

481

Stainless Steel Pressure Reducing Valve For Water, Air & Neutral Gases Direct Acting BSPT Threaded Male Unions



The 481 is an extremely sturdy pressure reducing valve which is suitable for water up to 95°C, compressed air, neutral gas, neutral and non-sticking liquids. Used in domestic water supply systems as well as commercial and industrial plants, this is a versatile valve suitable for many duties.

The 481 has an integral filter which prevents debris from entering the valve which may affect its performance.

The valve has 1/4" BSP pressure gauge ports on both sides so that the pressure can be accurately monitored and adjusted.

Approvals, Features & Benefits

- WRAS (EPDM up to 85°C only)
- ACS & DVGW (EPDM up to 80°C only)
- Direct acting
- Quiet operation
- Economical & efficient
- Pressure gauge port
- Can be installed in any position

Pressure & Temperature

Max upstream pressure:-

- 481-SP : 40 bar
- 481-HP : 40 bar
- 481-LP : 25 bar

Downstream pressure range:-

- 481-SP : 1 to 8 bar (DVGW 6 bar)
- 481-HP : 5 to 15 bar
- 481-LP : 0.5 to 2 bar

Temperature range:-

- EPDM (Standard) : -20°C to 120°C*
- FKM : -10°C to 120°C*
- * 95°C for outlet pressures over 8 bar

DN	15	20	25	32	40	50
I	80	90	100	105	130	140
L	142	158	180	193	226	252
h	33	33	45	45	70	70
H**	102 (128)	102 (128)	130 (150)	130 (150)	165 (185)	165 (185)
G (BSP)	1/2	3/4	1	1 1/4	1 1/2	2
Gauge Port (BSP)	1/4	1/4	1/4	1/4	1/4	1/4
Strainer Mesh (mm)	0.60	0.60	0.60	0.60	0.75	0.75
Flow K _{Vs} (m ³ /h) ¹	3	3.5	6.7	7.6	12.5	15
Weight Kg**	1.2 (1.5)	1.3 (1.6)	2.3 (2.8)	2.5 (3.0)	5.2 (5.9)	5.7 (6.4)

** Figures in brackets for low pressure version (681-LP)

¹ 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 on following page.

MATERIALS

Inlet Body	Stainless Steel (CF8M)
Outlet Body	Stainless Steel (CF8M)
Internal Parts	Stainless Steel (CF8M & 316L)
Spring	Steel (Anti-rust protection)
Strainer	Stainless Steel (316L)
Seals	EPDM (Standard) • FKM

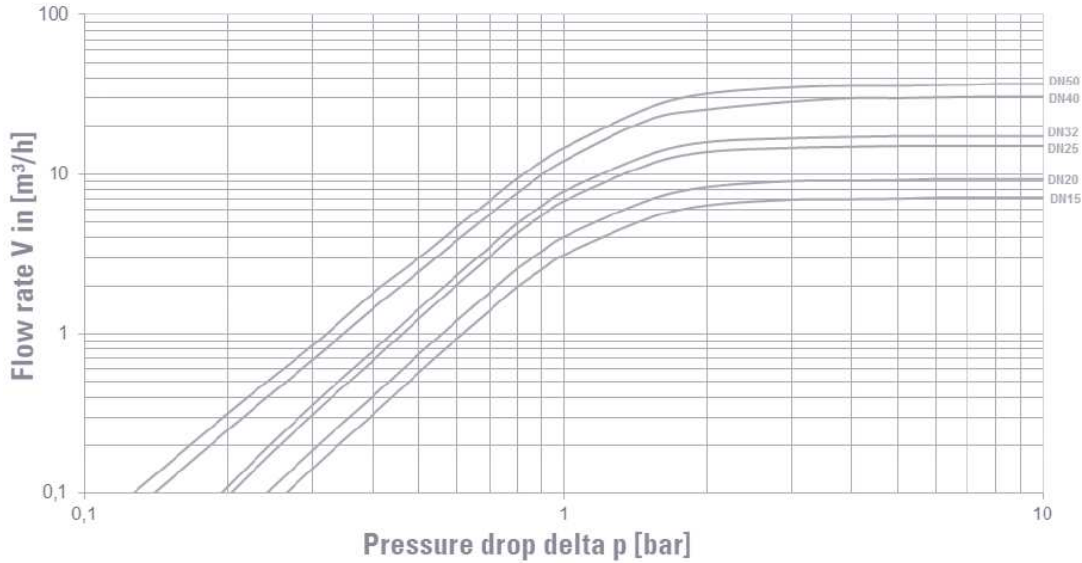
OPTIONS

Female Threaded BSPP	DN15 to DN25 only (contacts sales for dimensions)
Female Threaded NPT	DN15 to DN25 only (contacts sales for dimensions)
FKM Seals	-10°C to 120°C (not WRAS approved)
Complete Valve Insert Replacement	Can be exchanged without removing the valve
Pressure Gauges	63mm dial 1/4" BSP connection - various pressure ranges

481

Capacity Charts/Sizing

Dimensioning by pressure loss on the outlet pressure side



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.

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

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

