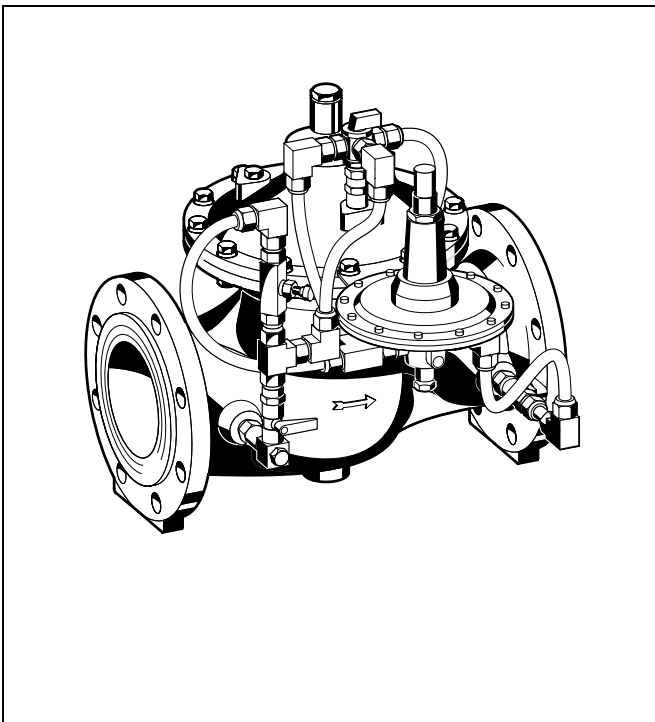


## FD300

### Altitude control valve

#### Product specification sheet



#### Construction

The filling valve comprises:

- Housing with PN16 flanges per ISO7005-2, EN1092-2
- Two-way pilot valve
- Control circuit with ball valves on inlet and outlet
- Control circuit with integral rinsable filter insert

#### 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

Altitude control valve of this type controls the water level in, for example, water reservoirs without the need for using a float valve or other ancillary controls.

The highly sensitive pilot valve and the main valve are installed outside the water reservoir and the pilot valve senses the hydrostatic water pressure from the water level in the reservoir.

The main valve closes when the maximum set pressure for the pilot valve is reached and reopens when the water level corresponds to the lower set value on the pilot valve.

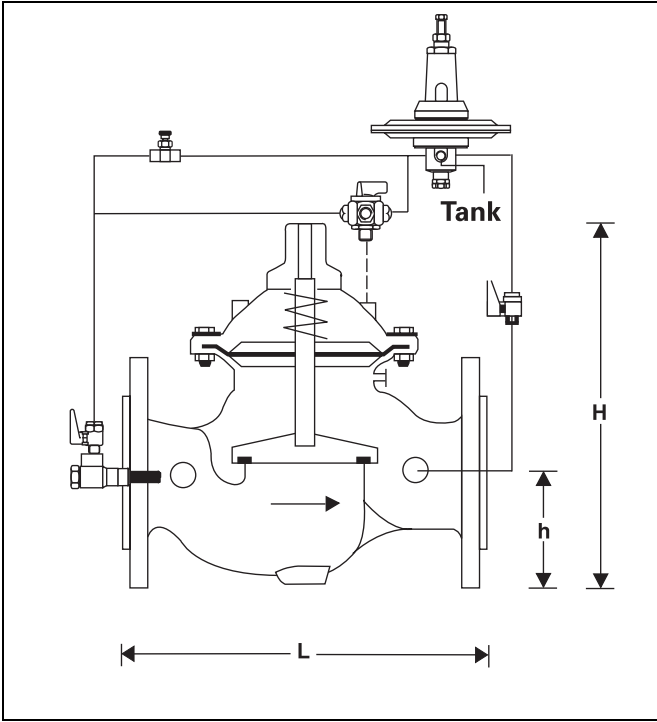
The standard version permits filling of a water storage unit. A special version is also available on request which can be used for both filling and emptying water storage units.

#### Range of Application

Medium	Water
Operating pressure	Max. 16 bar
Setting range	0.5 - 5 m water head (Standard version)

#### Technical Data

Operating temperature	Max. 80 °C
Nominal pressure	PN 16 PN 25 on request
Minimum pressure	0.7 bar
Connection size	DN 50 - 450



**Method of Operation**

At zero pressure the valve is closed. When the system is then put into operation, the water flows in and opens the diaphragm valve. This fills the reservoir until the water head corresponding to the set hydrostatic pressure on the pilot valve is reached and it then closes. If the pilot valve is closed, the pressure in the chamber above the membrane rises. The membrane surface area is larger than the valve surface area and therefore the diaphragm valve closes. If water is drawn from the water store, the hydrostatic pressure falls until it reaches the lower set pressure and the pilot valve then opens. In this way the pilot valve controls the opening and closing of the main valve.

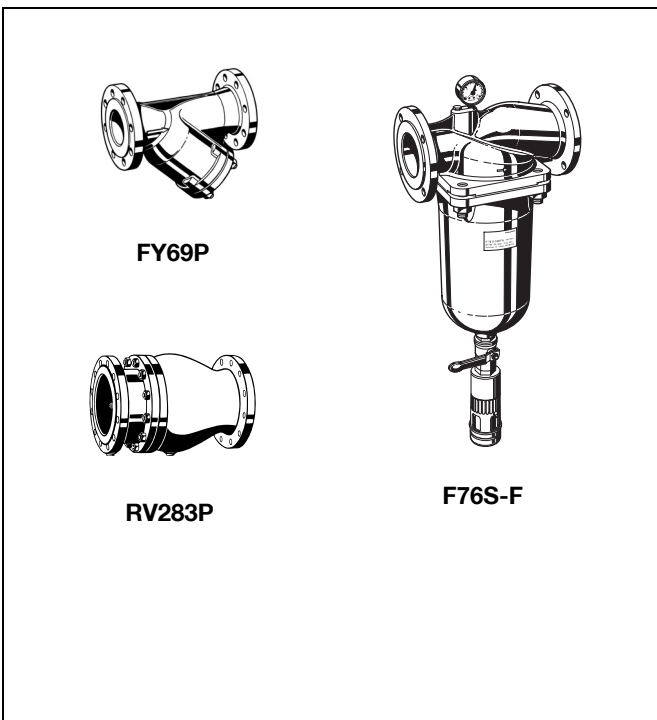
**Options**

FD300- ... A = Housing with flange, PN 16, ISO 7005, EN 1092-2

FD300- ... Z = PN 25, on request

Connection size

Connection size	DN	50	65	80	100	150	200	250	300	350	400	450
Weight	approx. kg	15	16	25	40	83	160	248	408	513	825	948
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 <sub>max</sub> ) in m <sup>3</sup> /h - V=5.5 m/s		40	40	90	160	350	480	970	1400	1900	2500	3150
k <sub>vs</sub> -value	m <sup>3</sup> /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

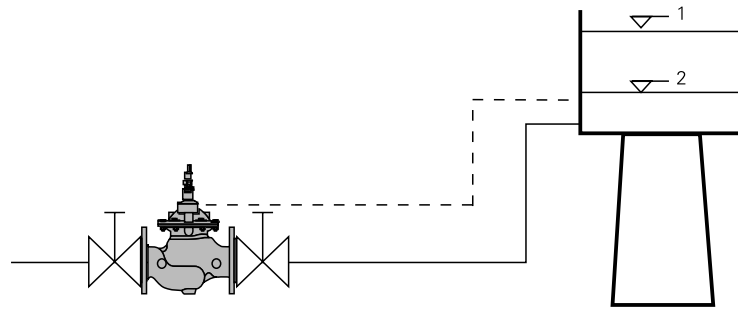
**F76S-F Reverse-rinsing filter**

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
  - o Protects against damage from coarse dirt
- Note flow direction (indicated by arrow)
- Ensure good access
  - o Simplifies maintenance and inspection
- The main valve must be installed below the maximum water level of the water storage facility being filled
- The pilot valve must be at least 2 m below the lowest stored water level and not more than 50 m below the highest water level
- Install connectors for removal and refitting for maintenance

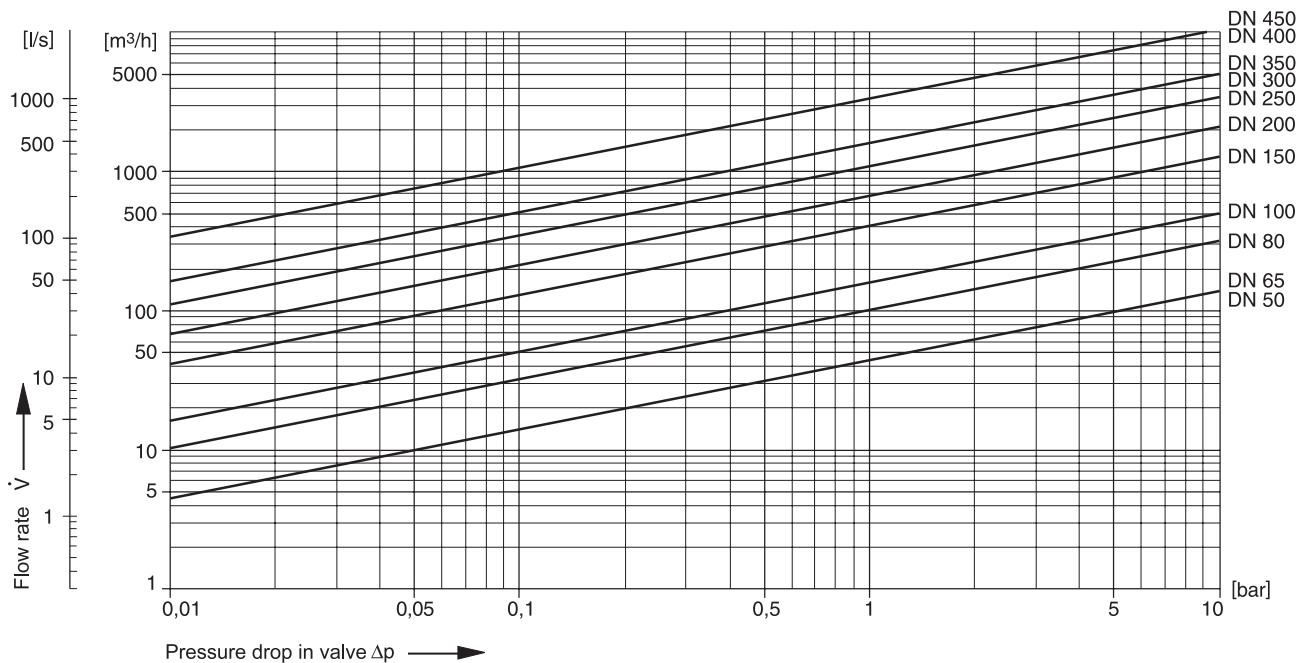
**Typical Applications**

Filling valves of this type, within the limits of their specification, are for water supply installations and also for commercial and industrial applications.

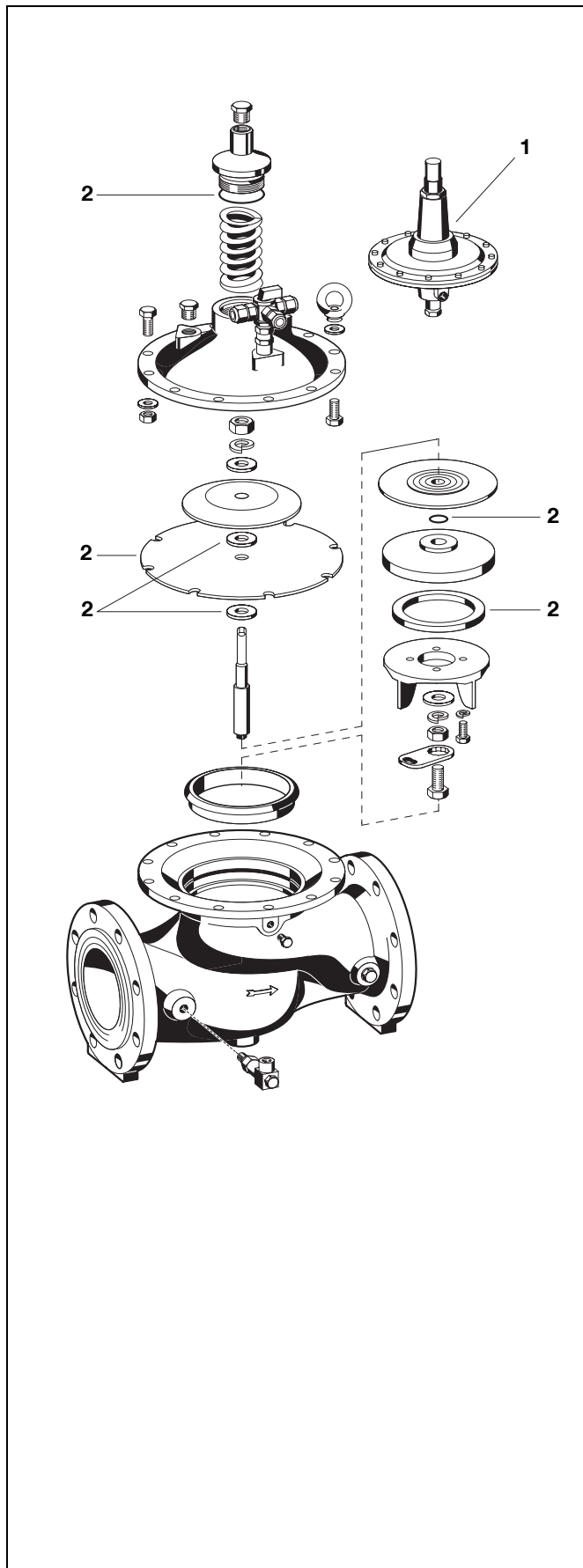
The following are some typical applications:

- Potable water supply
- As filling valves for reservoirs
- For receiver vessels for industrial installations

**Flow Diagram**



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**Spare Parts**

**Altitude control valve FD300, from 2002 onwards**

No.	Description	Dimension	Part No.
1	Replacement pilot valve	DN 50 - 450	76-600
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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