

Overflow and pressure control valves made of gunmetal, straightway form with flange connections -external adjustment-

→ Series 631



■ SUITABLE FOR

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

■ 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 air, neutral / non-neutral gases and vapours

- industrial plants
- power plant technology
- pump stations
- mechanical engineering



■ MATERIAL



■ SPECIFICATION



DN 20 to DN 80 - 10°C to + 95°C 0,5 – 10 bar

■ APPROVALS

European Pressure Equipment Directive

TR ZU 032/2013 - TR ZU 010/2011

Requirements

PED 2014/68/EU

Classification society

Germanischer Lloyd	GL
Lloyd's Register EMEA	LR EMEA
American Bureau of Shipping	ABS
Bureau Veritas	BV
Russian Maritime Register of Shipping	RS

■ MATERIALS

Component	Material	DIN EN	ASME
Inlet body	Gunmetal	CC499K	CC499K
Outlet body	Gunmetal	CC499K	CC499K
Internal parts	Gunmetal	CC499K	CC499K
	Brass	CW617N	CW617N
	Stainless steel	1.4404	316 L
Valve seat	Stainless steel	1.4404	316 L
Spring	Spring steel with anti-rust protection	1.1200	ASTM A228

■ VALVE VERSION

m	with diaphragm	High-quality, heat-resistant moulded elastomere, fabric-reinforced diaphragm. Valves in straightway form, closed version. Can be adjusted under operating conditions without medium escaping into the atmosphere. Adjustment can be directly read-off an optional pressure gauge (accessory). Optimal control response and large flow volumes even in cases of small pressure differences due to diaphragm operating principle.
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Complete valve cartridge available as replacement part (order code: 431 cartridge-DN..-seal) can be exchanged without removing the valve.

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

■ MEDIUM

GF	gaseous and liquid	for water, neutral and non-sticking liquids, compressed air and neutral gases; optionally with FPM elastomere seals for non-neutral media i.e. oils, fuels, oil-laden compressed air, etc.
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■ TYPE OF LIFTING MECHANISM

0	without lifting device
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN	20	25	32	40	50	65	80
Inlet / Outlet	20/20	25/25	32/32	40/40	50/50	65/65	80/80
	■	■	■	■	■	■	■

■ TYPE OF CONNECTION INLET / OUTLET FLANGE CONNECTIONS

FL / FL	Standard	Flange connection / flange connection	DIN EN 1092 / DIN EN 1092
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■ SEALS

EPDM	Ethylene propylene diene	Elastomere moulded diaphragm and seals approvals according to drinking water directive	-10°C to +95°C
Against surcharge			
FKM	Fluorocarbon	Elastomere moulded diaphragm and seals	-10°C to +95°C

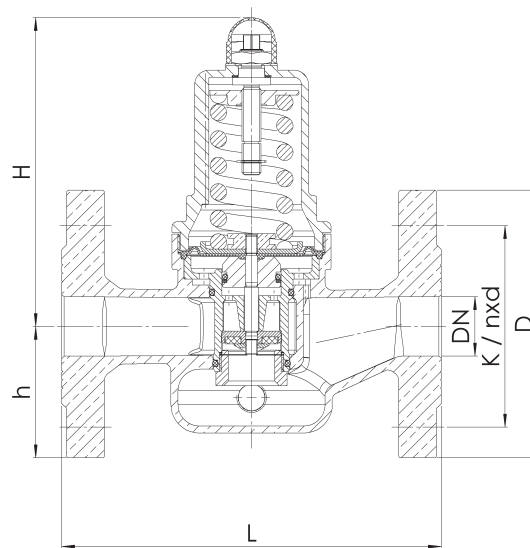
■ OPTIONS

Against surcharge	
Pressure gauges 33, 36, 39 or 40	Chapter Accessories

NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 631: Connection, installation dimensions, ranges of adjustment									
Nominal diameter	DN / PN	20 / 40	25 / 40	32 / 40	40 / 40	50 / 40	65 / 16	65 / 40	80 / 40
Inlet DIN EN 1092	DN	20	25	32	40	50	65	65	80
Connection DIN EN 1092	DN	20	25	32	40	50	65	65	80
Installation dimensions in mm	L	150	160	180	200	230	290	290	310
	D	105	115	140	150	165	185	185	200
	H	130	130	130	166	166	245	245	245
	h	50	55	68	73	80	89	89	97
	K / nxd	75 / 4xM12	85 / 4xM12	100 / 4xM16	110 / 4xM16	125 / 4xM16	145 / 4xM16	145 / 8xM16	160 / 8xM16
Weight	kg	4,2	4,7	5,9	8,6	10,5	20	20	22
Set pressure	bar	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	1-6	1-6	1-6
Range of adjustment	bar	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	1-6	1-6	1-6
		1,5-6	1,5-6	1,5-6	1,5-6	1,5-6			
		5,5-10	5,5-10	5,5-10	5,5-10	5,5-10			

MAIN DIMENSIONS, INSTALLATION DIMENSIONS



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				
631	m	GF	0	20	FL	FL	20	20	EPDM	Mano-meter 33	5,0	4
631	m	GF	0	65	FL	FL	65	65	FKM	PN16	1 - 6	1
631	m	GF	0		FL	FL						
631	m	GF	0		FL	FL						

In this table you can configure a valve according to your individual requirements (similar to the *example* shown, which should be deleted before you enter your own data). Please complete the table by hand using the abbreviations in this datasheet and then fax it to: +49(0)7141.4889488
Please do not forget to add your personal data so that our sales team can contact you.

Name

First Name

Company

Telephone

E-Mail

■ CAPACITY TABLE

Series G31: Kv values at 1 bar overpressure												
Nominal diameter DN	20		25		32		40		50		65	80
	Air [Nm ³ /h]		Air [Nm ³ /h]		Air [Nm ³ /h]		Air [Nm ³ /h]		Air [Nm ³ /h]		Air [Nm ³ /h]	Air [Nm ³ /h]
Pressure range bar	0,5-2	5,5-10	1,5-6		0,5-2	5,5-10	1,5-6		0,5-2	5,5-10	1,5-6	
	1,5-6		0,5-2	5,5-10	1,5-6		0,5-2	5,5-10	1,5-6		1-6	
Set pressure bar												
0,5	175		189		193		417		445			
1	208		231		239		498		537		1010	
1,5	175	247	185	264	196	273	370	587	408	624	1020	1115
2	214	285	226	303	238	314	429	636	472	683	1255	1315
3	245		282		291		506		557		1480	
4	292		330		338		543		615		1810	
5	329		367		379		625		684		2060	
5,5	173	354	183	386	186	394	375	653	417	719	1930	2150
6	186	375	194	405	202	418	395	708	443	760	1965	2230
7	210		223		229		400		502			
8	249		259		264		407		517			
9	273		285		289		432		564			
10	294		303		314		465		601			

Kv values at 1 bar overpressure												
Nominal diameter DN	20		25		32		40		50		65	80
	Water [m ³ /h]		Water [m ³ /h]		Water [m ³ /h]		Water [m ³ /h]		Water [m ³ /h]		Water [m ³ /h]	Water [m ³ /h]
Pressure range bar	0,5-2	5,5-10	1,5-6		0,5-2	5,5-10	1,5-6		0,5-2	5,5-10	1,5-6	
	1,5-6		0,5-2	5,5-10	1,5-6		0,5-2	5,5-10	1,5-6		1-6	
Set pressure bar												
0,5	5,1		5,5		6,2		12,4		12,9			
1	5,4		6,1		6,9		12,9		13,8		26,0	
1,5	5,2	5,9	5,6	6,6	6,4	7,5	9,0	13,2	9,4	14,4	24,0	26,0
2	5,2	6,3	5,7	6,9	6,4	7,8	9,1	13,5	9,4	14,9	25,0	27,0
3	5,3		5,9		6,5		9,3		9,5		29,0	
4	5,3		6,1		7,2		9,5		9,9		30,0	
5	5,4		6,2		7,5		9,7		10,2		31,0	
5,5	2,9	5,2	3,2	5,8	4,1	6,9	7,2	10,1	7,7	10,5	28,0	32,0
6	3,0	5,1	3,3	5,4	4,2	6,7	7,3	10,4	8,0	10,9	29,0	32,0
7	3,3		3,9		4,5		7,5		8,1			
8	3,2		3,8		4,4		7,3		7,8			
9	3,1		3,7		4,2		6,9		7,4			
10	3,1		3,6		4,0		6,5		7,1			