

# oventrop

Room climate

Automatic hydronic balancing  
with "Q-Tech"



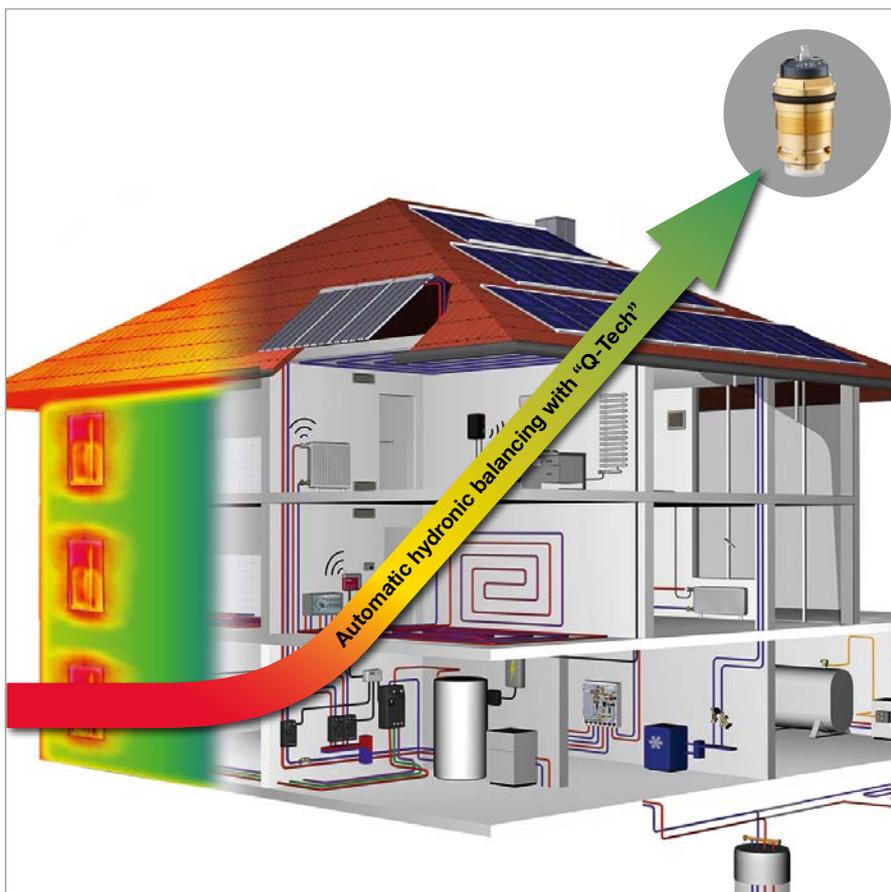
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**The thermostatic valves with "Q-Tech" allow for automatic hydronic balancing. They facilitate the adaptation of the volume flow to the requirements of the respective terminal unit in heating and cooling systems.**

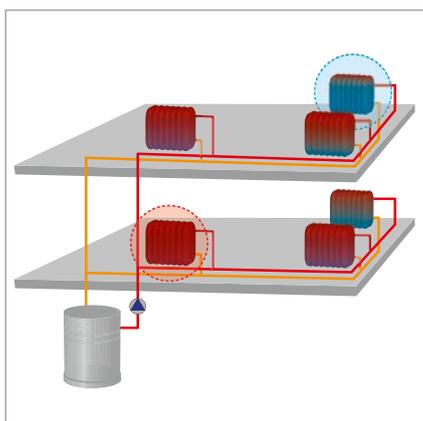
Standard heating systems are equipped with thermostatic valves which are preset on the basis of a pipework calculation (manual hydronic balancing) which requires knowledge of the installed pipework and of the radiator volume flows. In many heating systems, the layout of the pipework is, however, unknown which makes a pipework calculation almost impossible.

Oventrop offers the thermostatic radiator valves with "Q-Tech" which allow for an automatic control and thus for simplified hydronic balancing (automatic hydronic balancing).

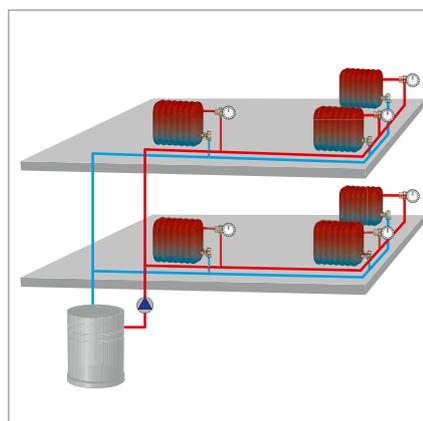
Hydronic balancing of new systems in which the layout of the pipework is known can also be carried out quickly and easily with the help of the Oventrop "Q-Tech" products.



System house with "Q-Tech"



Heating system without hydronic balancing



Heating system with hydronic balancing



### Advantages of automatic hydronic balancing

- automatic adaptation to different operating conditions
- reduced calculation, planning and installation effort
- reduced costs as fewer balancing valves are required
- hydronic balancing is maintained even if terminal units/sections of the system are activated or inactivated
- balanced sections of the system are not hydraulically influenced by installation extensions
- system can be put into operation section by section during the construction period
- efficient operation of high-efficiency pumps in any operating status
- optimum calorific value of condensing boilers
- energy savings due to an optimum energy distribution
- increased comfort due to a volume flow distribution according to requirements
- silent operation



“Q-Tech”

“Q-Tech” allows for an automatic volume flow control in heating and cooling systems and for the adaptation of the volume flows to the requirements of the respective terminal unit (e.g. radiator).

The required volume flow through the succeeding terminal unit is determined by the heat load calculation and the chosen temperature difference.

The maximum volume flow is directly set at the valves with “Q-Tech” and is automatically limited to the selected value (see chart). This way, hydronic balancing of the system is carried out easily with the help of the “Q-Tech” products.

### Advantages of “Q-Tech”



- the volume flow is kept at a constant level within the regulation tolerances even where high differential pressure variations occur
- no special body design required, the valve insert “QA” fits all standard Oventrop thermostatic valve bodies manufactured since 1999 (M 30 x 1.5)
- valve insert replaceable by using the special tool “Demo-Bloc” without draining the system
- ideal for upgrading and refurbishment
- wide adjustable flow rate (10 bis 170 l/h)
- wide differential pressure control range (max. 1.5 bar)
- silent in operation even with high differential pressures
- the set volume flows are kept at a constant level
- differential pressure independent mode of operation to a large extent
- constant, high valve authority (a=1)
- infinitely adjustable presetting
- fine setting scale in l/h
- set values visible from outside (without table)
- easy setting with the help of a presetting key
- valve insert with replaceable strainer

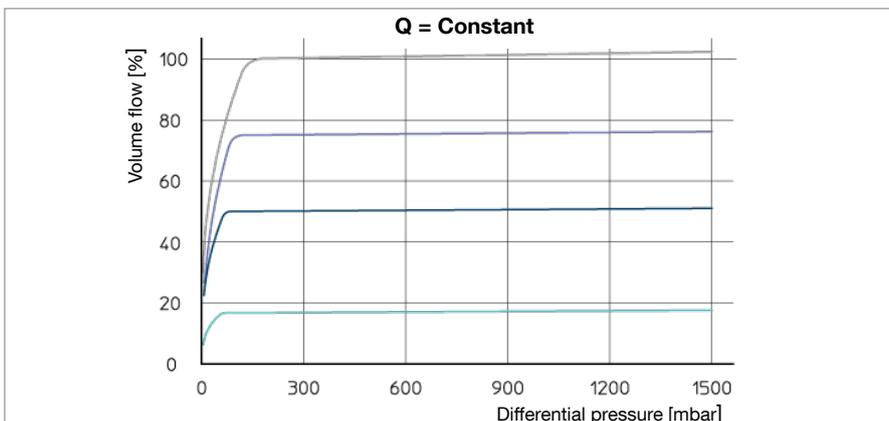
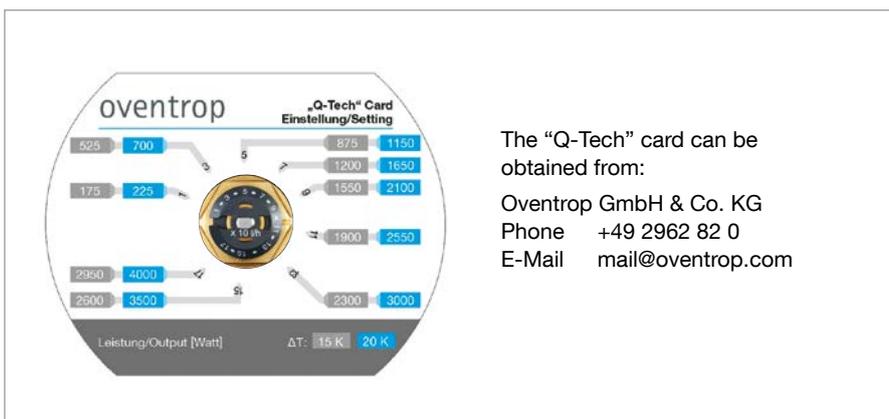


Chart with exemplary values



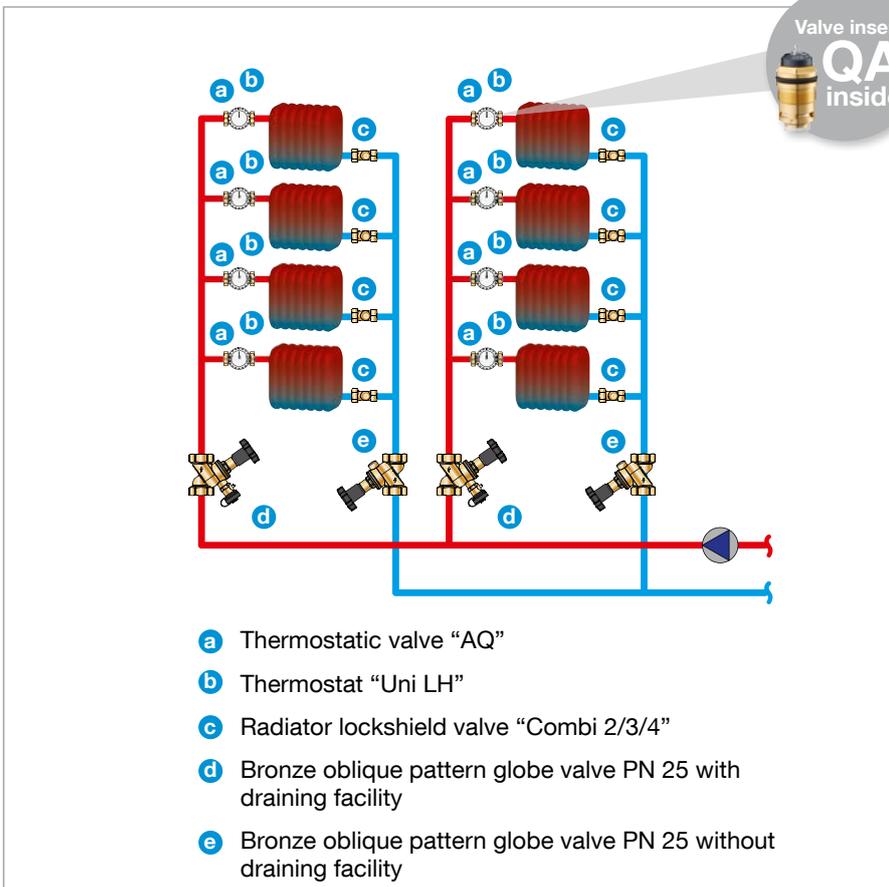
The “Q-Tech” card can be obtained from:

Oventrop GmbH & Co. KG  
 Phone +49 2962 82 0  
 E-Mail mail@oventrop.com

“Q-Tech” card - Easy setting of the radiator output



Sectional view of a straight pattern valve "AQ"



Radiator system with thermostatic valves "AQ"



"Demo-Bloc" for the conversion to "Q-Tech" without draining the system



The thermostatic valves "AQ" limit the volume flow, for instance through a radiator, to a preset value. A complex calculation of the presetting values is no longer necessary. Only the required volume flows must be known. Control of the volume flow is carried out by the valve once the correct volume flow of the terminal unit has been set. This way, hydronic balancing of the system is carried out easily.

The "AQ" valve combines a thermostatic valve and a diaphragm controlled flow regulator. The nominal value is set with the help of the presetting key supplied with the valve.

The functions of the thermostatic valve and the flow regulator are combined in a compact valve insert which can be replaced using the special tool "Demo-Bloc".

"AQ" valves	Item no.
<b>Angle pattern valve</b>	
DN 10	1183063
DN 15	1183064
DN 20	1183066
DN 25	1183068
<b>Straight pattern valve</b>	
DN 10	1183163
DN 15	1183164
DN 20	1183166
DN 25	1183168
<b>Reversed angle pattern valve</b>	
DN 10	1183263
DN 15	1183264
DN 20	1183266
<b>Double angle pattern valve</b>	
DN 10 Right	1183361
DN 15 Right	1183363
DN 10 Left	1183360
DN 15 Left	1183362



The design of the exclusive radiator valves “EQ” combines exclusive form and high functional efficiency especially in combination with modern radiators and towel radiators.

“EQ” valves	Item no.
Angle pattern valve DN 15	
chrome plated	1163552
white (RAL 9016)	1163562
Straight pattern valve DN 15	
chrome plated	1163652
white (RAL 9016)	1163662

“EQ” valve with thermostat “Uni LH”



The connection fitting “**Multiblock TQ**” is a practical combination of a presettable thermostatic valve and a connection fitting for use on radiators with supply and return pipe connection. The fitting is made of nickel plated brass. The distance between pipe centres is 50 mm. The stylish design covers create a smart optical integration with modern radiators and towel radiators.

“Multiblock TQ”	Item no.
Two pipe fitting	
Straight pattern	1184073
Angle pattern	1184074

Connection fitting “Multiblock TQ” with thermostat “Uni SH” and design cover



The connection fitting “**Multiblock TQ-RTL**” is a combination of a presettable thermostatic valve with “Q-Tech”, an isolating fitting and a return temperature limiter (RTL).

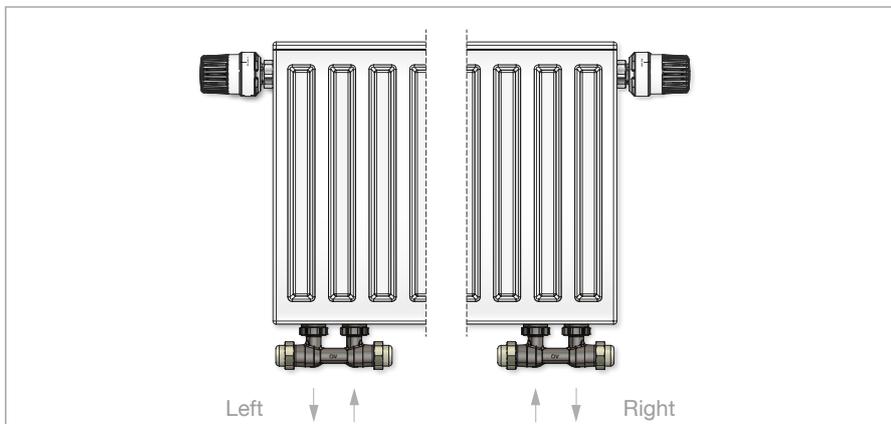
Application:  
Combined radiator/surface heating systems

“Multiblock TQ-RTL”	Item no.
for female thread Rp ½	1184076

Connection fitting “Multiblock TQ-RTL” with thermostat “pinox H” and design cover



Connection fitting "Multiflex FQ"

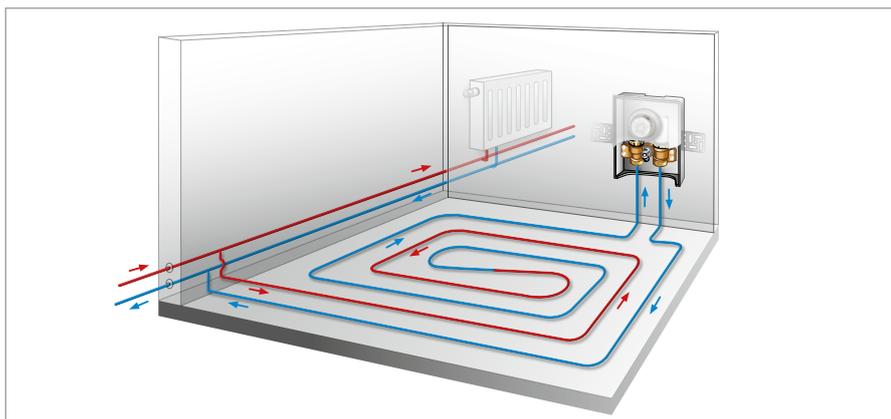


"Multiflex FQ" Installation example



"Unibox Q plus"

"Unibox TQ"



"Unibox TQ" Installation example including surface heating

The fitting "**Multiflex FQ**" is a connection fitting with isolating facility for radiators with integrated distributor.

The valve insert and the isolating insert are interchangeable. This way, the fitting can be adapted to the specified direction of flow on site.

"Multiflex FQ"	Item no.
Straight pattern for G 3/4 male thread	1015803
Angle pattern, left hand side connection for G 3/4 male thread	1015804
Angle pattern, right hand side connection for G 3/4 male thread	1015805
Straight pattern for G 1/2 female thread	1015873
Angle pattern, left hand side connection for G 1/2 female thread	1015874
Angle pattern, right hand side connection for G 1/2 female thread	1015875

The "**Unibox Q plus**" serves the individual room temperature control and the limitation of the return temperature in surface heating systems. It is equipped with a thermostatic valve for room temperature control and an RTLH valve for return temperature limitation.

The "**Unibox TQ**" allows for room temperature control via the surface heating. It is used in combination with a low temperature heating system.

Surface heating	Item no.
"Unibox TQ"	1022686
"Unibox Q plus"	1022684



**GHQ**  
inside

The valve inserts **"GHQ"** (connection thread M 30 x 1.5) and **"GDQ"** (squeeze connection) with infinitely adjustable presetting are designed for installation in the valve bodies of integrated distributors (e.g. of panel radiators).

Valve insert "GHQ" (M 30 x 1,5)	Item no.
with front connection	1019080
with internal O-ring	1019083
with seat diameter 16 H11	1019082

Valve insert "GHQ"



**QM**  
inside

Valve insert "GDQ" (squeeze connection)	Item no.
with front connection	1019099
with internal O-ring	1019084
with seat diameter 16 H11	1019086

Stainless steel distributor/collector "Multidis SFQ"

The new generation of stainless steel distributors/collectors **"Multidis SFQ"** is equipped with valve inserts **"QM"**. Hydronic balancing of surface heating systems can be carried out easily with the help of these inserts. The pre-assembled distributors/collectors are equipped with fill and drain ball valves.

"Multidis SFQ" for 2 to 12 circuits	Item no.
with integrated isolating facilities in the flow distributor	1404752-62
with integrated flow indicators in the flow distributor	1404952-62

Room climate

Hydronics

Stations  
Storage cylinders  
Pipes

Potable water

Oil  
Solar

Smart Home  
Smart Building

Subject to technical modifications without notice.  
Private persons may purchase our products from their specialised installer.

Presented by:



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