

installation and operation | Einbau und Bedienung | installatie en bediening
instalace a použití | установка и эксплуатация



Technical features	Symbol	Values
Medium		water/water+glycol
Max. glycol	%	30%
Dimensions	DN	15-20
Max. static pressure	PN	10 bar
Max. differential pressure	dP	0,8 bar
Max. temperature	t max	110 °C

Part	Material
Body valves	Brass EN12165-CW 617N-M
Rubber components to seal	EPDM peroxide
Steel components	INOX AISI302
Plastic components	ABS
Other brass components	Brass EN12164-CW 617N-M

All technical characteristics are provided according the European standard

EN215 "Thermostatic radiator valves. Requirements and test methods"

Threads are according EN-ISO 228/1

installation and operation | Einbau und Bedienung | installatie en bediening
instalace a použití | установка и эксплуатация



Attention: Do not use the thermostatic head for shut off the valve. In case of disassembling take off the head and use the plastic protection cap or handle to shut off the valve completely.

Achtung: Verwenden Sie den Thermostatkopf nicht zum Absperren des Ventils. Nehmen Sie bei der Demontage den TH-Kopf ab und schließen Sie das Ventil mit der Kunststoffschutzkappe oder Griff vollständig ab.

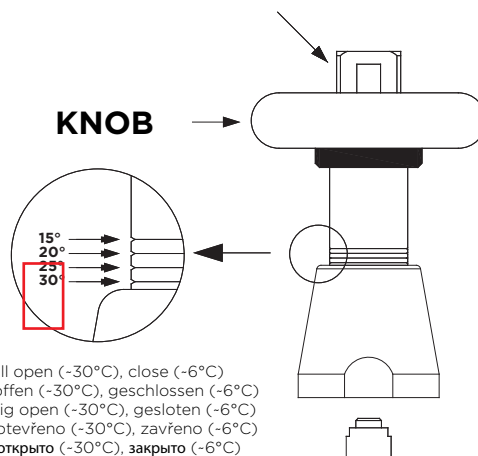
Let op: Gebruik de thermostaatkop niet om de kran af te sluiten. Bij demontage de kop eraf halen en de kunststof beschermkap of hendel gebruiken om de kran volledig af te sluiten.

Pozor: K uzavření ventilu nepoužijte termostatickou hlavici. V případě demontáže sundejte hlavici a pomocí plastového ochranného víčka nebo rukojeti úplně uzavřete ventil.

Внимание: не используйте термостатическую головку для перекрытия клапана. В случае разборки снимите головку и используйте пластмассовый защитный колпачок или ручку, чтобы полностью закрыть клапан.

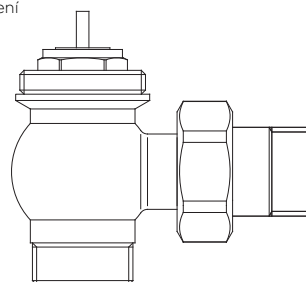
SENSOR

do not cover | nicht Abdecken
niet bedekken | nezakrývat | Не накрывать

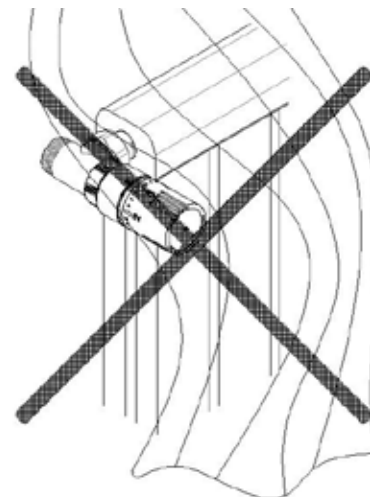
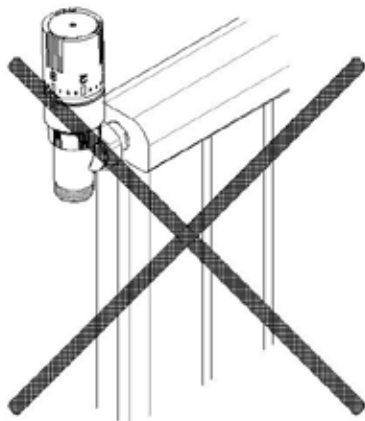
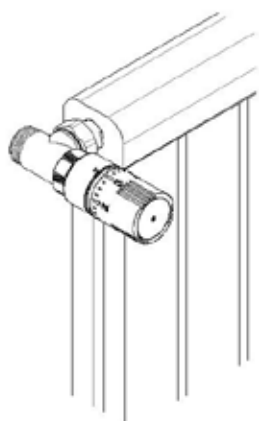


SPRING

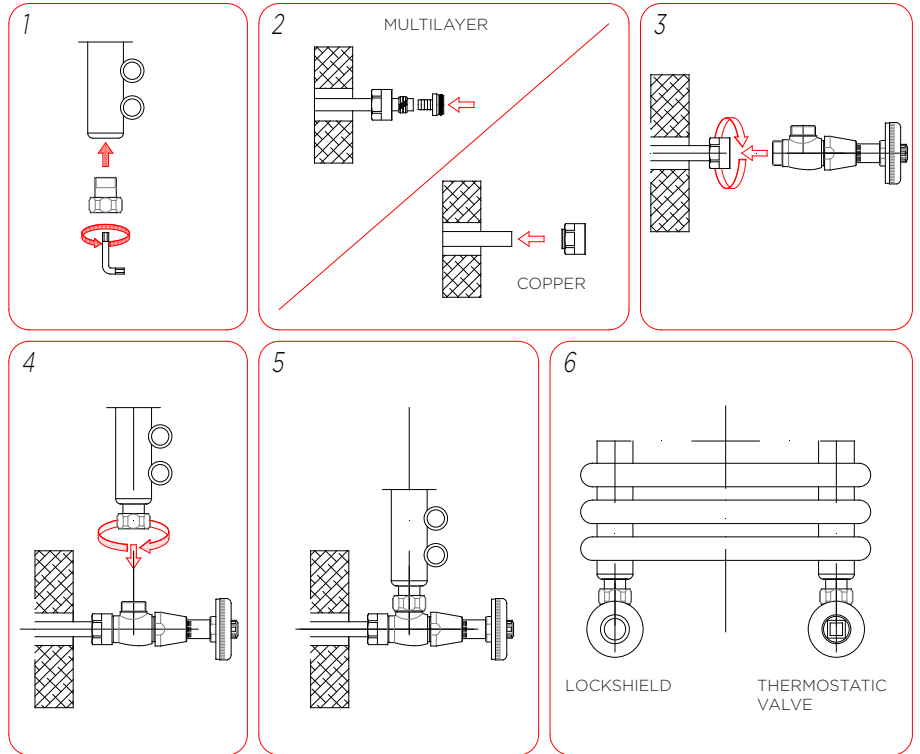
attention to the right direction | die Richtung beachten
let op de goede richting | pozor na správné uložení
обратите внимание на правильное направление



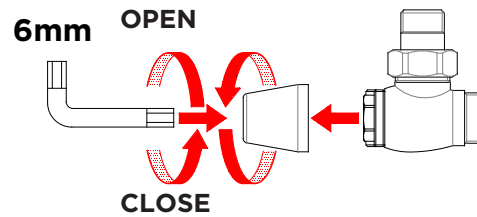
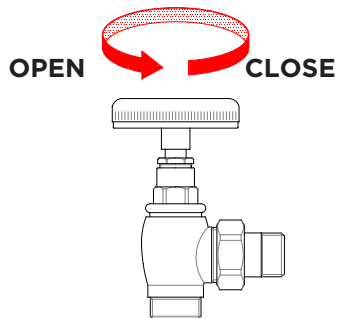
ΔP_{max} 1.5 bar normal
0.8 bar reverse



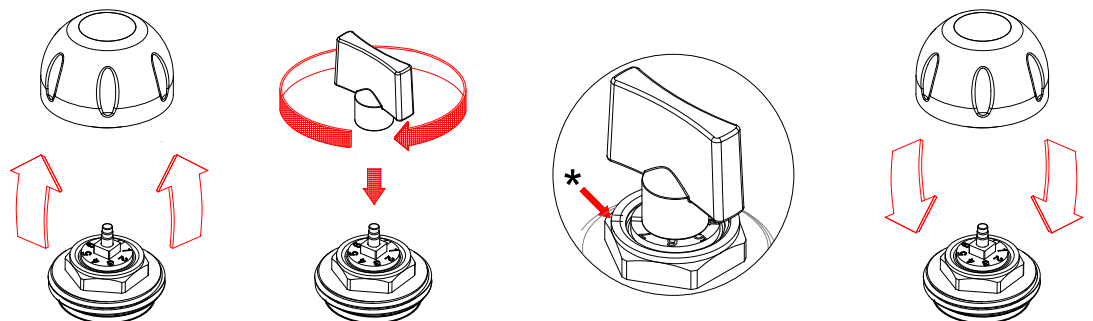
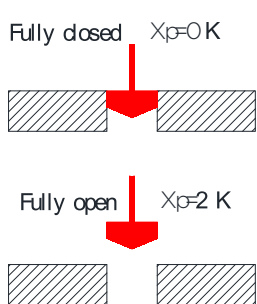
installation and operation | Einbau und Bedienung | installatie en bediening
instalace a použití | установка и эксплуатация



Manual set-up



Thermostatic preset set-up



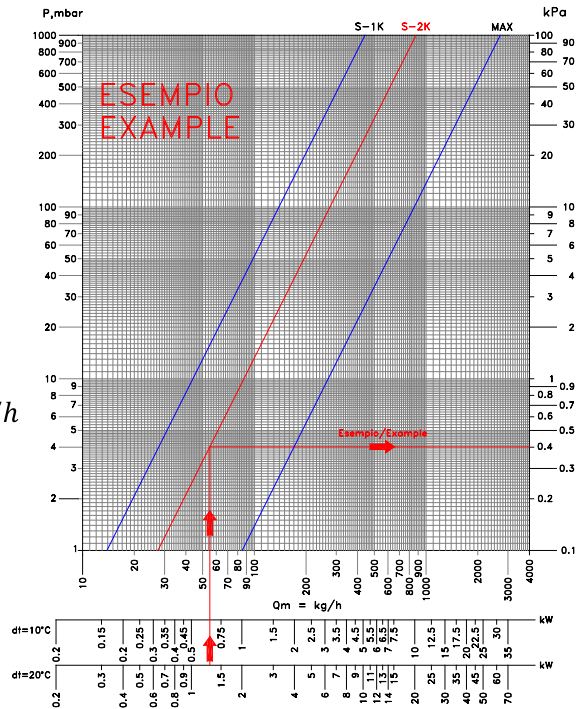
Determination of valve pressure loss:

Given data	
Type of valve	DN15 1/2"
Heat flow of radiator	1280 W
Temperature difference	20 °C
Desired proportional band	2K

The mass flow is calculated using the following relation:

$$Q_m = \frac{Q}{c * \Delta t} = \frac{1280}{1,163 * 20} = 55 \text{ kg/h}$$

Alternatively, it is possible to use the graduated scale of the selected valve diagram that provides the flow rate according to the design dT. It is possible to determine the head losses value for the proportional band chosen as shown in the example alongside where it is equal to 0.4 kPa.



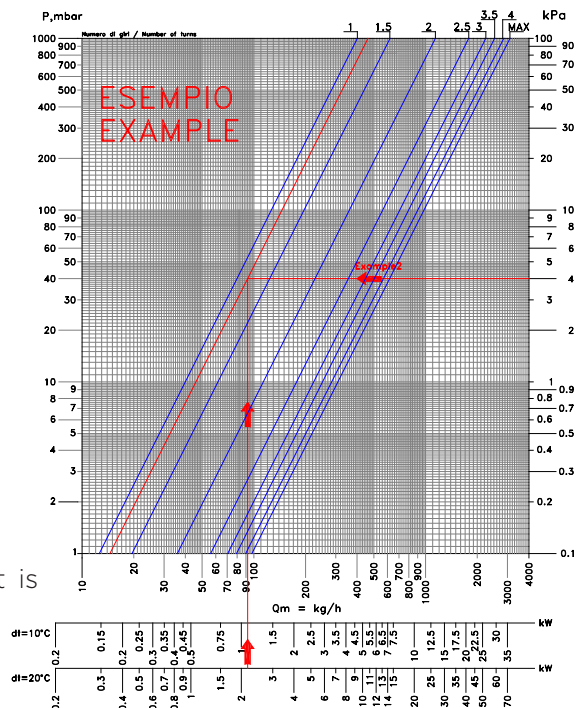
Determination of number of turns for the lockshield valve:

Given data	
Type of valve	DN15 1/2"
Heat flow of radiator	2150 W
Temperature difference	20 °C
Differential pressure across the radiator	4 kPa

The mass flow is calculated using the following relation:

$$Q_m = \frac{Q}{c * \Delta t} = \frac{2150}{1,163 * 20} = 92 \text{ kg/h}$$

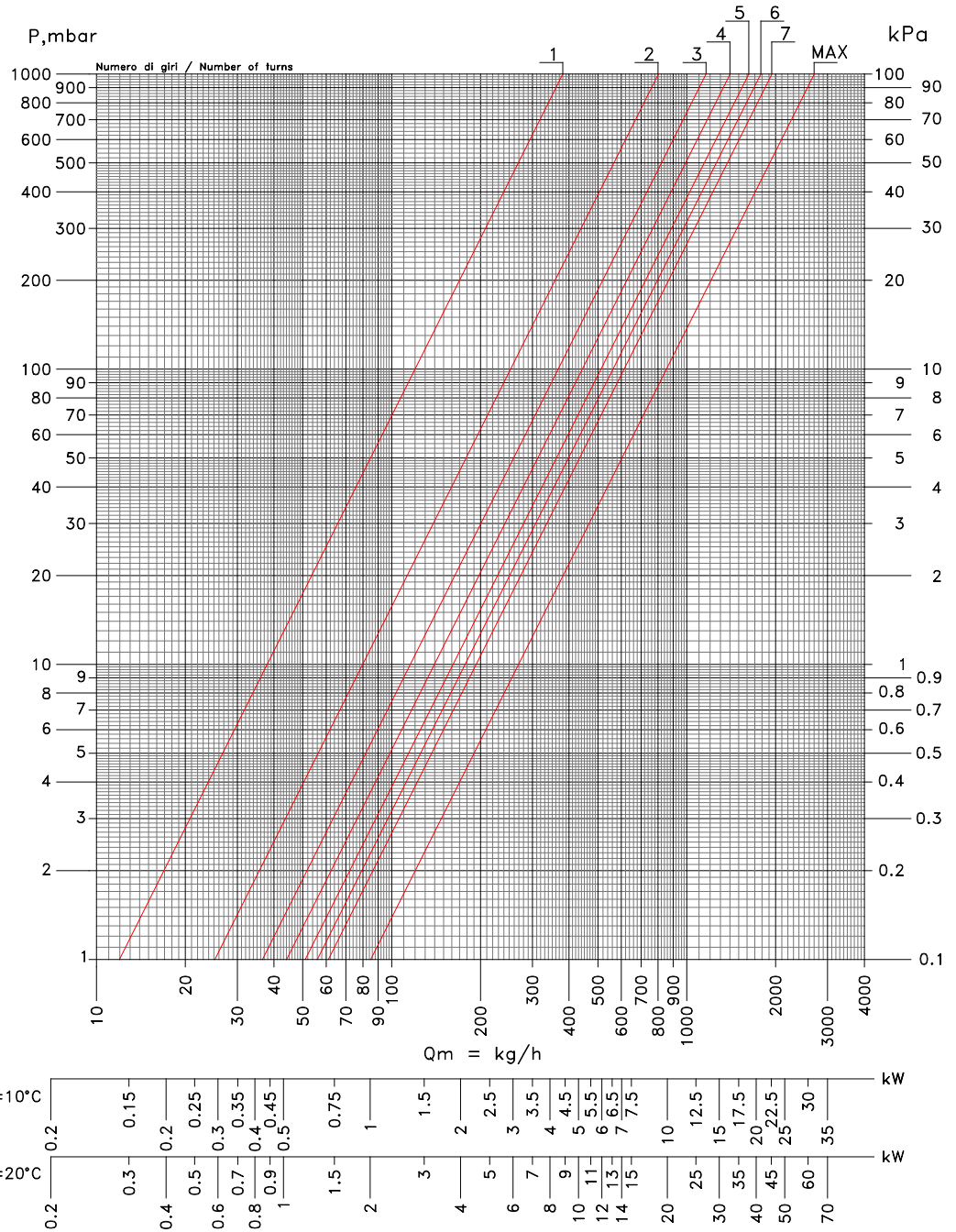
Alternatively, it is possible to use the graduated scale of the selected valve diagram that provides the flow rate according to the design dT. It is possible to determine the required pre-setting as shown in the example alongside where it is equal to 1.1.



anged valve thermostatic | Ventil mit thermostat eck | kran haaks met thermostaat
úhlový ventil s termostatem | угловой вентиль с термостатом

VLBWTD
DN15 1/2"

Pre-setting	Kv
N	m ³ /h
	1 0.38
	2 0.80
	3 1.16
	4 1.40
	5 1.62
	6 1.78
	7 1.94
Kvs	2.70



Note: To avoid excessive noisiness in the circuit, avoid using thermostatic valves with Δp values of more than 0,2 - 0,25 bar [20-25 kPa].

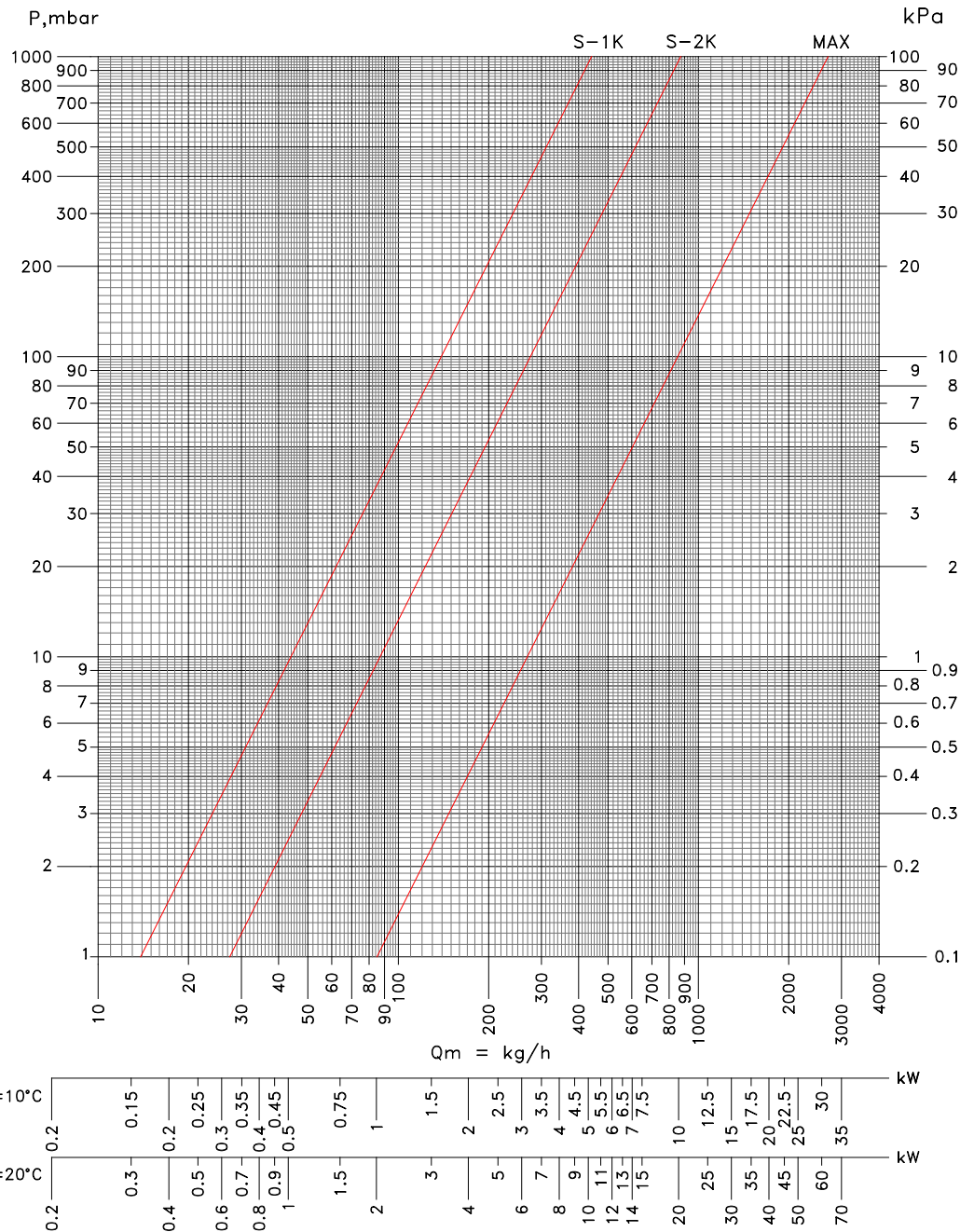
angeled valve thermostatic | Ventil mit thermostat eck | kran haaks met thermostaat
úhlový ventil s termostatem | угловой вентиль с термостатом

VLBWTD
DN15 1/2"

/2"

Preset set to 3
S-1K, S-2K, MAX

Technical data		
Kv	1K	0.44
	2K	0.87
	Kvs	2.70
Q mN	kg/h	275.58



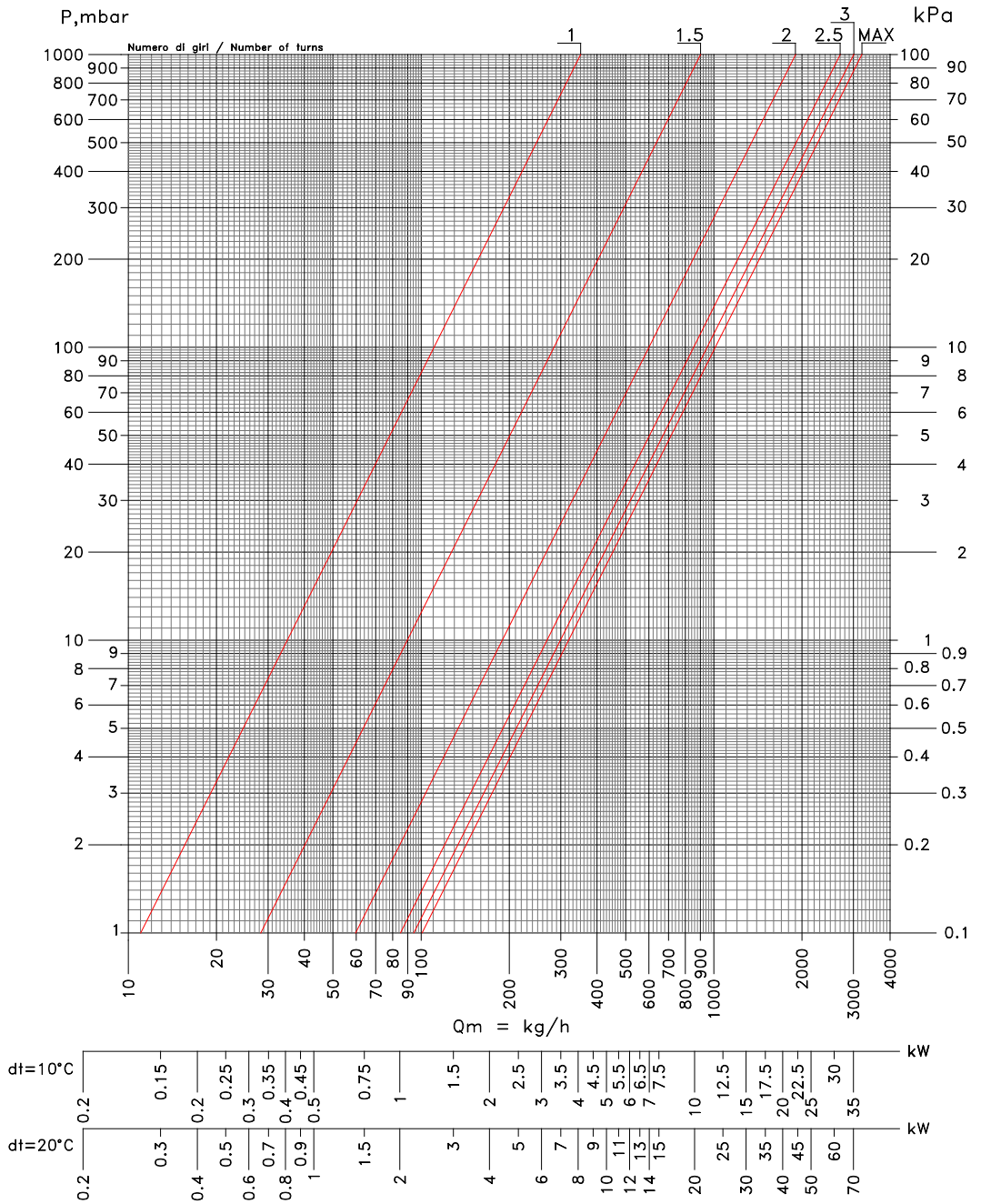
Note: To avoid excessive noisiness in the circuit, avoid using thermostatic valves with Δp values of more than 0,2 - 0,25 bar [20-25 kPa].

anged valve non-thermostatic | Ventil ohne Thermostat eck | kran haaks zonder thermostaat
úhlový ventil bez termostatu | угловой вентиль без термостата

(N) form fully closed position | (N) von voll geschlossen | (N) vanuit volledig gesloten positie
(N) od zcela uzavřené pozice | (N) из полностью закрытого положения

VLBWMD
DN15 1/2"

Number of turns	Kv
N	m ³ /h
1	0.35
1.5	0.90
2	1.90
2.5	2.70
3	3.00
Kvs	3.20

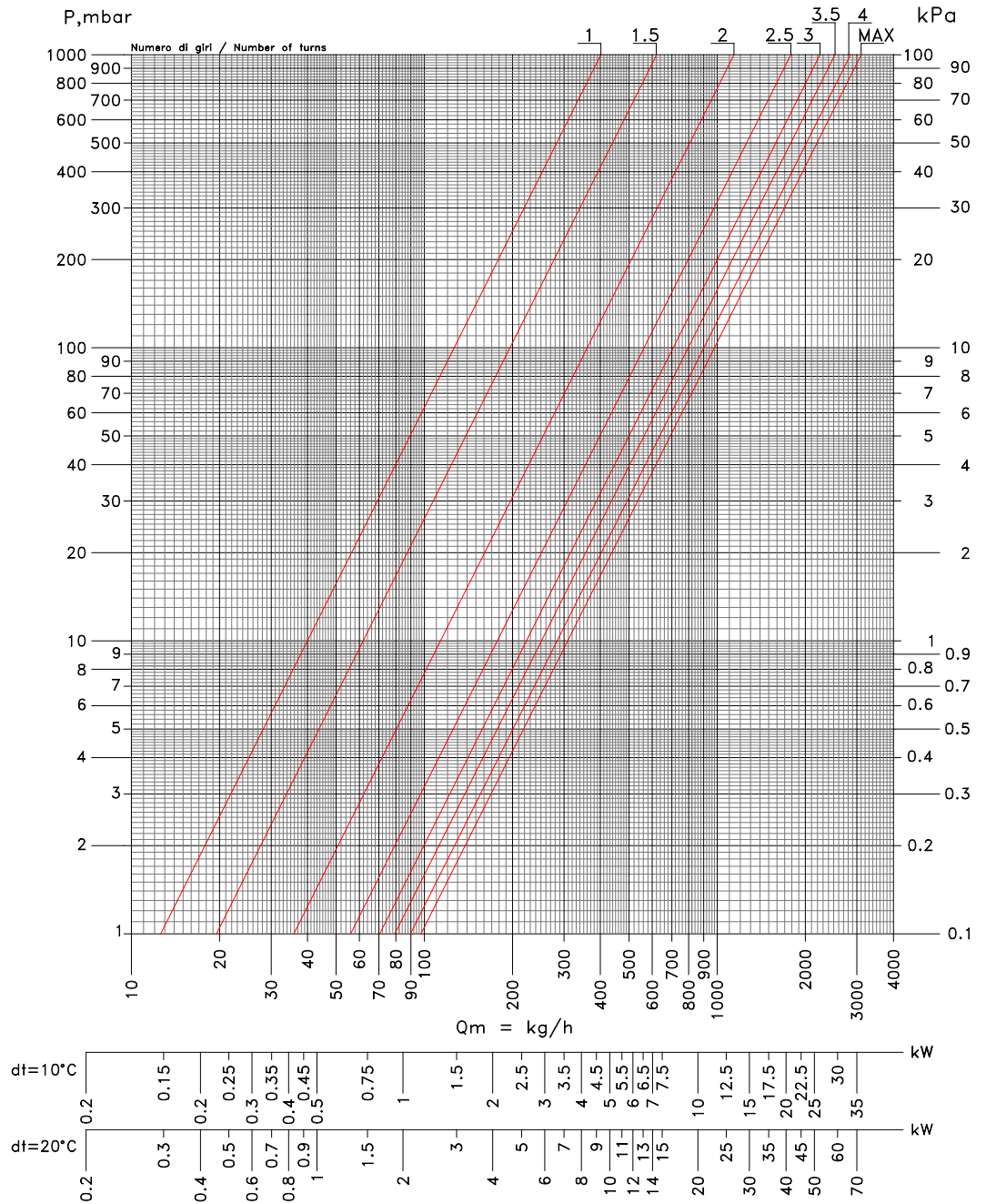


angeled lockshield | Rücklaufverschraubung eck | lockshield haaks
úhlová zpátečka | обратный клапан угловой

(N) form fully closed position | (N) von voll geschlossen | (N) vanuit volledig gesloten positie
(N) od zcela uzavřené pozice | (N) из полностью закрытого положения

VLBWD
DN15 1/2"

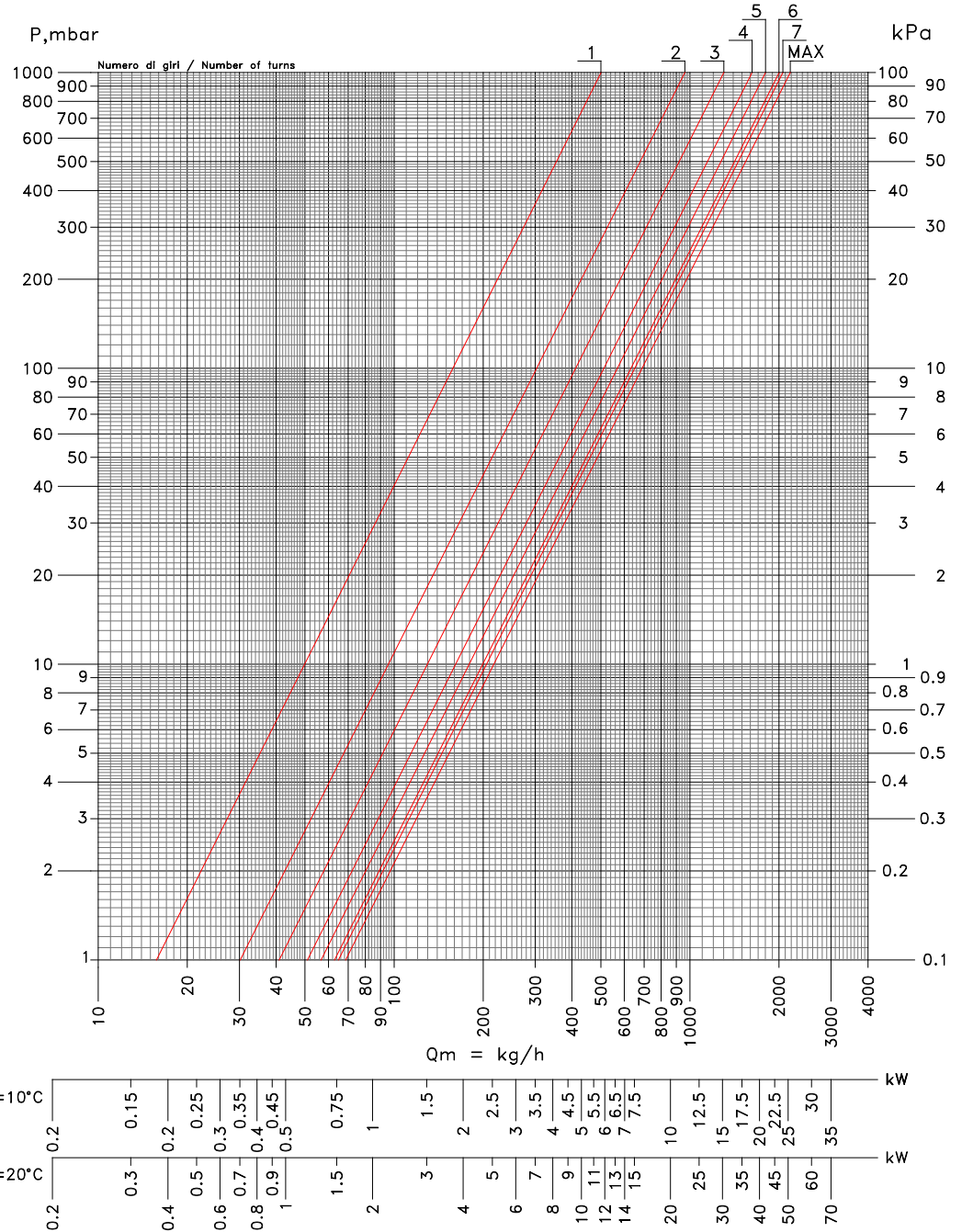
Number of turns	Kv
N	m ³ /h
1	0.40
1.5	0.62
2	1.14
2.5	1.78
3	2.24
3.5	2.52
4	2.85
Kvs	3.10



straight valve thermostatic | Ventil mit Thermostat durchgang | kran recht met thermostaat
přímý ventil s termostatem | прямой клапан с термостатом

VLBWTC
DN15 1/2"

Pre-setting	Kv
N	m ³ /h
	0.50
	0.96
	1.30
	1.62
	1.80
	2.00
	2.06
Kvs	2.18



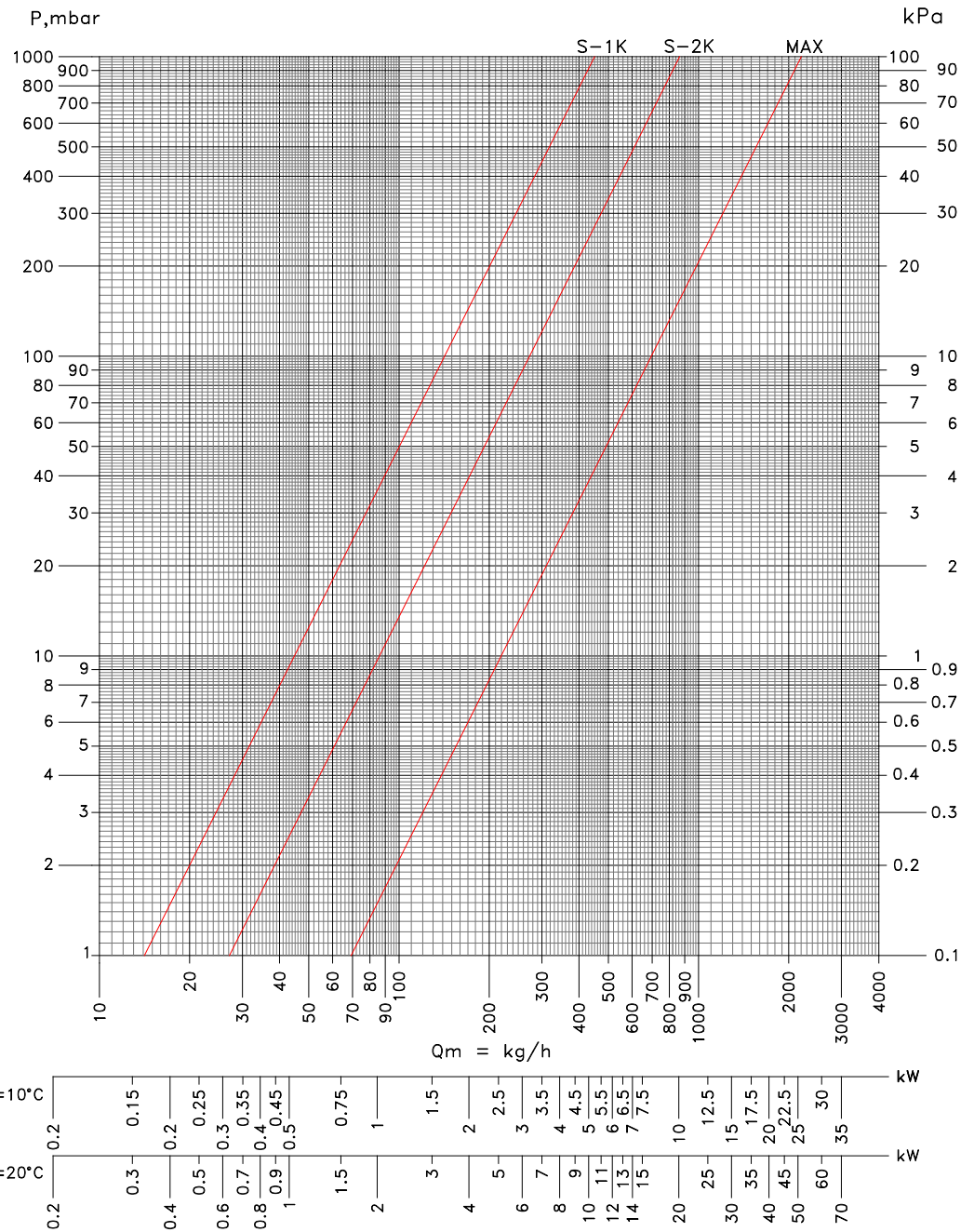
Note: To avoid excessive noisiness in the circuit, avoid using thermostatic valves with Δp values of more than 0,2 - 0,25 bar [20-25 kPa].

straight valve thermostatic | Ventil mit Thermostat durchgang | kran recht met thermostaat
přímý ventil s termostatem termostatu | прямой клапан с термостатом

VLBWTC
DN15 1/2"

Preset set to 3
S-1K, S-2K, MAX

Technical data		
Kv	1K	0.45
	2K	0.86
Q _{mN}	Kvs	2.20
	kg/h	272.63



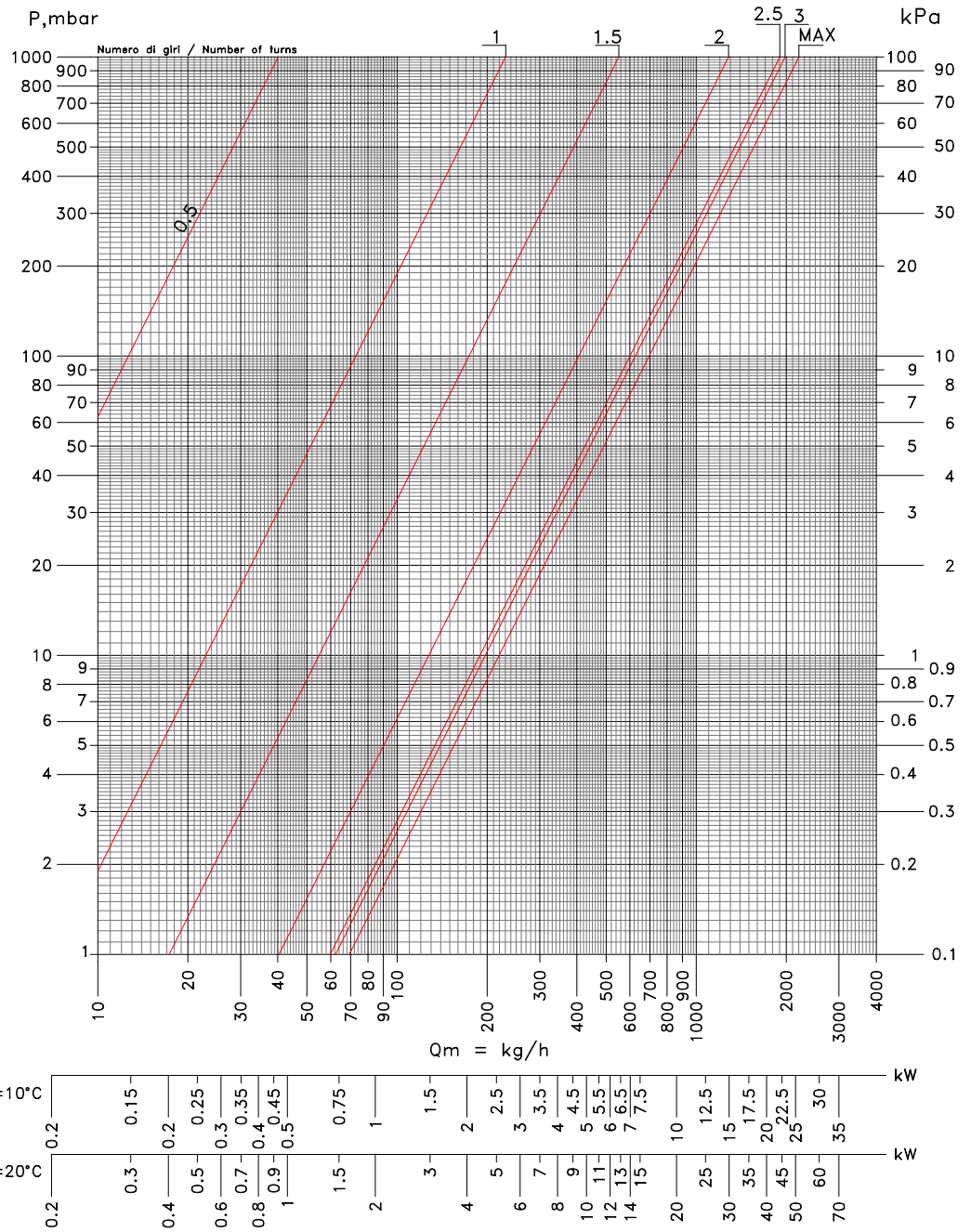
Note: To avoid excessive noisiness in the circuit, avoid using thermostatic valves with Δp values of more than 0,2 - 0,25 bar [20-25 kPa].

straight valve non-thermostatic | Ventil ohne Thermostat durchgang | kran recht zonder thermostaat
přímý ventil bez termostatu | прямой клапан без термостата

(N) form fully closed position | (N) von voll geschlossen | (N) vanuit volledig gesloten positie
(N) od zcela uzavřené pozice | (N) из полностью закрытого положения

VLBWMC
DN15 1/2"

Number of turns	Kv
N	m ³ /h
0.5	0.02
1	0.23
1.5	0.55
2	1.28
2.5	1.90
3	1.98
Kvs	2.20



straight lockshield | Rücklaufverschraubung durchgang | lockshield recht
přímá zpátečka | прямой запорный клапан

(N) form fully closed position | (N) von voll geschlossen | (N) vanuit volledig gesloten positie
(N) od zcela uzavřené pozice | (N) из полностью закрытого положения

VLBWC
DN15 1/2"

Number of turns	Kv
N	m ³ /h
1	0.32
1.5	0.73
2	1.15
2.5	1.62
3	1.80
3.5	2.05
4	2.18
Kvs	2.30

