EN ISO 228	G	3/8" (10)	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Installation dimensions in mm	L	27	29	34	42	46	51	60
	L1	69	72	90	95	115	-	-
	L2	87	95	111	126	149	-	-
	H	66	74	83	100	117	136	146
	H3	64	68	86	100	114	-	-
	h	26	30	35	43	46	52	61
	h1	14	15	18	23	28	-	-
	SW	24	28	34	41	52	58	70
	SW1	24	27	32	41	50	-	-
	do	10	13	19	25	30	38	50
Weight	kg	0,3	0,4	0,7	1,2	1,9	2,5	3,8
	bar	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20	0,2 - 20
Range of adjustment	bar	0,2 - 0,8	0,2 - 0,8	0,2 - 0,8	0,2 - 0,8	0,2 - 0,8	0,2 - 0,8	0,2 - 0,8
		0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5
		2-12	2-12	2-12	2-12	2-12	2-12	2-12
		12-20	12-20	12-20	12-20	12-20	12-20	12-20

■ **MAIN DIMENSIONS, INSTALLATION DIMENSIONS**

Version: 618t



Version: 618yt



Series 618 ■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Pressure range / set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
618	t	GF	0	15	f	f	15	15	NBR		2 - 12	10
618	yt	GF	0	25	f	f	25	25	PTFE		16,0	2
618	t	GF	0		f	f						
618	t	GF	0		f	f						

■ PROPERTIES

G0X	Especially for gaseous O2 applications by employment of specific materials including oil- and grease free production process	<input type="checkbox"/>	P03	Galvanically nickel-plated finish	<input type="checkbox"/>
P01	Oil- and grease-free production	<input type="checkbox"/>	P04	Chrome-plated finish	<input type="checkbox"/>
P02	Chemically nickel-plated finish	<input type="checkbox"/>			<input type="checkbox"/>

■ CERTIFICATES / APPROVALS

C01	Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)	<input type="checkbox"/>	C06	ATEX evaluation acc. to 2014/34/EU	<input type="checkbox"/>
C02-1	Test certificate acc. DIN EN 10204 3.1 (WPZ 3.1) for non TÜV-CE valves marking of individual serial number is required	<input type="checkbox"/>	C10	Certificate of oil- and grease free production	<input type="checkbox"/>
C03	Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1) (pressure retaining part)	<input type="checkbox"/>	C11	Certification of the production process especially for gaseous oxygen applications by employment of specific materials	<input type="checkbox"/>
C05	Sealing material Manufacturer certification (FDA, USP 3, 3-A,...), Please indicate description of certificate:	<input type="checkbox"/>			<input type="checkbox"/>

■ ADMISSIONS / ACCREDITATIONS

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

■ CAPACITY TABLE

Series 618: Kv values at 1 bar overpressure

Nominal diameter DN	10 Air [Nm ³ /h]				10 Water [m ³ /h]				10 Steam [kg/h]			
	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	49				1,6				38			
0,5	52	46*			1,7	0,4			41	35*		
0,8	58	47*			1,7	0,4			46	36*		
1,0		49*				0,4				37*		
1,5		50*				0,4				39*		
2,0		54*	13*			0,5	0,4			41*	10*	
2,5		56*	11*			0,5	0,4			43*	8,5*	
3,0			8*				0,4				6,2*	
4,0			7*				0,4				5,4*	
5,0			4*				0,4				3,1*	
6,0			3*				0,4				2,3	
7,0			< 1				0,5				< 1	
8,0			< 1				0,4				< 1	
9,0			< 1				0,4				< 1	
10,0			< 1				0,4				< 1	
11,0			< 1				0,3				< 1	
12,0			< 1	< 1			0,3	0,2			< 1	< 1
13,0				< 1				0,2				< 1
14,0				< 1				0,2				< 1
15,0				< 1				0,1				< 1
16,0				< 1				0,1				< 1
17,0				< 1				0,1				< 1
18,0				< 1				0,1				< 1
19,0				< 1				0,1				< 1
20,0				< 1				0,1				< 1

Kv values at 1 bar overpressure

Nominal diameter DN	15 Air [Nm ³ /h]				15 Water [m ³ /h]				15 Steam [kg/h]			
	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	85				2,7				68			
0,5	94	50			2,9	1,6			74	39		
0,8	104	57			3,0	1,6			81	42		
1,0		64				1,7				42		
1,5		66				1,8				49		
2,0		69	72*			1,8	0,9			50	56*	
2,5		70	72*			1,9	0,9			53	56*	
3,0			73*				0,8				57*	
4,0			75*				0,8				58*	
5,0			78*				0,8				60*	
6,0			79*				0,7				60*	
7,0			80*				0,6				61*	
8,0			84*				0,5				64*	
9,0			86*				0,4				65*	
10,0			89*				0,2				67*	
11,0			92*				0,2				69*	
12,0			95*	< 1			0,1	0,2			72*	< 1
13,0				< 1				0,2				< 1
14,0				< 1				0,2				< 1
15,0				< 1				0,2				< 1
16,0				5*				0,2				9*
17,0				12*				0,2				12*
18,0				38*				0,2				15*
19,0				51*				0,2				16*
20,0				65*				0,2				16*

*Capacity at 2 bar overpressure

■ CAPACITY TABLE

Series 618: Kv values at 1 bar overpressure

Nominal diameter DN	20				20				20			
	Air [Nm ³ /h]				Water [m ³ /h]				Steam [kg/h]			
Pressure range bar	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	125				3,6				98			
0,5	139	90			3,8	2,7			110	72		
0,8	152	94			4,1	2,9			118	80		
1,0		101				3,1				81		
1,5		118				3,2				89		
2,0		131	77			3,3	2,0			102	60	
2,5		155	83			3,5	2,1			121	67	
3,0			91				2,1				67	
4,0			98				2,1				80	
5,0			108				2,1				83	
6,0			112				2,2				94	
7,0			115				2,2				93	
8,0			116				2,0				88	
9,0			118				1,7				96	
10,0			121				1,6				87	
11,0			124				1,3				76	
12,0			125	74*			1,2	1,0			81	56*
13,0				82*				0,8				62*
14,0				97*				0,7				73*
15,0				111*				0,5				83*
16,0				125*				0,4				94*
17,0				132*				0,3				99*
18,0				148*				0,2				111*
19,0				169*				0,2				126*
20,0				180*				0,1				134*

*Capacity at 2 bar overpressure

Kv values at 1 bar overpressure

Nominal diameter DN	25				25				25			
	Air [Nm ³ /h]				Water [m ³ /h]				Steam [kg/h]			
Pressure range bar	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	158				5,1				122			
0,5	177	99			5,4	3,1			137	79		
0,8	191	111			5,7	3,2			146	88		
1,0		124				3,3				94		
1,5		141				3,6				109		
2,0		162	101			3,8	2,6			124	83	
2,5		179	106			4,1	2,6			140	93	
3,0			118				2,7				90	
4,0			127				2,8				93	
5,0			136				2,9				107	
6,0			147				2,8				102	
7,0			154				2,7				114	
8,0			151				2,4				127	
9,0			146				2,2				111	
10,0			141				2,0				121	
11,0			136				1,9				98	
12,0			133	117*			1,7	0,6			106	88*
13,0				128*				0,6				96*
14,0				139*				0,5				104*
15,0				151*				0,5				113*
16,0				162*				0,5				121*
17,0				169*				0,5				126*
18,0				186*				0,4				139*
19,0				197*				0,4				147*
20,0				202*				0,4				151*

*Capacity at 2 bar overpressure

■ CAPACITY TABLE

Series 618: Kv values at 1 bar overpressure

Nominal diameter DN	32 Air [Nm ³ /h]				32 Water [m ³ /h]				32 Steam [kg/h]			
	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	380				11,4				302			
0,5	428	261			11,9	7,3			339	207		
0,8	472	284			12,7	7,6			369	232		
1,0		314				8,0				248		
1,5		370				8,5				288		
2,0		419	161			9,1	4,1			328	119	
2,5		479	174			9,8	4,3			368	134	
3,0			195				4,4				148	
4,0			225				4,6				178	
5,0			241				4,9				206	
6,0			268				5,0				206	
7,0			289				5,1				231	
8,0			309				5,4				256	
9,0			329				4,8				240	
10,0			342				4,0				262	
11,0			369				3,7				283	
12,0			387	395*			3,4	1,5			304	298*
13,0				398*				1,4				299*
14,0				401*				1,4				301*
15,0				412*				1,3				309*
16,0				418*				1,2				313*
17,0				431*				1,2				323*
18,0				447*				1,1				334*
19,0				452*				1,1				338*
20,0				468*				1,0				350*

*Capacity at 2 bar overpressure

Kv values at 1 bar overpressure

Nominal diameter DN	40 Air [Nm ³ /h]				40 Water [m ³ /h]				40 Steam [kg/h]			
	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	638				17,8				498			
0,5	696	402			18,6	11,1			544	318		
0,8	737	436			19,4	11,4			575	355		
1,0		471				12,1				362		
1,5		546				13,0				420		
2,0		615	188			13,9	4,9			455	144	
2,5		677	204			14,9	5,0			510	161	
3,0			229				5,2				179	
4,0			265				5,3				214	
5,0			304				5,5				248	
6,0			347				5,6				283	
7,0			387				5,8				317	
8,0			421				5,8				352	
9,0			459				5,8				322	
10,0			495				5,9				350	
11,0			537				6,1				303	
12,0			567	423*			6,2	3,1			326	319*
13,0				427*				2,6				321*
14,0				435*				2,1				327*
15,0				445*				1,4				334*
16,0				458*				1,1				343*
17,0				487*				1,1				364*
18,0				521*				1,1				390*
19,0				561*				1,0				419*
20,0				595*				1,0				445*

*Capacity at 2 bar overpressure

■ **CAPACITY TABLE**

Series 618: Kv values at 1 bar overpressure												
Nominal diameter DN	50				50				50			
	Air [Nm ³ /h]				Water [m ³ /h]				Steam [kg/h]			
Pressure range bar	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20	0.2 - 0.8	0.5 - 2.5	2 - 12	12 - 20
Set pressure bar												
0,2	1125				28,9				885			
0,5	1234	576			30,3	15,1			969	471		
0,8	1356	591			31,2	15,7			1054	527		
1,0		602				16,3				564		
1,5		825				17,2				618		
2,0		958	308			18,5	6,9			705	249	
2,5		1019	347			19,5	7,0			791	279	
3,0			381				7,3				309	
4,0			482				7,6				370	
5,0			576				7,9				430	
6,0			688				8,5				490	
7,0			767				9,0				549	
8,0			811				9,4				609	
9,0			855				9,8				557	
10,0			901				10,2				606	
11,0			935				10,6				655	
12,0			981	472*			11,0	2,8			705	356*
13,0				511*				3,1				385*
14,0				578*				3,3				434*
15,0				614*				3,5				460*
16,0				650*				3,7				487*
17,0				672*				3,8				503*
18,0				687*				3,9				514*
19,0				701*				3,9				524*
20,0				712*				4,0				532*

*Capacity at 2 bar overpressure