

oventrop

Innovation + Quality

Valves, controls + systems

Thermostats, valves and fittings for radiators

Product Range

Awards:





The variety and different models of Oventrop valves and controls allow the stockist, plumber and specifying engineer to fulfil all technical requirements concerning radiators, accessories and the complete heating system.

Due to their presetting, they permit a hydronic adjustment of the flow rate and thus guarantee an economical heat output of the individual radiators.

Oventrop thermostatic radiator valves of the "Series A, AV 6, RF and F" are officially approved and correspond to:

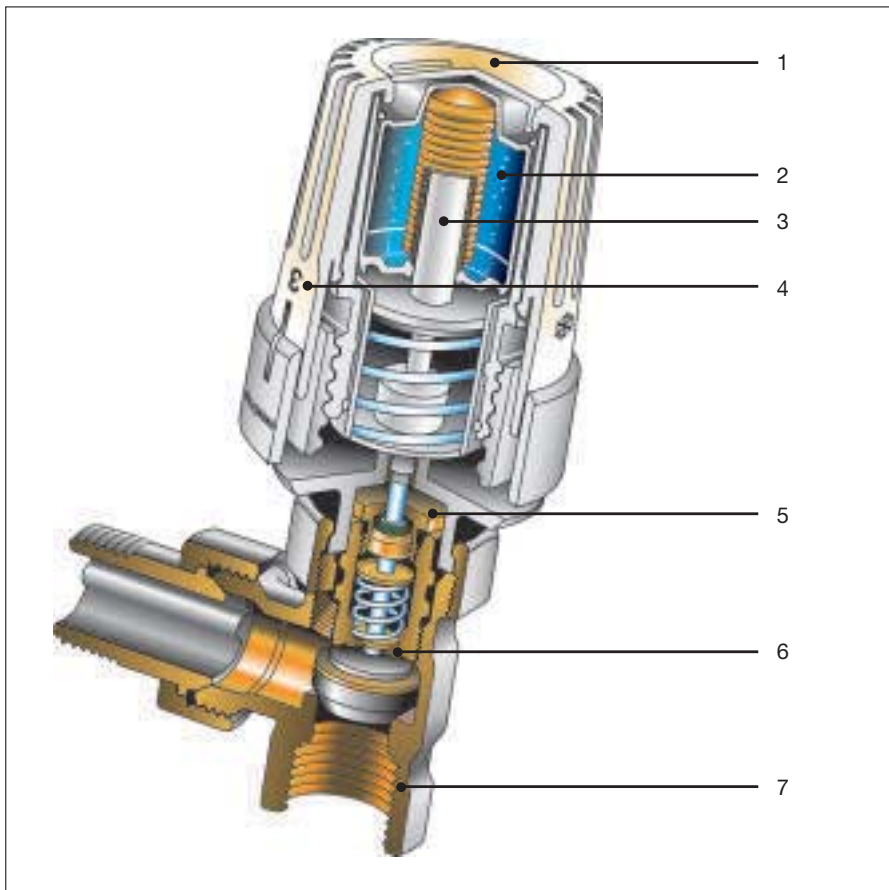
- the DIN/BS EN 215 standard (Reg.-No. 6T0002)
- the BS 6284 standard

Oventrop thermostatic radiator valves (valves of the "Series A" and thermostats "Uni XH", "Uni LH", "Uni LHZ", "Uni SH" and "Uni CH") exceed in all respects the values required in the different standards:

- Flexional strength: 815 N (1213N*)
Requirements according to DIN EN 215: 250 N
- Torsional strength: 25.8 Nm (29.8 Nm*)
Requirements according to DIN EN 215: 8 Nm
- Heating medium temperature effect:

"Uni XH":	0.37 K/30 K
"Uni XHT":	0.37 K/30 K
"Uni LH":	0.65 K/30 K
"Uni SH":	0.9 K/30 K
"Uni CH":	0.65 K/30 K
- Requirements according to DIN EN 215: 1.5 K/30 K
- Differential pressure effect: 0.4 K/0.5 bar
Requirements according to DIN EN 215: 1 K/0.5 bar
- Hysteresis: 0.2 K
Requirements according to DIN EN 215: 1.0 K

* Lockshield configuration



Function and composition:

The sensor element of the "Uni XH", "Uni LH", "Uni LHZ", "Uni SH" and "Uni CH" consists of a liquid filled metal capsule with immersed bellows and integral push rod.

A temperature fluctuation leads to an alteration of the volume of the liquid which entails a length modification of the immersed bellows. Thus the valve is closed and opened by means of the push rod.

1. Memory disc
2. Liquid sensor element
3. Overload spring
4. Setting figure
5. Gland
6. Valve insert
7. Thread connection according to EN standard (BS 21)



1

Oventrop thermostatic radiator and lockshield valves of the exclusive "Series E" for the elegant interior. A modern design combining exclusive form and excellent function.

1 The exclusive radiator valves with liquid sensor permit a thermostatic control of the room temperature.

The Oventrop valves of the "Series E" are available in angle, straight, reversed angle and double angle pattern, the radiator lockshield valves "Combi E" in angle and straight pattern.

Models:

gold plated
chrome plated
white powder coated
sand blasted and nickel plated
anthracite
stainless steel finish

The Oventrop "exclusive radiator valves" are leaders in design. No other product of the branch received as many awards:

Design Award of North Rhine Westphalia
Award of Honour for Industrial Products
Industrial Forum Design Hanover Award iF
Design-Innovation, Design Centre Essen
Award for high Design Quality

Pragothem Prague
Diploma for Best Exhibit

German Institute for Copper Berlin
Award "Product and Brass"

Interclima Paris
Trophée du Design

Admission to "The New Collection" for exemplary design Munich, "Design Laboratory" Museum of Art and Commerce Hamburg and Design Museum London



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2, 3 The thermostat "Uni SH" in a new, slim design with liquid sensor for the control of room temperature, comes with a setting device for visually handicapped persons. Ease of operation and optical display are excellent.

Models: white/chrome plated and stainless steel finish

The elegant design cover "SH-Cap" which is available in white, anthracite and chrome, can be pushed onto the thermostat subsequently. As for the model in stainless steel finish, the cover is already pre-assembled.

Awards:



International Design Award
Baden-Württemberg



"light + building", Frankfurt



Nominated for the Design Award of the Federal Republic of Germany



Design Award Japan

4 For the radiator product range "Series E", Oventrop also offers the handgrips of the known product lines "TARA"*, "MADISON"* and "DREAMWORKS"* of the company Dornbracht, Iserlohn.

The exclusive radiator valves without sensor element allow a manual control of the room temperature.

The handgrips (connection thread M 30 x 1.5) are screwed onto the radiator valve of the "Series E" instead of a thermostat.

Model: chrome plated

5 Handgrip "TARA" with angle pattern valve of the "Series E"



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* * Trade marks and design of the company Dornbracht GmbH & Co. KG, Iserlohn



Thermostat "Uni XH", white (RAL 9016) with radiator



Thermostat "Uni XH" (see above) with remote sensor



Thermostat "Uni XHT", transparent



Thermostat "Uni LH", white (RAL 9016)



Thermostat "Uni LH", signal grey (RAL 7004)



Thermostat with remote control, white (RAL 9016)



Thermostat "Uni CH" *Colan*

The Oventrop thermostats "Uni XH", "Uni XHT", "Uni LH", "Uni SH" and "Uni CH" with liquid sensor have a connection thread M 30 x 1.5 and can therefore be mounted to all radiators with integrated distributor and to valves with the corresponding connection.

The temperature range can be limited and locked by use of the limiting clips. The thermostats do not only have a setting device for visually handicapped persons but the chosen setting can be marked with the help of the memory disc (does not apply to "Uni SH" and "Uni CH").

Advantages:

- no adapter required
- safe fixing of thermostat
- simple installation
- reduced dimension
- excellent design
- collar nut cover available
- suitable for the valve bodies of the company Heimeier amongst others
- reinforcing cap available ("Uni LH")

The thermostat "Uni XH" is supplied in white colour (RAL 9016) or transparent, the thermostat "Uni CH" in white colour (RAL 9016) and the thermostat "Uni LH" in the colours white (RAL 9016), signal grey (RAL 7004), anthracite (RAL 7016) as well as gold or chrome plated (see page 2).

Awards:

Thermostat "Uni XH"



Interclima Paris
Trophée du Design



Industrial Forum Design Hanover
Award iF

Thermostat "Uni L (LH)"



Busse Design Ulm
Longlife Design Award

Thermostat "Uni CH"



Interclima Paris
Trophée du Design



Industrial Forum Design Hanover
Award iF

The thermostats "Uni XH", "Uni XHT", "Uni LH", "Uni SH" and "Uni CH" can be fitted without adapter to the radiators with integrated distributor of the following manufacturers:

- | | | | |
|------------|-------------|-------------|---------------|
| - ACOVA | - Cöskünöz | - Henrad | - Purmo |
| - Alarko | - Concept | - HM-Heizk. | - Radson |
| - Arbonia | - DEF | - Hoval | - Rettig |
| - Baufa | - Delta | - IMAS | - Runtal |
| - Baykan | - Demrad | - Itemar/ | - Starpan |
| - Biasi | - DiaNorm | - Biasi | - Stelrad |
| - boki | - Dia-therm | - Jaga | - Superia |
| - Bemm | - Dunafer | - Kampmann | - Termoteknik |
| - Borer | - DURA | - Kalor | - US-Steel |
| - Brema | - Ferroli | - Kermi | - Vasco |
| - Brugman | - Gerhard | - Korado | - VEHA |
| - Caradon- | + Rauh | - Manaut | - Winkels |
| - Stelrad | - Hagan | - Merriott | - Zehnder |
| - Celipan | - Heatline | - Neria | - Zenith |

(subject to change without notice)



Thermostat "Uni XD", white (RAL 9016) with radiator



Thermostat "Uni XD", white (RAL 9016)



Thermostat "Uni XD" (see above) with remote sensor



Thermostat "Uni LD", white (RAL 9016)



Thermostat „Uni LD“, white (RAL 9016) with remote sensor

The Oventrop thermostats "Uni XD", "Uni LD" and "Uni CD" with liquid sensor have a squeeze connection which is suitable for the Danfoss valve connection.

This special squeeze connection with collar nut allows a safe and close connection of the thermostat to the valve. Flow charts on demand.

The temperature range can be limited and locked by use of the limiting clips.

The thermostats do not only have a setting device for visually handicapped persons but the chosen setting can also be marked with the help of the memory disc (does not apply to "Uni CD").

Advantages:

- no adapter required
- safe fixing of the thermostat
- simple installation
- reduced dimension
- excellent design
- collar nut cover available ("Uni LD")
- suitable for all Danfoss valve bodies of the series RA and for TKM valves
- reinforcing cap available ("Uni LD")

The thermostat "Uni XD" is supplied in white colour (RAL 9016) and the thermostat "Uni LD" in the colours white (RAL 9016), signal grey (RAL 7004) or anthracite (RAL 7016) as well as chrome or gold plated.

Awards:

Thermostat "Uni L (LD)"



Busse Design Ulm
Longlife Design Award

Thermostat "Uni XD"



Interclima Paris
Trophée du Design



Industrial Forum Design Hanover
Award iF

The thermostats "Uni XD", "Uni LD" and "Uni CD" can be fitted without adapter to the radiators with integrated distributor of the following manufacturers:

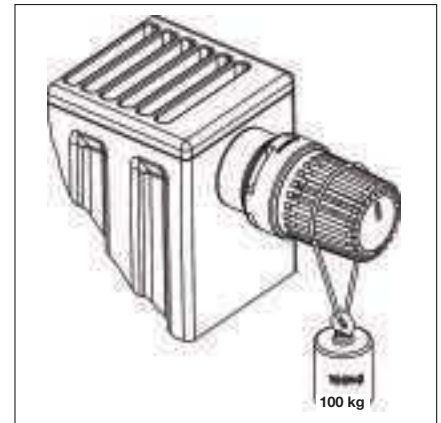
- | | |
|-------------|----------------|
| - Agis | - Hudevad |
| - Arbonia | - Radel |
| - Brötje | - RIO/Ribe |
| - Brugman | - Schäfer |
| - Buderus | - TERMO TEKNIK |
| - CICH | - Thor |
| - De'Longhi | - Vogel & Noot |

(subject to change without notice)



1 Thermostat "Uni LHB" (lockshield configuration), connection thread M 30 x 1.5, with integrated anti-theft device and increased flexional strength (load up to 100 kg). The control range of the thermostat is hidden.

Model: white (RAL 9016)



System illustration

2 Thermostat "Uni LHB" with setting tool
3 Anti-theft ring for "Uni XH" or "Uni LH", white (RAL 9016)

4 Thermostat "Uni DH" (wax sensor), white (RAL 9016), also available with remote sensor
5 Angle pattern adapter, white (RAL 9016) both ports with connection thread M 30 x 1.5 or both ports with squeeze connection

6 "Uni XHZ" and "Uni XDZ" sets for energy saving for timed individual room temperature control, consisting of:
 - thermostat ("Uni XHZ" or "XDZ")
 - time switch
 - mains adaptor



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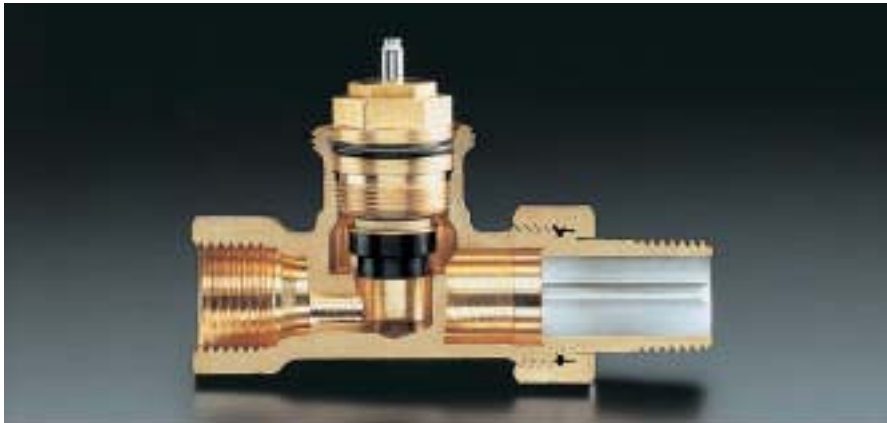
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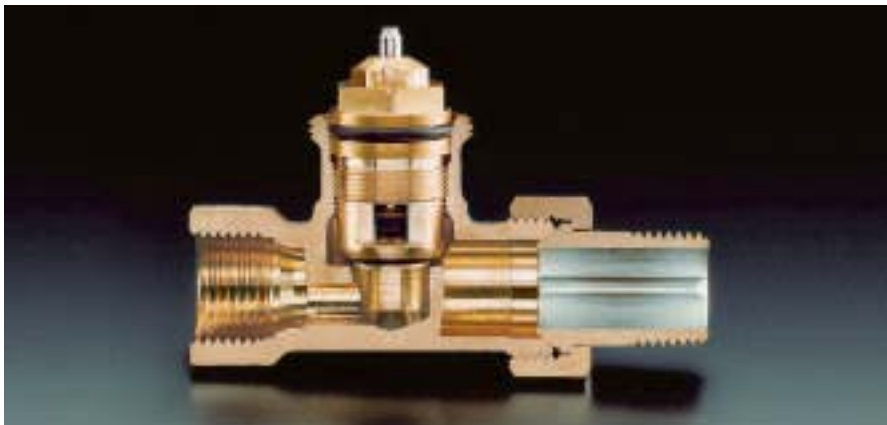
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For protection during transport and installation, the valves are delivered with protection caps. The colour of the cap indicates the valve series:

- “Series A” = black
- “Series AZ” = orange
- “Series AV 6” = white
- “Series ADV 6” = grey
- “Series RF” = blue
- “Series F” = red

The valves of the “Series A, AV 6, ADV 6, AZ, RF and F” have identical bodies. The valve inserts are interchangeable.

1 “Series A”

The “Series A” is the standard model for one pipe and two pipe heating systems. The room-to-room adjustment of the heat output is made with the help of the presettable radiator lockshield valves “Combi 4”, “Combi 3” or “Combi 2”.

“Series AZ” (not illustrated)

The Oventrop valves of the “Series AZ” correspond to those of the “Series A”. They do, however, have a higher flow capacity.

“Series RF” (not illustrated)

The Oventrop valves of the “Series RF” correspond to those of the “Series A”. They do, however, have reduced dimensions.

2 “Series AV 6” with presetting

The Oventrop valves of the “Series AV 6” are fitted with a presettable valve insert and therefore permit an adaptation of the flow rates to the required heat demand. The valves of the “Series AV 6” are used in two pipe heating systems with normal temperature difference.

3 “Series ADV 6” with presetting

The Oventrop valves of the “Series ADV 6” are fitted with presettable valve insert and therefore permit an adaptation of the flow rates to the required heat demand. Should the thermostat be removed or vandalised, the double function provokes an automatic closing of the valve to 5 % of the nominal flow.

An automatic frost protection is thus provided and an uncontrolled rise of temperature is impossible.

4 “Series F” with fine presetting

The Oventrop valves of the “Series F” offer a fine presetting facility which is protected by patent. They are particularly suitable for heating systems with high temperature difference (district heating systems) or for installations with low flow rates.

Advantage:

Precise adjustment of the flow rate through the radiator.



For the return connection of the pipework to radiators with integrated distributor or to radiators with conventional valve connection, Oventrop offers different types of radiator lockshield valves with proportional fine presetting for use in hot water central heating systems.

The Oventrop radiator lockshield valves are connected underneath the integrated distributor or to the radiator return pipe. They allow the removal of the radiators without the necessity to drain the system.

Awards:



Industrial Forum Design Hanover Award iF



reddot design award
Design Centre
North Rhine Westphalia



Nominated for the
Design Award of the
Federal Republic of Germany

1 “Combi E-VK” for the connection of radiators with integrated distributor. Stylish radiator lockshield valve available in straight and angle pattern. The straight pattern model is supplied with a protection pipe allowing to cover the pipes down to the floor.

2,3 Radiator lockshield valves “Combi” for radiators with conventional valve connection:

- “Combi 4” for reproducible presetting, isolating, filling and draining of the radiator
- “Combi 3” for presetting, isolating, filling and draining of the radiator
- “Combi 2” for presetting and isolating of the radiator

4 Service tool for radiator lockshield valves

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Examples:

1 The radiator connection module "Multimodul" allows the installation and initial operation of the heating system without radiators. It is mainly used for the connection of radiators with integrated distributor.

Installation is possible in either wall or floor.

2 "Bypass-Combi Duo" two pipe system

3 "Bypass-Combi Uno" one pipe system

4 One pipe radiator valve "Tauch-Rohr" with horizontal and vertical insertion tube, with constant bypass and shut off

5 Three-way bypass valve for one and two pipe heating systems



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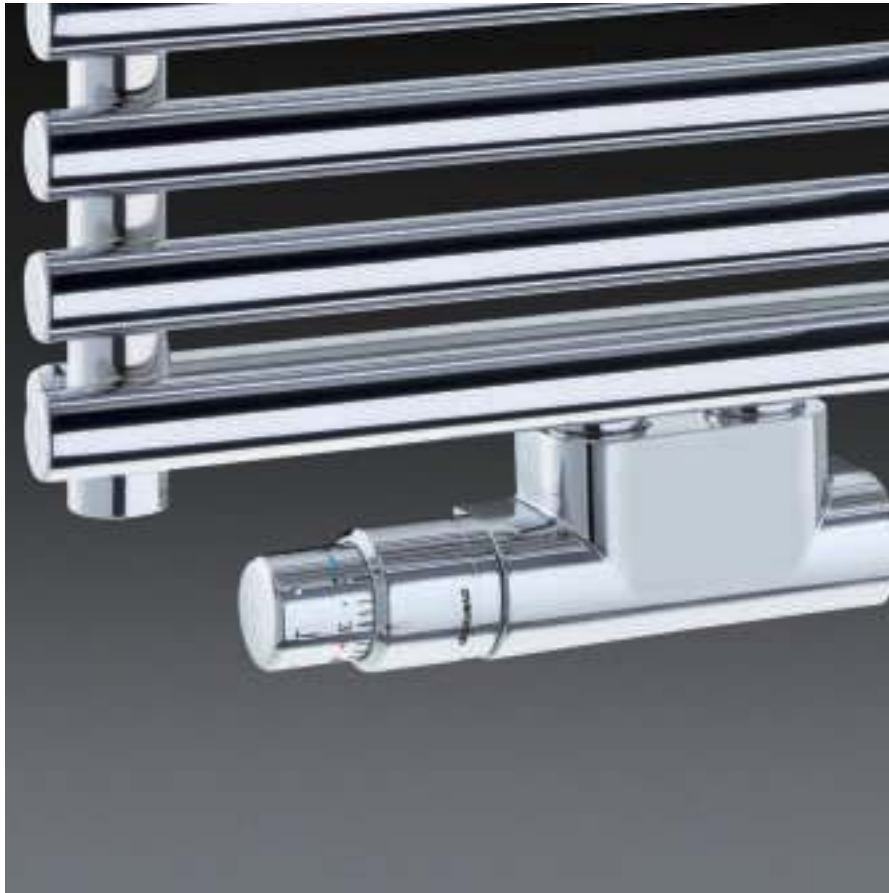
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With the combination consisting of the connection fitting “Multiblock T” and the thermostat “Uni SH”, Oventrop offers “the” optically and technically balanced solution for the connection to modern radiators and towel radiators (centre distance 50 mm). The stylish design covers in white, chrome or stainless steel finish can be fitted subsequently and create a smart optical harmony with the radiators.

When using the “Multiblock T” in conjunction with the thermostat “Uni SH” in a new slim design, an elegant finish is obtained (see illustr. 1). For colour harmonization, Oventrop also offers a connection set for towel radiators consisting of the thermostat “Uni SH” and the “Multiblock T” (see catalogue “Products”).

Applications:

Items nos. 118 40 13/14/83/84:

- for two pipe operation
- as thermostatic valve
- as isolating fitting
- for draining
- for filling
- presettable flow rate

Items nos. 118 40 23/24/33/34

- for one and two pipe operation
- as thermostatic valve
- as isolating fitting
- presettable flow rate

Advantages of the connection fittings:

- connection to all standard pipe materials for the connection to radiators with $\frac{3}{4}$ " male thread or $\frac{1}{2}$ " female thread
- can be used as thermostatic valve with presetting, for isolation, draining and filling
- free choice of connection to supply or return pipe
- two pipe operation, item nos. 118 40 43/14/83/84
- two or one pipe operation, convertible, item nos. 118 40 23/24/33/34
- high safety due to soft sealing connections to the radiators
- stylish design covers in white, chrome or stainless steel finish create a smart optical integration with the radiator

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1 Angle pattern model, left hand side connection of the thermostat (e.g. “Uni SH”) with chrome plated design cover

2 Straight pattern model, right hand side connection of the thermostat (e.g. “Uni XH”)

3 Angle pattern model, left hand side connection of the thermostat (e.g. “Uni SH”)

4 Straight pattern model, left hand side connection of the thermostat (e.g. “Uni XH”) with white design cover

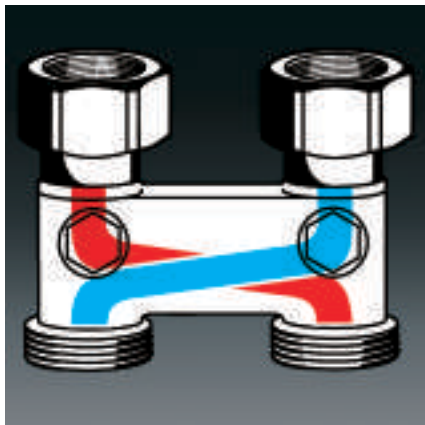
5 Connection fittings “Multiblock T”

Models:

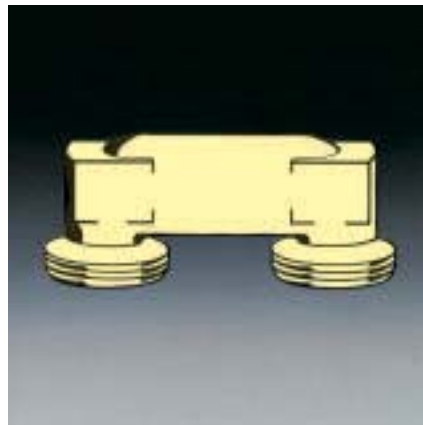
- two pipe fitting
- one/two pipe fitting (convertible)



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1 The connection programme “Multiflex” allows a safe connection of radiators with integrated distributor to plastic, copper and soft steel pipes as well as the composition pipe “Copipe”.

Models:

- ZB fitting (two pipe block)
- CE fitting (Combi one pipe)
- ZBU fitting (two pipe block, convertible to one pipe operation)

Distance between pipe centres: 50 mm

The single fittings can be connected to radiators with integrated distributor with any distance between pipe centres.

Advantages of the “Multiflex” programme:

- all connection problems of radiators with integrated distributor can be solved
- connection programme with facilities to: isolate, preset, drain and fill
- use in one and two pipe systems (ZBU)
- tolerances in the connection dimensions of the supply and return nipples are technically perfectly balanced. This means that there is no cross tension
- increased leakage proofing due to metal to metal sealing (“Multiflex V”) and soft sealing (“Multiflex F”)
- exact setting of radiator shares via the bypass screw in lengthwise direction
- excellent flow rates of CE fittings, CE isolating fittings and CE angle pattern isolating fittings when combined with the Oventrop thermostats “Uni XH”, “Uni LH”, “Uni LHZ”, “Uni SH”, “Uni CH”, “Uni XD” and “Uni LD” with a proportional deviation of 2 K

2 Inversion fitting with isolating facility for the inversion of the flow volume if the supply and return pipe have been mixed up. An insufficient radiator output is avoided and a silent operation of the radiator valve is guaranteed.

3 Bridging fitting

The bridging fitting allows a fixing of the pipe-work during installation. Moreover, it is used for bridging-over the supply and return pipe in case of subsequent installation of radiators.

4 Compression fittings “Ofix K” for plastic pipes (outer pipe diameter 12–20 mm) with $\frac{3}{4}$ " thread for the direct connection to the “Multiflex” fitting or distributors with $\frac{3}{4}$ " male thread, DIN V 3838 (cone “Euro”).

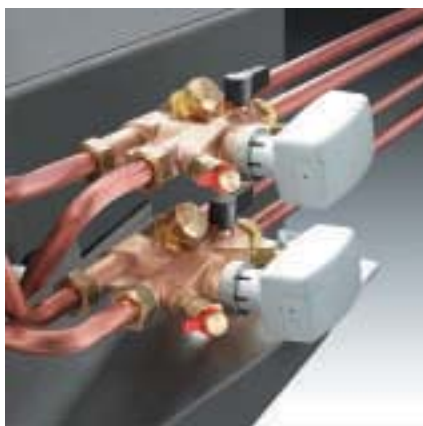
5 Compression fittings “Ofix CEP” with metal to metal seal for copper pipes (outer diameter 10–18 mm) with $\frac{3}{4}$ " thread for the direct connection to the “Multiflex” fitting or distributors with $\frac{3}{4}$ " male thread. When using soft pipes or pipes with a wall thickness 1 mm, reinforcing sleeves have to be used.

6 Compression fittings “Ofix CEP” - “crack & squeeze” for copper and precision steel pipes with $\frac{3}{4}$ " thread, with double function, soft or metal to metal sealing for different pipe dimensions. During installation, the retaining ring is separated from the cutting ring by tightening the collar nut up to the defined metal stop.

7 Compression fittings “Cofit” for composition pipes “Copipe” (outer pipe diameter 14, 16 and 20 mm) with $\frac{3}{4}$ " thread for the direct connection to the “Multiflex” fitting or distributors with $\frac{3}{4}$ " male thread, DIN V 3838 (cone “Euro”).



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The automatization is becoming more and more important not only in large but also in privately owned buildings.

Oventrop offers a wide range of valves, controls, actuators and regulators which fulfil the requirement of planning and realisation. The actuators are used for heating, ventilation and air-conditioning. They can be used for room temperature control, e.g. with conventional radiators, radiators with integrated distributor, distributors and collectors for surface heating, radiant ceiling panels, chilled ceiling systems and induction-coil appliances.

1 Electromotive actuators system "EIB" and "LON"

The power consumption of the actuators is extremely low so that a separate power supply is unnecessary. They are additionally equipped with an integrated binary entry to which, e.g. a window contact may be connected.

Models:

- System "EIB" suitable for the direct connection to the European installation bus
- System "LON" suitable for the direct connection to LonWorks networks

2 Installation example consisting of electromotive actuators (24 V) for the steady control as proportional actuators (0-10 V) or as three point actuators and "Cocon 4" four-way regulating valves.

3 Electromotive actuator (230 V) with steady control as three point actuator

4 Electromotive actuator (230 V) with two point control and short operating time (approx 3 sec.).

5 Electrothermal actuators with two point control. Because of their construction, the actuators are protected against overload. According to requirement 230 V or 24 V. A model with reduced dimension is available for installation where space is limited (illustr. left hand side).

Electrothermal actuators 24 V with steady control as proportional actuator (0-10 V) (illustr. right hand side).

6 Room thermostat or room thermostat-clock for individual room temperature control combined with the electrothermal actuators (two point) (5). Temperature set-back is carried out according to a timed programme (room thermostat-clock) or by use of an external time switch (room thermostat).

7 "DynaTemp 100/16" individual room temperature control via LAN consisting of thermostat "Uni LHZ", application router and (optional) with radio controlled window handles "SecuSignal".

Further information can be found in the Oventrop catalogue or on the internet, product range 1.

Subject to technical modification.

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