

► Simple, Robust and Accurate

- **Sizes:** 1/2" - 3/4" - 1" - 1 1/4" - 1 1/2" - 2"
- **Pressure Rating PFA:** 40 bar max.
- **Downstream Adjustment Range:** 0.5 – 15 bar (Depending on version)
- 1/4" BSP/F Outlet Gauge / Test port

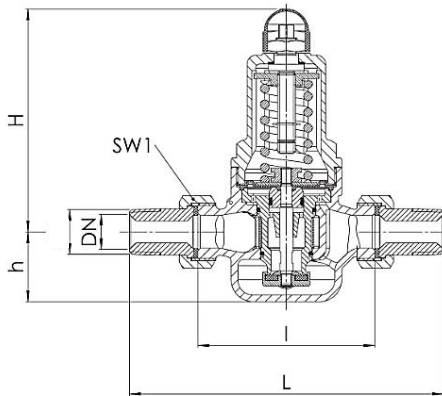


► AQUA-PRV/SC Function and Installation

The pressure reducing valve AQUA-PRV/SC, can be used in water distribution systems and on domestic distribution systems to protect installations from a high inlet (upstream) pressure. Regardless of variations of inlet pressure, the pressure reducing valve will reduce and maintain a lower and constant outlet (downstream) pressure.



► AQUA-PRV/SC Dimensions and Performance



► AQUA-PRV/SC Materials

- **Body and moving parts:** Gunmetal EN CC499K
- **Stem and Seat retainer :** Stainless Steel
- **Seat:** EPDM
- **Diaphragm:** EPDM
- **Gaskets:** RBR
- **Strainer:** Stainless Steel

► AQUA-PRV/SC Technical Specifications

Medium: Water / Air

Max. working temperature: -10°C to 95°C

Factory setting: To order

Connections: BSP Male

Downstream pressure gauge: optional

Dimensions						
G1 (DN)	L [mm]	I [mm]	h [mm]	H [mm]	Kvs [m ³ /h]	WEIGHT [kg]
1/2" / DN15	142	80	33	102 (*128)	3	1.2 (*1.5)
3/4" / DN20	158	90	33	102 (*128)	3.5	1.3 (*1.6)
1" / DN25	180	100	45	130 (*150)	6.7	2.4 (*2.9)
1 1/4" / DN32	193	105	45	130 (*150)	7.6	2.6 (*3.1)
1 1/2" / DN40	226	130	70	165 (*185)	12.5	5.5 (*6.2)
2" / DN50	252	140	70	165 (*185)	15	6.0 (*6.7)

* For type AQUA-PRV-LP/SC (0.5 – 2 bar)

Flow coefficient						
DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Kvs [m ³ /h]	3.0	3.5	6.7	7.6	12.5	15.0
Cv [l/s]	0.83	0.97	1.86	2.11	3.47	4.17

Nominal flow rates (recommended average velocity of 2 m/s)						
Ø	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Flow [m ³ /h]	1.3	2.2	3.5	6.0	9.0	15
Flow [l/min]	21	36	58	100	150	250

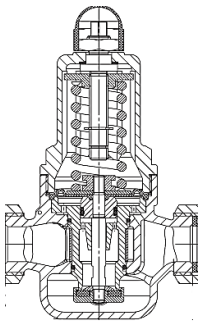
▶ Process

▶ AQUA-PRV/SC - Outlet Pressure Ranges

The AQUA-PRV/SC Pressure reducing valve is available with the following adjustment ranges:

SP	Standard Version	Inlet pressure: Up to 40 bar	Outlet pressure: 1 – 8 bar
HP	High-Pressure Version	Inlet pressure: Up to 40 bar	Outlet pressure: 5 – 15 bar
LP	Low-Pressure Version	Inlet pressure: Up to 25 bar	Outlet pressure: 0.5 – 2 bar

▶ AQUA-PRV/SC Compensated Seat and Integral Strainer



The AQUA-PRV/SC is a balanced valve. This means that the downstream pressure value, remains constant regardless of changes to upstream pressure. The thrust towards opening is counterbalanced by the closing pressure acting on the compensating piston. As the latter has a surface area equal to that of the obturator, the two forces cancel each other out.

The cartridge, which includes the diaphragm, filter, seat, obturator and compensating piston, is pre-assembled as a “self-contained unit”, and can easily be removed for inspection and maintenance purposes.

▶ AQUA-PRV/SC Hydraulic Characteristics

Sizing

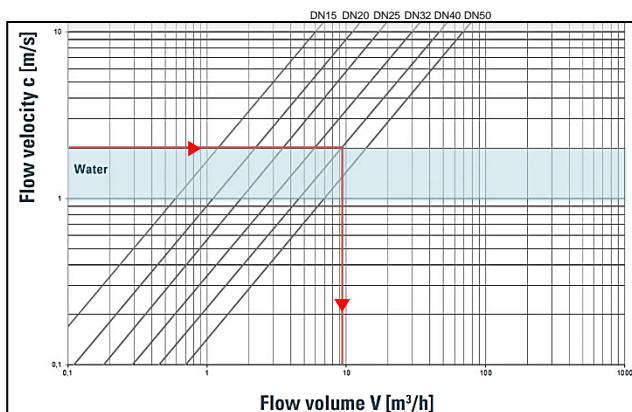
Steps for proper sizing:

(A) Determination of diameter:

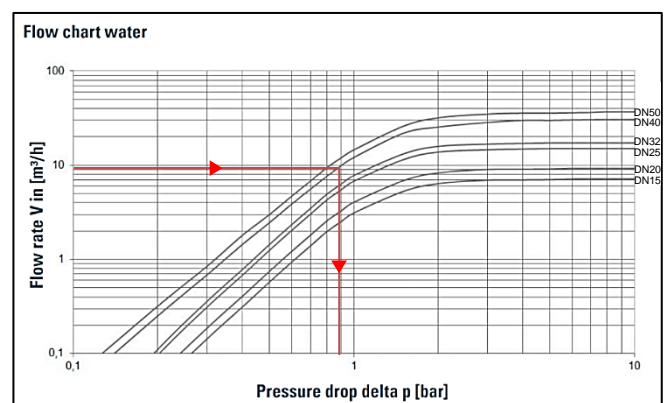
In water distribution systems and domestic distribution systems, the recommended velocity is between 1 m/s to 2 m/s. Using graph (A) the size of the valve is determined by intersecting the blue band and the velocity line (in this case DN40 1 1/2" has a capacity of 9.5 m³/h at a velocity of 2 m/s).

(B) Determination of pressure loss:

Using graph (B) identify the pressure drop intersecting the valve head loss curve (in this case 0.9 bar at 9.5 m³/h).



(A)



(B)