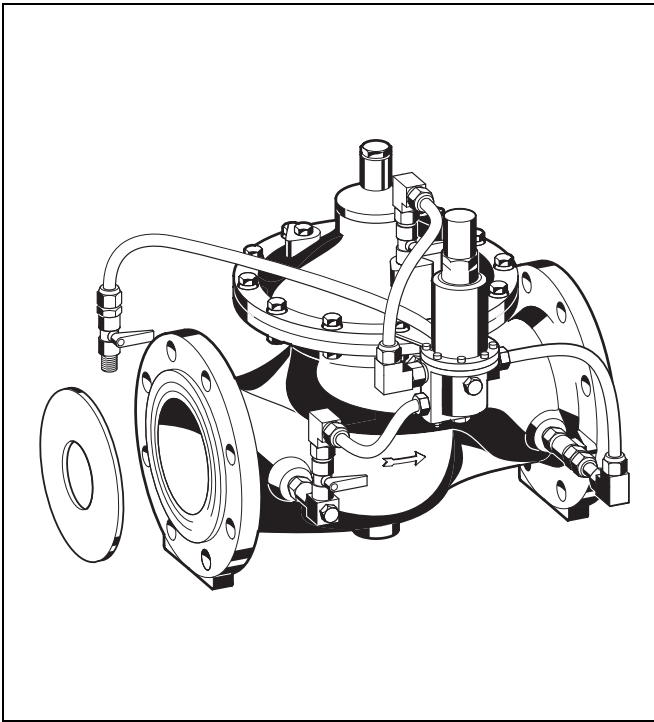


VR300

Flow rate regulator

Product specification sheet



Construction

The flow rate regulator comprises:

- Housing with PN16 flanges per ISO7005-2, EN1092-2
- Pilot valve CX-FR
- Control circuit with ball valves on inlet and outlet
- Control circuit with integral rinsable filter insert
- Integrated measuring orifice on the inlet

Materials

- Ductile iron housing, cover plate and diaphragm plate (ISO 1083), powder coated
- Red bronze/stainless steel regulating cone
- Stainless steel pressure spring and control rod
- Fibre-reinforced NBR diaphragm
- NBR and EPDM seals
- Stainless steel valve seat
- High quality synthetic material control circuits
- Brass compression fittings
- Brass pilot valve housing
- Stainless steel filter insert

Application

Flow rate regulators of this type, also called a flow rate limiting valves, control to a fixed flow rate, independent of fluctuating operating pressures and take-off flow rates. It prevents, for example, pumps running at too high a performance or regulates the performance of whole installations and systems.

Special Features

- High flow capacity
- Light weight
- High control accuracy
- Powder coated inside and outside - Powder used is physiologically and toxicologically safe
- Integral control circuit and ball valves
- No external energy required for operation

Range of Application

Medium Water
Operating pressure Max. 16 bar

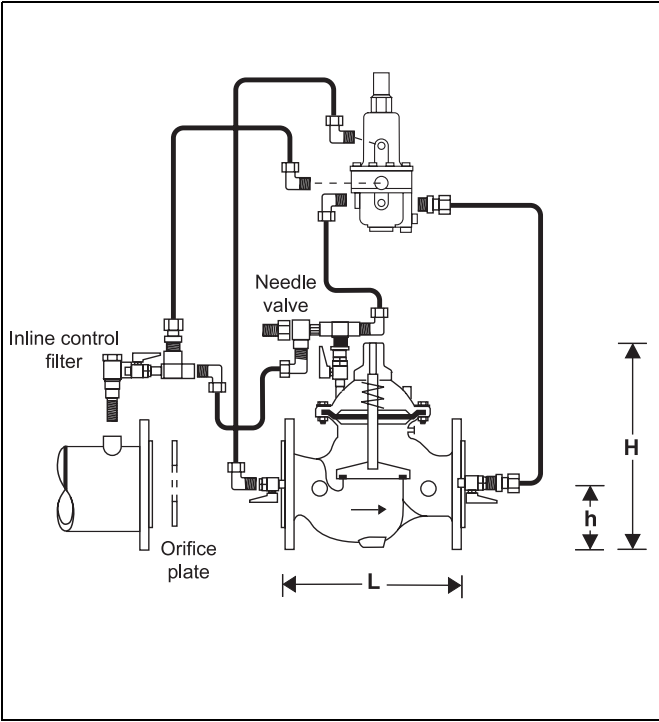
Technical Data

Operating temperature Max. 80 °C
ture

Nominal pressure PN 16
PN 25 on request

Minimum pressure 0.7 bar

Connection size DN 50 - 450



Method of Operation

The flow rate regulating valve automatically regulates to a constant flow rate, irrespective of fluctuating system pressures, using a pre-calculated measuring orifice operating in conjunction with a special pilot valve.

The valve opens fully if the consumption is less than the maximum calculated flow or the system itself does not deliver the required flow rate. A three-way pilot valve measures the differential pressure between the two sides of the measuring orifice and uses this to regulate the diaphragm valve.

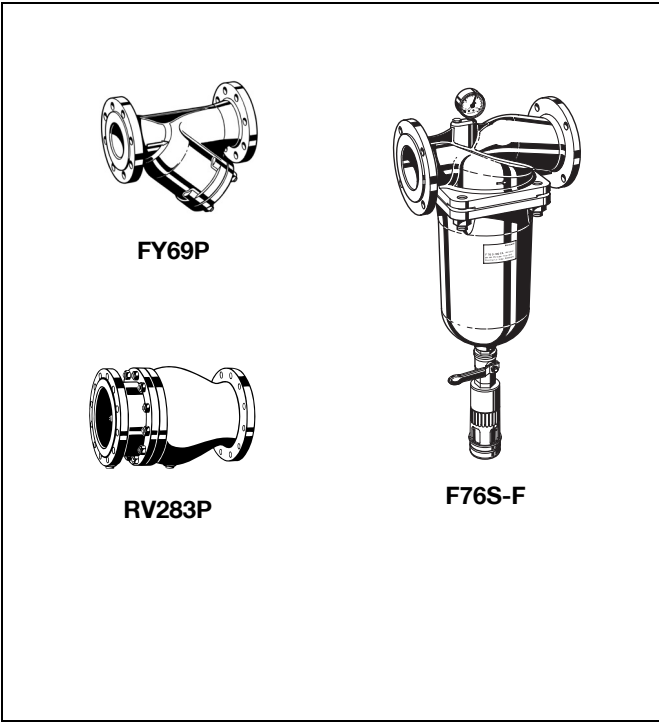
Options

VR300- ... A = Housing with flange, PN 16,
ISO 7005, EN 1092-2

VR300- ... Z = PN 25, on request

Connection size

| | | | | | | | | | | | | |
|--|-------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| Connection size | DN | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 |
| Weight | approx. kg | 16 | 17 | 26 | 41 | 84 | 161 | 249 | 409 | 514 | 826 | 949 |
| Dimensions | (mm) | | | | | | | | | | | |
| | L | 230 | 292 | 310 | 350 | 480 | 600 | 730 | 850 | 980 | 1100 | 1200 |
| | H | 235 | 294 | 400 | 433 | 558 | 650 | 823 | 944 | 990 | 1250 | 1250 |
| | h | 83 | 93 | 100 | 110 | 143 | 173 | 205 | 230 | 260 | 290 | 310 |
| Flow rate (Q _{max}) in m ³ /h | | 40 | 40 | 90 | 160 | 350 | 480 | 970 | 1400 | 1900 | 2500 | 3150 |
| - V=5.5 m/s | | | | | | | | | | | | |
| k _{VS} -value | m ³ /h | 43 | 43 | 103 | 167 | 407 | 676 | 1160 | 1600 | 1600 | 3300 | 3300 |



Accessories

FY69P Strainer

With double mesh, grey cast iron housing, powder coated inside and outside.

A = Mesh size approximately 0.5 mm

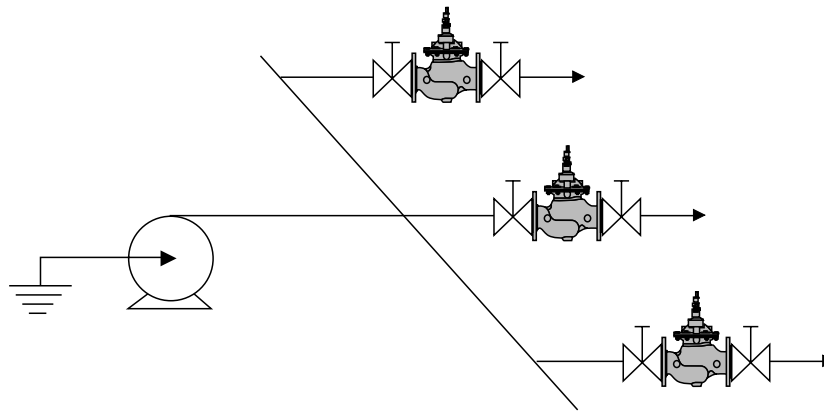
F76S-F Reverse-rinsing filter

Red bronze housing and filter bowl. Available in sizes DN 65 to DN 100, with filter mesh sizes 100 µm or 200 µm

RV283P Check valve

Grey cast iron housing, powder coated inside and outside. DIN/DVGW tested in compulsory test sizes DN 65, DN 80 and DN 100

Installation Example



Installation Guidelines

- Install shutoff valves on both sides of the pressure sustaining valves
- Install strainer upstream of filling valve
 - Protects against damage from coarse dirt
- Note flow direction (indicated by arrow)
- Ensure good access
 - Simplifies maintenance and inspection
- The calculated measuring orifice is designed to achieve a pressure drop of 0.20 - 0.25 bar
- A pressure measuring point of at least 1/2" size must be present in the inlet section
- A pre-calculated flow rate performance can be adjusted on the pilot valve between -10 % and +40 % of the predetermined value. Larger variations require another design of measuring orifice
- Install connectors for removal and refitting for maintenance

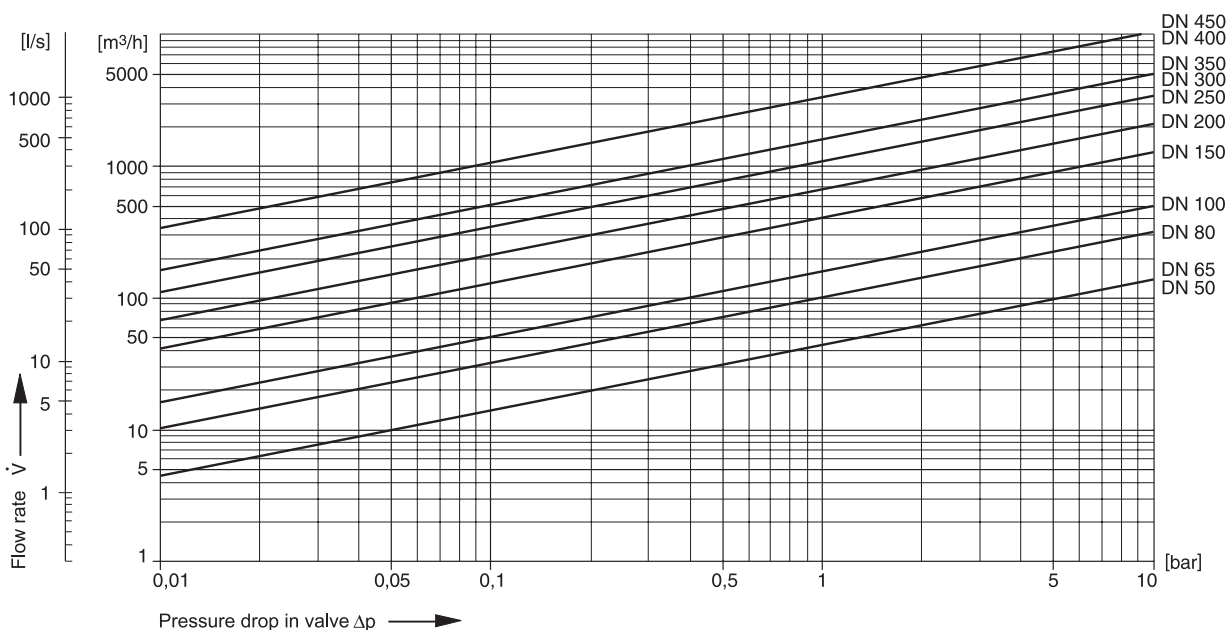
Typical Applications

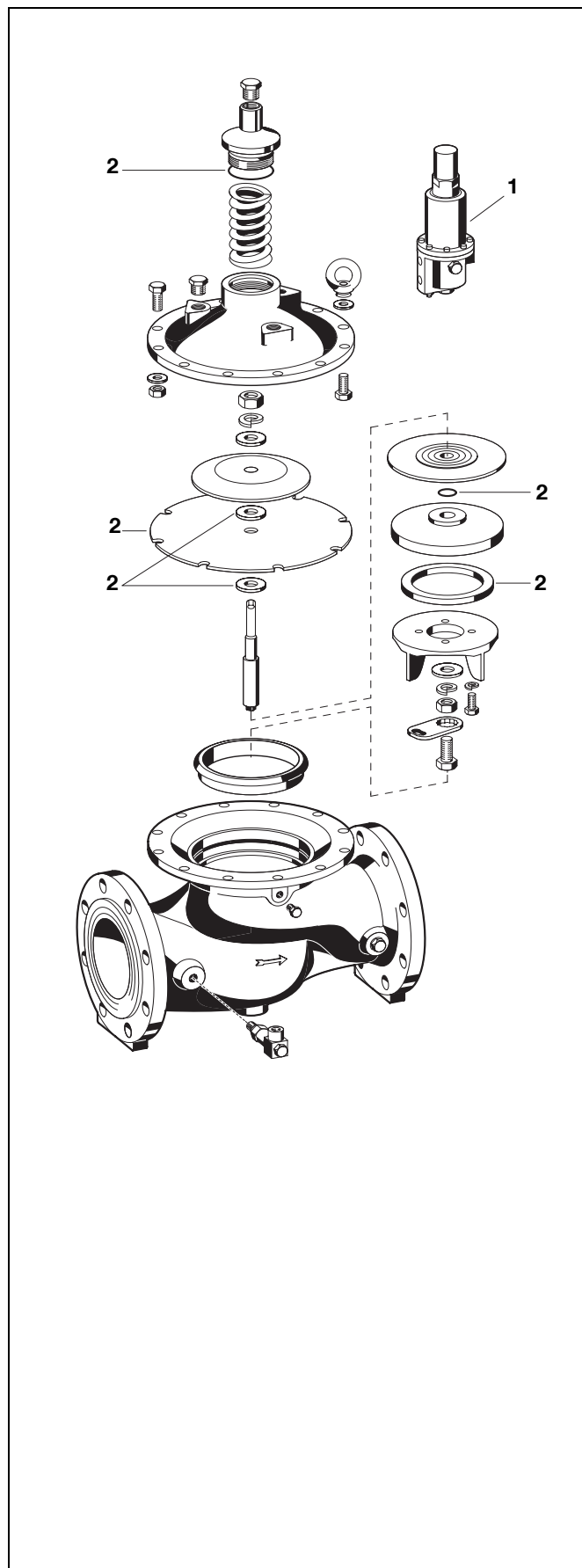
Flow rate regulators of this type, within the limits of their specifications, are suitable for installing in water supply systems and also for commercial and industrial installations.

The following are some typical applications:

- Performance limitation of pumps
- Supply network optimising system controls

Flow Diagram





Spare Parts

Flow rate regulator VR300, from 2002 onwards

| No. | Description | Dimension | Part No. |
|-----|-------------------|----------------------|----------|
| 1 | Replacement pilot | DN 50 - DN 450 CX-FR | |
| 2 | Set of seals | DN 50 | 0903750 |
| | | DN 65 | 0903751 |
| | | DN 80 | 0903752 |
| | | DN 100 | 0903753 |
| | | DN 150 | 0903754 |
| | | DN 200 | 0903755 |
| | | DN 250 | 0903756 |
| | | DN 300 | 0903757 |
| | | DN 350 | 0903758 |
| | | DN 400 | 0903759 |
| | | DN 450 | 0903760 |

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