

Application:

The cascade control set “Regumaq K” consisting of a control with motor-operated ball valves serves the control according to requirements of several stations for hot potable water preparation “Regumaq X/XZ-30” connected in cascade. Depending on the withdrawal quantity, the cascade control set serves the distribution of the cold water to fresh water stations installed in parallel according to requirements.

Advantages:

- maximum control accuracy of the hot water temperature even in case of low water consumption
- reduced installation work as the cabling is ready for plug-in, connection of 2 to 4 fresh water stations in cascade
- modular construction: extension of an existing cascade with 2 or 3 stations up to 4 participants in case of increased demand
- valve protection function
- temperature monitoring, detection of errors and transmission of a message to the centralised building control system (accessory)
- return layering during circulation (accessory)
- daily change of the priority station which avoids stagnation and guarantees an optimum potable water hygiene even in case of low water consumption
- recognition of a manually closed ball valve and suspension of the station within the cascade assembly which leads to an increase of operational safety and maintenance of normal operation during maintenance work
- cascade control set and Oventrop fresh water stations “Regumaq X /XZ-30” are co-ordinated to the optimum

Function:

Up to a certain withdrawal quantity, at least one of the ball valves with actuators installed in the supply pipe is always open. The ball valve changes daily to ensure a balanced utilisation of all fresh water stations. If the withdrawal quantity increases, further ball valves open successively and the individual fresh water stations are activated according to requirements. The actuators are connected via a bus system but they are not connected to the controllers of the fresh water stations which are activated by the volume flow. As the ball valves and the flow sensor are installed in the cold water supply, the programmable circulation and disinfection functions are also available in the cascade.

A fresh water station is temporarily suspended within the cascade assembly by manually closing the ball valve. All functions are now carried out by the remaining participants.

Extension options:

The accessory set “switching module” allows for the transmission of an error message if the temperature is exceeded and, together with the required accessories for return layering (consisting of ball valve for return layering and actuator for ball valve for return layering, see accessories), for the control of a valve for layering the temperature dependent return water in the lower or central storage area.

To increase the output, the circulation pumps in the stations can be replaced with an external circulation pump. For this purpose, the fresh water stations “Regumaq X-30” are extended by the required components with the help of the conversion set (see accessories) or the circulation pumps of the “Regumaq XZ-30” stations are replaced with the 130 mm spacer (see accessories).

The control of the external circulation pump by the controller of a fresh water station is recommended.

Technical data cascade control set:

Ball valves:	flat sealing, G 1¼
Seals:	EPDM / PTFE
Max. operating pressure:	PN 10
Min. cold water pressure:	2.5 bar



“Regumaq XZ-30” Stations for hot potable water preparation with cascade control set “Regumaq K4”

Mains connection:	230 V
Operating voltage bus system (transformer included in the delivery):	24 V / 5 V
Flow sensor (G 1 male thread):	VFS 10-200

Performance range for cascading system:

Cascading of 2 stations:	
- Max. discharge capacity (PWH):	60 l/min.
- Max. transferable heat output capacity at dT = 50 K:	210 kW
Cascading of 3 stations:	
- Max. discharge capacity (PWH):	90 l/min.
- Max. transferable heat output capacity at dT = 50 K:	315 kW
Cascading of 4 stations:	
- Max. discharge capacity (PWH):	120 l/min.
- Max. transferable heat output capacity at dT = 50 K:	420 kW

Cascade control set:

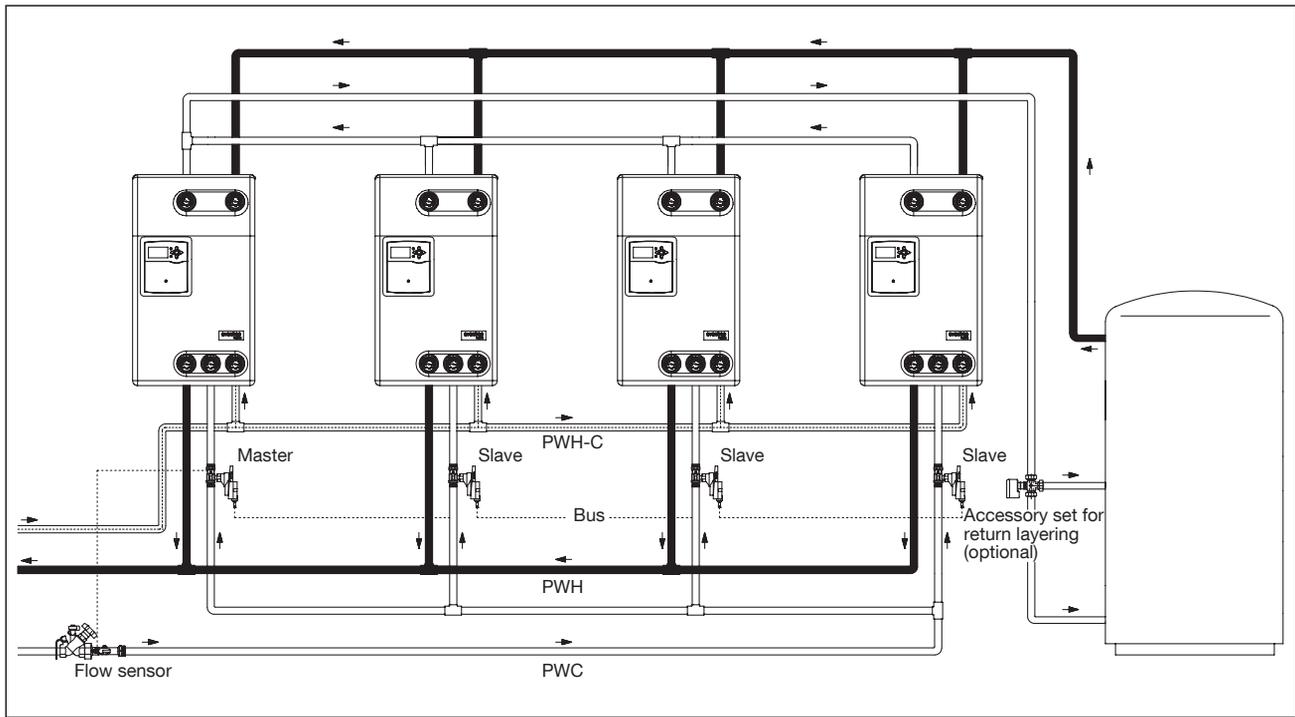
“Regumaq K 2”	Item no.:	1381082
“Regumaq K 3”		1381083
“Regumaq K 4”		1381084

Content cascade control set for 2 to 4 stations:

Actuator “Master”	1
Actuator “Slave”	1-3
Ball valve	1-4
Transformer 24 V / 5V	1
Distribution box	1
Bus connecting cable	2-4
Flow sensor VFS 10-200	1

Accessories:

Switching module with temperature sensor	Item no.:	1389085
Ball valve for return layering, PN 16		
DN 32		1381192
DN 40		1381193
DN 50		1381194
Actuator for ball valve for return layering		1381199
Conversion set for external circulation pump with pipework set with seals, ball valve, draining valve, check valve, thermometer, insulation screen and fixing material		1381080
Spacer 130 mm with seals		1381079



System illustration

4 fresh water stations “Regumaq XZ-30” with cascade control set “Regumaq K 4” (system illustration does not show the safety-relevant components)

Subject to technical modifications without notice.

Product range 6
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