



HYDROFIRE ΕΠΕ

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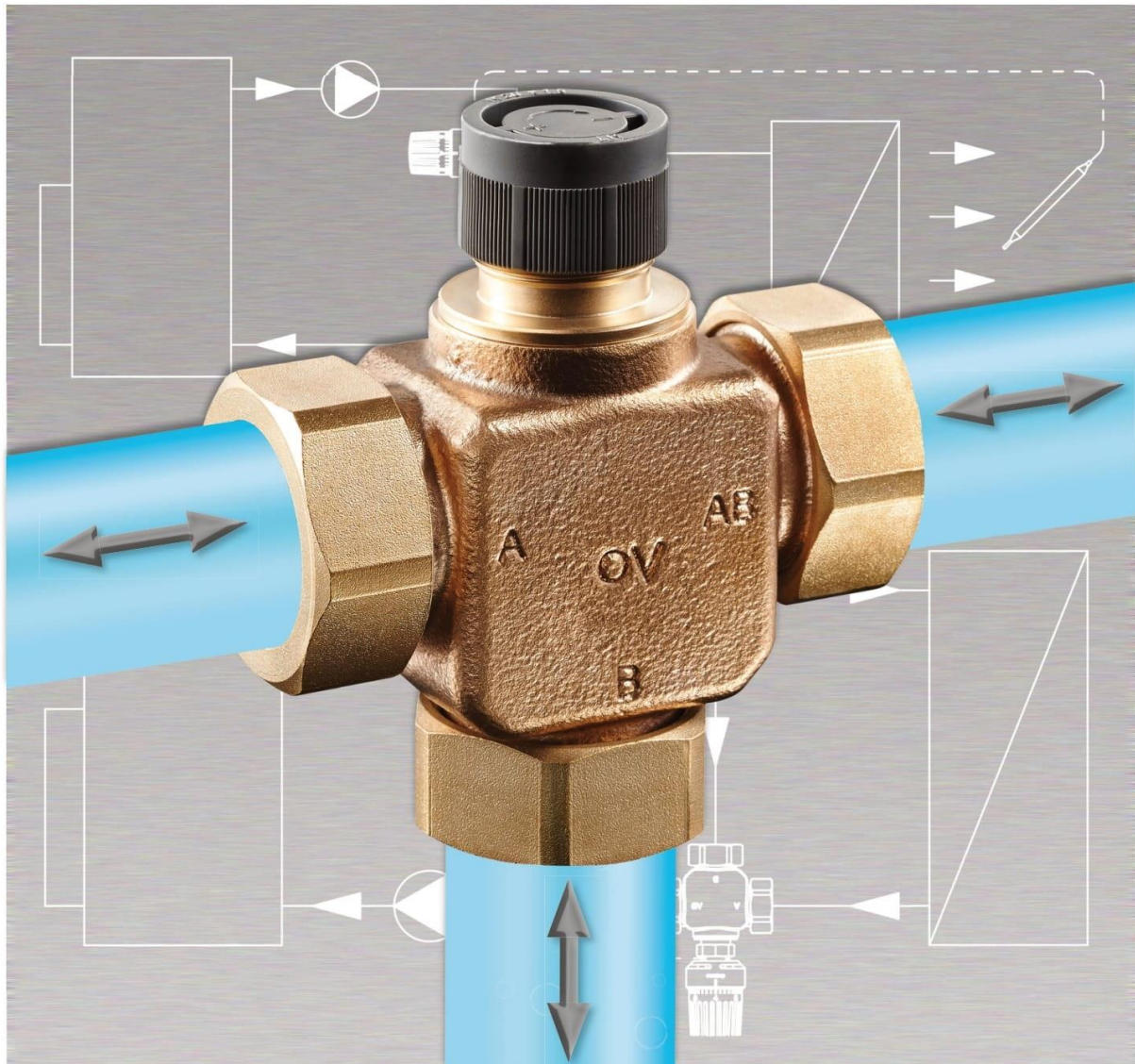
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Innovation + Quality

Valves, controls + systems

“Tri-CTR” Universal three-way valve
Mixing / Diverting

*for an improved
energy efficiency ...*





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“Tri-CTR” Universal three-way valve Mixing / Diverting



In order to guarantee an efficient use of energy, the flow rate in heating or cooling system often has to be divided or mixed with the help of three-way valves. The Oventrop three-way valve “Tri-CTR” combines both, a diverting and a mixing valve and therefore allows universal application.

1 For use as mixing valve, the Oventrop three-way diverting and mixing valve “Tri-CTR” has two inlet ports (A and B) and one outlet port (AB). Depending on the position of the regulating sleeve, the cold and hot water is mixed.

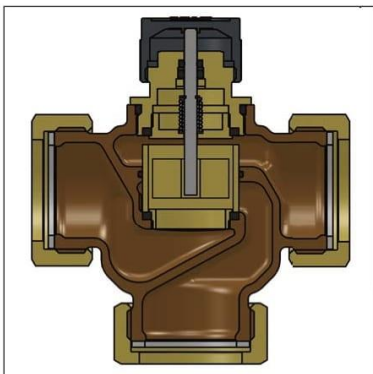
For use as diverting valve, the three-way valve has one inlet port (AB) and two outlet ports (A and B). Depending on the position of the regulating sleeve, the direction of flow is diverted from one to the other outlet port. The three-way diverting and mixing valves can be used in combination with Oventrop temperature controllers and actuators.

Technical data:

- Max. operating temperature t_s :
120 °C (for short periods up to 130 °C)
- Min. operating temperature t_s : -10 °C
- Max. operating pressure p_s :
16 bar (PN 16)
- Valve body made of corrosion resistant bronze
- Inner parts made of brass and stainless steel
- Regulating sleeve made of high quality plastic, seals of the valve insert and O-rings made of EPDM
- Connection thread M 30 x 1.5



1



2



3



4



5

Size	k_{vs} value	Item no.
DN 15	2.5	1131204
DN 20	4.4	1131206
DN 25	5.5	1131208
DN 32	6.7	1131210
DN 40	8.1	1131212
DN 50	10.5	1131216

Advantages:

- Universal application as diverting and mixing valve
- Pressure balanced regulating sleeve
- Suitable for high differential pressures
- Large flow range
- Universal application with different Oventrop actuators

1 Three-way valve “Tri-CTR”

2 Illustrated section three-way valve “Tri-CTR”

3 Temperature sensor with immersion or contact sensor for industrial plants, item no. 11405/28..

4 Electrothermal actuator “Aktor T 2P”, e.g. item no. 1012415

5 Electromotive actuator “Aktor M”, e.g. item no. 1012705



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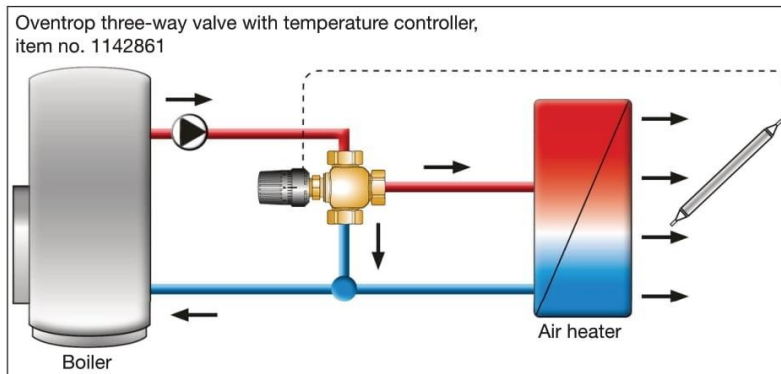
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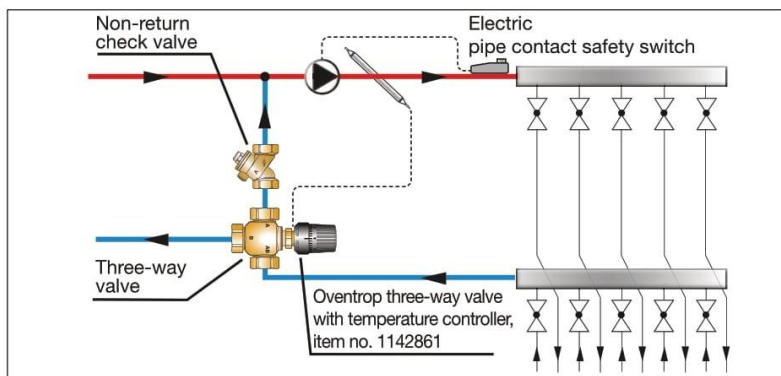
System illustrations of examples



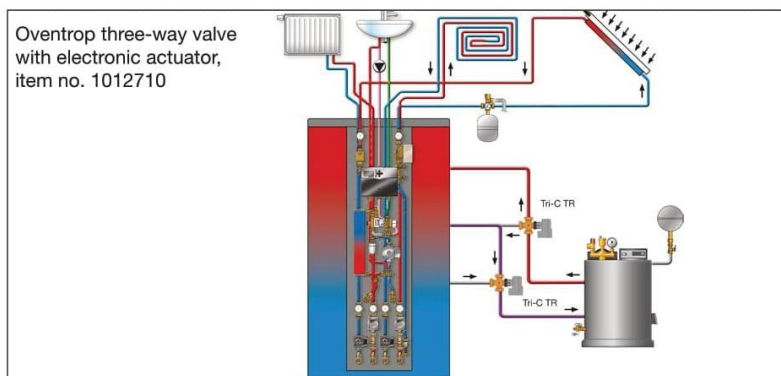
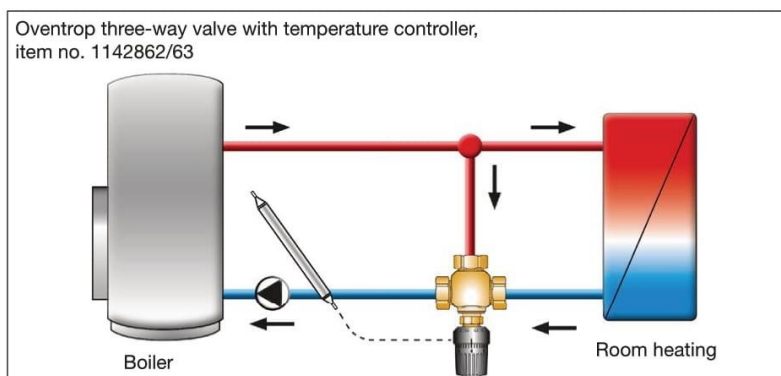
1 System illustration - Three-way valve "Tri-CTR" as diverting valve. Use in a heating system with air heater. The outlet temperature of the air heater is controlled.

2 System illustration - Three-way valve "Tri-CTR" as diverting valve for the control of underfloor heating systems. The flow temperature of the underfloor circuit is limited to the set value.

3 System illustration - Three-way valve "Tri-CTR" as mixing valve for return temperature increase at solid fuel boilers. The required return temperature is set at the temperature controller. With the return temperature increasing, the bypass between the supply and return pipe is throttled and vice versa.



4 System illustration - Zone loading of the energy storage centre "Regucor WHS" with the help of the three-way valve "Tri-CTR". Re-loading of the storage cylinder is activated by the system controller "Regtronic RS-B" as soon as the temperature in the centre of the storage cylinder below the separation sheet (heating circuit operation) or in the part above the separation sheet (potable water part in stand-by motion) drops below the minimum adjustable temperature. The potable water section and the heating circuit section of the energy storage centre "Regucor WHS" are loaded separately via the two three-way valves "Tri-CTR". Moreover, re-loading of the heating circuits is independent of the calculated nominal flow temperature which guarantees an efficient re-loading and loading of the corresponding part of the storage cylinder. The controller only asks for the heat which is really required from the heat generator (e.g. oil/gas/heat pump/solid fuel). In order to achieve a high solar share, the largest possible volume of the buffer storage cylinder is used for the storage of solar energy.





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Surface heating control with control unit “Regufloor HN”



The control unit “Regufloor HN” is used for constant flow temperature control in surface heating systems.

The three-way valve “Tri-CTR” has one inlet port (AB) and two outlet ports (A and B). Depending on the position of the regulating sleeve, the direction of flow is diverted from one outlet port to the other or, in case of intermediate positions it is divided between the outlet ports. Temperature is detected by the contact sensor at the supply. The automatic pump control steadily adjusts the pump output to the current hot water demand. The electric pipe contact safety switch is preset to 60°C and protects the surface heating circuit from inadmissible high temperatures.

Advantages:

- Compact installation dimensions
- Temperature range may be limited or locked via the thermostatic head
- Electronic temperature sensor as additional protection against excess temperature
- Easy setting of the flow temperature with the help of the thermostatic head
- Temperature control without auxiliary energy

Technical data:

- Max. operating pressure p_s : 6 bar
- Max. permissible differential pressure Δp max.: 200 kPa (2 bar)
- Max. operating temperature t_s :
Primary side: 90 °C
Secondary side: 50 °C
- Control range temperature controller: 20 – 50 °C
- Temperature range electric pipe contact safety switch: 20 – 90 °C
- kvs value: 3.7
- Performance range:
up to 15 kW or up to 200 m² heating surface with a heat demand of 75 W/m²

1 Control unit “Regufloor HN”,

item no. 1151600

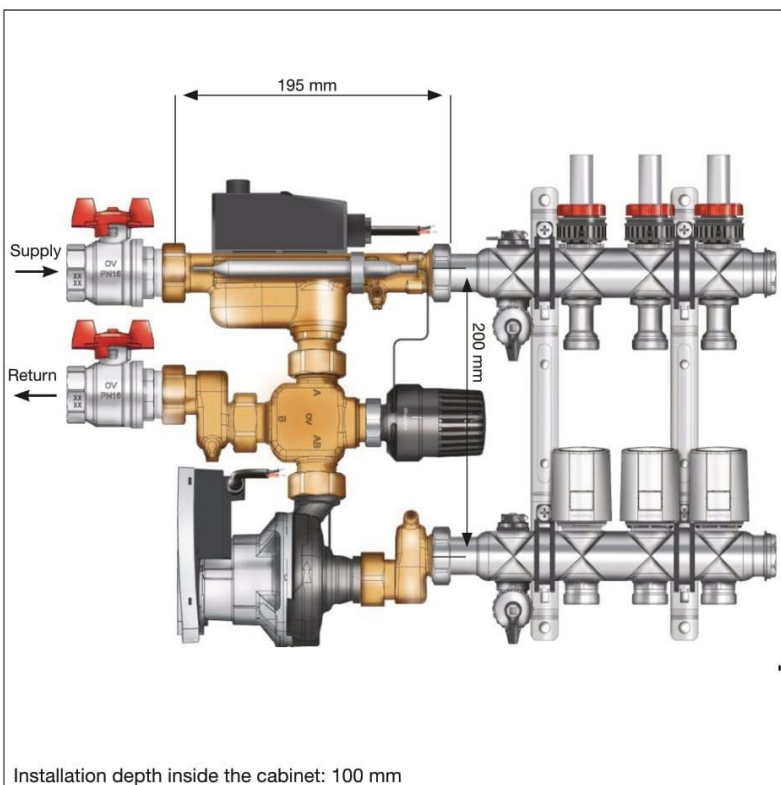
2 Dimensions control unit “Regufloor HN”

Further information can be found in the Oventrop catalogue “Products” as well as on the internet, product range 1.

Subject to technical modifications without notice.

Private persons may purchase our products from their qualified installer.

Presented by:



Installation depth inside the cabinet: 100 mm

Printed on paper free from chlorine bleaching.

Product ranges 2,3
PU 319-EN/3/03.2015/MW