

Regutec F



Return Lockshield
Radiator lockshield

*Engineering
GREAT Solutions*



Regutec F

The Regutec lockshield is used in pumped warm water heating and air conditioning systems.

Key features

- > **Easy to operate with an allen key size 5 AF**
- > **Presettable by means of shut-off and regulation cone**



Technical description

Applications area:

Heating and cooling systems.

Function:

Adjustment
Presetting
Shut-off

Dimensions:

DN 10-20

Temperature:

Max. working temperature: 120°C
Min. working temperature: -10°C

Materials:

Valve body: Brass
O-rings: EPDM rubber

Surface treatment:

Valve body and fittings are nickel-plated.

Standards:

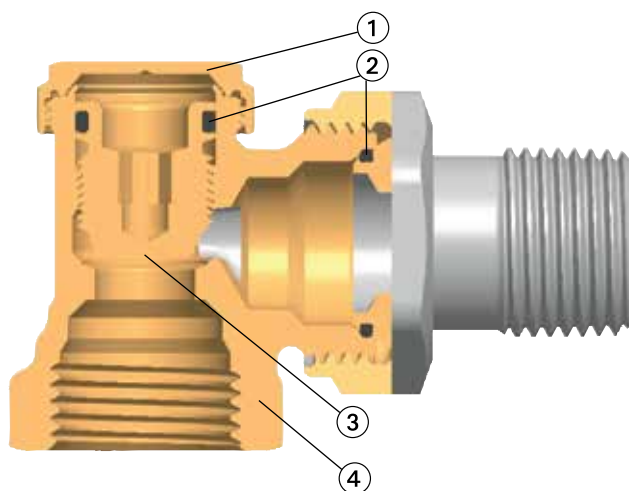
Dimensions according to EN 215 series F.

Pipe connection:

The female-threaded version is designed for connection to threaded pipe, or in conjunction with compression fittings, to copper or precision steel pipe. Not suitable for compression fitting for multi layer pipes. The male-threaded version, in conjunction with the appropriate compression fittings, permits connection to plastic pipe.

Construction

Regutec F



1. Closing cap
2. EPDM O-ring
3. Shut-off/regulation cone
4. Body made of Brass

Application

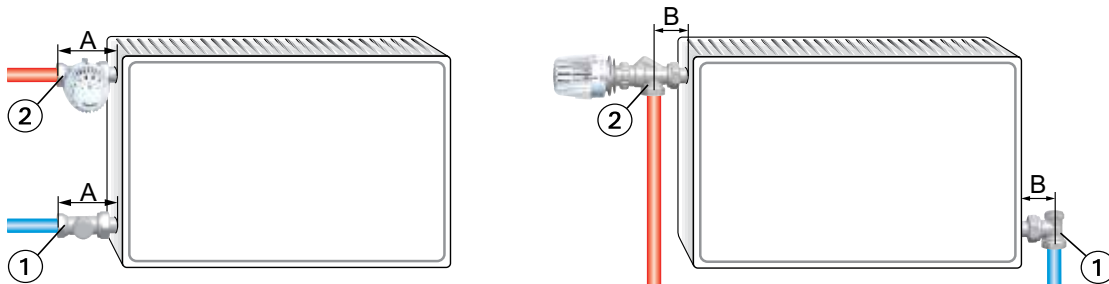
The Regutec F lockshield is used in pumped warm water heating and air conditioning systems.

Versions with female thread from DN 10 to DN 20, male thread G3/4 / DN 15 in angle and straight form make the threaded connection suitable for versatile and varied applications. It enables individual shut-off, for example of radiators, so

that decorating and service work can be carried out without interruption to the operation of other radiators.

A special combination of shut-off/regulation cone and valve seat enables it to be used as a shut-off fitting as well as for hydraulic balance. At the same time, the aim is met of supplying all heaters with hot water according to their requirement.

Sample application



1. Regutec F
2. Thermostatic valve Calypso/Calypso exact or manual radiator valve Mikrotherm F

Note

To avoid damage and the formation of stones in hot water systems the composition of the heating medium should comply to VDI guidelines 2035.

For industrial and long distance energy systems the VdTÜV-Explanatory Leaflet 1466/AGFW-Explanatory Leaflet 5/15 must be observed.

Mineral oils, or greases of all types containing mineral oil, in the

heating medium lead to severe swelling and, in most cases, to failure of the EPDM seals.

When using nitrite-free frost and corrosion protective substances based on ethylene glycol, the appropriate information, especially about the concentration of individual additives, is to be taken from the manufacturer's documentation for frost and corrosion protection.

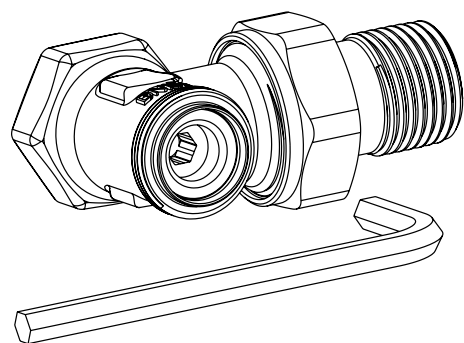
Operation

Shut-off

The Regutec F lockshield is operated with an allen key size 5 AF. By turning clock-wise the lockshield is closed. If the lockshield has been set for hydraulic balancing, the appropriate number of revolutions during closing has to be determined. It can then be ensured that the initial setting can be set again.

Regulation

For continuously variable regulation the lockshield is closed with the allen key size 5 AF and then opened by the required number of revolutions. The number of revolutions to set can be determined from the diagrams/technical data. The factory setting as delivered is fully open.



Technical data

Diagram DN 10 (3/8")

Angle / Straight

*) Revolution setting

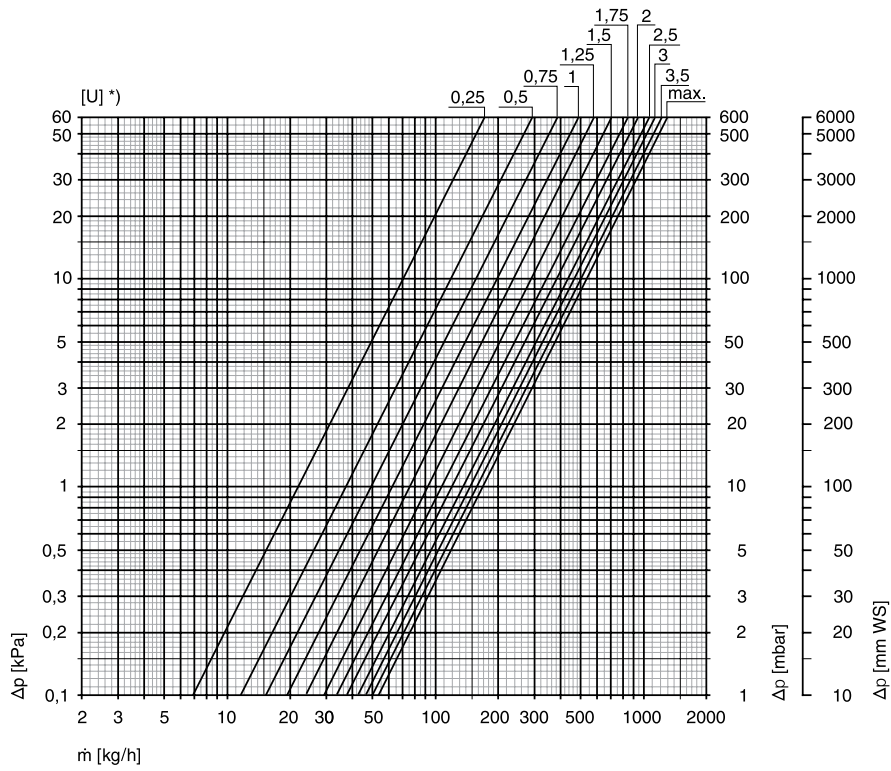


Diagram DN 15 (1/2")

Angle / Straight

*) Revolution setting

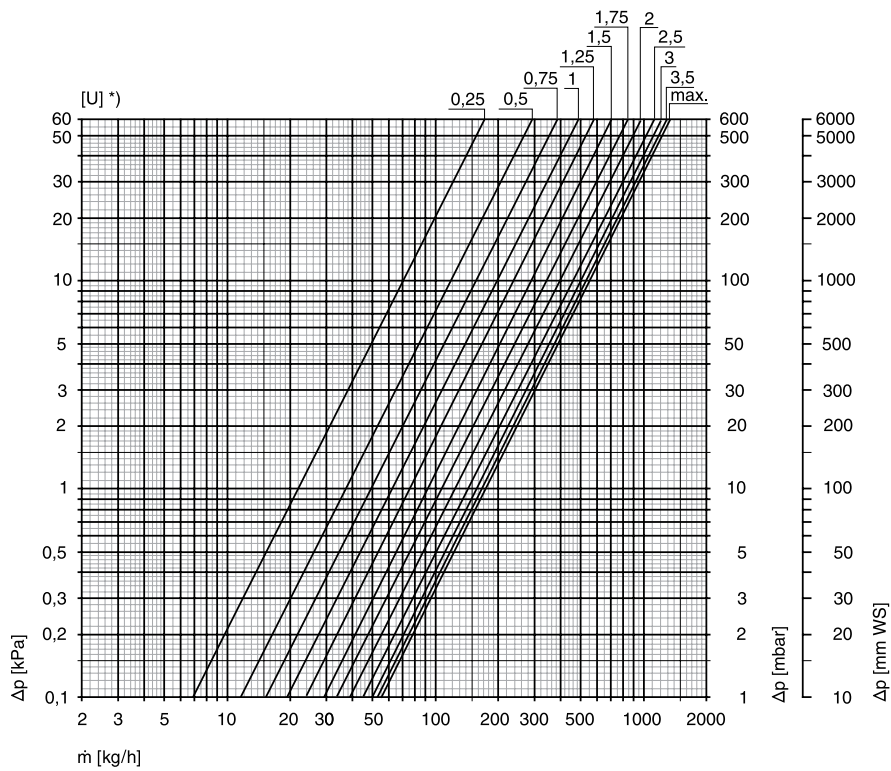
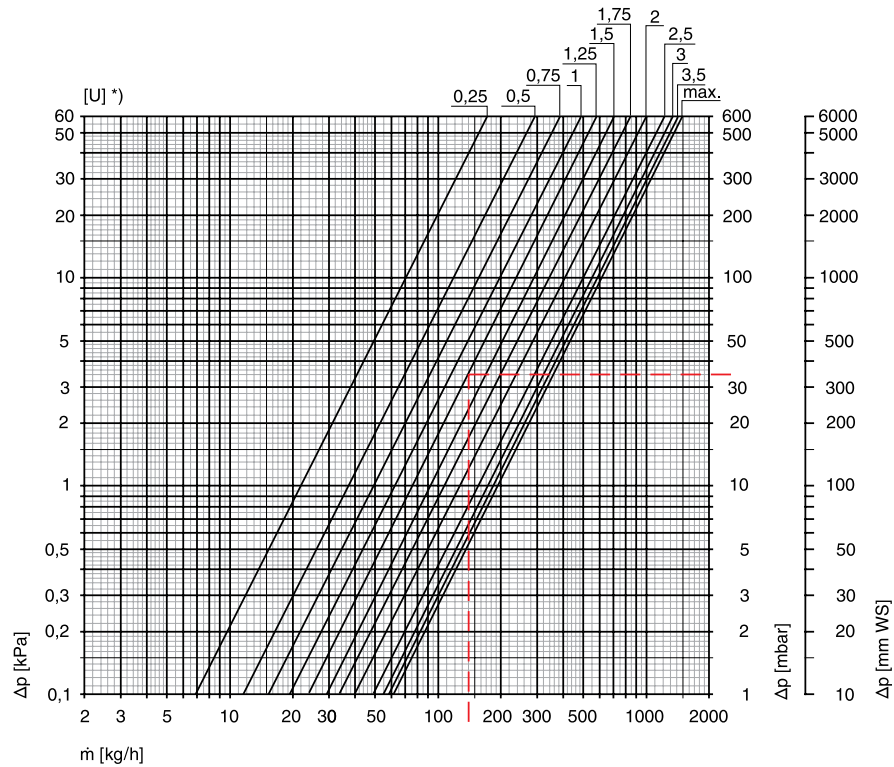


Diagram DN 20 (3/4")

Angle / Straight

*) Revolution setting



DN	Kv-value Revolution setting [U]								Kvs	ζ-value (open)
	0,25	0,5	1	1,5	2	2,5	3	3,5		
10 (3/8")	0,22	0,37	0,62	0,92	1,19	1,36	1,47	1,58	1,68	13,8
15 (1/2")	0,22	0,37	0,62	0,92	1,22	1,43	1,57	1,68	1,74	34,6
20 (3/4")	0,22	0,37	0,62	0,92	1,27	1,55	1,72	1,85	1,93	93,2

*) referred to threaded pipe according to DIN 2440.

Calculation example

Required:

revolution setting DN 20

Given:

differential pressure to choke off $\Delta p = 34$ mbar

heat flow $Q = 2440$ W

temperature spread $\Delta t = 15$ K (70/55°C)

Solution:

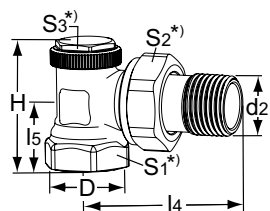
mass flow $m = Q / (c \cdot \Delta t) = 2440 / (1,163 \cdot 15) = 140$ kg/h

revolution setting = 1,25 (from diagram)

$$Cv = \frac{Kv}{0,86}$$

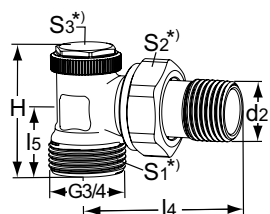
$$Kv = Cv \cdot 0,86$$

Articles



Angle

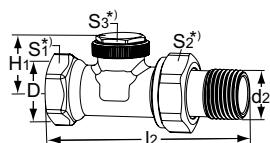
DN	D	d2	l4	l5	H	Kvs	EAN	Article No
10	Rp 3/8	R 3/8	49	20	39	1,68	4024052969012	0331-01.000
15	Rp 1/2	R 1/2	53	23	43	1,74	4024052969111	0331-02.000
20	Rp 3/4	R 3/4	63	26	48	1,93	4024052969418	0331-03.000



Angle

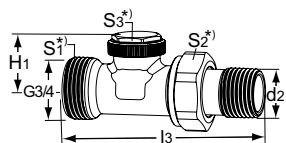
with male thread G 3/4

DN	d2	l4	l5	H	Kvs	EAN	Article No
15	R 1/2	53	23	43	1,74	4024052969319	0333-02.000



Straight

DN	D	d2	l2	H1	Kvs	EAN	Article No
10	Rp 3/8	R 3/8	75	24	1,68	4024052969517	0332-01.000
15	Rp 1/2	R 1/2	82	24	1,74	4024052969616	0332-02.000
20	Rp 3/4	R 3/4	98	25,5	1,93	4024052969913	0332-03.000



Straight

with male thread G 3/4

DN	d2	l3	H1	Kvs	EAN	Article No
15	R 1/2	82	24	1,74	4024052969814	0334-02.000

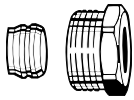
*) S1: DN10=22mm, DN15=27mm, DN20=32mm

S2: DN10=27mm, DN15=30mm, DN20=37mm

S3: DN10-20=19mm

 Kvs = m³/h at a pressure drop of 1 bar and fully open valve.

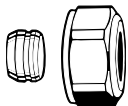
Accessories



Compression fitting

for copper or precision steel pipe according to DIN EN 1057/10305-1/2. Female thread connection Rp 3/8 – Rp 3/4. Metal-to-metal joint. Brass nickel-plated. Support sleeves should be used for a pipe wall thickness of 0.8 – 1 mm. Follow the specifications of the pipe manufacturer.

Ø Pipe	DN	EAN	Article No
12	10 (3/8")	4024052174614	2201-12.351
15	15 (1/2")	4024052175017	2201-15.351
16	15 (1/2")	4024052175116	2201-16.351
18	20 (3/4")	4024052175215	2201-18.351



Compression fitting

for copper or precision steel pipe according to DIN EN 1057/10305-1/2. Connection male thread G 3/4 according to DIN EN 16313 (Eurocone). Metal-to-metal joint. Brass nickel-plated. With a pipe wall thickness of 0.8-1 mm insert supporting sleeves. Heed pipe manufacturer's technical advice.

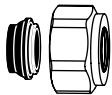
Ø Pipe	EAN	Article No
12	4024052214211	3831-12.351
15	4024052214617	3831-15.351
16	4024052214914	3831-16.351
18	4024052215218	3831-18.351



Support sleeve

for copper or precision steel pipe with a 1 mm wall thickness. Brass.

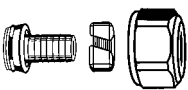
L	Ø	EAN	Article No
25,0	12	4024052127016	1300-12.170
26,0	15	4024052127917	1300-15.170
26,3	16	4024052128419	1300-16.170
26,8	18	4024052128815	1300-18.170



Compression fitting

for copper or precision steel pipe according to DIN EN 1057/10305-1/2. Connection male thread G 3/4 according to DIN EN 16313 (Eurocone). Soft sealed, max. 95°C. Nickel-plated brass.

Ø Pipe	EAN	Article No
15	4024052515851	1313-15.351
18	4024052516056	1313-18.351



Compression fitting

for plastic pipe according to DIN 4726, ISO 10508. PE-X: DIN 16892/16893, EN ISO 15875; PB: DIN 16968/16969. Connection male thread G 3/4 according to DIN EN 16313 (Eurocone). Nickel plated brass.

Ø Pipe	EAN	Article No
14x2	4024052134618	1311-14.351
16x2	4024052134816	1311-16.351
17x2	4024052134915	1311-17.351
18x2	4024052135110	1311-18.351
20x2	4024052135318	1311-20.351

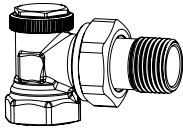


Compression fitting

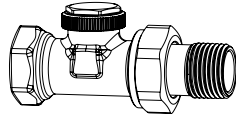
for Alu/PEX multi-layer pipe according to DIN 16836. Connection male thread G 3/4 according to DIN EN 16313 (Eurocone). Nickel-plated brass.

Ø Pipe	EAN	Article No
16x2	4024052137312	1331-16.351

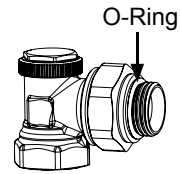
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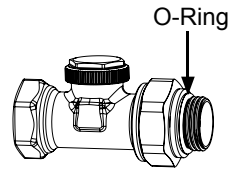
DN 10 0331-01.
DN 15 0331-02.
DN 20 0331-03.



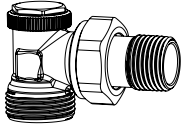
DN 10 0332-01.
DN 15 0332-02.
DN 20 0332-03.



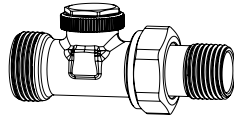
DN 15 0331-22.



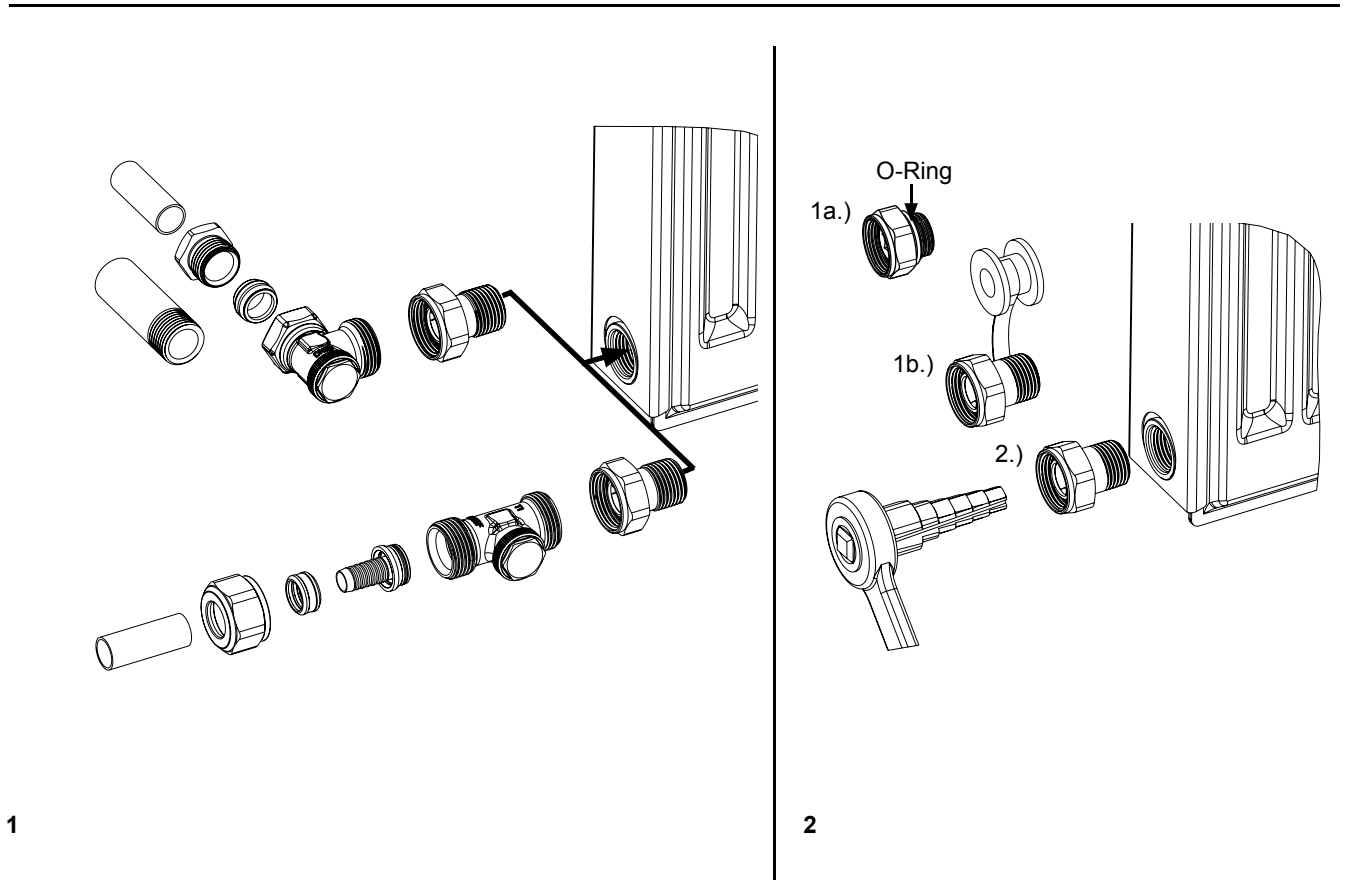
DN 15 0332-22.



DN 15 0333-02.

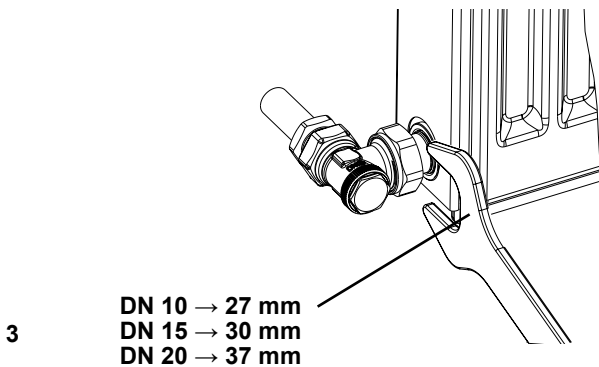


DN 15 0334-02.



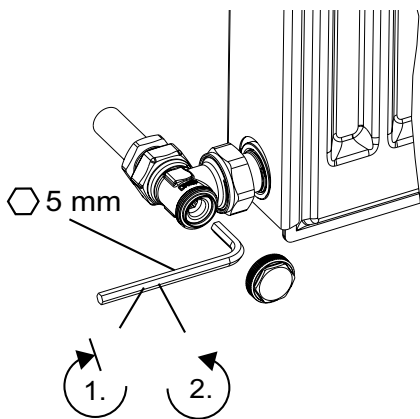
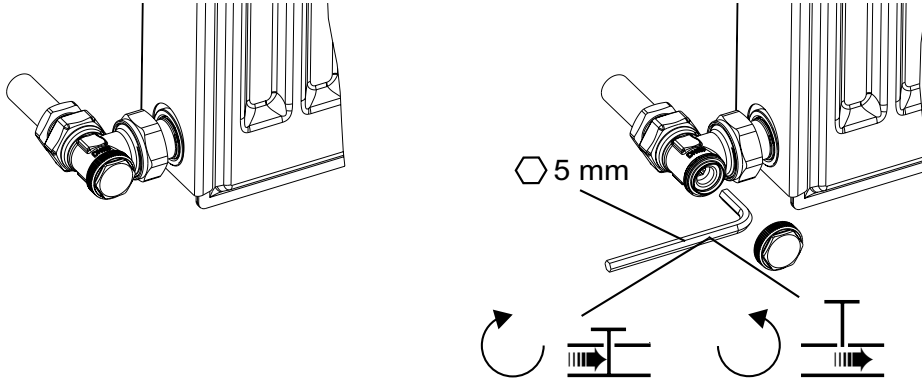
1

2

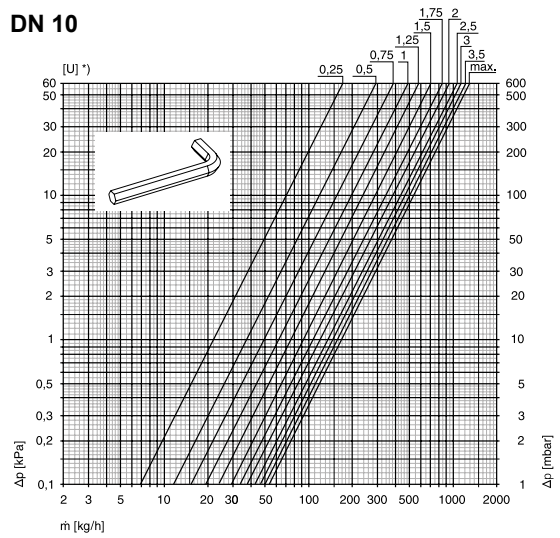


3

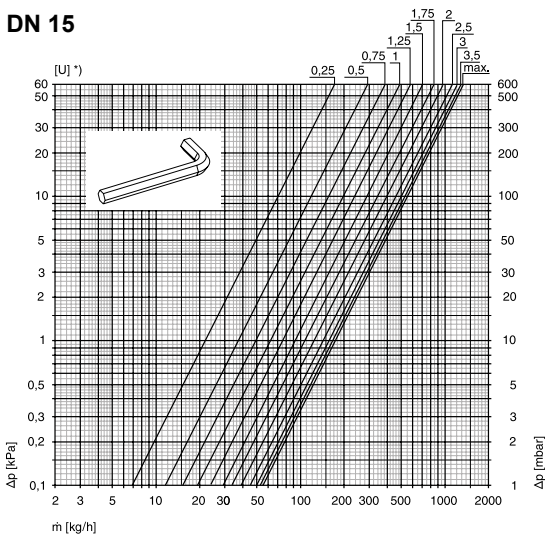
DN 10 → 27 mm
DN 15 → 30 mm
DN 20 → 37 mm



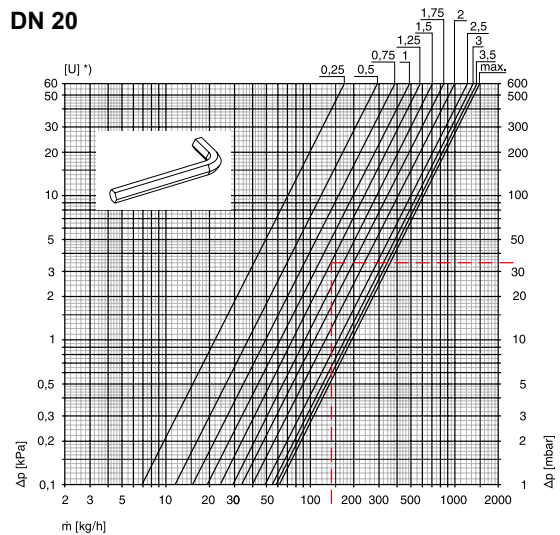
DN 10



DN 15



DN 20



DN	Kv								Kvs
	0,25	0,5	1	1,5	2	2,5	3	3,5	
10 (3/8")	0,22	0,37	0,62	0,92	1,19	1,36	1,47	1,58	1,68
15 (1/2")	0,22	0,37	0,62	0,92	1,22	1,43	1,57	1,68	1,74
20 (3/4")	0,22	0,37	0,62	0,92	1,27	1,55	1,72	1,85	1,93

Kv/Kvs = m³/h at a pressure drop of 1 bar.

We reserve the right to introduce technical alterations without previous notice.