

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 15 to DN 100 - 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

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.

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.

■ TYPE OF LIFTING MECHANISM

0 without lifting device

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN	15	20	25	32	40	50	65	80	100
Inlet / Outlet	15/15	20/20	25/25	32/32	40/40	50/50	65/65	80/80	100/100
	■	■	■	■	■	■	■	■	■

■ TYPE OF CONNECTION INLET / OUTLET FLANGE CONNECTIONS

FL / FL	Standard	Flange connection / flange connection	DIN EN 1092 / DIN EN 1092
---------	----------	---------------------------------------	---------------------------

■ 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

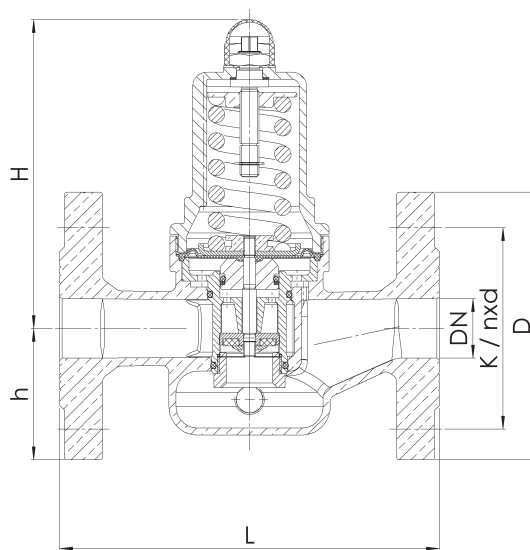
Chapter Accessories

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 631: Connection, installation dimensions, ranges of adjustment											
Nominal diameter	DN / PN	15/40	20 / 40	25 / 40	32 / 40	40 / 40	50 / 40	65 / 16	65 / 40	80 / 40	100 / 16
Inlet DIN EN 1092	DN	15	20	25	32	40	50	65	65	80	100
Connection DIN EN 1092	DN	15	20	25	32	40	50	65	65	80	100
Installation dimensions in mm	L	130	150	160	180	200	230	290	290	310	350
	D	95	105	115	140	150	165	185	185	200	220
	H	102	130	130	130	166	166	245	245	245	320
	h	46	50	55	68	73	80	89	89	97	112
	K / nxd	65 / 4xM12	75 / 4xM12	85 / 4xM12	100 / 4xM16	110 / 4xM16	125 / 4xM16	145 / 4xM16	145 / 8xM16	160 / 8xM16	180 / 8xM16
Weight	kg	2,8	4,2	4,7	5,9	8,6	10,5	20	20	22	40
Set pressure	bar	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	1-6	1-6	1-6	1 - 5,5
Range of adjustment	bar	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	1-6	1-6	1 - 5,5
		1,5-6	1,5-6	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	5,5-10	5,5-10			
Coefficient of flow K_{vs}	m ³ /h	2,1	4,7	5,1	5,5	10,5	11,5	20,5	20,5	21,5	42

The K_{vs} value was determined according to DIN EN 60534-2-3. Instructions on how to determine size and capacity are to be found under section 2.

■ 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 631: Kv values at 1 bar overpressure																																																
Nominal diameter DN	15			20			25			32			40			50			65			80			100																							
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			1-6																				
	1,5-6			0,5-2			5,5-10			1,5-6			0,5-2			5,5-10			1,5-6			0,5-2			5,5-10			1-6																				
Set pressure bar																																																
0,5	73			175			189			193			417			445																																
1	89			208			231			239			498			537						945			1010			1230																				
1,5	102			103			247			175			264			185			273			196			587			370			624			408			1020			1115			1350					
2	117			119			285			214			303			226			314			238			636			429			683			472			1255			1315			1510					
3				146			245			282			291			291			291			291			506			506			557			1480			1620			1820								
4				170			292			330			338			338			338			338			543			543			615			1810			1890			2090								
5				187			329			367			379			379			379			379			625			625			684			1895			2060			2320								
5,5				195			139			354			173			386			183			394			186			653			375			719			417			1930			2150			2450		
6				203			147			375			186			405			194			418			202			708			395			760			443			1965			2230					
7							162			210			223			223			223			229			229			400			400			502														
8							179			249			259			259			259			264			264			407			407			517														
9							218			273			285			285			285			289			289			432			432			564														
10							255			294			303			303			303			314			314			465			465			601														

Kv values at 1 bar overpressure																																																
Nominal diameter DN	15			20			25			32			40			50			65			80			100																							
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			1-6																				
	1,5-6			0,5-2			5,5-10			1,5-6			0,5-2			5,5-10			1,5-6			0,5-2			5,5-10			1-6																				
Set pressure bar																																																
0,5	2,7			5,1			5,5			6,2			12,4			12,9																																
1	2,9			5,4			6,1			6,9			12,9			13,8						23,0			26,0			31,0																				
1,5	3,4			3,1			5,9			5,2			6,6			5,6			7,5			6,4			13,2			9,0			14,4			9,4			24,0			26,0			31,7					
2	3,6			3,2			6,3			5,2			6,9			5,7			7,8			6,4			13,5			9,1			14,9			9,4			25,0			27,0			33,0					
3				3,3			5,3			5,9			6,5			9,3			9,5			9,5			9,5			9,5			26,0			29,0			34,5											
4				3,4			5,3			6,1			7,2			9,5			9,9			9,9			9,9			9,9			28,0			30,0			36,0											
5				3,3			5,4			6,2			7,5			9,7			10,2			10,2			10,2			10,2			28,0			31,0			38,7											
5,5				3,0			2,3			5,2			2,9			5,8			3,2			6,9			4,1			10,1			7,2			10,5			7,7			28,0			32,0			40,0		
6				2,9			2,4			5,1			3,0			5,4			3,3			6,7			4,2			10,4			7,3			10,9			8,0			29,0			32,0					
7							2,4			3,3			3,9			3,9			3,9			4,5			4,5			4,5			7,5			8,1														
8							2,4			3,2			3,8			3,8			3,8			4,4			4,4			4,4			7,3			7,8														
9							2,3			3,1			3,7			3,7			3,7			4,2			4,2			4,2			6,9			7,4														
10							2,2			3,1			3,6			3,6			3,6			4,0			4,0			4,0			6,5			7,1														