

→ Series 430

430

Overflow and pressure control valves
made of stainless steel,
straightway form,
with threaded connections
-externally adjustable-



■ MATERIAL



■ SPECIFICATION



1/2" – 2"



– 20°C to + 120°C



0,5 – 10 bar

■ 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

- test rig construction
- process equipment construction
- laboratories
- mechanical engineering
- secondary areas in the food-, beverage-, pharmaceutical- and cosmetics-industries

■ APPROVALS

European Pressure Equipment Directive

TR ZU 032/2013 - TR ZU 010/2011

Requirements

PED 2014/68/EU

UK PESR 2016 No. 1105

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	Stainless steel	1.4408	CF8M
Outlet body	Stainless steel	1.4408	CF8M
Internal parts	Stainless steel	1.4408	CF8M
	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.
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Complete valve cartridge available as replacement part (order code: 430 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 and distilled 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	15	20	25	32	40	50
Inlet	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Outlet	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

BSP-Tm / BSP-Tm	Standard threaded connections	Male thread BSP-T / Male thread BSP-T	DIN EN 10226, ISO 7-1 / DIN EN 10226, ISO 7-1
f / f	Version with female thread available in sizes DN15, DN20 and DN25	Female thread BSP-P / Female thread BSP-P	DIN EN ISO 228-1 / DIN EN ISO 228-1

■ SEALS

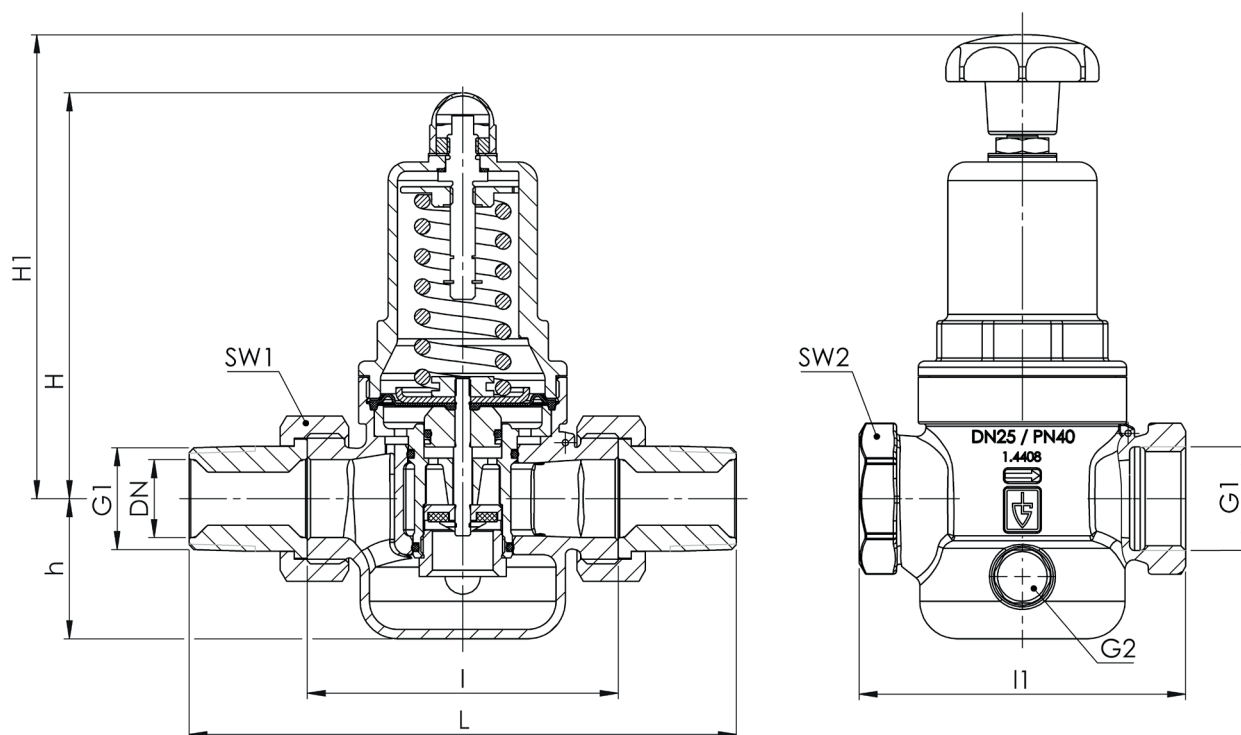
EPDM	Ethylene propylene diene	Elastomere moulded diaphragm and seals approvals according to drinking water directive	-20°C to +120°C (up to 6 bar outlet pressure) -20°C to +95°C (from 6 bar outlet pressure)
FKM	Fluorocarbon	Elastomere moulded diaphragm and seals	-10°C to +120°C (up to 6 bar outlet pressure) -10°C to +95°C (from 6 bar outlet pressure)

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 430: Connection, installation dimensions, ranges of adjustment							
Nominal diameter	DN	15	20	25	32	40	50
Inlet DIN EN 10226	G1	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Outlet DIN EN 10226	G1	1/2" (15)	3/4" (20)	1" (25)	1 1/4" (32)	1 1/2" (40)	2" (50)
Installation dimensions in mm	L	142	158	180	193	226	252
	I	80	90	100	105	130	140
	I1	85	95	105			
	H	102	102	130	130	165	165
	H1	124	124	161	161	198	198
	h	33	33	45	45	70	70
	SW1	30	37	46	52	65	75
	SW2	28	35	43	48	57	68
Pressure gauge connection	G2	1/4" axial	1/4" axial	1/4" axial	1/4" axial	1/4" axial	1/4" axial
Weight	kg	1,2	1,3	2,3	2,5	5,2	5,7
Set pressure	bar	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10
Range of adjustment	bar	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2
		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
Coefficient of flow K_{vs}	m³/h	2,1	2,4	5,1	5,5	10,5	11,5

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



Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Pressure range / set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
430	m	GF	0	20	BSP-T m	BSP-T m	20	20	EPDM		5,5 - 10	5
430	m	GF	0	25	f	f	25	25	EPDM		0,5 - 2	3
430	m	GF	0									
430	m	GF	0									

■ TECHNICAL FINISHES, VARIANTS, ACCESSORIES

S15	Hand wheel (plastic) for tool-free setting of setpressure ¹	☐	☐
S17	Supply with manometers suitable for the valve finish	☐	☐
S71	Preliminary setup for protection against manipulation of the preset pressure (seal)	☐	☐

¹For nominal diameters DN15 to DN50 for the pressure ranges 0,5-2 and 1,5-6,0 bar

■ PROPERTIES

GOX	Especially for gaseous O2 applications by employment of specific materials including oil- and grease free production process	☐	☐
P01	Oil- and grease-free production	☐	☐
FE	Setting and sealing	☐	☐

■ CERTIFICATES / APPROVALS

C01	Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)	☐	C06	ATEX evaluation acc. to 2014/34/EU	☐
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	☐	C10	Certificate of oil- and grease free production	☐
C03	Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1) (pressure retaining part)	☐	C11	Certification of the production process especially for gaseous oxygen applications by employment of specific materials	☐
C05	Sealing material Manufacturer certification (FDA, USP 3, 3-A,...), Please indicate description of certificate:	☐			☐

■ ADMISSIONS / ACCREDITATIONS

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

■ CAPACITY TABLE

Series 430: Kv values at 1 bar overpressure												
Nominal diameter DN	15		20		25		32		40		50	
	Air [Nm³/h]		Air [Nm³/h]		Air [Nm³/h]		Air [Nm³/h]		Air [Nm³/h]		Air [Nm³/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		0,5-2	5,5-10
Set pressure bar												
0,5	73		77		189		193		417		445	
1	89		94		231		239		498		537	
1,5	102	103	108	107	264	185	273	196	587	370	624	408
2	117	119	121	126	303	226	314	238	636	429	683	472
3	146		153		282		291		506		557	
4	170		176		330		338		543		615	
5	187		194		367		379		625		684	
5,5	195	139	206	157	386	183	394	186	653	375	719	417
6	203	147	216	163	405	194	418	202	708	395	760	443
7	162		178		223		229		400		502	
8	179		190		259		264		407		517	
9	218		225		285		289		432		564	
10	255		261		303		314		465		601	

Kv values at 1 bar overpressure															
Nominal diameter	15			20		25		32		40		50			
DN	Water [m³/h]		Water [m³/h]		Water [m³/h]		Water [m³/h]		Water [m³/h]		Water [m³/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			
Set pressure bar	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	
0,5	2,7		2,9		5,5		6,2		12,4		12,9				
1	2,9		3,3		6,1		6,9		12,9		13,8				
1,5	3,4	3,1	3,6	3,4	6,6	5,6	7,5	6,4	13,2	9,0	14,4	9,4			
2	3,6	3,2	3,9	3,4	6,9	5,7	7,8	6,4	13,5	9,1	14,9	9,4			
3	3,3		3,5		5,9		6,5		9,3		9,5				
4	3,4		3,7		6,1		7,2		9,5		9,9				
5	3,3		3,7		6,2		7,5		9,7		10,2				
5,5	3,0	2,3	3,6	2,7	5,8	3,2	6,9	4,1	10,1	7,2	10,5	7,7			
6	2,9	2,4	3,6	2,7	5,4	3,3	6,7	4,2	10,4	7,3	10,9	8,0			
7	2,4		2,6		3,9		4,5		7,5		8,1				
8	2,4		2,6		3,8		4,4		7,3		7,8				
9	2,3		2,5		3,7		4,2		6,9		7,4				
10	2,2		2,5		3,6		4,0		6,5		7,1				