

1.a Thermostats

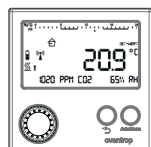
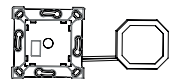
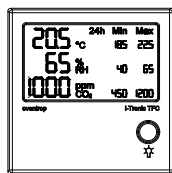
Content	1.07
Thermostat "Uni XH" (M 30 x 1.5)	1.08
Thermostat "Uni XHM" (M 30 x 1.5)	1.08
Thermostat "Uni XHT" (M 30 x 1.5)	1.08
Thermostat "Uni LH" (M 30 x 1.5)	1.09
Thermostat "Uni LGH" (M 30 x 1.5)	1.09
Thermostat "Uni LHB" (M 30 x 1.5)	1.10
Thermostat "Uni SH" (M 30 x 1.5)	1.10
Thermostat "vinox H" (M 30 x 1.5)	1.11
Thermostat "vindo TH" (M 30 x 1.5)	1.11
Thermostat "Uni CH" (M 30 x 1.5)	1.11
Thermostat with remote control "Uni FH" (M 30 x 1.5)	1.12
Thermostat "Uni XD" (squeeze connection)	1.13
Thermostat "Uni LD" (squeeze connection)	1.13
Thermostat "vinox D" (squeeze connection)	1.14
Thermostat "vindo TD" (squeeze connection)	1.14
Thermostat "vindo RTD"	1.14
Thermostat with remote control "Uni FD" (squeeze connection)	1.15
Thermostat "Uni LDV" (squeeze connection)	1.15
Thermostat "Uni LDVL" (squeeze connection)	1.15
Thermostat "Uni L" M 30 x 1.0	1.16
Special thermostats	1.16
Accessories for thermostats	1.17
Manual heads	1.18

1.b Room thermostats

Content	1.19
Room thermostats (heating)	1.20
Room thermostats (heating/cooling)	1.21
Room thermostats (heating/cooling) with fan drive	1.22

1.c Actuators

Content	1.23
Combination possibilities of valves and actuators	1.24
"Aktor T" Electrothermal actuators	1.26
"Aktor M" Electromotive actuators	1.28
"Aktor M ST EIB" Electromotive actuators	1.29
"Aktor M ST LON@" Electromotive actuators	1.29
"Aktor MH CON B" (ENOCEAN) Wireless actuator	1.29

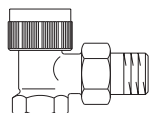


1.d "i-Tronic" Climate display device

Content	1.31
"i-Tronic TFC"	1.32

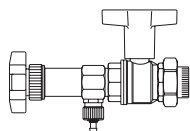
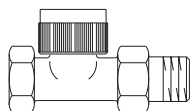
1.e "R-Tronic" Climate display device/control "Synet CR" Gateway and hydronic balancing

Content	1.33
"R-Tronic RT B" Wireless thermostat	1.34
"R-Tronic RTF B" Wireless thermostat with humidity display	1.35
"R-Tronic RTFC K" Wireless thermostat with humidity and CO ₂ display	1.35
"Aktor MH CON B" Wireless actuator (M 30 x 1.5)	1.36
"Aktor MD CON B" Wireless actuator (squeeze connection)	1.36
Accessories	1.37
"FK-C F" Wireless window contact	1.37
"RP-S F" Wireless repeater	1.37
"R-Con 2P" Wireless receiver (1 channel)	1.37
Automatic presetting with "Synet CR" and automatic hydronic balancing with "Q-Tech"	1.38
"Synet CR" Gateway	1.38



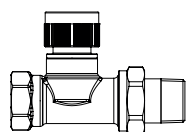
1.f Valves with "Q-Tech" for automatic hydronic balancing

Content	1.41
Thermostatic valves "AQ"	1.42
Thermostatic valves "RFQ"	1.42
Thermostatic valves "AQF"	1.43
Exclusive radiator valves "EQ"	1.44
"Multiblock TQ" Two pipe fitting	1.45
"Multiblock TQ-RTL"	1.46
"Demo-Bloc"	1.47



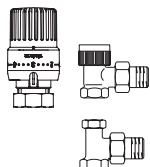
1.g Valves for manual hydronic balancing

Content	1.49
Thermostatic valves "AV 9"	1.50
Thermostatic valves "AV 9" (press connection)	1.50
Thermostatic valves "AV 9" (male thread)	1.51
Thermostatic valves "CV 9"	1.52
Thermostatic valves "AF"	1.53
Accessories	1.55
Thermostatic valves "ADV 9"	1.56
Thermostatic valves "RFV 9"	1.57
"Uniset" Radiator valve sets	1.59
Radiator lockshield valve "Combi 3G"	1.59
"Demo-Bloc"	1.60



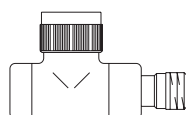
1.1h Valves for large flow rates

Content	1.61
Thermostatic valves "A"	1.62
Thermostatic valves "A" (male thread)	1.63
Thermostatic valves "AZ V"	1.64
Thermostatic valves "AZ H"	1.64
Thermostatic valves "RF"	1.65



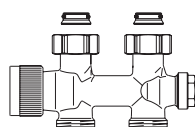
1.1i Thermostatic valve sets

Content	1.67
Thermostatic valve sets with thermostat "vindo TH"	1.68
Thermostatic valve sets with thermostat "Uni LH"	1.69
Connection sets "Multiflex F" with thermostat "vindo TH"	1.69



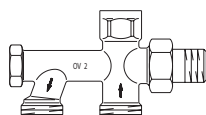
1.1j Exclusive radiator valves

Content	1.71
Thermostatic valves "E"	1.72
Design handgrips	1.73
Radiator lockshield valves "Combi E"	1.74
Sets of compression fittings (1-fold)	1.74
T-pieces	1.74
Wall connection sets (1-fold)	1.74
Thermostatic valve sets "E"	1.75



1.1k "Multiblock T/ T-RTL" Fittings for radiators with centre connection

Content	1.77
"Multiblock T" Two pipe fitting	1.78
"Multiblock TU" One/two pipe fitting convertible	1.78
Design covers	1.79
Connection sets "Multiblock T"/"Uni SH" for towel radiators (radiators with Rp 1/2 female thread)	1.80
Connection sets "Multiblock T"/"pinox H" for towel radiators (radiators with Rp 1/2 female thread)	1.80
"Multiblock TFU" One/two pipe fitting convertible	1.81
Connection sets "Multiblock TFU"/"Uni SH" for towel radiators (radiators with Rp 1/2 female thread)	1.81
"Multiblock T-RTL"	1.82
Connection sets "Multiblock T-RTL"/"Uni SH"	1.83
Connection sets "Multiblock T-RTL"/"pinox H"	1.83



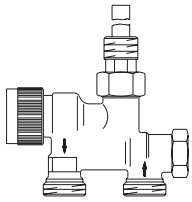
1.1l Valve sets, components and accessories for for two pipe heating systems

Content	1.85
"Bypass-Combi Duo" two pipe with shut off	1.86
"Duo" Two pipe connection piece with shut off	1.86
Connection pieces	1.86
"Duo" Two pipe connection piece without shut off	1.87
Two pipe radiator valve with insertion tube with shut off	1.87
Valve for "TKM" system	1.87

 Angle pattern fitting 1.87

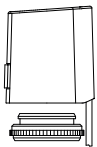
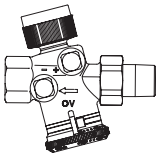
1.m Valve sets, components and accessories for one pipe heating systems

Content	1.89
"Bypass-Combi Uno" one pipe	1.90
"Uno" One pipe connection piece	1.90
"Uno" One pipe connection piece M 24 x 1.5	1.91
"Ofix" Compression fittings M 24 x 1.5	1.91
"Cofit S" Compression fittings M 24 x 1.5	1.91
Plastic rosette cover	1.91
Radiator valve with insertion tube with fixed bypass and shut off	1.92
Valve for "TKM" system	1.92
Angle pattern fitting	1.92
Three-way conversion valves	1.93
Accessories	1.93
Isolation fittings	1.94
S-connection fitting, flat sealing	1.95
Tailpipe sets	1.95



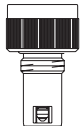
1.n "Unofix" Refurbishment of one pipe heating systems

Content	1.97
System illustrations	1.98
"Cocon QTZ" Pressure independent control valves PN 16	1.99
"Aktor T" Electrothermal actuators	1.99
Accessories	1.100



1.o Valve inserts for radiators with integrated distributor

Content	1.101
Valves inserts with "Q-Tech"	1.102
Valve inserts (M 30 x 1.5)	1.104
Valve inserts (squeeze connection)	1.106



1.p Valve inserts

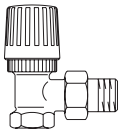
Content	1.107
Valve inserts for valves with connection thread M 30 x 1.5	1.108
Valve inserts for valves with connection thread M 30 x 1.0 (for valves manufactured up to 1998)	1.110



1.q Return temperature limiters

Content	1.111
Return temperature limiter valves for thermostat "Uni RTLH"	1.112
Thermostat "Uni RTLH"	1.112
Thermostat "Uni RTL"	1.112
Valve inserts	1.112
Extension	1.112
Gland nut	1.112





Return temperature limiter sets

1.113

1.r Manual radiator valves

Content

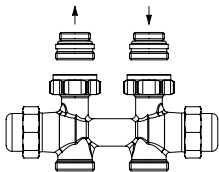
1.115

Manual radiator valves "HRV"

1.116

Manual radiator valves "HR"

1.116



1.s "Q-Tech" Fittings for automatic hydronic balancing

Content

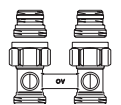
1.117

"Multiflex FQ" Fittings for G 1/2 female thread

1.118

"Multiflex FQ" Fittings for G 3/4 male thread

1.118



1.t Fittings for radiators with integrated distributor

Content

1.119

"Multiflex F" Fittings for G 1/2 female thread

1.120

"Multiflex F" Fittings for G 3/4 male thread

1.121

"Multiflex V" Fittings for G 1/2 female thread

1.122

"Multiflex V" Fittings for G 3/4 male thread

1.123

Radiator connection

1.124

Inversion fittings

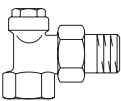
1.124

Connection fittings

1.125

Plastic rosette cover, white

1.125



1.u Lockshield valves for conventional radiators

Content

1.127

"Combi 4"

1.128

"Combi C"

1.128

"Combi 3"

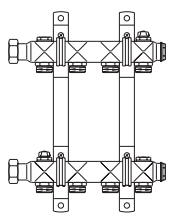
1.129

"Combi 2"

1.130

"Combi LR"

1.130



1.v Distributors/collectors

Content

1.131

"Multidis SH" Stainless steel distributor/collector

1.132

Ball valves

1.132

Flush-mounted cabinets

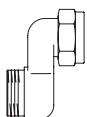
1.133

Ring spanner

1.133

Floor distributor/collector

1.133



1.w Conversion fittings/Accessories for radiators

Content

1.135

Conversion fittings

1.136

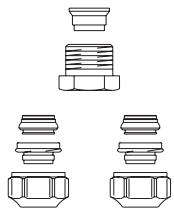
Strainer inserts

1.137



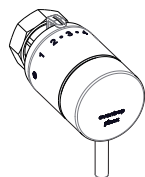
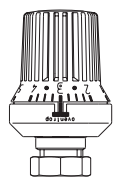
Accessories for radiators

1.138



1.x Connection system

Content	1.139
"Ofix" Compression fittings	1.140
"Ofix" Compression fittings (2-fold)	1.142
"Cofit S" Compression fittings	1.143
Summary	1.144
Installation examples	1.145
"Ofix" for the connection of standard pipes to Oventrop valves and controls	1.146
Brass reinforcing sleeves	1.143



1.a Thermostats

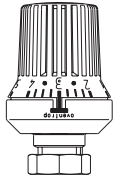
Content

Thermostat "Uni XH" (M 30 x 1.5)	1.08
Thermostat "Uni XHM" (M 30 x 1.5)	1.08
Thermostat "Uni XHT" (M 30 x 1.5)	1.08
Thermostat "Uni LH" (M 30 x 1.5)	1.09
Thermostat "Uni LGH" (M 30 x 1.5)	1.09
Thermostat "Uni LHB" (M 30 x 1.5)	1.10
Thermostat "Uni SH" (M 30 x 1.5)	1.10
Thermostat "vinox H" (M 30 x 1.5)	1.11
Thermostat "vindo TH" (M 30 x 1.5)	1.11
Thermostat "Uni CH" (M 30 x 1.5)	1.11
Thermostat with remote control "Uni FH" (M 30 x 1.5)	1.12
Thermostat "Uni XD" (squeeze connection)	1.13
Thermostat "Uni LD" (squeeze connection)	1.13
Thermostat "vinox D" (squeeze connection)	1.14
Thermostat "vindo TD" (squeeze connection)	1.14
Thermostat "vindo RTD"	1.14
Thermostat with remote control "Uni FD" (squeeze connection)	1.15
Thermostat "Uni LDV" (squeeze connection)	1.15
Thermostat "Uni LDVL" (squeeze connection)	1.15
Thermostat "Uni L" M 30 x 1.0	1.16
Special thermostats	1.16
Accessories for thermostats	1.17
Manual heads	1.18

Article	Control range	Packing unit	Article-No.	Hint
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Thermostat "Uni XH" (M 30 x 1.5)
with liquid sensor
marking "Uni XH" on lower side

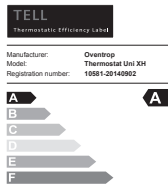
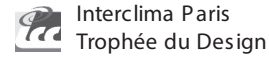
Temperature setting may be limited or locked by using the limiting elements.
With setting device for visually handicapped persons.
Marking of a set value by using the memo disk.
Max. heating water temperature: 120 °C



white	7-28 °C	(10)	1011365
white	7-28 °C	(10)	1011364

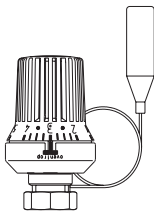
with '0' setting
without '0' setting

Awards:



Information: www.tell-online.eu

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European Valve Manufacturers Association

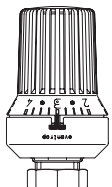


white,
with remote sensor

capillary 2 m long	7-28 °C		1011565
capillary 5 m long	7-28 °C	(10)	1011566
capillary 2 m long	7-28 °C	(10)	1011582

with '0' setting

without '0' setting

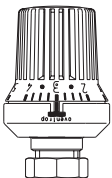


Thermostat "Uni XHM" (M 30 x 1.5)
with liquid sensor
marking "Uni XHM" on lower side
with higher specific piston stroke

white	7-28 °C	(10)	1011360
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In combination with valves, the specific piston stroke and thus the k_v -value is higher compared to the other Oventrop valves. Especially suitable for the valve design with 1K P-deviation.

with '0' setting



Thermostat "Uni XHT" (M 30 x 1.5)
with liquid sensor
marking "Uni XHT" on lower side

transparent	7-28 °C	(10)	1011300
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Max. heating water temperature: 90 °C

with '0' setting

For further information see
"Technical information":



Article	Control range	Packing unit	Article-No.	Hint
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Thermostat "Uni LH" (M 30 x 1.5)
 with liquid sensor
 marking "Uni LH" on lower side

Temperature setting may be limited or locked by using the concealed limiting elements. With setting device for visually handicapped persons. Marking of a set value by using the memo disk.
 Max. heating water temperature: 120 °C

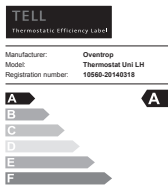


white	7-28 °C	(10)	1011465	
white	7-28 °C	(25)	1011466°	
without memo disk, please inquire about customised memo disk				
white	7-28 °C	(10)	1011464	
white	8-38 °C	(10)	1011488	

with '0' setting

without '0' setting

For indoor swimming pools and health spa.



Information: www.tell-online.eu

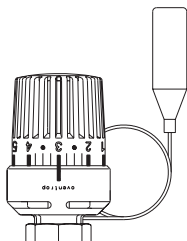
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 European Valve Manufacturers Association

bd Busse Design Ulm
 award Longlife Design Award



signal grey with collar nut cover (RAL 7004)	7-28 °C	(25)	1011461	
anthracite with collar nut cover (RAL 7016)	7-28 °C	(25)	1011467	
gold plated with collar nut cover	7-28 °C	(25)	1011468	
chrome plated with collar nut cover	7-28 °C	(25)	1011469	

with '0' setting



white, with remote sensor				
capillary 2 m long	7-28 °C		1011665	
capillary 5 m long	7-28 °C	(75)	1011666	
capillary 10 m long	7-28 °C	(75)	1011667	
capillary 2 m long	7-28 °C	(75)	1011682	

with '0' setting

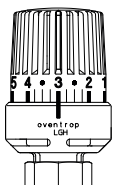
without '0' setting

For indoor swimming pools and health spa.

capillary 2 m long	8-38 °C	(10)	1011688	
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without '0' setting

For further information see "Technical information":



Thermostat "Uni LGH" (M 30 x 1.5)
 with liquid sensor

white		(100)	1018561	
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Thermostat accessories: Pages 1.17, 10.10

Article	Control range	Packing unit	Article-No.	Hint
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Thermostat "Uni LHB" (M 30 x 1.5)
with liquid sensor
marking "Uni LHB" underneath
the memo disk



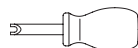
white 7-28 °C (10) **1011410**

Lockshield configuration, lockable, with integrated anti-theft device and increased flexional strength.
Max. heating water temperature: 120 °C
Award:



universal design award

without '0' setting



Setting key
for thermostat "Uni LHB" **1011497**

For nominal temperature setting at the thermostat.

Thermostat "Uni SH" (M 30 x 1.5)
with liquid sensor
marking "Uni SH" on lower side



white/chrome plated 7-28 °C (10) **1012065**
white 7-28 °C (10) **1012066**
chrome plated 7-28 °C (10) **1012069**
stainless steel finish 7-28 °C (10) **1012085**

With setting device for visually handicapped persons.
Max. heating water temperature: 120 °C

with '0' setting



"SH-Cap" Design covers

anthracite (RAL 7016) (25) **1012080**
chrome plated (25) **1012081**
white (25) **1012082**

Awards:



International Design Award
Baden-Württemberg

DESIGN PLUS ISH Frankfurt



Design Award of the
Federal Republic of Germany
Nominated



Good Design Award Japan



universal design award



The Chicago Athenaeum:
Museum of Architecture and Design
GOOD DESIGN Award

"Uni SH" in combination with
"Multiblock T" in stainless steel finish:

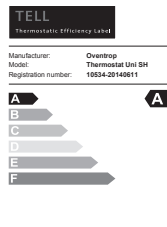


Design Centre Essen
reddot design award



Design Award of the
Federal Republic of Germany
Nominated

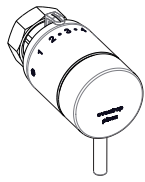
For further information see
"Technical information".



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A Label of United Valves
European Valve Manufacturers Association

Article	Control range	Packing unit	Article-No.	Hint
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Thermostat "pinox H" (M 30 x 1.5)
 with liquid sensor
 marking "pinox H" on lower side

chrome plated	(12)	1012165
white	(12)	1012166

Single-lever thermostat.
 This thermostat can be fitted to all thermostatic radiator valves with connection thread M 30 x 1.5. Design similar to that of single-lever taps.
 Max. heating water temperature: 120 °C

without '0' setting

The thermostat "pinox H" has features which are protected by patent.

Awards:

Innovation award
 Architecture & Technology

DESIGN **PLUS** ISH Frankfurt 2013

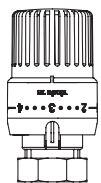
ICONIC AWARDS 2013

German Design Award
 SPECIAL MENTION 2014

Interclima Paris
 Trophée du Design

Industrial Design Forum Hanover
 Award iF

ICONIC AWARDS 2016
 INTERIOR INNOVATION



Thermostat "vindo TH" (M 30 x 1.5)
 with liquid sensor

white	7-28 °C	(10)	1013066
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Temperature setting may be limited or locked by using the limiting elements. With setting device for visually handicapped persons.
 Max. heating water temperature: 120 °C

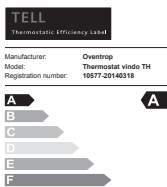
with '0' setting

The thermostat "vindo TH" has features which are protected by patent.

Awards:

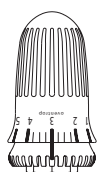
German Designer Club
 Good Design 08

Design Award of the
 Federal Republic of Germany
 Nominated



Information: www.tell-online.eu

A Label of Efficient Valves
 European Valve Manufacturers Association



Thermostat "Uni CH" (M 30 x 1.5)
 Design *Colan*
 with liquid sensor
 marking "Uni CH" on lower side

white	7-28 °C	(10)	1011265
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The thermostat "Uni CH" features a moveable collar not cover.
 Max. heating water temperature: 120 °C

without '0' setting

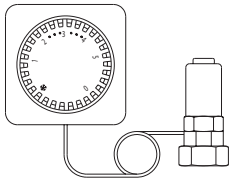
Article	Control range	Article-No.	Hint
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Thermostat with remote control "Uni FH" (M 30 x 1.5)

Thermostats with remote control and with remote transmission are especially suitable for trench heaters, encased radiators and surface heating systems.

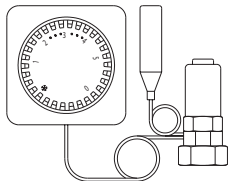
Max. heating water temperature: 120 °C

with '0' setting

**Thermostat with remote control "Uni FH" white**

capillary 2 m long	7-28 °C	1012295
capillary 5 m long	7-28 °C	1012296
capillary 10 m long	7-28 °C	1012297

white,
with additional remote sensor



capillary 2 m long	7-28 °C	1012395
capillary 5 m long	7-28 °C	1012396

with '0' setting

For further information see
"Technical information":

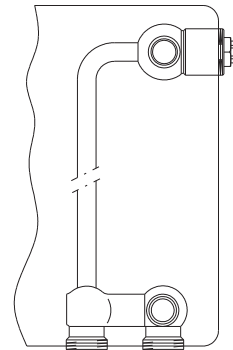


The thermostats "Uni XH", "Uni XHM", "Uni XHT", "Uni LH", "Uni LHB", "Uni LHZ", "Uni FH", "Uni SH", "Uni CH", "vindo TH" and "pinox H" can be fitted without adapter to the radiators with integrated distributor of the following manufacturers:

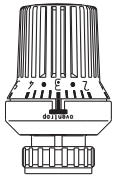
- ACOVA	- Delta	- Kampmann
- Alarko	- Demrad	- Kermi
- Arbonia	- DiaNorm	- Korado
- Baufa	- Dia-therm	- Purmo
- Baykan	- Dunafer	- Radson
- boki	- DURA	- Rettig
- Bemm	- Emco	- Runtal
- Borer	- Heatline	- Starpan
- Brema	- Henrad	- Superia
- Brugman	- HM-Heizkörper	- Termoteknik
- Caradon-Stelrad	- Hoval	- US-Steel
- Celikpan	- IMAS	- Vasco
- Cöskünöz	- Jaga	- VEHA
- Concept	- Jugotherm	- Zehnder
- DEF	- Kalor	- Zenith

(Subject to change without notice)

Example of an integrated distributor for two pipe heating systems. G 3/4 male thread, distance between pipe centres 50 mm.



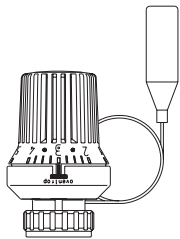
Article	Control range	Packing unit	Article-No.	Hint
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Thermostat "Uni XD" (squeeze connection)
 with liquid sensor
 marking "Uni XD" on lower side

These thermostats can be fitted without adapter to the integrated distributors and thermostatic radiator valves with squeeze connection of the company Danfoss, series RA. Squeeze connection with collar nut:
 – easy installation
 – close connection
 Temperature setting may be limited or locked by using the limiting elements.
 With setting device for visually handicapped persons.
 Marking of a set value by using the memo disk.
 Max. heating water temperature: 120 °C
with '0' setting
without '0' setting

white	7-28 °C	(10)	1011375	
white	7-28 °C	(10)	1011374	



white,
 with remote sensor

capillary 2 m long	7-28 °C	(10)	1011575	
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with '0' setting

Thermostat "Uni LD" (squeeze connection)
 with liquid sensor
 marking "Uni LD" on lower side

Temperature setting may be limited or locked by using the concealed limiting elements.
 With setting device for visually handicapped persons.
 Marking of a set value by using the memo disk.
 Max. heating water temperature: 120 °C



white	7-28 °C	(10)	1011472	
white	7-28 °C	(10)	1011475	
white	7-28 °C	(25)	1011476°	

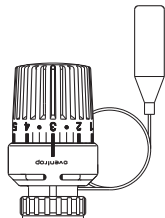
without memo disk,
 please inquire about customised memo disk

without '0' setting
with '0' setting
with '0' setting



signal grey with collar nut cover (RAL 7004)	7-28 °C	(25)	1011470	
anthracite with collar nut cover		(25)	1011478	
chrome plated with collar nut cover		(25)	1011479	
gold plated with collar nut cover		(25)	1011480	

with '0' setting



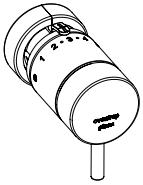




white,
 with remote sensor

capillary 2 m long	7-28 °C	(75)	1011685	
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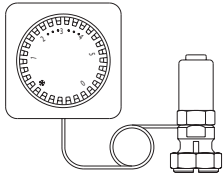
with '0' setting

For further information see "Technical information":



Article	Control range	Packing unit	Article-No.	Hint
	Thermostat "pinox D" (squeeze connection) with liquid sensor marking "pinox D" on lower side			Single-lever thermostat. The thermostat can be fitted without adapter to the integrated distributors and thermostatic radiator valves of the company Danfoss, series RA. Design similar to that of single-lever taps. Max. heating water temperature: 120 °C <u>without '0' setting</u> The thermostat "pinox D" has features which are protected by patent.
	chrome plated		(12) 1012175	
white		(12) 1012176*		
	Thermostat "vindo TD" (squeeze connection) with liquid sensor			The thermostat can be fitted without adapter to the integrated distributors and thermostatic radiator valves of the company Danfoss, series RA. Temperature setting may be limited or locked by using the limiting elements. With setting device for visually handicapped persons. Max. heating water temperature: 120 °C <u>with '0' setting</u> The thermostat "vindo TD" has features which are protected by patent. Awards:  German Designer Club Good Design 08  Design Award of the Federal Republic of Germany Nominated
	white	7-28 °C	(10) 1013076	
	Thermostat "vindo RTD" with liquid sensor for RTD valves of the company Danfoss			The thermostat can be fitted without adapter to the thermostatic radiator valves with connection thread M 30 x 1.5 of the company Danfoss, series RTD. <u>Cannot</u> be used with Oventrop valves with connection thread M 30 x 1.5. Max. heating water temperature: 120 °C <u>With '0' setting</u> The thermostat "vindo RTD" has features which are protected by patent.
	white		(10) 1613066	

Article	Control range	Packing unit	Article-No.	Hint
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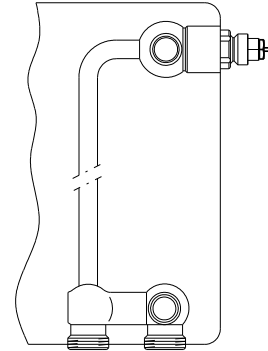
Thermostat with remote control "Uni FD" (squeeze connection)				Max. heating water temperature: 120 °C
white				
capillary 2 m long	7-28 °C		1012275	<u>with '0' setting</u>

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

- Agis
- Arbonia
- Brötje
- Brugman
- Buderus
- De 'Longhi
- Hudevad
- Ribe/Rio
- Thor
- Vasco
- Vogel & Noot

(Subject to change without notice)

Example of an integrated distributor for one and two pipe heating systems. G 3/4 male thread, distance between pipe centres 50 mm.



Fittings for the connection of these radiators to the pipework: pages 1.120-1.124 and 1.128-1.130.

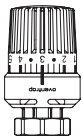


Thermostat "Uni LDV" (squeeze connection)			
with liquid sensor			
white	7-28 °C	(10)	1616575

These thermostats can be fitted without adapter to the thermostatic radiator valves with squeeze connection of the company Danfoss, series RAV (thermostat connection Ø 34 mm). Temperature setting may be limited or locked by using the concealed limiting elements. With setting device for visually handicapped people. Marking of a set value by using the memo disk.

Max. heating water temperature: 120 °C

with '0' setting






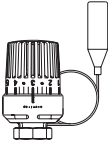








Thermostat "Uni LDVL" (squeeze connection)			
with liquid sensor			
white	7-28 °C	(10)	1616675

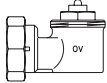
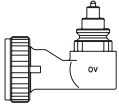


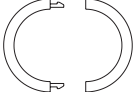

These thermostats can be fitted without adapter to the thermostatic radiator valves with squeeze connection of the company Danfoss, series RAVL (thermostat connection Ø 26 mm).

Temperature setting may be limited or locked by using the concealed limiting elements. With setting device for visually handicapped people. Marking of a set value by using the memo disk.

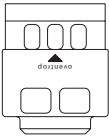



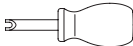
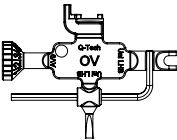

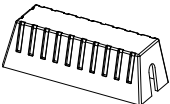


Max. heating water temperature: 120 °C

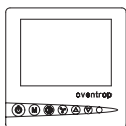
with '0' setting

Article	Control range	Packing unit	Article-No.	Hint
Thermostat "Uni L" M 30 x 1.0				
with liquid sensor marking "Uni L" on lower side				
	white	7-28 °C	(10) 1011401	For Oventrop valves manufactured until 1998. Award: Thermostat "Uni L"  Busse Design Ulm  Longlife Design Award
	white, with remote sensor capillary 2 m long	7-28 °C	(75) 1011651	<u>with '0' setting</u>
Special thermostats with liquid sensor				
Suitable for Kosmia thermostatic radiator valve bodies.				
Thermostat "Uni LK" (M 28 x 1.0)				
	white	7-28 °C	(10) 1613501	<u>with '0' setting</u>
Thermostat "Uni LA" (M 28 x 1.5)				
	white	7-28 °C 7-28 °C	(10) 1613401 1613465	Suitable for Herz thermostatic radiator valve bodies. <u>with '0' setting</u> without '0' setting
Thermostat "Uni LI" (M 32 x 1.0)				
	white	7-28 °C	(10) 1616200	Suitable for Ista thermostatic radiator valve bodies manufactured since 1985. <u>with '0' setting</u>
Thermostat "Uni LR" (M 33 x 2.0)				
	white	7-28 °C	(10) 1616301	Suitable for Rosswein thermostatic radiator valve bodies. <u>with '0' setting</u>
Thermostat "Uni LM" (M 38 x 1.5)				
	white	7-28 °C	(10) 1616100	Suitable for Meges thermostatic radiator valve bodies. <u>with '0' setting</u>
Thermostat "Uni LO" (M 38 x 1.5)				
	white	7-28 °C	(10) 1616500	Suitable for Oreg (Onda) thermostatic radiator valve bodies. <u>with '0' setting</u>
Thermostat "Uni LV" (squeeze connection)				
	white	7-28 °C	(10) 1616001	Suitable for Vaillant thermostatic radiator valve bodies manufactured since 1981. <u>with '0' setting</u>
Thermostat only for "maxi/mini" thermostatic radiator valves manufactured up to 1974 (M 40 x 1.5)				
	anthracite/white		(10) 1015500	The valves of this series are no longer produced.

Article	Packing unit	Article-No.	Hint
Accessories for thermostats			
	Angle pattern adapter M 30 x 1.5/ M 30 x 1.5		Connection to the valve: M 30 x 1.5 Connection to the thermostat: M 30 x 1.5
	white	(25) 1011450	
	anthracite model	(25) 1641451	
	squeeze connection/squeeze connection		Connection to the valve: squeeze connection Connection to the thermostat: squeeze connection
	white	(10) 1011452	
	Adapter, nickel plated for the conversion of connection thread		For Oventrop valves manufactured up to 1998. For Ista valves.
	M 30 x 1.0 to M 30 x 1.5	(10) 1011445	
	M 32 x 1.0 to M 30 x 1.5	(50) 1661445	
	"Uni-Clip" Graduated collar for "Uni XH", "Uni XHM" and "Uni XD"		Due to the vertical position of the figures, the set values can be easily read off in case of lateral connection of the thermostat (for thermostats with '0' setting).
	right hand model, 50 pieces	1011396	
	left hand model, 50 pieces	1011397	
	Collar nut cover Set = 5 pieces		For the collar nuts of the thermostats "Uni XH", "Uni XHM", "Uni LH", "Uni LHZ", "Uni LA", "Uni SH", "vindo TH" and "pinox H".
	anthracite	(10) 1011380	
	chrome plated	(10) 1011381	
	gold plated	(10) 1011382	
	stainless steel finish	(10) 1011383	
white	(10) 1011393		
	white		"Uni L"
set = 5 pieces	(10) 1011493		
	Anti-thrift ring for thermostats "Uni XH", "Uni XHM", "Uni LH", "Uni LHZ", "Uni SH", "Uni L", "Uni LA" and "vindo TH"		For the stabilisation and protection of the thermostatic control head from theft.
	white	(10) 1011766	
	set = 5 pieces		For further information see "Technical information":
for thermostats "Uni XD", "Uni LD" and "vindo TD"	(10) 1011775		
set = 5 pieces	(10) 1011775		



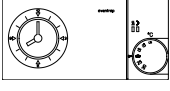

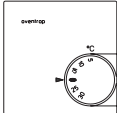


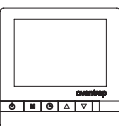
Article	Packing unit	Article-No.	Hint
			
Reinforcing cap white			The reinforcing caps are delivered with an Allen key.
for thermostats "Uni LH", "Uni LHZ" and "Uni LA"			
not lockable	(10)	1011865	
lockable	(10)	1011866	
for thermostat "Uni L"			
not lockable	(10)	1011801	
lockable	(10)	1011811	
for thermostat "Uni LD"			
not lockable	(10)	1011875	
			
Reinforcing cap made of brass			
connection thread	(10)	1189381	
M 30 x 1.5			
			
Combined cap Open/Close with Allen screw			
connection thread	(5)	1627965	
M 30 x 1.5			
			
Tool for thermostats "Uni LH", "Uni LHZ", "Uni LD", "Uni LDV", "Uni LDVL", "Uni L" and special thermostats			To release the graduation cap and clips.
bag of 5 pieces	(10)	1989100	
			
Setting key for thermostat "Uni LHB"		1011497	For nominal temperature setting at the thermostat.
			
Universal tool			For setting of the nominal temperature value at the thermostat "Uni LHB", presetting at the valve as well as releasing of the graduation cap of the thermostats "Uni LH", "Uni LHZ", "Uni LD", "Uni LDV", "Uni LDVL", "Uni L" and special thermostats.
for thermostat "Uni LHB",	(50)	1011489	
"Uni LH" and thermostatic valves "AV 9" and "AQ"			
for thermostats "Uni LHB",	(50)	1011496°	
"Uni LH" and thermostatic valves "AV 6"			With additional Allen key (2.5 mm) to secure the thermostat "Uni LHB".
			
Extensions L = 20 mm			
for thermostatic valves	(10)	1022698	For "Unibox T", "Unibox plus", "Unibox TQ" and "Unibox Q plus".
			
Cover for all remote sensors			
Set = 5 pieces	(10)	1011698	
			
Manual heads white			The manual head allows the subsequent conversion to actuators or thermostats without the necessity to drain the system.
connection thread M 30 x 1.5	(10)	1012565	
			
connection squeeze connection	(10)	1012575	



1.b Room thermostats

Content

Room thermostats (heating)	1.20
Room thermostats (heating/cooling)	1.21
Room thermostats (heating/cooling) with fan drive	1.22

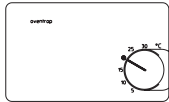
Article	Packing unit	Article-No.	Hint
Room thermostats (heating)			
Room thermostat-clock - surface mounting (heating)			
Heating two point control			
	with daily setting		
	230 V	(78)	1152551
	with weekly setting		
	230 V	(78)	1152552
	24 V		1152554
Room thermostat - surface mounting (heating)			
Heating two point control			
	230 V	(25)	1152051
	24 V	(25)	1152052
	230 V	(25)	1152055
	with concealed temperature setting		
Room thermostat - flush mounting (heating)			
Heating two point control			
	230 V	(128)	1152071
	24 V	(128)	1152072
Room thermostat - flush mounting (heating)			
with display			
Heating two point control			
	230 V	(40)	1152561
	24 V	(40)	1152562
			The electric room thermostat-clock is required for individual room temperature control of heating systems in combination with the electrothermal actuators (two point) "Aktor T 2P". Output signal pulse-width modulation. Temperature range: 5 °C up to 30 °C Heating: Use electrothermal actuators (two point) "closed with current off". Central temperature setback is carried out according to a timed programme. Limitation of the control range by using the concealed limiting elements.
			The electric thermostat is used for individual room temperature control in combination with the electrothermal actuators (two point) "Aktor T 2P". Temperature range: 5 °C up to 30 °C Heating: Use electrothermal actuators (two point) "closed with current off". As for item no. 1152051/52/55/71/72, temperature may be set back by use of an external time switch (item no. 1152551/52 for 230 V, item no. 1152554 for 24 V). Cooling: Use electrothermal actuators (two point) "open with current off". Limitation of the control range of item no. 1152051/52/71/72 by using the concealed limiting elements.
			With LCD display and adjustable timed programme. Temperature range: 5 °C up to 35 °C Operating current range (item no. 1152561): 100 up to 230 V AC Heating: Use electrothermal actuators (two point) "closed with current off" (terminal "NC") or "open with current off" (terminal "NO").

Article	Packing unit	Article-No.	Hint
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Room thermostats (heating/cooling)

Room thermostat - surface mounting (heating and cooling)

Heating 0 - 10 V control
 Cooling 0 - 10 V control



24 V

(25) **1152151**

The room thermostat is used for individual room temperature control in combination with the electrothermal actuator (0- 10 V) "Aktor T ST L NC", item no. 1012953, page 1.27, or the electromotive actuator "Aktor M ST L", item no. 1012705/06, page 1.28 (may also be used in three- or four-pipe systems). With one analogue output 0–10 V each for heating and cooling as well as adjustable neutral zone (0.5–7.5 K). Temperature range: 5 °C up to 30 °C For further information see "Technical information":



Room thermostat - surface mounting (heating or cooling)

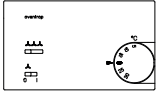
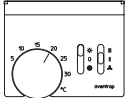

Heating two point control
 Cooling two point control



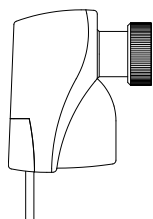
230 V

1152063°

Room thermostat for individual room temperature control. Adjustment of the nominal temperature value, absence or presence. Entry for operating mode changeover from heating or cooling (change-over).

Article	Packing unit	Article-No.	Hint
Room thermostats (heating/cooling) with fan drive			
		Room thermostat - surface mounting (heating and cooling) Heating 0 - 10 V control Cooling 0 - 10 V control with fan drive	The room thermostat does not only feature analogue outlets 0-10 V for heating and cooling, but also a 3-stage ventilator switch (24 V - 240 V) for the activation of fan convectors (fan coil units). The room thermostat is used for individual room temperature control in combination with the electrothermal actuator (0-10 V) "Aktor T ST L NC", item no. 1012953, page 1.27 or the electromotive actuator "Aktor M ST L", item no. 1012705/06, page 1.00 (may also be used in three- or four-pipe systems). Temperature range: 5 °C up to 30 °C
24 V	(25)	1152153	
		Room thermostat - surface mounting (heating or cooling) Heating two point control Cooling two point control with fan drive	The room thermostat is used for heating or cooling in combination with electrothermal actuators (two point) "Aktor T 2P" and fan convectors (fan coil units). The room temperature is maintained at the chosen level. With switch for "Heating-Off-Cooling" and fan switch. Temperature range: 5 °C up to 30 °C Heating/cooling: Use electrothermal actuators (two point) "closed with current off". For further information see "Technical information":
230 V		1152351	
		Room thermostat - surface mounting (heating or cooling) with display Heating two point control Cooling two point control with fan drive	With LCD display and adjustable timed programme. Temperature range: 5 °C up to 35 °C Heating or cooling: Use electrothermal actuators (two point) closed with current "off". For further information see "Technical information":
230 V 24 V		1152451 1152452°	
		Room thermostat - surface mounting (heating and cooling) with display Heating two point control Cooling 0 - 10 V control with fan drive	Electronic room thermostat with digital display for ventilation systems with heating and cooling function.
24 V		1152065	
		Room thermostat - surface mounting (heating or cooling) with display Heating or cooling 0 - 10 V control with fan drive	
24 V		1152064	



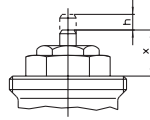


1.c Actuators

Content

Combination possibilities of valves and actuators	1.24
"Aktor T" Electrothermal actuators	1.26
"Aktor M" Electromotive actuators	1.28
"Aktor M ST EIB" Electromotive actuators	1.29
"Aktor M ST LON®" Electromotive actuators	1.29
"Aktor MH CON B" (ENOCEAN) Wireless actuator	1.29

- ① Can also be connected to valves with different connections using Oventrop valve adapters (for instance company Danfoss, series RA)
- ② GValid for sum resulting from pipework and valve
- ③ In combination with Oventrop extension, item no. 1022698
- ④ RPiston stroke actuator ≥ effective valve lift
- ⑤ K_{VS} -Wert kann vermindert werden
Standard values without considering tolerances.
With due consideration of the valve parameters, the combination with actuators of other manufacturers is possible on consultation.

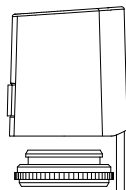


Ratings actuators		Characteristic parameters for CBC										Illustration (examples)						
		Item. no	Model	Operating current	Operating behaviour (normal signal of the controller)	Interface	Lower lift position [mm]	Upper lift position [mm]	Piston stroke [mm]	Operating power [W]	Medium floating time	Protection	Max. fluid temperature [°C]	Permissible installation position	1	2	3	
Illustration	A	10124...	electromotive closed with current "off"	24 V / 230 V	2 point	digital	11.2	15.8	-	> 90	-5 min	IP54	+100	Valve characteristic line 				
	B	10124...	electromotive open with current "off"	24 V / 230 V	2 point	digital	11.2	15.8	-	> 90	-5 min	IP54	+100			•	•	•
	C	1012953	electromotive closed with current "off"	24 V	steady (0-10 V)	analogue	11.2	15.8	4.0	> 90	-40 s/mm	IP54	+100			•	•	•
	D	1012705	modulating electroactive	24 V	steady (0-10 V)	analogue	11.2	15.8	0.5 - 4.0	> 90	-15 s/mm	IP40	+100			•	•	•
	E	1012706	mod. electroactive with piston feedback	24 V	steady (0-10 V)	analogue	11.2	15.8	0.5 - 4.0	> 90	-15 s/mm	IP40	+100			•	•	•
	F	1012717	electromotive with emergency function	24 V	steady (0-10 V)	analogue	11.2	15.8	4.0	> 90	-15 s/mm	IP40	+100			•	•	•
	G	1012708	electromotive	24 V	3 point	digital	11.2	15.8	-	> 90	-15 s/mm	IP40	+100			•	•	•
	H	1012709	electromotive	230 V	3 point	digital	11.2	15.8	-	> 90	-15 s/mm	IP40	+100			•	•	•
	I	1012710/11	electromotive open with current "off"	230 V/24 V	2 point	digital	11.2	17.0	-	> 90	-3 s	IP54	+100			•	•	•
	J	1012715/16	electromotive with emergency function	230 V/24 V	2 point	digital	11.2	15.8	-	> 90	-	IP40	+100			•	•	•
	K	11560...	electromotive system "EIB / KNX"	24 V	steady	EIB / KNX	11.2	15.2	2.6 - 4.0	> 90	-30 s/mm	IP44	+100			•	•	•
	L	1157065	electromotive system "LON"	nom. 48 V	steady	LON	11.2	15.2	2.6 - 4.0	> 90	-30 s/mm	IP44	+100			•	•	•
	M	1150665	electromotive	Mignon (2x) steady (Controller integrated)	EnOcean (CV wireless)	11.0	15.4	2	> 80	-3 s/mm	IP20	+90			•	•	•	
	N	1150765	electromotive	Mignon (2x) steady (Controller integrated)	EnOcean (EEP AS-20-01)	11.0	15.4	2	> 80	-3 s/mm	IP20	+90			•	•	•	

In vertical to horizontal position; not suspended.

4	5	6	7	8	9	10	11	12	13	14
"AZ V"	"AZ H"	"AQ"	"E"	"EQ"	"Multiblock T-RTL"	"Multiblock TQ-RTL"	Valves with insertion tube	Three-way conversion valves	Valve inserts for radiators with integrated distributor	Valve inserts "GH0" for radiators with integrated distributor
1187...	11884...	1183...	1163...	1163...	11840...	11840...	11835../16435..	11805..	10180..	101908.
15 20 25	20 25	10 15 20	15	15	15	15	15	15 20	-	-
11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
5	0.2	0.6 (1.5)	0.2	0.6 (1.5)	0.2	0.6 (1.5)	0.2	0.2	0.2	0.6 (1.5)
3.0	3.2	1.6	2.2	1.6	2.2	1.6	2.9	1.6	2.2	1.6
14.8 or higher	15.0 or higher	13.4 or higher	14.0 or higher	13.4 or higher	14.0 or higher	13.4 or higher	14.7 or higher	13.4 or higher	14.0 or higher	13.4 or higher
11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower	11.3 or lower
90 / 150	90 / 150	90 / 150	90 / 150	90 / 150	90 / 150	90 / 150	90 / 150	90 / 150	90 / 150	90 / 150
●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●
● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④
●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●
● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④
● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④
● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④	● ^④
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●	●	●	●	●	●	●	●	●	●	●

Article	Article-No.	Hint
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"Aktor T" Electrothermal actuators**"Aktor T 2P" Electrothermal actuators (two point)
connection thread M 30 x 1.5**

"H NC", closed with current "off", 230 V	1012415
"H NO", open with current "off", 230 V	1012425
"L NC", closed with current "off", 24 V	1012416
"L NO", open with current "off", 24 V	1012426
"H NC", closed with current "off", 230 V with mounted auxiliary switch	1012435
"L NC", closed with current "off", 24 V cable 2 m long	1012442
"H NC", closed with current "off", 230 V cable 2 m long	1012452
"H NC", closed with current "off", 230 V cable 5 m long	1012455
"H NC", closed with current "off", 230 V cable 10 long	1012459
"M NC", closed with current "off", 120 V only in approved countries outside the EU	1012420#

Oventrop electrothermal actuators are used for heating, ventilation and air conditioning. The actuators serve to control the room temperature and can be used e. g. with conventional radiators, radiators with integrated distributor, distributors/collectors for surface heating, radiant ceiling panels, chilled ceiling systems and induction air systems in combination with two point room thermostats. Further applications in bivalent heating installations.

For zone and room temperature control.

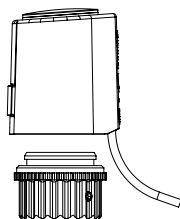
Connecting cable 1 m.
With "First-Open" function (except for actuators "open with current off") and stroke index.
Simple plug-in connection with valve adapter.

Actuators can be installed in any position.

As for the model with auxiliary switch, a pump can for instance be switched via the integrated volt free contact.

Due to their construction, the electrothermal actuators are secured against overvoltage which could occur when switching on neon tubes. A varistor is thus not necessary.

**# NRTL approval according to UL-specification.
May only be installed in approved countries outside the EU.**

**"Aktor T 2P" Electrothermal actuators (two point)
squeeze connection**

"H NC", closed with current "off", 230 V	1012418
"L NC", closed with current "off", 24 V	1012419

These actuators can be fitted without adapter to the integrated distributors and thermostatic radiator valves with squeeze connection of the company Danfoss, series RA.

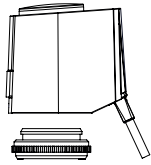
Connecting cable 1 m.
With "First-Open" function and stroke index.
Simple plug-in connection with valve adapter.

Actuators can be installed in any position.

Due to their construction, the electrothermal actuators are secured against overvoltage which could occur when switching on neon tubes. A varistor is thus not necessary.

For further information see
"Technical information":





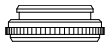
"Aktor T ST" Electrothermal actuator (0-10 V)
Proportional actuator
connection thread M 30 x 1.5

"L NC", closed with current "off", 24 V **1012953**
with automatic recognition of neutral point and valve travel

The actuator (0-10 V) can be used in centralised building control systems in combination with the electronic room thermostat, item no. 1152151/1152153, or with a central controller.
Plug-in connecting cable 1 m.
With "First-Open" function and stroke index.
Easy plug-in connection with valve adapter.
Due to their construction, the electrothermal actuators are secured against overvoltage which could occur when switching on neon tubes. A varistor is thus not necessary.

Accessories electrothermal actuators

For electrothermal actuators, item no. 1012415/25/16/26/35/42/52/55/59/20 and 1012953



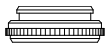
Valve adapter
connection thread M 30 x 1.5 (5) **1012461**

Replacement valve adapter for electrothermal actuators.



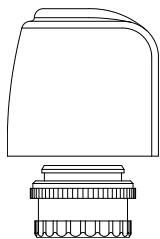
high model (5) **1012462**
connection thread M 30 x 1.5

The high model is required when using the actuators, item no. 10124.. and 1012953, in combination with the regulating valves "Hycococon ETZ/HTZ" as well as the fittings "Multiblock T/TU/TFU/TQ" and the design cover (11 mm higher than standard).



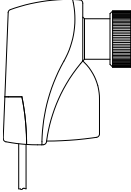
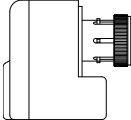
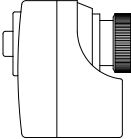
connection thread M 30 x 1.0 (5) **1012890**

The adapter is required for Oventrop valves with connection thread M 30 x 1.0 (up to 1998) in combination with the electrothermal actuators.

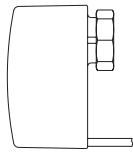


Reinforcing cap
for electrothermal actuators (two point) and (0-10 V) **1012450**

To protect electrothermal actuators against vandalism.
The special valve adapter with connection thread M 30 x 1.5 for fixing of the reinforcing cap is included.

Article	Article-No.	Hint	
"Aktor M" Electromotive actuators			
	"Aktor M" Electromotive actuators connection thread M 30 x 1.5 with manual setting, adjustable mode of operation	Oventrop electromotive actuators are used for heating, ventilation and air conditioning. The actuators serve to control the room temperature and can be used e. g. with conventional radiators, radiators with integrated distributor, distributors/collectors for surface heating (except for item no. 1012710/11), radiant ceiling panels, chilled ceiling systems and induction air systems. Further application in bivalent heating installations. The actuators (0-10 V) can be used in centralised building control systems in combination with the electronic room thermostat, item no. 1152151/53, or with a central controller. Anti-blocking function: The actuator opens and closes the valve completely once every 24 hours. Connecting cable 1.5 m. With the appropriate control, the actuator, item no. 1012708, can also be used for two point operation. In case of electric emergency function, the actuator returns to zero position if the power supply is interrupted.	
	"ST L" , 24 V, modulating proportional actuator, 0-10 V, automatic anti-blocking function and recognition of neutral point, multiple characteristic lines adjustable		1012705
	"ST L" , 24 V, modulating proportional actuator, 0-10 V, with position feedback, automatic anti-blocking function and recognition of neutral point, multiple characteristic lines adjustable		1012706
	"3P L" , 24 V, three point actuator, without anti-blocking function		1012708
	"3P H" , 230 V, three point actuator, without anti-blocking function, mode of operation not adjustable		1012709
	"ST L NC" , 24 V modulating proportional actuator, 0 - 10 V, with electric emergency function and automatic recognition of neutral point	1012717	
	"2P H" , 230 V, two point actuator, without anti-blocking function	1012710	
	"2P L" , 24 V, two point actuator, without anti-blocking function	1012711	
	"2P H NC" , 230 V, two point actuator, with emergency function	1012715	
	"2P L NC" , 24 V, two point actuator, with emergency function	1012716	

Article	Article-No.	Hint
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"Aktor M ST EIB" Electromotive actuators System "KNX/EIB"

with integrated bus coupling

"Uni EIB H"

connection thread M 30 x 1.5

with one binary entry	1156065
with two binary entries	1156066

„Uni EIB D“

with adapter for squeeze connection

with one binary entry	1156075
with two binary entries	1156076

"Aktor M ST LON®" Electromotive actuators System "LON®"

"OVLONH"

connection thread M 30 x 1.5

with one binary entry	1157065
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„OVLOND“

with adapter for squeeze connection

with one binary entry	1157075
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Product data bank "KNX/EIB" and application programmes "LON"

"Aktor MH CON B" (ENOCEAN) Wireless actuator

connection thread M 30 x 1.5 **1157065**

Electronic actuator with bi-directional wireless communication, battery operated

traffic white (RAL 9016)



Only functions in combination with communication centres/gateways and room thermostats using the EEP (EnOcean Equipment Profile) A5-20-01.

The electromotive actuator "KNX/EIB" is suitable for a direct connection to the European installation bus control system. The power absorption is extremely low, so that a separate power supply is not needed. The actuator is equipped with one or two integrated binary entries to which a window contact and a movement sensor may for instance be connected.

The connection of the bus and the binary entry is made via a 4- or 6-core cable (1 m).

The electromotive actuator "LON" is suitable for the direct connection to LonWorks® networks.

The power absorption is extremely low, so that a separate power supply is not needed when using the Link-Power-Technology.

The actuator is equipped with an integrated binary entry to which a window contact may for instance be connected.

The connection of the bus and the binary entry is made via a 4-core cable (1 m).

The data to be read in the ETS data bank or the LonTalk®-Software can be downloaded from the internet under www.oventrop.de (category "Software") free of charge.

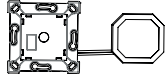
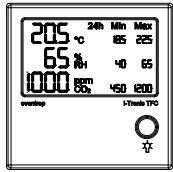
Electronic actuator for room temperature control. The actuator supports the EnOcean profile A5-20-01 and can be connected to communication centres/gateways or room thermostats of other manufacturers.



enocean®

The actuator is not compatible with the gateway "Synet CR" and the wireless thermostats "R-Tronic".

System	Oventrop actuators	Item no.	The Oventrop actuators can e.g. be used with the following bus systems:
KNX/EIB	"Uni EIB H" with one binary entry with two binary entries	1156065	- GIRA Instabus KNX/EIB - ABB i-bus KNX - Busch-Jäger installation bus - Jung KNX-System - Merten KNX - Siemens GAMMA instabus - Woertz Building Control Systems - and others
		1156066	
	"Uni EIB D" with one binary entry with two binary entries	1156075	
		1156076	
LON	"OVLONH" with one binary entry	1157065	
		"OVLOND" with one binary entry	1157075
EnOcean (wireless)	"Aktor MH CON B" (ENOCEAN) with wireless module	1157065	- iEXERGY (wibutler) - and others

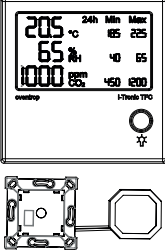
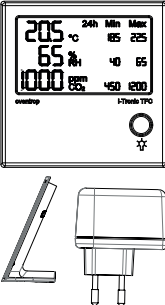
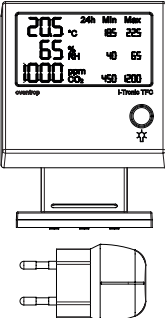


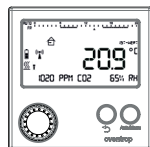
1.d "i-Tronic" Climate display device

Content

"i-Tronic TFC"

1.32

Article	Article-No.	Hint
<p>"i-Tronic TFC" Climate meter displaying the temperature, humidity and CO₂ content in the ambient air traffic white (RAL 9016)</p> <p>for wall attachment with power pack for flush sockets (power supply 100-240 V ~/ 50-60 Hz) with wall bracket</p> 	1150683	<p>Climate meter for monitoring the important room climate variables: temperature, humidity and CO₂ content. These values will supply information on the beginning and end of a necessary room airing (e.g. window opening). Furthermore, the min./max. values of the last 24 hours are displayed.</p> <p>The climate meter can not only be fixed onto the wall with the help of a wall bracket and a flush-mounted power pack but it is also suitable for mobile use.</p> <p>Two table stand solutions are offered for mobile use: One with a power pack for mains power supply and another with two rechargeable batteries with integrated charging electronics.</p>
<p>for mobile use with wired power supply, table stand and mains adaptor (power supply: 100-240 V ~/ 50-60 Hz)</p> 	1150685	
<p>for mobile use with rechargeable batteries, integrated charging electronics in the table stand and power pack for battery charging</p> 	1150688	<p>Two integrated rechargeable batteries (2 x AA NiMH) allow for the mobile monitoring of the important room climate variables temperature, humidity and CO₂ content.</p> <p>Operation of rechargeable batteries: approx. 6 days</p>



1.e "R-Tronic" Climate display device/control "Synet CR" Gateway and hydronic balancing

Content

"R-Tronic RT B" Wireless thermostat	1.34
"R-Tronic RTF B" Wireless thermostat with humidity display	1.35
"R-Tronic RTFC K" Wireless thermostat with humidity and CO ₂ display	1.35
"Aktor MH CON B" Wireless actuator (M 30 x 1.5)	1.36
"Aktor MD CON B" Wireless actuator (squeeze connection)	1.36
Accessories	1.37
"FK-C F" Wireless window contact	1.37
"RP-S F" Wireless repeater	1.37
"R-Con 2P" Wireless receiver (1 channel)	1.37
Automatic presetting with "Synet CR" and automatic hydronic balancing with "Q-Tech"	1.38
"Synet CR" Gateway	1.38

"R-Tronic" Climate display device/control

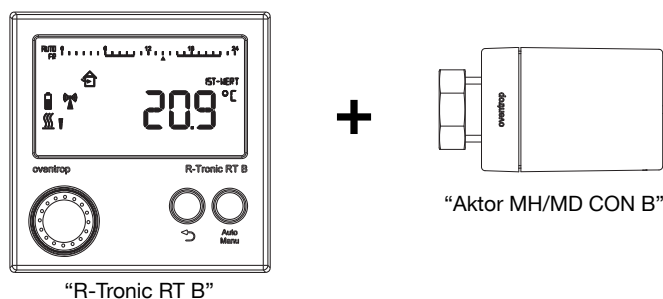
The system "R-Tronic" consists of a battery operated actuator for wireless thermostats "Aktor MH/MD CON B" and the wireless thermostat "R-Tronic". The wireless thermostat can be battery or mains operated. During battery operation, a maximum of three actuators "Aktor MH/MD CON B" can be connected to one "R-Tronic" and up to 8 actuators during mains operation.

During mains operation, window contacts and the one channel wireless receiver "R-Con 2P" can be connected additionally. The wireless receiver transmits a switching signal depending on a CO₂ threshold for one fan.

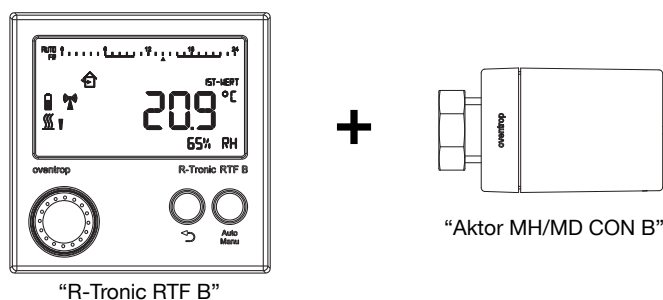
Up to 16 wireless thermostats can be connected to the gateway "Synet CR" for mobile quick access via Internet.

Options

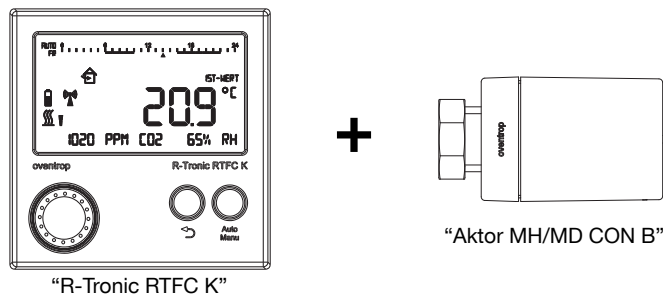
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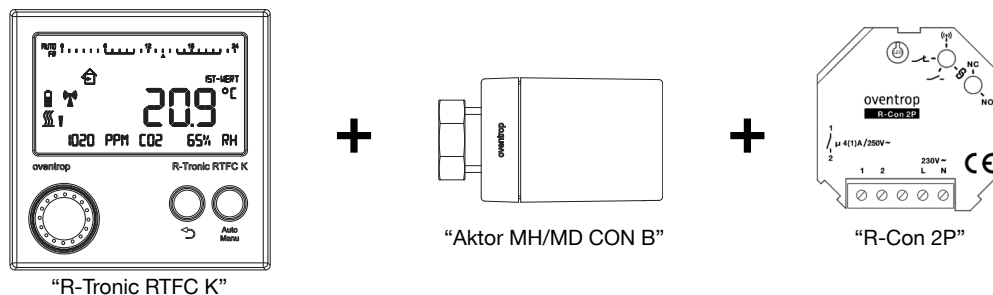
2.



3.



4.

Option 1: **"R-Tronic RT B"**

Wireless thermostat for room temperature control with timer functions (battery operated, flush-mounted power pack or mains adaptor available as accessories)

Option 2: **"R-Tronic RTF B"**

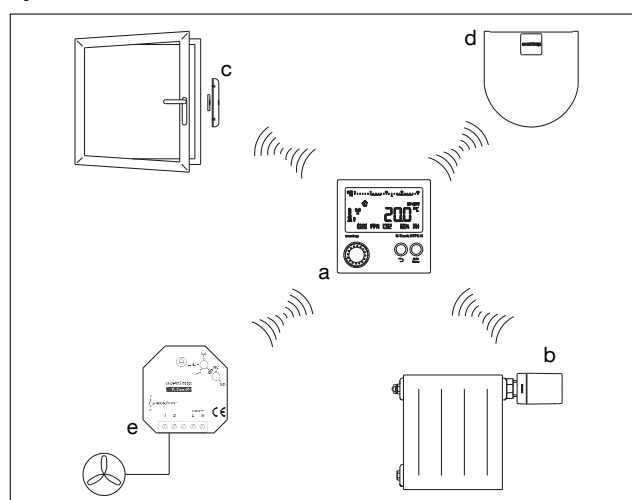
As option 1, but with integrated humidity sensor and display of the relative humidity RH in % (battery operated, flush-mounted power pack or mains adaptor available as accessories)

Option 3: **"R-Tronic RTFC K"**

As option 2, but with additional sensor for measurement of the CO₂ content and display of the CO₂ concentration in ppm (no battery operation, power supply via external flush-mounted power pack or mains adaptor).

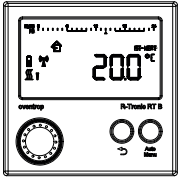
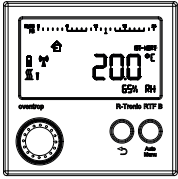
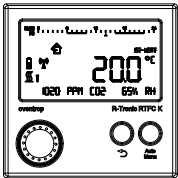
Option 4: **"R-Tronic RTFC K" with "R-Con 2P"**

As option 3, but additionally with one channel wireless receiver "R-Con 2P" for the activation of a fan depending on a CO₂ threshold for fresh air supply.

System illustrations

Options 1, 2, 3, 4 (climate display device/control)

- a "R-Tronic RT B / RTF B / RTFC K" Wireless thermostat
- b "Aktor MH/MD CON B" Actuator for wireless thermostats
- c "FK-C F" Wireless window contact
- d "Synet CR" Gateway
- e "R-Con 2P" Wireless receiver (1 channel) for CO₂ dependent fan activation (only in combination with "R-Tronic RTFC K")

Article	Article-No.	Hint
 <p>"R-Tronic RT B" Wireless thermostat</p> <p>Wireless thermostat with bi-directional wireless communication, battery operated, surface mounting</p> <p>traffic white (RAL 9016)</p>	<p>1150680° 1150880#</p>	<p>Electronic wireless thermostat "R-Tronic RT B" for room temperature control according to adjustable timed programmes. The nominal and actual temperature of the room can be displayed.</p> <p>Up to 3 participants (such as actuators for wireless thermostats "Aktor MH/MD CON B" and wireless receivers "R-Con") can be connected during battery operation . A supply via the network is an alternative, see accessories page 1.37.</p> <p>During mains operation, the number of participants can be increased to 8 which allows, for instance, for an integration of window contacts for room temperature setback.</p>
 <p>"R-Tronic RTF B" Wireless thermostat with humidity display</p> <p>Wireless thermostat with bi-directional wireless communication and integrated humidity sensor, battery operated, surface mounting</p> <p>traffic white (RAL 9016)</p>	<p>1150681° 1150881#</p>	<p>Electronic wireless thermostat "R-Tronic RTF B" for room temperature control according to adjustable timed programmes. The nominal and actual temperature of the room can be displayed. An integrated humidity sensor supplies information on the relative humidity RH in %. The value is displayed in the text line.</p> <p>Up to 3 participants (such as actuators for wireless thermostats "Aktor MH/MD CON B" and wireless receivers "R-Con") can be connected during battery operation . A supply via the network is an alternative, see accessories page 1.37.</p> <p>During mains operation, the number of participants can be increased to 8 which allows, for instance, for an integration of window contacts for room temperature setback.</p>
 <p>"R-Tronic RTFC K" Wireless thermostat with humidity and CO₂ display</p> <p>Wireless thermostat with bi-directional wireless communication and integrated humidity and CO₂ sensor</p> <p>traffic white (RAL 9016)</p> <p>Power supply: Flush-mounted power pack (100-240 V ~/ 50-60 Hz) with wall bracket</p> <p>Power supply: Mains adaptor (100-240 V ~/ 50-60 Hz) with table stand</p>	<p>1150682° 1150882#</p> <p>1150684° 1150884#</p>	<p>Electronic wireless thermostat "R-Tronic RTFC K" for room temperature control according to adjustable timed programmes. The nominal and actual temperature of the room can be displayed. An integrated humidity sensor supplies information on the relative humidity RH in % and an integrated CO₂ sensor on the CO₂ content in ppm in the room air. Both values are displayed in the text line.</p> <p>If preset limits are exceeded, a symbol asking for fresh air supply is displayed.</p> <p>Up to 8 participants (such as actuators for wireless thermostats "Aktor MH/MD CON B", wireless receivers "R-Con" and wireless window contacts for room temperature setback) can be connected to the "R-Tronic RTFC K".</p> <p>Power is supplied by a flush-mounted power pack or a mains adaptor with table stand.</p> <p># Compatible with the gateway "Synet CR"</p>

Article

Article-No.

Hint

**"Aktor MH CON B" Wireless actuator (M 30 x 1.5)**

Connection thread M 30 x 1.5
Electronic actuator for wireless thermostats
with bi-directional wireless communication,
battery operated

traffic white (RAL 9016)

Only functions in combination with the
wireless thermostats "R-Tronic RT B/ RTF B/ RTFC K".

1150665

Electronic actuator for wireless thermostats
for room temperature control according to
adjustable timed programmes at the wireless
thermostats "R-Tronic RT B/ RTF B/ RTFC K".
Heating operation and the position of the valve
(OPEN/CLOSED) of the "Aktor MH/MD CON B"
are shown on the display of the wireless
thermostat.
Operation via the menu-driven wireless
thermostat.

Awards:



ICONIC AWARDS 2016



German Design Award 2016

**"Aktor MD CON B" Wireless actuator (squeeze connection)**

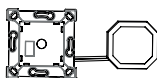
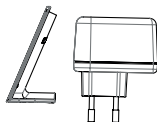

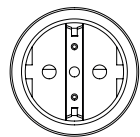
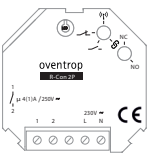
Squeeze connection
Electronic actuator for wireless thermostats
with bi-directional radio communication,
battery operated

traffic white (RAL 9016)

Only functions in combination with the wireless
thermostats "R-Tronic RT B/ RTF B/ RTFC K".

1150675

These actuators for wireless thermostats can
be fitted without adapter to the integrated
distributors and thermostatic radiator valves
with squeeze connection of the company
Danfoss, series RA.

Article	Article-No.	Hint
Accessories		
	<p>Flush-mounted power pack (100-240 V ~ /50-60 Hz) with wall bracket</p>	1150692
	<p>Mains adaptor (100-240 V ~ / 50-60 Hz) with table stand, white for stationary use, suitable for "i-Tronic TFC" and "R-Tronic RT B/RTF B"</p>	1150694
	<p>"FK-C F" Wireless window contact solar powered, white (similar to RAL 9003)</p>	1153070
<p>A radio signal is transmitted when opening or closing the window. The solar powered energy storage ensures a maintenance-free operation.</p>		
<p>Compatible with: - "R-Tronic" Wireless thermostats ("DynaTemp HA") - Wireless room modules ("DynaTemp BA")</p>		
<p>Note: The wireless thermostats "R-Tronic" require the software version 01-06-02 or higher and have to be mains-operated.</p>		
	<p>"RP-S F" Wireless repeater for installation into an earthed plug white (similar to RAL 9003)</p>	1150699
<p>The wireless repeater "RP-S F" serves to amplify the signal between the wireless thermostat "R-Tronic" and the communication centre "Synet CR" as well as the wireless receiver "R-Con"/"R-Con 2P".</p>		
	<p>"R-Con 2P" Wireless receiver (1 channel) 230 V, flush mounting, cabling on site Switching output (volt free): "NC" closed with current "off" "NO" open with current "off"</p>	1150710*
<p>For activation and deactivation of fans and ventilation systems. The switching signal is generated by the wireless thermostat "R-Tronic RTFC K" if a set CO₂ value is exceeded or undercut. Two rotary switches at the "R-Con 2P" allow for</p> <ol style="list-style-type: none"> 1. the configuration of the switching output "NC" closed with current "off" "NO" open with current "off" 2. a manual setting of the switching output to AUTO, ON, OFF or TEACH IN. <p>Maximum switching capacity of the volt free output: 4(1)A/ 250 V AC</p>		

Hydronic balancing with "Synet CR" and valves with "Q-Tech" in detached and semi-detached houses**Automatic presetting with "Synet CR":**

Automatic presetting of thermostatic radiator valves, for instance in detached or semi-detached houses, can be carried out via a smartphone or tablet with the help of the gateway "Synet CR" and the actuators for wireless thermostats "Aktor MH CON B". Manual presetting at each radiator on the spot is thus not required.

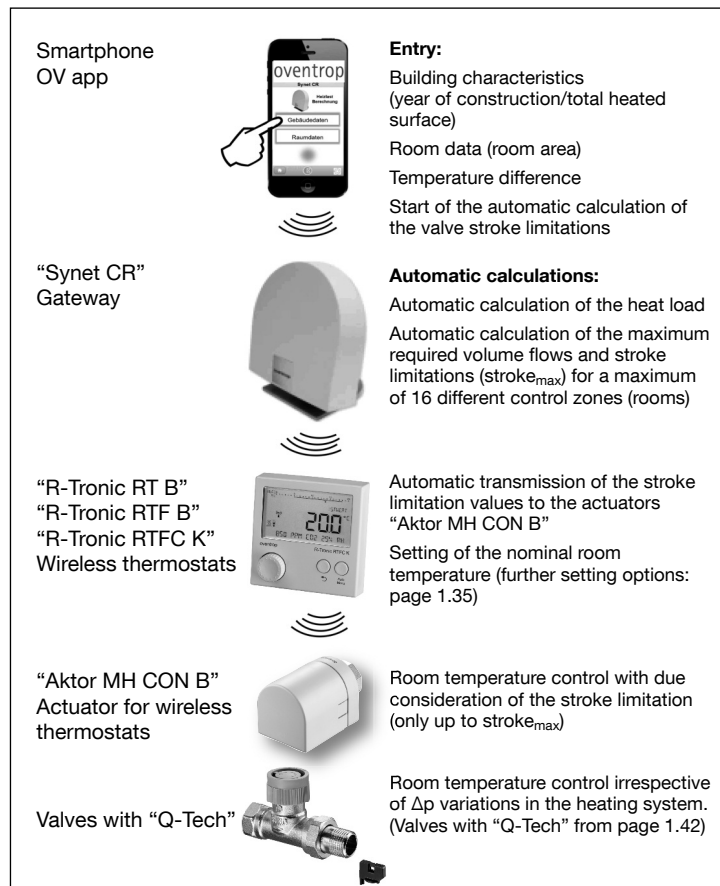
Apart from room temperature control, the gateway "Synet CR" allows for the calculation of the maximum required volume flow for each radiator. The gateway "Synet CR" is preloaded with the calculation procedure (procedure according to "VdZ specialist rules for heating optimisation – procedure A").

The valve characteristic line of the thermostatic valves with "Q-Tech" which allows for the conversion of the detected volume flows for the stroke limitation of the actuators "Aktor MH CON B" is integrated in the gateway "Synet CR".

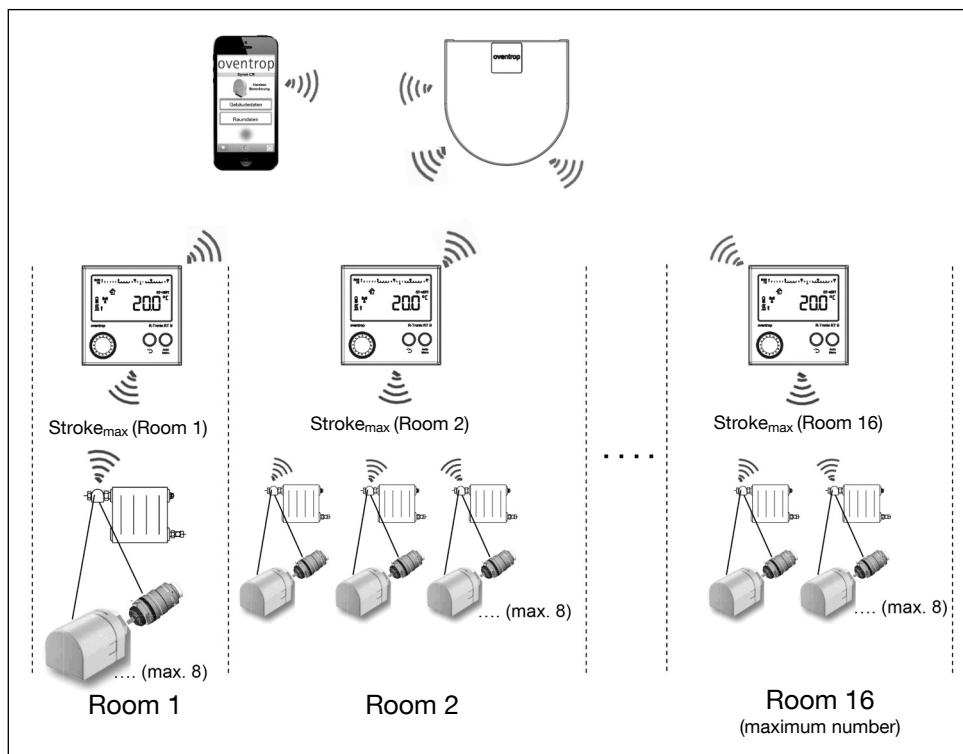
The user may carry out automatic presetting within a few steps via a smartphone or tablet with the help of the setup assistant of the OV app.

Automatic balancing with "Q-Tech":

Irrespective of differential pressure variations in the heating system, the radiator volume flow required for room temperature control is constantly maintained by the control and regulating valve with "Q-Tech". After having carried out the automatic presetting described above, the volume flow is limited to a maximum value by the gateway "Synet CR" and the actuator "Aktor MH CON B" mounted onto the thermostatic valve with "Q-Tech".



Sequence of automatic presetting and balancing with "Synet CR" and valves with "Q-Tech"



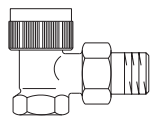
System illustration (example): Hydronic balancing with "Synet CR" and valves with "Q-Tech"

Advantages:

- Automatic calculation of the required volume flow for each radiator and automatic presetting of the thermostatic valves with "Q-Tech" via the actuator "Aktor MH CON B"
- Manual setting of the thermostatic valves at the radiator is not required
- Pipework calculation and regulation of the risers are not required
- Presetting of the valves in the riser is not required
- Hydronically balanced heating system during full and low demand periods
- Long battery life span as the "Aktor MH CON B" only carries out control commands for room temperature control



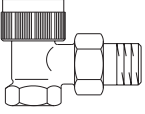
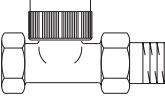
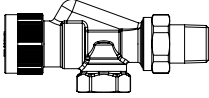
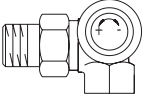
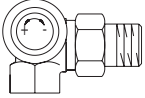
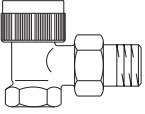
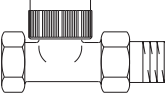
Article	Article-No.	Hint
<p>"Synet CR" Gateway</p> <p>Centre for the connection of up to 16 "R-Tronic" climate display devices/controls and for regulation in combination with "Q-Tech" valves</p> <p>In preparation.</p>	<p>1150687</p>	<p>Centre for the simple networking, visualization and parameterization of "R-Tronic" climate display devices/controls.</p> <p>Up to 16 wireless thermostats or rooms can be managed by the centre by transmitting adjustable timed programmes for the individual rooms from the centre to the "R-Tronic" via the bi-directional radio communication.</p> <p>Furthermore, automatic hydronic balancing is supported in combination with the "Q-Tech" valves (see page 1.42). For this purpose, the heat load, the maximum required volume flows for each radiator as well as the required maximum stroke limitations at the actuators "Aktor MH CON B" are calculated by the gateway "Synet CR" after having entered the building and room data. The stroke limitations at the "Q-Tech" valves are carried out automatically.</p> <p>Access options:</p> <ul style="list-style-type: none"> -Local access in the building -Worldwide mobile remote access via Internet <p>User interfaces:</p> <ul style="list-style-type: none"> -Integrated web interface -App for iOS and Android terminals <p>Interfaces:</p> <ul style="list-style-type: none"> -LAN <ul style="list-style-type: none"> a. Direct PC/laptop connection b. Direct router connection -USB for WLAN stick <ul style="list-style-type: none"> a. Access Point Mode b. Client mode -868 MHz radio communication with "R-Tronic" display devices/controls -Mains adaptor 5 V <p>Installation options:</p> <ul style="list-style-type: none"> - Wall attachment with the help of the supplied fixing plate. - Table stand with mains adaptor see accessories, page 1.37.

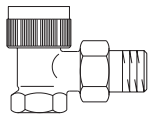
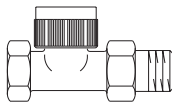
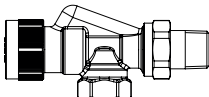
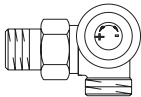
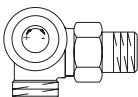


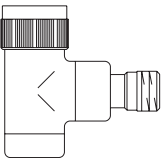
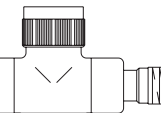
1.f Valves with "Q-Tech" for automatic hydronic balancing

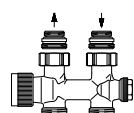
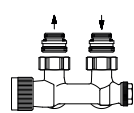
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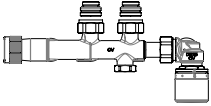
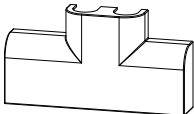
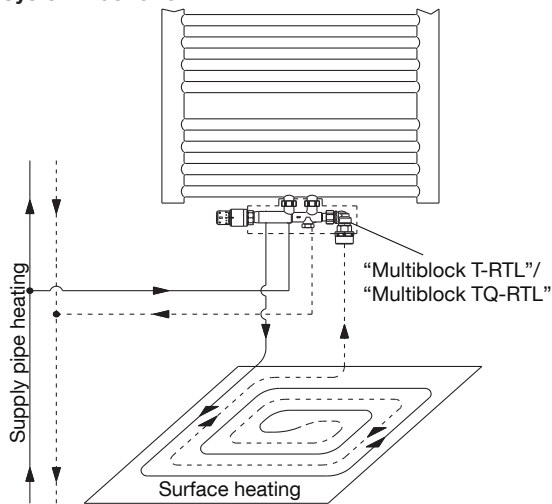
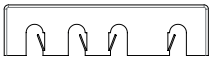
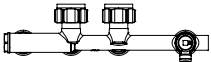
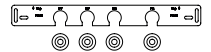
Thermostatic valves "AQ"	1.42
Thermostatic valves "RFQ"	1.42
Thermostatic valves "AQF"	1.43
Exclusive radiator valves "EQ"	1.44
"Multiblock TQ" Two pipe fitting	1.45
"Multiblock TQ-RTL"	1.46
"Demo-Bloc"	1.47




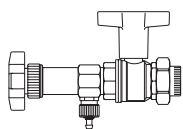
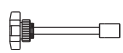
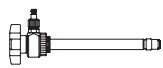
Article	Packing unit	Article-No.	Hint
Thermostatic valves "AQ" with "Q-Tech" for automatic hydronic balancing, infinitely adjustable presetting			<p>Valves for thermostats with valve insert "QA" connection thread M 30 x 1.5 brass, nickel plated</p> <p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g: 10 bar (PN 10) Operating temperature t_g: 2 °C up to 110 °C Flow range: 10 - 170 l/h</p> <p>Function: The valves with "Q-Tech" are combined control and regulating valves which are used for room temperature control in combination with thermostats with liquid sensor or actuators. The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.</p> <p>Presetting is carried out by using the presetting key supplied with the valves.</p> <p>The thermostatic valves "AQ" and "RFQ" are not suitable for steam installations.</p> <p>All valve inserts are replaceable by using the special tool "Demo-Bloc" and the coupling set, page 1.60, without draining the system.</p> <p>All valves are suitable for the installation with copper pipes.</p> <p>Compression fittings page 1.140, reinforcing sleeves page 1.143.</p> <p>All thermostatic valves "AQ" and "RFQ" have a <u>light grey</u> protection cap.</p> <p>Reduced dimensions compared with thermostatic valves "AQ".</p> <p>Thermostatic valves "RFQ" not suitable for use in combination with female threaded compression fittings "Cofit S".</p> <p>Compression fittings page 3.45, reinforcing sleeves page 1.143.</p>
Angle pattern valve			
	DN 10	(10) 1183063	
	DN 15	(10) 1183064	
	DN 20	(10) 1183066	
	DN 25	(10) 1183068*	
Straight pattern valve			
	DN 10	(10) 1183163	
	DN 15	(10) 1183164	
	DN 20	(10) 1183166	
	DN 25	(10) 1183168*	
Reversed angle pattern valve			
	DN 10	(10) 1183263	
	DN 15	(10) 1183264	
	DN 20	(10) 1183266	
Double angle pattern valve Right hand side connection			
	DN 10	(10) 1183361	
	DN 15	(10) 1183363	
Left hand side connection			
	DN 10	(10) 1183360	
	DN 15	(10) 1183362	
Thermostatic valves "RFQ" with "Q-Tech" for automatic hydronic balancing, infinitely adjustable presetting			
Angle pattern valve			
	DN 10	(10) 1185503	
	DN 15	(10) 1185504	
	DN 20	(10) 1185506	
Straight pattern valve			
	DN 10	(10) 1185603	
	DN 15	(10) 1185604	
	DN 20	(10) 1185606	

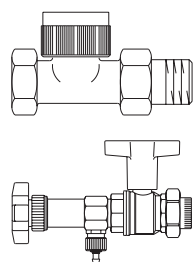
Article	Article-No.	Hint
<p>Thermostatic valves "AQF" with "Q-Tech" for automatic hydronic balancing, infinitely adjustable fine presetting</p>		
 <p>Angle pattern valve</p>	<p>DN 10 1183003* DN 15 1183004* DN 20 1183006*</p>	<p>Valves for thermostats with valve insert "QAF" connection thread M 30 x 1.5 brass, nickel plated with fine presetting and proportional control behaviour within a P-range of 2 K</p> <p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 110 °C</p> <p>Function: The valves with "Q-Tech" are combined control and regulating valves which are used for room temperature control in combination with thermostats with liquid sensor or actuators. The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.</p> <p>Presetting is carried out by using the presetting key supplied with the valves.</p> <p>The thermostatic valves "AQF" are not suitable for steam installations.</p> <p>All valve inserts are replaceable by using the special tool "Demo-Bloc" and the coupling set, page 1.47, without draining the system.</p> <p>All valves are suitable for the installation with copper pipes.</p> <p>Compression fittings page 1.140, reinforcing sleeves page 1.143.</p> <p>All thermostatic valves "AQF" have a <u>wine red</u> protection cap.</p>
 <p>Straight pattern valve</p>	<p>DN 10 1183103* DN 15 1183104* DN 20 1183106*</p>	
 <p>Reversed angle pattern valve</p>	<p>DN 10 1183203* DN 15 1183204*</p>	
 <p>Double angle pattern valve Right hand side connection</p>	<p>DN 10 1183351* DN 15 1183353*</p>	
 <p>Left hand side connection</p>	<p>DN 10 1183350* DN 15 1183352*</p>	

Article	Article-No.	Hint
Exclusive radiator valves "EQ" with "Q-Tech" for automatic hydronic balancing, infinitely adjustable presetting		Exclusive radiator valves
	Angle pattern valve DN 15 chrome plated white (RAL 9016) 1163552 1163562	Valves for thermostats with valve insert "QA" connection thread M 30 x 1.5 brass
	Straight pattern valve DN 15 chrome plated white (RAL 9016) 1163652 1163662	Application: Central heating and cooling systems with closed circuits, for operation with non- aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 110 °C (chrome plated) 2 °C up to 90 °C (white) Flow range: 10 - 170 l/h
		Application: The valves with "Q-Tech" are combined control and regulating valves which are used for room temperature control in combination with thermostats with liquid sensor or actuators. The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.
		Presetting is carried out by using the presetting key supplied with the valves.
		The thermostatic valves "EQ" are not suitable for steam installations.
		All valves inserts are replaceable by using the special tool "Demo-Bloc" and the coupling set, page 1.60, without draining the system.
		All valves are suitable for the installation with copper pipes.
		All thermostatic valves "EQ" have a <u>light grey</u> protection cap.

Article	Packing unit	Article-No.	Hint
<p>"Multiblock TQ" Two pipe fitting with "Q-Tech" for automatic hydronic balancing Fitting with infinitely adjustable presetting and isolating and draining facility brass, nickel plated, with soft seal</p>			<p>"Multiblock TQ" for use on radiators with supply and return pipe connection. Distance between pipe centres 50 mm. Marking "OV 2" on valve body. With valve insert "QA".</p>
<p>for the connection to radiators with Rp 1/2 female thread</p>			<p>To be used: -for two pipe operation -as thermostatic valve -as isolating fitting -for draining -for filling</p>
	<p>Straight pattern</p>	<p>(5) 1184073</p>	<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 110 °C Flow range: 10 - 170 l/h</p>
	<p>Angle pattern</p>	<p>(5) 1184074</p>	<p>Function: The fittings with "Q-Tech" are combined control and regulating fittings which are used for room temperature control in combination with thermostats with liquid sensor or actuators. The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.</p>
<p>Presetting is carried out by using the presetting key supplied with the valves.</p>			<p>The "Multiblock TQ" is not suitable for steam installations.</p>
<p>The fittings "Multiblock TQ" have a light grey protection cap.</p>			<p>The fittings "Multiblock TQ" have a light grey protection cap.</p>
<p>For the connection of copper, precision steel, stainless steel and plastic pipes as well as Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142.</p>			<p>For the connection of copper, precision steel, stainless steel and plastic pipes as well as Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142.</p>
<p>Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G 3/4 according to DIN EN 16313 (cone "Euro") may also be used.</p>			<p>Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G 3/4 according to DIN EN 16313 (cone "Euro") may also be used.</p>
<p>The supply and return pipe connections must be strictly observed. The direction of flow must be observed!</p>			<p>The supply and return pipe connections must be strictly observed. The direction of flow must be observed!</p>

Article	Packing unit	Article-No.	Hint
<p>"Multiblock TQ-RTL" with "Q-Tech" for automatic hydronic balancing Connection fitting for the combination of radiator and surface temperature balance, two pipe fitting, with infinitely adjustable presetting, isolating facility and integrated return temperature limiter, with soft seal, angle pattern, brass, nickel plated, including mounting aid</p>  <p>for the connection to radiators with Rp ½ female thread</p>		1184076	<p>"Multiblock TQ-RTL" for simultaneous connection of radiators with supply and return connection and 50 mm distance between pipe centres as well as surface temperature balance. For the separate control of the room temperature and the return temperature (limitation). With valve insert "QA".</p> <p>To be used:</p> <ul style="list-style-type: none"> - for two pipe operation - as thermostatic valve at the radiator - as isolating fitting at the radiator - for surface temperature balance by use of a return temperature limiter
<p>Design cover for "Multiblock T-RTL" and "Multiblock TQ-RTL"</p>  <p>chrome plated white</p>		1184077 1184087	<p>Application: Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max operating pressure: p_g: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 70 °C</p> <p>Function: The fittings with "Q-Tech" are combined control and regulating fittings which are used for room temperature control in combination with thermostats with liquid sensor or actuators. The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.</p> <p>Presetting is carried out by using the presetting key supplied with the valves.</p> <p>The fitting "Multiblock TQ-RTL" is not suitable for steam installations.</p> <p>For the connection of copper, precision steel, stainless steel and plastic pipes as well as the Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142.</p> <p>Alternatively, the compression fittings of other manufacturers which are suitable for the connection to G ¾ male thread according to DIN EN 16313 (cone "Euro") may also be used.</p> <p>The supply and return connections must be strictly observed to guarantee a perfect function of the fitting.</p> <p>The surface circuit can be filled, drained, bled and leak tested with installed block for initial operation.</p> <p>Used for the pre-assembly and fixing of the pipes of the heating circuit and the surface heating.</p>
<p>System illustration:</p> 			
<p>Rosette cover for "Multiblock T-RTL" and "Multiblock TQ-RTL"</p>  <p>chrome plated white</p>		1189077 1189087	
<p>Block for initial operation for "Multiblock T-RTL" and "Multiblock TQ-RTL"</p> 		1184094	
<p>Mounting aid for "Multiblock T-RTL" and "Multiblock TQ-RTL"</p> 		(5) 1189094	

Article	Packing unit	Article-No.	Hint
Valve inserts			
	for thermostatic valves "AQ, RFQ, EQ", fittings "Multiblock TQ, TQ-RTL", and "Unibox TQ, Q plus"	"QA" (25) 1187065#	# These valve inserts are suitable for all valve bodies with connection thread M 30 x 1.5 of all sizes of the thermostatic valves "A, AV 9, AQ, AV 6, ADV 9, ADV 6, CV 9, E, EQ, AF, RF, RFV 9, RFQ and RFV 6".
	"QAF"	1187055*#	
	Replacement filter mesh for valve insert "QA"	Set = 10 replacement filter meshes 1187090*	
"Demo-Bloc" special tool for replacing valve inserts <u>without draining the system</u>			The "Demo-Bloc" is supplied in a handy bag. Max. operating pressure p_s : 10 bar (PN 10)
	connection thread M 30 x 1.5	1188051	Including coupling set for valve insert "QA".
	Coupling set for replacement of the valve insert "QA"	1188094	
	Differential pressure measuring stem	1188093	The differential pressure above the valve seat can be measured with the "Demo-Bloc" and the differential pressure measuring stem.



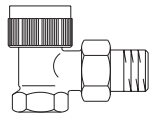
1.g Valves for manual hydronic balancing

Content

Thermostatic valves "AV 9"	1.50
Thermostatic valves "AV 9" (press connection)	1.50
Thermostatic valves "AV 9" (male thread)	1.51
Thermostatic valves "CV 9"	1.52
Thermostatic valves "AF"	1.53
Accessories	1.55
Thermostatic valves "ADV 9"	1.56
Thermostatic valves "RFV 9"	1.57
"Uniset" Radiator valve sets	1.59
Radiator lockshield valve "Combi 3G"	1.59
"Demo-Bloc"	1.60

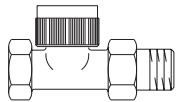
Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

Thermostatic valves "AV 9"
infinitely adjustable presetting

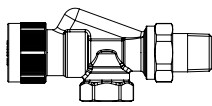
Angle pattern valve

DN 10	0.36	0.67	1.10	(25)	1183703
DN 15	0.36	0.67	1.20	(25)	1183704
DN 20	0.36	0.67	1.30	(25)	1183706
DN 25	0.36	0.67	1.30	(10)	1183708



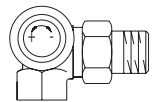
Straight pattern valve

DN 10	0.36	0.67	0.90	(25)	1183803
DN 15	0.36	0.67	1.00	(25)	1183804
DN 20	0.36	0.67	1.20	(25)	1183806
DN 25	0.36	0.67	1.20	(10)	1183808

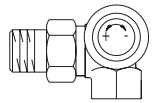


Reversed angle pattern valve

DN 10	0.36	0.67	0.90	(25)	1183903
DN 15	0.36	0.67	1.00	(25)	1183904
DN 20	0.36	0.67	1.20	(25)	1183906

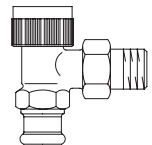
Double angle pattern valve
Left hand side connection

DN 10	0.36	0.67	0.90	(25)	1183470
DN 15	0.36	0.67	1.00	(25)	1183472



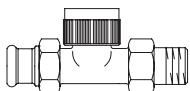
Right hand side connection

DN 10	0.36	0.67	0.90	(25)	1183471
DN 15	0.36	0.67	1.00	(25)	1183473

Thermostatic valves "AV 9" (press connection)infinitely adjustable presetting
with press connection for copper, stainless steel and
C-steel pipe Ø 15 mm

Angle pattern valve

DN 15	0.36	0.67	1.20	(25)	1183775
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Straight pattern valve

DN 15	0.36	0.67	1.00	(25)	1183875
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Valves for thermostatsconnection thread M 30 x 1.5
brass, nickel plated

Oventrop valves

Test according to EN 215

Reg.-no. 011-6 T 002

Keymark - The Oventrop thermostatic valves "A, AV 9, RF, AF und AZ H" (angle and straight pattern valves DN 10 - DN 20) with the thermostats "Uni XH", "Uni LH", "Uni LH" with remote sensor, "Uni SH", "vindo TH" and "pinox H" are Keymark tested and certified.

All materials used are silicone free.

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ ÖNORM 5195).

Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C
(for short periods up to 130 °C)

Presetting is carried out by using the presetting key, item no. 1183962, or a spanner 13 mm or the Heimeier presetting key.

The thermostatic valves "AV 9" are not suitable for steam installations.

All valve inserts are replaceable by using the special tool "Demo-Bloc", page 1.60, without draining the system.

All valves DN 10 up to DN 20 are suitable for the installation with copper pipes.

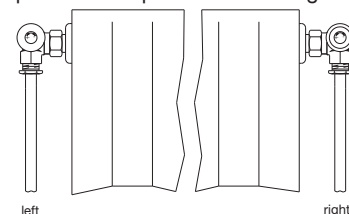
Compression fittings page 1.140, reinforcing sleeves page 1.143.

Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted.

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 (material no. E195/1.0034) according to DIN EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the original contours SANHA (SA), Geberit-Mapress (MM) or Viega (Profipress) in corresponding size. Processing must be carried out according to the installation instructions.

All thermostatic valves "AV 9" have a white protection cap with 3 frontal lugs.



Thermostats from page 1.08.

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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Thermostatic valves "AV 9" (male thread)
infinitely adjustable presetting, with G ¼ male threaded pipe connection and R ½ male threaded radiator connection

Especially suitable as flow and return valve for distributors of heating circuits.

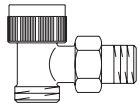
The G ¼ male thread of the valves allows for the connection to copper, precision steel and plastic pipes as well as the Oventrop composition pipe "Copipe" by using the corresponding fittings.

Fittings page 1.136, compression fittings page 1.140, reinforcing sleeves page 1.143.

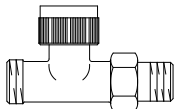
Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted.

All thermostatic valves "AV 9" have a white protection cap with 3 frontal lugs.

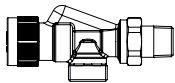
Thermostats from page 1.08.



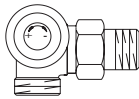
Angle pattern valve
DN 15 0.36 0.67 1.20 (25) **1183747**



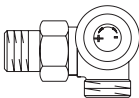
Straight pattern valve
DN 15 0.36 0.67 1.00 (25) **1183847**



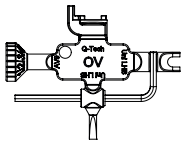
Reversed angle pattern valve
DN 15 0.36 0.67 1.00 (25) **1183942**



Double angle pattern valve
Left hand side connection
DN 15 0.36 0.67 1.00 (25) **1183446**



Right hand side connection
DN 15 0.36 0.67 1.00 (25) **1183447**



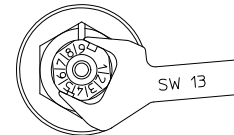
Universal tool
for thermostat "Uni LHB", (50) **1011489**
"Uni LH" and thermostatic valves "AV 9" and "AQ"

For setting of the nominal temperature value at the thermostat "Uni LHB", presetting at the valve as well as releasing of the graduation cap of the thermostats "Uni LH", "Uni LHZ", "Uni LD", "Uni LDV", "Uni LDVL", "Uni L" and special thermostats.
With additional Allen key (2.5 mm) to secure the thermostat "Uni LHB".



Presetting key (10) **1183962**
for thermostatic valves "AV 9, ADV 9, RFV 9, CV 9, E"
and fittings "Multiblock T/TU/TFU/T-RTL"
(manufactured since 2016)

The presetting value can be adjusted with the help of the marking on the hexagon of the valve insert.
The presetting key fits only in one position.

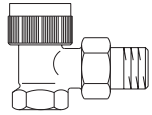


Alternatively, presetting can also be carried out with a spanner sized 13 mm.

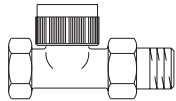
Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

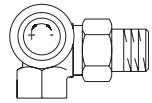
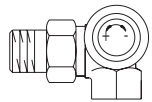
Thermostatic valves "CV 9"
infinitely adjustable presetting
chrome plated



Angle pattern valve

DN 15 0.36 0.67 1.20 (25) **1162054**

Straight pattern valve

DN 15 0.36 0.67 1.00 (25) **1162154**Double angle pattern valve
Left hand side connectionDN 15 0.36 0.67 1.00 (25) **1162472**

Right hand side connection

DN 15 0.36 0.67 1.00 (25) **1162473**

Chrome plated valves for thermostats
connection thread M 30 x 1.5
brass, chrome plated

Application:

Central heating and cooling systems with
closed circuits, for operation with non-
aggressive, harmless fluids (e.g. water or
suitable water and glycol mixtures according
to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C
(for short periods up to 130 °C)

Presetting is carried out by using the presetting
key, item no. 1183962, or a spanner 13 mm
or the Heimeier presetting key.

The thermostatic valves "CV 9" are not suitable
for steam installations.

All valve inserts are replaceable by using the
special tool "Demo-Bloc", page 1.47, without
draining the system.

All valves are suitable for the installation with
copper pipes.

Compression fittings page 1.140, reinforcing
sleeves, page 1.143.

Attention: Filling and draining of the system
before the valves are preset and the thermostat
is mounted.

All thermostatic valves "CV 9" have a white
protection cap with 3 frontal lugs.

Thermostats from page 1.08.

For further information see
"Technical information":

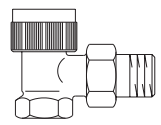


Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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Thermostatic valves "AF"
infinitely adjustable fine presetting

Valves for thermostats
connection thread M 30 x 1,5
bronze/brass, nickel plated

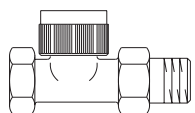
Angle pattern valve



DN 10	0.20	0.32	0.37	(25)	1180603
DN 15	0.20	0.32	0.37	(25)	1180604
DN 20	0.20	0.32	0.37	(25)	1180606

Application:
Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
Especially suitable for direct or indirect connection to district heating circuits.
Max. operating pressure p_s : 16 bar (PN 16)
Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 140 °C)

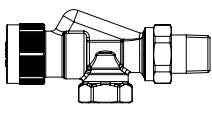
Straight pattern valve



DN 10	0.20	0.32	0.37	(25)	1180703
DN 15	0.20	0.32	0.37	(25)	1180704
DN 20	0.20	0.32	0.37	(25)	1180706

Central heating systems with a high temperature differential and systems requiring setting of low flow rates (low flow tolerances) for instance up to a maximum kv value of 0.32 at 2 K P-deviation, max. differential pressure 3.0 bar, against which the valves close.

Reversed angle pattern valve

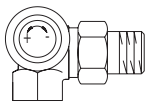


DN 10	0.20	0.32	0.37	(25)	1180903
DN 15	0.20	0.32	0.37	(25)	1180904

Especially suitable for panel radiators and for the replacement of KOSMOS fine adjustment valves type 52 F1 - F7 with vertically pointing handwheel.

All valves DN 10 up to DN 20 are suitable for the installation with copper pipes.

Double angle pattern valve
Left hand side connection

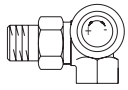


DN 10	0.20	0.32	0.37	(25)	1181460
DN 15	0.20	0.32	0.37	(25)	1181462

Compression fittings page 1.141, reinforcing sleeves page 1.143.

All valve inserts are replaceable by using the special tool "Demo-Bloc", page 1.47, without draining the system.

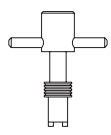
Right hand side connection



DN 10	0.20	0.32	0.37	(25)	1181461
DN 15	0.20	0.32	0.37	(25)	1181463

Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted.

Presetting key
for thermostatic valves "AF" and valve inserts GHF



with pocket **1180791**

All thermostatic valves "AF" have a red protection cap, the gland nut of the valves manufactured since end of 1993 has a red mark.

Thermostats from page 1.08.

Measuring device **1180793**



For the exact control of the presetting of the thermostatic valves "AF".

For further information see "Technical information":

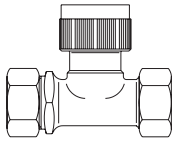


Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

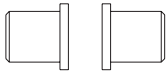
Thermostatic valves "AF"

infinitely adjustable fine presetting
by using the valve insert (except for item no. 1180957)



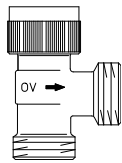
Straight pattern valve
both ports flat sealing with collar nut G 3/4 female thread
(length 66 mm)

DN 15	0.20	0.32	0.37	(25)	1180955
DN 15	0.55	1.05	1.80	(25)	1180957



Set 5 = 2 weldable tailpipes

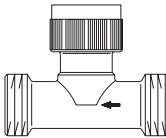
for valve DN 15 (10) **1060592**



As conversion valve G 3/4 male thread, flat sealing,
without weldable tailpipes and without collar nuts
for PRUSS regulating valves no. 120 - 1/2"

	0.20	0.32	0.37	(25)	1180964
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Angle pattern valve



0.20 0.32 0.37 (25) **1180965**

Straight pattern valve (length 80 mm)

0.20 0.32 0.37 (25) **1180967**

Straight pattern valve (length 70 mm)

Valves for thermostats

connection thread M 30 x 1.5
brass, nickel plated

Application:

Central heating and cooling systems with
closed circuits, for operation with non-
aggressive, harmless fluids (e.g. water or
suitable water and glycol mixtures according
to VDI 2035/ÖNORM 5195).

Especially suitable for direct or indirect
connection to district heating circuits.

Max. operating pressure p_s : 20 bar (PN 20)

Operating temperature t_s : 2 °C up to 120 °C
(for short periods up to 130 °C)

These conversion valves (except for
thermostatic valve "A", item no. 1180957) have
the same regulation characteristics as the
thermostatic valves "AF".

Item no. 1180957 is equipped with a valve
insert "A".

All valve inserts are replaceable by using the
special tool "Demo-Bloc", page 1.47, without
draining the system.

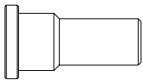

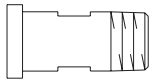




Attention: Filling and draining of the system
before the valves are preset and the thermostat
is mounted.

All thermostatic valves "AF" have a red
protection cap.

Thermostats from page 1.08.

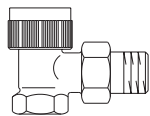
For further information see
"Technical information":



Article	Packing unit	Article-No.	Hint
Accessories			
Fittings and cap for straight pattern and conversion valves item no.: 1180964/65/67			
	Weldable nipple (steel)		
	DN 10	(10)	1010989
	DN 15	(10)	1010990
	Solder nipple (brass)		
	12 mm	(10)	1010991
	15 mm	(10)	1010992
	Screwed nipple (brass)		
	R ½ DIN EN 10 226-1	(10)	1010993
	Collar nut (brass)		
	G ⅞ female thread	(10)	1010994
	Threaded tailpipe (brass)		
	G ⅞ male thread x 12 mm	(5)	1010995
	G ⅞ male thread x 15 mm	(5)	1010996
	Threaded tailpipe (weldable nipple – steel)		
	G ¾ male thread x 15 mm	(10)	1010988
	G ⅞ male thread x 15 mm	(10)	1010998
	Cap (brass)		
	G ⅞ female thread	(10)	1010997

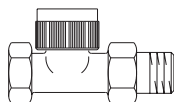
Article	kv at 1K P-dev.	kv at 2K P-dev.	Packing unit	Article-No.	Hint
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Thermostatic valves "ADV 9"
with double function and infinitely adjustable presetting



Angle pattern valve

DN 10	0.36	0.67	(25)	1188363
DN 15	0.36	0.67	(25)	1188364
DN 20	0.36	0.67	(25)	1188366



Straight pattern valve

DN 10	0.36	0.67	(25)	1188463
DN 15	0.36	0.67	(25)	1188464
DN 20	0.36	0.67	(25)	1188466

All other thermostatic valves "A, AV 9, AF, CV 9, E, RF and RFV 9" can also be equipped with the valve insert with double function and presetting, item no. 1186002, page 1.109.

Valves for thermostats
connection thread M 30 x 1.5
brass, nickel plated

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C
(for short periods up to 130 °C)

The thermostatic valves "ADV 9" are not suitable for steam installations.

The double function of these valves provokes an automatic closing of the valve to 5 % of the nominal flow (frost protection) should the thermostat be removed or destroyed.

Not suitable for use with electric actuators.

All valve inserts are replaceable by using the special tool "Demo-Bloc", page 1.60, without draining the system.

All valves DN 10 up to DN 20 are suitable for the installation with copper pipes.

Compression fittings: page 1.140, reinforcing sleeves: page 1.143.

Attention: Before filling and draining the system, the protection cap has to be opened by one turn starting from the shut position.

All thermostatic valves "ADV 9" have a grey-green protection cap with 3 frontal lugs and a grey-green coloured marking on the bonnet.

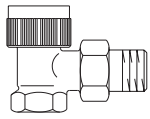
Thermostats from page 1.08.

For further information see "Technical information":



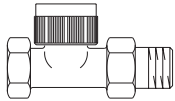
Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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Thermostatic valves "RFV 9"
reduced dimensions, infinitely adjustable presetting



Angle pattern valve

DN 10	0.36	0.67	1.10	(25)	1185003
DN 15	0.36	0.67	1.20	(25)	1185004
DN 20	0.36	0.67	1.30	(25)	1185006



Straight pattern valve

DN 10	0.36	0.67	0.90	(25)	1185103
DN 15	0.36	0.67	1.00	(25)	1185104
DN 20	0.36	0.67	1.20	(25)	1185106

Valves for thermostats
connection thread M 30 x 1.5
brass, nickel plated

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)

The thermostatic valves "RFV 9" are not suitable for steam installations.

Reduced dimensions compared with "AV 9".

Thermostatic valves "RFV 9" are not suitable for use in combination with female threaded compression fittings "Cofit S".

Compression fittings page 3.45, reinforcing sleeves page 1.143.

Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted.

All thermostatic valves "RFV 9" have a light green protection cap with 3 frontal lugs.

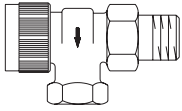
Thermostats from page 1.08.

For further information see "Technical information":



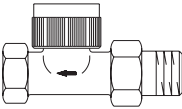
Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

Return flow valvesThermostatic valves "AV 9"
infinitely adjustable presetting

Reversed angle pattern valve for the return pipe

DN 10	0.36	0.67	1.10	(25)	1183793
DN 15	0.36	0.67	1.20	(25)	1183794



Straight pattern valve for the return pipe

DN 10	0.36	0.67	0.90	(25)	1183893
DN 15	0.36	0.67	1.00	(25)	1183894

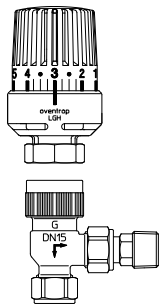
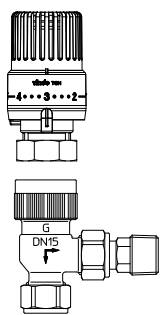
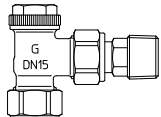
Valves for thermostatsconnection thread M 30 x 1.5
brass, nickel plated

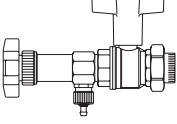
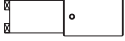


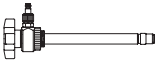
Application:

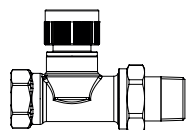
Central heating and cooling systems with
closed circuits, for operation with non-
aggressive, harmless fluids (e.g. water or
suitable water and glycol mixtures according
to VDI 2035/ÖNORM 5195).Max. operating pressure p_s : 10 bar (PN 10)Operating temperature t_s : 2 °C bis 120 °C

(for short periods up to 130 °C)

Especially suitable for installations with
reversed supply and return pipe and for upright
radiators.**Attention:** Reversed supply and return pipe at
the radiator might reduce the capacity.Compression fittings page 3.45, reinforcing
sleeves page 1.143.Presetting is carried out by using the presetting
key, item no. 1183962, or a spanner 13 mm
or the Heimeier presetting key.The return flow valves are not suitable for
use in combination with female threaded
compression fittings "Cofit S".All return flow valves are suitable for the
installation with copper pipes.The return flow valves "AV 9" have a white
protection cap with 3 frontal lugs.**Thermostats from page 1.08.**

Article	Packing unit	Article-No.	Hint
"Uniset" Radiator valve sets			
	<p>"Uniset Pro" - Bi-directional Thermostatic valve body, liquid ("Uni LGH") thermostat and Combi 3G lockshield valve</p> <p>15 mm x 1/2" BSP tail</p>	<p>(50) 1188585</p>	<p>For pumped 2 pipe systems PN 10 at 120 °C max. Angle nickel plated body having compression x 1/2" BSP union tail to suit copper pipe only.</p> <p>Fully bi-directional.</p> <p>Certified to EN 215.</p>
	<p>"Uniset Pro" - Bi-directional Thermostatic valve body, liquid (Vindo TGH) thermostat and Combi 3G lockshield valve</p> <p>15 mm x 1/2" BSP tail</p>	<p>(50) 1189785</p>	
Radiator lockshield valve "Combi 3G"			
	<p>"Combi 3G"</p> <p>15 mm x 1/2" BSP tail</p>	<p>(50) 1098362</p>	<p>Angle pattern nickel plated body having compression x 1/2" BSP union tail to suit copper pipe only. Pumped 2 pipe systems. PN 10 at 120 °C max.</p>

Article	Packing unit	Article-No.	Hint
"Demo-Bloc" special tool for replacing valve inserts <u>without draining the system</u>			
		1188051	The "Demo-Bloc" is supplied in a handy bag. Max. operating pressure p_s : 10 bar (PN 10) Including coupling set for valve insert "QA".
		(100) 1188400	The valve seat can be cleaned by use of the "Demo-Bloc" and the cleaning head.
		1188092	
		1188094	
		1188093	The differential pressure above the valve seat can be measured with the "Demo-Bloc" and the differential pressure measuring stem.



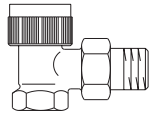
1.h Valves for large flow rates

Content

Thermostatic valves "A"	1.62
Thermostatic valves "A" (male thread)	1.63
Thermostatic valves "AZ V"	1.64
Thermostatic valves "AZ H"	1.64
Thermostatic valves "RF"	1.65

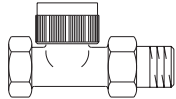
Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

Thermostatic valves "A"

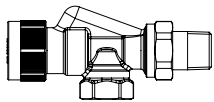
Angle pattern valve

DN 10	0.50	0.95	1.35	(25)	1181003
DN 15	0.50	0.95	1.35	(25)	1181004
DN 20	0.55	1.10	3.50	(25)	1181006
DN 25	0.55	1.10	3.50	(10)	1181008
DN 32	0.55	1.10	4.10	(10)	1181010



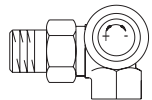
Straight pattern valve

DN 10	0.50	0.95	1.35	(25)	1181103
DN 15	0.50	0.95	1.35	(25)	1181104
DN 20	0.55	1.10	2.50	(25)	1181106
DN 25	0.55	1.10	3.30	(10)	1181108
DN 32	0.55	1.10	4.10	(10)	1181110

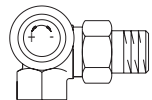


Reversed angle pattern valve

DN 10	0.50	0.95	1.35	(25)	1181403
DN 15	0.50	0.95	1.35	(25)	1181404
DN 20	0.55	1.10	2.20	(25)	1181406

Double angle pattern valve
Right hand side connection

DN 10	0.50	0.95	1.35	(25)	1181391
DN 15	0.50	0.95	1.35	(25)	1181393



Left hand side connection

DN 10	0.50	0.95	1.35	(25)	1181390
DN 15	0.50	0.95	1.35	(25)	1181392

Valves for thermostats

connection thread M 30 x 1.5
brass, nickel plated

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C
(for short periods up to 130°C)

Valves DN 20 up to DN 32, with high kvs value, to be used also for zone control as well as in one pipe, two pipe and gravity heating systems. Steam 0.5 bar at 110 °C.

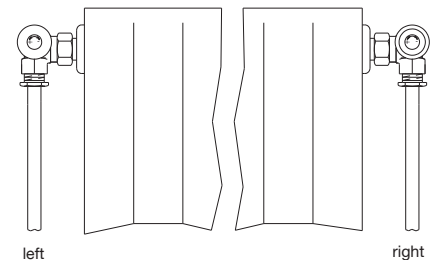
All valve inserts are replaceable by using the special tool "Demo-Bloc", page 1.60, without draining the system.

All valves DN 10 up to DN 20 are suitable for the installation with copper pipes.

All valves sized DN 15 can also be connected to the Oventrop composition pipe "Copipe".

Compression fittings page 1.140, reinforcing sleeves page 1.143.

All thermostatic valves "A" have a black protection cap.

Thermostats from page 1.08.

For further information see
"Technical information":



Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

Thermostatic valves "A" (male thread)

with G 3/4 male threaded pipe connection and R 1/2 male threaded radiator connection

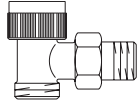
The G 3/4 male thread of the valves allows for the connection to copper, precision steel and plastic pipes as well as the Oventrop composition pipe "Copipe" by using the corresponding fittings.

Fittings page 1.136, compression fittings page 1.140, reinforcing sleeves page 1.143.

All thermostatic valves "A" have a black protection cap.

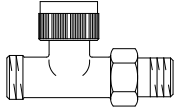
Thermostats from page 1.08.

Angle pattern valve



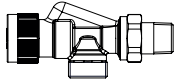
DN 15	0.50	0.95	1.35	(25)	1181097
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Straight pattern valve



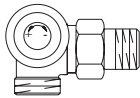
DN 15	0.50	0.95	1.35	(25)	1181197
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Reversed angle pattern valve



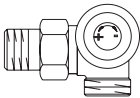
DN 15	0.50	0.95	1.35	(25)	1181492
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Double angle pattern valve
Left hand side connection

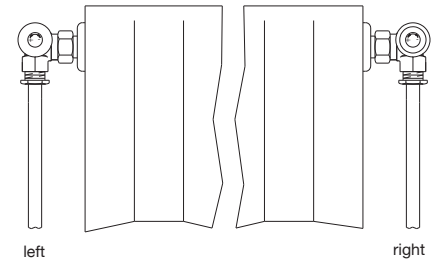


DN 15	0.50	0.95	1.35	(25)	1181396
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Right hand side connection



DN 15	0.50	0.95	1.35	(25)	1181397
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For further information see "Technical information":

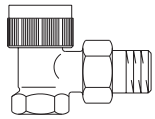


Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

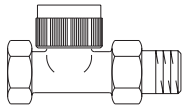
Thermostatic valves "AZ V"

infinitely adjustable presetting



Angle pattern valve

DN 15	0.47	0.92	3.00	(25)	1187504
DN 20	0.47	0.92	3.00	(25)	1187506



Straight pattern valve

DN 15	0.47	0.92	1.70	(25)	1187604
DN 20	0.47	0.92	2.30	(25)	1187606
DN 25	0.47	0.92	3.00	(10)	1187608

Valves for thermostats

connection thread M 30 x 1.5
brass, nickel plated

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
Max. operating pressure p_s : 16 bar (PN 16)
Operating temperature t_s : -10 °C up to 120 °C

With infinitely adjustable valve insert for high flow rates.

The thermostatic valves "AZ V" are, amongst others, used for the zone control in combination with thermostats or actuators in central heating and cooling systems.

All valve inserts are replaceable by using the special tool "Demo-Bloc", page 1.60, without draining the system.

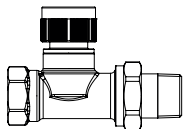
All valves DN 15 up to DN 20 are suitable for the installation with copper pipes.

Compression fittings page 1.140, reinforcing sleeves page 1.143.

Presetting key, item no. 1068585, page 3.18.

All thermostatic valves "AZ V" have a green protection cap.

Thermostatic valves "AZ H"



Straight pattern valve

DN 20	0.68	1.35	4.00	(25)	1188406
DN 25	0.68	1.35	4.90	(10)	1188408

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C
Valves with high flow capacity, especially suitable for zone control as well as one pipe, two pipe and gravity heating systems.

Not suitable for the installation with compression fittings.

The valve insert of the thermostatic valves "AZ H" can not be replaced by using the special tool "Demo-Bloc".

All thermostatic valves "AZ H" have an orange protection cap.

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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Thermostatic valves "RF"
reduced dimensions

Valves for thermostats
connection thread M 30 x 1.5
brass, nickel plated

Application:
Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)

Reduced dimensions compared with thermostatic valves "A".

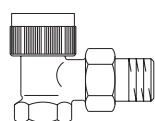
Compression fittings page 3.45, reinforcing sleeves page 1.143.

Thermostatic valves "RF" are not suitable for use in combination with female threaded compression fittings "Cofit S".

All valves are suitable for the installation with copper pipes.

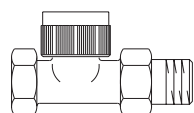
All thermostatic valves "RF" have a blue protection cap.

Thermostats from page 1.08.



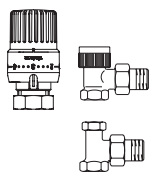
Angle pattern valve

DN 10	0.50	0.95	1.35	(25)	1184703	49 mm
DN 15	0.50	0.95	1.35	(25)	1184704	54 mm
DN 20	0.55	1.10	3.50	(25)	1184706	63 mm



Straight pattern valve

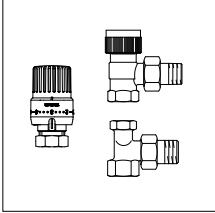
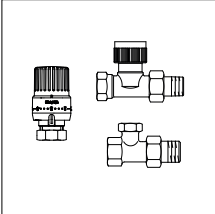
DN 10	0.50	0.95	1.35	(25)	1184803	75 mm
DN 15	0.50	0.95	1.35	(25)	1184804	83 mm
DN 20	0.55	1.10	2.50	(25)	1184806	98 mm

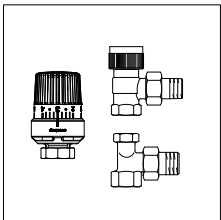
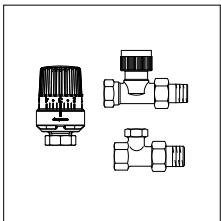
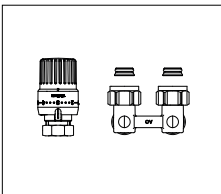
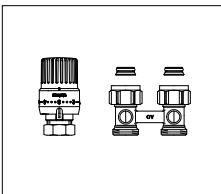


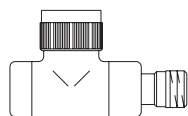
1.i Thermostatic valve sets

Content

Thermostatic valve sets with thermostat "vindo TH"	1.68
Thermostatic valve sets with thermostat "Uni LH"	1.69
Connection sets "Multiflex F" with thermostat "vindo TH"	1.69

Article	Packing unit	Article-No.	Hint
Thermostatic valve sets with thermostat "vindo TH"			Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g : 10 bar (PN 10) Thermostatic valves "AQ": Operating temperature t_s : 2 °C up to 110 °C Thermostatic valves "AV 9", RFV 9", "RF", "A" and radiator lockshield valve "Combi 2": Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)
Angle pattern			
consisting of: Thermostatic valve "AQ" with "Q-Tech" for automatic hydronic balancing, radiator lockshield valve "Combi 2", thermostat "vindo TH"			
DN 10	(10)	1713063*	
DN 15	(10)	1713064*	
			
consisting of: Thermostatic valve "AV 9" with infinitely adjustable presetting, radiator lockshield valve "Combi 2", thermostat "vindo TH"			
DN 10	(10)	1673703	
DN 15	(10)	1673704	
consisting of: Thermostatic valve "A", radiator lockshield valve "Combi 2", thermostat "vindo TH"			
DN 10	(10)	1671003	
DN 15	(10)	1671004	
Straight pattern			
consisting of: Thermostatic valve "AQ" with "Q-Tech" for automatic hydronic balancing, radiator lockshield valve "Combi 2", thermostat "vindo TH"			
DN 10	(10)	1713163*	
DN 15	(10)	1713164*	
			
consisting of: Thermostatic valve "RFV 9" with infinitely adjustable presetting, radiator lockshield valve "Combi 2", thermostat "vindo TH"			
DN 10	(10)	1675103	
DN 15	(10)	1675104	
consisting of: Thermostatic valve "RF", radiator lockshield "Combi 2", thermostat "vindo TH"			
DN 10		1672003	
DN 15		1672004	

Article	Packing unit	Article-No.	Hint
Thermostatic valve sets with thermostat "Uni LH"			
Angle pattern			
	consisting of: Thermostatic valve "AQ" with "Q-Tech" for automatic hydronic balancing, radiator lockshield valve "Combi 2", thermostat "Uni LH"		
	DN 10	(10)	1703063*
DN 15	(10)	1703064*	Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Thermostatic valves "AQ": Operating temperature t_s : 2 °C up to 110 °C Thermostatic valves "AV 9" and radiator lockshield valve "Combi 2": Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)
consisting of: Thermostatic valve "AV 9" with infinitely adjustable presetting, radiator lockshield valve "Combi 2", thermostat "Uni LH"			
DN 10	(10)	1683703*	
DN 15	(10)	1683704*	
Straight pattern			
	consisting of: Thermostatic valve "AQ" with "Q-Tech" for automatic hydronic balancing, radiator lockshield valve "Combi 2", thermostat "Uni LH"		
	DN 10	(10)	1703163*
DN 15	(10)	1703164*	
consisting of: Thermostatic valve "AV 9" with infinitely adjustable presetting, radiator lockshield valve "Combi 2", thermostat "vindo TH"			Application Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)
DN 10	(10)	1683803*	
DN 15	(10)	1683804*	
Connection sets "Multiflex F" with thermostat "vindo TH"			
Angle pattern			
	consisting of: "Multiflex F" ZB angle pattern isolating fitting and thermostat "vindo TH"		
	for G ¾ male thread	(10)	1715814*
for G ½ female thread	(10)	1715884*	
Straight pattern			
	consisting of: "Multiflex" ZB isolating fitting, thermostat "vindo TH"		
	for G ¾ male thread	(10)	1715813*
for G ½ female thread	(10)	1715883*	



1.j Exclusive radiator valves

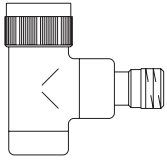
Content

Thermostatic valves "E"	1.72
Design handgrips	1.73
Radiator lockshield valves "Combi E"	1.74
Sets of compression fittings (1-fold)	1.74
T-pieces	1.74
Wall connection sets (1-fold)	1.74
Thermostatic valve sets "E"	1.75

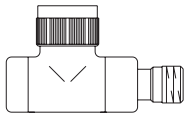
Article	kv at 1K P- dev.	kv at 2K P- dev.	kvs	Packing unit	Article-No.	Hint
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Thermostatic valves "E"

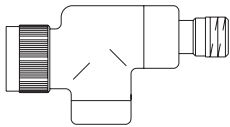
infinitely adjustable presetting

Angle pattern valve DN 15

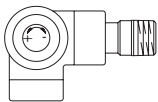
anthracite (RAL 7016)	0.36	0.67	1.20	(10)	1163032
sand blasted and nickel plated	0.36	0.67	1.20	(10)	1163042
chrome plated	0.36	0.67	1.20	(10)	1163052
white (RAL 9016)	0.36	0.67	1.20	(10)	1163062
gold plated	0.36	0.67	1.20	(10)	1163072
stainless steel finish	0.36	0.67	1.20	(10)	1163082

Straight pattern valve DN 15

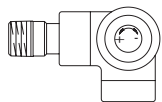
anthracite (RAL 7016)	0.36	0.67	1.00	(10)	1163132
sand blasted and nickel plated	0.36	0.67	1.00	(10)	1163142
chrome plated	0.36	0.67	1.00	(10)	1163152
white (RAL 9016)	0.36	0.67	1.00	(10)	1163162
gold plated	0.36	0.67	1.00	(10)	1163172
stainless steel finish	0.36	0.67	1.00	(10)	1163182

Reversed angle pattern valve DN 15


anthracite (RAL 7016)	0.36	0.67	1.00	(10)	1163232
chrome plated	0.36	0.67	1.00	(10)	1163252
white (RAL 9016)	0.36	0.67	1.00	(10)	1163262

Double angle pattern valve**Left hand side connection DN 15**


anthracite (RAL 7016)	0.36	0.67	1.00	(10)	1163432
chrome plated	0.36	0.67	1.00	(10)	1163452
white (RAL 9016)	0.36	0.67	1.00	(10)	1163462
stainless steel finish	0.36	0.67	1.00	(10)	1163482

Right hand side connection DN 15


anthracite (RAL 7016)	0.36	0.67	1.00	(10)	1163433
chrome plated	0.36	0.67	1.00	(10)	1163453
white (RAL 9016)	0.36	0.67	1.00	(10)	1163463
stainless steel finish	0.36	0.67	1.00	(10)	1163483

**Exclusive radiator valves
Valves for thermostats**connection thread M 30 x 1.5
brass**Application:**Central heating and cooling systems with
closed circuits, for operation with non-
aggressive, harmless fluids (e.g. water or
suitable water and glycol mixtures according
to VDI 2035/ÖNORM 5195).Max. operating pressure p_g : 10 bar (PN 10)
Operating temperature t_g : 2 °C up to 120 °C
(for short periods up to 130 °C),
2 °C up to 90 °C for the white models
and in stainless steel finish.Oventrop exclusive thermostatic radiator and
lockshield valves for an elegant home interior.
Technical data and nominal flow rate as
thermostatic valves "AV 9", page 1.50.All valve inserts are replaceable by using the
special tool "Demo-Bloc", page 1.60, without
draining the system.All valves are suitable for the installation with
copper pipes.**Attention:** Filling and draining of the system
before the valves are preset and the thermostat
is mounted.**Awards:**
 Design Award of
North Rhine Westphalia,
Award of Honour for Industrial Products

 Industrial Design Forum Hanover
Award iF

 Design Innovation of
Design Centre Essen
Award for high Quality of Design

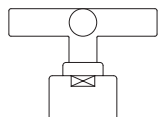
 Pragotherrm, Prague

 German Institute for Copper Berlin
Award "Product and Brass"
Admission to "The New Collection"
for exemplary Design Munich,
"Design Laboratory" Museum of Art
and Commerce Hamburg and
Design Museum London**Thermostats from page 1.08.**

Article	Article-No.	Hint
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Design handgrips
for thermostatic valves "E", chrome plated
connection thread M 30 x 1.5

For the manual, infinitely adjustable control of the room temperature. They do not contain a thermostatic sensor element.

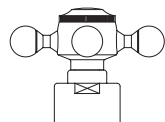


TARA ◊

1168052

Consisting of handgrip and adapter.

May be fitted onto the chrome plated thermostatic valves "E".
Max. flow temperature: 75 °C



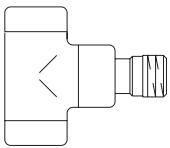
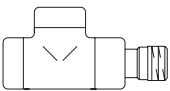
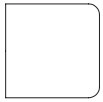
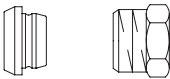

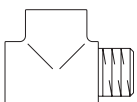
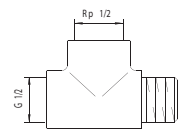
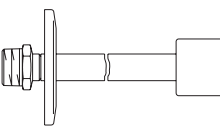
MADISON ◊

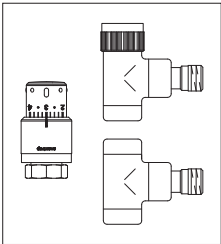
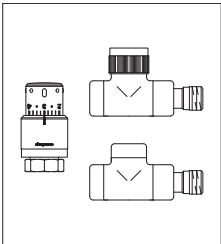
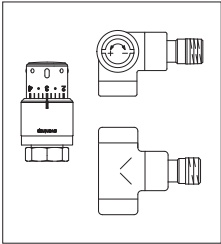
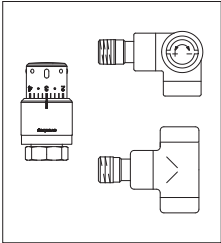
1168152

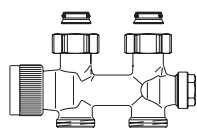
◊ Product and trademark of the company
Alois F. Dornbracht GmbH & Co. KG
Armaturenfabrik.

For further information see
"Technical information":



Article	Packing unit	Article-No.	Hint
Radiator lockshield valves "Combi E"			Technical data as "Combi 4", page 1.128.
	Angle pattern DN 15		Service tool, item no. 1090551, page 1.123.
	anthracite (RAL 7016)	(10) 1166032	
	sand blasted and nickel plated	(10) 1166042	
	chrome plated	(10) 1166052	
	white (RAL 9016)	(10) 1166062	
	gold plated	(10) 1166072	
	stainless steel finish	(10) 1166082	
	Straight pattern DN 15		
	anthracite (RAL 7016)	(10) 1167032	
	sand blasted and nickel plated	(10) 1167042	
	chrome plated	(10) 1167052	
	white (RAL 9016)	(10) 1167062	
	gold plated	(10) 1167072	
	stainless steel finish	(10) 1167082	
	Sets of compression fittings (1-fold)		Attention: When installing copper pipes with a wall thickness of ≤ 1 mm it is necessary to use reinforcing sleeves for the additional stabilisation of the pipe. Should the wall thickness exceed 1 mm, please contact the pipe manufacturer. Reinforcing sleeves for wall thickness = 1 mm, page 1.143. Note: The pipes are not held by the soft sealing fitting, they have to be fixed additionally. Regarding stretching of the pipe ends, the instructions of the pipe manufacturers have to be observed.
	for copper pipe according to DIN EN 1057 consisting of: compression ring, compression nut, cap		For further information see "Technical information":
	G 1/2 M x 12 mm sand blasted and nickel plated	1169392	
	G 1/2 M x 15 mm sand blasted and nickel plated	1169393	
	G 1/2 M x 16 mm sand blasted and nickel plated	1169394	
	G 1/2 M x 12 mm chrome plated	1169092	
	G 1/2 M x 15 mm chrome plated	1169093	
	G 1/2 M x 16 mm chrome plated	1169094	
	G 1/2 M x 12 mm white (RAL 9016)	1169192	
	G 1/2 M x 15 mm white (RAL 9016)	1169193	
	G 1/2 M x 16 mm white (RAL 9016)	1169194	
	G 1/2 M x 12 mm gold plated	1169292	
	G 1/2 M x 15 mm gold plated	1169293	
	G 1/2 M x 16 mm gold plated	1169294	
	G 1/2 M x 12 mm anthracite (RAL 7016)	1169492	
	G 1/2 M x 15 mm anthracite (RAL 7016)	1169493	
	G 1/2 M x 12 mm stainless steel finish	1169592	
	G 1/2 M x 15 mm stainless steel finish	1169593	
T-pieces			For the installation of heating elements in towel radiators.
	R 1/2 M x Rp 1/2 F, connection of heating element G 1/2 F		
	chrome plated	1167552	Item no. 1167552/62
	white	1167562	
	Wall connection sets (1-fold)		For the wall installation of the exclusive radiator valves. Consisting of: pipe \varnothing 15 mm white or chrome plated, L = 150 mm, R 1/2 male thread EN 10226-1 connection for the wall installation and compression fittings for the exclusive radiator valves.
	chrome plated		
	DN 15	1169553	
	white		
	DN 15	1169563	

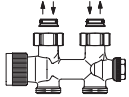


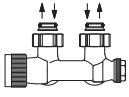
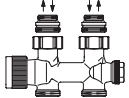
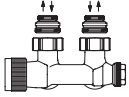
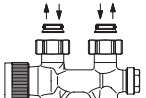
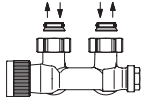
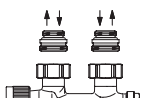
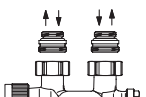
Article	Article-No.	Hint
<p>Thermostatic valve sets "E" chrome plated, DN 15</p>		<p>Exclusive radiator valves</p>
	<p>Angle pattern consisting of:</p> <p>Angle pattern valve, angle pattern lockshield valve, thermostat "Uni SH"</p>	<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g: 10 bar (PN 10) Operating temperature t_g: 2 °C up to 120 °C (for short periods up to 130 °C)</p>
	<p>Straight pattern consisting of:</p> <p>Straight pattern valve, straight pattern lockshield valve, thermostat "Uni SH"</p>	<p>Oventrop exclusive radiator and lockshield valves for an elegant home interior.</p> <p>Technical data and nominal flow rate as thermostatic valves "AV 9", page 1.50.</p>
	<p>Double angle pattern left hand side connection consisting of:</p> <p>Double angle pattern valve (left hand side connection), angle pattern lockshield valve, thermostat "Uni SH"</p>	<p>All valve inserts are replaceable by using the special tool "Demo-Bloc", page 1.60, without draining the system.</p>
	<p>Double angle pattern right hand side connection consisting of:</p> <p>Double angle pattern valve (right hand side connection), angle pattern lockshield valve, thermostat "Uni SH"</p>	<p>All valves are suitable for the installation with copper pipes.</p> <p>Compression fittings page 1.74.</p> <p>Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted.</p>



1.k "Multiblock T/ T-RTL" Fittings for radiators with centre connection

Content

"Multiblock T" Two pipe fitting	1.78
"Multiblock TU" One/two pipe fitting convertible	1.78
Design covers	1.79
Connection sets "Multiblock T"/"Uni SH" for towel radiators (radiators with Rp 1/2 female thread)	1.80
Connection sets "Multiblock T"/"pinox H" for towel radiators (radiators with Rp 1/2 female thread)	1.80
"Multiblock TFU" One/two pipe fitting convertible	1.81
Connection sets "Multiblock TFU"/"Uni SH" for towel radiators (radiators with Rp 1/2 female thread)	1.81
"Multiblock T-RTL"	1.82
Connection sets "Multiblock T-RTL"/"Uni SH"	1.83
Connection sets "Multiblock T-RTL"/"pinox H"	1.83

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint	
"Multiblock T" Two pipe fitting							
Fitting with presetting and isolating and draining facility brass, nickel plated, with soft seal Installation irrespective of the position of the supply and return pipe							
for the connection to radiators with G 3/4 male thread according to DIN EN 16313 (cone "Euro")							
	0.34	0.57	0.81	(5)	1184013	<p>"Multiblock T" for use on radiators with supply and return pipe connection. Distance between pipe centres 50 mm. Marking "OV 2" on valve body. To be used: – for two pipe operation – as thermostatic valve – as isolating fitting – for draining – for filling Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C) Technical data as thermostatic valves "AV 9". For the connection of copper, precision steel, stainless steel and plastic pipes as well as the Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142. Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G 3/4 according to DIN EN 16313 (cone "Euro") may also be used.</p> <p>"Multiblock TU" for use on radiators with supply and return pipe connection. Distance between pipe centres 50 mm. Supplied for two pipe operation. Conversion to one pipe operation see installation instructions. Marking "OV 1+2" on valve body. To be used: – for one or two pipe operation – as thermostatic valve – as isolating fitting Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C) Technical data as thermostatic valves "AV 9". kv-/kvs values valid for two pipe operation. Values for one pipe operation see "Technical information". For the connection of copper, precision steel, stainless steel and plastic pipes as well as Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142. Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G 3/4 according to DIN EN 16313 (cone "Euro") may also be used.</p> <p>Award: "Multiblock T" in combination with "Uni SH" in stainless steel finish  Design Centre Essen reddot design award  Design Award of the Federal Republic of Germany Nominated 2009</p>	
Straight pattern							
	0.34	0.57	0.81	(5)	1184014		
Angle pattern							
for the connection to radiators with Rp 1/2 female thread							
	0.34	0.57	0.81	(5)	1184083		
Straight pattern							
	0.34	0.57	0.81	(5)	1184084		
Angle pattern							
"Multiblock TU" One/two pipe fitting convertible							
Fitting with presetting, convertible, with isolating facility brass, nickel plated, with soft seal Installation irrespective of the position of the supply and return pipe							
for the connection to radiators with G 3/4 male thread according to DIN EN 16313 (cone "Euro")							
	0.34	0.57	0.81	(5)	1184023		
Straight pattern							
	0.34	0.57	0.81	(5)	1184024		
Angle pattern							
for the connection to radiators with Rp 1/2 female thread							
	0.34	0.57	0.81	(5)	1184033		
Straight pattern							
	0.34	0.57	0.81	(5)	1184034		
Angle pattern							

Article	kv at 2K P-dev.	Packing unit	Article-No.	Hint
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Design covers
for "Multiblock T/TU"



Straight pattern

anthracite	(5)	1184088
stainless steel finish	(5)	1184090
white	(5)	1184095
chrome plated	(5)	1184097



Angle pattern

anthracite	(5)	1184089
stainless steel finish	(5)	1184091
white	(5)	1184096
chrome plated	(5)	1184098



Special valve insert for reversed supply and return pipe with presetting

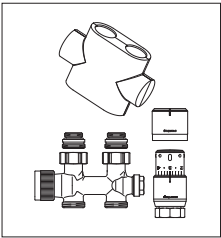
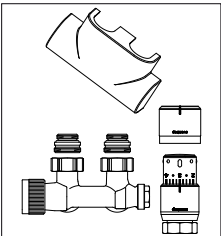
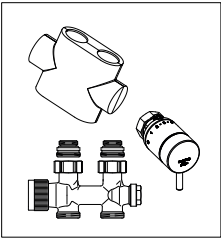


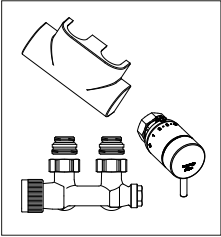
"AV6U"	0.52	(100)	1187077°
"AV9U"	0.57	(100)	1187078

As replacement for:

- "Multiblock T/TU/TFU"
- "Unibox E T"
- "Unibox E plus"
- "Unibox E vario"
- "Unibox E BV"

In case of reversed direction of flow for:

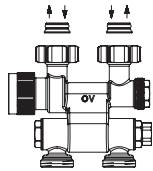
- "Unibox T"
- "Unibox TQ"
- "Unibox plus" (connection for room temperature control)
- "Unibox vario" (connection for room temperature control)
- "Unibox Q plus" (connection for room temperature control)

Article	Article-No.	Hint
<p>Connection sets "Multiblock T"/"Uni SH" for towel radiators (radiators with Rp ½ female thread)</p>		
<p>Straight pattern</p>		
	<p>consisting of:</p> <p>"Multiblock T", connection fitting with presetting, two pipe fitting Design cover "Uni SH" Thermostat with liquid sensor "SH-Cap"</p>	<p>"Multiblock T" for use on radiators with supply and return pipe connection. Distance between pipe centres 50 mm. Marking "OV 2" on valve body.</p> <p>To be used: -for two pipe operation -as thermostatic valve -as isolating fitting -for draining -for filling</p> <p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C)</p>
<p>white chrome plated stainless steel finish</p>	<p>1184183 1184283 1184383</p>	<p>Technical data as thermostatic valves "AV 9".</p> <p>"Uni SH": <u>with '0' setting,</u> temperature range 7–28 °C graduation on cap 0 ☼ 1-5</p> <p>White set: Thermostat "Uni SH" white/chrome plated</p>
<p>Angle pattern</p>		
	<p>consisting of:</p> <p>"Multiblock T", connection fitting with presetting, two pipe fitting Design cover "Uni SH" Thermostat with liquid sensor "SH-Cap"</p>	<p>Technical data as thermostatic valves "AV 9".</p> <p>"Uni SH": <u>with '0' setting,</u> temperature range 7–28 °C graduation on cap 0 ☼ 1-5</p> <p>White set: Thermostat "Uni SH" white/chrome plated</p>
<p>white chrome plated stainless steel finish</p>	<p>1184184 1184284 1184384</p>	<p>"Multiblock T" also available as one/two pipe fitting (convertible): page 1.78 Marking "OV 1+2" on valve body.</p>
<p>Connection sets "Multiblock T"/"pinox H" for towel radiators (radiators with Rp ½ female thread)</p>		
<p>Straight pattern</p>		
	<p>consisting of:</p> <p>"Multiblock T", connection fitting with presetting, two pipe fitting Design cover "pinox H" Thermostat with liquid sensor</p>	<p>Awards: "Multiblock T" in combination with "Uni SH" in stainless steel finish:  Design Centre Essen reddot design award  Design Award of the Federal Republic of Germany Nominated 2009</p> <p>"pinox H": <u>without '0' setting</u> Temperature range: 7 - 28 °C Graduation on cap: ☼ 1 - 5</p>
<p>white chrome plated</p>	<p>1184185 1184285</p>	
<p>Angle pattern</p>		
	<p>consisting of:</p> <p>"Multiblock T", connection fitting with presetting, two pipe fitting Design cover "pinox H" Thermostat with liquid sensor</p>	
<p>white chrome plated</p>	<p>1184186 1184286</p>	

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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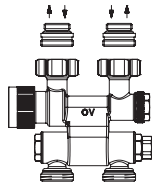
"Multiblock TFU" One/two pipe fitting convertible

Fitting with presetting, pivoting supply/return pipe connection with isolating and draining facility brass, nickel plated, with soft seal Installation irrespective of the position of the supply and return pipe



for the connection to radiators with G 3/4 male thread according to DIN EN 16313 (cone "Euro")

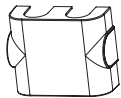
0.31	0.47	0.60	(5)	1184025
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for the connection to radiators with Rp 1/2 female thread

0.31	0.47	0.60	(5)	1184035
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Design covers
for "Multiblock TFU"



white	(5)	1184092
chrome plated	(5)	1184093

"Multiblock TFU" for use on radiators with supply and return pipe connection. Distance between pipe centres 50 mm. To be used:
 - for one or two pipe operation
 - as thermostatic valve
 - as isolating fitting
 - for draining
 - for filling
 - as angle or straight pattern model (pivoting) allowing the connection of the thermostat on the right or left hand side

Application:
 Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
 Max. operating pressure p_s: 10 bar (PN 10)
 Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C)
 Technical data as thermostatic valves "AV 9". kv-/kvs values valid for two pipe operation. Values for one pipe operation see "Technical information".
 For the connection of copper, precision steel, stainless steel and plastic pipes as well as Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142.
 Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G 3/4 according to DIN EN 16313 (cone "Euro") may also be used.

For further information see "Technical information":

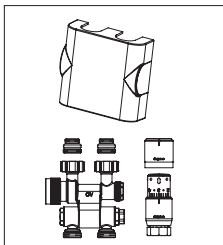


Connection sets "Multiblock TFU"/"Uni SH" for towel radiators (radiators with Rp 1/2 female thread)

Swivelling supply/return pipe connection

consisting of:

- "Multiblock TFU" connection fitting with presetting, one/two pipe fitting
- Design cover
- "Uni SH" Thermostat with liquid sensor
- "SH-Cap"

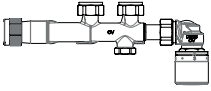
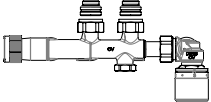
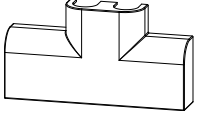
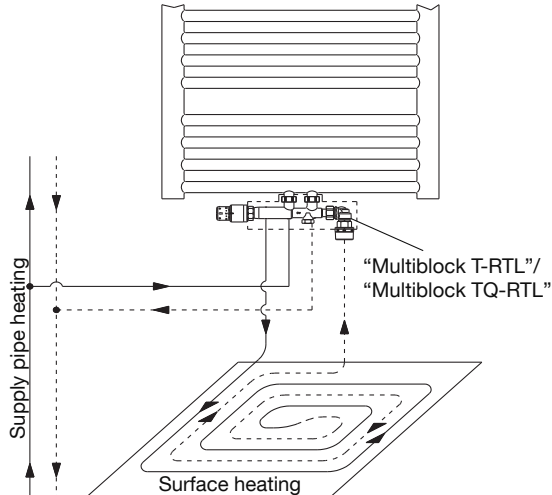

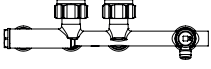
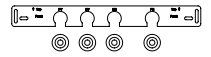


white	1184135
chrome plated	1184235

Application:
 Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
 Max. operating pressure: p_s: 10 bar (PN 10)
 Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C)

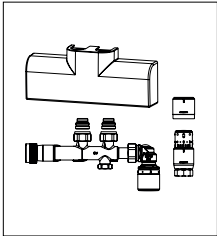
"Uni SH":
 with '0' setting,
 temperature range 7–28 °C
 graduation on cap 0 ☼ 1-5

White set:
 Thermostat "Uni SH" white/chrome plated

Article	Packing unit	Article-No.	Hint
"Multiblock T-RTL"			
Connection fitting for the combination of radiator and surface temperature balance, two pipe fitting, with presetting, isolating facility and integrated return temperature limiter, with soft seal, angle pattern, brass, nickel plated, including mounting aid			
		for the connection to radiators with G 3/4 male thread according to DIN EN 16313 (cone "Euro")	"Multiblock T-RTL" for simultaneous connection of radiators with supply and return connection and 50 mm distance between pipe centres as well as surface temperature balance. For separate control of room and return temperature (limitation).
		1184016	To be used: - for two pipe operation - as thermostatic valve at the radiator - as isolating fitting at the radiator - for surface temperature balance by use of a return temperature limiter
		for the connection to radiators with Rp 1/2 female thread	
		1184086	
Design cover			
		for "Multiblock T-RTL" and "Multiblock TQ-RTL"	Application: Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g : 10 bar (PN 10) Operating temperature t_g : 2 °C up to 70 °C
	chrome plated	1184077	Technical data as thermostatic valves "AV 9".
	white	1184087	
System illustration:			
			
For the connection of copper, precision steel, stainless steel and plastic pipes as well as the Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.142.			
Alternatively, the compression fittings of other manufacturers which are suitable for the connection to G 3/4 male thread according to DIN EN 16313 (cone "Euro") may also be used.			
The supply and return connections must be strictly observed to guarantee a perfect function of the fitting.			
		for "Multiblock T-RTL" and "Multiblock TQ-RTL"	
	chrome plated	1189077	
	white	1189087	
		Block for initial operation for "Multiblock T-RTL" and "Multiblock TQ-RTL"	The surface circuit can be filled, drained, bled and leak tested with installed block for initial operation.
		1184094	
		Mounting aid for "Multiblock T-RTL" and "Multiblock TQ-RTL"	Used for the pre-assembly and fixing of the pipes of the heating circuit and the surface heating.
		(5) 1189094	

Article	Article-No.	Hint
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Connection sets "Multiblock T-RTL"/"Uni SH" for the combination of towel radiators (with Rp 1/2 female thread) and surface heating



Angle pattern

consisting of:

"Multiblock T-RTL" connection fitting with presetting, isolating facility and integrated return temperature limiter, two pipe fitting, including mounting aid
 Design cover
 "Uni SH" Thermostat with liquid sensor
 "SH-Cap"

white	1184188
chrome plated	1184288

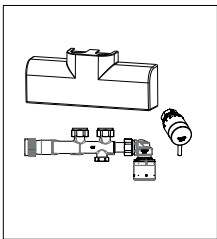
"Multiblock T-RTL" for simultaneous connection of radiators with supply and return connection and 50 mm distance between pipe centres as well as surface heating. For separate control of room and return temperature (limitation).

To be used:
 - for two pipe operation
 - as thermostatic valve at the radiator
 - as isolating fitting at the radiator
 - for surface temperature balance by use of a return temperature limiter

Application:
 Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).
 Max. operating pressure p_s : 10 bar (PN 10)
 Operating temperature t_s : 2 °C up to 70 °C
 Technical data as thermostatic valves "AV 9".

"Uni SH":
with '0' setting
 Temperature range: 7 - 28 °C
 Graduation on cap: 0 ☼ 1 - 5

Connection sets "Multiblock T-RTL"/"pinox H" for the combination of towel radiators (with Rp 1/2 female thread) and surface heating



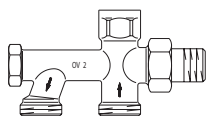
Angle pattern

consisting of:

"Multiblock T-RTL" connection fitting with presetting, isolating facility and integrated return temperature limiter, two pipe fitting, including mounting aid
 Design cover
 "pinox H" Thermostat with liquid sensor

white	1184189
chrome plated	1184289

"pinox H":
without '0' setting
 Temperature range: 7 - 28 °C
 Graduation on cap: ☼ 1 - 5



1.1 Valve sets, components and accessories for for two pipe heating systems

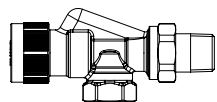
Content

"Bypass-Combi Duo" two pipe with shut off	1.86
"Duo" Two pipe connection piece with shut off	1.86
Connection pieces	1.86
"Duo" Two pipe connection piece without shut off	1.87
Two pipe radiator valve with insertion tube with shut off	1.87
Valve for "TKM" system	1.87
Angle pattern fitting	1.87

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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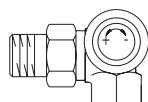
"Bypass-Combi Duo" two pipe with shut off
comprising the following components:

Thermostatic valves "A"



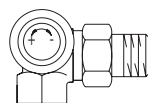
Reversed angle pattern valve

DN 15 0.50 0.95 1.35 (25) **1181404**



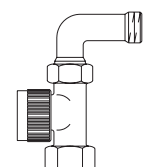
Double angle pattern valve
Right hand side connection

DN 15 0.50 0.95 1.35 (25) **1181393**



Left hand side connection

DN 15 0.50 0.95 1.35 (25) **1181392**



or
straight pattern valve with pipe elbow DN 15

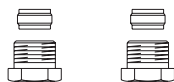
"A" 0.50 0.95 1.35 (25) **1181304**

"AV 9" 0.36 0.67 1.00 (25) **1184005**



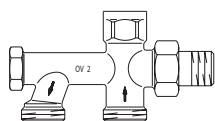
Connecting pipe
steel, chrome plated

15 x 560 mm long **1016951**
 15 x 1120 mm long **1016953**
 15 x 2000 mm long **1016954**



"Ofix CEP" Compression fittings
2-fold, for connecting pipe, metal to metal sealing

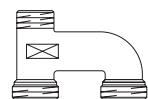
G 1/2 x 15 mm (50) **1016853**



"Duo" Two pipe connection piece with shut off

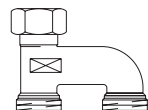
DN 15 G 3/4 male thread (25) **1013361**

Connection pieces
nickel plated



"h" fitting
without collar nut

G 1/2 M x G 3/4 M x G 3/4 M (10) **1028750**



with collar nut

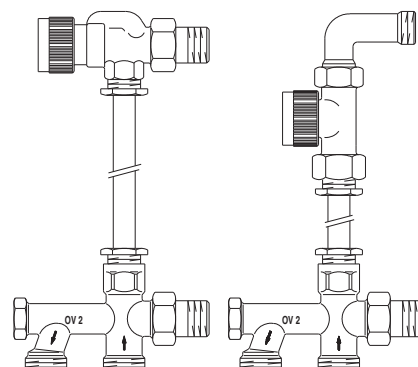
G 3/4 F x G 3/4 M x G 3/4 M (10) **1028851**

Valves / Valves for two pipe heating systems
connection thread M 30 x 1.5
brass, nickel plated

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

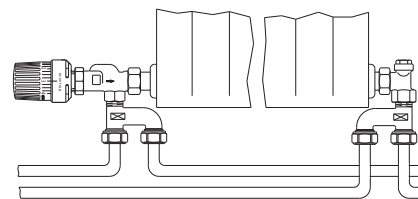
Max. operating pressure p_g : 10 bar (PN 10)
Operating temperature t_g : 2°C up to 120°C
(for short periods up to 130°C)



The male threads G 3/4 according to DIN EN 16313 (cone "Euro") of the two pipe connection pieces "Duo" allow for the connection to copper, precision steel and plastic pipes as well as the Oventrop composition pipe "Copipe" by using the corresponding fittings, page 1.142.

Distance between pipe centres 50 mm.

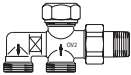
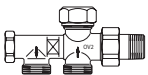
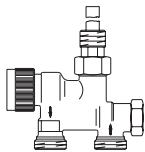
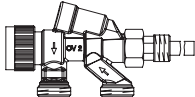
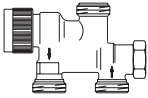

The "h" fitting G 1/2 x G 3/4 x G 3/4 is suitable for the installation of plastic, precision steel, copper and Oventrop composition pipe "Copipe" in combination with all Oventrop thermostatic radiator and lockshield valves DN 15 (Rp 1/2 F), distance between pipe centres 50 mm.

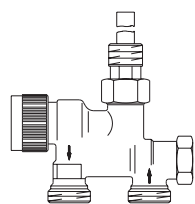


Item no. 1028851 for the connection of valves with male thread G 3/4.

Thermostats from page 1.08.

"Unofix" System for refurbishment of one pipe heating systems: Pages 1.99, 3.54
Single fittings: Page 1.141

Article	kv at 2K P-dev.	Packing unit	Article-No.	Hint
"Duo" Two pipe connection piece without shut off or with shut off and infinitely adjustable presetting with brass fitting				
DN 15 M 24 x 1.5 M				
	without shut off	(25)	1182551	Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C) Distance between pipe centres 35 mm.
	with shut off and infinitely adjustable presetting	(25)	1182651	
Compression fittings "Ofix" M 24 x 1.5: page 1.91.				
Two pipe radiator valve with insertion tube with shut off				
Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C) The insertion tube is 150 mm long, Ø 11 mm, distance between pipe centres 50 mm.				
	with vertical insertion tube	DN 15 G 3/4 M 0.90	1183581	Marking: 2 grooves on the front face of the lateral isolating stem.
	with horizontal insertion tube	DN 15 G 3/4 M 0.90	1643561	Marking "OV 2" on valve body.
Valve for "TKM" system				
	Two pipe valve	DN 15 G 3/4 M 0.90	(20) 1183661	These valves are required for the connection of radiators of the "TKM" system. The two pipe valve has an <u>anthracite</u> protection cap. Characteristic: 2 grooves on front face of the lateral isolating stem.
	Angle pattern fitting	G 3/4 c/nut x G 3/4 M	(10) 1189361	For the connection to G 3/4 male thread according to DIN EN 16313 (cone "Euro"). Thermostats from page 1.08.



1.m Valve sets, components and accessories for one pipe heating systems

Content

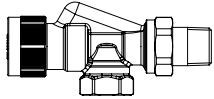
"Bypass-Combi Uno" one pipe	1.90
"Uno" One pipe connection piece	1.90
"Uno" One pipe connection piece M 24 x 1.5	1.91
"Ofix" Compression fittings M 24 x 1.5	1.91
"Cofit S" Compression fittings M 24 x 1.5	1.91
Plastic rosette cover	1.91
Radiator valve with insertion tube with fixed bypass and shut off	1.92
Valve for "TKM" system	1.92
Angle pattern fitting	1.92
Three-way conversion valves	1.93
Accessories	1.93
Isolation fittings	1.94
S-connection fitting, flat sealing	1.95
Tailpipe sets	1.95

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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"Bypass-Combi Uno" one pipe with infinitely adjustable bypass and shut off comprising the following components:

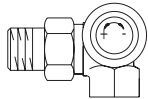
Thermostatic valves "A"

Reversed angle pattern valve



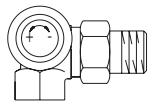
DN 15 0.50 0.95 1.35 (25) **1181404**

Double angle pattern valve
Right hand side connection



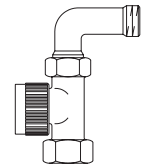
DN 15 0.50 0.95 1.35 (25) **1181393**

Left hand side connection



DN 15 0.50 0.95 1.35 (25) **1181392**

or
straight pattern valve with pipe elbow DN 15



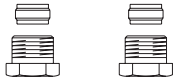
"A" 0.50 0.95 1.35 (25) **1181304**

Connecting pipe
steel, chrome plated



15 x 560 mm long **1016951**
15 x 1120 mm long **1016953**
15 x 2000 mm long **1016954**

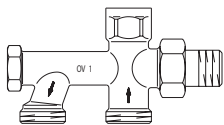
"Ofix CEP" Compression fittings
2-fold, for connecting pipe, metal to metal sealing



G ½ x 15 mm (50) **1016853**

"Uno" One pipe connection piece with infinitely adjustable bypass and shut off

with radiator isolating fitting

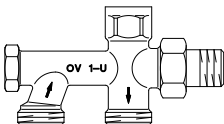


DN 15 (25) **1013161**
G ¾ male thread

with brass fitting

DN 15 (25) **1013162**
G ¾ male thread

reversed direction of flow
with radiator isolating fittings



DN 15 (25) **1013164**
G ¾ male thread

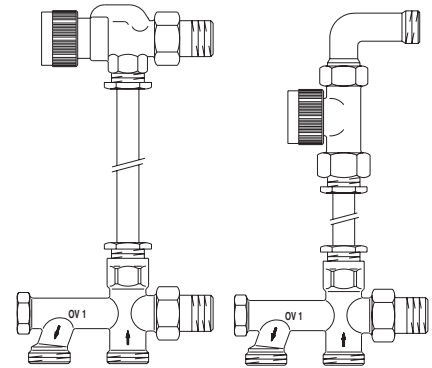
Valves / Valves for one pipe heating systems
connection thread M 30 x 1.5
brass, nickel plated

Application:

One pipe central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

One pipe heating systems with outputs up to 8.000 Watt per circuit.

Max. operating pressure p_s : 10 bar (PN 10)
Operating temperature t_s : 2 °C up to 120 °C
(for short periods up to 130 °C)



The male threads G ¾ according to DIN EN 16313 (cone "Euro") of the one pipe connection pieces "Uno" allow for the connection to copper, precision steel and plastic pipes as well as Oventrop composition pipes "Copipe" by using the corresponding fittings, page 1.141.
Distance between pipe centres 50 mm.

A special radiator isolating fitting at the distributor, item no. 1013161, prevents even small capacity radiators from self convection heating.

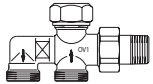
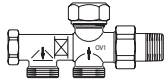
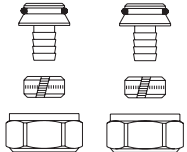
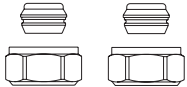
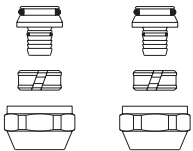
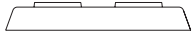
Radiator share: 35 % (factory setting), adjustable between 20 and 50%.

Marking "OV 1" on valve body.

With reversed direction of flow (return radiator side) compared with item no. 1013161 and 1013162.

Marking "OV 1-U" on valve body.

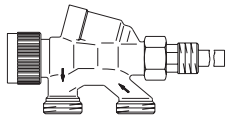
Thermostats from page 1.08.

Article	Packing unit	Article-No.	Hint
<p>"Uno" One pipe connection piece M 24 x 1.5 without shut off with fixed bypass or with shut off and infinitely adjustable bypass with brass fitting</p> <p>DN 15 M 24 x 1.5 male thread</p>			
	(25)	1182051	<p>Application: One pipe central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). One pipe heating systems with outputs up to 8.000 Watt per circuit. Max. operating pressure p_g: 10 bar (PN 10) Operating temperature t_g: 2 °C up to 120 °C (for short periods up to 130 °C) Distance between pipe centres 35 mm. Radiator share: 50 %</p>
	(25)	1182151	
<p>"Ofix" Compression fittings M 24 x 1.5 brass, collar nut nickel plated</p>			
	<p>"Ofix K" 2-fold for plastic pipes, metal to metal sealing plus O-ring</p> <p>14 x 2 mm (10) 1016823 16 x 2 mm (10) 1016824</p>		<p>Attention: When installing copper pipes with a wall thickness of ≤ 1 mm, it is necessary to use reinforcing sleeves for the additional stabilisation of the pipe. Should the wall thickness exceed 1 mm, please contact the pipe manufacturer. Reinforcing sleeves for wall thickness = 1 mm, see page 1.143. Note: The pipes are not held by the soft sealing fitting, they have to be fixed additionally. Regarding stretching of the pipe ends, the instructions of the pipe manufacturers have to be observed.</p>
	<p>"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, metal to metal sealing</p> <p>15 mm (50) 1016813</p>		
	<p>"Cofit S" Compression fittings M 24 x 1.5 universal application for composition pipe and, provided similar preparation is used, for plastic pipes (PE-X pipes), 2-fold, metal to metal sealing plus O-ring, brass, collar nut nickel plated</p> <p>14 x 2 mm (10) 1507854 16 x 2 mm (10) 1507855</p>		
		<p>Plastic rosette cover flat, distance between pipe centres 35 mm</p> <p>14 - 16 mm (25) 1016684</p>	

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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Radiator valve with insertion tube with fixed bypass and shut off

with horizontal insertion tube



DN 15	1.50	1.80	2.60	1183561
G 3/4 male thread				

Application:

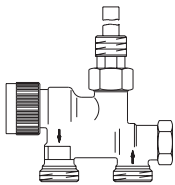
One pipe central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_g : 10 bar (PN 10)
Operating temperature t_g : 2 °C up to 120 °C (for short periods up to 130 °C)

The fixed bypass of the radiator valves with insertion tube is adjusted to a radiator flow share of 35 % (factory setting) at 2K P-deviation.

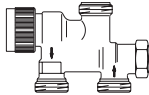
The insertion tube is 150 mm long, Ø 11 mm, distance between pipe centres 50 mm.

with vertical insertion tube



DN 15	1.50	1.80	2.20	1183571
G 3/4 male thread				

The one pipe radiator valve with vertical insertion tube is especially suitable for towel radiators. (The technical instructions of the radiator manufacturers have to be observed.)

Valve for "TKM" system

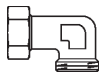
One pipe valve

DN 15	1.22	1.50	1.80	(20)	1183671
G 3/4 male thread					

Radiator share: 50 %

The valves are required for the connection of radiators of the "TKM" system.

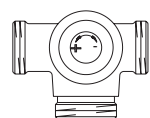
The one pipe valve has an orange protection cap.

Angle pattern fitting

G 3/4 c/nut x G 3/4 M	(10)	1189361
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For the connection to G 3/4 male thread according to DIN EN 16313 (cone "Euro").

Thermostats from page 1.08.

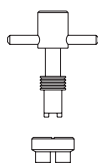


Three-way conversion valves
connection thread M 30 x 1.5
bronze/brass, nickel plated,
with presetting

DN 15 (25) **1180584**
Left hand side connection
DN 15 (25) **1180585**
Right hand side connection

DN 20 (25) **1180586**
Left hand side connection
DN 20 (25) **1180587**
Right hand side connection

Accessories



Presetting key
with pocket

for three-way conversion valve
with presetting **1010599**



Fittings, flat sealing
- to the radiator -

DN 15 (25) **1019394**
(R 1/2 male / collar nut G 3/4 female)
DN 20 (25) **1019396**
(R 1/2 male / collar nut G 1 female)



- to the bypass pipe -

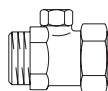
DN 15 (25) **1019384**
(G 1/2 female / collar nut G 7/8 female)
DN 20 (25) **1019386**
(G 3/4 female / collar nut G 1 1/8 female)



- to the pipework -

DN 15 (25) **1019374**
(weldable tailpipe / collar nut G 3/4 female)
DN 20 (25) **1019376**
(weldable tailpipe / collar nut G 1 female)

Isolating fitting, flat sealing
45 mm

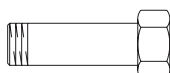


DN 15 (25) **1016194**
(G 3/4 male / collar nut G 3/4 female)
DN 20 (25) **1016196**
(G 1 male / collar nut G 1 female)



Compensating fittings, flat sealing
45 mm

DN 15 (25) **1016394**
(G 3/4 male / collar nut G 3/4 female)



79 mm
DN 15 (25) **1019194**
(G 1/2 male / collar nut G 3/4 female)
DN 20 (25) **1019196**
(G 1/2 male / collar nut G 1 female)

Three-way conversion valves and accessories

for the conversion of vertical one pipe heating systems to thermostatic systems.

The Oventrop three-way conversion valves have the same dimensions as the manual radiator valves according to TGL 43191 (models A, B, C, D).

Application:

One pipe entral heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 16 bar (PN 16)
Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)

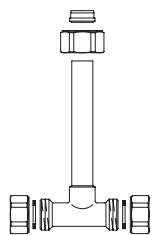
One pipe systems with top and bottom connection at the radiator may experience a slight warming up of the radiator even with the valves being closed, all depending on the size of the radiator, the type of radiator and the flow temperature. This warming up is system related and cannot be eliminated by using thermostatic radiator valves. Isolation fittings to reduce this warming up: page 1.94.

All three-way conversion valves have a yellow protection cap, the gland nut has a yellow marking since end of 1993.

For further information see "Technical information":



Article	Packing unit	Article-No.	Hint
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**Connection sets**

The connection set with bypass consists of a full exchange pack of all the fittings required in front of the radiator. These components are required in combination with the three-way conversion valves and isolating fittings.

Centre distance 552 mm DN 15	1010558
Centre distance 552 mm DN 20	1010559
Centre distance 992 mm DN 15	1010568
Centre distance 992 mm DN 20	1010569

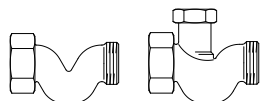
Valve insert with presetting

suitable for three-way conversion valves with connection thread M 30 x 1.0 (25) **1017056**

Old model.

Isolation fittings

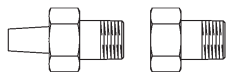
to reduce heat transfer between valve/T-piece and radiators of vertical one pipe installations.
The isolation fittings are supplied as a set for the top and the bottom connection of the radiator.



Isolation loop and shut off set

DN 15 (G 3/4 collar nut x G 3/4 male thread)	(25) 1016284
DN 20 (G 1 collar nut x G 1 male thread)	(25) 1016286

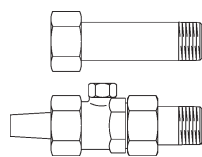
The isolation loop and shut off set are suitable for radiators with welded fitting.



Isolation tailpipe (set)

(reduced dimension – tailpipe and collar nut)

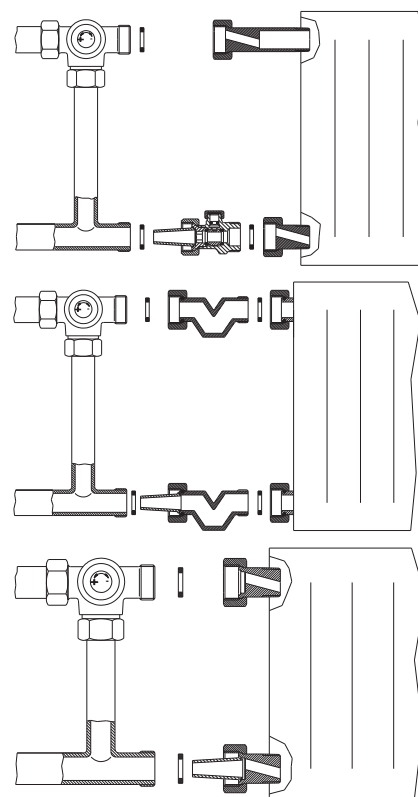
DN 15 (G 3/4 collar nut x G 1/2 male thread)	(25) 1016295
DN 20 (G 1 collar nut x G 1/2 male thread)	(25) 1016297




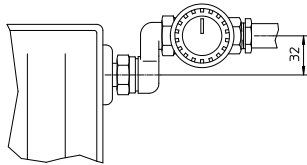
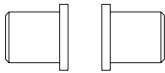
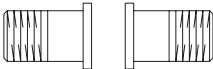

Isolation-compensation-shut off set

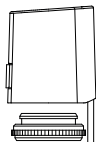
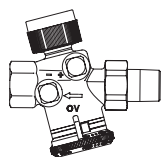
DN 15 (G 3/4 collar nut x G 1/2 male thread)	(25) 1016254
DN 20 (G 1 collar nut x G 1/2 male thread)	(25) 1016256

Refer to installation instructions.



The conversion from manual to thermostatic radiator valves and the installation of all a. m. components should be supervised by a qualified design engineer or plumber.

Article	Packing unit	Article-No.	Hint
			
S-connection fitting, flat sealing including radiator tailpipe (G 3/4 collar nut x R 1/2 male thread)			
DN 15 (G 3/4 male thread x G 3/4 collar nut)	(10)	1019497	 The S-connection fitting is suitable for the replacement of radiators using existing pipework. The max. distance between pipe centres is 2 x 32 mm = 64 mm.
DN 20 (G 3/4 male thread x G 1 collar nut)	(10)	1019498	
Tailpipe sets (2 pieces each)			
			
Set 5 = 2 weldable tailpipes			
for valve DN 15	(10)	1060592	
for valve DN 20	(10)	1060593	
			
Set 7 = 2 male threaded tailpipes			
R 1/2 for valve DN 15	(10)	1061492	
R 3/4 for valve DN 20	(10)	1061493	
			
Set 8 = 2 female threaded tailpipes			
Rp 1/2 for valve DN 15	(10)	1061392	
Rp 3/4 for valve DN 20	(10)	1061393	

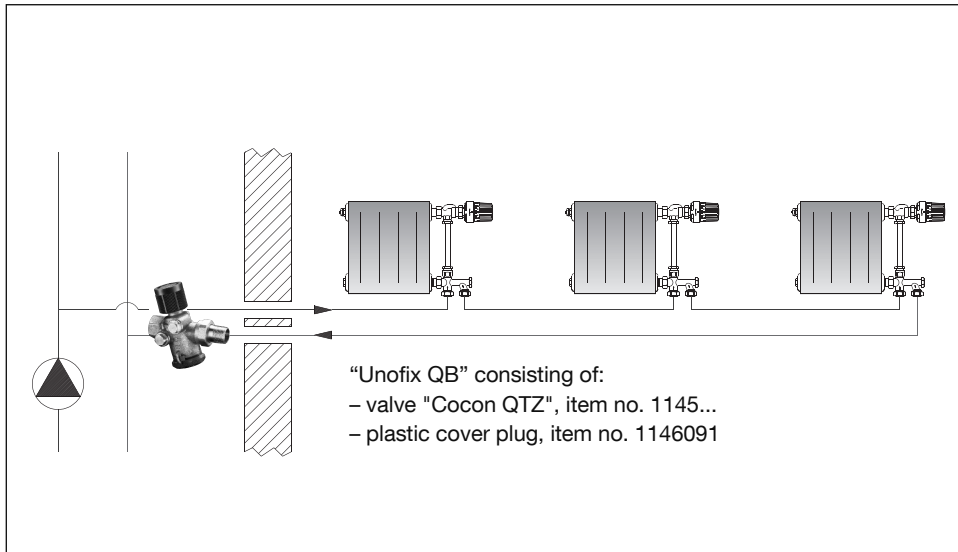


1.n "Unofix" Refurbishment of one pipe heating systems

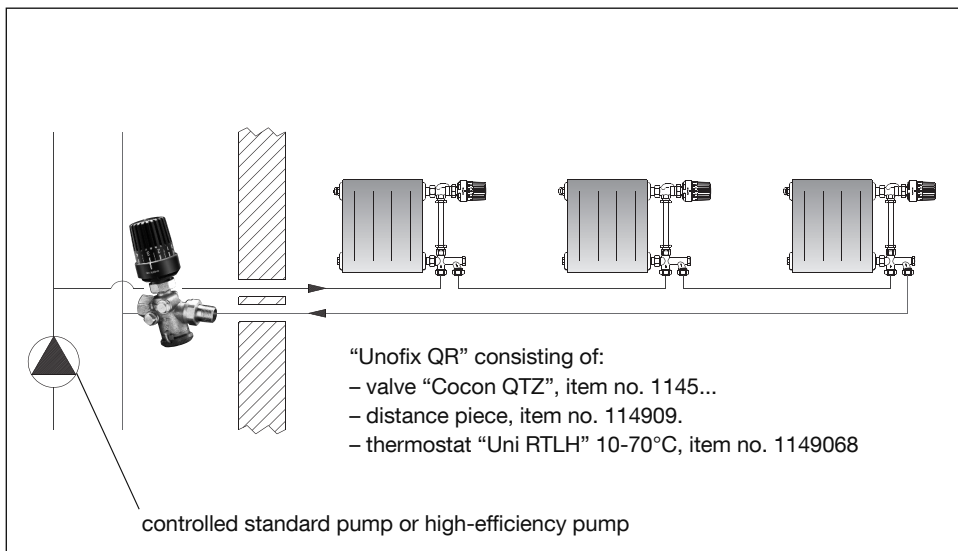
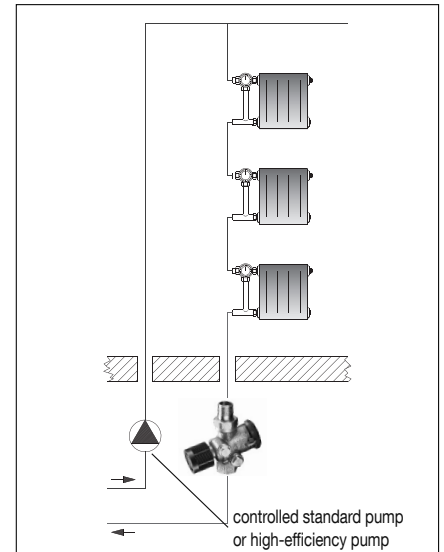
Content

System illustrations	1.98
"Cocon QTZ" Pressure independent control valves PN 16	1.99
"Aktor T" Electrothermal actuators	1.99
Accessories	1.100

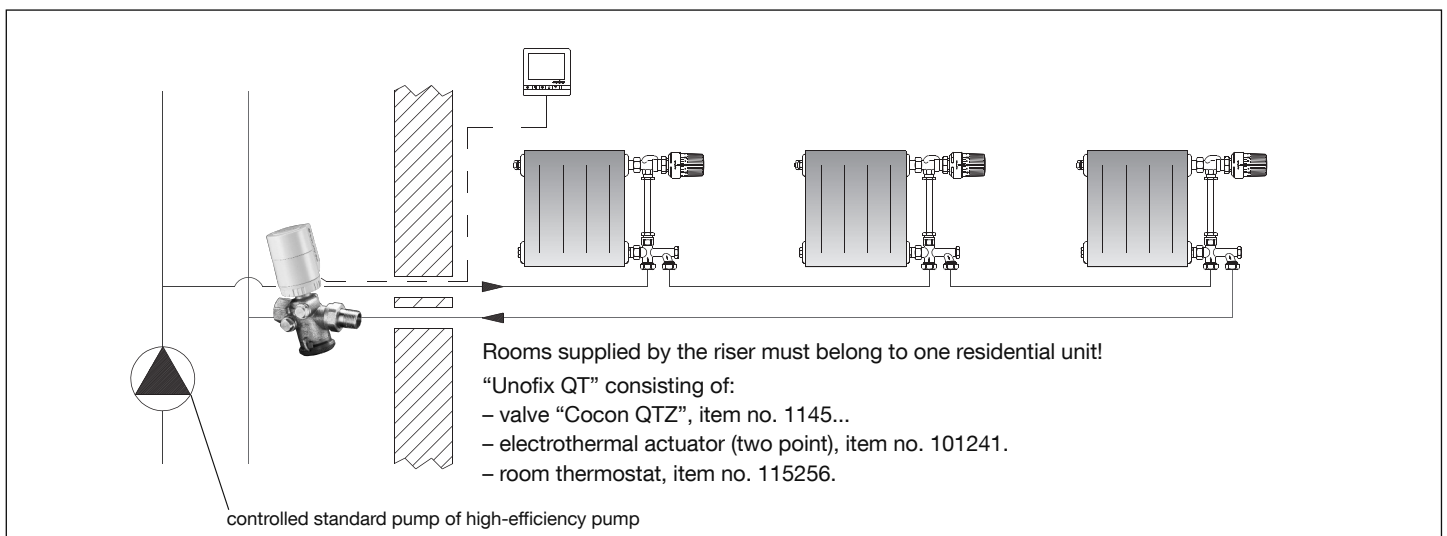
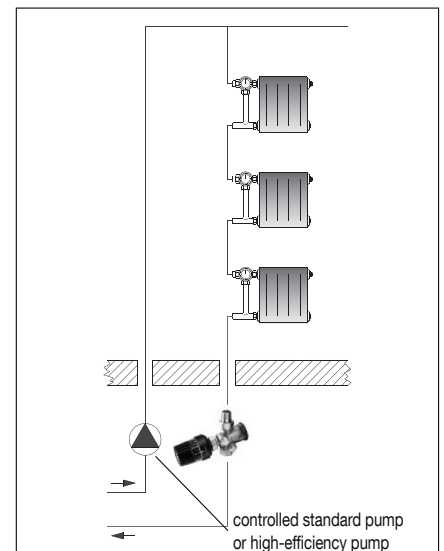
System illustrations



System illustration "Unofix QB"



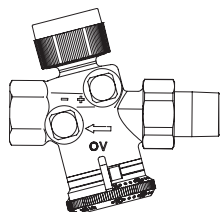
System illustration "Unofix QR"



System illustration "Unofix QT"

Article	Control range	Packing unit	Article-No.	Hint
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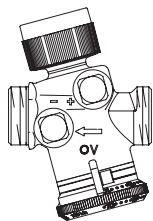
"Cocon QTZ" Pressure independent control valves PN 16
connection thread M 30 x 1.5
both ports connections for measuring technique "classic"
(closed with blind plugs)



Inlet port: coupling, outlet port: female thread

DN 15	30 - 210 l/h	(10)	1145504°
DN 15	90 - 450 l/h	(10)	1145604°
DN 15	150 - 1050 l/h	(10)	1145704°
DN 20	150 - 1050 l/h	(10)	1145506°
DN 20	180 - 1300 l/h	(10)	1145606°

both ports with connections for "classic" measuring technique
(closed with blind plugs)
both ports male thread



DN 10	30 - 210 l/h	(10)	1145563°
DN 10	90 - 450 l/h	(10)	1145663°
DN 15	30 - 210 l/h	(10)	1145564°
DN 15	90 - 450 l/h	(10)	1145664°
DN 15	150 - 1050 l/h	(10)	1145764°
DN 20	150 - 1050 l/h	(10)	1145566°
DN 20	180 - 1300 l/h	(10)	1145666°

The system is used for the refurbishment of one pipe heating systems with horizontal or vertical heating circuits.

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 16 bar (PN 16)
Operating temperature t_s : -10 °C up to +120 °C

Oventrop pressure independent control valves "Cocon QTZ" control the room temperature with the help of actuators or limit the return temperature with the help of the thermostat "Uni RTLH" (with distance piece item no. 114909.) The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.

All valves DN 15 and DN 20 are suitable for the installation with copper pipes.

Model one port with coupling, one port with female thread:

Compression fittings page 1.140, reinforcing sleeves page 1.143.

Model both ports male thread:

DN 10: G 1/2 male threaded connection, flat sealing

DN 15: G 3/4 male threaded connection for compression fittings "Ofix", pages 1.140, 1.141 and 1.143.

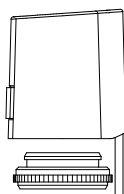
With insert item no. 1661100 (page 1.125) suitable for flat sealing tailpipes.

DN 20: G 1 male threaded connection for compression fittings, page 9.31.

With insert item no. 1650793 (page 3.59) suitable for flat sealing tailpipes.

Further models page 3.54.

"Aktor T" Electrothermal actuators



"Aktor T 2P" Electrothermal actuators (two point)
connection thread M 30 x 1.5

"H NC", closed with current "off", 230 V	1012415
"L NC", closed with current "off", 24 V	1012416

Oventrop electrothermal actuators are used for heating, ventilation and air conditioning. The actuators serve to control the room temperature and can be used e. g. with conventional radiators, radiators with integrated distributor, radiant ceiling panels, chilled ceiling systems and induction air systems in combination with two point room thermostats.

Further applications in bivalent heating installations.

Connecting cable 1 m.

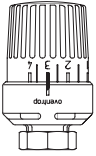


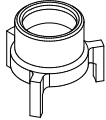
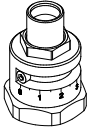
With "First-Open" function and stroke index. Simple plug-in connection with valve adapter.

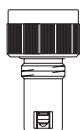
Actuators can be installed in any position. Due to their construction, the electrothermal actuators are secured against overvoltage which could occur when switching on neon tubes. A varistor is thus not necessary.

Tailpipe sets: Page 3.58

Flexible hoses: Page 3.62

Combination possibilities of valves and actuators: Page 3.08

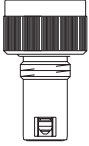
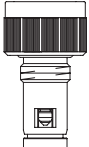
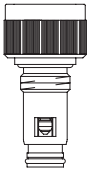
Article	Packing unit	Article-No.	Hint
"Uni RTHL" Thermostat connection thread M 30 x 1.5			
	anthracite	(10) 1149068	With '0' setting, may be limited or locked. Temperature range: 10° C - 70 °C The thermostats "Uni RTLH" may also be used in combination with the pressure independent control valves "Cocon QTZ" (with distance piece 114909.) for the limitation of the return temperature in one pipe risers.
Room thermostat - flush mounting digital			
	230 V 24 V	(40) 1152561 (40) 1152562	With LCD display and adjustable timed programme. Temperature range: 5 °C up to 35 °C Operating current range (item no. 1152561): 100 up to 230 V AC Heating: Use electrothermal actuators (two point) "closed with current off" (terminal "NC") or "open with current off" (terminal "NO").
Accessories			
	Plastic cap connection thread M 30 x 1.5	(10) 1146091	Cap for the protection of the control unit at full lift position. Is required if no actuator has been mounted.
	Distance piece with fixed minimum piston stroke	(10) 1149090	Distance piece for the optimisation of the return temperature in one pipe heating systems. Especially advantageous when using condensing appliances or for district heating systems. The distance piece is installed between the "Cocon QTZ" DN 10 up to DN 32 and the thermostat "Uni RTLH". A minimum flow rate of about 20% of the max. adjustable nominal value is maintained.
	Distance piece with adjustable minimum piston stroke	(10) 1149091	Minimum piston stroke infinitely adjustable, with recognition of the closing dimension. The required minimum flow rate can be set with the help of the scale. Can be used for "Cocon QTZ" DN 10 up to DN 20.



1.o Valve inserts for radiators with integrated distributor

Content

Valves inserts with "Q-Tech"	1.102
Valve inserts (M 30 x 1.5)	1.104
Valve inserts (squeeze connection)	1.106

Article	Article-No.	Hint																																					
<p>Valves inserts with "Q-Tech" for automatic hydronic balancing, infinitely adjustable presetting, with G ½ male thread and thermostat connection M 30 x 1.5 (in preparation)</p>																																							
 <p>GHQ with front connection</p>	1019080	<p>Application: Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max operating pressure: p_g: 10 bar (PN 10) Operating temperature t_g: 2 °C up to 110 °C Flow range: 10 - 170 l/h</p> <p>Function: The valve inserts with "Q-Tech" are combined control and regulating inserts which are used for room temperature control in combination with thermostats with liquid sensor or actuators. The max. flow rate is set to the required nominal value and is constantly maintained within the necessary proportional band.</p> <p>The valve inserts are designed for the installation into the valve bodies of integrated distributors (e.g. panel radiators).</p> <p>Presetting is carried out by using the presetting key supplied with the valve inserts.</p> <p>The valve inserts "GHQ" are not suitable for steam installations.</p> <p>All valve inserts "GHQ" have a <u>light grey</u> protection cap.</p> <p>Please observe installation instructions!</p> <p>The valve insert item no. 1019080 is suitable for the radiator types, e.g.:</p> <table border="0"> <tr> <td>- Arbonia</td> <td>- DiaNorm¹</td> <td>- Purmo¹</td> </tr> <tr> <td>(up to 2002)</td> <td></td> <td></td> </tr> <tr> <td>- Baufa</td> <td>- Dia-therm</td> <td>- Radson¹</td> </tr> <tr> <td>- bremo</td> <td>- HM-radiator</td> <td>- Rettig¹</td> </tr> <tr> <td>- DEF</td> <td>- Hoval</td> <td>- Runtal</td> </tr> <tr> <td>- Demrad</td> <td>- Manaut</td> <td></td> </tr> </table> <p>¹(up to end of 2010)</p> <p>The valve insert item no. 1019083 is suitable for the radiator types, e.g.:</p> <table border="0"> <tr> <td>- Caradon</td> <td>- Henrad</td> <td>- Schäfer</td> </tr> <tr> <td>- DURA</td> <td>- Korado</td> <td>- Superia (since 2005)</td> </tr> <tr> <td>- Ferroli/IMA</td> <td>- Brugman</td> <td>- Thor (since 2005)</td> </tr> <tr> <td></td> <td>(since 2013)</td> <td></td> </tr> <tr> <td>- Vasco</td> <td></td> <td></td> </tr> </table> <p>The valve insert item no. 1019082 is suitable for the radiator types, e.g.:</p> <table border="0"> <tr> <td>- De Longhi</td> <td>- Ribe</td> </tr> <tr> <td>- Veha</td> <td>- Brugman (up to 2013)</td> </tr> </table> <p>(Subject to technical modifications of the radiator manufacturers)</p>	- Arbonia	- DiaNorm ¹	- Purmo ¹	(up to 2002)			- Baufa	- Dia-therm	- Radson ¹	- bremo	- HM-radiator	- Rettig ¹	- DEF	- Hoval	- Runtal	- Demrad	- Manaut		- Caradon	- Henrad	- Schäfer	- DURA	- Korado	- Superia (since 2005)	- Ferroli/IMA	- Brugman	- Thor (since 2005)		(since 2013)		- Vasco			- De Longhi	- Ribe	- Veha	- Brugman (up to 2013)
- Arbonia	- DiaNorm ¹		- Purmo ¹																																				
(up to 2002)																																							
- Baufa	- Dia-therm	- Radson ¹																																					
- bremo	- HM-radiator	- Rettig ¹																																					
- DEF	- Hoval	- Runtal																																					
- Demrad	- Manaut																																						
- Caradon	- Henrad	- Schäfer																																					
- DURA	- Korado	- Superia (since 2005)																																					
- Ferroli/IMA	- Brugman	- Thor (since 2005)																																					
	(since 2013)																																						
- Vasco																																							
- De Longhi	- Ribe																																						
- Veha	- Brugman (up to 2013)																																						
 <p>GHQ with internal O-ring</p>	1019083																																						
 <p>GHQ with seat diameter 16 H 11</p>	1019082																																						



Article Thermostat connection: squeeze connection

Article-No.

Hint

GDQ
with front connection

1019099*

Please observe installation instructions!

The valve insert item no. 1019099 is suitable for the radiator types, e.g.:

- Arbonia
 - DiaNorm¹ - Baufa (up to 2002)
 - bremo
 - Dia-therm- Radson¹
 - HM-Heizkörper- Rettig¹
 - DEF
 - Hoval
 - Runtal
 - Demrad
 - Manaut
 - Purmo¹
- ¹(up to end of 2010)



GDQ
with internal O-ring

1019084*

The valve insert item no 1019084 is suitable for the radiator types, e.g.:

- Brötje (since 2003)-Ferroli/IMA-Schäfer
- Caradon
- Henrad
- Superia
- DURA
- Korado
- Brugmann (since 2013)
- Vasco

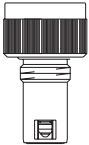
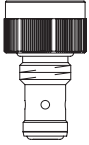
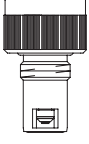
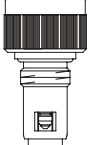
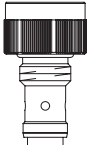


GDQ
with seat diameter 16 H 11

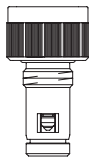
1019086*

The valve insert item no. 1019086 is suitable for the radiator types, e.g.:

- De Longhi
 - Thor
 - Brugmann (up to 2013)
 - Ribe
 - VEHA
 - Brötje (since approx. 1994 up to approx. 2003)
- (Subject to technical modifications of the radiator manufacturers)

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint														
Valve inserts (M 30 x 1.5)																				
	<p>GH with 6 presetting positions with G ½ male thread and thermostat connection M 30 x 1.5 with front connection Protection cap: white</p>																			
	0.35	0.70	1.05	(25)	1018080	<p>Application: Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g: 10 bar (PN 10) Operating temperature 2 °C bis 120 °C (for short periods up to 130 °C) Flow temperature up to 120 °C. The valve inserts are designed for the installation into the valve bodies of integrated distributors (e. g. panel radiators). The valve inserts are presettable to suit the hydraulic requirements of the heating system. The hydraulic values of the valve inserts GH correspond to the values of the inserts of the company Heimeier. The valve inserts are suitable for the thermostats "Uni XH", "Uni XHM", "Uni XHT", "Uni LH", "Uni LHB", "Uni LHZ", "Uni SH", "Uni CH", "vindo TH" and "pinox H" (pages 1.08 - 1.11). Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted. Please observe installation instructions!</p> <p>The valve inserts item no. 1018080, 1018280, 1018090 and 1648077 are suitable for the radiator types, e.g.:</p> <table border="0"> <tr> <td>-Arbonia (up to 2002)-DiaNorm¹</td> <td>-Purmo¹</td> </tr> <tr> <td>-Baufa</td> <td>-Dia-therm</td> </tr> <tr> <td>-bremo</td> <td>-HM-Heizkörper-Rettig¹</td> </tr> <tr> <td>-DEF</td> <td>-Hoval</td> </tr> <tr> <td>-Demrad</td> <td>-Manaut</td> </tr> </table> <p>¹(up to end of 2010)</p> <p>Is used for reversed supply and return pipe. Attention: The radiator output can be reduced when using this insert.</p> <p>The valve inserts item no. 1018082, 1018282 and 1018097 are suitable for the radiator types, e.g.:</p> <table border="0"> <tr> <td>-De Longhi</td> <td>-VEHA</td> </tr> <tr> <td>-Ribe</td> <td></td> </tr> </table> <p>(Subject to technical modifications of the radiator manufacturers)</p>	-Arbonia (up to 2002)-DiaNorm ¹	-Purmo ¹	-Baufa	-Dia-therm	-bremo	-HM-Heizkörper-Rettig ¹	-DEF	-Hoval	-Demrad	-Manaut	-De Longhi	-VEHA	-Ribe	
-Arbonia (up to 2002)-DiaNorm ¹	-Purmo ¹																			
-Baufa	-Dia-therm																			
-bremo	-HM-Heizkörper-Rettig ¹																			
-DEF	-Hoval																			
-Demrad	-Manaut																			
-De Longhi	-VEHA																			
-Ribe																				
Brass																				
	0.35	0.70	1.05	(25)	1018280															
Stainless steel																				
	<p>GHF with fine presetting with G ½ male thread and thermostat connection M 30 x 1.5 with front connection Protection cap: red</p>																			
	0.20	0.32	0.37	(25)	1018090															
	<p>GH with 6 presetting positions with G ½ male thread and thermostat connection M 30 x 1.5 with front connection Protection cap: white</p>																			
	0.35	0.63	1.00	(25)	1648077															
	<p>GH with 6 presetting positions with G ½ male thread and thermostat connection M 30 x 1.5 with seat diameter 16 H 11 Protection cap: white</p>																			
	0.35	0.70	1.05	(25)	1018082															
Brass																				
	0.35	0.70	1.05	(25)	1018282															
Stainless steel model																				
	<p>GHF with fine presetting with G ½ male thread and thermostat connection M 30 x 1.5 with seat diameter 16 H 11 Protection cap: red</p>																			
	0.20	0.32	0.37	(25)	1018097															

Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.	Hint
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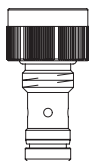
GH
with 6 presetting positions
with G 1/2 male thread
and thermostat connection M 30 x 1.5
with internal O-ring
Protection cap: white

	0.35	0.70	1.05	(25)	1018083	
Brass						
Stainless steel	0.35	0.70	1.05	(25)	1018283	

The valve inserts item no. 1018083, 1018283 and 1018098 are suitable for the radiator types, e.g.:

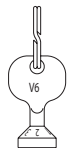
-Caradon	-Henrad	-Schäfer
-DURA	-Korado	-Superia (since 2005)
-Ferroli/IMA	-Brugman (since 2013)	-Thor (since 2005)
-Vasco		

(Subject to technical modifications of the radiator manufacturers)



GHF
with fine presetting
with G 1/2 male thread
and thermostat connection M 30 x 1.5
with internal O-ring
Protection cap: red

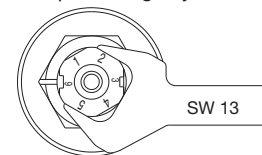
	0.20	0.32	0.37	(25)	1018098	
--	------	------	------	------	----------------	--



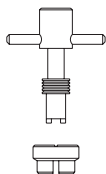
Presetting key (10) **1183961**
for valves "AV 6, ADV 6, RFV 6, E", fittings "Multiblock T/TU/TFU/T-RTL" (manufactured up to 2015) and valve inserts GH

The presetting value can be adjusted with the help of the marking on the hexagon of the valve insert.

The presetting key fits only in one position.



Alternatively, presetting can also be carried out with a spanner sized 13 mm.



Presetting key
for thermostatic valves "AF" and valve inserts GHF
with pocket **1180791**



Valve insert
with thread M 20 x 1.0
and thermostat connection M 30 x 1.5
Replacement for item no. 1879800 (M 30 x 1.0)

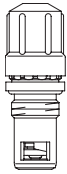
e. g. Buderus/Brötje 1982 - 1986 (25) **1879850**

Further valve inserts for other types of radiators are prepared or are available on request.

Attention: Filling and draining of the system before the valves are preset and the thermostat is mounted.

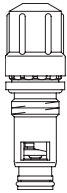
Article	kv at 1K P-dev.	kv at 2K P-dev.	kvs	Packing unit	Article-No.
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Hint

Valve inserts (squeeze connection)

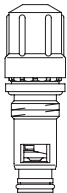
GD
with 8 presetting positions
with G ½ male thread
and squeeze connection
with front connection
Protection cap: white

0.32 0.63 1.05 (25) **1018099**



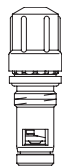
GD
with 8 presetting positions
with G ½ male thread
and squeeze connection
with external O-ring
with seat diameter 16 H 11
Protection cap: white

0.32 0.63 1.05 (25) **1018086**



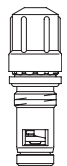
GDF
with 8 fine presetting positions
with G ½ male thread
and squeeze connection
with external O-ring
with seat diameter 16 H 11
Protection cap: red

0.14 0.24 0.47 (25) **1018096**



GD
with 8 presetting positions
with G ½ male thread
and squeeze connection
with internal O-ring
Protection cap: white

0.32 0.63 1.05 (25) **1018084**



GDF
with 8 fine presetting positions
with G ½ male thread
and squeeze connection
with internal O-ring
Protection cap: red

0.14 0.24 0.47 (25) **1018094**

Application:

Central heating systems with closed circuits,
for operation with non-aggressive, harmless
fluids (e.g. water or suitable water and glycol
mixtures according to VDI 2035/ÖNORM
5195).

Max. operating pressure p_g : 10 bar (PN 10)
Operating temperature 2 °C bis 120 °C
(for short periods up to 130 °C)

The valve inserts are designed for the
installation into the valve bodies of integrated
distributors (e.g. panel radiators).

The valve inserts are presettable to suit the
hydronic requirements of the heating system.

The hydronic values of the valve inserts GD
correspond to the values of the inserts of the
competitors.

The valve inserts are suitable for the
thermostats "Uni XD", "Uni LD", "vindo TD"
and "pinox D" (pages 1.13 - 1.14).

Presetting of the valve inserts GD and GDF is
carried out by hand.

Attention: Filling and draining of the system
before the valves are preset and the thermostat
is mounted.

Please observe installation instructions!

The valve insert item no. 1018099 is suitable
for the radiator types, e.g.:

-Arbonia (up to 2002)-DiaNorm ¹	-Purmo ¹
-Baufa	-Dia-therm
-bremo	-HM-Heizkörper-Rettig ¹
-DEF	-Hoval
-Demrad	-Manaut

¹(up to end of 2010)

The valve inserts item no. 1018086 and
1018096 are suitable for the radiator types,
e.g.:

-De Longhi	-Thor	-Brugmann (up to 2013)
-Ribe	-VEHA	

-Brötje (since approx. 1994 up to approx. 2003)

The valve inserts item no. 1018084 and
1018094 are suitable for the radiator types,
e.g.:

-Brötje (since 2003)	-Ferrol/IMA-Schäfer
-Caradon	-Henrad
	-Superia (since 2005)
-DURA	-Korado
	-Brugmann (since 2013)

-Vasco










(Subject to technical modifications of the
radiator manufacturers)



1.p Valve inserts






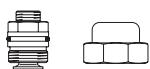



Content

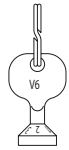
Valve inserts for valves with connection thread M 30 x 1.5	1.108
Valve inserts for valves with connection thread M 30 x 1.0 (for valves manufactured up to 1998)	1.110

Article	kv at 2K P-dev.	Packing unit	Article-No.	Hint
Valve inserts for valves with connection thread M 30 x 1.5				
	"AV 9, CV 9, RFV 9, E" and "Multiblock T-RTL" (manufactured since 2016)	0.67	(100) 1187047#	All valve inserts are replaceable with the help of the special tool "Demo-Bloc" without draining the system. Valve inserts for radiators with integrated distributors page 1.104. Also for "Hycocoon ETZ" (manufactured since 2016).
	"AV 6, RFV 6, E" and "Multiblock T-RTL" (manufactured up to 2015)	0.65	(100) 1187057#	Also for "Hycocoon ETZ" (manufactured up to 2015 inclusive).
	"A, RF" (DN 10 - DN 15, manufactured since 2015)	0.95	(100) 1187059#	
	"A" (manufactured since 2013) and "RF" (manufactured since 2014)	1.00 - 1.10	(100) 1187049#	
	"A" (DN 10 - DN 15) and "RF"	0.95	(100) 1187069°#	# These valve inserts are suitable for all valve bodies with connection thread M 30 x 1.5 of all sizes of the thermostatic valves "A, AV 9, AQ, AV 6, ADV 9, ADV 6, CV 9, E, EQ, AF, RF, RFV 9, RFQ and RFV 6".
	"A" (DN 20 - DN 32) and "AZ"	1.10	(100) 1187060°#	
	"AF"	0.32	(100) 1187352#	
	for thermostatic valves "AQ, RFQ, EQ", fittings "Multiblock TQ, TQ-RTL", and "Unibox TQ, Q plus"		(25) 1187065#	
	Replacement filter mesh for valve insert "QA"		Set = 10 replacement filter meshes	1187090*

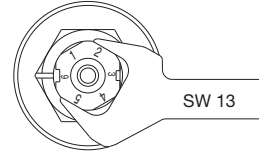
Distinctive features of the valves:

Series	Protection cap	Gland nut (since end of 1993)
A	black	unplated brass
ADV 6	grey-green	grey-green
ADV 9	grey-green (3 frontal lugs)	grey-green
AF	red	red
AQ/ EQ/ RFQ	light grey	
AV 9/ CV 9/ E	white (3 frontal lugs)	
AZ H	orange	
AZ V	green	
RF	blue	unplated brass
RFV 9	light green (3 frontal lugs)	

	Article	kv at 2K P-dev.	Packing unit	Article-No.	Hint
	"ADV 6"	0.65	(100)	1186001#	The double function of the "ADV 6" and "ADV 9" inserts provokes an automatic closing of the valve to 5 % of the nominal flow (frost protection) should the thermostat be removed or destroyed. Presetting as "AV 6" and "AV 9".
	"ADV 9"	0.67	(100)	1186002#	
	"PTB" and "Cocon 2TZ"	kvs = 0.45 P1 kvs = 1.0 P2 kvs = 1.8 P3	(100) (100) (100)	1186052# 1186053# 1186054	
	with stainless steel seat (especially for steam installations)		(100)	1186200#	
	Valve insert for three-way conversion valve with presetting		(100)	1187056	For three-way conversion valve item no. 1180584/85/86/87.
	"Combi LR" with cap		(100)	1187071	
	Special valve insert for reversed supply and return pipe for thermostatic valves "A, AV 9, AV 6, ADV 6, ADV 9, CV 9, E, AF, RF, RFV 9, RFV 6" without presetting	0.45	(100)	1187070#	
	Special valve insert for reversed supply and return pipe with presetting	"AV6U" 0.52 "AV9U" 0.57	(100) (100)	1187077° 1187078	As replacement for: - "Multiblock T/TU/TFU" - "Unibox E T" - "Unibox E plus" - "Unibox E vario" - "Unibox E BV" In case of reversed direction of flow for: - "Unibox T" - "Unibox TQ" - "Unibox plus" (connection for room temperature control) - "Unibox vario" (connection for room temperature control) - "Unibox Q plus" (connection for room temperature control)
	Gland nut for all valves (except for "AV 9, AV 6, CV 9, E, RFV 9, RFV 6, ADV 9, ADV 6, AQ, RFQ, EQ, A (manufactured since 2013), RF (manufactured since 2014) GH and GD") Wrench size 14 mm Set = 5 pieces		(10)	1017501	Suitable for M 30 x 1.5 and M 30 x 1.0.



Article	kv at 2K P-dev.	Packing unit	Article-No.	Hint
			(10) 1183961	
Presetting key for valves "AV 6, ADV 6, RFV 6, E", fittings "Multiblock T/TU/TFU/T-RTL" (manufactured up to 2015) and valve inserts GH				The presetting value can be adjusted with the help of the marking on the hexagon of the valve insert. The presetting key fits only in one position.



Alternatively, presetting can also be carried out with a spanner sized 13 mm.

Valve inserts for valves with connection thread M 30 x 1.0
(for valves manufactured up to 1998)


"AZ" (100) **1017060+**

1.10



"A, E and RF" (50) **1017069+**

0.95



"AV 6 and RFV 6" (25) **1017057+**

0.65

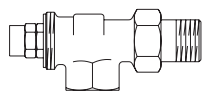


"F" (10) **1017351**

0.32

Also suitable for Ista radiator valves.
 Illustration of distinctive features: page 1.144.

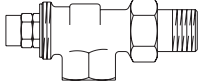
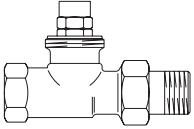
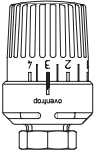
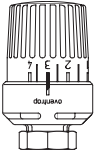



+ These valve inserts are suitable for all valve bodies with connection thread M 30 x 1.0 of all sizes of the valves "A, AV 6, ADV 6, AZ, E, RF and RFV 6".

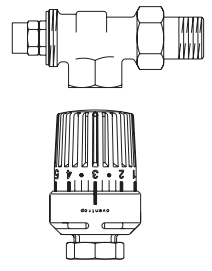
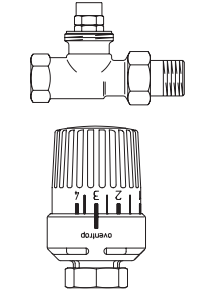



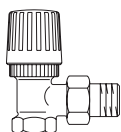
1.q Return temperature limiters

Content

Return temperature limiter valves for thermostat "Uni RTLH"	1.112
Thermostat "Uni RTLH"	1.112
Thermostat "Uni RTL"	1.112
Valve inserts	1.112
Extension	1.112
Gland nut	1.112
Return temperature limiter sets	1.113

Article	kv at 2K P-dev.	Packing unit	Article-No.	Hint
Return temperature limiter valves for thermostat "Uni RTLH"				
connection thread M 30 x 1.5 brass, nickel plated				
				Application: Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Combined radiator/surface heating. Max. operating pressure p_g : 10 bar (PN 10)
	0.30	(25)	1024363	
	0.30	(25)	1024364	
Straight pattern valve for the return pipe				
				Valve insert with double disc prevents inadvertent overheating, with frost protection. Compression fittings page 1.140, reinforcing sleeves page 1.143.
	0.30	(25)	1024463	
	0.30	(25)	1024464	
Thermostat "Uni RTLH"				
connection thread M 30 x 1.5				
				With '0' setting, may be limited or locked. Temperature range: 10 °C–40 °C factory setting (return temperature), may be increased to 50 °C by cancelling the limitation (40 °C).
white		(25)	1027165	
chrome plated		(25)	1027172	
anthracite		(10)	1149068	With '0' setting, may be limited or locked. Temperature range: 10° C - 70 °C The thermostats "Uni RTLH" may also be used in combination with the pressure independent control valves "Cocon QTZ" (with distance piece 114909.) for the limitation of the return temperature in one pipe risers.
Thermostat "Uni RTL"				
connection thread M 30 x 1.0				
				With '0' setting, may be limited or locked. RTL valves with connection thread M 30 x 1.0 are no longer produced.
white		(25)	1027100	
Valve inserts				
				Valve insert with double disc. Prevents inadvertent overheating, with frost protection.
for return flow valves connection thread M 30 x 1.5		(100)	1026981	
Extension				
L = 20 mm				
				For "Unibox RTL", "Unibox vario", "Unibox TQ" and "Unibox Q plus".
for RTLH valves		(10)	1022699	
Gland nut				
for all RTLH valves				
				Set = 5 pieces
		(10)	1026986	


Article	kv at 2K P-dev.	Article-No.	Hint
Return temperature limiter sets			
	Reversed angle connection consisting of:		Packed as a set. Valve and thermostat RTLH. Temperature range: 10 °C–40 °C factory setting (return temperature), may be increased to 50 °C by cancelling the limitation (40 °C).
Reversed angle pattern valve for the return pipe and thermostat "Uni RTLH"	DN 15	0.30	1028364
	Straight pattern connection consisting of:		For further information see "Technical information":
Straight pattern valve for the return pipe and thermostat "Uni RTLH"	DN 15	0.30	1028464
			

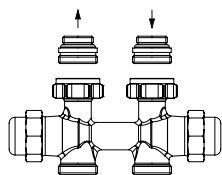


1.r Manual radiator valves

Content

Manual radiator valves "HRV"	1.116
Manual radiator valves "HR"	1.116

Article	kvs	Packing unit	Article-No.	Hint
Manual radiator valves "HRV" presetting by using the stem manual head white				<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).</p> <p>Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C) Steam 0.5 bar, 110 °C.</p> <p>Lengths according to DIN EN 215. The protection cap (as delivered) protects the handwheel against damages. The manual radiator valve is suitable for subsequent conversion to thermostatic operation by replacing the manual head.</p> <p>The valves are suitable for installation with copper pipes.</p> <p>Compression fittings page 1.140, compression fittings for valves with reduced dimensions page 3.45, reinforcing sleeves page 1.143.</p> <p>Valves with reduced dimensions are not suitable in combination with the female threaded compression fittings "Cofit S".</p> <p>No subsequent conversion to thermostatic operation.</p> <p>Lengths according to DIN 3842. Protection cap (as delivered) protects the handwheel against damages.</p> <p>For further information see "Technical information":</p> 
Angle pattern valve				
DN 10	3.20	(25)	1191503	
DN 15	3.20	(25)	1191504	
DN 20	3.20	(25)	1191506	
reduced dimensions, as thermostatic valves "RF"				
DN 10	3.20	(25)	1194503	
DN 15	3.20	(25)	1194504	
DN 20	3.20	(25)	1194506	
Straight pattern valve				
DN 10	1.70	(25)	1191603	
DN 15	1.70	(25)	1191604	
DN 20	2.30	(25)	1191606	
reduced dimensions, as thermostatic valves "RF"				
DN 10	1.70	(25)	1194603	
DN 15	1.70	(25)	1194604	
DN 20	2.30	(25)	1194606	
Manual radiator valves "HR" white handwheel				
Angle pattern valve				
DN 10	1.45	(25)	1190503	
DN 15	1.45	(25)	1190504	
DN 20	1.45	(25)	1190506	
Straight pattern valve				
DN 10	1.20	(25)	1190603	
DN 15	1.20	(25)	1190604	
DN 20	1.20	(25)	1190606	
Straight pattern valve				
DN 15	1.20		1190654°	



1.s "Q-Tech" Fittings for automatic hydronic balancing

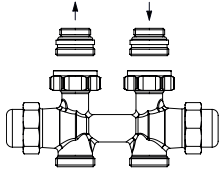
Content

"Multiflex FQ" Fittings for G 1/2 female thread	1.118
"Multiflex FQ" Fittings for G 3/4 male thread	1.118

Article	Packing unit	Article-No.	Hint
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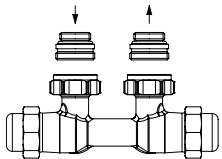
"Multiflex FQ" Fittings for G 1/2 female thread
 brass connection fitting with "Q-Tech" for automatic hydronic balancing, soft sealing, flat sealing, nickel plated, for radiators with integrated distributor **G 1/2 female thread**

Straight pattern



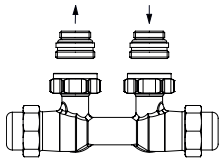
G 1/2 male x G 3/4 male (5) **1015873***

Angle pattern
 Left hand side connection



G 1/2 male x G 3/4 male (5) **1015874***

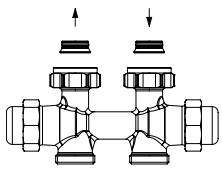
Angle pattern
 Right hand side connection



G 1/2 male x G 3/4 male (5) **1015875***

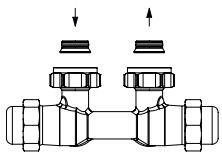
"Multiflex FQ" Fittings for G 3/4 male thread
 brass connection fitting with "Q-Tech" for automatic hydronic balancing, soft sealing, flat sealing, nickel plated, for radiators with integrated distributor **G 3/4 male thread**

Straight pattern



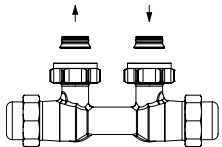
G 3/4 c/nut x G 3/4 M (5) **1015803***

Angle pattern
 Left hand side connection



G 3/4 c/nut x G 3/4 M (5) **1015804***

Angle pattern
 Right hand side connection



G 3/4 c/nut x G 3/4 M (5) **1015805***

Fitting with "Q-Tech" and isolating facility for radiators with integrated distributor.

Application:

Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

Max. operating pressure p_s : 10 bar (PN 10)
 Operating temperature t_s : 2 °C up to 110 °C
 Flow range: 10 - 170 l/h

The volume flow for the radiator determined in the heat demand calculation can be set directly at the fitting. The volume flow is automatically limited to the set value (automatic hydronic balancing).

Even if differential pressure variations occur in the heating system, the flow rate is constantly maintained within the necessary proportional band.

Setting is carried out by using the presetting key supplied with the fittings.

Isolation is carried out with the help of an Allen key.

The nipples supplied with the fittings are self sealing.

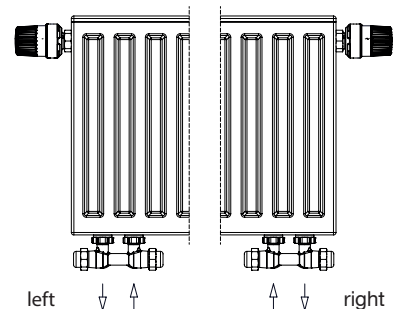
The fittings are not suitable for steam installations.

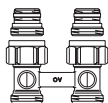
For further information see chapter "Fittings for radiators with integrated distributor": page 1.120

An existing angle pattern fitting for left hand side connection can be converted to a "Multiflex FQ" fitting for right hand side connection by swapping the valve insert and the isolating insert and vice versa.

For the connection of copper, precision steel, stainless steel and plastic pipes as well as the Oventrop composition pipe "Copipe", the Oventrop compression fittings are to be used, page 1.140.

Alternatively, the compression fittings of other manufacturers which are suitable for the connection to G 3/4 male thread according to DIN EN 16313 (cone "Euro") may also be used.

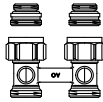

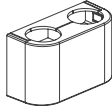
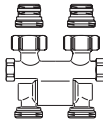
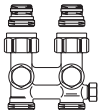
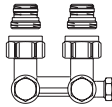
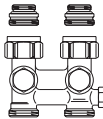
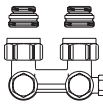
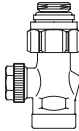
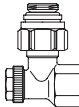


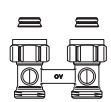
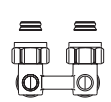
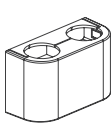
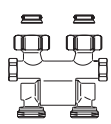
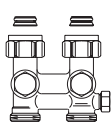
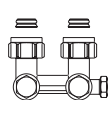
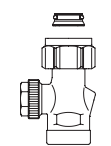
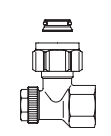

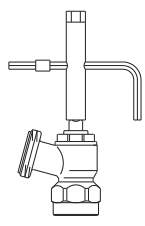



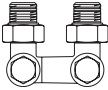
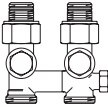
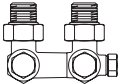
1.t Fittings for radiators with integrated distributor

Content

"Multiflex F" Fittings for G 1/2 female thread	1.120
"Multiflex F" Fittings for G 3/4 male thread	1.121
"Multiflex V" Fittings for G 1/2 female thread	1.122
"Multiflex V" Fittings for G 3/4 male thread	1.123
Radiator connection	1.124
Inversion fittings	1.124
Connection fittings	1.125
Plastic rosette cover, white	1.125

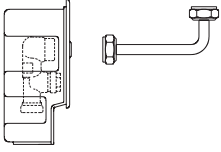
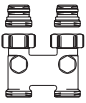


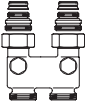


Article	Packing unit	Article-No.	Hint
"Multiflex F" Fittings for G ½ female thread brass connection fittings, soft sealing , flat sealing, nickel plated, for radiators with integrated distributor G ½ female thread			The connection to the radiator is self sealing. (Self sealing nipples are supplied with each fitting.) Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C) The counterpart (thread of the distributor) of the self sealing nipple has to be equipped with a bevel (without burrs) in order not to damage the ring gasket. Soft seal between connection fitting and nipple. The connection fittings for G ½ female thread are suitable for radiators with integrated distributor of the following manufacturers: Agis, Alarko, Arbonia, Baykan, Bemm, Biasi, Borer, Bremono, Caradon-Stelrad, Celikpan, Concept, Cöskünöz, DEF, Delta, Demrad, DiaNorm, Dia-therm, Dunafer, DURA, Ferroli, HM-Galant, Henrad, Hoval, Hudevad, IMAS, Itemar, Jugoterm, Korado, Manaut, Quinn, Purmo, Radson, Runtal, Schäfer, Starpan, Stelrad, Superia, TermoTeknik, Thor, US-Steel, Vasco, VEHA, Zehnder, Zenith. (Subject to change without notice). The ZB fittings (two pipe block) are used for radiators with integrated distributor for two pipe systems. # Isolation with limit stop The ZBU fittings (two pipe block, convertible) can be used for two pipe systems (as supplied) or for one pipe systems. If used in one pipe systems, the bypass stem has to be adjusted according to the enclosed installation instructions. The CEW fittings can be used for one pipe operation (like ZBU fittings but preset to one pipe operation with a radiator share of 35 %) or for two pipe operation. The Oventrop compression fittings are to be used, page 1.142. Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G ¾ according to DIN EN 16313 (cone "Euro") may also be used. "Combi 3" for presetting, isolating, filling and draining. Service tool item no. 1090551, page 1.121. Fittings with Rp ½ female thread are not suitable for compression fittings (only for threaded pipes).
Combinations distance between pipe centres 50 mm			
	ZB isolating fitting for two pipe systems		
	G ½ male x G ¾ male	(10) 1015883#	
	ZB angle pattern isolating fitting for two pipe systems		
	G ½ male x G ¾ male	(10) 1015884#	
	Design cover for ZB isolating and angle pattern isolating fittings, item no. 1015813/14/83/84, white	(5) 1015896	
	ZB isolating fitting for two pipe systems, pivoting		
	G ½ male x G ¾ male	(10) 1015781	
	ZBU preset isolating fitting for two pipe systems for filling and draining	(10) 1015993	
	ZBU angle pattern preset isolating fitting for two pipe systems for filling and draining	(10) 1015994	
	CEW preset isolating fitting for one pipe systems for filling and draining	(10) 1015933	
	CEW angle pattern preset isolating fitting for one pipe systems for filling and draining	(10) 1015934	
Single fittings			
	Isolating fitting "Combi 3"		
	G ½ male x Rp ½ female	(25) 1016175	
	G ½ male x G ¾ male	(25) 1016177	
	Angle pattern isolating fitting "Combi 3"		
	G ½ male x Rp ½ female	(25) 1016575	
	G ½ male x G ¾ male	(25) 1016577	








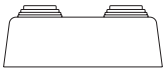
Article	Packing unit	Article-No.	Hint
<p>"Multiflex F" Fittings for G 3/4 male thread brass connection fittings, soft sealing, flat sealing, nickel plated, for radiators with integrated distributor G 3/4 male thread according to DIN EN 16313 (cone "Euro")</p>			<p>The connection fitting to the radiator is soft sealing.</p>
<p>Combinations distance between pipe centres 50 mm</p>			<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C)</p>
	<p>ZB isolating fitting for two pipe systems</p>	<p>G 3/4 collar nut x G 3/4 male (10) 1015813#</p>	<p>The connection fittings for G 3/4 male thread are suitable for radiators with integrated distributor of the following manufacturers: Baufa, Brötje, Brugman, Buderus, De'Longhi, Kermi, Radel, Ribe, Vogel + Noot. (Subject to change without notice).</p>
	<p>ZB angle pattern isolating fitting for two pipe systems</p>	<p>G 3/4 collar nut x G 3/4 male (10) 1015814#</p>	<p>The ZB fittings (two pipe block) are used for radiators with integrated distributor for two pipe systems.</p>
	<p>Design cover for ZB isolating and angle pattern isolating fittings, item no. 1015813/14/83/84, white (5) 1015896</p>		<p># Isolation with limit stop</p>
	<p>ZB isolating fitting for two pipe systems, pivoting G 3/4 collar nut x G 3/4 male (10) 1015711</p>		<p>The ZBU fittings (two pipe block, convertible) can be used for two pipe systems (as supplied) or for one pipe systems.</p>
	<p>ZBU preset isolating fitting for two pipe systems for filling and draining G 3/4 collar nut x G 3/4 male (10) 1015943</p>		<p>If used in one pipe systems, the bypass stem has to be adjusted according to the enclosed installation instructions.</p>
	<p>ZBU angle pattern preset isolating fitting for two pipe systems for filling and draining G 3/4 collar nut x G 3/4 male (10) 1015944</p>		<p>The Oventrop compression fittings are to be used, page 1.142.</p>
	<p>Single fittings Isolating fitting "Combi 3" G 3/4 collar nut x Rp 1/2 female (25) 1016166 G 3/4 collar nut x G 3/4 male (25) 1016168</p>		<p>Alternatively, the compression fittings of other manufacturers which are suitable for the connection to male thread G 3/4 according to DIN EN 16313 (cone "Euro") may also be used.</p>
	<p>Angle pattern isolating fitting "Combi 3" G 3/4 collar nut x Rp 1/2 female (25) 1016567 G 3/4 collar nut x G 3/4 male (25) 1016569</p>		<p>The presetting of the fittings is carried out with the help of a 4 mm Allen key.</p>
			<p>"Combi 3" for presetting, isolating, filling and draining.</p>
			<p>Fittings with Rp 1/2 female thread are not suitable for compression fittings (only for threaded pipes).</p>
			<p>For further information see "Technical information":</p>
			
	<p>Service tool 1090551</p>		

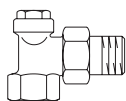
Article	Packing unit	Article-No.	Hint
<p>"Multiflex V" Fittings for G ½ female thread brass connection fittings, metal to metal tapered sealing, nickel plated, for radiators with integrated distributor G ½ female thread</p> <p>Combinations distance between pipe centres 50 mm</p>			<p>The connection fitting to the radiator is self sealing. (Self sealing nipples are supplied with each fitting.)</p> <p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g: 10 bar (PN 10) Operating temperature t_g: 2 °C up to 120 °C (for short periods up to 130 °C)</p> <p>The counterpart (thread of the distributor) of the self sealing nipple has to be equipped with a bevel (without burrs) in order not to damage the ring gasket. The connection fittings for G ½ female thread are suitable for radiators with integrated distributor of the following manufacturers: Agis, Alarko, Arbonia, Baykan, Bemm, Biasi, Borer, Bremono, Caradon-Stelrad, Celikpan, Concept, Cöskünöz, DEF, Delta, Demrad, DiaNorm, Dia-therm, Dunafer, DURA, Ferroli, HM-Galant, Henrad, Hoval, Hudevad, IMAS, Itemar, Jugoterm, Korado, Manaut, Quinn, Purmo, Radson, Runtal, Schäfer, Starpan, Stelrad, Superia, TermoTeknik, Thor, US-Steel, Vasco, VEHA, Zehnder, Zenith. (Subject to change without notice).</p> <p>The ZB fittings (two pipe block) are used for radiators with integrated distributor for two pipe systems. The CE fittings (Combi one pipe) with barrier preventing heat back-flow are used for radiators with two pipe distributors in one pipe systems. Tolerance adjustment of the radiator connection with the help of the patented body connection sealed with double O-ring. Preset radiator flow share: 35 % (factory setting)</p> <p>For further information see "Technical information":</p>
		ZB preset isolating fitting for two pipe systems for filling and draining G ½ male x G ¾ male (10) 1016291°	
		ZB angle pattern preset isolating fitting for two pipe systems for filling and draining G ½ male x G ¾ male (10) 1016292°	
		CE preset isolating fitting for one pipe systems for filling and draining G ½ male x G ¾ male (10) 1016391°	
		CE angle pattern preset isolating fitting for one pipe systems for filling and draining G ½ male x G ¾ male (10) 1016392°	



Article	Packing unit	Article-No.	Hint
<p>"Multiflex V" Fittings for G 3/4 male thread brass connection fittings, metal to metal tapered sealing, nickel plated, for radiators with integrated distributor G 3/4 male thread according to DIN EN 16313 (cone "Euro")</p>			
<p>Combinations distance between pipe centres 50 mm</p>			
	<p>ZB preset isolating fitting for two pipe systems for filling and draining</p>	<p>G 3/4 collar nut x G 3/4 male (10) 1016241°</p>	<p>The connection fitting to the radiator has a metal to metal seal.</p>
	<p>ZB angle pattern preset isolating fitting for two pipe systems for filling and draining</p>	<p>G 3/4 collar nut x G 3/4 male (10) 1016242°</p>	<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C)</p>
	<p>CE preset isolating fitting for one pipe systems for filling and draining</p>	<p>G 3/4 collar nut x G 3/4 male (10) 1016341°</p>	<p>The connection fittings for G 3/4 male thread are suitable for radiators with integrated distributor of the following manufacturers: Baufa, Brötje, Brugman, Buderus, De 'Longhi, Kermi, Radel, Ribe, Vogel + Noot. (Subject to change without notice). The ZB fittings (two pipe block) are used for radiators with integrated distributor for two pipe systems.</p>
	<p>CE angle pattern preset isolating fitting for one pipe systems for filling and draining</p>	<p>G 3/4 collar nut x G 3/4 male (10) 1016342°</p>	<p>The CE fittings (Combi one pipe) with barrier preventing heat back-flow are used for radiators with two pipe distributors in one pipe systems. Tolerance adjustment of the radiator connection with the help of the patented body connection sealed with double O-ring. Preset radiator flow share: 35 % (factory setting)</p>
	<p>Service tool 1090551</p>		
	<p>Single fitting Fitting G 3/4 collar nut x Rp 1/2 female (25) 1016304</p>	<p>Fittings with Rp 1/2 female thread are not suitable for compression fittings (only for threaded pipes). For further information see "Technical information":</p>	

Article	Packing unit	Article-No.	Hint
Radiator connection			
		"Multimodul" Radiator connection 1015651	The radiator connection module "Multimodul" allows the installation and operation of the heating system without radiators during the construction period. The module is suitable for one and two pipe heating systems and has isolating, draining, filling and presetting facilities. The module is supplied with a wall installation box with white cover (RAL 9010), connecting pipes, compression fittings and a protection cover made of Styrofoam.
Inversion fittings brass, nickel plated, for reversed supply and return pipe, for two pipe heating systems, for radiators with integrated distributor			
		with isolating facility distance between pipe centres 50 mm G 1/2 male x G 3/4 male (10) 1016363	
		angle pattern, with isolating facility distance between pipe centres 50 mm G 1/2 male x G 3/4 male (10) 1016463	
		with isolating facility distance between pipe centres 50 mm G 3/4 collar nut x G 3/4 male (10) 1016362	
		with isolating facility upper distance between pipe centres 50 mm lower distance between pipe centres 40 mm G 3/4 collar nut x G 3/4 male (10) 1016372	
		angle pattern, with isolating facility distance between pipe centres 50 mm G 3/4 collar nut x G 3/4 male (10) 1016462	
		Bridging fitting distance between pipe centres 50 mm G 3/4 male thread (10) 1016452	For bridging-over the supply and the return pipe in case of subsequent installation of radiators.

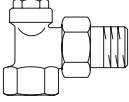
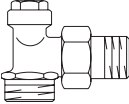
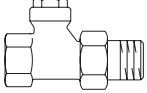
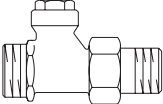

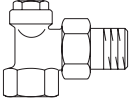
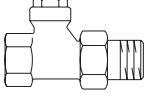
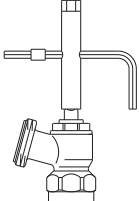
Article	Packing unit	Article-No.	Hint
Connection fittings brass			For "Multiflex V" fittings. Effective length: 15.5 mm
	Insert as set = 2 pieces		
	for cone according to DIN EN 16313 (cone "Euro")	(50) 1661100	For "Multiflex F", "Multiblock T/TU/TFU/TQ/T-RTL/TQ-RTL" and "Cocon QTZ" DN 15.
	Distance piece, nickel plated		Compression fittings, 2-fold, page 1.142.
	Set = 2 pieces G 3/4 female x G 3/4 male	(100) 1681650	G 3/4 male thread side with tapered sealing, according to DIN EN 16313 (cone "Euro").
	Nipple, unplated one port self sealing Set = 10 pieces		
	G 1/2 male x G 3/4 male	(10) 1028252	For "Multiflex F", "Multiblock T/TU/TFU/TQ/T-RTL/TQ-RTL". Port G 3/4 flat sealing.
	G 1/2 male x G 3/4 male	(10) 1028253	For "Multiflex V", port G 3/4 with tapered sealing according to DIN EN 16313 (cone "Euro").
	Nipple, nickel plated		
	G 1/2 male x G 3/4 male	(10) 1028161	Port G 3/4 with tapered sealing according to DIN EN 16313 (cone "Euro"). Port G 1/2 self sealing.
	Double nipple, brass, nickel plated		
	G 3/4 male x G 3/4 male	(10) 1028263	Port G 3/4 with tapered sealing according to DIN EN 16313 (cone "Euro").
Plastic rosette cover, white flat, distance between pipe centres 50 mm			
	Distance between pipe centres 50 mm Perforation		For "Bypass-Combi" distributors, valves with insertion tube, two pipe connection pieces from page 1.86, "Multiblock T/TU/TFU/TQ" from page 1.78 and "Multiflex" fittings from page 1.120.
	12 mm	(25) 1016671	
	14 mm	(25) 1016672	
	15 mm	(25) 1016673	
	16 mm	(25) 1016674	
	18 mm	(25) 1016675	
	for pipe diameters 10, 12, 15, 16, 18, 20 mm, distance between pipe centres 50 mm	(25) 1016662	


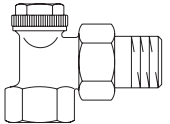
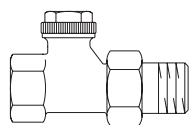
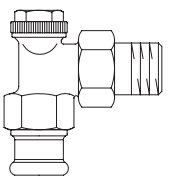
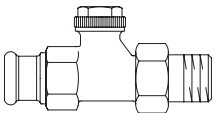
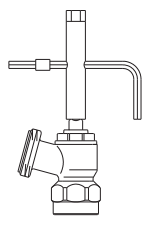



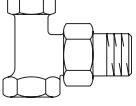

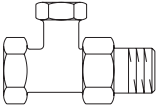
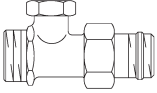
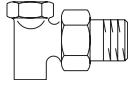
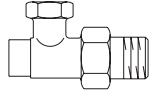
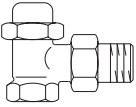
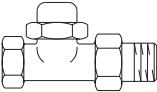
1.u Lockshield valves for conventional radiators

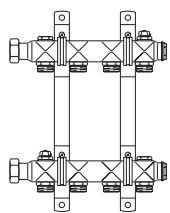
Content

"Combi 4"	1.128
"Combi C"	1.128
"Combi 3"	1.129
"Combi 2"	1.130
"Combi LR"	1.130

Article	kvs	Packing unit	Article-No.	Hint
"Combi 4" presetting with memory lock, isolating, filling and draining				
Bronze/brass model, female thread according to EN 10226-1 Angle pattern nickel plated				
	DN 10	1.70	(25) 1090661	Application: Central heating and cooling systems with closed circuits, for operation with non- aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g : 10 bar (PN 10) Operating temperature t_g : 2 °C up to 120 °C (for short periods up to 130 °C) Lengths according to DIN 3842 (except for item no. 1090672 und 1090772). All lockshield valves are also suitable for the installation with copper pipes.
	DN 15	1.70	(25) 1090662	
	DN 20	1.70	(10) 1090663	
	DN 15	1.70	(25) 1090672	The lockshield valves DN 15 may be connected to the Oventrop composition pipe "Copipe". Compression fittings page 1.140, reinforcing sleeves page 1.143.
Straight pattern nickel plated				
	DN 10	1.70	(25) 1090761	The lockshield valves item no. 1090662 and 1090762 are self sealing.
	DN 15	1.70	(25) 1090762	
	DN 20	1.70	(10) 1090763	
	DN 15	1.70	(25) 1090772	For further information see "Technical information":
				
"Combi C" presetting with memory lock, isolating, filling and draining				
Angle pattern chrome plated				
	DN 15	1.70	(25) 1164554	Application: Central heating and cooling systems with closed circuits, for operation with non- aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_g : 10 bar (PN 10) Operating temperature t_g : 2 °C up to 120 °C (for short periods up to 130 °C)
Straight pattern chrome plated				
	DN 15	1.70	(25) 1165554	Technical data as "Combi 4". Lengths according to DIN 3842.
	Service tool		1090551	All lockshield valves are suitable for the installation with copper pipes. Compression fittings page 1.140, reinforcing sleeves page 1.143.

Article	kvs	Packing unit	Article-No.	Hint
<p>"Combi 3" presetting, isolating, filling and draining bronze/brass model, female thread according to EN 10226-1 with female threaded pipe connection</p>				<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C) Lengths according to DIN 3842.</p> <p>All lockshield valves are also suitable for the installation with copper pipes.</p> <p>The lockshield valves DN 15 may be connected to the Oventrop composition pipe "Copipe".</p> <p>Compression fittings page 1.140, reinforcing sleeves page 1.143.</p> <p>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 (material no. E 195/1.0034) according to DIN EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the original contours SANHA (SA), Geberit- Mapress (MM) or Viega (Profipress) in corresponding size. Processing must be carried out according to the installation instructions.</p> <p>For further information see "Technical information":</p> 
<p>Angle pattern nickel plated</p> 				
DN 10	1.70	(25)	1090361	
DN 15	1.70	(25)	1090362	
DN 20	1.70	(10)	1090363	
<p>Straight pattern nickel plated</p> 				
DN 10	1.70	(25)	1090461	
DN 15	1.70	(25)	1090462	
DN 20	1.70	(10)	1090463	
<p>with press connection for copper, stainless steel and C-steel pipe Ø 15 mm Angle pattern nickel plated</p> 				
DN 15	1.70	(25)	1090374	
<p>Straight pattern nickel plated</p> 				
DN 15	1.70	(25)	1090474	
<p>Service tool</p> 			1090551	

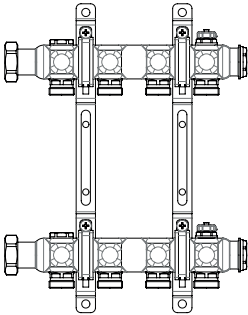
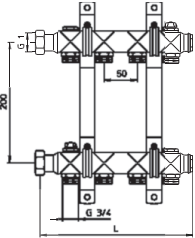
Article	kvs	Packing unit	Article-No.	Hint
"Combi 2" presetting, isolating brass model, female thread according to EN 10226-1				<p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C (for short periods up to 130 °C)</p> <p>Lengths according to DIN 3842 (except for item no. 1091072 and 1091172) .</p> <p>All lockshield valves are also suitable for the installation with copper pipes.</p> <p>The lockshield valves DN 15 may be connected to the Oventrop composition pipe "Copipe".</p> <p>Compression fittings page 1.140, reinforcing sleeves page 1.143.</p> <p>The lockshield valves item no. 1091072 and 1091172 are self sealing.</p> <p>The insert has to be unscrewed for soldering operation.</p> <p>For further information see "Technical information":</p> 
	Angle pattern nickel plated			
DN 10	1.70	(25)	1091061	
DN 15	1.70	(25)	1091062	
DN 20	1.70	(10)	1091063	
	DN 15	1.70	(25) 1091072	
G 3/4 male thread x G 1/2 male thread				
	Straight pattern nickel plated			
DN 10	1.70	(25)	1091161	
DN 15	1.70	(25)	1091162	
DN 20	1.70	(10)	1091163	
	DN 15	1.70	(25) 1091172	
G 3/4 male thread x G 1/2 male thread				
	Bronze/brass model, solder type Angle pattern unplated			
R 3/8 x 12 mm	1.70	(25)	1091251°	
R 1/2 x 12 mm	1.70	(25)	1091252°	
R 1/2 x 15 mm	1.70	(25)	1091253°	
	Straight pattern unplated			
R 3/8 x 12 mm	1.70	(25)	1091351°	
R 1/2 x 12 mm	1.70	(25)	1091352°	
R 1/2 x 15 mm	1.70	(25)	1091353°	
"Combi LR" presetting, isolating brass model, female thread according to EN 10226-1				
	Angle pattern nickel plated			
DN 10	3.50	(25)	1027562	
DN 15	4.50	(25)	1027564	
DN 20	4.50	(10)	1027566	
DN 25	4.50	(10)	1027568	
	Straight pattern			
DN 10	1.80	(25)	1027662	
DN 15	1.80	(25)	1027664	
DN 20	2.40	(10)	1027666	
DN 25	3.20	(10)	1027668	



1.v Distributors/collectors

Content

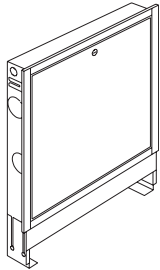
"Multidis SH" Stainless steel distributor/collector	1.132
Ball valves	1.132
Flush-mounted cabinets	1.133
Ring spanner	1.133
Floor distributor/collector	1.133

Article	Packing unit	Article-No.	Hint																																				
	"Multidis SH" Stainless steel distributor/collector for radiator connection flat sealing		Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Max. operating temperature t_s : 100 °C Description: Pre-assembled distributor/collector. Flow distributor and supply collector with vent plugs and terminal caps. Heating circuit connections G 3/4 male thread according to DIN EN 16313 (cone "Euro") for Oventrop compression fittings. Brackets (loosely added) sound-absorbing as per DIN 4109 standard.																																				
	for 2 circuits	1407152																																					
	for 3 circuits	1407153																																					
	for 4 circuits	1407154																																					
	for 5 circuits	1407155																																					
	for 6 circuits	1407156																																					
	for 7 circuits	1407157																																					
	for 8 circuits	1407158																																					
	for 9 circuits	1407159																																					
	for 10 circuits	1407160																																					
	for 11 circuits	1407161																																					
	for 12 circuits	1407162																																					
Ball valves																																							
flat sealing																																							
G 3/4 F x G 1 M	(10)	1406383																																					
G 1 F x G 1 M	(10)	1406384																																					
flat sealing, with thermometer (0–80°C) with red T-handle																																							
G 3/4 F x G 1 M		1406483																																					
G 1 F x G 1 M		1406484																																					
flat sealing, with thermometer (0–80°C) with blue T-handle																																							
G 3/4 F x G 1 M		1406583																																					
G 1 F x G 1 M		1406584																																					
flat sealing, with sensor connection M 10 x 1.0																																							
G 1 F x G 1 M	(10)	1406708																																					
with cone "Euro"																																							
G 3/4 male x G 3/4 collar nut	(50)	1406504																																					
			<table border="1"> <thead> <tr> <th>Circuits</th> <th>Length (L)</th> <th>Length with ball valves 1406384</th> </tr> </thead> <tbody> <tr><td>2</td><td>140 mm</td><td>220 mm</td></tr> <tr><td>3</td><td>190 mm</td><td>270 mm</td></tr> <tr><td>4</td><td>240 mm</td><td>320 mm</td></tr> <tr><td>5</td><td>290 mm</td><td>370 mm</td></tr> <tr><td>6</td><td>340 mm</td><td>420 mm</td></tr> <tr><td>7</td><td>390 mm</td><td>470 mm</td></tr> <tr><td>8</td><td>440mm</td><td>520 mm</td></tr> <tr><td>9</td><td>490 mm</td><td>570 mm</td></tr> <tr><td>10</td><td>540 mm</td><td>620 mm</td></tr> <tr><td>11</td><td>590 mm</td><td>670 mm</td></tr> <tr><td>12</td><td>640 mm</td><td>720 mm</td></tr> </tbody> </table>	Circuits	Length (L)	Length with ball valves 1406384	2	140 mm	220 mm	3	190 mm	270 mm	4	240 mm	320 mm	5	290 mm	370 mm	6	340 mm	420 mm	7	390 mm	470 mm	8	440mm	520 mm	9	490 mm	570 mm	10	540 mm	620 mm	11	590 mm	670 mm	12	640 mm	720 mm
Circuits	Length (L)	Length with ball valves 1406384																																					
2	140 mm	220 mm																																					
3	190 mm	270 mm																																					
4	240 mm	320 mm																																					
5	290 mm	370 mm																																					
6	340 mm	420 mm																																					
7	390 mm	470 mm																																					
8	440mm	520 mm																																					
9	490 mm	570 mm																																					
10	540 mm	620 mm																																					
11	590 mm	670 mm																																					
12	640 mm	720 mm																																					
			Ball valve for the isolation of the heating circuits at the distributor/collector. Heating circuit connection G 3/4 male thread according to DIN EN 16313 (cone "Euro") for Oventrop compression fittings. Distributor/collector connection with collar nut G 3/4 and O-ring seal.																																				

Article Article-No. Hint

Flush-mounted cabinets

steel, galvanised, frame and doors white lacquered
removable screen



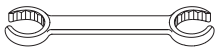
No. 1: inner width: 560 mm **1401151**
No. 2: inner width: 700 mm **1401152**
No. 3: inner width: 900 mm **1401153**
No. 4: inner width: 1200 mm **1401154**

Depth: 115 - 180 mm
Height: 760 - 885 mm
To be used for the following distributors/collectors:

S	No. °°	S + B	No. °°
8 circuits	1	7 circuits	1
11 circuits	2	10 circuits	2
12 circuits	3	12 circuits	3

°° No. of the cabinets

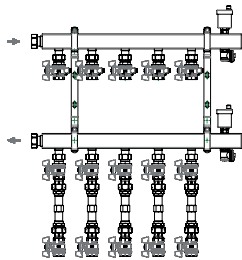
Distributor/collector for radiator connection:
S = stainless steel distributor/collector without ball valves
S + B = stainless steel distributor/collector with ball valves



Ring spanner

Spanner size 30/32 **1401091**

For the installation of the compression fittings.



Floor distributor/collector
with heat meter connections

for 2 dwelling units **1408652***
for 3 dwelling units **1408653***
for 4 dwelling units **1408654***
for 5 dwelling units **1408655***

consisting of:

- Flow distributor and return collector with G 1 and G ¾ connections (flat sealing with collar nuts)
- Airvent, fill and drain valves, ring gaskets
- Heat meter connection sets
- Double bracket

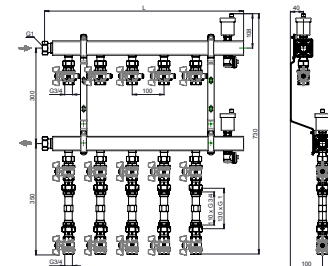
The components have to be assembled on site.

Application:

The floor distributor/collector with heat meter connections is used for the distribution and isolation of the volume flows on each floor to the individual dwelling units.

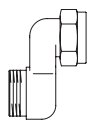
The heat meter connection sets allow for the installation of heat meters for the registration of the heat consumption of the individual dwellings.

Dimensions/connection sizes:



Lengths of the floor distributors/collectors:

Item no.	No. of dwelling units	Length (L)
1408652	2	325 mm
1408653	3	425 mm
1408654	4	525 mm
1408655	5	625 mm



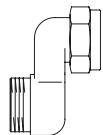
1.w Conversion fittings/Accessories for radiators

Content

Conversion fittings	1.136
Strainer inserts	1.137
Accessories for radiators	1.138



Article	Packing unit	Article-No.	Hint
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Conversion fittingsbrass, nickel plated, with tapered sealing
for thermostatic and manual valves**S-connection fitting**

(G 3/4 male thread x G 3/4 collar nut)	(10)	1019204
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Length compensating tail (short)

DN 10	G 3/8 male thread	(25)	1019003
DN 15	G 1/2 male thread	(25)	1019004
DN 20	G 3/4 male thread	(25)	1019006

Length compensating tail (medium)

DN 15	R 1/2 male thread	(25)	1019052
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Length compensating tail (long)

DN 10	G 3/8 male thread	(20)	1019103
DN 15	G 1/2 male thread	(20)	1019104
DN 20	G 3/4 male thread	(10)	1019106

Reducer

G 1 F x G 1/2 M	(10)	1019251
G 1 F x G 3/4 M	(10)	1019252
G 1 1/4 F x G 1/2 M	(10)	1019253
G 1 1/4 F x G 3/4 M	(10)	1019254

Reducing coupling

DN 10	(G 5/8 c/nut x R 1/2 M)	(25)	1019351
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Reducing tail

DN 20	(G 1/2 male thread)	(25)	1019352
DN 25	(G 1/2 male thread)	(25)	1019353

Coupling

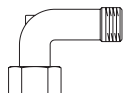
DN 10	(G 5/8 c/nut x R 3/8 M)	(50)	1019303
DN 15	(G 3/4 c/nut x R 1/2 M)	(50)	1019304
DN 20	(G 1 c/nut x R 3/4 M)	(50)	1019306
DN 25	(G 1 1/4 c/nut x R 1 M)	(50)	1019308

self sealing, with threaded ring gasket

DN 15	(G 3/4 c/nut x G 1/2 M)	(50)	1019362
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self sealing with O-ring

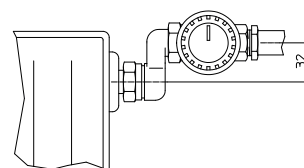
DN 15	(G 3/4 c/nut x G 1/2 M)	(25)	1019372
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Elbow

DN 15	(G 1/2 M x G 3/4 c/nut)	(25)	1019365
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Compensation fitting for lower connection

G 3/4 c/nut x G 3/4 M	(10)	1019451
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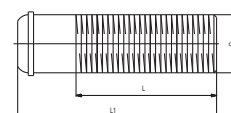


The S-connection fittings (protection of registered design) are suitable for the replacement of radiators using existing pipework. The max. distance between pipe centres is $2 \times 32 \text{ mm} = 64 \text{ mm}$ (no sealing required).

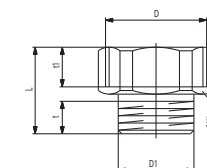
In combination with double angle pattern valves, the coupling item no. 1019304 has to be used in addition.



D	L	L ₁	D	L	L ₁
G 3/8	9	21	R 1/2	13.2	43
G 1/2	10	23	DIN EN 10 226-1		
G 3/4	11	25			



D	L	L ₁
G 3/8	55	75
G 1/2	55	75
G 3/4	50	70

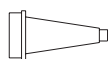


Dim.	D	D ₁	L	t	t ₁	SW*
1" x 1/2"	G 1	G 1/2	26	9	11	38
1" x 3/4"	G 1	G 3/4	27	10	11	38
1 1/4" x 1/2"	G 1 1/4	G 1/2	28	9	13	46
1 1/4" x 3/4"	G 1 1/4	G 3/4	29	10	13	46

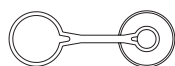
* SW = spanner size

Especially suitable for "Bypass-Combi" (pages 1.86 and 1.87) if a straight pattern valve shall be used instead of an angle pattern valve.






Axle distance 11.5 mm, H = 43 mm, both ports with tapered sealing.

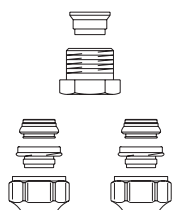


Article	Packing unit	Article-No.	Hint
Strainer inserts			
plastic			
DN 10	($\frac{3}{4}$)	(50) 1019903	For the conversion of old installations in order to avoid a malfunction due to coarse impurity (deposits).
DN 15	($\frac{1}{2}$)	(50) 1019904	
DN 20	($\frac{3}{4}$)	(25) 1019906	
DN 25	(1)	(25) 1019908	



Cap with washer and fixing loop			Female thread of the cap
DN 10	(10)	1010999	G $\frac{3}{8}$, without fixing chain
DN 15	(50)	1034052	G $\frac{3}{4}$, also for "Optiflex" DN 10
DN 20	(25)	1034053	G 1
DN 25	(25)	1034008	G 1 $\frac{1}{4}$










Article	Packing unit	Article-No.	Hint
Accessories for radiators			Application: Central heating systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ ÖNORM 5195). Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 120 °C
		Vent plug brass, nickel plated	
		for panel radiators with rotating water outlet self sealing	
		G 3/8 male thread (100) 1101603 G 1/2 male thread (10) 1101604	
		Blind plugs brass	
		G 1/8 male thread (100) 1100101 G 1/4 male thread (100) 1100102 G 3/8 male thread 1100103 G 1/2 male thread (50) 1100104	
		brass, nickel plated self sealing	Max. operating pressure p_s : 10 bar (PN 10) Operating temperature t_s : 2 °C up to 100 °C
		G 3/8 male thread (100) 1101703 G 1/2 male thread (10) 1101704 G 3/4 male thread (50) 1101706	
		Keys suitable for item no. 10376.. and 10380.. (6 mm square)	
		for all sizes (10) 1103051	
		suitable for item no. 1101603 and 1101604 (5 mm square)	
		for all sizes (10) 1103151	
		Venting screw brass	
		G 1/8 male thread (25) 1109001 G 1/4 male thread (25) 1109002 G 3/8 male thread (25) 1109003	
		Drain valve self sealing, with rotating outlet made of brass resistant to dezincification Set = 10 pieces Handwheel and outlet anthracite	Max. operating pressure: p_s : 10 bar (PN 10) Max. operating temperature t_s : 100 °C With nipple for 3/8 hose. Seal made of EPDM. For filling and deaeration, for use at radiators. Also suitable for valves and components of surface heating and potable water systems.
		G 1/4 male thread (10) 1102002 G 3/8 male thread (10) 1102003 G 1/2 male thread (10) 1102004	


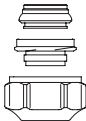
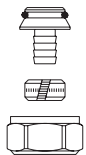
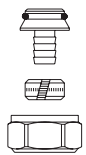


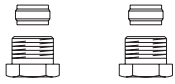
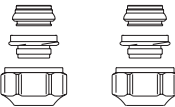
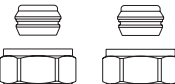
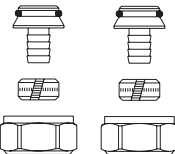
1.x Connection system

Content

"Ofix" Compression fittings	1.140
"Ofix" Compression fittings (2-fold)	1.142
"Cofit S" Compression fittings	1.143
Summary	1.144
Installation examples	1.145
"Ofix" for the connection of standard pipes to Oventrop valves and controls	1.146
Brass reinforcing sleeves	1.143

Article	Packing unit	Article-No.	Hint
"Ofix" Compression fittings brass			For the connection of Oventrop radiator fittings (except for single fittings "Multiflex" with female thread Rp 1/2) to the pipework.
for female thread "Ofix CEP" for copper pipes according to DIN EN 1057 compression nut nickel plated, metal to metal sealing			
		G 3/8 x 10 mm (10) 1027151	Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p _s : 10 bar (PN 10) Operating temperature t _s : 2 °C up to 120 °C
		G 3/8 x 12 mm (10) 1027152	
		G 3/4 x 18 mm (10) 1027157	
		G 3/4 x 22 mm (10) 1027158	
		G 1/2 x 10 mm (10) 1028152	Compression fittings for female thread (item no. 1028152 up to 56) not suitable for thermostatic valves "RF/RFV 6/RFV 9/RFQ", manual valves "HRV" with reduced dimensions and return temperature limiter valves. Compression fittings for above valves: page 3.45
		G 1/2 x 12 mm (10) 1028153	
		G 1/2 x 14 mm (10) 1028154	
		G 1/2 x 15 mm (10) 1028155	
		G 1/2 x 16 mm (10) 1028156	
			Attention: When installing copper pipes with a wall thickness of ≤ 1 mm, it is necessary to use reinforcing sleeves for the additional stabilisation of the pipe. Should the wall thickness exceed 1 mm, please contact the pipe manufacturer. Reinforcing sleeves for wall thickness = 1 mm: page 1.143. Exception: Reinforcing sleeves are not required for soft sealing compression fittings. Note: The pipes are not held by the soft sealing fitting, they have to be fixed additionally. Regarding stretching of the pipe ends, the instructions of the pipe manufacturers have to be observed.

Article	Packing unit	Article-No.	Hint
	for G 3/4 male thread according to DIN EN 16313 (cone "Euro") "Ofix CEP" for copper pipes according to DIN 1057 collar nut nickel plated, metal to metal sealing		For the connection of radiator fittings with male thread G 3/4 according to DIN EN 16313 (cone "Euro") to the pipework. Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). Max. operating pressure p _s : 10 bar (PN 10) Operating temperature t _s : 2 °C up to 120 °C
	10 mm	(10) 1027472	
	12 mm	(10) 1027473	
	14 mm	(10) 1027474	
	15 mm	(10) 1027475	
	16 mm	(10) 1027476	
18 mm	(10) 1027477		
	"Ofix CEP" – Snap & Seal – for copper pipes according to DIN EN 1057, precision steel pipes according to DIN EN 10305-1/2 and stainless steel pipes, collar nut nickel plated, with double compression ring function, one-piece pre-assembled, soft sealing (no reinforcing sleeves required)		Max. operating pressure p _s : 10 bar (PN 10) Operating temperature t _s : 2 °C up to 95 °C The "Ofix CEP" compression fittings - Snap & Seal - can also be used with galvanised steel pipes (DIN EN 10305-3): – Geberit, Mapress C-steel system pipe (galvanised from outside) – Seppelfricke, XPress C-steel pipe (galvanised from outside) – Simplex, VSH C-steel pipe (galvanised from outside) – Viega, Prestabo steel pipe (galvanised from outside)
	10 mm	(10) 1027440	
	12 mm	(10) 1027441	
	14 mm	(10) 1027442	
	15 mm	(10) 1027443	
	16 mm	(10) 1027444	
18 mm	(10) 1027445		
	"Ofix K" for plastic pipes according to DIN 4726, PE-X according to DIN 16892/16893, PB according to DIN 16968, PP according to DIN 8078 A1, collar nut nickel plated , metal to metal sealing plus O-ring		The permissible operating pressures and operating temperatures depend on the application classes of the respective standards of the plastic pipework systems (e.g. PE-X, DIN EN ISO 15875).
	12 x 1.1 mm	(10) 1027768	
	12 x 2 mm	(10) 1027752	
	14 x 2 mm	(10) 1027755	
	16 x 1.5 mm	(10) 1027767	
	16 x 2 mm	(10) 1027757	
	17 x 2 mm	(10) 1027759	
	18 x 2 mm	(10) 1027761	
20 x 2 mm	(10) 1027763		
	"Ofix K" for plastic pipes according to DIN 4726, PE-X according to DIN 16892/16893, PB according to DIN 16968, PP according to DIN 8078 A1, collar nut unplated , metal to metal sealing plus O-ring		
	12 x 1.1 mm	(10) 1027788	
	12 x 2 mm	(10) 1027772	
	14 x 2 mm	(10) 1027775	
	16 x 1.5 mm	(10) 1027787	
	16 x 2 mm	(10) 1027777	
	17 x 2 mm	(10) 1027779	
	20 x 2 mm	(10) 1027783	
18 x 2 mm	(10) 1027781		

Article	Packing unit	Article-No.	Hint
"Ofix" Compression fittings (2-fold) brass			<p>Compression fittings for female thread: For the connection of Oventrop radiator fittings (except single fittings "Multiflex" with female thread Rp 1/2) to the pipework. Compression fittings for G 3/4 male thread: For the connection of "Multiblock T/TU/TFU/TQ/T-RTL and TQ-RTL" and "Multiflex" fittings as well as radiator valves with insertion tube to the pipework.</p> <p>Application: Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).</p> <p>Item no. 1016853 and 101686.: Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 120 °C Item no. 101684.: Max. operating pressure p_s: 10 bar (PN 10) Operating temperature t_s: 2 °C up to 95 °C</p> <p>The "Ofix CEP" compression fittings - Snap & Seal - can also be used with galvanised steel pipes (DIN EN 10305-3):</p> <ul style="list-style-type: none"> - Geberit, Mapress C-steel system pipe (galvanised from outside) - Seppelfricke, XPress C-steel pipe (galvanised from outside) - Simplex, VSH C-steel pipe (galvanised from outside) - Viega, Prestabo steel pipe (galvanised from outside) <p>Attention: When installing copper pipes with a wall thickness of ≤ 1 mm, it is necessary to use reinforcing sleeves for the additional stabilisation of the pipe. Should the wall thickness exceed 1 mm, please contact the pipe manufacturer. Reinforcing sleeves for wall thickness = 1 mm: page 1.143. Exception: Reinforcing sleeves are not required for soft sealing compression fittings. Note: The pipes are not held by the soft sealing fitting, they have to be fixed additionally. Regarding stretching of the pipe ends, the instructions of the pipe manufacturers have to be observed.</p>
for female thread			
		"Ofix CEP" Compression fittings 2-fold, for connecting pipe, metal to metal sealing	
	G 1/2 x 15 mm	(50) 1016853	
for G 3/4 male thread according to DIN EN 16313 (cone "Euro") collar nut nickel plated			
		"Ofix CEP" – Snap & Seal – 2-fold for copper pipes according to DIN EN 1057, precision steel pipes according to DIN EN 10305-1/2 and stainless steel pipes, with double compression ring function, one-piece pre-assembled, soft sealing (no reinforcing sleeves required)	
	10 mm	(50) 1016840	
	12 mm	(50) 1016841	
	14 mm	(50) 1016842	
	15 mm	(50) 1016843	
	16 mm	(50) 1016844	
	18 mm	(50) 1016845	
		"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, metal to metal sealing	
	10 mm	(50) 1016860	
	12 mm	(50) 1016861	
	14 mm	(50) 1016862	
	15 mm	(50) 1016863	
	16 mm	(50) 1016864	
	18 mm	(50) 1016865	
		"Ofix K" 2-fold for plastic pipes according to DIN 4726, PE-X according to DIN 16892/16893, PB according to DIN 16968, PP according to DIN 8078 A1, metal to metal sealing plus O-ring	<p>The permissible operating pressures and operating temperatures depend on the application classes of the respective standards of the plastic pipework systems (e.g. PE-X, DIN EN ISO 15875).</p>
	12 x 1.1 mm	(10) 1016883	
	12 x 2 mm	(10) 1016870	
	14 x 2 mm	(10) 1016873	
	15 x 2.5 mm	(10) 1016885	
	16 x 1.5 mm	(10) 1016882	
	16 x 2 mm	(10) 1016874	
	17 x 2 mm	(10) 1016876	
	18 x 2 mm	(10) 1016877	
	20 x 2 mm	(10) 1016879	

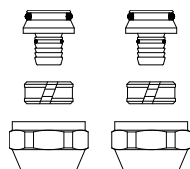
"Unofix" System for refurbishment of one pipe heating systems: Pages 1.99, 3.54
Single fittings: Page 1.141

Article	Packing unit	Article-No.	Hint
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"Cofit S" Compression fittings for G 3/4 male thread according to DIN EN 16313 (cone "Euro")
 universal application for composition pipe and, provided similar preparation is used,
for plastic pipe (PE-X-pipe)
 2-fold, metal to metal sealing plus O-ring, outlet made of bronze, compression ring and collar nut made of brass, collar nut nickel plated

Application:
 Central heating and cooling systems with closed circuits, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195).

The permissible operating pressures and operating temperatures depend on the application classes of the respective standards of the plastic pipework systems (e.g. PE-X, DIN EN ISO 15875).



14 x 2.0 mm x G 3/4 collar nut	(10)	1507934
16 x 2.0 mm x G 3/4 collar nut	(10)	1507935
17 x 2.0 mm x G 3/4 collar nut	(10)	1507937
18 x 2.0 mm x G 3/4 collar nut	(10)	1507938
20 x 2.0 mm x G 3/4 collar nut	(10)	1507939
20 x 2.5 mm x G 3/4 collar nut	(10)	1507940

Brass reinforcing sleeves

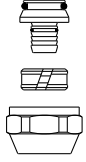
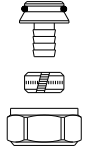
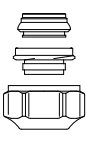
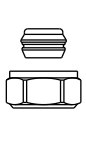


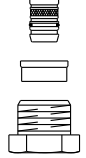


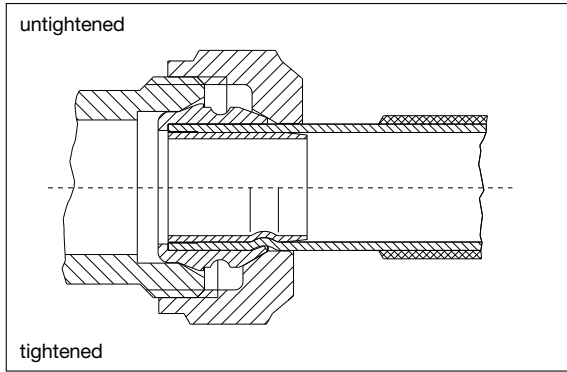
6 mm	(100)	2083951
8 mm	(100)	2083952
10 mm	(100)	1029651
12 mm	(100)	1029652
14 mm	(100)	1029653
15 mm	(50)	1029654
16 mm	(50)	1029655
18 mm	(50)	1029656
22 mm	(50)	1029657

Is required for the installation of soft pipes with a wall thickness of 1 mm.

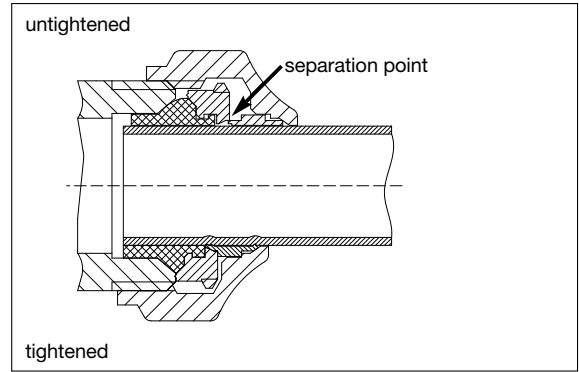
Diameters are related to the outer diameter of the pipe.

Connection of pipes, valves, radiators, distributors etc. for heating, sanitary and air conditioning by use of compression fittings

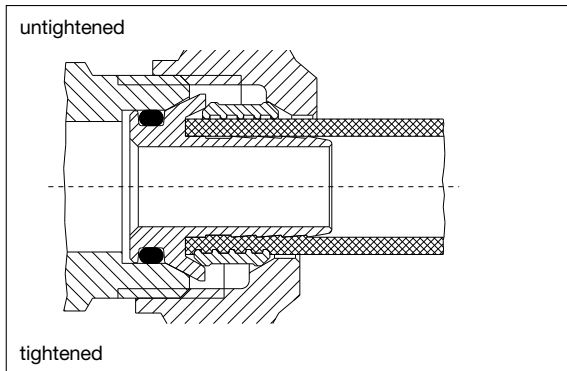
			Oventrop composition pipe "Copipe" and composition pipes of other manufacturers Ø 14 – Ø 20	Plastic pipe to DIN 4726, PE-X to DIN 16 892/16 893, PB to DIN 16 968, PP to DIN 80 78 A1 Ø 12 – Ø 20	Copper pipe DIN EN 1057 (DIN 1786) Ø 10 – Ø 18	Precision steel pipe DIN EN 10305-1 (DIN 2391) DIN EN 10305-2 (DIN 2393) Ø 10 – Ø 18	Stainless steel pipe Ø 10 – Ø 18	Brass reinforcing sleeves
Compression fittings for male threaded connection G ¾ according to DIN EN 16313 (cone "Euro")	"Cofit S" outlet brass resistant to de-zincification compression ring brass 	Ø 14 – Ø 20 page 11.32	Ø 14 – Ø 20 page 11.32 (only PE-X pipe)					
	"Ofix K" outlet and compression ring brass 		Ø 12 – Ø 20 pages 1.141					
	"Ofix CEP" soft seal "Snap & Seal" 			Ø 10 – Ø 18 page 1.141	Ø 10 – Ø 18 page 1.141	Ø 10 – Ø 18 page 1.141		
	"Ofix CEP" compression ring brass 				Ø 10 – Ø 18 page 1.141			
Compression fittings for female threaded connection Rp ½	"Ofix CEP" compression ring brass 			Ø 10 – Ø 16 page 1.141				for wall thickness = 1 mm page 1.143
	"Cofit S" outlet brass resistant to de-zincification compression ring brass 	Ø 14 + Ø 16 Page 11.32						



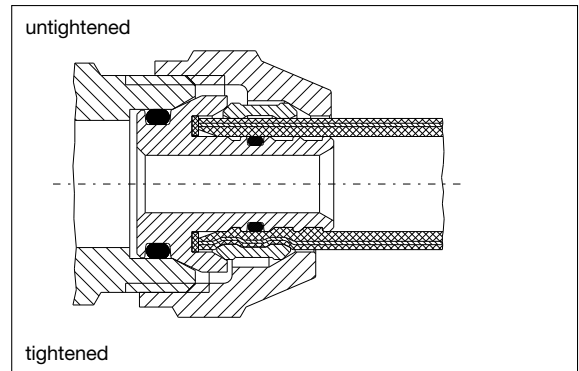
"Ofix CEP" compression fitting for copper pipe, metal to metal sealing, male threaded connection



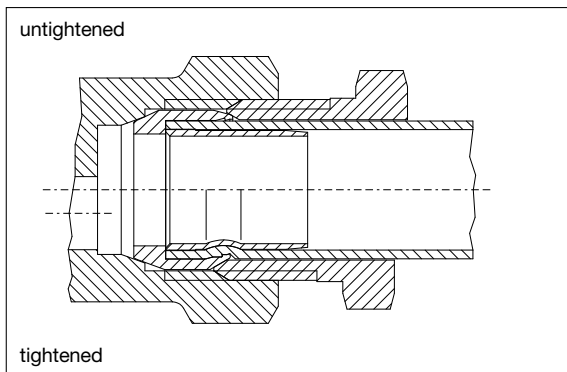
"Ofix CEP" compression fitting "Snap & Seal" for copper, precision steel and stainless steel pipe, soft sealing, male threaded connection



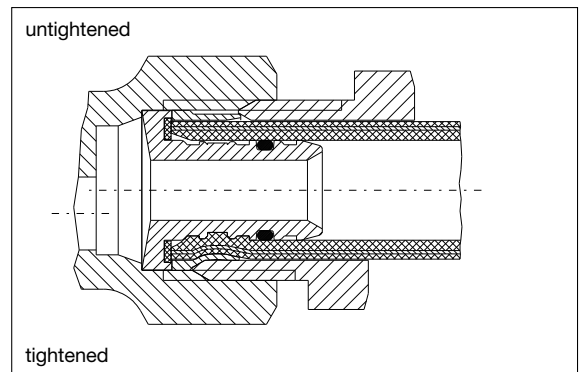
"Ofix K" compression fitting for plastic pipe, male threaded connection



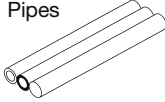

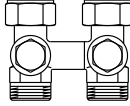


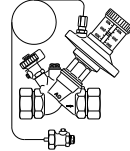


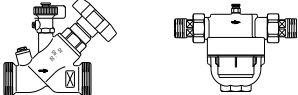

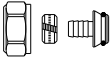










"Cofit S" compression fitting, universal application for "Copipe" composition pipe, and, in case of identical processing, also for PE-X plastic pipe, male threaded connection



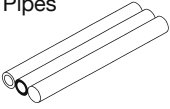

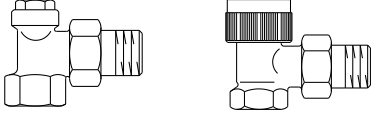



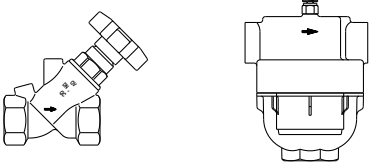

"Ofix CEP" compression fitting for copper pipe, metal to metal sealing, female threaded connection



"Cofit S" compression fitting for composition pipe, female threaded connection

Pipes 	Connection method	Connection system		Male threaded connection
		Connection fitting	Additional fitting	Oventrop valves (examples)
Copper pipe, stainless steel pipe, precision steel pipe 1)	Screwed connection	 Collar nut, compression ring and ring gasket for G 3/4 M according to DIN EN 16313 (cone "Euro"), soft sealing Item no. 102744. Page 1.141	—	Radiator valves 
		 Collar nut and compression ring for G 3/4 M according to DIN EN 16313 (cone "Euro"), metal to metal sealing Item no. 102747. Page 1.141	Connection piece  Item no. 15030.. Page 11.32	Valves for hydronic balancing 
Copper pipe 1)	Soldering connection	 Item no. 10610.. Page 3.45	—	Valves for hydronic balancing
		 Item no. 42020.. Page 8.66	—	Valves for water distribution 
Stainless steel pipe 1)	Press connection	 Item no. 42015.. Page 8.69	—	Valves for hydronic balancing and valves for water distribution
PE pipe	Screwed connection	 Collar nut, compression ring and outlet for G 3/4 M according to DIN EN 16313 (cone "Euro") Item no. 10277.., Page 1.141	—	Radiator valves
		 Connection piece Item no. 15030.. Page 11.32	—	Valves for hydronic balancing and valves for water distribution
Steel pipe as well as screwed fittings	Screwed connection	 Item no. 1016304 Page 1.123	—	Radiator valves
		 Item no. 10693.. Page 1.89 only three-way conversion valves	—	
		 Item no. 10613.. Page 3.45	—	Valves for hydronic balancing
	Welding connection	 Item no. 10614.. Page 3.45	—	Valves for water distribution
		 Item no. 42013.. Page 8.66	—	
		 Item no. 42014.. Page 8.66	—	Valves for water distribution
		 Item no. 10193.. Page 1.93 only three-way conversion valves	—	Radiator valves
 Item no. 10605.. Page 3.45	—	Valves for hydronic balancing		
 Item no. 42005.. Page 8.66	—	Valves for water distribution		
Other pipes e. g. stainless steel pipe, thick walled plastic pipe	All other pipes - with their special connection - may be connected with flat sealing tailpipes (with ring gaskets and collar nuts) to Oventrop flat sealing and male threaded valves.			

1) Pipes with a wall thickness of ≤ 1 mm will need reinforcing sleeves, except when the soft sealing fitting 102744. is used! Page 1.141.

Pipes 	Connection method	Connection system		Female threaded connection
		Connection fitting	Additional fitting	Oventrop valves (examples)
Copper pipe 1)	Screwed connection	Compression nut and compression ring  Item no. 10281.. for Rp 1/2 F Page 1.140 Exception: Single fittings "Multiflex", thermostatic valves "RF/RFV6", manual valves "HRV" with reduced dimensions and return temperature limiter valves	-	Radiator valves 
		Compression nut and compression ring  Item. no. 10271.. for Rp 3/8 - Rp 3/4 F, Page 1.140 Exception: "Multiflex" single fittings		
Collar nut, compression ring and ring gasket  for G 3/4 M according to DIN EN 16313 (cone "Euro"), soft sealing Item. no. 102744. Page 1.141		Double nipple  Item. no. 15031.. Page 11.32	Valves for water distribution 	
Collar nut, compression ring and outlet  for G 3/4 M according to DIN EN 16313 (cone "Euro") Item. no. 10277.. Page 1.141				
Steel pipe as well as screwed fittings		Seal directly		
Other pipes e. g. stainless steel pipe, thick walled plastic pipe	All other pipes - with their special connection - may be connected with nipples to Oventrop female threaded valves.			

1) Pipes with a wall thickness of ≤ 1 mm will need reinforcing sleeves, except when the soft sealing fitting 102744. is used! Page 1.141.