

# oventrop

Innovation + Quality

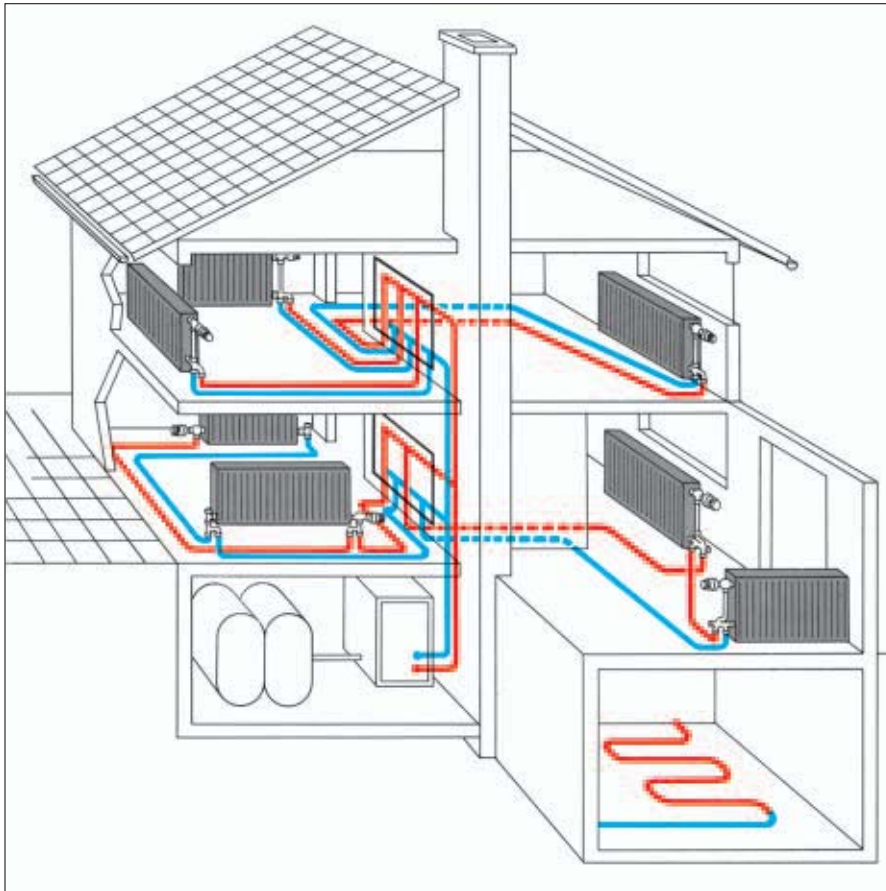
Valves, controls + systems

Thermostats, valves and fittings for radiators

Product Range

Design 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.

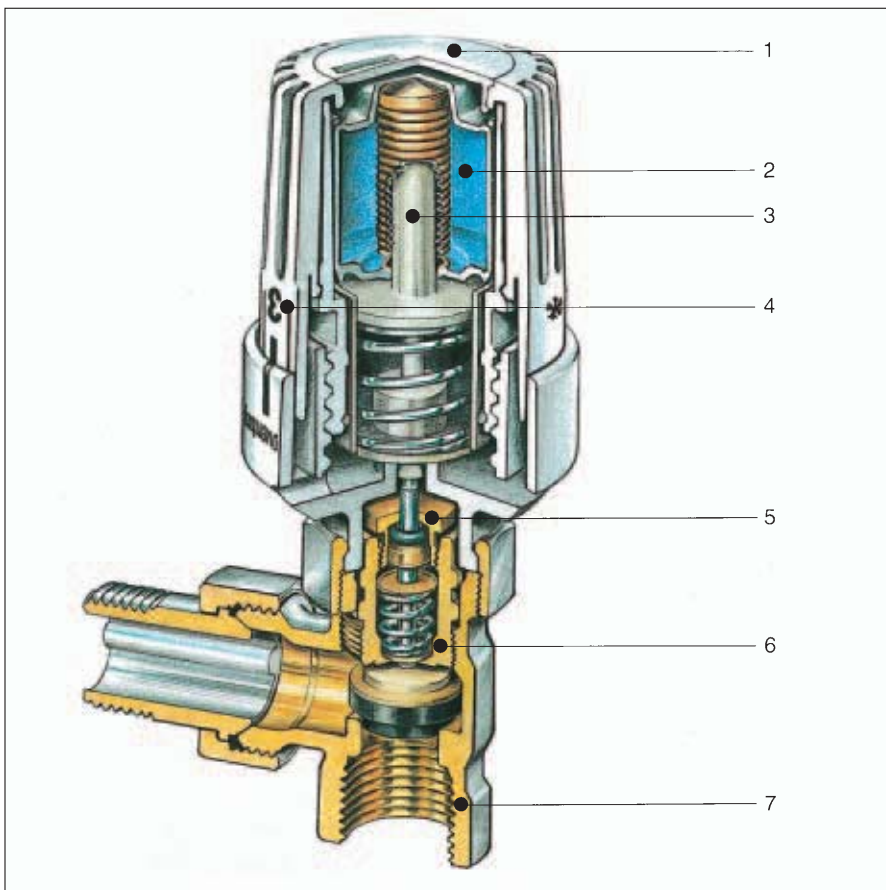
Oventrop thermostatic radiator valves of the "Series A, AV6, RF and F" are officially approved and correspond to:

- 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" and "Uni LH") exceed in all respects the values required in the different standards:

- Flexional strength: 815 N (1213 N\*)  
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 LH": 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

\* thermostat with reinforcing cap



Function and composition:

The sensor element of the "Uni XH", "Uni LH", "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 or 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)



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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:

Angle/straight pattern radiator valves and lockshield valves:

white powder coated  
chrome plated  
gold plated  
sand blasted and nickel plated  
anthracite

Reversed angle and double angle pattern radiator valves:

white powder coated  
chrome plated  
anthracite

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 Hannover 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

**2** 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 30x1.5) are screwed onto the radiator valve of the "Series E" instead of a thermostat.

Model: chrome plated

**3** Handgrip "TARA" with angle pattern valve of the "Series E"



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

**4, 5** 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.

The elegant design cover "SH-Cap" which is available in anthracite and chrome, can be pushed onto the thermostat subsequently. The thermostat integrates optically with modern radiators and towel radiators of different colours.



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Thermostat "Uni XH" with radiator

The Oventrop thermostats "Uni XH", "Uni XHT", "Uni LH", "Uni CH" and "Uni SH" 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.

Advantages:

- no adapter required
- safe fixing of thermostat
- simple installation
- reduced dimension
- excellent design
- collar nut cover available
- suitable for the valves 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 and the thermostat "Uni LH" in the colours white RAL 9016, signal grey RAL 7004 or anthracite as well as gold or chrome plated.

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

- |            |             |            |
|------------|-------------|------------|
| - ACOVA    | - Dia-therm | - Korado   |
| - Alarko   | - Dunaferr  | - Manaut   |
| - Aluplan  | - DURA      | - Merriott |
| - Arbonia  | - Ferroli   | - Neria    |
| - Baufa    | - Gerhard   | - Purmo    |
| - Bemm     | + Rauh      | - Radson   |
| - Borer    | - Heatline  | - Rettig   |
| - Bremo    | - Henrad    | - Runtal   |
| - Caradon- | - HM-       | - Starpan  |
| Stelrad    | Heizkörper  | - Stelrad  |
| - Cetra    | - Hoval     | - Superia  |
| - Cöskünöz | - IMAS      | - US-Steel |
| - Concept  | - Itemar/   | - Vasco    |
| - DEF      | Biasi       | - VEHA     |
| - Delta    | - Jaga      | - Winkels  |
| - Demrad   | - Kalor     | - Zehnder  |
| - DiaNorm  | - Kermi     | - Zenith   |

(subject to change without notice)



Thermostat "Uni LH"



Thermostat "Uni LH" signal grey, RAL 7004



Thermostat "Uni CH" *Colan*



Thermostat "Uni XHT" transparent



Thermostat "Uni SH" with valve "Series E"



Thermostat "Uni XD" with radiator



Thermostat "Uni LD"



"Uni XD" with remote sensor



"Uni LD" with remote sensor

The Oventrop thermostats "Uni XD" and "Uni LD" 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.

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 as well as chrome or gold plated.

The thermostats "Uni XD" and "Uni LD" 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)



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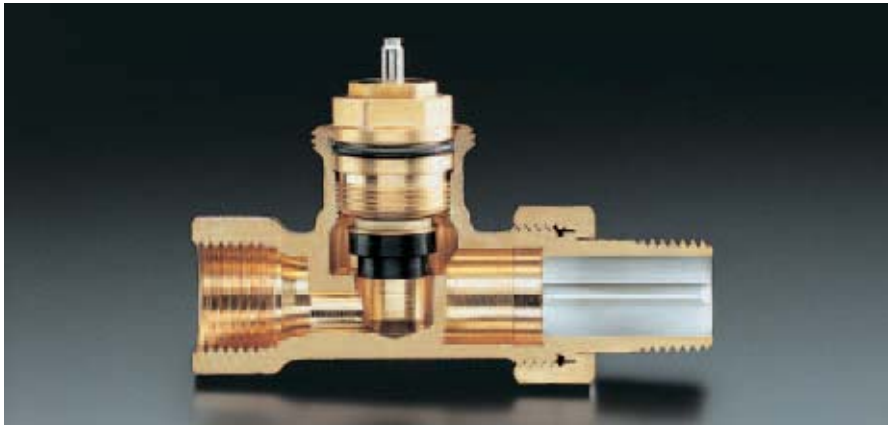


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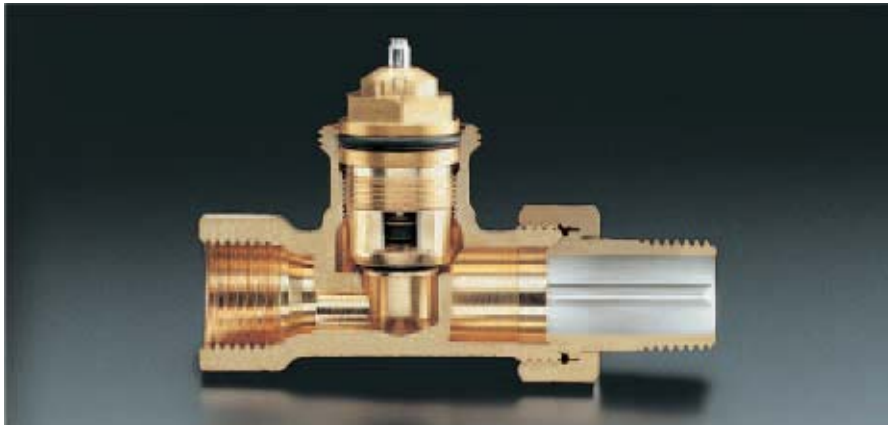


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- 1 Thermostat "Uni XH" with remote sensor, capillary 2 m and 5 m
- 2 Thermostat "Uni DH" (wax sensor) white, also with remote sensor
- 3 Thermostat with remote control (connection thread M 30 x 1.5 or squeeze connection)
- 4 Anti-theft ring for "Uni XH" or "Uni LH"
- 5 Thermostat "Uni XHB" (lockshield configuration) with integrated anti-theft device and increased strength (load up to 100 kg)
- 6 Angle pattern adapter both ports with connection thread M 30 x 1.5 or both ports with squeeze connection
- 7 Graduated collars "Uni-Clip" for "Uni XH" and "Uni XD" for an easy reading of the set value of the thermostat in case of lateral thermostat connection
- 8 "Uni XHZ" and "Uni XDZ" sets for energy saving for timed individual room temperature control, consisting of:
  - thermostat ("Uni XHZ" or "Uni XDZ")
  - time switch
  - mains adaptor



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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.



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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



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

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

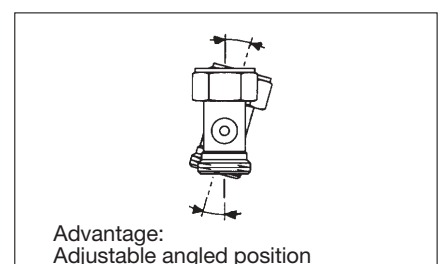
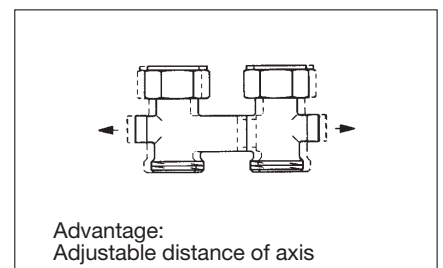
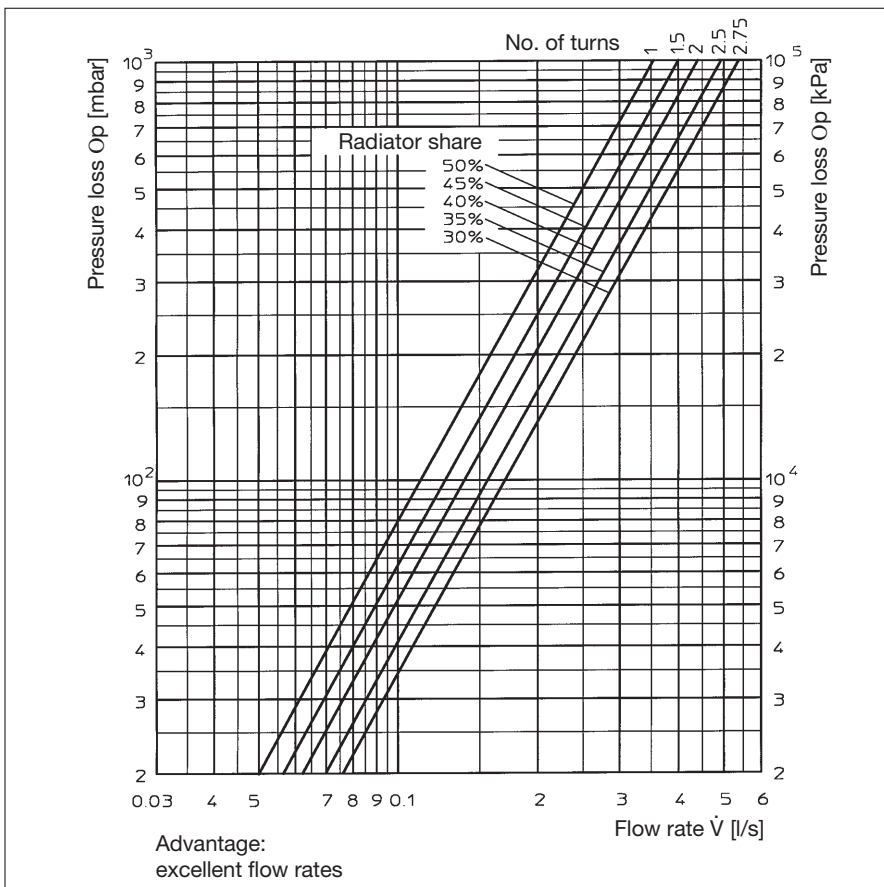
The ZB fittings (two pipe block) are installed in radiators with two pipe distributor, the CE fittings (Combi one pipe) are installed in radiators with two pipe distributors used in one pipe systems.

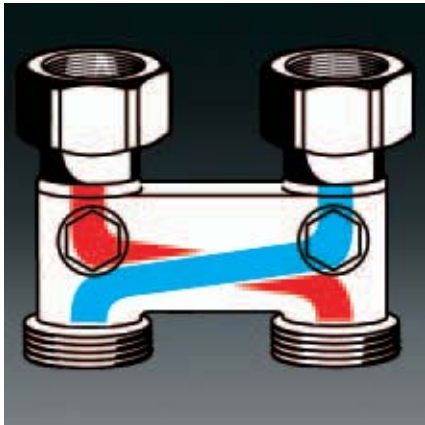
The ZBU fittings (two pipe block, convertible) can be used in either two pipe systems (as supplied) or one pipe systems.

The distance between pipe centres of the CE, ZB and ZBU fittings is 50 mm.

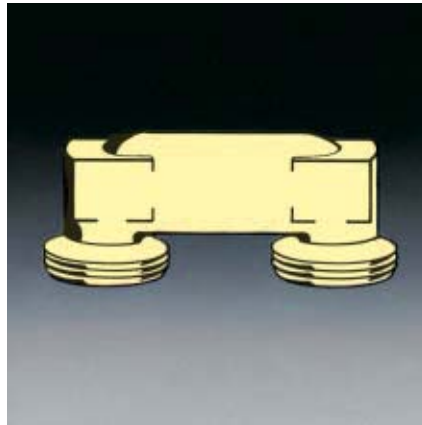
Advantages of the “Multiflex” programme:

- all connection problems of radiators with integrated distributor can be solved
- connection programme with facilities to:
  - isolate
  - preset
  - drain
  - fill
- easy to use
- suitable for radiators in one or two pipe systems
- tolerances in the connection dimensions of the supply and return nipples are technically perfectly balanced. This means that there is no cross tension (see illustration, patented solution for “Multiflex V”)
- 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 CH”, “Uni XD” and “Uni LD” with a proportional deviation of 2 K (see chart)





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**1** Inversion fitting with isolating facility  
Should the supply and the return pipe have been mixed up on site, a correction of the flow path becomes necessary.

An insufficient radiator output is thus avoided and a silent operation of the radiator valve is guaranteed. The Oventrop inversion fitting offers a practical and economical solution of this problem.

The Oventrop inversion fitting can also be used to avoid a crossing of the pipes in the floor.

**2** Bridging fitting

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

Should a radiator in a one pipe system be removed again later, this fitting serves to bridge the heating circuit.

**3** 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.

**4** Compression fittings “Ofix CEP” with metal to metal sealing 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 A 1 mm, reinforcing sleeves have to be used.

**5** Compression fittings “Ofix CEP” - “crack & squeeze” for the connection of radiator fittings with male thread  $\frac{3}{4}$ ” cone “Euro” with double function, soft sealing and 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.

**6** Compression fittings “Cofit” for composition pipe “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.



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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 intergrated binary entry to which, e.g. a window contact may be connected.

The "EIB" system is suitable for the direct connection to the European installation bus.

The "LON" system is suitable for the direct connection to LonWorks networks.

**2** Electromotive actuators for steady control as proportional (0-10 V) or three point actuator

**3** Electronic room thermostat for individual room temperature control combined with the electromotive proportional actuators (2) for use in heating and cooling systems

**4** Electromotive 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 dimensions is available for installation where space is limited.

**5** Room thermostat or room thermostat-clock for individual room temperature control combined with the electrothermal actuators (4)

Temperature setback is carried out according to a timed programme (room thermostat-clock) or by use of an external time switch (room thermostat).

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

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