

143

PRESSURE REDUCING VALVE

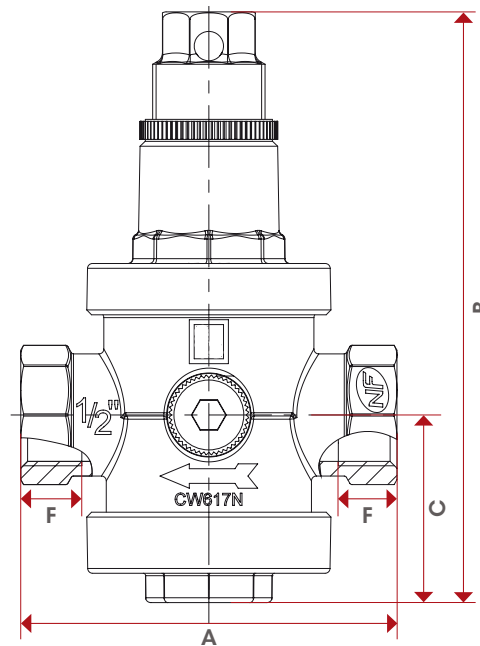


| SIZE | PRESSURE | CODE | PACKING |
|---------------|----------------|---------|---------|
| 1/2" (DN 15) | 25bar/362,5psi | 1430012 | 1/34 |
| 3/4" (DN 20) | 25bar/362,5psi | 1430034 | 1/34 |
| 1" (DN 25) | 25bar/362,5psi | 1430100 | 1/18 |
| 1"1/4 (DN 32) | 25bar/362,5psi | 1430114 | 1/9 |
| 1"1/2 (DN 40) | 25bar/362,5psi | 1430112 | 1/9 |
| 2" (DN 50) | 25bar/362,5psi | 1430200 | 1/8 |
| 2"1/2 (DN 65) | 25bar/362,5psi | 1430212 | 1/6 |
| 3" (DN 80) | 25bar/362,5psi | 1430300 | 1/4 |
| 4" (DN 100) | 25bar/362,5psi | 1430400 | 1/3 |

TECHNICAL SPECIFICATIONS

- Compensated piston operation.
- Female/female threads.
- Body in nickel-plated brass.
- Minimum and maximum working temperatures: 0°C, 80°C.
- Maximum inlet pressure: 25bar.
- Outlet pressure can be adjusted:
 - 1/2" - 3/4" - 1" between 1 and 5,5 bar.
 - 1"1/4 through 4" between 1 and 6 bar.
- Factory preadjustment 3 bar.
- Outlet pressure gauge connection 1/4" on both sides.
- Threads ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).
- Available also with NPT thread in the sizes 2"1/2 - 3" - 4".

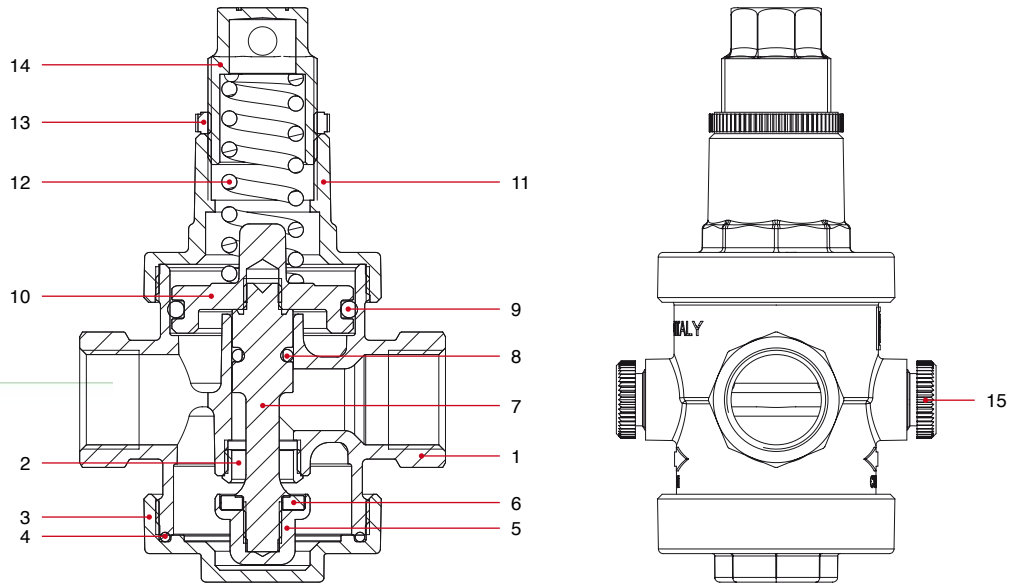
OVERALL DIMENSIONS



| | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" | 2"1/2 | 3" | 4" |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| A | 77 | 85 | 91 | 118 | 126 | 142 | 147 | 179 | 188 |
| B | 125,5 | 125,5 | 159 | 218 | 225 | 250 | 270 | 290 | 330 |
| C | 40 | 40 | 59 | 69,5 | 126 | 87 | 88 | 97,5 | 140,5 |
| F | 12 | 12 | 13 | 18 | 18 | 20 | 20 | 22 | 23,5 |
| Kg/cm² bar | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| LBS - psi | 362,5 | 362,5 | 362,5 | 362,5 | 362,5 | 362,5 | 362,5 | 362,5 | 362,5 |

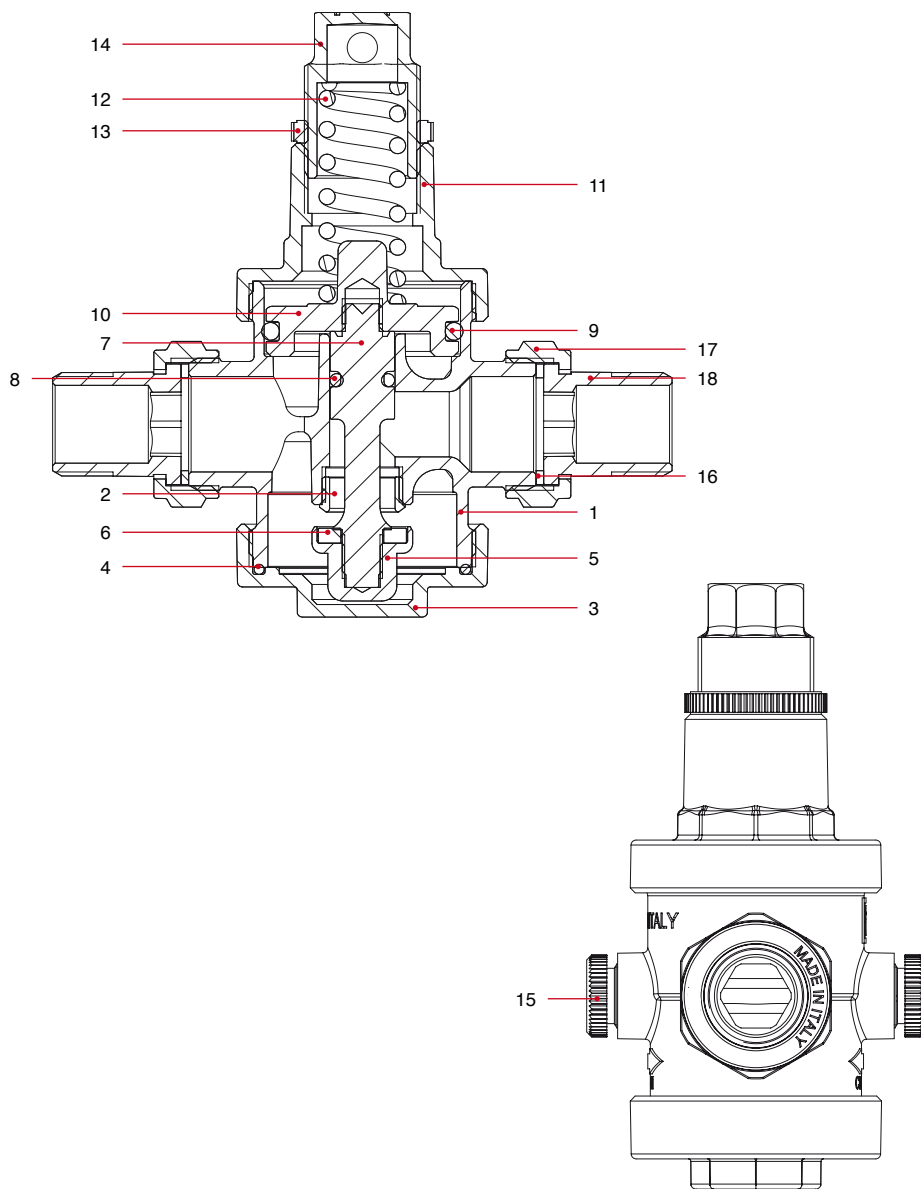
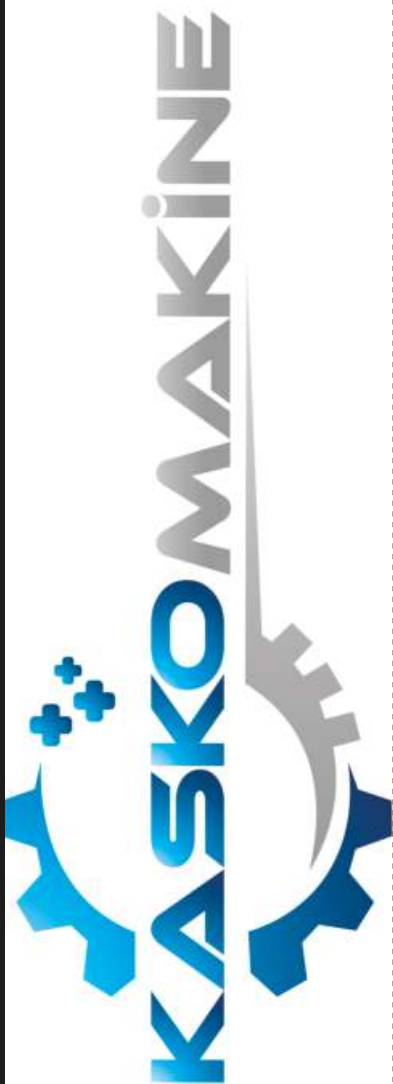


MATERIALS
FROM 1/2" TO 1"



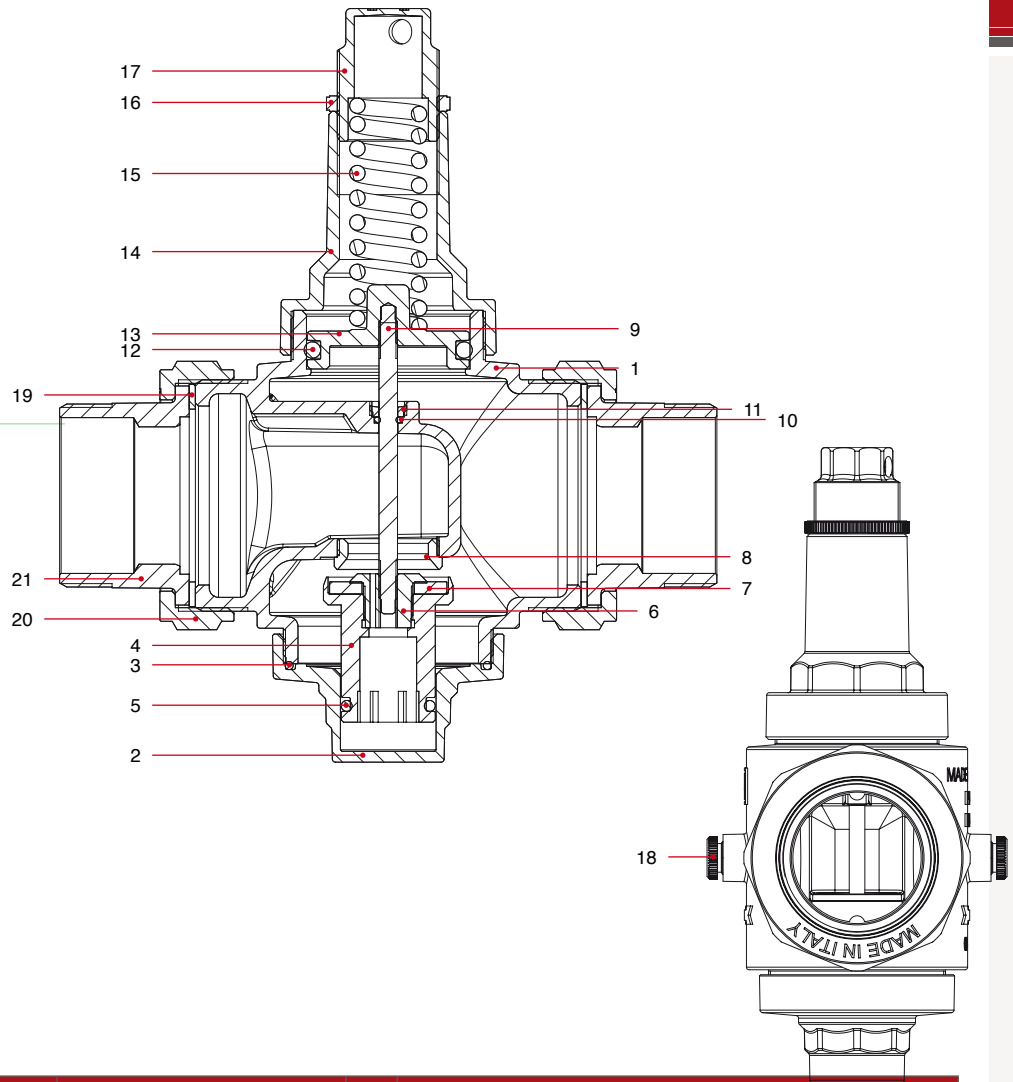
| POS. | DESCRIPTION | N. | MATERIAL |
|------|------------------|----|----------------------------|
| 1 | Body | 1 | Nickel-plated brass CW617N |
| 2 | Seat | 1 | Stainless steel AISI 303 |
| 3 | Bottom plug | 1 | Nickel-plated brass CW617N |
| 4 | O-Ring | 1 | EPDM |
| 5 | Shutter | 1 | Brass CW614N |
| 6 | Flat seat washer | 1 | EPDM |
| 7 | Stem | 1 | Brass CW614N |
| 8 | O-Ring | 1 | EPDM |
| 9 | O-Ring | 1 | EPDM |
| 10 | Diaphragm | 1 | Brass CW617N |
| 11 | Upper plug | 1 | Nickel-plated brass CW617N |
| 12 | Spring | 1 | EN 10270-1 DH |
| 13 | Nut | 1 | Nylon |
| 14 | Regulator | 1 | Nickel-plated brass CW617N |
| 15 | Cap | 2 | POM |

MATERIALS
FROM 1/2" TO 1"



| POS. | DESCRIPTION | N. | MATERIAL |
|------|------------------------|----|----------------------------|
| 1 | Body | 1 | Nickel-plated brass CW617N |
| 2 | Seat | 1 | Stainless steel AISI 303 |
| 3 | Bottom plug | 1 | Nickel-plated brass CW617N |
| 4 | O-Ring | 1 | EPDM |
| 5 | Shutter | 1 | Brass CW614N |
| 6 | Flat seat washer | 1 | EPDM |
| 7 | Stem | 1 | Brass CW614N |
| 8 | O-Ring | 1 | EPDM |
| 9 | O-Ring | 1 | EPDM |
| 10 | Diaphragm | 1 | Brass CW617N |
| 11 | Upper plug | 1 | Nickel-plated brass CW617N |
| 12 | Spring | 1 | EN 10270-1 DH |
| 13 | Nut | 1 | Nylon |
| 14 | Regulator | 1 | Nickel-plated brass CW617N |
| 15 | Cap | 2 | Nylon |
| 16 | Flat seat washer | 2 | Fiber |
| 17 | Nut | 2 | Nickel-plated brass CW617N |
| 18 | Fitting with flat seat | 2 | Nickel-plated brass CW617N |

MATERIALS
FROM 1"1/4 TO 2"



| POS. | DESCRIPTION | N. | MATERIAL |
|------|------------------------|----|----------------------------|
| 1 | Body | 1 | Nickel-plated brass CB753S |
| 2 | Bottom plug | 1 | Nickel-plated brass CW617N |
| 3 | O-Ring | 1 | NBR |
| 4 | Shutter | 1 | Brass CW614N |
| 5 | O-Ring | 1 | NBR |
| 6 | Stop washer | 1 | Brass CW614N |
| 7 | Flat seat washer | 1 | NBR |
| 8 | Seat | 1 | Stainless steel AISI 303 |
| 9 | Stem | 1 | Stainless steel AISI 303 |
| 10 | O-Ring | 1 | NBR |
| 11 | Stop ring | 1 | Brass CW625N |
| 12 | O-Ring | 1 | NBR |
| 13 | Diaphragm | 1 | Brass CW617N |
| 14 | Upper plug | 1 | Nickel-plated brass CW617N |
| 15 | Spring | 1 | EN 10270-1 SM/SH |
| 16 | Nut | 1 | Nylon |
| 17 | Regulator | 1 | Nickel-plated brass CW617N |
| 18 | Cap | 2 | Nylon |
| 19 | Flat seat washer | 2 | Fiber |
| 20 | Nut | 2 | Nickel-plated brass CW617N |
| 21 | Fitting with flat seat | 2 | Nickel-plated brass CW617N |

CERTIFICATIONS



1/2" - 3/4"

PRESSURE DROP CHART

WITH WATER

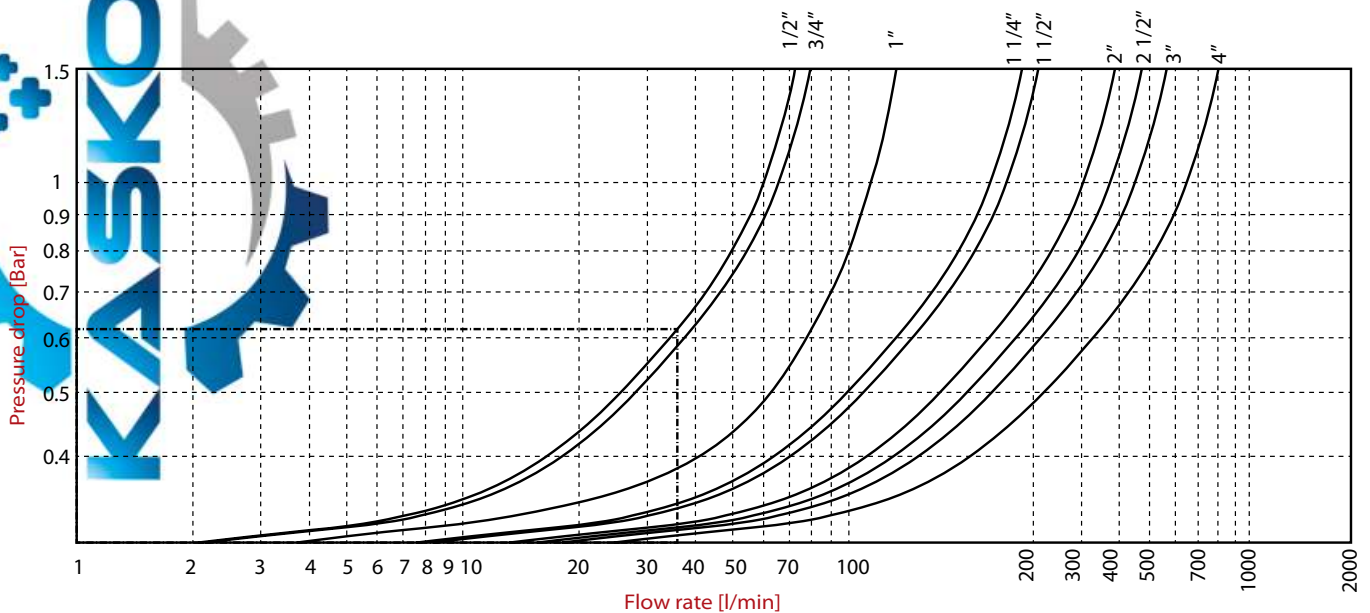
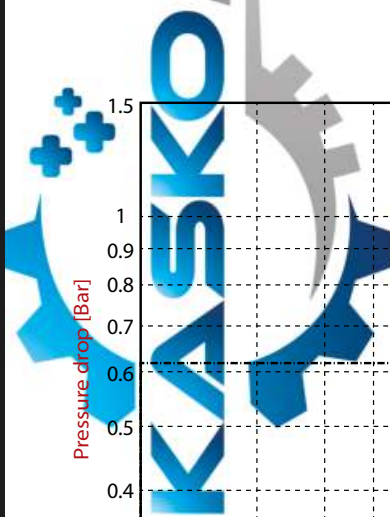
Pressure drop diagram includes the loss of pressure proportional to a specific flow rate. According to the requested flow rate, it is possible to measure the water system and the pressure reducing valve correctly (it would be better to have a flow speed between 1 m/s and 2 m/s in the piping).

INSTANCE:

In case of 1/2" pressure reducing valve with an adjusted downstream pressure of 3 bar and a flow rate of 35 l/min, the pressure drop diagram states a loss of pressure of 0.62 bar. It means that the pressure gauge installed on the outlet way of pressure reducing valve shows a figure of 2.38 bar (= 3 bar - 0.62 bar).

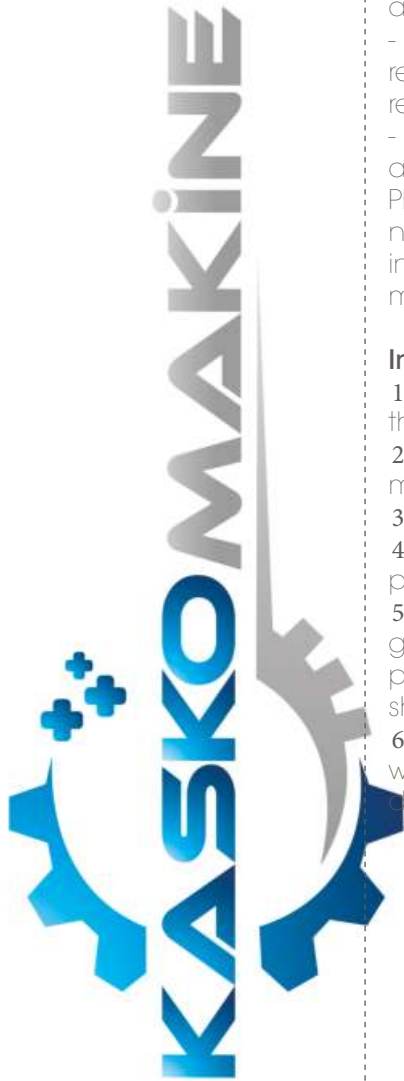
Here mentioned figures refer to: upstream pressure 8 bar, downstream pressure 3 bar.

N.B. Figure about 4" are approximate.



| DN | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|-----------|------|------|-----|--------|--------|----|--------|----|----|
| Kv (m³/h) | 3,6 | 4 | 6,6 | 9,6 | 10,2 | 18 | 22,8 | 27 | 39 |

MANUFACTURER INSTRUCTIONS



Installation

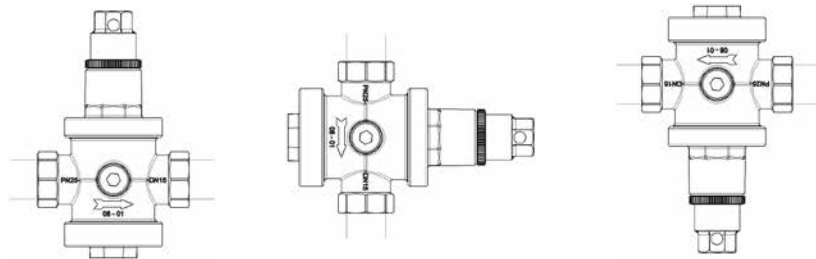
For the best use and duration of the system, it is necessary to comply with the following instructions on installation, with the national regulations and with relevant local requirements.

- Place of installation has to be protected from frost and has to be easily inspectable
- Install the pressure reducing valve on the private water system, immediately downstream of the water meter
- It would be better to install shut-off valves upstream and downstream of the pressure reducing valve, to facilitate the maintenance operations
- In order to protect pressure reducing valve from overpressure, install a check valve immediately downstream of the pressure reducing valve
- The right scheme of installation is shown in Fig. 5.2
- In case of water heater downstream of the pressure reducing valve, install an expansion vessel between the valve and the water heater
- In order to avoid cavitation and therefore excessive noisiness, it is strongly recommended that the ratio between maximum upstream pressure and regulating downstream pressure does not exceed the value of 2,5.
- Pressure reducing valve is not a safety device. It would be better to install all the necessary safety relief valves.

Please, duly note the downstream pressure of the reducing valve has not to be higher than the maximum working pressure of the devices installed in the private water system, in order to avoid possible damages or malfunctions.

Instruction on installation

1. Before installing the pressure reducing valve, open all the outlets to flush the system and expel any air left in piping
2. Install shut-off valves upstream and downstream to facilitate maintenance operations
3. For a right flow direction, use the arrow stamped on the body
4. Pressure reducing valve can be installed in either vertical or horizontal piping. It can be installed also upside down
5. Art. 143 is equipped with a threaded connection suitable for a pressure gauge. It is possible to unscrew the plug made in order to install a pressure gauge in the size of 1/4". In such a position, the pressure gauge shows the downstream pressure of the reducing valve.
6. The whole range of pressure reducing valves are tested and adjusted with a downstream pressure of 3 bar. It is possible to change the downstream pressure by means of the adjusting device.



7. The final adjustment of the pressure reducing valve has to be carried out with a filled private water system and with all the outlets shut-off. The upstream pressure has to be at least 1 bar higher than the adjusted pressure. Adjustment of the pressure reducing valve to a downstream pressure different from the pre-adjusted one (3 bar):

- Close the downstream shut-off valve
- Unscrew the nylon nut (Fig. 4.1)
- Adjustment is carried out by means of a tool or a screwdriver on the upper part of the device (Fig. 4.2); turn in clockwise way to increase the downstream pressure, turn in anticlockwise way to reduce the downstream pressure
- Open the outlets in the private water system, in order to check the stability