

Function:

Oventrop thermostatic radiator valves are proportional regulators working without auxiliary energy. They regulate the room temperature by varying the volume flow of heating water. Oventrop thermostatic radiator valves meet the requirements of the Energy Saving Directive and allow the design of thermostatic radiator valves with a proportional control range of 1 or 2 Kelvin.

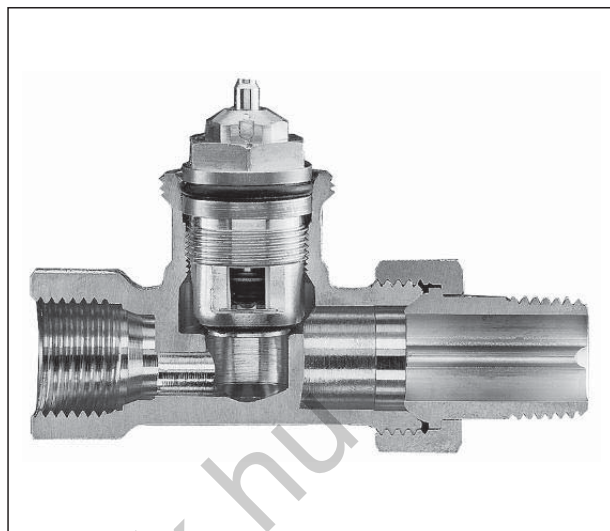
Technical data:

- Nominal flow: (see charts)
- Max. flow of heating water: (see charts)
- Max. differential pressure against which the valve closes:
 - 1 bar: "Series A, AV 9, AV 6, ADV 6, RF, RFV 6"
 - 3 bar: "Series F"
- Valve body material: bronze, brass, nickel plated
- Differential pressure effect: 0.1 K – 0.7 K/0.5 bar

When choosing the operating fluid, the latest technical status has to be considered (e.g. VDI 2035 – Avoidance of damage to hot water heating systems).

KEYMARK – The Oventrop thermostatic radiator valves "Series A, AV 9, AV 6, RF, F" (angle and straight pattern valves DN 10 – DN 20) with the thermostats "Uni XH", "Uni LH", "Uni SH", "vindo TH", "pinox H", "Uni LGH", "Uni L" and "Uni LH" with remote sensor as well as "Series VN" with the thermostat "Uni LD" are Keymark tested and certified (Reg.-no. 011-6T0002).

For further details see installation instructions.



Straight pattern valve "Series AV 6" (illustr.) or "Series AV 9"



"Bypass-Combi Uno"



"Tauch-Rohr" valve with horizontal/vertical insertion tube

Tender specification

Oventrop thermostatic radiator valve

"Series AV 9"

With infinitely adjustable presetting visible from outside to adapt the volume flows to the required heat demand without replacing the valve insert.

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

Max. operating pressure p_s : 10 bar

Recommended differential pressure range: 30 up to 200 mbar

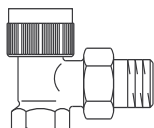
Max. differential pressure: 1 bar

Body nickel plated, stem made of stainless steel with double O-ring seal.

Connection thread M 30 x 1.5

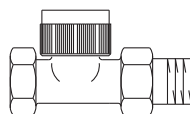
Connection for threaded and copper pipes or composition pipe "Copipe".

Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".



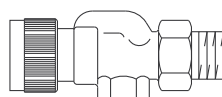
Angle pattern valve

DN 10 Angle	1183703
DN 15 Angle	1183704
DN 20 Angle	1183706
DN 25 Angle	1183708



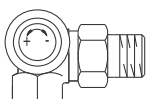
Straight pattern valve

DN 10 Straight	1183803
DN 15 Straight	1183804
DN 20 Straight	1183806
DN 25 Straight	1183808



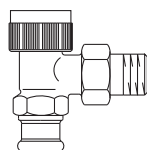
Reversed angle pattern valve especially for panel radiators

DN 10 Reversed angle	1183903
DN 15 Reversed angle	1183904
DN 20 Reversed angle	1183906



Double angle pattern valve

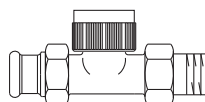
DN 10 Double angle left	1183470
DN 10 Double angle right	1183471
DN 15 Double angle left	1183472
DN 15 Double angle right	1183473



Angle pattern valve with press connection

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

DN 15 Ø 15 mm Angle	1183775
---------------------	---------



Straight pattern valve with press connection

DN 15 Ø 15 mm Straight	1183875
------------------------	---------

Presetting key

for all valves of the "Series AV 9"

1183962

Oventrop thermostatic radiator valve

"Series AV 6"

Limiting and presetting to adapt the volume flows to the required heat demand without replacing the valve insert.

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

Max. operating pressure p_s : 10 bar

Recommended differential pressure range: 30 up to 200 mbar

Max. differential pressure: 1 bar

Body nickel plated, stem made of stainless steel with double O-ring seal.

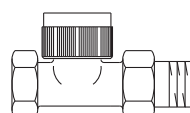
Connection thread M 30 x 1.5

Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".



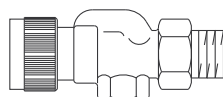
Angle pattern valve

DN 10 Angle	1183763
DN 15 Angle	1183764
DN 20 Angle	1183766
DN 25 Angle	1183768



Straight pattern valve

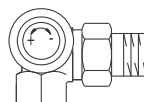
DN 10 Straight	1183863
DN 15 Straight	1183864
DN 20 Straight	1183866
DN 25 Straight	1183868



Reversed angle pattern valve

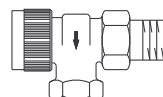
especially for panel radiators

DN 10 Reversed angle	1183963
DN 15 Reversed angle	1183964
DN 20 Reversed angle	1183966



Double angle pattern valve

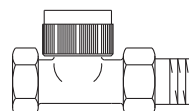
DN 10 Double angle left	1183460
DN 10 Double angle right	1183461
DN 15 Double angle left	1183462
DN 15 Double angle right	1183463



Reversed angle pattern valve

for reversed supply and return pipe (rattling noises)

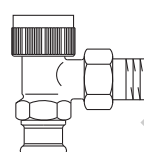
DN 10	1183791
DN 15	1183792



Straight pattern valve for the return pipe

for reversed supply and return pipe (rattling noises)

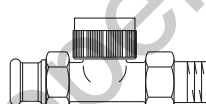
DN 10	1183891
DN 15	1183892



Angle pattern valve with press connection

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

DN 15 Ø 15 mm Angle	1183774
---------------------	---------

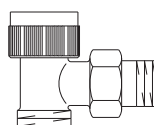


Straight pattern valve with press connection

DN 15 Ø 15 mm Straight	1183874
------------------------	---------

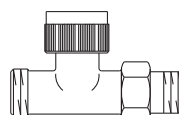
Oventrop thermostatic radiator valve "Series AV 6"

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



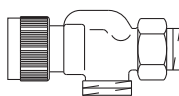
Angle pattern valve

DN 15 Angle	1183797
-------------	---------



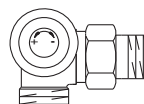
Straight pattern valve

DN 15 Straight	1183897
----------------	---------



Reversed angle pattern valve

DN 15 Reversed angle	1183992
----------------------	---------



Double angle pattern valve

DN 15 Double angle left	1183496
DN 15 Double angle right	1183497

Presetting key

for all valves of the "Series AV 6", ADV 6" and "RFV 6"

1183961

for all valves of the "Series AV 9"

1183962

**Oventrop thermostatic radiator valves
"Series A"**

(k_v and k_{vs} values as old "Series AZ")

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

Max. operating pressure p_s : 10 bar

Recommended differential pressure range: 30 up to 200 mbar

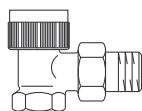
Max. differential pressure: 1 bar

Body nickel plated, stem made of stainless steel.

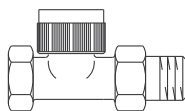
Connection thread M 30 x 1.5

Connection for threaded and copper pipes or composition pipe "Copipe".

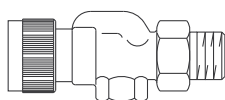
Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".


Angle pattern valve

DN 10 Angle (k_v 1.00)	1181003
DN 15 Angle (k_v 1.05)	1181004
DN 20 Angle (k_v 1.10)	1181006
DN 25 Angle (k_v 1.10)	1181008
DN 32 Angle (k_v 1.10)	1181010

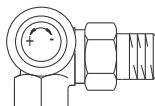

Straight pattern valve

DN 10 Straight (k_v 1.00)	1181103
DN 15 Straight (k_v 1.05)	1181104
DN 20 Straight (k_v 1.10)	1181106
DN 25 Straight (k_v 1.10)	1181108
DN 32 Straight (k_v 1.10)	1181110


Reversed angle pattern valve

especially for flat radiators

DN 10 Reversed angle (k_v 1.00)	1181203
DN 15 Reversed angle (k_v 1.05)	1181204
DN 20 Reversed angle (k_v 1.10)	1181206

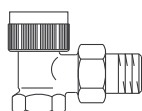

Double angle pattern valve

DN 10 Double angle left (k_v 1.00)	1181390
DN 10 Double angle right (k_v 1.00)	1181391
DN 15 Double angle left (k_v 1.05)	1181392
DN 15 Double angle right (k_v 1.05)	1181393

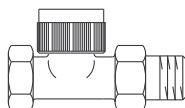
**Oventrop thermostatic radiator valve
"Series A"**

(k_v and k_{vs} values as old "Series AZ")

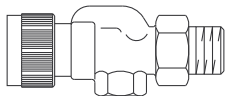
with G 3/4 male threaded pipe connection and R 1/2 male threaded radiator connection


Angle pattern valve

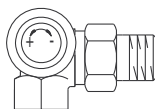
DN 15 Angle (k_v 1.05)	1181097
---------------------------	---------


Straight pattern valve

DN 15 Straight (k_v 1.05)	1181197
------------------------------	---------


Reversed angle pattern valve

DN 15 Reversed angle (k_v 1.05)	1181292
------------------------------------	---------


Double angle pattern valve

DN 15 Double angle left (k_v 1.05)	1181396
DN 15 Double angle right (k_v 1.05)	1181397

**Oventrop thermostatic radiator valve
"Series RF", reduced dimensions**

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

Max. operating pressure p_s : 10 bar

Recommended differential pressure range: 30 up to 200 mbar

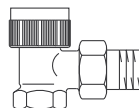
Max. differential pressure: 1 bar

Body nickel plated, stem made of stainless steel with double O-ring seal.

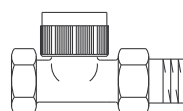
Connection thread M 30 x 1.5

Connection for threaded and copper pipes or composition pipe "Copipe".

Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".


Angle pattern valve

DN 10 Angle (k_v 1.00)	1184703
DN 15 Angle (k_v 1.05)	1184704
DN 20 Angle (k_v 1.10)	1184706


Straight pattern valve

DN 10 Straight (k_v 1.00)	1184803
DN 15 Straight (k_v 1.05)	1184804
DN 20 Straight (k_v 1.10)	1184806

**Oventrop thermostatic radiator valve
"Series ADV 6"**

With presetting to adapt the volume flows to the required heat demand.

The double function of this valve provokes and 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.

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

Max. operating pressure p_s : 10 bar

Recommended differential pressure range: 30 up to 200 mbar

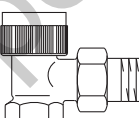
Max. differential pressure: 1 bar

Body nickel plated, stem made of stainless steel with double O-ring seal.

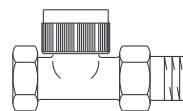
Connection thread M 30 x 1.5

Connection for threaded and copper pipes or composition pipe "Copipe".

Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".


Angle pattern valve

DN 10 Angle	1188163
DN 15 Angle	1188164
DN 20 Angle	1188166


Straight pattern valve

DN 10 Straight	1188263
DN 15 Straight	1188264
DN 20 Straight	1188266

Presetting key

for all valves of the "Series AV 6", "ADV 6" and "RFV 6" 1183961

**Oventrop thermostatic radiator valve
"Series RFV 6", reduced dimensions**

With presetting to adapt the volume flows to the required heat demand.

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

Max. operating pressure p_s : 10 bar

Recommended differential pressure range: 30 up to 200 mbar

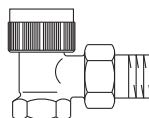
Max. differential pressure: 1 bar

Body nickel plated, stem made of stainless steel with double O-ring seal.

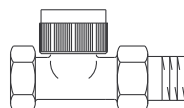
Connection thread M 30 x 1.5

Connection for threaded and copper pipes or composition pipe "Copipe".

Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".


Angle pattern valve

DN 10 Angle	1185063
DN 15 Angle	1185064
DN 20 Angle	1185066


Straight pattern valve

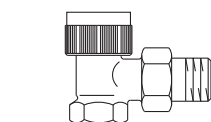
DN 10 Straight	1185163
DN 15 Straight	1185164
DN 20 Straight	1185166

Presetting key

for all valves of the "Series AV 6", "ADV 6" and "RFV 6" 1183961

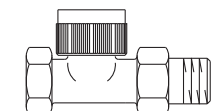
Oventrop thermostatic radiator valve "Series F"

With hidden infinitely adjustable fine presetting without replacing the valve insert.
Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 140 °C)
Max. operating pressure p_s : 16 bar
Recommended differential pressure range: 30 up to 200 mbar
Max. differential pressure: 3 bar
Flow rates limited to a max. P-deviation of 2 K.
Body nickel plated, stem made of stainless steel with double O-ring seal.
Connection thread M 30 x 1.5
Connection for threaded and copper pipes or composition pipe "Copepe".
Complete valve insert replaceable during operation by using the special tool "Demo-Bloc".



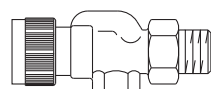
Angle pattern valve

DN 10 Angle	1180603
DN 15 Angle	1180604
DN 20 Angle	1180606



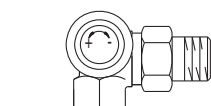
Straight pattern valve

DN 10 Straight	1180703
DN 15 Straight	1180704
DN 20 Straight	1180706



Reversed angle pattern valve

especially for panel radiators	
DN 10 Reversed angle	1180803
DN 15 Reversed angle	1180804

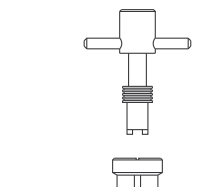


Double angle pattern valve

Left hand side connection	
DN 10	1181460
DN 15	1181462



Right hand side connection	
DN 10	1181461
DN 15	1181463



Presetting key

for all valves of the "Series F"	1180791
----------------------------------	---------

Conversion valve PN 20 for the replacement of manual radiator valves

Pruss, model 120, angle	1180964
dto., straight (length 80 mm)	1180965
dto., straight (length 70 mm)	1180967

Fittings for conversion valves

Weldable nipple (steel)	
DN 10	1010989
DN 15	1010990
Solder nipple (brass)	
12 mm	1010991
15 mm	1010992
Screwed nipple (brass)	
R 1/2 EN 10226-1 male thread	1010993
Collar nut (brass)	
3/4 female thread	1010994
Threaded tailpipe brass	
3/4 male thread x 12 mm	1010995
3/4 male thread x 15 mm	1010996
Threaded tailpipe (weldable nipple – steel)	
3/4 male thread x 15 mm	1010988
3/4 male thread x 15 mm	1010988
Cap (brass)	
3/4 female thread	1010999
3/4 female thread	1010997

Compression fittings

"Ofix CEP" for copper pipes according to DIN EN 1057, compression nut nickel plated (for female threaded connection Rp 3/4, 1/2, 3/8)	
G 3/4 x 10 mm	1027151
G 3/4 x 12 mm	1027152
G 1/2 x 10 mm	1028152
G 1/2 x 12 mm	1028153
G 1/2 x 14 mm	1028154
G 1/2 x 15 mm	1028155
G 1/2 x 16 mm	1028165
G 3/4 x 18 mm	1027157
G 3/4 x 22 mm	1027158

"Ofix CEP" for copper pipes according to DIN EN 1057, collar nut nickel plated (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))	
10 mm	1027472
12 mm	1027473
14 mm	1027474
15 mm	1027475
16 mm	1027476
18 mm	1027477

"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 (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))	
12 x 1.1 mm	1027768
12 x 2 mm	1027752
14 x 2 mm	1027755
16 x 1.5 mm	1027767
16 x 2 mm	1027757
17 x 2 mm	1027759
18 x 2 mm	1027761
20 x 2 mm	1027763

"Ofix CEP" 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, max. 95 °C (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))	
10 mm	1027440
12 mm	1027441
14 mm	1027442
15 mm	1027443
16 mm	1027444
18 mm	1027445

"Cofit S" for composition pipe "Copepe", compression nut made of nickel plated brass (for female threaded connection Rp 1/2)	
14 x 2 mm	1507354
16 x 2 mm	1507355

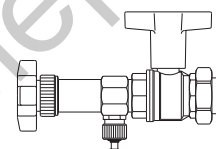
"Cofit S" for composition pipe "Copepe", collar nut nickel plated (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))	
14 x 2 mm	1507954
16 x 2 mm	1507955
18 x 2 mm	1507958
20 x 2.5 mm	1507960

Reinforcing sleeves

For the additional stabilisation of soft pipes with a wall thickness of 1 mm.	
10 x 1 mm	1029651
12 x 1 mm	1029652
14 x 1 mm	1029653
15 x 1 mm	1029654
16 x 1 mm	1029655
18 x 1 mm	1029656
22 x 1 mm	1029657

Oventrop special tool "Demo-Bloc"

for replacing thermostatic radiator valve inserts without draining the system

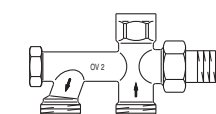


Suitable for all thermostatic radiator valve series	1188051
Cleaning head	1188400

Oventrop two pipe connection piece "Duo"

with shut off, for simplified installation of two pipe heating systems.
Operating temperature t_s : 2 °C up to 120 °C (for short periods up to 130 °C)
Max. operating pressure p_s : 10 bar
Body nickel plated.

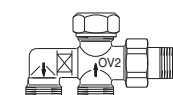
Connection G 3/4 male thread according to DIN EN 16313 (cone "Euro") for copper pipes, precision steel pipes and plastic pipes and composition pipe "Copepe".
Distance between pipe centres: 50 mm



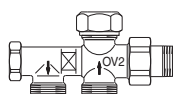
DN 15 G 3/4 M	1013361
---------------	---------

Oventrop two pipe connection piece "Duo" without shut off or with shut off and infinitely adjustable presetting

Connection for copper and plastic pipes.
Distance between pipe centres: 35 mm



without shut off	
DN 15 M 24 x 1.5 M	1182551



with shut off	
with infinitely adjustable presetting	
DN 15 M 24 x 1.5 M	1182651

Set of compression fittings

"Ofix CEP" 2-fold for connecting pipe, metal to metal sealing, collar nut nickel plated, metal to metal sealing (for female threaded connection Rp 1/2)

15 mm	1016853
-------	---------

"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, collar nut nickel plated, metal to metal sealing (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

10 mm	1016860
12 mm	1016861
14 mm	1016862
15 mm	1016863
16 mm	1016864
18 mm	1016865

"Ofix CEP" 2-fold 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, max. 95 °C (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

10 mm	1016840
12 mm	1016841
14 mm	1016842
15 mm	1016843
16 mm	1016844
18 mm	1016845

"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, collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

12 x 1.1 mm	1016883
12 x 2.0 mm	1016870
14 x 2.0 mm	1016873
15 x 2.5 mm	1016885
16 x 1.5 mm	1016882
16 x 2.0 mm	1016874
17 x 2.0 mm	1016876
18 x 2.0 mm	1016877
20 x 2.0 mm	1016879

"Cofit S" 2-fold universal application for composition pipe and, provided similar preparation is used, for plastic pipes (PE-X), collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

14 x 2.0 mm	1507934
16 x 2.0 mm	1507935
17 x 2.0 mm	1507937
18 x 2.0 mm	1507938
20 x 2.0 mm	1507939
20 x 2.5 mm	1507940

"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, collar nut nickel plated, metal to metal sealing (for male threaded connection M 24 x 1.5)

15 mm	1016813
-------	---------

"Ofix K" 2-fold for plastic pipes, collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection M 24 x 1.5)

14 x 2.0 mm	1016823
16 x 2.0 mm	1016824

"Cofit S" 2-fold universal application for composition pipe and, provided similar preparation is used, for plastic pipes (PE-X), collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection M 24 x 1.5)

14 x 2.0 mm	1507854
16 x 2.0 mm	1507855

Oventrop "Bypass-Combi Uno" one pipe

with infinitely adjustable bypass and shut off

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

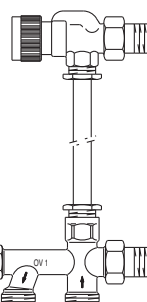
Max. operating pressure p_s: 10 bar

With upper and lower connection to the radiator consisting of:

Reversed angle pattern or double angle pattern valve, or straight pattern valve with pipe elbow, connecting pipe, one pipe connection piece and set of compression fittings.

With infinite bypass adjustable during operation, for radiator isolation and with isolating fitting between distributor and radiator.

Body nickel plated.



Reversed angle pattern valve

DN 15 Reversed angle 1181204

Double angle pattern valve

DN 15 Double angle left 1181392

DN 15 Double angle right 1181393

Straight pattern valve

with pipe elbow DN 15 Straight 1181304

Connecting pipe

15 x 560 mm 1016951

15 x 1120 mm 1016953

15 x 2000 mm 1016954

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

Distance between pipe centres: 50 mm

DN 15 G 3/4 M 1013161

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

Distance between pipe centres: 50 mm

DN 15 G 3/4 M 1013162

One pipe connection piece "Uno" with infinitely adjustable bypass and shut off or with fixed bypass without shut off with brass fitting

Distance between pipe centres: 35 mm

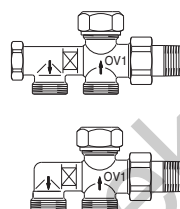
with shut off and infinitely adjustable bypass

DN 15 M 24 x 1.5 M 1182151

without shut off

with fixed bypass

DN 15 M 24 x 1.5 M 1182051



Set of compression fittings

"Ofix CEP" 2-fold for connecting pipe, metal to metal sealing, collar nut nickel plated, metal to metal sealing (for female threaded connection Rp 1/2)

10 mm	1016853
-------	---------

"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, collar nut nickel plated, metal to metal sealing (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

10 mm	1016860
12 mm	1016861
14 mm	1016862
15 mm	1016863
16 mm	1016864
18 mm	1016865

"Ofix CEP" 2-fold 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, max. 95 °C (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

10 mm	1016840
12 mm	1016841
14 mm	1016842
15 mm	1016843
16 mm	1016844
18 mm	1016845

"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, collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

12 x 1.1 mm	1016883
12 x 2.0 mm	1016870
14 x 2.0 mm	1016873
15 x 2.5 mm	1016885
16 x 1.5 mm	1016882
16 x 2.0 mm	1016874
17 x 2.0 mm	1016876
18 x 2.0 mm	1016877
20 x 2.0 mm	1016879

"Cofit S" 2-fold universal application for composition pipe and, provided similar preparation is used, for plastic pipes (PE-X), collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

14 x 2.0 mm	1507934
16 x 2.0 mm	1507935
17 x 2.0 mm	1507937
18 x 2.0 mm	1507938
20 x 2.0 mm	1507939
20 x 2.5 mm	1507940

"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, collar nut nickel plated, metal to metal sealing (for male threaded connection M 24 x 1.5)

15 mm	1016813
-------	---------

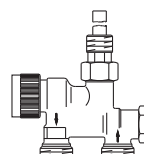
"Ofix K" 2-fold for plastic pipes, collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection M 24 x 1.5)

14 x 2.0 mm	1016823
16 x 2.0 mm	1016824

"Cofit S" 2-fold universal application for composition pipe and, provided similar preparation is used, for plastic pipes (PE-X), collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection M 24 x 1.5)

14 x 2.0 mm	1507854
16 x 2.0 mm	1507855

Reinforcing sleeves see page 4, column 2.1.14-4.


**Oventrop one pipe radiator valve
"Tauch-Rohr" with fixed bypass
and shut off**

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

For horizontal or vertical connection to lower radiator nipple (Rp 1/2 female thread).

Body nickel plated.
with horizontal insertion tube
DN 15 G 3/4 M 1183561

with vertical insertion tube
DN 15 G 3/4 M 1183571

**Oventrop two pipe radiator valve
"Tauch-Rohr" with shut off**

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

For horizontal or vertical connection to lower radiator nipple (Rp 1/2 female thread).

Body nickel plated.
with horizontal insertion tube (k_v 0.90)
DN 15 G 3/4 M 1643561

with vertical insertion tube (k_v 0.90)
DN 15 G 3/4 M 1183581

**Oventrop one pipe radiator valve
for "TKM" system**

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

For vertical connection to lower radiator nipple (Rp 3/4 male thread).

Body nickel plated.
DN 15 G 3/4 M 1183671

**Oventrop two pipe radiator valve
for "TKM" system**

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

For vertical connection to lower radiator nipple (G 3/4 collar nut).

Body nickel plated.
(k_v 0.90 at 2 K P-deviation)
DN 15 G 3/4 M 1183661

Set of compression fittings

"Ofix CEP" 2-fold for copper pipes according to DIN EN 1057, collar nut nickel plated, metal to metal sealing (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

10 mm	1016860
12 mm	1016861
14 mm	1016862
15 mm	1016863
16 mm	1016864
18 mm	1016865

"Ofix CEP" 2-fold 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, max. 95 °C (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

10 mm	1016840
12 mm	1016841
14 mm	1016842
15 mm	1016843
16 mm	1016844
18 mm	1016845

"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, collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

12 x 1.1 mm	1016883
12 x 2.0 mm	1016870
14 x 2.0 mm	1016873
15 x 2.5 mm	1016885
16 x 1.5 mm	1016882
16 x 2.0 mm	1016874
17 x 2.0 mm	1016876
18 x 2.0 mm	1016877
20 x 2.0 mm	1016879

"Cofit S" 2-fold universal application for composition pipe and, provided similar preparation is used, for plastic pipes (PE-X), collar nut nickel plated, metal to metal sealing plus O-ring (for male threaded connection G 3/4 according to DIN EN 16313 (cone "Euro"))

14 x 2.0 mm	1507934
16 x 2.0 mm	1507935
17 x 2.0 mm	1507937
18 x 2.0 mm	1507938
20 x 2.0 mm	1507939
20 x 2.5 mm	1507940

Reinforcing sleeves see page 4, column 2.

**Plastic rosette cover**

Distance between pipe centres: 50 mm

Perforation:

12 mm 1016671

14 mm 1016672

15 mm 1016673

16 mm 1016674

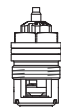
18 mm 1016675

Distance between pipe centres: 35 mm

Perforation: 14-20 mm 1016684

Valve inserts:

Stem made of stainless steel with double O-ring seal. The valve inserts of all series (except valve insert for three-way conversion valves) may be combined with all thermostatic radiator valve bodies.

**"AV 9" Valve insert with infinitely adjustable presetting**

suitable for all thermostatic radiator valves

of the "Series AV 9"

1187047

**"AV 6" Valve insert with presetting**

suitable for all thermostatic radiator valves

of the "Series AV 6", "Series RFV 6" and "Series E"

1187057

**"A" Valve insert**

suitable for all thermostatic radiator valves

of the "Series A" (manufactured as from 2013)
and "Series RF" (manufactured as from 2014)

1187049

**"A" Valve insert**

suitable for all thermostatic radiator valves

of the "Series A" (DN 10 – DN 15) and "Series RF"

1187069

**"F" Valve insert with infinitely adjustable fine presetting**

suitable for all thermostatic radiator valves

of the "Series F"

1187352

**"ADV 6" valve insert with double function and presetting**

suitable for all thermostatic radiator valves

of the "Series ADV 6"

1186001

**"PTB" Valve insert**

with linear flow characteristic line

 $k_{VS} = 0.45$ (P1)

1186052

**"PTB" Valve insert**

with linear flow characteristic line

 $k_{VS} = 0.80$ (P2)

1186053

**Valve insert with stainless steel seat**for the conversion of the "Series A", "Series AZ" and "Series RF",
especially for steam installations

1186200

**Valve insert with presetting**

suitable for all three-way

conversion valves

1187056

**Special valve insert**

for reversed supply and return pipe for

"Series A, AV 9, AV 6, ADV 6, AZ,
E, F, RF, RFV 6"

1187070

**Special valve insert with presetting**for reversed supply and return pipe, suitable for the
valves bodies of the "Unibox T", "Unibox plus"
and "Unibox vario"

1187077

As replacement for the Oventrop products:

"Multiblock T/TF", "Unibox E plus", "Unibox ET/ETC",

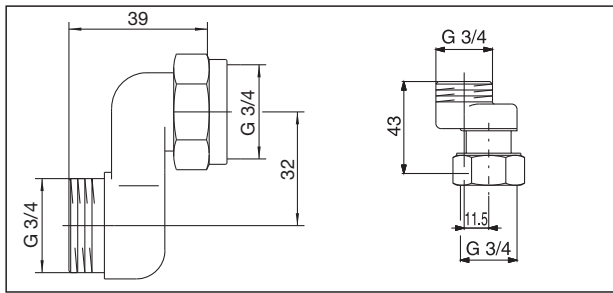
"Unibox E vario", "Unibox E BV/E BVC"

**Gland nut**

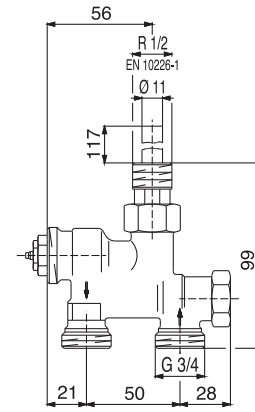
for all valves exception:

"Series A" (manufactured as from 2013), "Series AV 9",
"Series AV 6", "Series RF" (manufactured as from 2014),
"Series RFV 6" and "Series ADV 6"

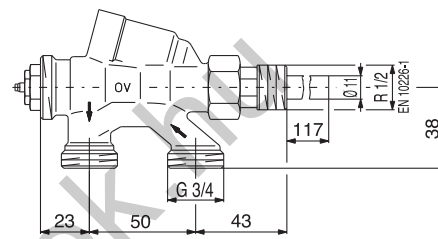
1017501



Dimensions of S-connection fitting

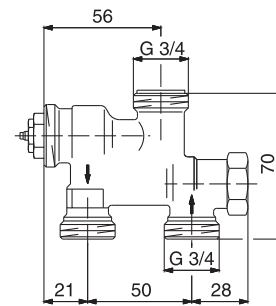


Vertical insertion tube

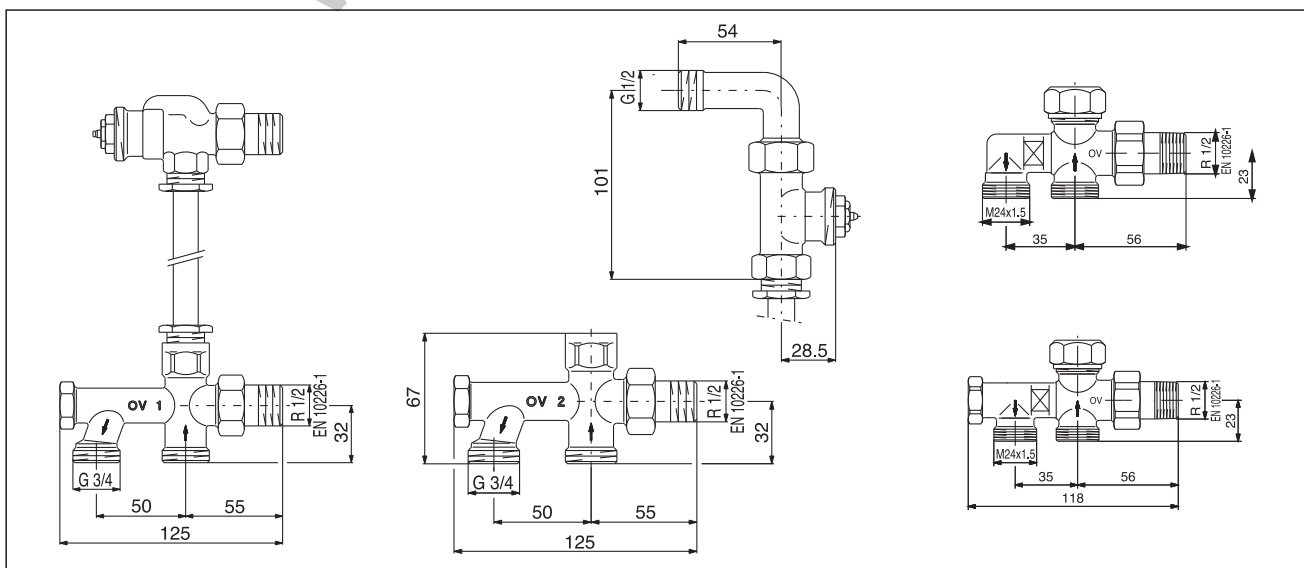


Horizontal insertion tube

Dimensions of "Tauch-Rohr" valves (one/two pipe)

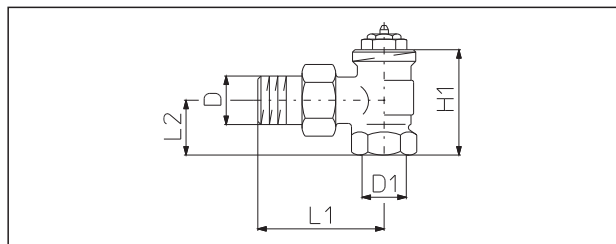


Dimensions of valve for "TKM" system (one/two pipe)



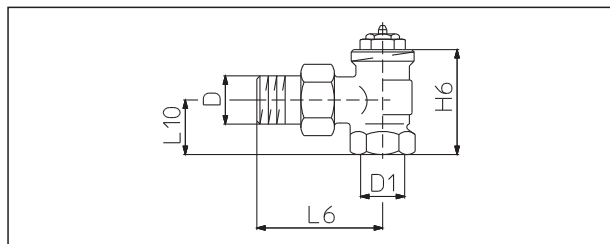
Dimensions of "Bypass-Combi Uno/Duo"

“Series A, AV 9, AV 6, ADV 6 and F”

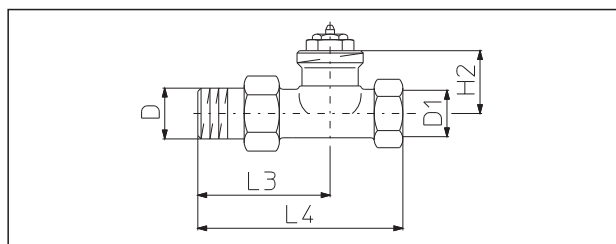


Dimensions of angle pattern valve

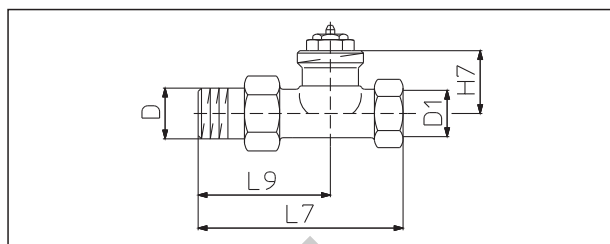
“Series RF” and “Series RFV 6”



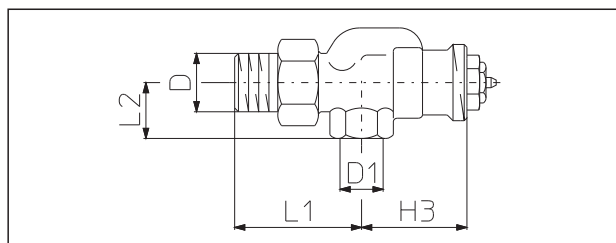
Dimensions of angle pattern valve



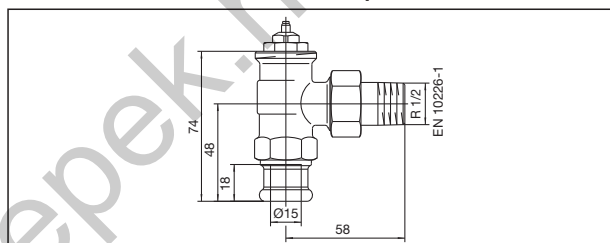
Dimensions of straight pattern valve



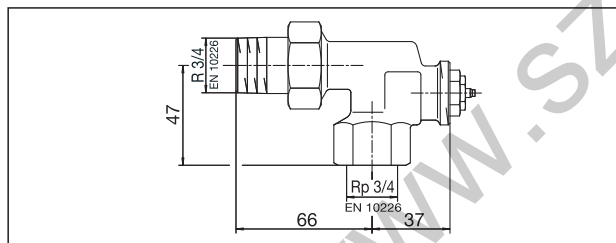
Dimensions of straight pattern valve



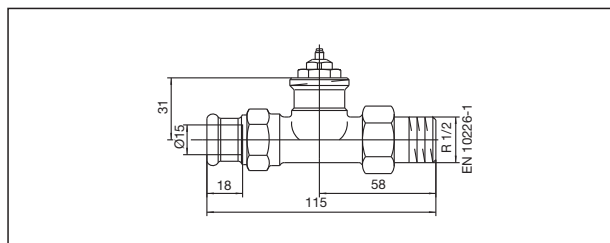
Dimensions of reversed angle pattern valve
for the supply pipe DN 10 and DN 15



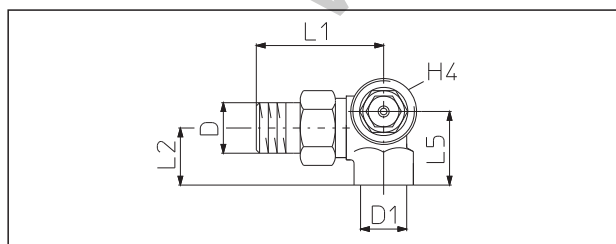
Dimensions of angle pattern valve



Dimensions of reversed angle pattern valve
for the supply pipe DN 20



Dimensions of straight pattern valve



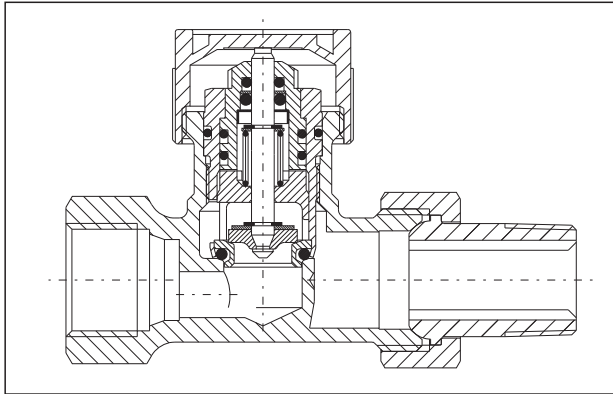
Dimensions of double angle pattern valve,
illustr.: right hand side connection

The dimensions of the valves for the return pipe are identical with those for the supply pipe.

DN	D EN 10226-1	D ₁ EN 10226-1	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉	L ₁₀	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	H ₇
10	R 3/8	Rp 3/8	52	22	52	85	27	49	75	–	50	20	47.5	31	41.5	31	–	47.5	31
15	R 1/2	Rp 1/2	58	27	58	95	34	54	83	61	56	23	53	31	40	30	40	50	31
20	R 3/4	Rp 3/4	66	29	63	106	–	63	98	69	63	26	53	29	37	–	40	50	29
25	R 1	Rp 1	75	34	80	125	–	–	–	–	–	–	61	30	–	–	–	–	–
32	R 1 1/4	Rp 1 1/4	86	39	90	150	–	–	–	–	–	–	68.5	33.5	–	–	–	–	–

Series

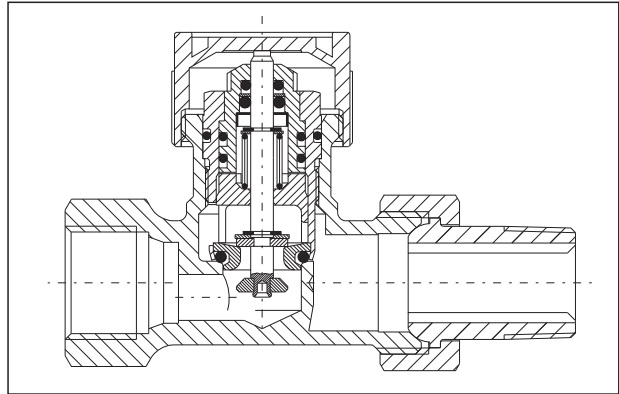
“Series AV 9”, “Series AV 6” and “Series RFV 6”



Model with presetting; for two pipe heating systems with normal temperature difference.

The valves of the “Series AV 9”, “Series AV 6” and “Series RFV 6” are fitted with a presettable valve insert and allow a problem-free adaptation of the volume flows.

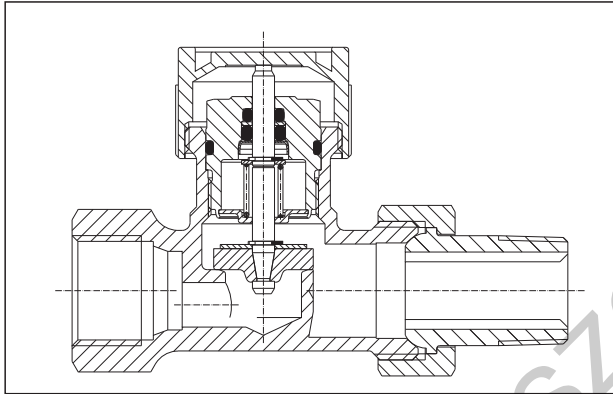
“Series ADV 6”



Model with presetting and double function.

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

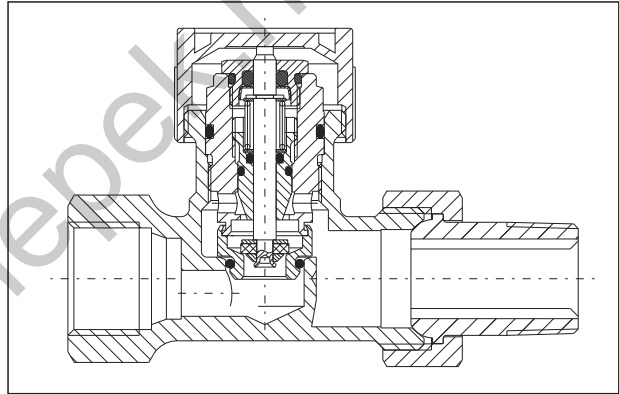
“Series A” and “Series RF”



Model for all one and two pipe heating systems.

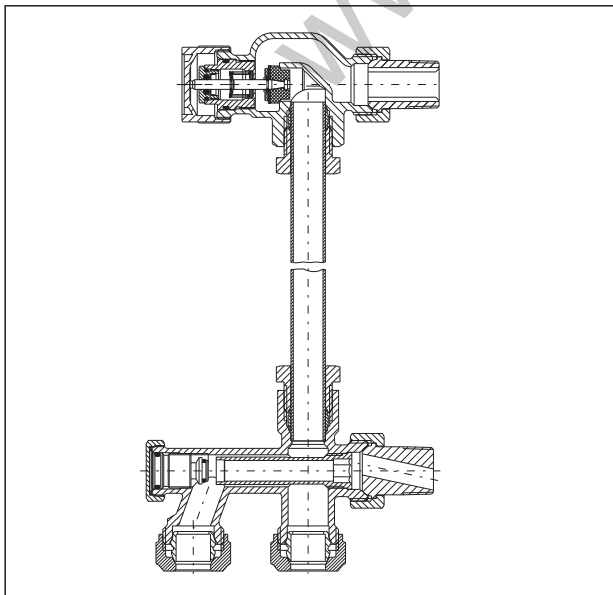
Adaptation of the volume flows is carried out via the presettable radiator lockshield valve (e.g. “Combi 4”).

“Series F”



Model with infinitely adjustable fine presetting; for two pipe heating systems with high temperature difference and low flow rates.

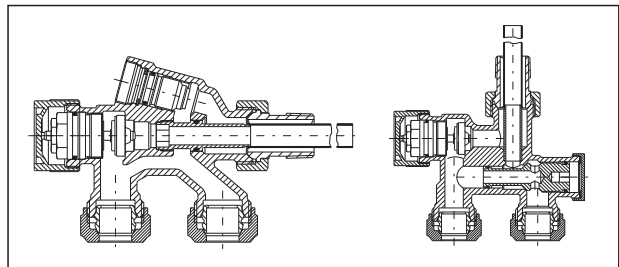
“Bypass-Combi”



One pipe radiator valve “Bypass-Combi Uno”

Installation set for a problem-free installation of one pipe heating systems.

“Tauch-Rohr” valves



“Tauch-Rohr” valves for one pipe heating systems

k_v and Zeta values**“Series A” and “Series RF”**

Size	k _v at P-deviation			k _{vs}	Zeta at P-deviation			
	1 K	1.5 K	2 K		1 K	1.5 K	2 K	open
Angle pattern valve								
DN 10	0.55	0.78	1.00	2.8	128	64	39	5
DN 15	0.55	0.80	1.05	3.5	342	162	94	8
DN 20	0.55	0.82	1.10	3.5	1110	499	277	27
DN 25	0.55	0.82	1.10	3.5	2791	1255	698	69
DN 32	0.55	0.82	1.10	4.1	8467	3809	2117	152
Straight pattern valve								
DN 10	0.55	0.78	1.00	1.8	128	64	39	12
DN 15	0.55	0.80	1.05	1.8	342	162	94	31
DN 20	0.55	0.82	1.10	2.8	1110	499	277	43
DN 25	0.55	0.82	1.10	3.5	2791	1255	698	69
DN 32	0.55	0.82	1.10	4.1	8467	3809	2117	152
Reversed angle pattern valve, double angle pattern valve, sizes DN 10 + DN 15								
DN 10	0.55	0.78	1.00	1.8	128	64	39	12
DN 15	0.55	0.80	1.05	1.8	342	162	94	31
DN 20	0.55	0.82	1.10	2.2	1110	499	277	70

“Series AV 9” (with infinitely adjustable presetting)

All patterns

Size	k_v at P-deviation (presetting 9)			k_{vs}	Zeta at P-deviation (presetting 9)			
	1 K	1.5 K	2 K		1 K	1.5 K	2 K	open
DN 10	0.35	0.51	0.67		316	149	86	
DN 15	0.35	0.51	0.67		843	397	230	
DN 20	0.35	0.51	0.67		2782	1310	759	
DN 25	0.35	0.51	0.67		6970	3283	1902	

“Series AV 6” and “Series RFV 6” (with presetting)

All patterns

Size	k_v at P-deviation (presetting 6)				k_{vs}	Zeta at P-deviation				
	1 K	1.5 K	2 K	3 K		1 K	1.5 K	2 K	3 K	open
DN 10	0.32	0.49	0.65	0.8	0.9	374	157	89	59	46
DN 15	0.32	0.49	0.65	0.8	0.9	1004	421	239	158	125
DN 20	0.32	0.49	0.65	0.8	0.9	3330	1398	795	525	414
DN 25	0.32	0.49	0.65	0.8	0.9	8338	3556	2021	1334	1054

“Series ADV 6” (with double function and presetting)

All patterns

Size	k_v at P-deviation (presetting 6)				Zeta at P-deviation				
	1 K	1.5 K	2 K	3 K	1 K	1.5 K	2 K	3 K	
DN 10	0.32	0.49	0.65	0.8	374	157	89	59	
DN 15	0.32	0.49	0.65	0.8	1004	421	239	158	
DN 20	0.32	0.49	0.65	0.8	3330	1398	795	525	

“Series F” (with infinitely adjustable fine presetting)

All patterns

Size	k_v at P-deviation (presetting 6)				k_{vs}	Zeta at P-deviation				
	1 K	1.5 K	2 K	3 K		1 K	1.5 K	2 K	3 K	open
DN 10	0.20	0.29	0.32	0.35	0.37	957	449	374	313	280
DN 15	0.20	0.29	0.32	0.35	0.37	2570	1202	1004	839	751
DN 20	0.20	0.29	0.32	0.35	0.37	8535	3992	3330	2790	2490

Zeta values related to the inner pipe diameter according to DIN EN 10255 (DN 10 = 12.6 mm, DN 15 = 16.1 mm, DN 20 = 21.7 mm, DN 25 = 27.3 mm, DN 32 = 36.0 mm).

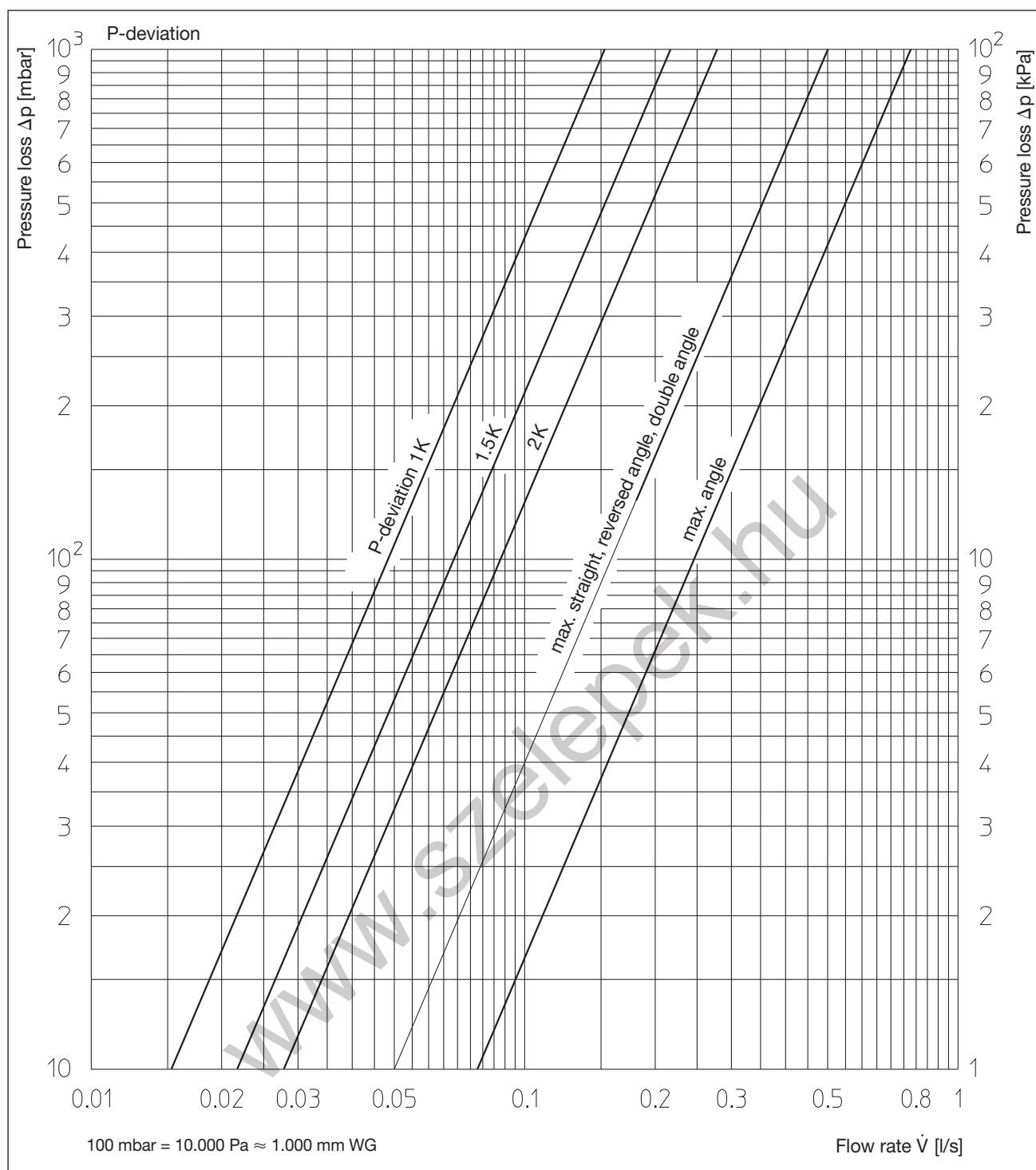


Chart 1

Oventrop thermostatic radiator valves "Series A" and "Series RF", DN 10
All patterns at 1 to 2 K P-deviation and k_{vs}

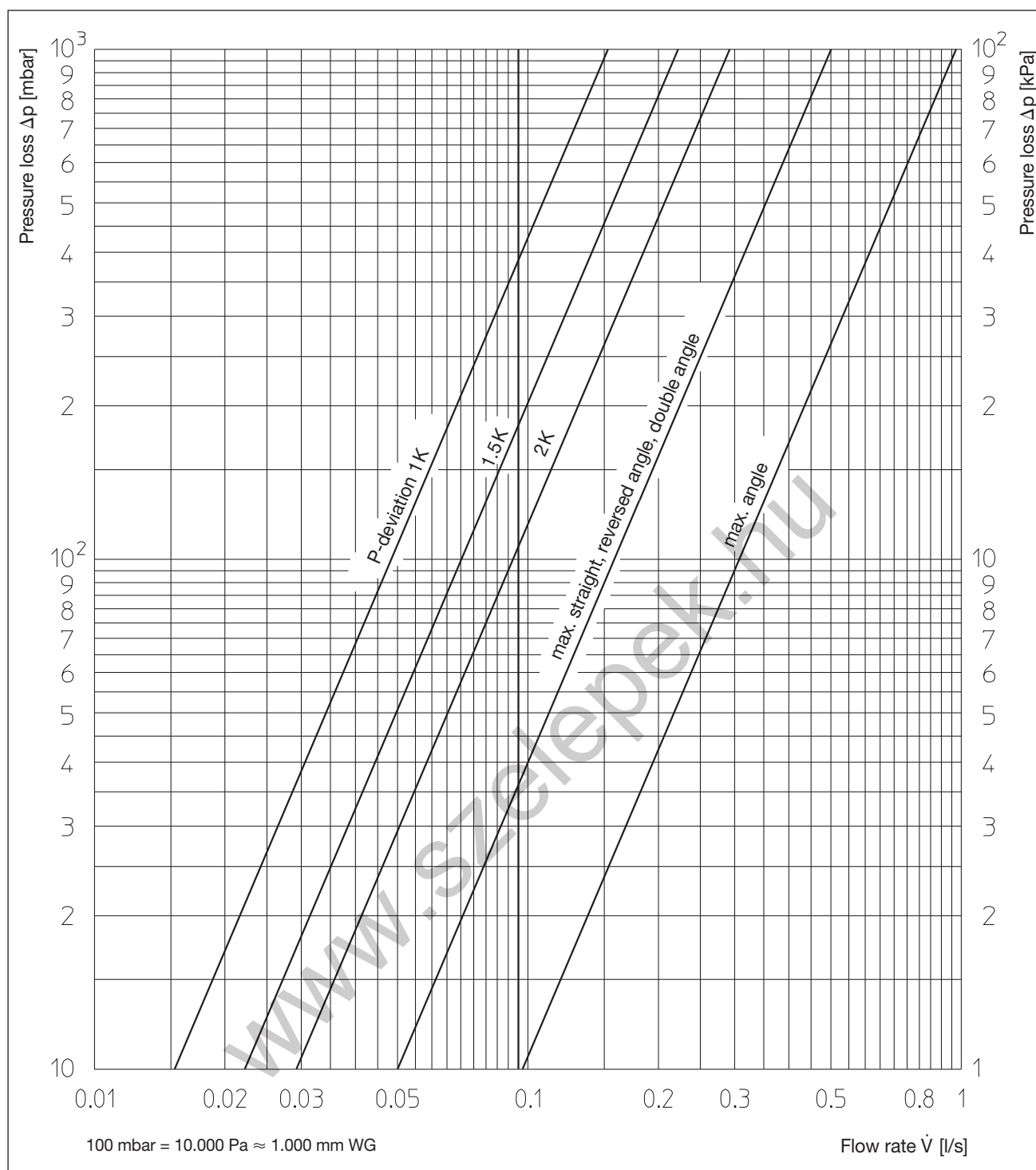


Chart 2

Oventrop thermostatic radiator valves "Series A" and "Series RF", DN 15
 All patterns at 1 to 2 K P-deviation and k_{vs}

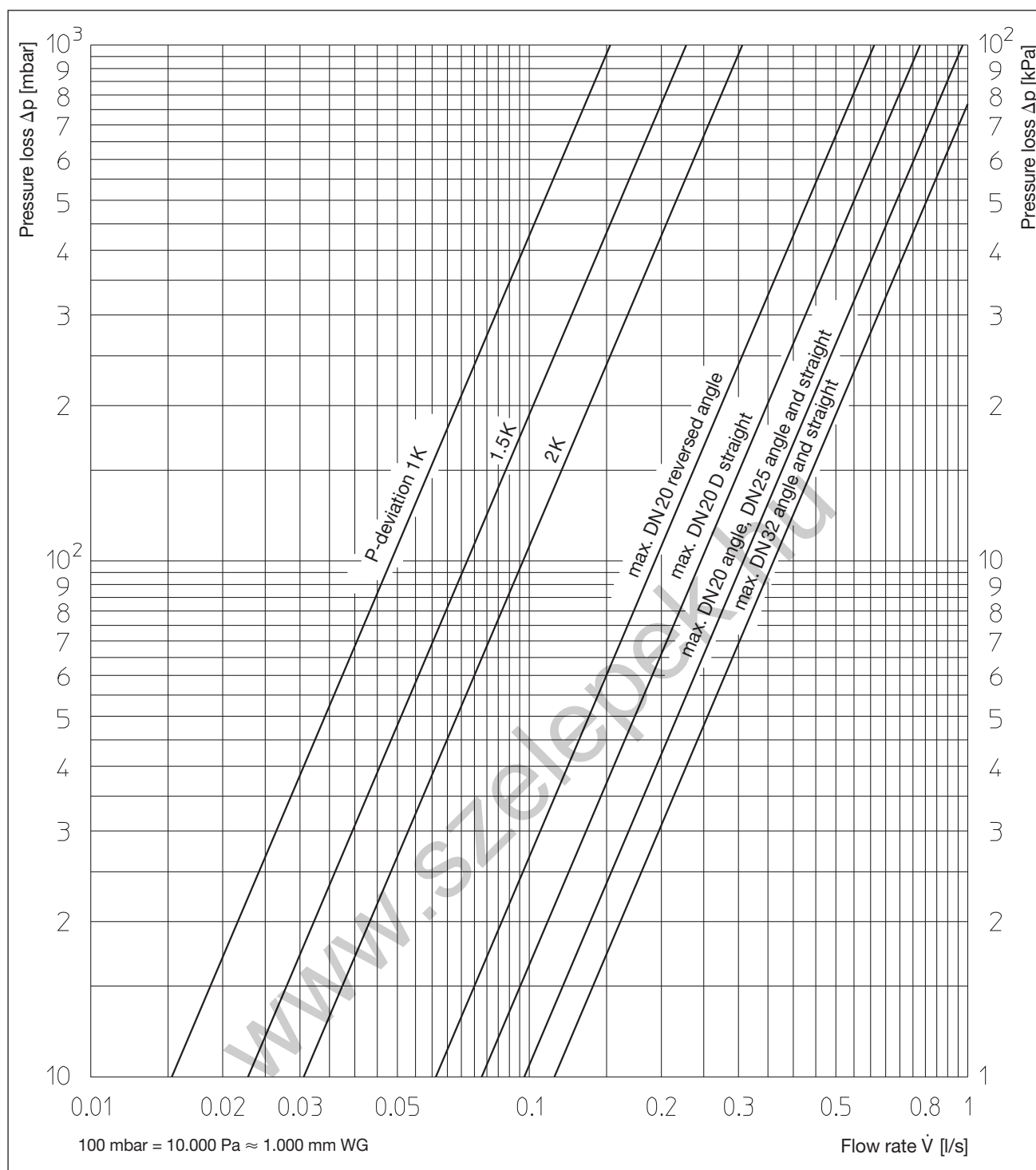
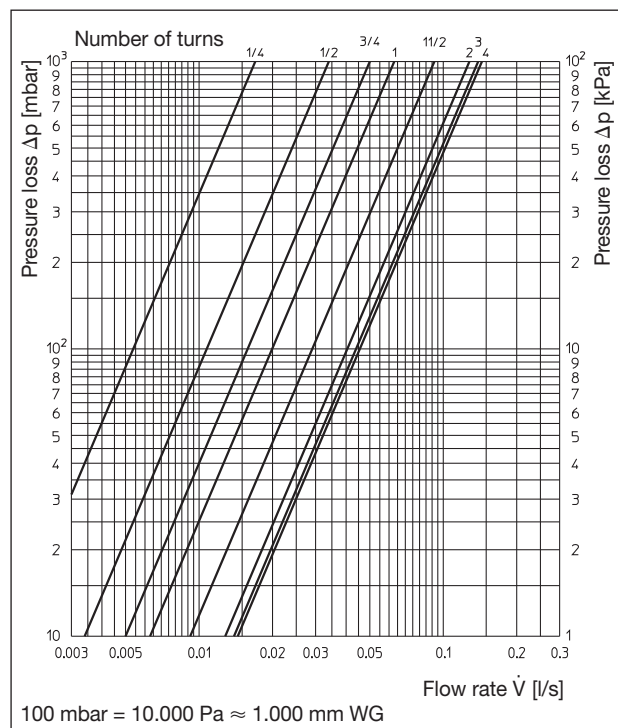


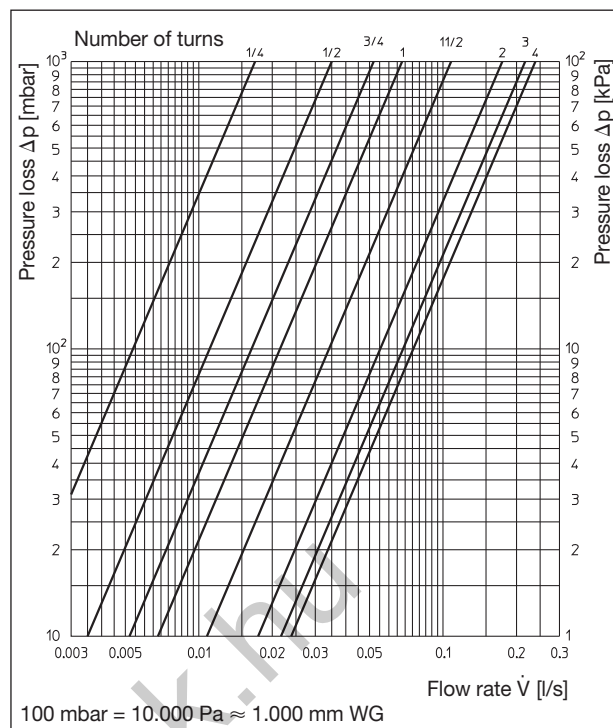
Chart 3

Oventrop thermostatic radiator valves "Series A" and "Series RF", DN 20 – DN 32
 All patterns at 1 to 2 K P-deviation and k_{vs}

All patterns at 1 K P-deviation:



All patterns at 2 K P-deviation:

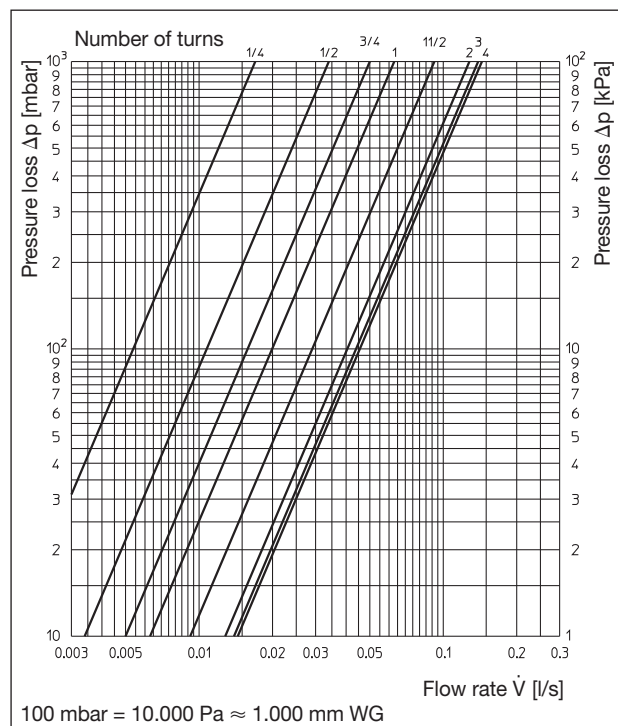


Charts 4

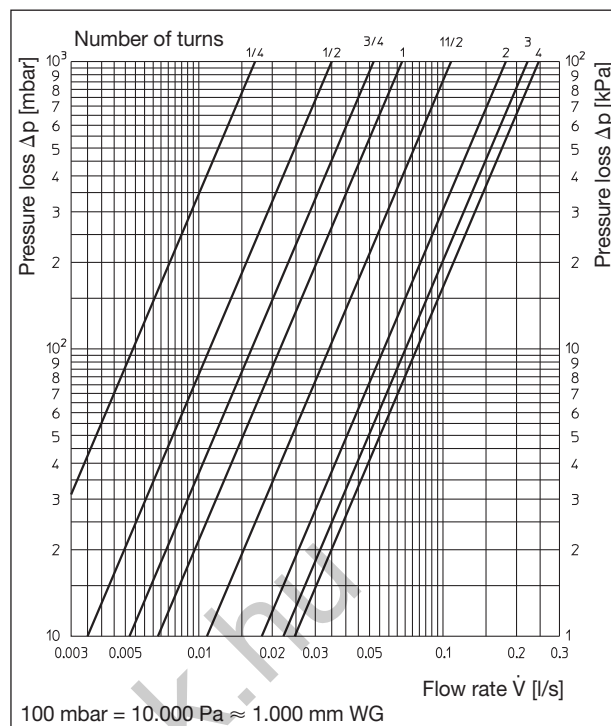
Oventrop thermostatic radiator valves "Series A" and "Series RF", DN 10
and radiator lockshield valves "Combi 4", "Combi 3" or "Combi 2".

Presetting	1/4	1/2	3/4	1	1 1/2	2	3	4
k_V value at 1 K P-deviation	0.060	0.123	0.180	0.228	0.330	0.460	0.500	0.520
k_V value at 1.5 K P-deviation	0.060	0.124	0.185	0.238	0.370	0.560	0.660	0.710
k_V value at 2 K P-deviation	0.060	0.125	0.187	0.243	0.390	0.630	0.780	0.860

All patterns at 1 K P-deviation



All patterns at 2 K P-deviation

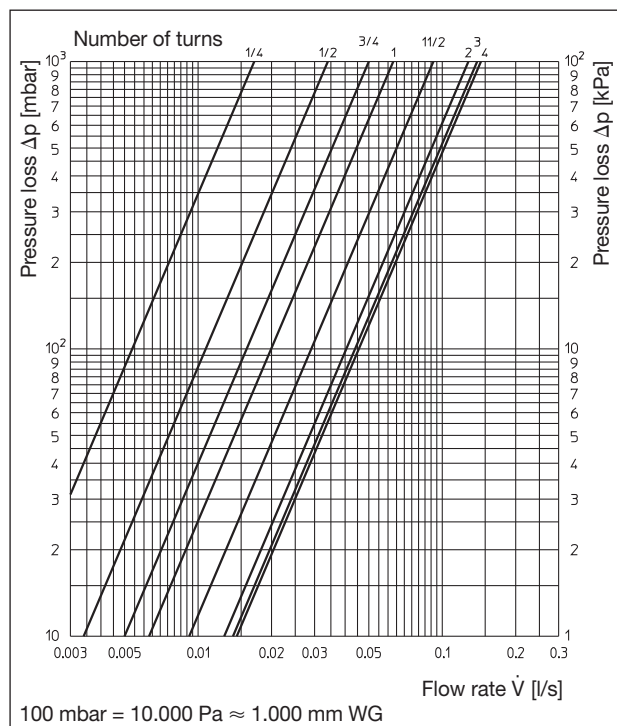


Charts 5

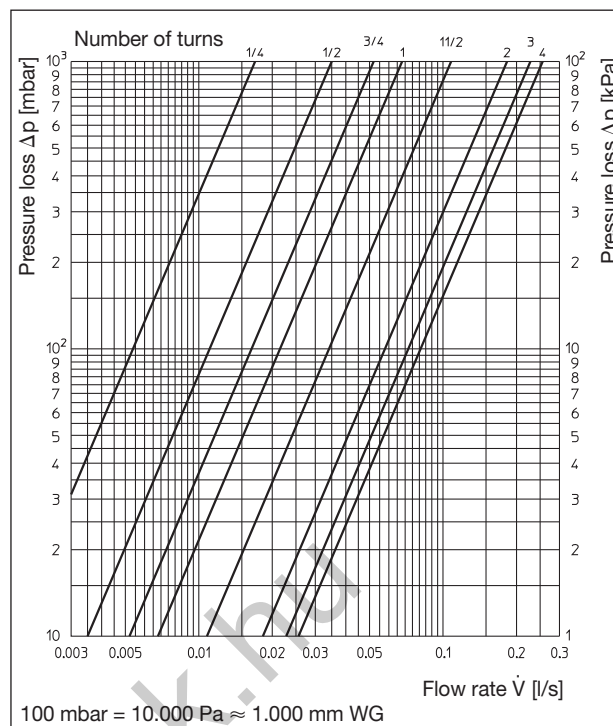
Oventrop thermostatic radiator valves "Series A" and "Series RF", DN 15
and radiator lockshield valves "Combi 4", "Combi 3" or "Combi 2".

Presetting	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4
k_v value at 1 K P-deviation	0.060	0.123	0.180	0.228	0.330	0.460	0.500	0.520
k_v value at 1.5 K P-deviation	0.060	0.124	0.185	0.239	0.370	0.570	0.670	0.720
k_v value at 2 K P-deviation	0.060	0.125	0.187	0.243	0.390	0.650	0.800	0.890

All patterns at 1 K P-deviation



All patterns at 2 K P-deviation



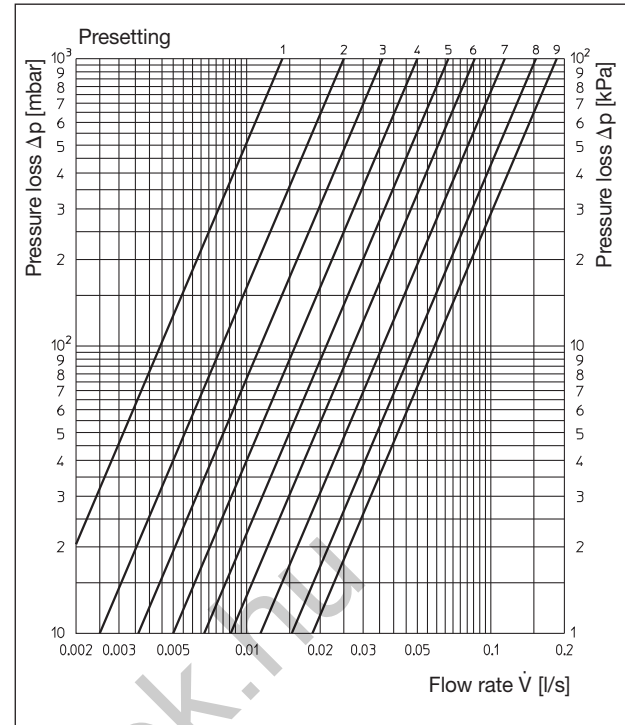
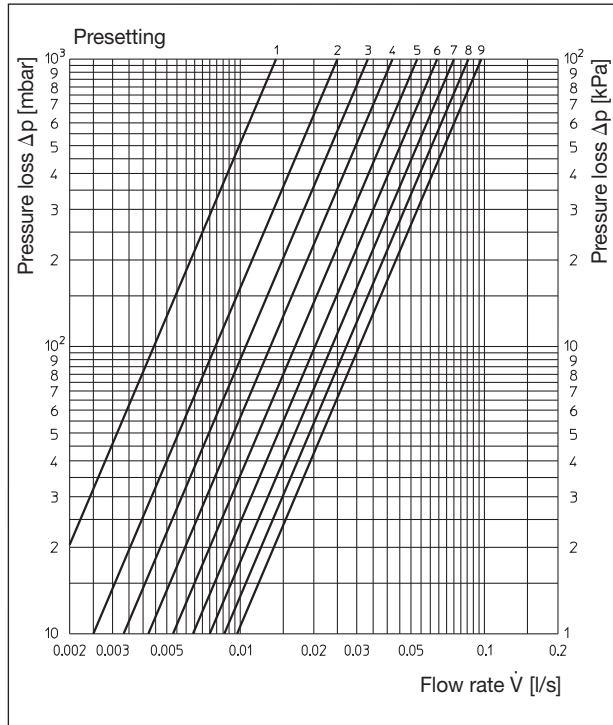
Charts 6

Oventrop thermostatic radiator valves "Series A" and "Series RF", DN 20 – DN 32
and radiator lockshield valves "Combi 4", "Combi 3" or "Combi 2".

Presetting	1/4	1/2	3/4	1	1 1/2	2	3	4
k_v value at 1 K P-deviation	0.060	0.123	0.180	0.228	0.330	0.460	0.500	0.520
k_v value at 1.5 K P-deviation	0.060	0.125	0.185	0.239	0.370	0.580	0.680	0.740
k_v value at 2 K P-deviation	0.060	0.125	0.187	0.244	0.390	0.660	0.820	0.920

All patterns and sizes at 1 K P-deviation

All patterns and sizes at 2 K P-deviation

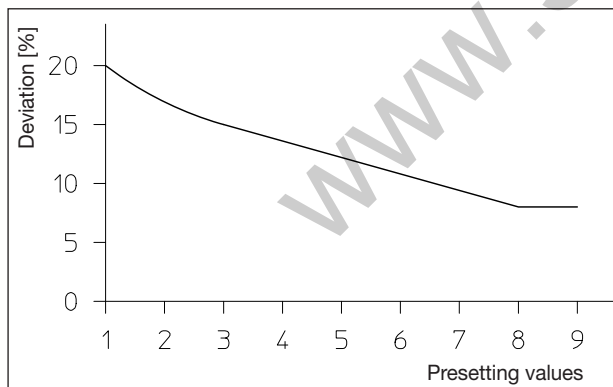


Charts 7

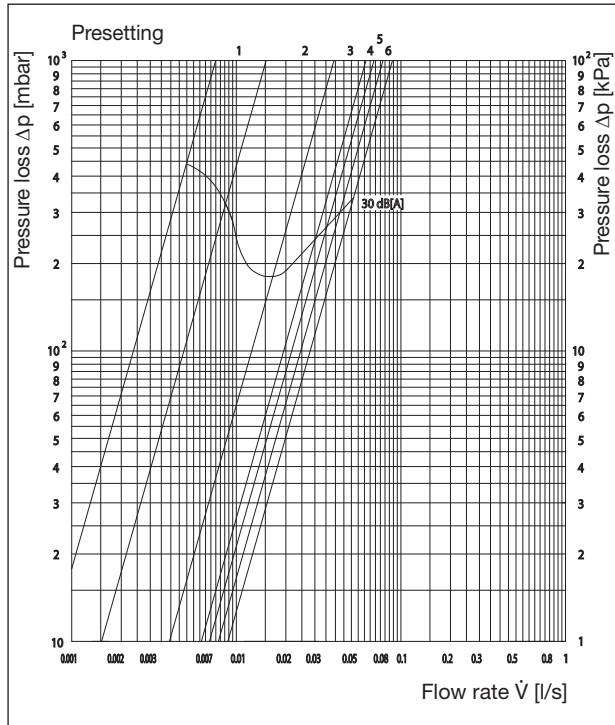
Oventrop thermostatic radiator valves "Series AV 9" with infinitely adjustable presetting

Presetting	1	2	3	4	5	6	7	8	9
k_V -value at 1 K P-deviation	0.05	0.09	0.12	0.15	0.19	0.23	0.27	0.31	0.35
k_V -value at 1.5 K P-deviation	0.05	0.09	0.13	0.17	0.22	0.28	0.36	0.45	0.51
k_V -value at 2 K P-deviation	0.05	0.09	0.13	0.18	0.24	0.31	0.41	0.55	0.67

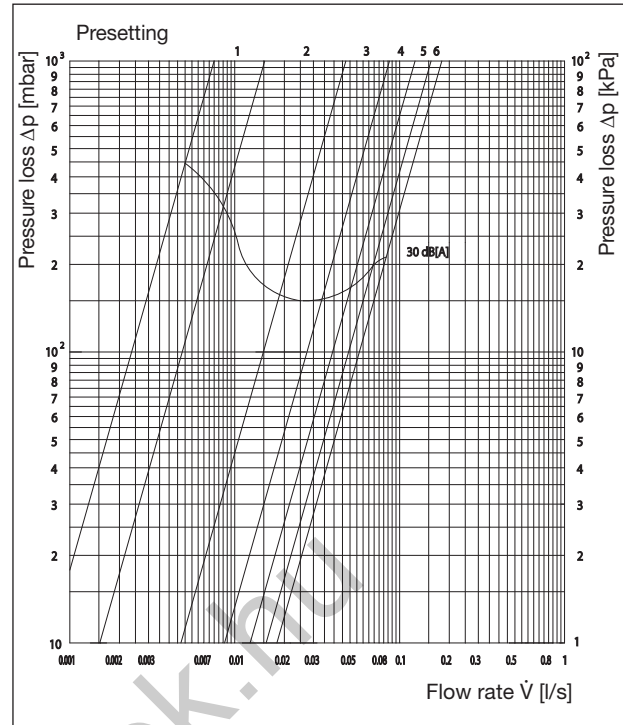
Performance data: all patterns and sizes


Flow tolerances depending on the presetting:
According to DIN EN 215 at 2 K P-deviation

All patterns and sizes at 1 K P-deviation

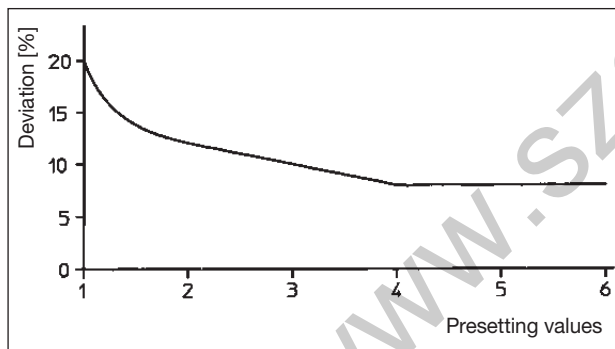


All patterns and sizes at 2 K P-deviation



Charts 8

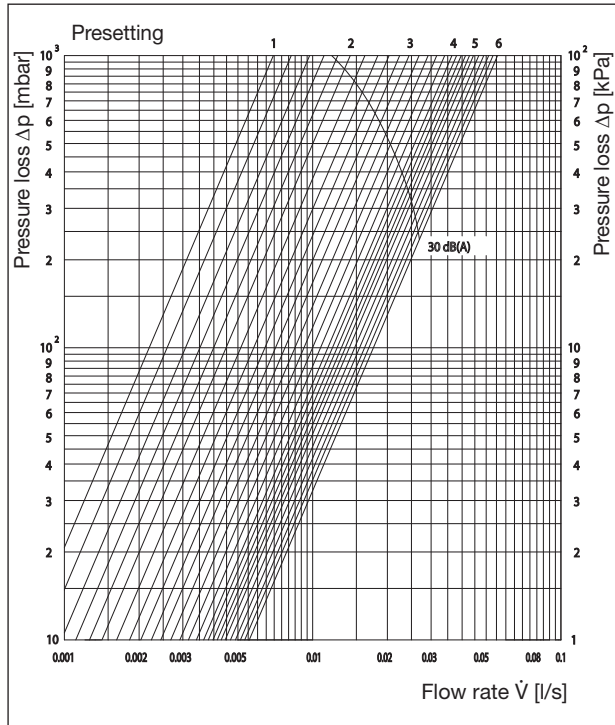
Oventrop thermostatic radiator valves "Series AV 6", "Series RFV 6" and "Series ADV 6" with presetting.


Flow tolerances depending on the presetting:
According to DIN EN 215 at 2 K P-deviation

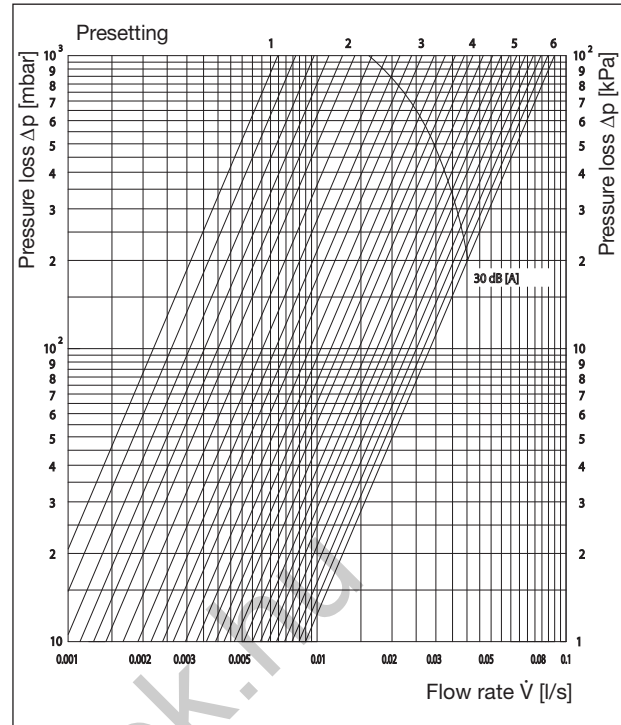
Presetting	1	2	3	4	5	6
k_V -value at 1 K P-deviation	0.055	0.141	0.221	0.247	0.28	0.32
k_V -value at 1.5K P-deviation	0.055	0.170	0.296	0.370	0.42	0.49
k_V -value at 2K P-deviation	0.055	0.170	0.313	0.446	0.56	0.65

Performance data: all patterns and sizes

All patterns and sizes at 1 K P-deviation

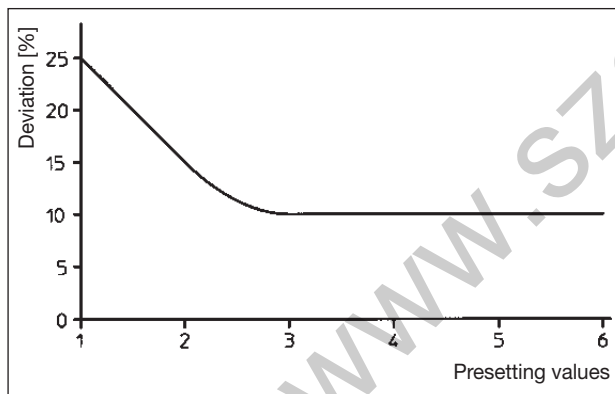


All patterns and sizes at 2 K P-deviation



Charts 9

Oventrop thermostatic radiator valves "Series F" with fine presetting.



Flow tolerances depending on the presetting:

According to DIN EN 215 at 2 K P-deviation

Presetting	1	2	3	4	5	6
k_V -value at 1 K P-deviation	0.025	0.051	0.088	0.131	0.16	0.20
k_V -value at 1,5 K P-deviation	0.025	0.051	0.095	0.152	0.20	0.29
k_V -value at 2 K P-deviation	0.025	0.051	0.095	0.152	0.228	0.323

Performance data: all patterns and sizes

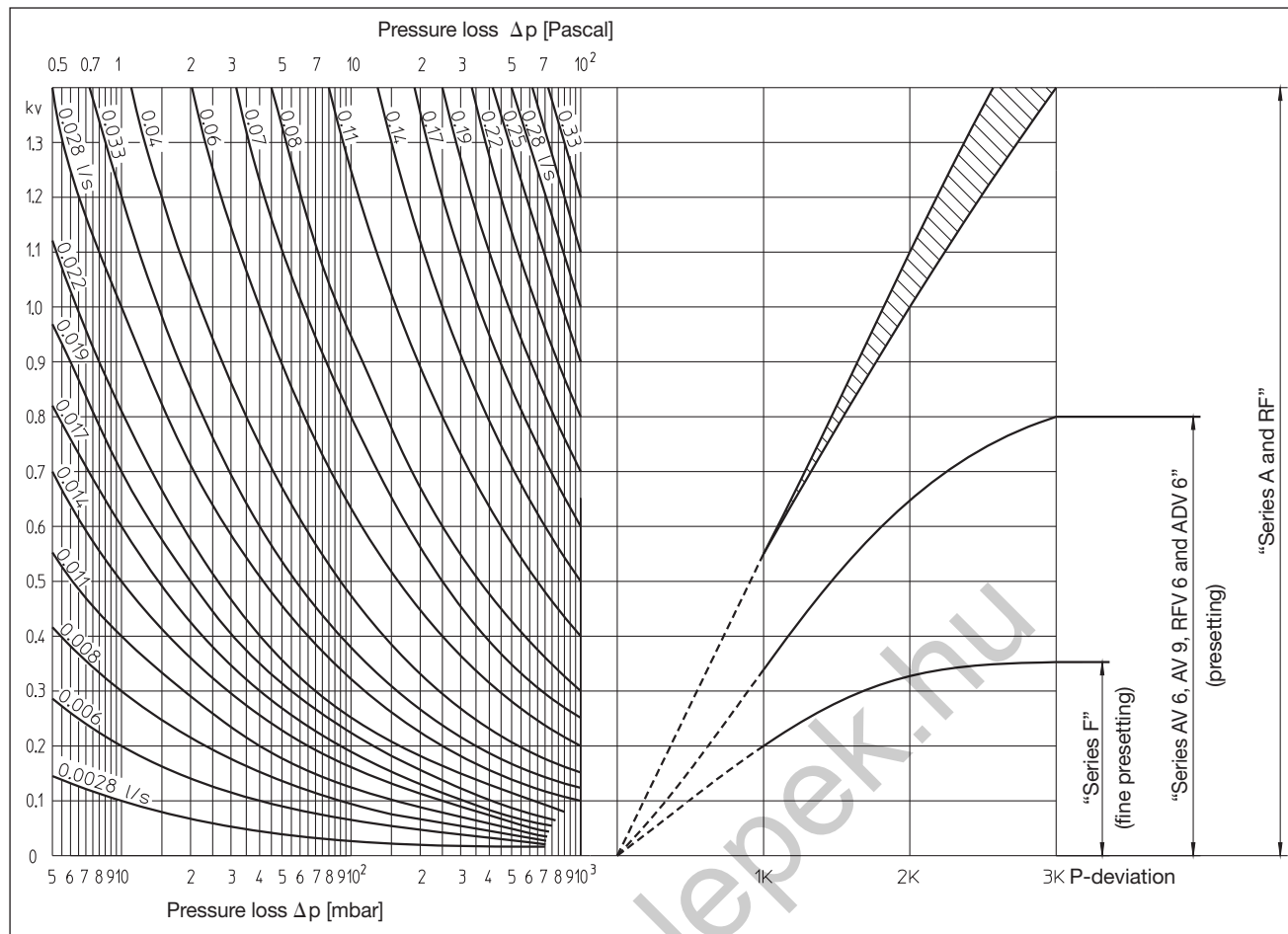


Chart 10

Oventrop thermostatic radiator valves "Series A, AV 9, AV 6, RF, ADV 6, RFV 6 and F": design ranges

Example: $q_m = 120 \text{ kg/h}$, $\Delta p = 30 \text{ mbar}$. $k_v = 0.7$ (read off flow chart).

Valves of the "Series A" and "Series RF" can be used. Choice of valves see charts 1-6.

Radiator valve design:

Oventrop thermostatic radiator valves permit a "room-by-room" adaptation of the heat output by using:

- thermostatic radiator valves with presetting ("Series AV 6", "Series AV 9", "Series RFV 6", "Series ADV 6" with presetting and "Series F" with fine presetting)
- thermostatic radiator valves "Series A" and "Series RF" combined with presettable radiator lockshield valves "Combi 4", "Combi 3" and "Combi 2"

Official approvals:

Oventrop thermostatic radiator valves correspond to:

- the EN 215 standard (E KEYMARK tested and certified, reg.-no. 011-6T0002)
- BS 7556 standard

In addition, the thermostatic radiator valves of the "Series F" correspond to:

- the directions of the Association for District Heating (AGFW, work sheet FW 507)
- the conditions of the company Esso (TA list)

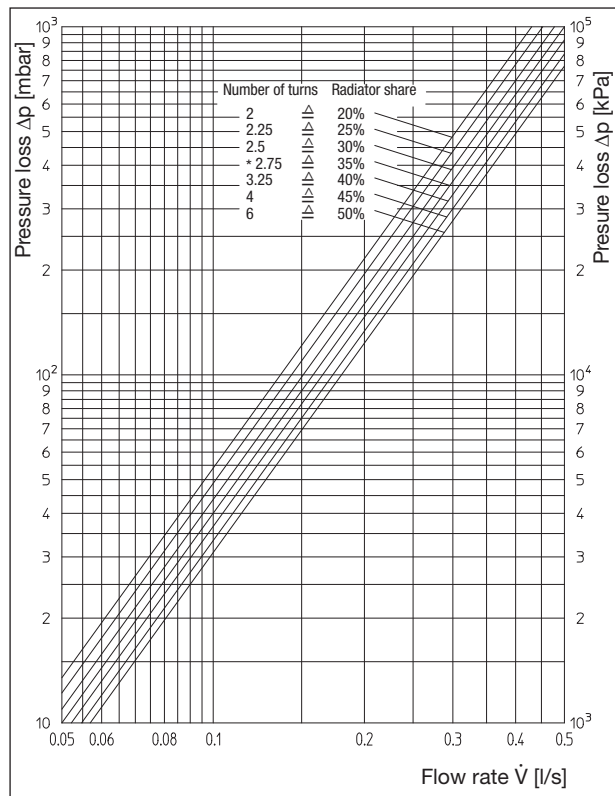


Chart 11

Oventrop one pipe radiator valve "Bypass-Combi Uno" with a distance between pipe centres of 50 mm (complete valve set) with valve "Series A", all patterns at 2 K P-deviation

Valve design "Bypass-Combi Uno" with a distance between pipe centres of 50 mm

Before leaving the factory, the distributor is adjusted to a radiator flow share of 35% at 2 K P-deviation. The presetting can be restored at any time by first turning the setting screw clockwise until stop and then turning it back anticlockwise by 3.25 turns.

The infinitely presettable bypass provides the optimum design of the heating system. There is a reciprocal relationship between the following three values:

- Radiator share
- Radiator heat output
- Pressure loss

By fixing any of these three values, the other two are determined. To achieve optimum matching of radiator output and pressure loss (pump output), preference can often be given to establishing the lowest possible Δp pressure loss (low pump running costs).

Valve design one pipe connection piece "Uno" with a distance between pipe centres of 35 mm

The distributor is preset at works to a radiator flow share of 50 % at 2 K P-deviation (valves of the "Series A").

Valve design "Tauch-Rohr" valves

The valves have a fixed radiator flow share of 35 % at 2 K P-deviation. k_v value: 1.8

Even with the valves being closed, radiators in one pipe heating systems can become slightly warm due to the heat flow through the bypass.

Valve design "TKM" system (one pipe)

The valve is preset at works to a radiator flow share of 50 % at 2 K P-deviation. k_v value = 1.5

P-deviation	2K				
Turns of setting screw	2	2.25	2.5	3.25	6
k_v -value	1.55	1.63	1.72	1.88	2.05
Radiator share	20%	25%	30%	35%	40%

Resistances in equivalent lengths of pipe (meter)

For "Tauch-Rohr" valve: Radiator share 35 %

Radiator share	k_v	Pipe length [m]				
		12 x 1	14 x 1	15 x 1	16 x 1	18 x 1
40%	2.05	1.10	1.80	2.30	2.75	4.00
35%	1.88	1.20	1.95	2.50	3.00	4.35
30%	1.72	1.35	2.15	2.75	3.30	4.75
25%	1.63	1.40	2.25	2.90	3.45	5.05
20%	1.55	1.50	2.40	3.00	3.65	5.30

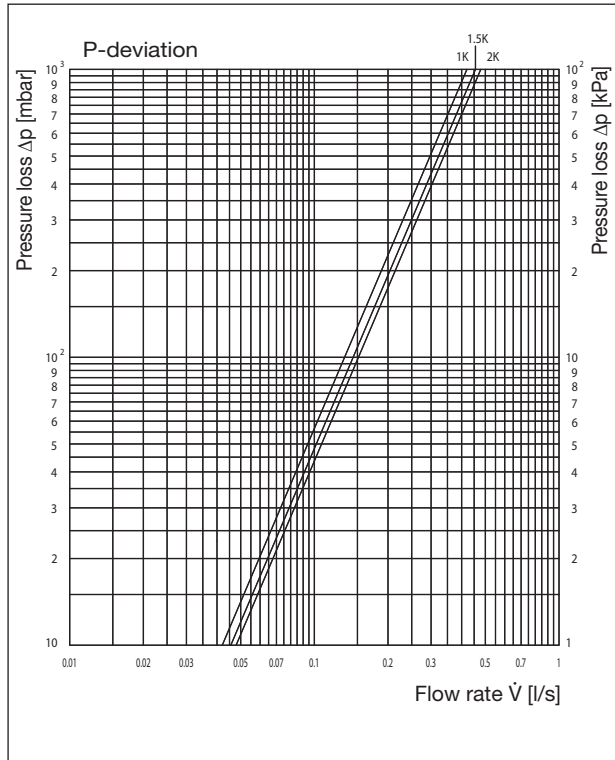
Soft steel pipe

Radiator share	k_v	Pipe length [m]				
		12 x 1	14 x 1	15 x 1	16 x 1	18 x 1
40%	2.05	1.20	1.95	2.50	3.05	4.30
35%	1.88	1.35	2.10	2.70	3.30	4.70
30%	1.72	1.45	2.30	2.95	3.65	5.10
25%	1.63	1.55	2.40	3.15	3.85	5.40
20%	1.55	1.60	2.55	3.30	4.05	5.70

Copper pipe

* Factory setting "Bypass-Combi Uno" / Fixed setting "Tauch-Rohr" valves

With fixed bypass without shut off



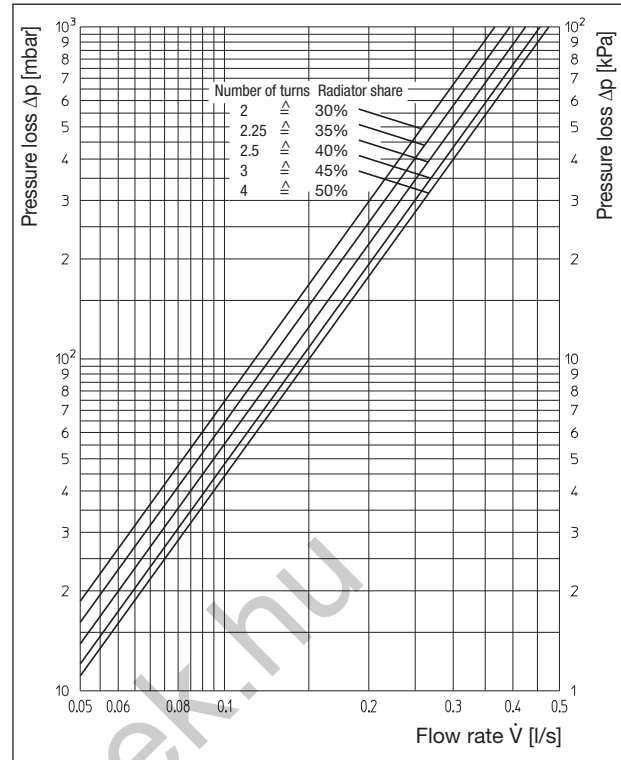
Charts 12

One pipe connection piece "Uno" (distance between pipe centres 35 mm) and valve "Series A", DN 15

P-deviation	1 K	1.5 K	2 K
k_V -value	1.5	1.64	1.71
Radiator share	25%	35%	50%

Performance data

With infinitely adjustable bypass and shut off

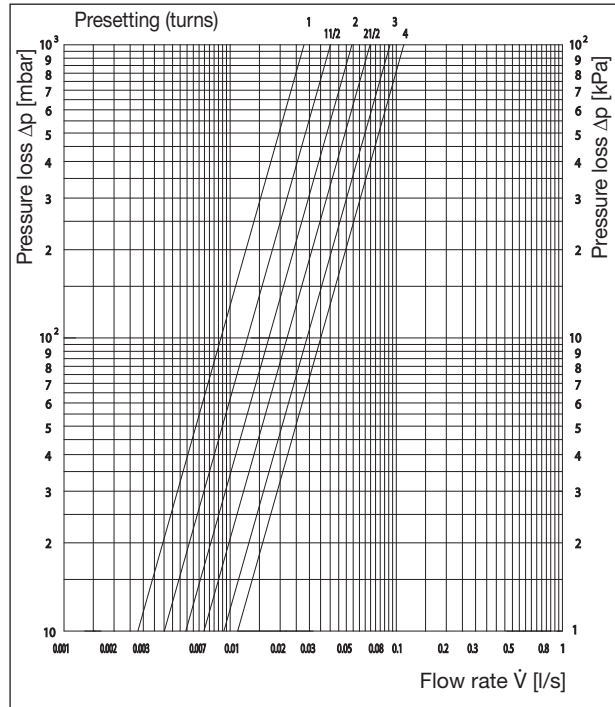


Performance data

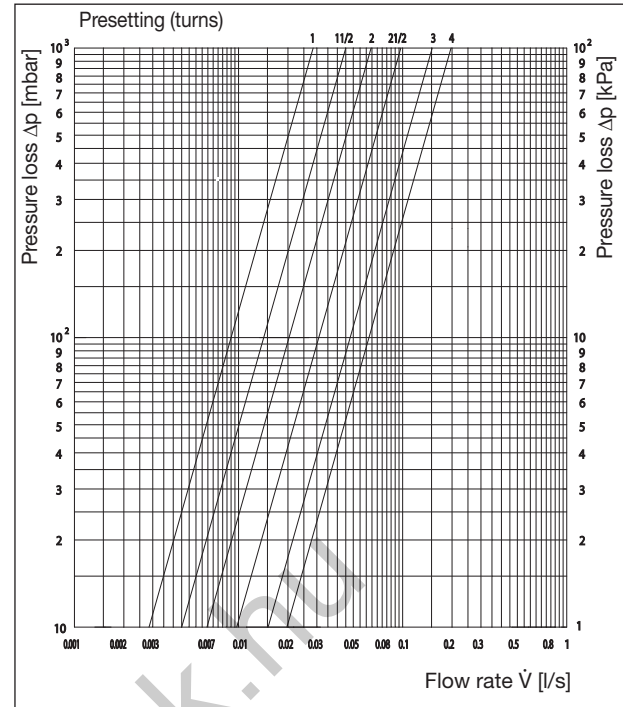
* Factory setting one pipe connection piece "Uno"

Number of turns setting screw	2	2.25	2.5	3	4*
k_V -value	1.32	1.42	1.53	1.64	1.71
Radiator share	30%	35%	40%	45%	50%

All patterns at 1 K P-deviation



All patterns at 2 K P-deviation



Charts 13

Two pipe connection piece "Duo" (distance between pipe centres 35 mm) and valve "Series A", DN 15

P-deviation	1 K	1.5 K	2 K
k_v -value	0.4	0.55	0.7

Performance data

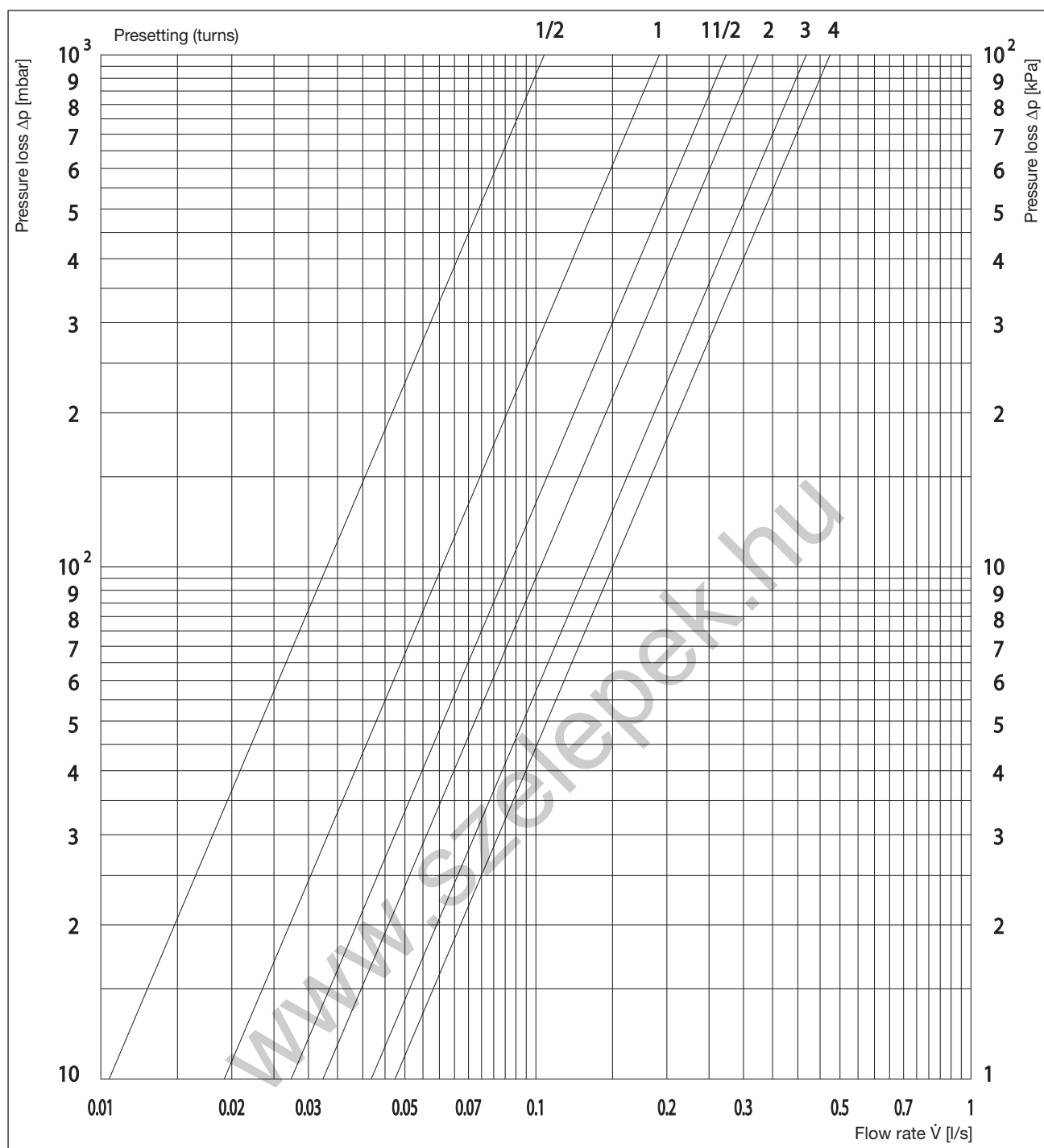


Chart 14

Oventrop "Bypass-Combi Duo"

Two pipe connection piece "Duo" with shut off (distance between pipe centres 50 mm)

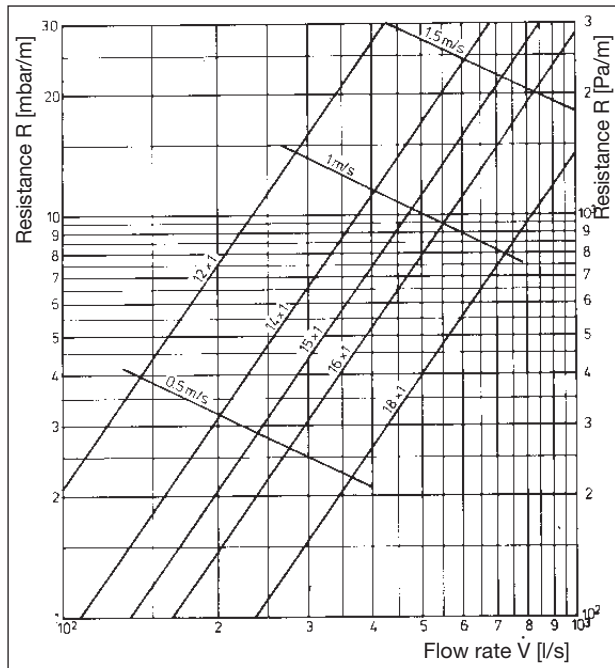


Chart 15
Soft steel pipe
Resistance R in mbar/m

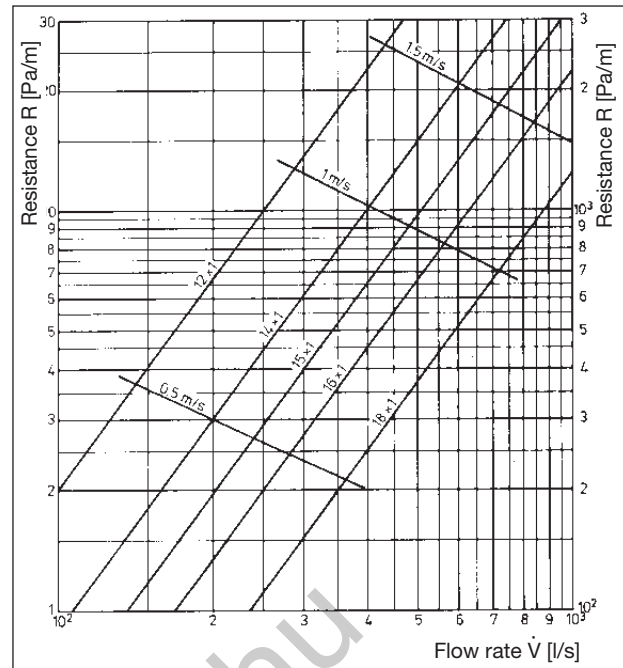


Chart 16
Copper pipe
Resistance R in mbar/m

Note: Pressure loss chart for composition pipe "Copipe" see technical information "Combi-System"



Note:

The protection cap is provided with 7 graduations. The change from one graduation to another corresponds to an alteration of the flow rate of 1 K P-deviation at the valve.

The protection cap may not be used for a permanent closure of the valve.

A metal cap has to be fitted to the connection nipple at the outlet port of the valve.

Subject to technical modification without notice.

Product range 1
ti 5-0/10/MW
Edition 2014

OVENTROP GmbH & Co. KG
Paul-Oventrop-Straße 1
D-59939 Olsberg
Germany
Phone +49(0) 2962 82-0
Fax +49(0) 2962 82-450
E-Mail mail@oventrop.de
Internet www.oventrop.de

For an overview of our global presence visit www.oventrop.de