

# TA-BVS 240/243



## Balancing valves

Stainless steel, for high media resistance

# TA-BVS 240/243

A stainless steel balancing valve that delivers accurate hydronic performance in an impressive range of applications. The TA-BVS is available with flanges or welding ends and is ideal for use mainly on industrial applications and for high temperature.



## Key features

- > **Handle**  
Equipped with a removable handle that ensures accurate and straightforward balancing.
- > **Measuring points**  
For simple, accurate balancing.
- > **Stainless steel**  
For high media resistance and longer valve lifetime.

## Technical description

### Application:

Heating and cooling systems

### Functions:

Balancing  
Pre-setting  
Measuring  
Shut-off

### Dimensions:

DN 15-250

### Pressure class:

*Valve body:*

DN 15-50: PN 40

DN 65-250: PN 25

*Flanges:*

DN 15-50: PN 40

DN 65-250: PN 16

(PN 10, 25 and 40 on request)

### Temperature:

Max. working temperature: 200°C

**Note:** Not for steam

Min. working temperature: -20°C

Below -20°C contact IMI Hydronic Engineering.

### Media:

Clean media. Also suitable for industrial system with e.g. process water, glycol or freezium.

For media with ethanol or methanol on request – contact IMI Hydronic Engineering.

### Material:

Valve body: Stainless steel  
EN X2CrNiMo17-12-2 (1.4404).

Ball: Stainless steel EN X2CrNiMo17-12-2 (1.4404).

Spindle: Stainless steel  
EN X2CrNiMo17-12-2 (1.4404).

Spindle seals: FPM and NBR.

Ball seal: Hardened PTFE.

Handle:

DN 15-50 stainless steel,

DN 65-150 zinc-plated steel,

DN 200-250 with manual gear.

Measuring points: Stainless steel  
EN X2CrNiMo17-12-2 (1.4404).

### Marking:

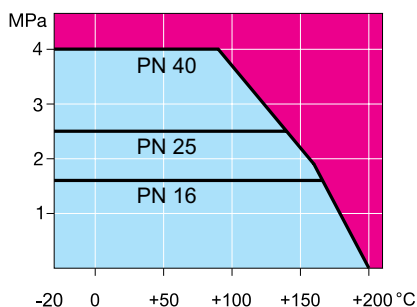
Body and flanges: Traceability No.  
Label on body: IMI TA, DN, PN, CE (according to table), material, max. temperature, product No and flow direction arrow.

Marking	PN 40	PN 25
CE 0496*	DN 40-50	DN 65-250

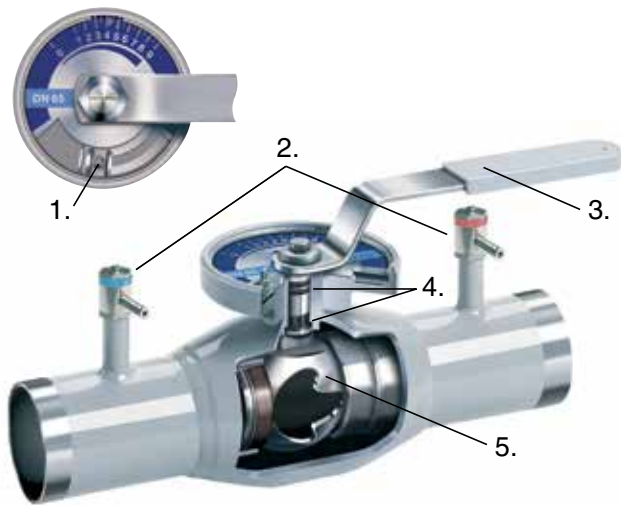
\*) Notified body.

### Flanges:

EN 1092-1, ISO 7005-1.



## Operating instruction

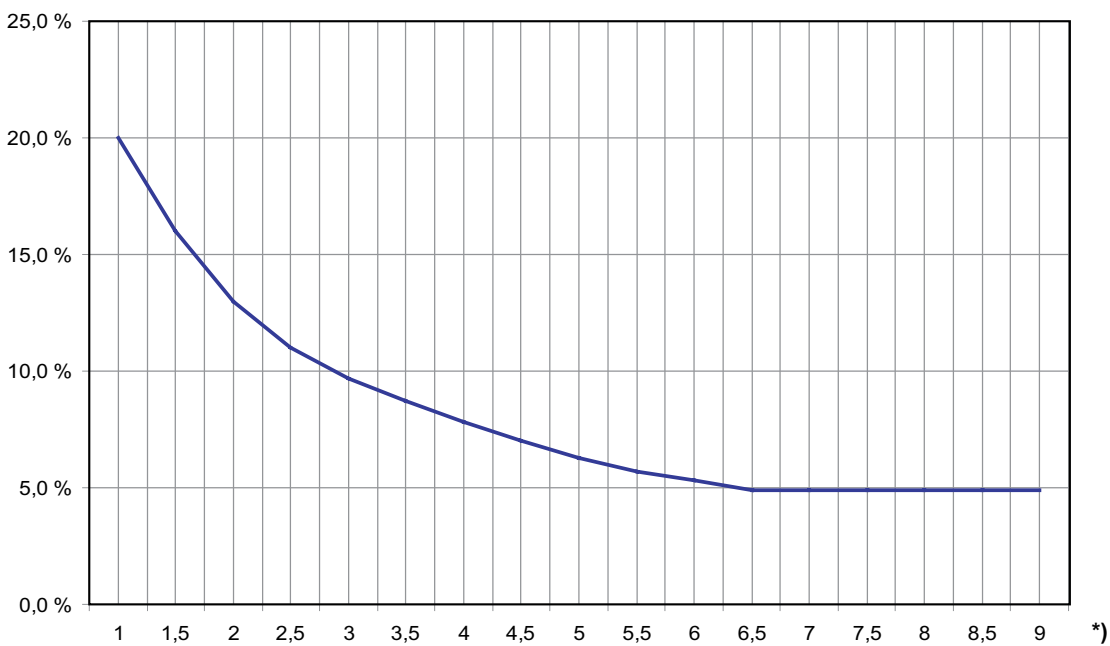


1. Locking screw
2. Measuring points
3. Removable handle
4. Two O-rings. The upper can be replaced during operation.
5. Ball with W-port. Equal percentage valve characteristic.

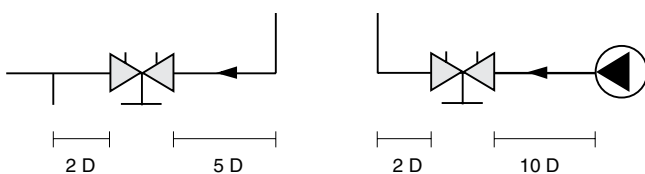
## Measuring accuracy

### Deviation of flow at different settings

The curve is valid for valves with normal pipe fittings. Try also to avoid mounting taps and pumps, immediately before the valve.



\*) Setting.



## Sizing

When  $\Delta p$  and the design flow are known, use the formula to calculate the Kv value or use the diagram.

$$Kv = 0,01 \frac{q}{\sqrt{\Delta p}} \quad q \text{ l/h, } \Delta p \text{ kPa}$$

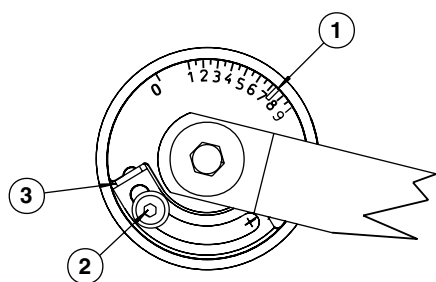
$$Kv = 36 \frac{q}{\sqrt{\Delta p}} \quad q \text{ l/s, } \Delta p \text{ kPa}$$

## Kv values

Setting	DN 15/20	25	32	40	50	65	80	100	125	150	200	250
<b>1</b>	-	-	0,39	0,60	1,26	2,52	3,42	6,48	6,84	13,7	19,7	35,0
<b>1,5</b>	-	0,35	0,57	1,01	1,80	3,64	5,37	9,47	13,3	20,2	20,2	51,2
<b>2</b>	0,14	0,49	0,83	1,48	2,70	4,75	7,31	12,5	18,0	26,6	38,4	66,5
<b>2,5</b>	0,28	0,99	1,08	2,02	3,55	6,34	10,2	16,3	24,3	35,5	51,1	90,0
<b>3</b>	0,42	1,36	1,44	2,70	4,39	7,92	13,1	20,1	30,6	44,3	63,8	110
<b>3,5</b>	0,61	1,66	1,80	3,24	5,61	9,78	16,1	24,5	37,8	55,1	79,3	140
<b>4</b>	0,80	2,00	2,30	3,96	6,84	11,6	19,1	28,8	45,0	65,9	95,0	165
<b>4,5</b>	1,02	2,40	2,74	4,86	8,34	14,2	23,3	35,8	55,3	84,1	121	215
<b>5</b>	1,24	3,00	3,42	5,98	9,83	16,7	27,5	42,8	65,5	102	147	260
<b>5,5</b>	1,64	3,50	4,21	7,18	11,9	20,9	33,2	51,8	81,7	127	183	325
<b>6</b>	2,04	4,50	5,11	8,57	14,0	25,2	38,9	60,8	97,9	152	219	380
<b>6,5</b>	2,64	5,10	5,97	10,2	16,9	29,5	46,3	75,4	122	197	282	500
<b>7</b>	3,24	6,70	7,27	12,3	19,8	33,8	53,6	90,0	146	241	325	576
<b>7,5</b>	3,84	7,30	8,64	14,4	23,4	39,8	64,6	113	177	290	417	740
<b>8</b>	4,45	9,30	10,1	17,6	27,0	45,7	75,6	137	209	338	486	866
<b>8,5</b>	5,04	10,0	11,5	20,9	30,6	53,5	91,8	169	251	400	576	1020
<b>9</b>	5,83	12,6	13,1	22,6	34,2	61,2	108	216	294	461	660	1170

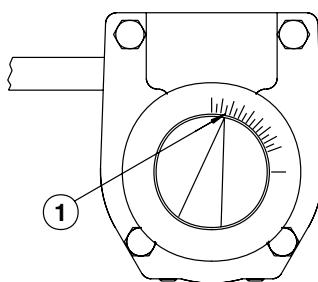
## Setting

### DN 15-150



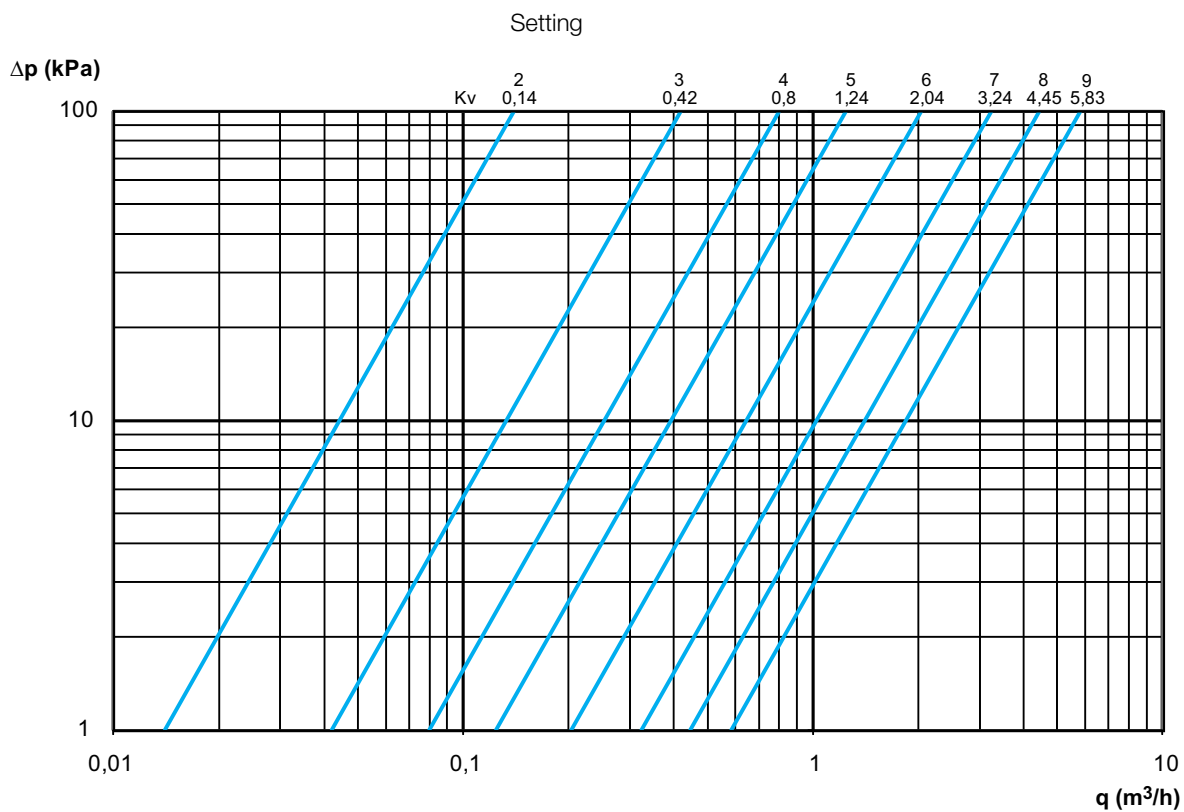
1. Adjust to the desired position **(1)**.
2. Open the locking screw of the limiter **(2)**.
3. Move the limiter against the edge of the scale plate **(3)**.
4. Tighten the locking screw of the limiter **(2)**.

### DN 200-250

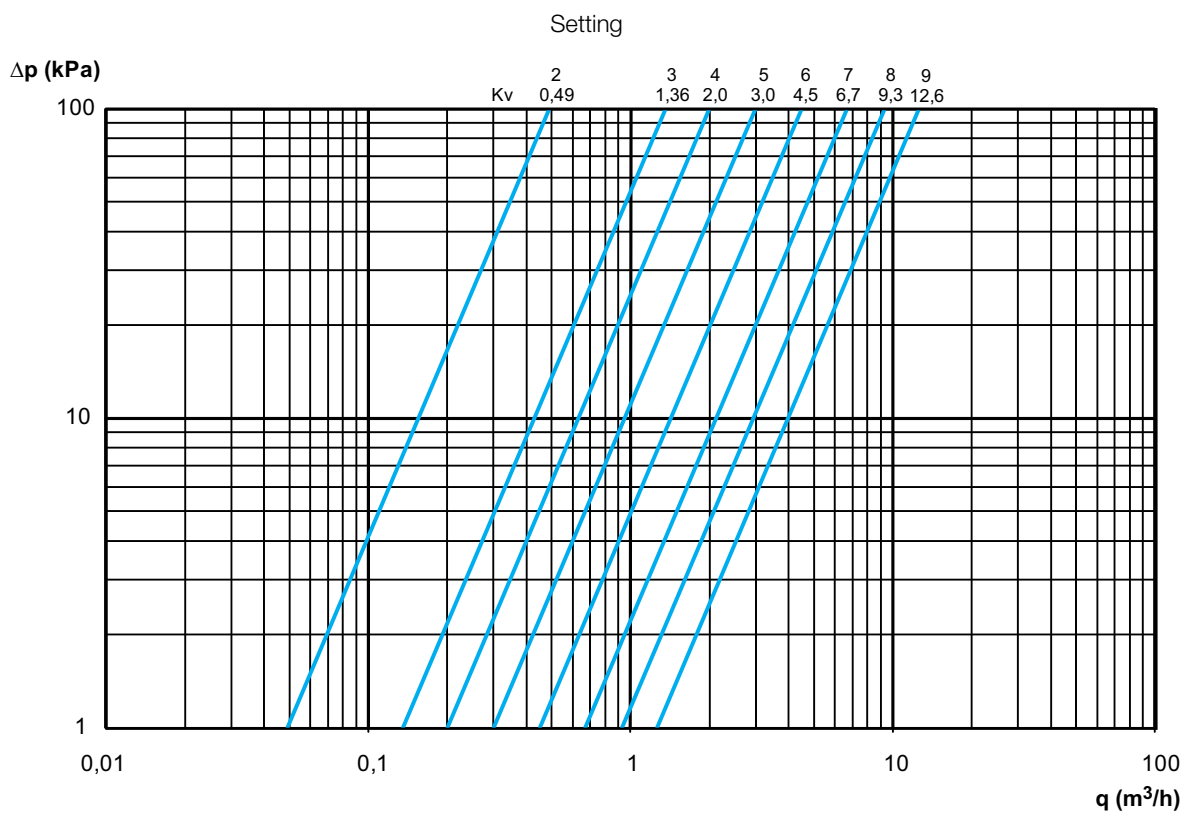


1. Adjust to the desired position **(1)**.

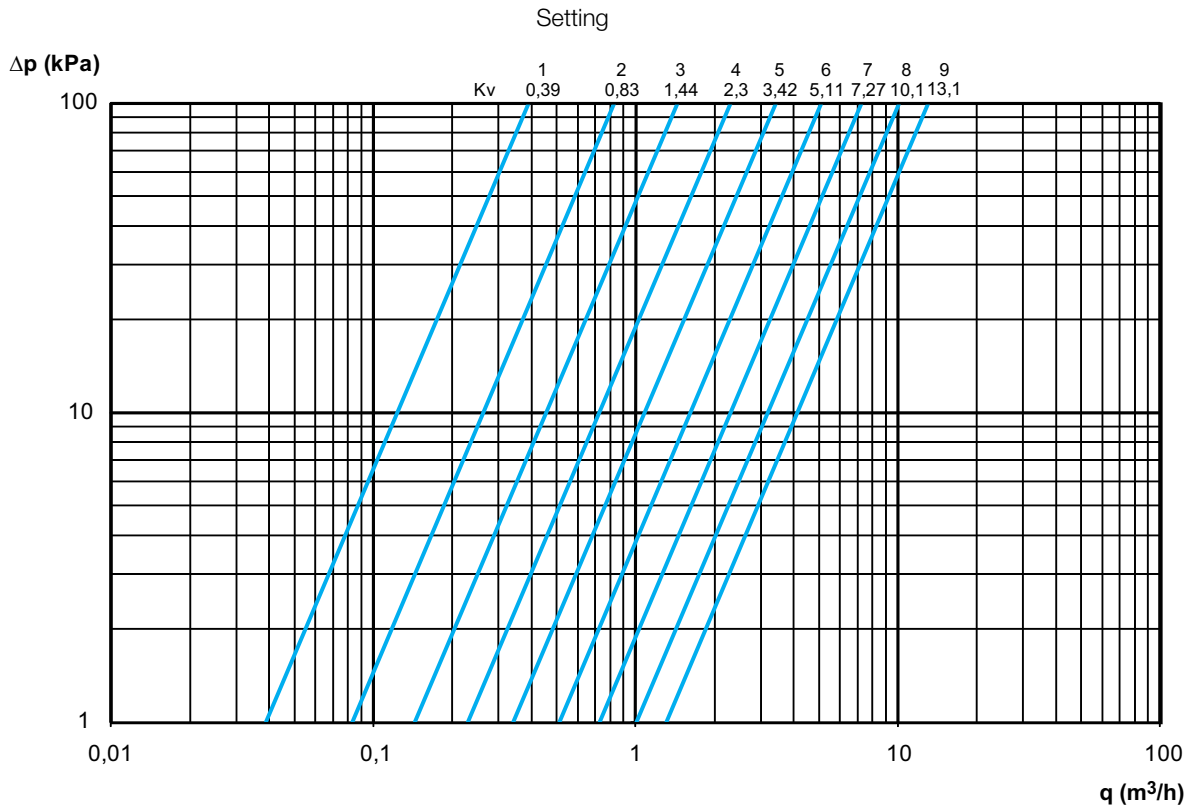
## Diagram DN 15-20



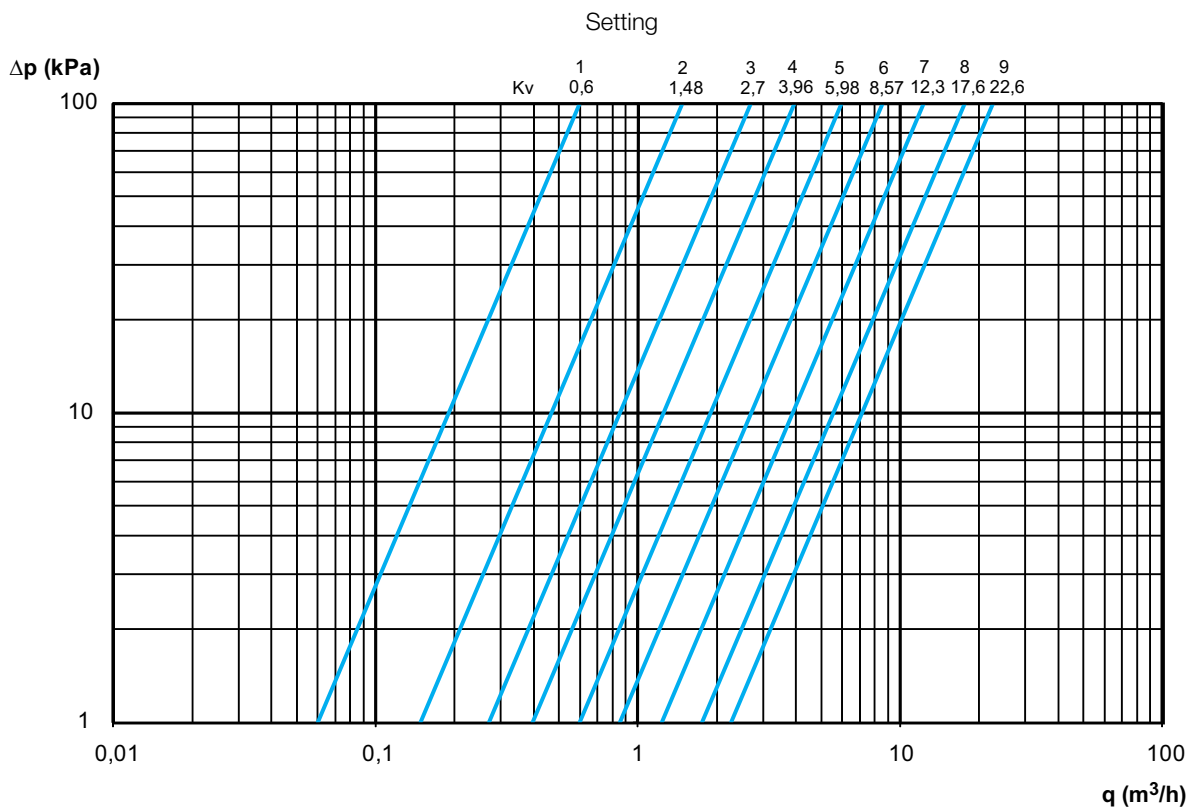
## Diagram DN 25



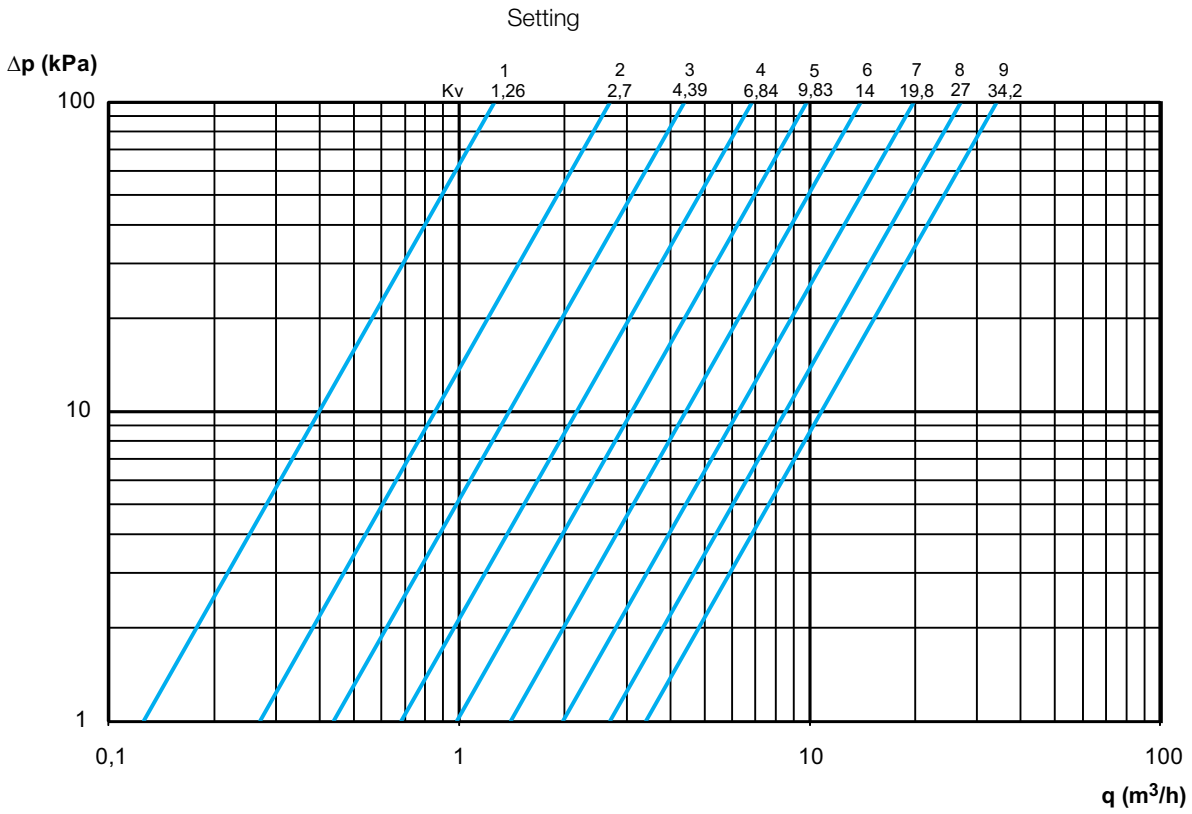
### Diagram DN 32



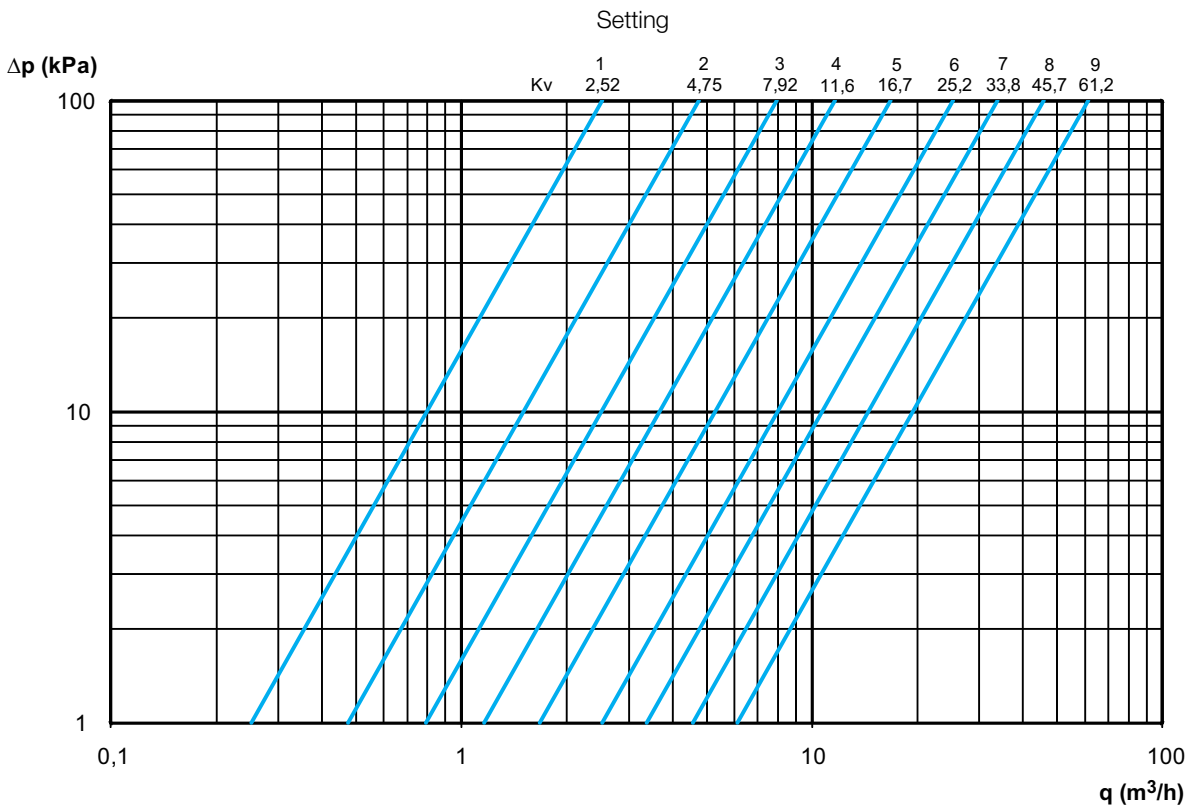
### Diagram DN 40



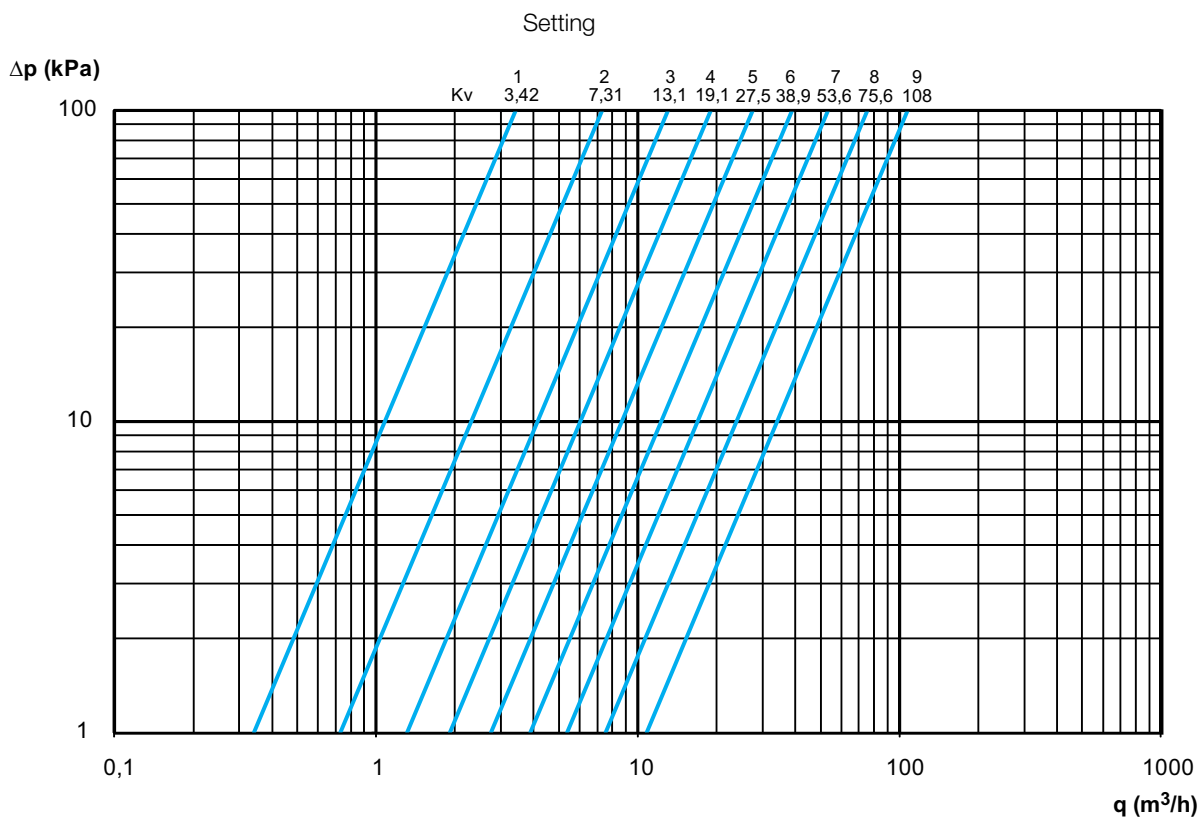
### Diagram DN 50



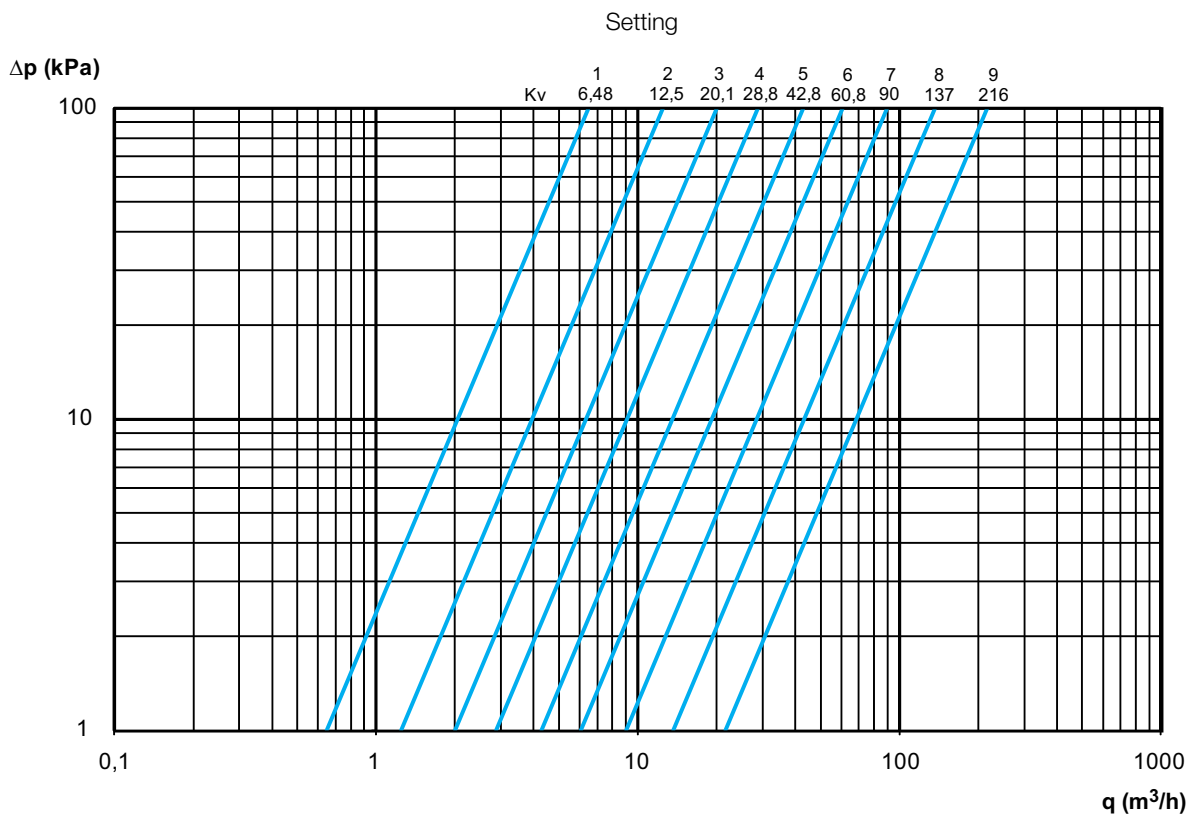
### Diagram DN 65



### Diagram DN 80

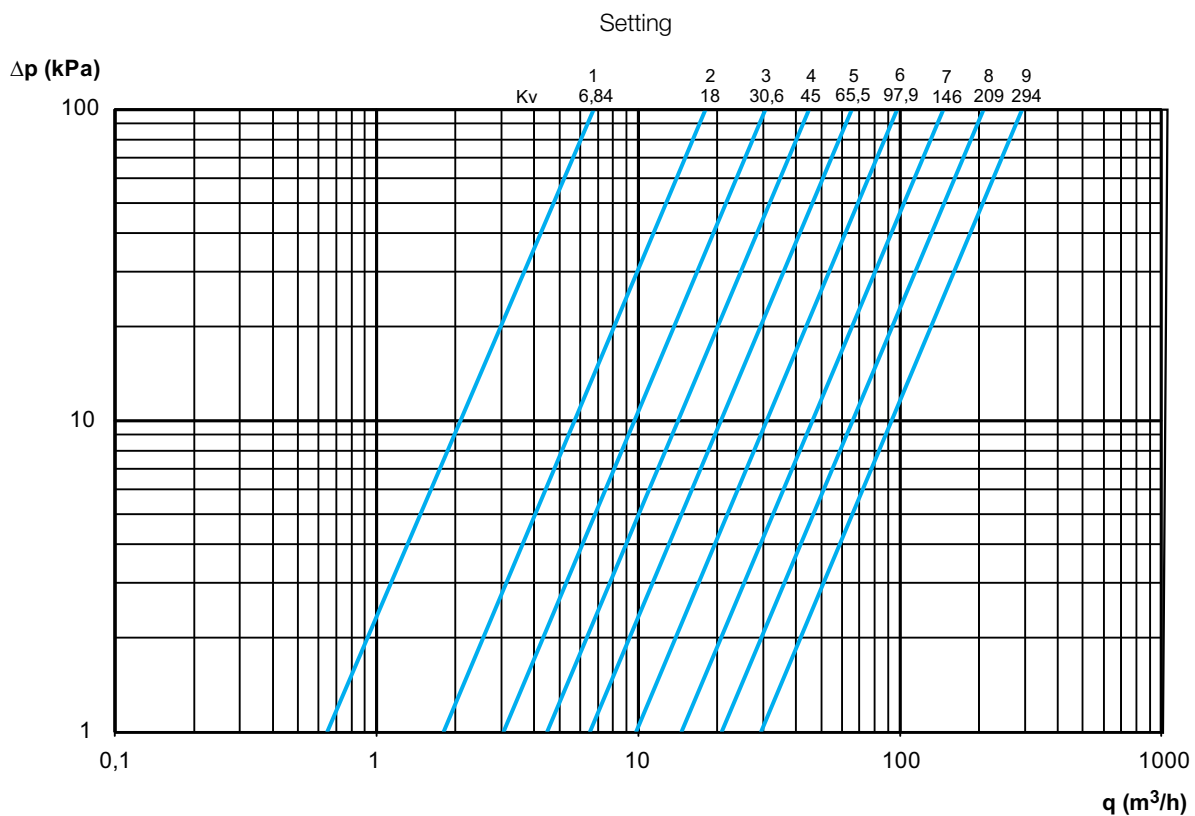


### Diagram DN 100

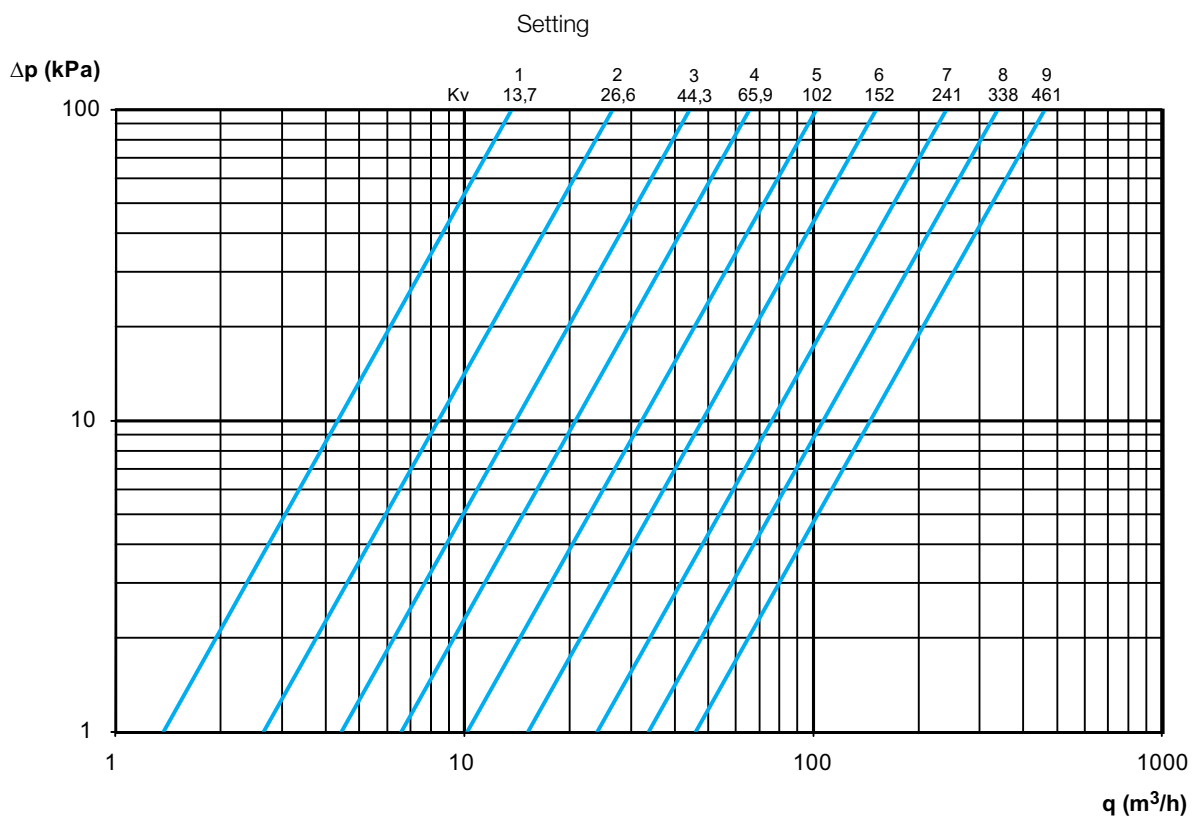




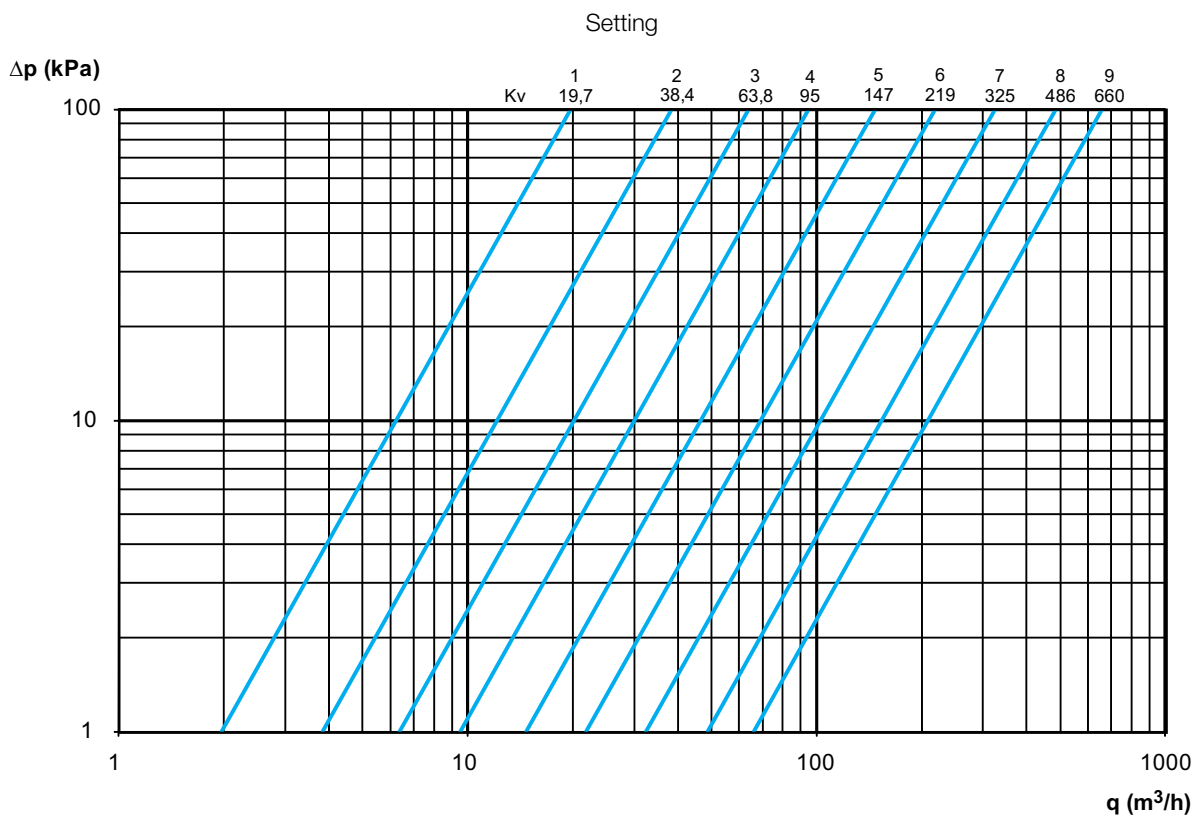
### Diagram DN 125



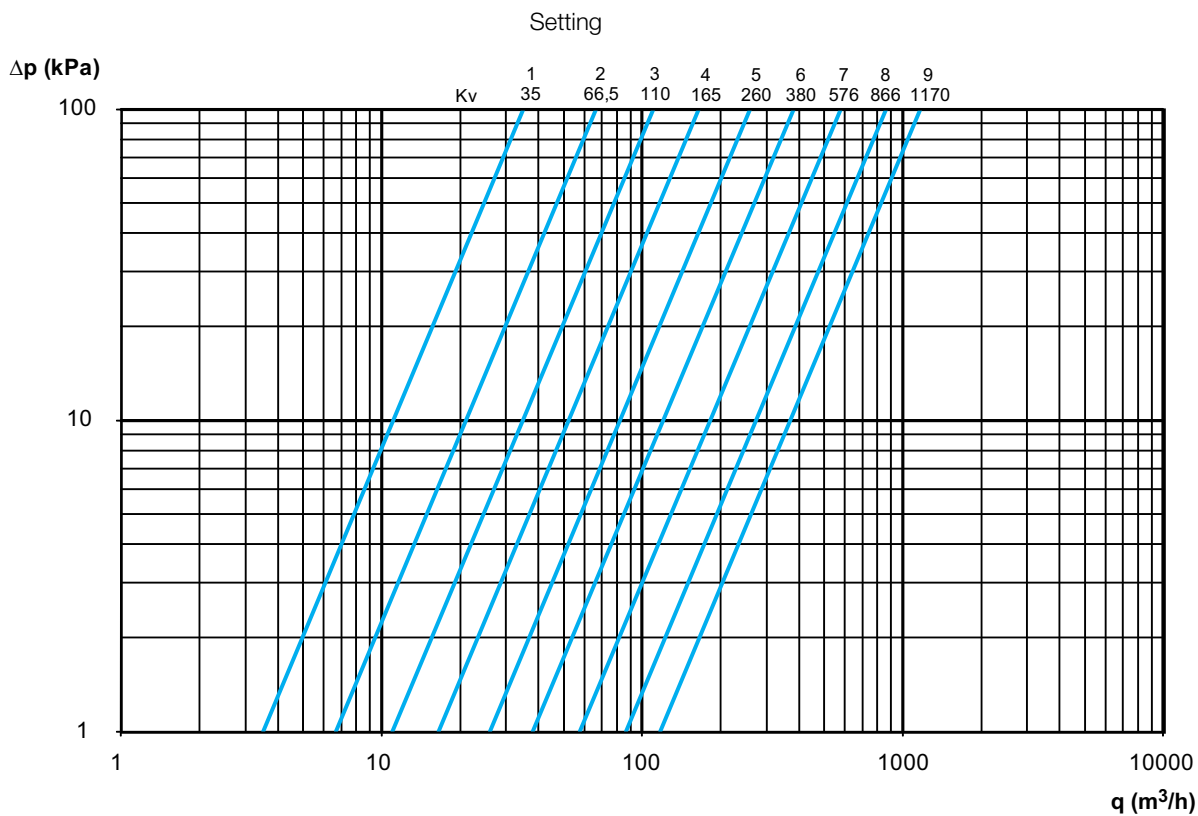
### Diagram DN 150



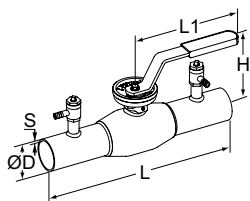
### Diagram DN 200



### Diagram DN 250



## TA-BVS 240 – Welding ends



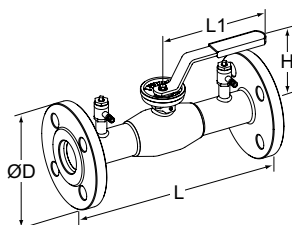
### Welding ends

DN	D	L	L1	H	S	Kvs	Kg	EAN	Article No
<b>PN 40</b>									
15	21,3	230	145	105	2	5,83	0,9	6415840183815	6-52 240-015
20	26,9	230	145	105	2	5,83	0,9	6415840183822	6-52 240-020
25	33,7	230	145	113	2	12,6	1,1	6415840183839	6-52 240-025
32	42,4	260	145	117	2	13,1	1,3	6415840183846	6-52 240-032
40	48,3	260	188	114	2,5	22,6	2,3	6415840183853	6-52 240-040
50	60,3	300	188	121	2,6	34,2	3,1	6415840183860	6-52 240-050
<b>PN 25</b>									
65	76,1	300	280	154	3	61,2	4,4	6415840183877	6-52 240-065
80	88,9	300	280	166	3	108	5,4	6415840183884	6-52 240-080
100	114,3	325	280	173	3	216	7,7	6415840183891	6-52 240-090
125	139,7	325	400	221	4	294	15,5	6415840183907	6-52 240-091
150	168,3	350	600	240	4	461	16,1	6415840183914	6-52 240-092
200*	219,1	400	-	-	4	660	38,2	6415840183921	6-52 240-093
250*	273,0	530	-	-	4	1170	73,6	6415840183938	6-52 240-094

\*) Equipped with manual gear.

Kvs = m<sup>3</sup>/h at a pressure drop of 1 bar and fully open valve.

## TA-BVS 243 – Flanged



### Flanged

DN	Number of bolt holes	D	L	L1	H	Kvs	Kg	EAN	Article No
<b>PN 40</b>									
15	4x14	95	250	145	105	5,83	2,1	6415840116813	6-52 243-015
20	4x14	105	250	145	105	5,83	2,6	6415840116820	6-52 243-020
25	4x14	115	240	145	113	12,6	3,1	6415840116837	6-52 243-025
32	4x18	140	280	145	117	13,1	4,7	6415840116844	6-52 243-032
40	4x18	150	270	188	114	22,6	6,0	6415840116851	6-52 243-040
50	4x18	165	310	188	121	34,2	8,1	6415840116868	6-52 243-050
<b>PN 16</b>									
65	8x18	185	310	280	160	61,2	10,1	6415840116875	6-52 243-065
80	8x18	200	310	280	173	108	12,0	6415840116882	6-52 243-080
100	8x18	220	350	280	173	216	15,9	6415840116899	6-52 243-090
125	8x18	250	355	400	221	294	25,6	6415840116905	6-52 243-091
150	8x22	285	370	600	240	461	30,0	6415840116912	6-52 243-092
200*	12x22	340	425	-	-	660	56,7	6415840116929	6-52 243-093
250*	12x26	405	550	-	-	1170	104	6415840116936	6-52 243-094

\*) Equipped with manual gear.

Kvs = m<sup>3</sup>/h at a pressure drop of 1 bar and fully open valve.

