



Tender specification:

The Oventrop flush-mounted valves “Aquaström UP-F, UP-KFR, UP-Therm” are straight pattern valves without dead zone for use in potable water systems. Depending on the valve insert, they are used as free-flow valves (UP-F) according to EN 1213, as combination free-flow valve/non-return check valve (UP-KFR) according to EN 13959 and W570 or as circulation regulating valves (UP-Therm) according to VP 554.

UP-F (DN 15 and DN 20): DVGW certified (PN 10)

Function:

Depending on the model, all valves are especially suitable for intermediate ceiling, flush-mounted or front-wall installation. Depending on the valve insert, the valves can be used as free-flow (UP-F), combination free flow valve/non-return check valve (UP-KFR) or as thermal circulation regulating valves (UP-Therm).

Function flush-mounted valves:

When used as circulation regulating valve, the valve serves to achieve the hydronic balance between the various circulation risers. If the system calculation according to W553 has been carried out correctly, a cooling down of the individual risers will be avoided. The valve also supports thermal disinfection and features an isolating facility.

Hydronic balancing:

Having reached the factory setting of 57 °C or 63 °C, the thermal regulating insert throttles the volume flow to a residual volume flow ($k_v = 0.05$). This will guarantee that the subsequent circulation risers are also supplied with hot circulation water and a cooling down is avoided. The valve corresponds to the requirements of the DVGW test standard W554. Moreover, thermal disinfection is supported by increasing the residual volume flow to up to 73 °C.

Advantages:

UP-F / KFR:

- high k_v values and thus low pressure loss
- silent operation
- without dead zone
- subsequent conversion of “Aquaström” free flow valves to KFR valves by simply replacing the valve inserts

UP-Therm:

- automatic thermal regulation of the volume flow
- support of thermal disinfection
- with isolating facility
- without dead zone
- low hysteresis, as the thermometer sensor is in contact with the fluid



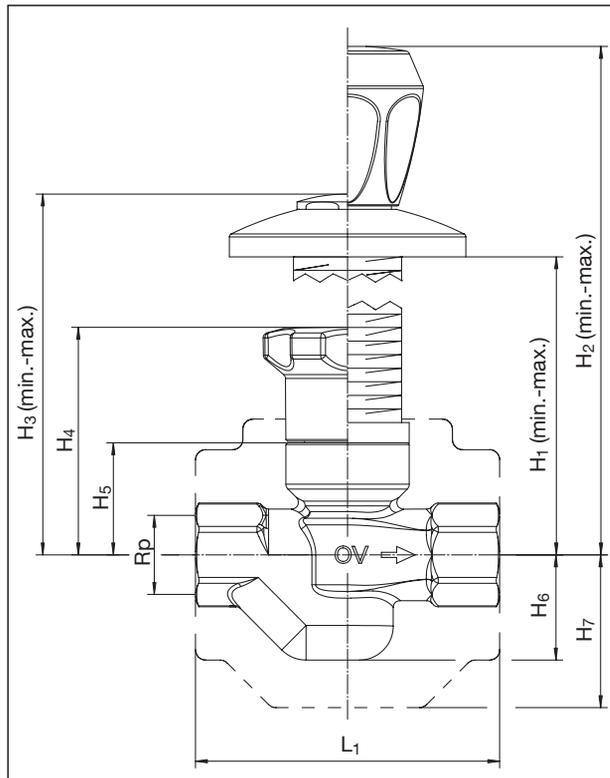
“Aquaström UP-F, UP-KFR, UP-Therm”

General information:

The return pipes of a circulation system must be dimensioned according to the valid circulation procedures! (See also DVGW work sheet W553). The calculation of a circulation system has to be documented so that subsequent modifications or extensions of the system can be carried out (see also DVGW work sheet W551, paragraph 5.7).

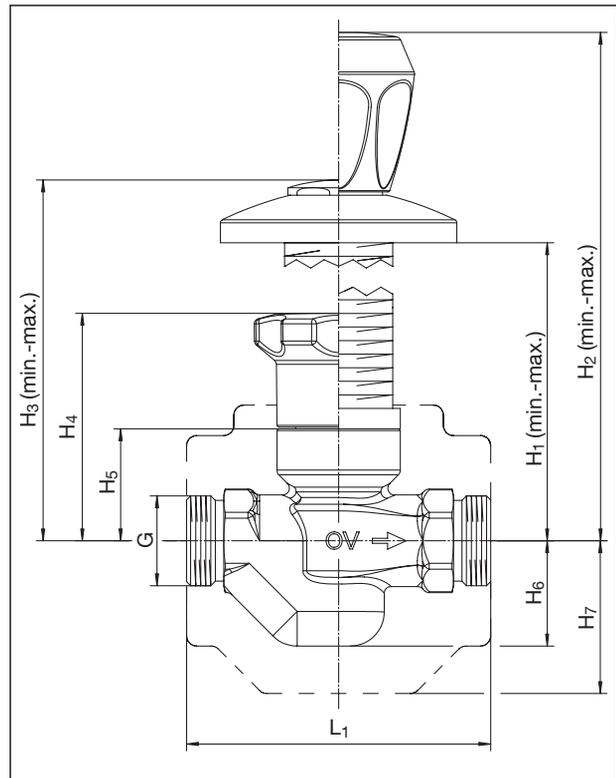
A potable water circulation system can be calculated using the Oventrop software OVplan which can be found on the Oventrop DVD (available free of charge) and on our homepage (www.oventrop.com).

**“Aquaström UP-F, UP-KFR, UP-Therm”
Flush-mounted valves**



DN	Rp	L ₁	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	H ₇
15	1/2	90	70	133	88	67	33	31	45
20	3/4		137	200	155				
25	1	120	62	125	80	- *	43	45	67
32	1 1/4	124	122	185	140	74			

* Model with handwheel not available



DN	G	L ₁	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	H ₇
15	3/4*	90	70 137	133 200	88 155	67	33	31	45

* Model DN 15, G 3/4 with UP-Therm

Technical data:

UP-F/UP-KFR:

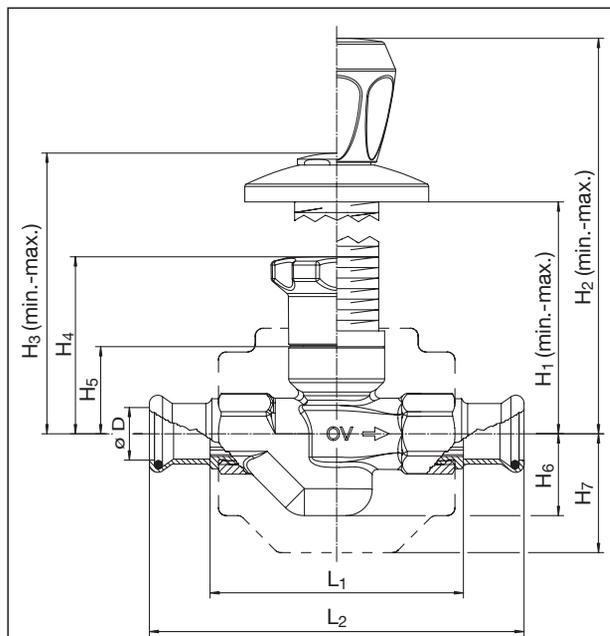
- DN 15: both ports G 3/4 male thread
both ports Rp 1/2 female thread
both ports press fittings Ø 15 mm
both ports press fittings Ø 18 mm
UP-F: k_v = 4.8
UP-KFR: k_v = 4.8 / P_{opening} = 25 mbar
- DN 20: both ports G 1 male thread
both ports Rp 3/4 female thread
both ports press fittings Ø 22 mm
UP-F: k_v = 6.3
UP-KFR: k_v = 6.2 / P_{opening} = 25 mbar
- DN 25: both ports Rp 1 female thread
UP-F: k_v = 13
- DN 32: both ports Rp 1 1/4 female thread
UP-F: k_v = 15.5

UP-Therm:

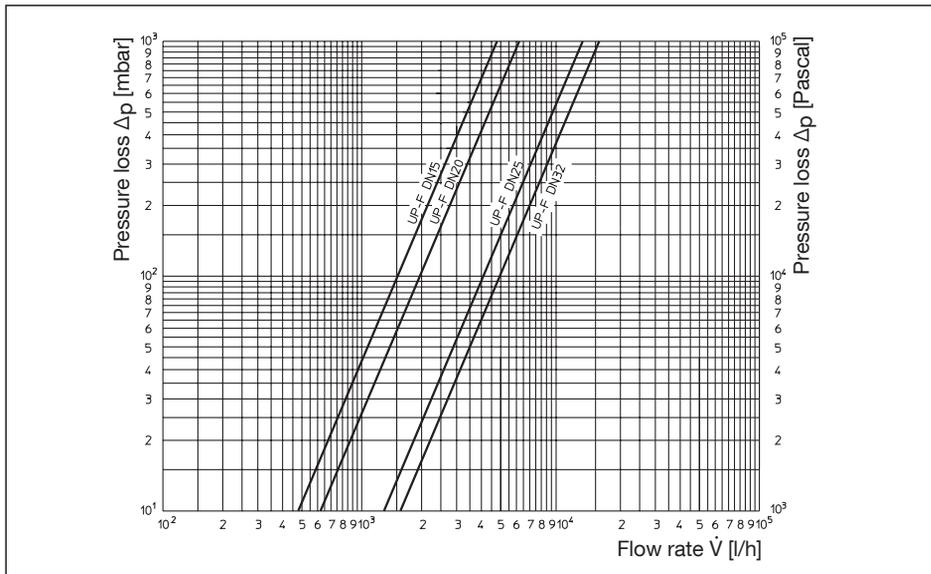
- DN 15: both ports G 3/4 male thread
both ports G 1/2 female thread
both ports press fittings Ø 15 mm
Residual volume flow: k_v = 0.05

General information:

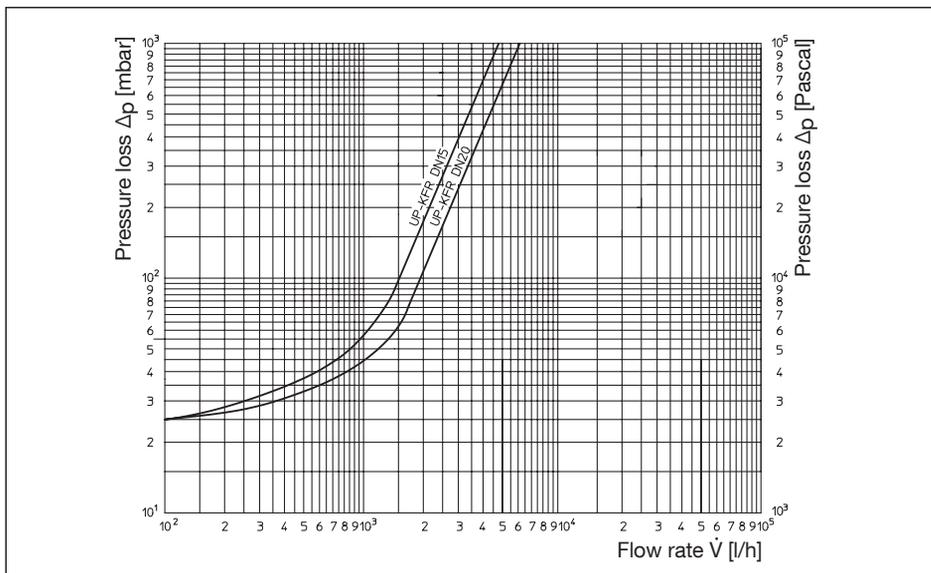
- Temperature setting UP-Therm: 57 °C / 63 °C (fixed value)
- Control accuracy UP-Therm: ±1 °C
- Materials (in contact with the fluid) bronze, EPDM, PTFE
- Fluid / max. operating temperature: Potable water, 90 °C
- Max. differential pressure Δ_p: 1 bar
- Installation position: any, easily accessible
- Max. ambient temperature: 90 °C
- Operating pressure: 10 bar
- Max. test pressure: 16 bar



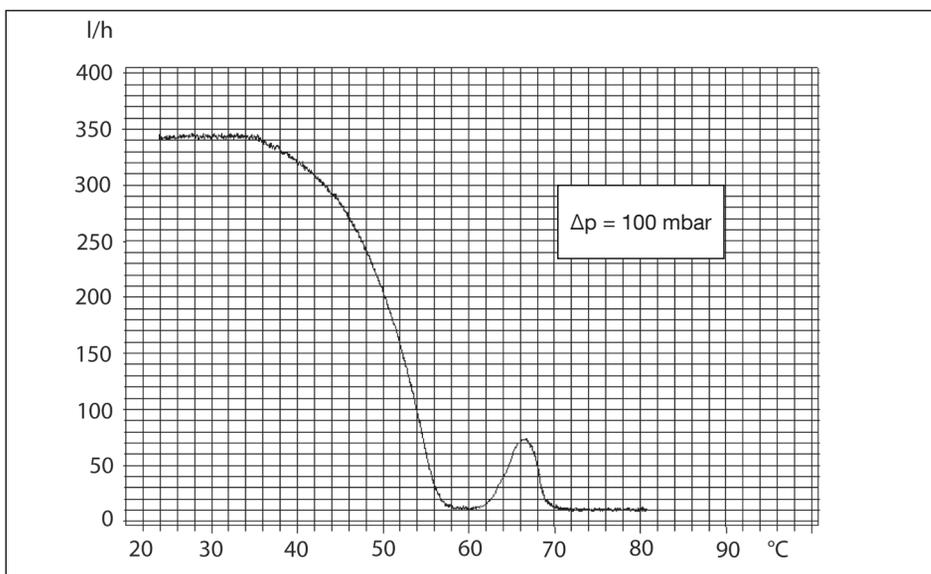
DN	D	L ₁	L ₂	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	H ₇
15	15	131	95	70	133	88	67	33	31	45
	18			-	-	-				
20	22	145	97	137	200	155				



Flow chart UP-F



Flow chart UP-KFR



Regulation characteristics UP-Therm, measured at $\Delta p = 100$ mbar

Accessories:

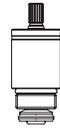
Standard bonnet handwheel set, chrome plated
DN15 / DN20 Item no.: 4229001
DN25 / DN32 Item no.: 4229002



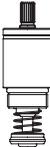
Lockshield bonnet handwheel set, chrome plated
DN15 / DN20 Item no.: 4229010
DN25 / DN32 Item no.: 4229011



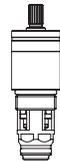
Spare valve insert “Aquaström UP-F”
DN15 / DN20 Item no.: 4220190
DN25 / DN32 Item no.: 4220191



Spare valve insert “Aquaström UP-KFR”
DN 15 / DN 20 Item no.: 4221090



Spare valve insert “Aquaström UP-Therm”
for circulation module 57 °C
DN 15 / DN 20 Item no.: 4225090



Spare valve insert “Aquaström UP-Therm”
for circulation module 63 °C
DN 15 / DN 20 Item no.: 4225590



Pipe socket wrench for all flush-mounted valves
DN 15-DN 32 Item no.: 4229035

Spare flush-mounting pipe
DN 15 / DN 20 Item no.: 4229015
DN 25 / DN 32 Item no.: 4229016



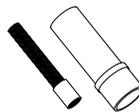
Spare insulation shells
DN 15 / DN 20 Item no.: 4229050
DN 25 Item no.: 4229051
DN 32 Item no.: 4229052



Mounting set for front-wall installation
DN 15 / DN 20 Item no.: 4229020
DN 25 / DN 32 Item no.: 4229021



Extension set 90 mm for flush-mounting pipe
DN 15 / DN 20 Item no.: 4229040
DN 25 / DN 32 Item no.: 4229041



Oventrop DVD
Item.: 9999999



free of charge