

# oventrop

Innovation + Quality

Valves, controls + systems

Thermostats, valves and fittings for radiators

 MADE IN GERMANY

Product range





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.

### Advice regarding the Energy Saving Directive:

Oventrop thermostatic radiator valves comply with the specifications of the Energy Saving Directive. According to DIN V 4701-10 they can be designed with a P-deviation of 1 or 2 Kelvin which results in different ratios energy consumption/efficiency.

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

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

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/BS EN 215: 250 N
- Torsional strength: 25.8 Nm (29.8 Nm\*)  
Requirements according to DIN/BS EN 215: 8 Nm
- Heating medium temperature effect:  
"Uni XH": 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/BS EN 215: 1.5 K/30 K
- Differential pressure effect:  
0.4 K/0.5 bar  
Requirements according to DIN/BS EN 215: 1 K/0.5 bar
- Hysteresis: 0.2 K  
Requirements according to DIN/BS EN 215: 1.0 K

\*\*"Uni LH" in lockshield configuration



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Oventrop thermostatic radiator valves and lockshield valves for the elegant interior. A modern design combining exclusive form and function.

1-2 The "pinox" sets special highlights and represents a functional and accomplished thermostat. The lever facilitates an easy and precise temperature setting. The "pinox" was awarded numerous design prizes.

The "pinox" is recommended for the modern living room design, especially in combination with the "Series E" radiator valve programme or the "Multiblock T/TU/TFU" connection fittings.

3 The exclusive radiator valves with liquid sensor allow for 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, sand blasted and nickel plated, anthracite and stainless steel finish

4-5 The thermostat "Uni SH" in a slim design with liquid sensor serves to control the room temperature. Ease of operation and optical display are excellent.

With setting device for visually handicapped people.

Models:

white/chrome plated, white, chrome plated, and stainless steel finish.

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

6 For the radiator valve programme "Series E" Oventrop also offers the handgrips of the known product lines "TARA" and "MADISON" of the company Dornbracht in Iserlohn.

**Awards:**

Oventrop is a leading designer for radiator valves and fittings. No other company of the branch received as many awards (selection):

Award of Honour for Industrial Products  
Design Award of  
North Rhine Westphalia

iF Award  
Industrial Design Forum Hanover

Award for High Quality of Design  
Design Innovation  
Design Centre Essen

International Design Award  
Baden-Württemberg

ISH Frankfurt, Design Plus  
universal design award

Design Award Japan

GOOD DESIGN Award

Grand Prix Pragothem Prague

Award "Product and Brass"

German Institute for Copper Berlin

Trophée du Design, Interclima Paris

Plus X Award, ICONIC Award

Admission to "The New Collection" for exemplary Design Munich, "Design Laboratory" of the Museum of Art and Commerce in Hamburg, Design Museum London. The Chicago Athenaeum Museum



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



Thermostat "Uni XH" with remote sensor, white (RAL 9016)



Thermostat "Uni LH", white (RAL 9016)



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



Thermostat "Uni FH" with remote control, white (RAL 9016)



Thermostat „Uni CH“ *Calsonic*

The Oventrop thermostats "Uni XH", "Uni XHM", "Uni XHT", "Uni LH", "Uni LHB", "Uni SH", "Uni FH", "Uni CH", "pinox H" and "vindo TH" 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 setting may be limited or locked by using the limiting elements. The thermostats do not only have a setting device for visually handicapped people but the set value can be marked by using the memo disk (does not apply to "Uni SH", "Uni FH", "Uni CH", "pinox H" and "vindo TH").

#### Advantages:

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

The thermostats "Uni XH", "Uni XHM", "Uni XHT", "Uni LHB", "Uni SH", "Uni FH", "Uni CH", and "vindo TH" are supplied in white colour (RAL 9016). The thermostat "Uni LH" is available in the colours white (RAL 9016), signal grey (RAL 7004), anthracite (RAL 7016) as well as gold and chrome plated (see page 2). The thermostat "pinox H" is chrome plated.

#### Awards:

Thermostat "Uni XH"



Trophée du Design  
Interclima Paris



iF Award  
Industrial Design Forum  
Hanover

Thermostat "Uni L (LH)"



Longlife Design Award  
Busse Design Ulm

Thermostat "Uni CH"



Trophée du Design  
Interclima Paris



iF Award  
Industrial Design Forum  
Hanover

The thermostats with connection thread M 30 x 1.5 can be fitted without adapter to the radiators with integrated distributor of the following manufacturers:

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

(Subject to change without notice)



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



Thermostat "Uni XD", white (RAL 9016)



Thermostat "Uni XD" with remote sensor, white (RAL 9016)



Thermostat "Uni LD", white (RAL 9016)



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

The Oventrop thermostats "Uni XD", "Uni LD", "Uni FD", "pinox D" and "vindo TD" with liquid sensor have a squeeze connection which is suitable for the Danfoss valve series RA. The thermostat "Uni LDV" is suitable for the Danfoss valve series RAV, the thermostat "Uni LDVL" for the Danfoss valve series RAVL and the thermostat "vindo RTD" for the Danfoss valve series RTD.

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

The temperature setting may be limited or locked by using the limiting elements. The thermostats do not only have a setting device for visually handicapped people but the set value can be marked by using the memo disk (does not apply to "Uni FD", "pinox D", "vindo TD" and "vindo RTD").

Advantages:

- no adapter required
- safe fixing of thermostat
- simple installation
- reduced dimensions
- excellent design
- suitable for Danfoss valve bodies of the series RA, RAV, RAVL, RTD and for TKM valves
- reinforcing cap available ("Uni LD")

The thermostats "Uni XD", "Uni FD", "Uni LDV", "Uni LDVL", "vindo TD" and "vindo RTD" are supplied in white colour (RAL 9016). The thermostat "Uni LD" is available in the colours white (RAL 9016), signal grey (RAL 7004), anthracite (RAL 7016) as well as gold and chrome plated. The thermostat "pinox D" is chrome plated.

Awards:

Thermostat "Uni L (LD)"



Thermostat "Uni XD"



The thermostats "Uni XD", "Uni LD", "Uni FD", "pinox D" and "vindo TD" can be fitted without adapter to the radiators with integrated distributor of the following manufacturers:

- |                 |                      |
|-----------------|----------------------|
| <b>55- Agis</b> | <b>55- De'Longhi</b> |
| - Arbonia       | - Hudevad            |
| - Brötje        | - Ribe/Rio           |
| - Brugman       | - Thor               |
| - Buderus       | - Vogel & Noot       |

(Subject to change without notice)



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**1** Thermostat "Uni XHM", connection thread M 30 x 1.5, with higher specific piston stroke, especially suitable for the valve design with 1 K P-deviation.

**2** 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.

White model (RAL 9016)

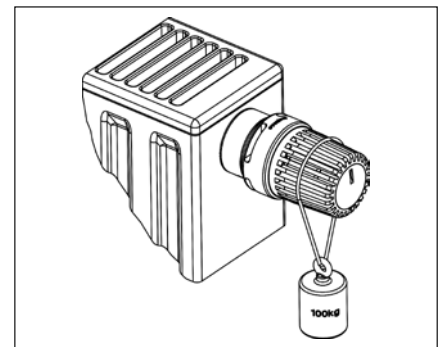
Awards:



universal design award



Design Award of the Federal Republic of Germany Nominated 2012



System illustration

**3** Anti-theft ring for "Uni XH", "Uni XHM", "Uni LH", "Uni LHZ", "Uni SH", "Uni L", "Uni LA" and "vindo TH", white (RAL 9016)

**4** Thermostat "Uni LHZ", connection thread M 30 x 1.5, for a timed room temperature control via an integrated electrically heated liquid sensor. Operation is identical with that of a standard thermostat.

If the thermostat is energized, it switches to temperature setback. The thermostat "Uni LHZ" can be activated via the control unit "DynaTemp" via LAN networks and internet.

The thermostat is also available with remote control ("Uni FHZ").

**5** Angle pattern adapter, white (RAL 9016), both ports with connection thread M 30 x 1.5 or both ports with squeeze connection.

**6** Thermostatic radiator valve "Series AV 9" and radiator lockshield valve "Combi 3" with nickel plated brass press connection.

For the direct connection of copper pipes according to DIN EN 1057/DVGW GW 392, stainless steel pipes according to DIN EN 10088/DVGW GW 541 and thin-walled C-steel pipe according to DIN EN 10305. Pressing must be carried out to tighten the connection.

### Threaded connection:



At radiators with integrated distributor or



1 "Uni LH", item no. 1011465, (M 30 x .15) suitable for Oventrop, Heimeier and MNG



2 "Uni SH", item no. 1012065, (M 30 x 1.5) suitable for Oventrop, Heimeier and MNG



3 "Uni XH", item no. 1011365, (M 30 x 1.5) suitable for Oventrop, Heimeier and MNG



4 "Uni LA", item no. 1613401, (M 28 x 1.5) suitable for Herz



5 "Uni LI", item no. 1616200, (M 32 x 1.0) suitable for Ista



6 "Uni LK", item no. 1613501, (M 28 x 1.0) suitable for Kosmia



7 "Uni LM", item no. 1616100, (M 38 x 1.5) suitable for Meges or "Uni LO", item no. 1616500 (M 38 x 1.5) suitable for Oreg/Ondal



8 "Uni LR", item no. 1616301, (M 33 x 2.0) suitable for Rossweiner



conventional radiators (illustr. Oventrop M 30 x 1.5)

### Squeeze connection:



At radiators with integrated distributor or



9 "Uni LD", item no. 1011475, (squeeze connection) suitable for Danfoss, series RA



10 "Uni XD", item no. 1011375, (squeeze connection) suitable for Danfoss, series RA



11 "Uni LDV", item no. 1616575, (squeeze connection) suitable for Danfoss, series RAV



12 "Uni LDVL", item no. 1616675, (squeeze connection) suitable for Danfoss, series RAVL



13 "Uni LV", item no. 1616001, (squeeze connection) suitable for Vaillant



conventional radiators (illustr. Danfoss, series RA)

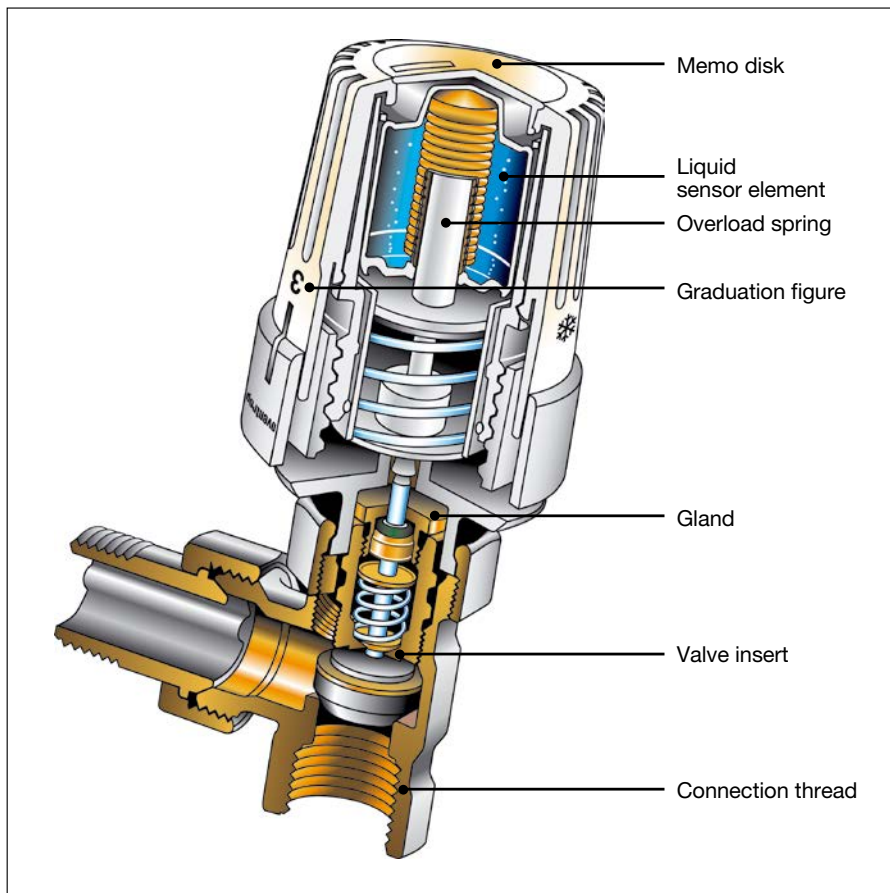
### Time to change

The extensive range of thermostats can also be used for the conversion and modernisation of radiators with integrated distributor or conventional radiators with threaded or squeeze connection.

The opposite summary shows the Oventrop thermostats for threaded connection (illustr. 1-8) or squeeze connection (illustr. 9-13).

Your benefit:

- no adapter required
- design oriented thermostats with liquid sensor
- excellent regulation behaviour complying with the German Energy Saving Directive
- maintenance-free thermostats
- reduced dimensions
- simple installation



### Function and construction:

The sensor element of the thermostats "Uni LH", "Uni LD", "Uni XH", "Uni XD", "Uni SH", "Uni CH", "pinox" and "vindo" consists of a liquid filled metal capsule with an immersed bellow 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 bellow. Thus the valve is closed and opened by the push rod.

### Series:

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 ADV 6"	= grey-green
"Series ADV 9"	= grey-green (3 frontal lugs)
"Series AF"	= red
"Series AV 9/ CV 9/ E"	= white (3 frontal lugs)
"Series AZ H"	= orange
"Series AZ V"	= green
"Series RF"	= blue
"Series RFV 9"	= light green (3 frontal lugs)

All valves (except for "Series AZ H") have identical bodies. The valve inserts are interchangeable.

**1 "Series AV 9" with presetting**  
The Oventrop valves of the "Series AV 9" 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 9" are used in two pipe heating systems with normal temperature difference.

"Series RVF 9" (not illustrated)  
The Oventrop valves of the "Series RVF 9" correspond to those of the "Series AV 9". They do, however, have reduced dimensions.

**2 "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 H/V" (not illustrated)  
The Oventrop valves of the "Series AZ H/V" 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.

**3 "Series AF" with fine presetting**  
The Oventrop valves of the "Series AF" 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

**4 "Series ADV 9" with presetting**  
The Oventrop valves of the "Series ADV 9" 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 destroyed, 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.



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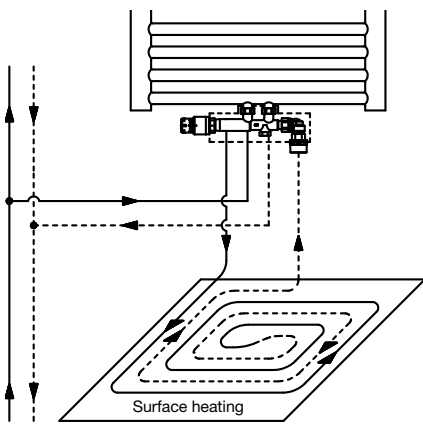
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The connection fittings “Multiblock” are a practical combination of a thermostatic radiator valve and a connection fitting for use on radiators with supply and return pipe connection (“Multiblock T/TU/TFU”) or for simultaneous connection of radiators for surface temperature balance (“Multiblock T-RTL”). Installation can be carried out without taking the direction of flow into account (only applies to “Multiblock T/TU/TFU”), it is bi-directional. The straight pattern model of the “Multiblock T/TU/TFU” allows for a universal installation of the connection fitting, i.e. the thermostat can be mounted on the right or left hand side.

The fittings are made of nickel plated brass and the connections to the radiator are soft sealed. The distance between pipe centres is 50 mm.

Stylish design covers which are available as accessories, create a smart optical integration with modern radiators and towel radiators.

Models:

- “Multiblock T/TU”
- “Multiblock TFU” pivoting supply and return pipe connection
- “Multiblock T-RTL” in combination with return temperature limiter and surface temperature balance
- for the connection to radiators with G 3/4“ male thread according to DIN EN 16313 (cone “Euro”) or Rp 1/2“ female thread

Advantages of the “Multiblock”:

- Connection to any standard pipe material
- Can be used as thermostatic valve with presetting, for isolation, draining and filling
- Free choice of connection to supply or return pipe
- For two pipe operation (item no. 1184013/14/83/84)
- For one or two pipe operation (item no. 1184023/24/33/34/25/35)
- High safety due to soft sealing connections to the radiator
- Stylish design covers in white, chrome plated, anthracite or stainless steel finish

Awards “Uni SH” with “Multiblock T” in stainless steel finish:



reddot design award  
Design Centre  
North Rhine Westphalia



Design Award of the  
Federal Republic of Germany  
Nominated 2015

1 Angle pattern, left hand side connection of the thermostat (e.g. “Uni SH”) with design cover in stainless steel finish

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

3 Connection fittings “Multiblock T/TU”  
- two pipe fitting  
- one/two pipe fitting (convertible)

4 System illustration “Multiblock T-RTL”

5 “Multiblock T-RTL” with thermostat “Uni SH” and white design cover



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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 the radiator return pipe. They allow for the removal of the radiators without the necessity to drain the system.

**1, 2** Radiator lockshield valves “Combi” for radiators with conventional valve connection:

- “Combi 4”  
for presetting with memory lock, 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

**3** Service tool for radiator lockshield valves

**4** The radiator connection module “Multimodul” allows for 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.

**5** “Bypass-Combi Duo” two pipe system or “Bypass-Combi Uno” one pipe system (not illustrated)

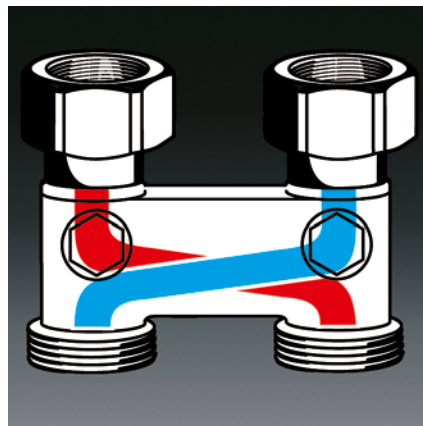
**6** One pipe radiator valve “Tauch-Rohr” with horizontal and vertical insertion tube, with constant bypass and shut off



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**1** The connection programme “Multiflex” allows for a safe connection of radiators with integrated distributor to plastic, copper and 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, fill and drain
- use in one and two pipe systems (ZBU)
- tolerances in the connection dimensions of the supply and return nipples are technically perfectly balanced, i.e. 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 at a proportional deviation of 2 K

**2** Installation example

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

**4** Compression fittings “Ofix K” for plastic pipes (outer pipe diameter 12-20 mm) with G 3/4 thread for the direct connection to the “Multiflex” fitting or distributors with G 3/4 male thread, DIN EN 16313 (cone “Euro”).

**5** Compression fittings “Ofix CEP” with metal to metal seal for copper pipes (outer diameter 10-18 mm) with G 3/4 thread for the direct connection to the “Multiflex” fitting or distributors with G 3/4 male thread, DIN EN 16313 (cone “Euro”). When using soft pipes or pipes with a wall thickness ≤ 1mm, reinforcing sleeves have to be used.

**6** Compression fittings “Ofix CEP” – “Snap & Seal” for copper, precision steel and stainless steel pipes with G 3/4 thread, with double function, soft or metal to metal sealing for different pipe dimensions for the direct connection to the “Multiflex” fitting or distributors with G 3/4 male thread, DIN EN 16313 (cone “Euro”). 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 G 3/4 thread for the direct connection to the “Multiflex” fitting or distributors with G 3/4 male thread, DIN EN 16313 (cone “Euro”).



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The automation 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 and chilled ceiling systems as well as induction air systems.

**1** "R-Tronic RT B" and "Aktor MH CON B" Electronic wireless room thermostat with battery operated actuator for a timed room temperature control and optionally with humidity and CO<sub>2</sub> display ("R-Tronic RTF B", "R-Tronic RTFC K").

**2** "DynaTemp" Network-based control systems for heating, cooling and potable water distribution. Individual functional packages for the different applications (heating, air-conditioning and sanitary) in centralised building control systems are programmed in the control unit "DynaTemp".

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

**4** Electromotive actuator (230 V) with steady control as three point actuator.

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

**6** Electrothermal actuators with two point control. Due to their construction, the actuators are secured against overvoltage. According to requirement 230 V or 24 V. Electrothermal actuators 24 V with steady control as proportional actuator (0-10 V) (illustr. right hand side).

**7** Electromotive actuators system "EIB" and "LON"

The power absorption of the actuators is extremely low so that a separate power supply is unnecessary. They are additionally equipped with one or two binary entries to which a window contact may, for instance, be connected.

Models:

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

Product data banks for both systems are available free of charge.

Further information can be found in the Oventrop catalogue "Products", in the technical data sheets as well as on the internet, product ranges 1 and 8.

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