

PNEUMAT[®] SYSTEM



Pressure gauges not included

■ SUITABLE FOR

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

■ EXAMPLES OF USE

For the protection of:

- domestic water supply systems
- commercial and industrial plants

against too high supply pressure.

Pressure reducers are used, if within a piping system despite of varying pressures on the inlet side a certain pressure must not be exceeded on the outlet side.

- potable water supply according to DIN 1988
- process water supply in industrial- and building technology
- fire-fighting equipment and sprinkler systems
- shipbuilding industry and offshore plants
- secondary areas in the food-, pharmaceutical- and cosmetics- industries.



■ MATERIAL



■ SPECIFICATION



DN 15 to DN 80 – 10°C to + 95°C

Inlet pressure:
up to 40 bar
Outlet pressure:
0,5 to 15 bar
depending on version

■ APPROVALS

DIN-DVGW type examination

Type approval ACS

Type approval WRAS

TR ZU 032/2013 - TR ZU 010/2011

Requirements

DIN DVGW guidelines
DIN EN 1567
DIN 1988

DIN EN ISO 3822
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	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
Spring	Spring steel with anti-rust protection	1.1200	ASTM A228
Strainer	Stainless steel	1.4404	316 L

■ VALVE VERSION

m	with diaphragm	High-quality, heat-resistant moulded elastomere, fabric-reinforced diaphragm. Pressure adjustment by means of non-rising spindle. Valve insert with balanced single seat valve completely made of stainless steel.
----------	----------------	--

Complete valve cartridge SP/HP (order code: 482 Insert-DN.-seal) available as replacement part can be exchanged without removing the valve.

Complete valve cartridge LP (order code: 482 LP Insert-DN.-seal) available as replacement part can be exchanged without removing the valve.

Built-in dirt trap made of stainless steel.

Mesh size:	DN 15 to DN 32	0,60 mm
	DN 40 to DN 80	0,75 mm

■ 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.
-----------	--------------------	---

■ TYPE OF LIFTING MECHANISM

0	without lifting device
----------	------------------------

■ OUTLET PRESSURE RANGES

SP	Standard version	Inlet pressure: up to 40 bar	Outlet pressure: from 1 to 8 bar
HP	High-pressure version (not for DN 65 and DN 80)	Inlet pressure: up to 40 bar	Outlet pressure: from 5 to 15 bar
LP	Low-pressure version (not for DN 65 and DN 80)	Inlet pressure: up to 25 bar	Outlet pressure: from 0,5 to 2 bar

Fixed setting at a required outlet pressure against surcharge.

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

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

■ 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, 34, 35, 36, 39 and 40	Chapter Accessories
Pressure gauge 37, 38, 41, 42 or 43 made of stainless steel	Chapter Accessories

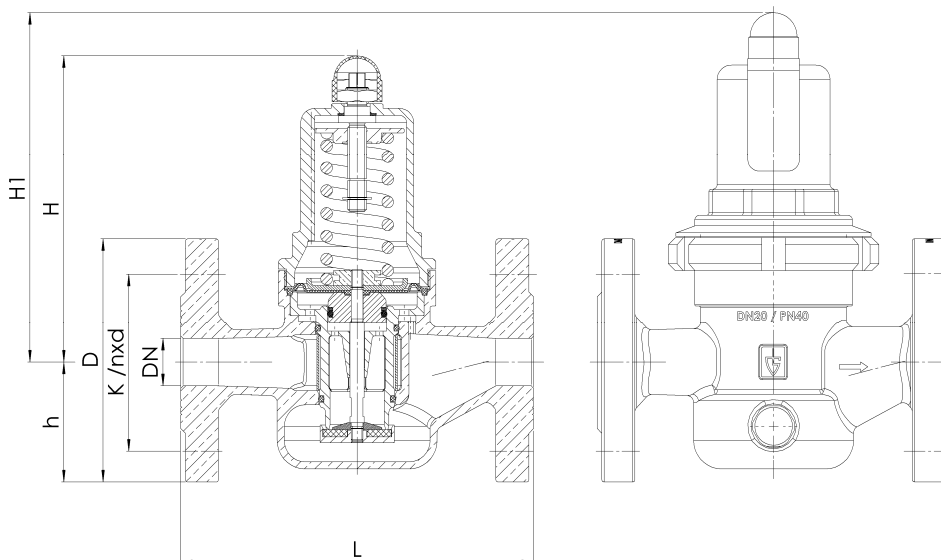
NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series 482: Connection, installation dimensions, ranges of adjustment										
Connection		DN15 PN40	DN20 PN40	DN25 PN40	DN32 PN40	DN40 PN40	DN50 PN40	DN65 PN16	DN65 PN40	DN80 PN40
Inlet pressure SP, LP up to	bar	40	40	40	40	40	40	16	40	40
Inlet pressure HP up to	bar	25	25	25	25	25	25			
Outlet pressure	bar	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	0,5-2	1-8	1-8	1-8
		1-8 5-15	1-8 5-15	1-8 5-15	1-8 5-15	1-8 5-15	1-8 5-15			
Installation dimensions in mm	D	95	105	115	140	150	165	185	185	200
	L	130	150	160	180	200	230	290	290	310
	H (H1)	102 (128 ¹)	130 (150 ¹)	130 (150 ¹)	130 (150 ¹)	165 (185 ¹)	165 (185 ¹)	235	235	235
	h	46	50	55	68	73	80	89	89	96
	K / nxd	65 / 4xM12	75 / 4xM12	85 / 4xM12	100 / 4xM16	110 / 4xM16	125 / 4xM16	145 / 4xM16	145 / 8xM16	160 / 8xM16
Weight	kg	2,7 (2,9 ²)	3,9 (4,3 ²)	4,3 (4,7 ²)	5,5 (5,9 ²)	8,4 (9,1 ²)	10,2 (10,9 ²)	18,7	19	20,5
Coefficient of flow K_{vs}	m ³ /h	3	5,8	6,7	7,6	12,5	15	40	40	50

¹for type 482mGFO-LP

²The 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



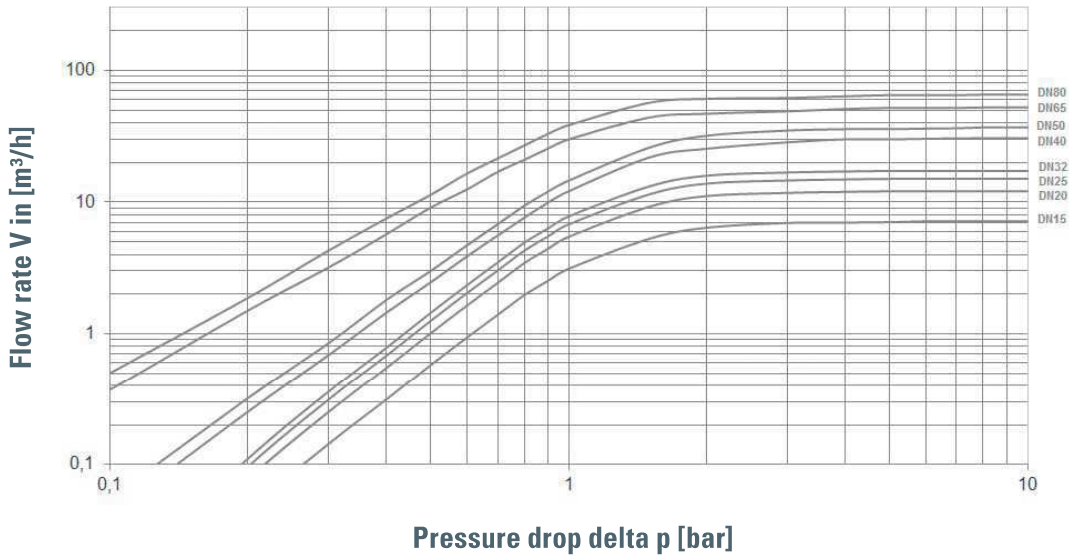
INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Outlet pressure	Nominal diameter DN	Connection type		Connection size		Seal	Options	Optional: fixed setting	Quantity
						Inlet	Outlet	Inlet	Outlet				
482	m	GF	0	SP	65	FL	FL	65	65	EPDM	PN16		5
482	m	GF	0	LP	40	FL	FL	40	40	FKM	Pressure Gauge 43	1,5	2
482	m	GF	0			FL	FL						
482	m	GF	0			FL	FL						

Series 482:

Dimensioning by pressure loss on the outlet pressure side

Flow chart water



Dimensioning by flow velocity

For Liquids:

With help of the chart you can determine the nominal diameter (DN) for a given flow volume V (m³/h). According to DVGW-guidelines (DIN 1988) a flow velocity of 2 m/s in domestic water supply systems should not be exceeded.

For compressed air and other gaseous media:

The usual flow velocity for compressed air is 10 - 20 m/s. For gaseous media the flow volume V should always be shown in actual cubic meters/hour. If the flow volume is given in standard cubic meters, these should be converted into actual cubic meters before using the diagram.

$$V(\text{m}^3/\text{h}) = \frac{V_{\text{Norm}} (\text{Nm}^3/\text{h})}{p_{\text{absolut}} (\text{bar})} = \frac{V_{\text{Norm}}}{p_0 + 1}$$

Actual cubic meters are based on the prevailing pressure of the medium on the outlet side of the pressure reducer.

