Tender specification:

Oventrop radiator lockshield valve “Combi 4”
with proportional fine presetting with memory lock for use in hot water central heating systems and chilled water circuits.
For presetting with memory lock, isolating, filling and draining of the radiator.
Made of bronze/brass, nickel plated, valve disc with EPDM O-ring seal.
Protection cap with additional sealing function.
Connection for service tool.
Suitable for threaded pipes and compression fittings.
Lengths according to DIN 3842.
Operating temperature t_S: 2 °C up to 120 °C
(for short periods up to 130 °C)
Max. operating pressure p_S: 10 bar

Oventrop radiator lockshield valve “Combi 3”
with proportional fine presetting for use in hot water central heating systems and chilled water circuits.
For presetting, isolating, filling and draining of the radiator.
Made of bronze/brass, nickel plated, valve disc with EPDM O-ring seal.
Protection cap with additional sealing function.
Connection for service tool.
Suitable for threaded pipes, compression fittings and press connection.
Lengths according to DIN 3842
Operating temperature t_S: 2 °C up to 120 °C
(for short periods up to 130 °C)
Max. operating pressure p_S: 10 bar

Oventrop radiator lockshield valve “Combi 2”
with proportional fine presetting for use in hot water central heating systems and chilled water circuits.
For presetting and isolating of the radiator.
Made of brass, nickel plated, valve disc with EPDM O-ring seal.
Protection cap with additional sealing function.
Suitable for threaded pipes, compression fittings and solder connection.
Lengths according to DIN 3842.
Operating temperature t_S: 2 °C up to 120 °C
(for short periods up to 130 °C)
Max. operating pressure p_S: 10 bar

Oventrop radiator lockshield valve “Combi LR”
with proportional fine presetting and increased kvs value for use in hot water central heating systems and chilled water circuits.
For presetting and isolating of the radiator.
Made of brass, nickel plated, valve disc with EPDM O-ring seal.
Protection cap with additional sealing function.
Suitable for threaded pipes and compression fittings.
Lengths according to EN 215.
Operating temperature t_S: 2 °C up to 120 °C
(for short periods up to 130 °C)
Max. operating pressure p_S: 10 bar

Function:

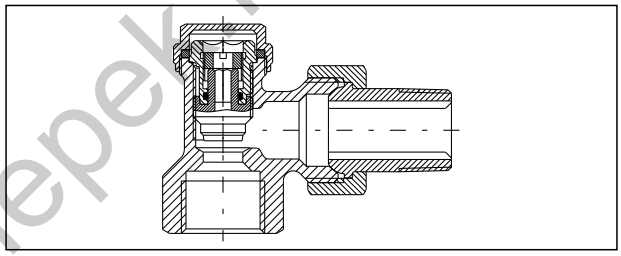
The Oventrop radiator lockshield valves “Combi 4, 3, 2 and LR” are installed in the return pipe of the radiator. When installing “Combi 4 and 3”, please ensure that the facility for draining the radiator is accessible. This will allow the removal of the radiators without the necessity to drain the system.

The carry out the hydronic balancing in the heating system, a presetting can be made to alter the flow resistance.

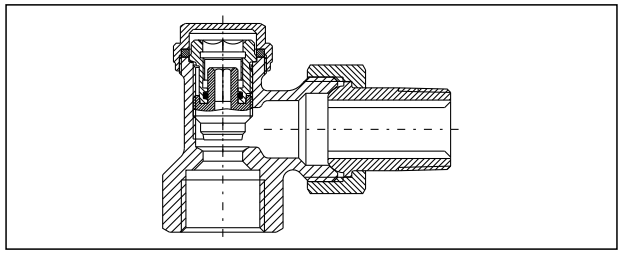
Draining and filling of the radiator (“Combi 4 and 3” only) is carried out using a service tool.

The operating fluid should be in accordance with the latest technical development (e.g. VDI 2035 – Avoidance of damage to hot water systems).

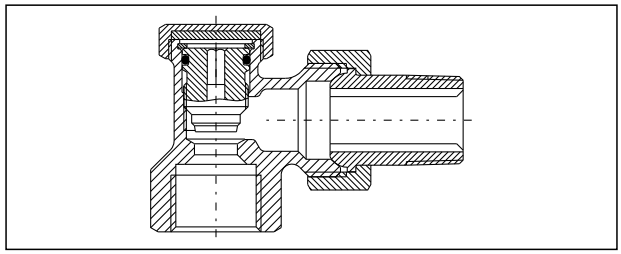
Radiator lockshield valve “Combi 4”



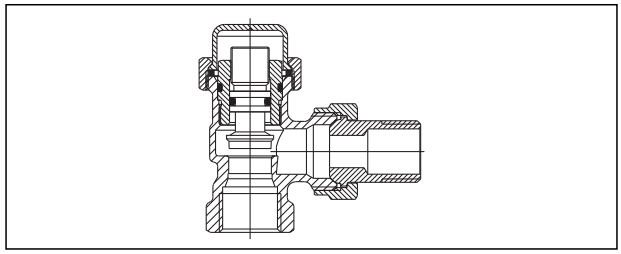
Illustrated section “Combi 4”
angle pattern with female thread EN 10226-1



Illustrated section “Combi 3”
angle pattern with female thread EN 10226-1



Illustrated section “Combi 2”
angle pattern with female thread EN 10226-1



Illustrated section “Combi LR”
angle pattern with female thread EN 10226-1

“Combi 4” / “Combi 3”

1 Presetting:

1.1 Remove protection cap.

1.2 Close the valve disc by turning a 4 mm spanner (1) clockwise (illustr. 1).

1.3 Then preset the valve disc by turning the 4 mm spanner (1) anticlockwise according to the number of turns selected from the flow chart (illustr. 2).

1.4 Finally, using a screwdriver, turn the lock nut clockwise until stop (illustr. 3, only “Combi 4”).

Important: In case of subsequent modification of the presetting, the lock nut should first be unscrewed by turning a screwdriver (illustr. 3) slightly anticlockwise. Afterwards the presetting can be changed with the help of the 4 mm spanner (1).

Note: The chosen presetting will not be changed by draining or isolating the radiator.

2 Isolating:

2.1 Remove protection cap.

2.2 Close the valve disc by turning a 4 mm spanner (1) clockwise (illustr. 4).
Attention: Do not twist the lock nut, otherwise the chosen presetting is no longer given when operating the valve (only “Combi 4”).

3 Draining:

3.1 First close the thermostatic radiator valve in the supply pipe.

3.2 Isolate the “Combi 4/3” as described above (point 2).

3.3 Loosen the valve insert by turning a 10 mm spanner (1) anticlockwise (max. ¼ thread) (illustr. 5).
Attention: The lock nut has to be screwed in sufficiently so that the 10 mm spanner can be inserted up to 4 mm at least.

3.4 Fit the service tool (2) to the “Combi 4/3” and connect a hose (illustr. 6).
Attention: Tighten the 19 mm compression nut closely (max. 10 Nm).

3.5 Open the vent screw at the radiator. Fit the 10 mm spanner (1) to the service tool (2) and drain the radiator by turning it anticlockwise (illustr. 6).
Attention: A max. differential pressure of 4 bar must not be exceeded during filling and draining.

4 Filling:

via the service tool

4.1 If the radiator was just drained with the service tool (2), no modifications to the tool or the valve are required. The radiator can now be filled through the hose (radiator now has to be bled).
Attention: A max. differential pressure of 4 bar must not be exceeded during filling and draining.

4.2 With the filling operating completed, fit the 10 mm spanner (1) to the service tool (2) again and close the insert by turning clockwise (illustr. 7).

4.3 Remove the service tool (2) and tighten insert using the 10 mm spanner (1) (max. 10 Nm) (illustr. 8).

via the heating system

4.4 Close the valve disc by turning a 10 mm spanner (1) clockwise and tighten it (max. 10 Nm) (illustr. 8).

4.5 Open the valve disc by turning a 4 mm spanner (1) anticlockwise until stop (illustr. 2). Bleed radiator.

4.6 Replace protection cap.

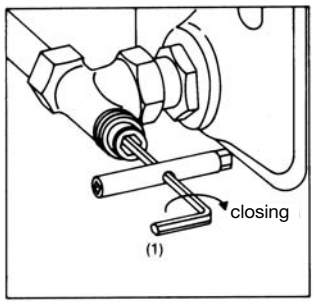
“Combi 2” / “Combi LR”

1 Presetting:

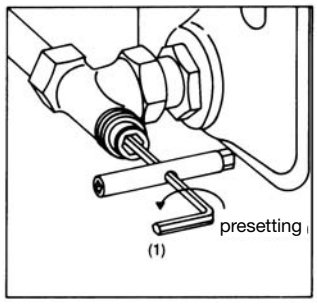
For presetting the “Combi 2” and “Combi LR” proceed as described above but using a 6 mm spanner (“Combi 4”, point 1).

2 Isolating:

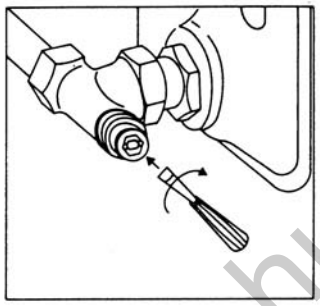
For isolating the “Combi 2” and “Combi LR” proceed as described above but using a 6 mm spanner (“Combi 4”, point 2).

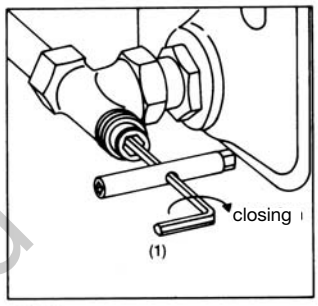


Illustr. 1

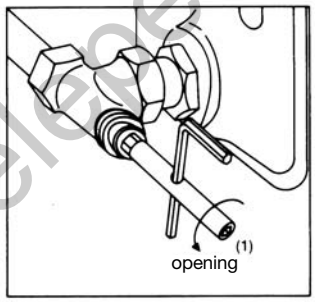


Illustr. 2

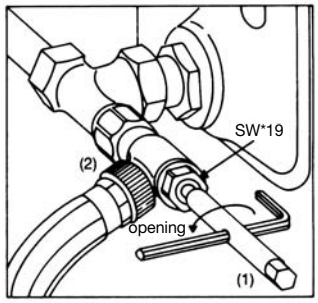

Illustr. 3



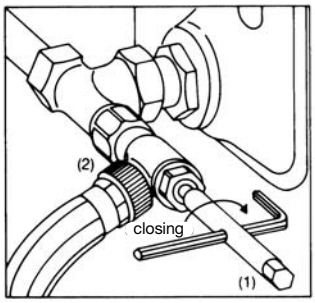
Illustr. 4



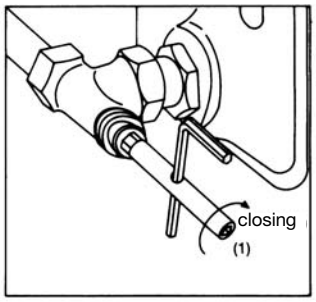
Illustr. 5



Illustr. 6

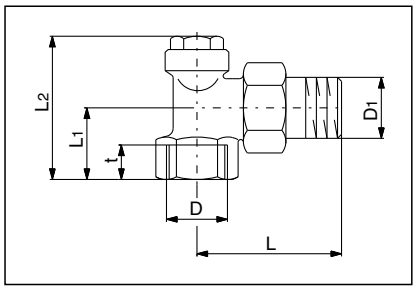


Illustr. 7

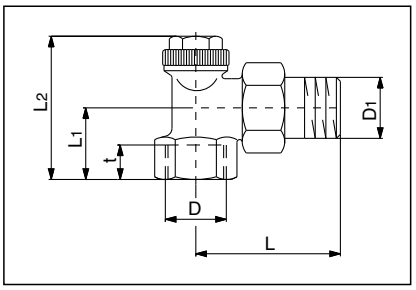


Illustr. 8

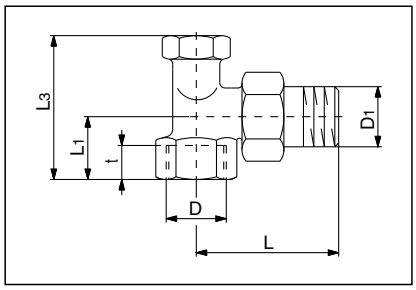
*SW = Spanner size



“Combi 4”



“Combi 3”



“Combi 2”

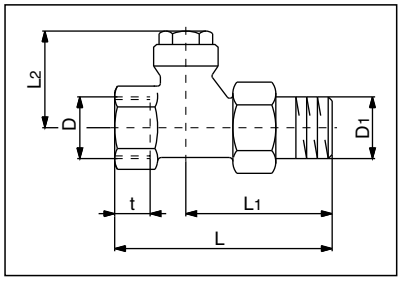
DN	D	D_1	L	L_1	L_2	L_3	t	“Combi 4” nickel plated	“Combi 3” nickel plated	“Combi 2” nickel plated
10	Rp ⅜	R ⅜	52	22	47.5	43.5	10.1	109 06 61	109 03 61	109 10 61
15	Rp ½	R ½	58	26	52	48	13.2	109 06 62	109 03 62	109 10 62
20	Rp ¾	R ¾	66	29	58	54	14.5	109 06 63	109 03 63	109 10 63

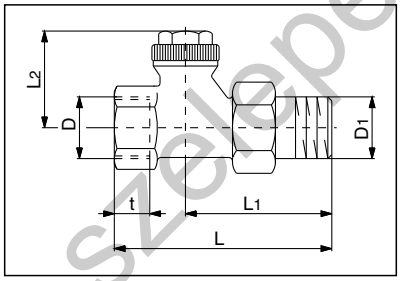
Angle pattern with female thread

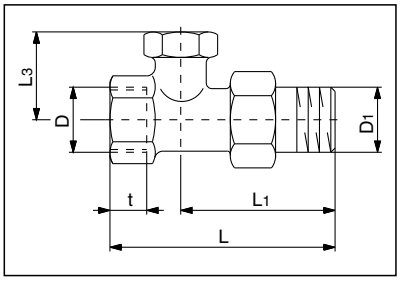
D	D_1	L	L_1	L_2	L_3	t	“Combi 2” unplated
12	R ⅜	52	22	47.5	43.5	10	109 12 51
12	R ½	54	22	47.5	43.5	10	109 12 52
15	R ½	58	26	-	48	12	109 12 53

Angle pattern with solder connection

Note: The threads R an Rp are according to EN 10226-1.







DN	D	D_1	L	L_1	L_2	L_3	t	“Combi 4” nickel plated	“Combi 3” nickel plated	“Combi 2” nickel plated
10	Rp ⅜	R ⅜	75	51.5	34	30	10.1	109 07 61	109 04 61	109 11 61
15	Rp ½	R ½	80	53.5	34	30	13.2	109 07 62	109 04 62	109 11 62
20	Rp ¾	R ¾	91	62	34.5	30.5	14.5	109 07 63	109 04 63	109 11 63

Straight pattern with female thread

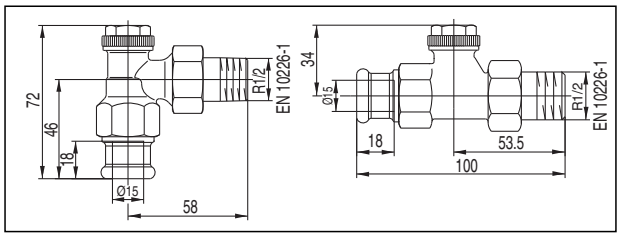
D	D_1	L	L_1	L_2	L_3	t	SW*	“Combi 2” unplated
12	R ⅜	75	51.5	34	30	10	27	109 13 51
12	R ½	77	53.5	34	30	10	27	109 13 52
15	R ½	80	53.5	-	30	12	30	109 13 53

Straight pattern with solder connection

Note: The threads R an Rp are according to EN 10226-1.

Note:
When using compression fittings, the Oventrop radiator lockshield valves are also suitable for use with the Oventrop composition pipe “Copipe” (14 and 16 mm) and copper pipes (10 – 22 mm). The models with G ¾ male thread may also be used with precision steel, stainless steel and plastic pipes as well as the Oventrop composition pipe “Copipe”.

*SW = Spanner size

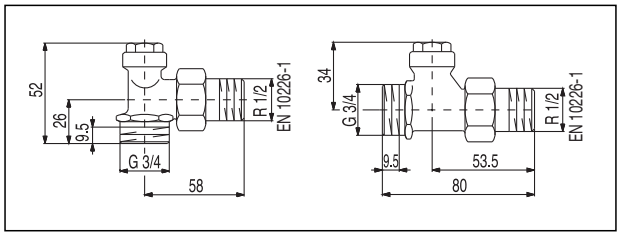


“Combi 3” with press connection

Item no. 109 03 74 Item no. 109 04 74

Note:

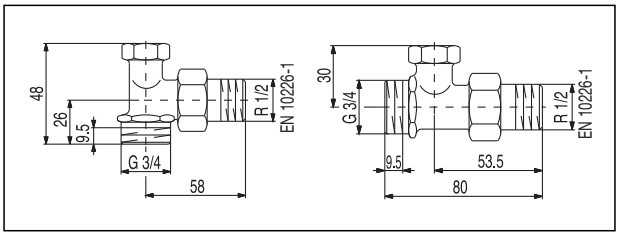
The radiator lockshield valves with press connection are suitable for the direct connection of copper pipes according to DIN EN 1057/DVGW GW 392, stainless steel pipes according to DIN EN 10088/DVGW GW 541 and thin-walled C-steel pipe according to DIN EN 10305. Pressing must be carried out to tighten the connection. Only use press bits 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.



“Combi 4” both ports male thread

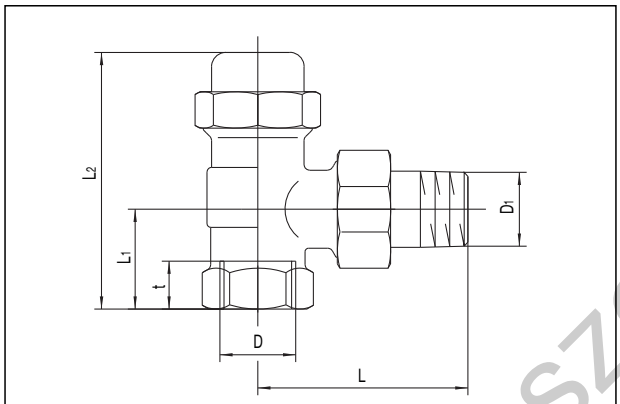
Item no. 109 06 72 Item no. 109 07 72

Service tool, item no. 109 05 51, for “Combi 4” and “Combi 3”



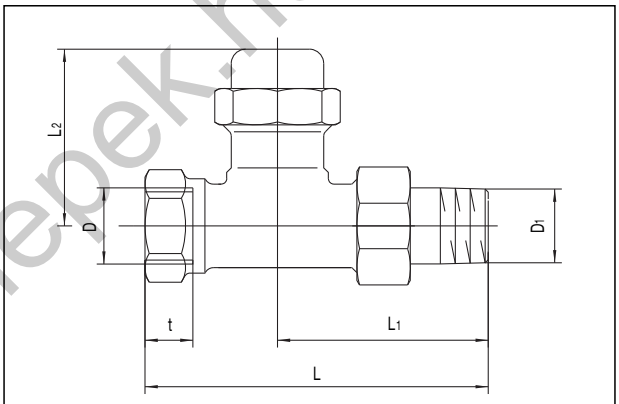
“Combi 2” both ports male thread

Item no. 109 10 72 Item no. 109 11 72



DN	D EN 10226-1	D1 EN 10226-1	L	L1	L2	t
10	Rp ⅜	R ⅜	52	22	65	10.1
15	Rp ½	R ½	58	27	71	13.2
20	Rp ¾	R ¾	66	29	71	14.5
25	Rp 1	R 1	75	34	78	16.8

“Combi LR” angle pattern with female thread



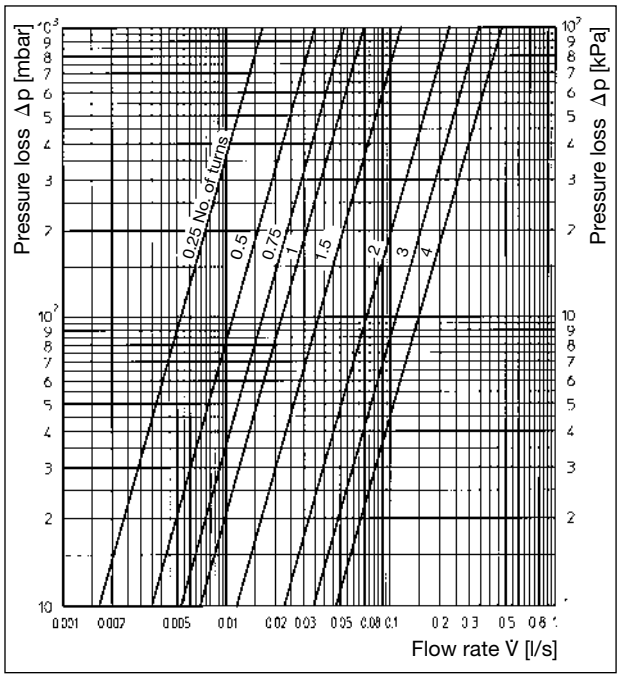
DN	D EN 10226-1	D1 EN 10226-1	L	L1	L2	t
10	Rp ⅜	R ⅜	85	52	49	10.1
15	Rp ½	R ½	95	58	49	13.2
20	Rp ¾	R ¾	106	63	47	14.5
25	Rp 1	R 1	125	80	48	16.8

“Combi LR” straight pattern with female thread

Note:

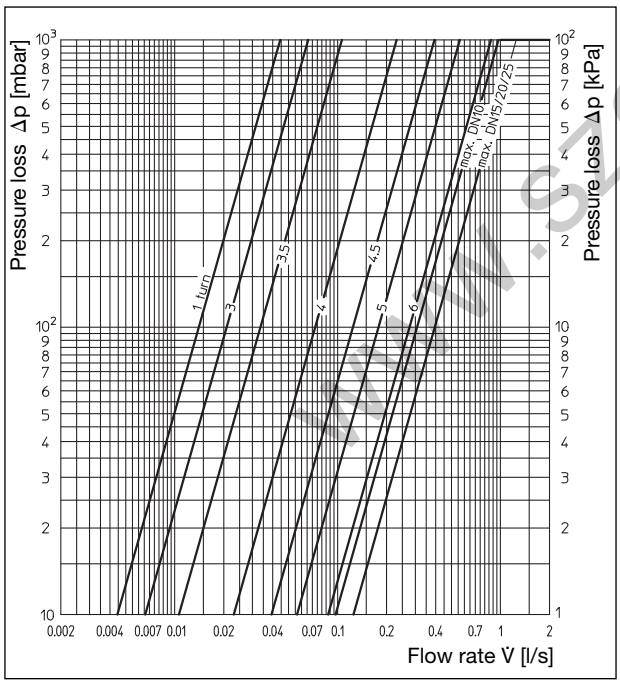
When using compression fittings, the Oventrop radiator lockshield valves are also suitable for use with the Oventrop composition pipe “Copipe” (14 and 16 mm) and copper pipes (10 – 22 mm). The models with G ¾ male thread may also be used with precision steel, stainless steel and plastic pipes as well as the Oventrop composition pipe “Copipe”.

Performance data:

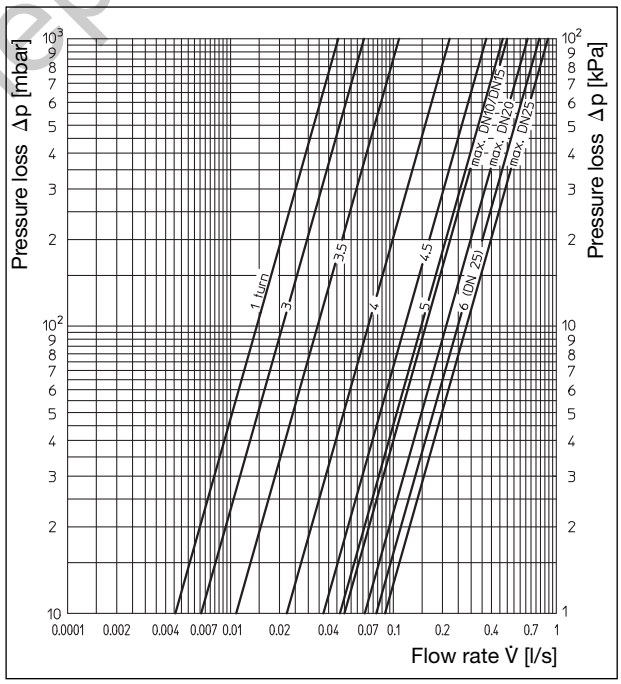


“Combi 4”, “Combi 3” and “Combi 2”

Presetting	0.25	0.5	0.75	1	1,5	2	3	4
k_V-value	0.060	0.126	0.190	0.250	0.420	0.819	1.236	1.700



“Combi LR” angle pattern



“Combi LR” straight pattern

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