

## HydroControl VFS

Stainless steel regulating and shutoff valves

PN 16/PN 25, DN 65...300



Stainless steel regulating and shutoff valve for the static hydronic balancing of pipelines in closed heating and cooling systems. The valve offers a measuring function across the valve seat. All wetted parts are made of stainless steel. The valve is available in two different material grades.

### Functions

- Flow control
- Blockable and lead-sealable presetting
- Pipeline shutoff
- Flow measurement connection

### Features

- + All wetted parts made of stainless steel (except for seals)
- + Available in stainless steel CF8 or CF8M (corresponds to 1.4308 / SAE 304 or 1.4408 / SAE 316)
- + Available up to DN 300 with flanges according to EN 1092-1, PN 16 or PN 25

# Product Details

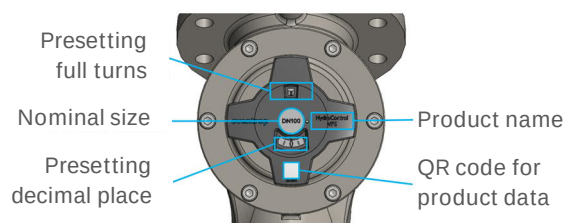
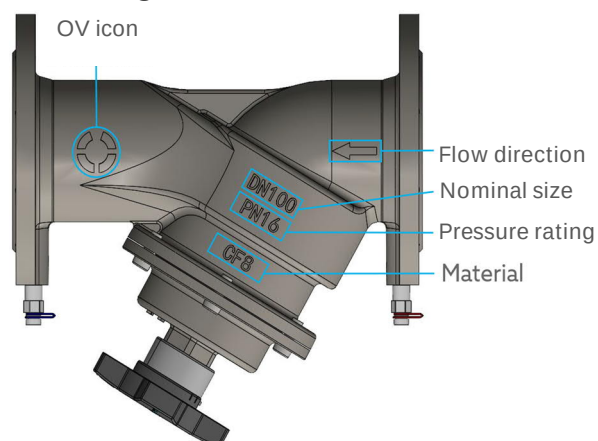
## Technical Data

|                       |                                                                                                                                                                                                                                                                                    |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal sizes         | DN 65...300                                                                                                                                                                                                                                                                        |
| Variants              | With flanges according to EN 1092-1 / PN 16 / Stainless steel CF8<br>With flanges according to EN 1092-1 / PN 16 / Stainless steel CF8M<br>With flanges according to EN 1092-1 / PN 25 / Stainless steel CF8<br>With flanges according to EN 1092-1 / PN 25 / Stainless steel CF8M |
| Operating temperature | -10...95 °C                                                                                                                                                                                                                                                                        |
| Operating pressure    | PN 16 or PN 25                                                                                                                                                                                                                                                                     |
| Medium                | Heating and cooling water according to VDI 2035 or ÖNORM 5195<br>Water / glycol mixtures with max. 50% glycol content                                                                                                                                                              |
| Kvs values            | 86...1276                                                                                                                                                                                                                                                                          |

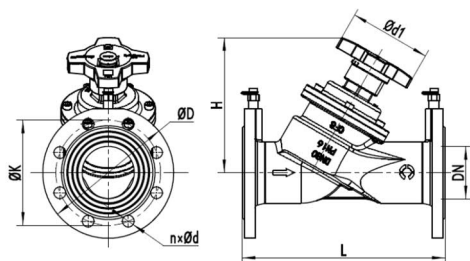
## Materials

| Component                                  | Material                                                                                                                                                                                                                                                       |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Handwheel set with presetting              | Polyamide plastic                                                                                                                                                                                                                                              |
| Y-pattern body, bonnet and regulating plug | Item no. <b>10635</b> ...: Stainless steel CF8<br>(corresponds to material number 1.4308, comparable to 1.4301 (A2), SAE 304)<br>Item no. <b>10636</b> ...: Stainless steel CF8M<br>(corresponds to material number 1.4408, comparable to 1.4401 (A4) SAE 316) |
| Spindle, measuring valve body              | Item no. <b>10635</b> ...: Stainless steel 304<br>(corresponds to material number 1.4301 (A2), SAE 304)<br>Item no. <b>10636</b> ...: Stainless steel 316<br>(corresponds to material number 1.4401 (A4) SAE 316)                                              |
| Valve seals and seat seal                  | EPDM                                                                                                                                                                                                                                                           |

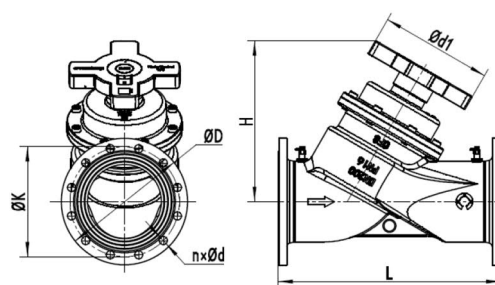
## Marking



## Dimensions



HydroControl VFS DN 65...150

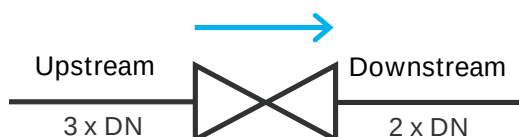


HydroControl VFS DN 200...300

| DN         | L<br>[mm] | H<br>[mm] | Ød1<br>[mm] | ØD<br>[mm] | PN 16      |                |             | PN 25      |            |                |             |
|------------|-----------|-----------|-------------|------------|------------|----------------|-------------|------------|------------|----------------|-------------|
|            |           |           |             |            | ØK<br>[mm] | n x Ød<br>[mm] | Weight [kg] | ØD<br>[mm] | ØK<br>[mm] | n x Ød<br>[mm] | Weight [kg] |
| <b>65</b>  | 290       | 195       | 125         | 185        | 145        | 4 x 18         | 14          | 185        | 145        | 8 x 18         | 14          |
| <b>80</b>  | 310       | 206       | 125         | 200        | 160        | 8 x 18         | 17          | 200        | 160        | 8 x 18         | 17          |
| <b>100</b> | 350       | 237       | 125         | 220        | 180        | 8 x 18         | 25          | 235        | 190        | 8 x 22         | 27          |
| <b>125</b> | 400       | 244       | 125         | 250        | 210        | 8 x 18         | 33          | 270        | 220        | 8 x 26         | 35          |
| <b>150</b> | 480       | 281       | 125         | 285        | 240        | 8 x 22         | 49          | 300        | 250        | 8 x 26         | 50          |
| <b>200</b> | 600       | 421       | 300         | 340        | 295        | 12 x 22        | 87          | 360        | 310        | 12 x 26        | 90          |
| <b>250</b> | 730       | 460       | 300         | 405        | 355        | 12 x 26        | 136         | 425        | 370        | 12 x 30        | 142         |
| <b>300</b> | 850       | 500       | 300         | 460        | 410        | 12 x 26        | 178         | 485        | 430        | 16 x 30        | 185         |

## Installation

Calming sections must be provided upstream and downstream of the valve.



## Item Numbers

| Nominal size  | Kvs value | Stainless steel CF8 (1.4308) |                | Stainless steel CF8M (1.4408) |                |
|---------------|-----------|------------------------------|----------------|-------------------------------|----------------|
|               |           | Item no. PN 16               | Item no. PN 25 | Item no. PN 16                | Item no. PN 25 |
| DN <b>65</b>  | 86.2      | 1063551                      | 1063581        | 1063651                       | 1063681        |
| DN <b>80</b>  | 138.4     | 1063552                      | 1063582        | 1063652                       | 1063682        |
| DN <b>100</b> | 205.2     | 1063553                      | 1063583        | 1063653                       | 1063683        |
| DN <b>125</b> | 314.0     | 1063554                      | 1063584        | 1063654                       | 1063684        |
| DN <b>150</b> | 405.8     | 1063555                      | 1063585        | 1063655                       | 1063685        |
| DN <b>200</b> | 795.1     | 1063556                      | 1063586        | 1063656                       | 1063686        |
| DN <b>250</b> | 1087.8    | 1063557                      | 1063587        | 1063657                       | 1063687        |
| DN <b>300</b> | 1276.2    | 1063558                      | 1063588        | 1063658                       | 1063688        |

# Sizing

## Kv values

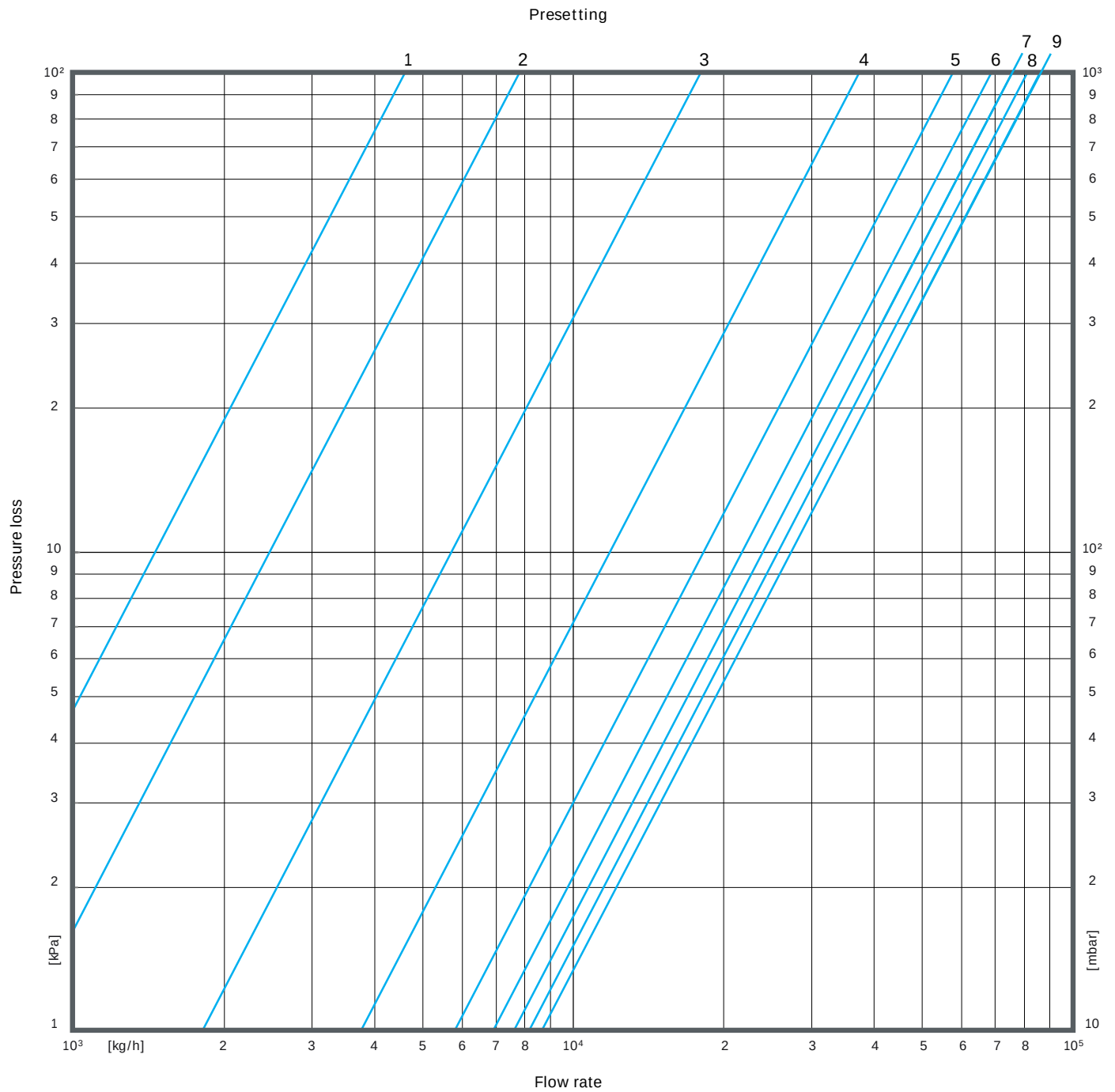
| Presetting | DN 65       | DN 80       | DN 100      | DN 125       | DN 150       | DN 200       | DN 250       | DN 300       |
|------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <b>1.0</b> | <b>4.6</b>  | <b>6.6</b>  | <b>4.8</b>  | <b>17.0</b>  | <b>18.0</b>  | <b>57.7</b>  | <b>70.4</b>  | <b>60.3</b>  |
| <b>1.1</b> | 5.00        | 7.30        | 5.60        | 18.80        | 20.50        | 63.00        | 78.20        | 68.50        |
| <b>1.2</b> | 5.10        | 7.90        | 6.50        | 20.00        | 22.80        | 68.00        | 86.40        | 77.70        |
| <b>1.3</b> | 5.40        | 8.50        | 7.40        | 21.50        | 25.20        | 73.50        | 94.40        | 87.70        |
| <b>1.4</b> | 5.60        | 9.30        | 8.30        | 23.00        | 27.80        | 77.80        | 103.60       | 97.70        |
| <b>1.5</b> | 5.80        | 9.90        | 9.40        | 24.50        | 30.20        | 82.80        | 112.00       | 107.70       |
| <b>1.6</b> | 6.00        | 10.40       | 10.60       | 25.70        | 32.70        | 88.20        | 120.80       | 118.20       |
| <b>1.7</b> | 6.30        | 11.30       | 11.80       | 27.60        | 35.10        | 94.20        | 129.80       | 129.60       |
| <b>1.8</b> | 6.80        | 11.90       | 13.00       | 29.10        | 38.10        | 99.90        | 138.80       | 139.60       |
| <b>1.9</b> | 7.20        | 12.60       | 14.20       | 31.00        | 40.50        | 105.80       | 147.60       | 149.60       |
| <b>2.0</b> | <b>7.8</b>  | <b>13.5</b> | <b>15.6</b> | <b>32.8</b>  | <b>43.4</b>  | <b>113.2</b> | <b>156.3</b> | <b>159.6</b> |
| <b>2.1</b> | 8.50        | 14.20       | 17.10       | 34.90        | 46.20        | 121.10       | 164.80       | 168.80       |
| <b>2.2</b> | 9.20        | 14.90       | 18.70       | 36.90        | 49.50        | 129.60       | 173.80       | 178.40       |
| <b>2.3</b> | 10.00       | 15.80       | 20.30       | 39.00        | 52.60        | 137.50       | 182.40       | 188.00       |
| <b>2.4</b> | 11.00       | 16.30       | 21.90       | 41.00        | 56.10        | 146.00       | 191.00       | 197.70       |
| <b>2.5</b> | 11.90       | 17.30       | 23.60       | 43.50        | 59.80        | 155.10       | 200.00       | 207.60       |
| <b>2.6</b> | 13.00       | 17.90       | 25.40       | 45.80        | 62.80        | 165.00       | 208.80       | 216.80       |
| <b>2.7</b> | 14.00       | 18.90       | 27.40       | 48.50        | 66.10        | 175.00       | 217.60       | 225.60       |
| <b>2.8</b> | 15.20       | 20.20       | 29.30       | 51.30        | 69.80        | 185.20       | 225.90       | 233.80       |
| <b>2.9</b> | 16.60       | 21.40       | 31.30       | 54.00        | 72.60        | 196.40       | 233.90       | 242.00       |
| <b>3.0</b> | <b>18.0</b> | <b>23.4</b> | <b>33.2</b> | <b>57.1</b>  | <b>75.8</b>  | <b>207.9</b> | <b>241.9</b> | <b>249.5</b> |
| <b>3.1</b> | 19.60       | 25.70       | 35.30       | 60.30        | 78.80        | 220.00       | 249.80       | 256.20       |
| <b>3.2</b> | 21.20       | 27.80       | 37.40       | 64.00        | 81.60        | 233.10       | 256.60       | 262.60       |
| <b>3.3</b> | 23.10       | 30.20       | 39.50       | 68.00        | 84.40        | 245.60       | 263.40       | 268.20       |
| <b>3.4</b> | 25.20       | 33.20       | 41.70       | 72.00        | 86.80        | 260.00       | 269.60       | 273.90       |
| <b>3.5</b> | 27.10       | 35.80       | 44.00       | 76.00        | 89.20        | 274.50       | 275.90       | 278.80       |
| <b>3.6</b> | 29.20       | 38.60       | 46.60       | 80.00        | 92.20        | 288.80       | 282.20       | 283.60       |
| <b>3.7</b> | 31.20       | 41.90       | 49.00       | 84.50        | 94.50        | 302.80       | 289.20       | 288.00       |
| <b>3.8</b> | 33.30       | 45.20       | 51.80       | 89.00        | 97.10        | 317.40       | 296.00       | 293.60       |
| <b>3.9</b> | 35.50       | 48.30       | 54.70       | 93.30        | 99.60        | 330.80       | 303.80       | 299.80       |
| <b>4.0</b> | <b>37.4</b> | <b>51.3</b> | <b>57.7</b> | <b>97.8</b>  | <b>102.6</b> | <b>344.4</b> | <b>311.3</b> | <b>305.4</b> |
| <b>4.1</b> | 39.50       | 54.50       | 61.30       | 102.60       | 105.30       | 358.80       | 319.90       | 312.00       |
| <b>4.2</b> | 41.70       | 57.60       | 65.20       | 107.00       | 108.20       | 372.50       | 329.40       | 317.40       |
| <b>4.3</b> | 43.90       | 60.90       | 69.20       | 112.00       | 110.80       | 386.00       | 338.40       | 322.80       |
| <b>4.4</b> | 46.00       | 64.40       | 73.20       | 116.60       | 113.80       | 400.50       | 348.00       | 328.00       |
| <b>4.5</b> | 48.00       | 67.80       | 77.60       | 121.80       | 116.20       | 414.10       | 358.20       | 334.00       |
| <b>4.6</b> | 50.10       | 70.90       | 82.00       | 126.90       | 119.20       | 427.20       | 368.40       | 340.90       |
| <b>4.7</b> | 52.20       | 74.30       | 86.00       | 131.90       | 122.50       | 441.20       | 378.20       | 348.00       |
| <b>4.8</b> | 54.20       | 77.70       | 90.20       | 136.80       | 125.40       | 453.80       | 388.40       | 356.30       |
| <b>4.9</b> | 56.00       | 80.60       | 94.90       | 141.80       | 129.10       | 465.50       | 399.40       | 365.80       |
| <b>5.0</b> | <b>57.6</b> | <b>83.3</b> | <b>99.0</b> | <b>147.1</b> | <b>132.5</b> | <b>476.5</b> | <b>409.0</b> | <b>377.5</b> |

| Presetting | DN 65 | DN 80  | DN 100 | DN 125 | DN 150 | DN 200 | DN 250 | DN 300  |
|------------|-------|--------|--------|--------|--------|--------|--------|---------|
| 5.1        | 59.10 | 85.90  | 103.10 | 152.20 | 136.10 | 487.50 | 423.20 | 390.50  |
| 5.2        | 60.50 | 88.20  | 107.40 | 158.00 | 140.20 | 496.80 | 437.90 | 406.00  |
| 5.3        | 61.80 | 90.60  | 111.50 | 163.20 | 144.80 | 505.50 | 452.60 | 422.80  |
| 5.4        | 63.00 | 93.10  | 115.60 | 168.90 | 149.10 | 514.80 | 467.40 | 440.80  |
| 5.5        | 64.00 | 95.10  | 119.80 | 174.80 | 153.60 | 522.80 | 482.60 | 459.80  |
| 5.6        | 65.00 | 97.10  | 123.70 | 180.00 | 158.00 | 530.80 | 497.20 | 479.60  |
| 5.7        | 66.00 | 98.80  | 127.60 | 185.50 | 162.50 | 538.40 | 511.50 | 499.20  |
| 5.8        | 67.00 | 100.60 | 131.50 | 191.10 | 167.20 | 545.20 | 525.40 | 518.20  |
| 5.9        | 67.90 | 102.10 | 135.40 | 195.80 | 171.80 | 552.50 | 539.60 | 537.00  |
| 6.0        | 68.8  | 103.8  | 139.2  | 200.6  | 176.7  | 560.1  | 554.2  | 555.9   |
| 6.1        | 69.60 | 105.00 | 142.70 | 204.90 | 181.30 | 566.80 | 567.80 | 568.80  |
| 6.2        | 70.50 | 106.10 | 146.30 | 209.10 | 186.60 | 574.00 | 581.00 | 583.80  |
| 6.3        | 71.20 | 106.90 | 149.80 | 213.00 | 191.80 | 578.80 | 595.30 | 597.60  |
| 6.4        | 71.90 | 107.80 | 153.20 | 216.90 | 197.40 | 585.00 | 609.00 | 611.60  |
| 6.5        | 72.70 | 108.20 | 156.50 | 220.50 | 202.50 | 590.50 | 622.60 | 625.80  |
| 6.6        | 73.20 | 108.60 | 159.50 | 224.00 | 207.80 | 596.20 | 635.50 | 639.60  |
| 6.7        | 73.90 | 109.30 | 162.50 | 227.80 | 213.40 | 602.50 | 648.60 | 654.00  |
| 6.8        | 74.50 | 110.00 | 165.50 | 231.10 | 217.90 | 608.20 | 660.80 | 666.50  |
| 6.9        | 75.10 | 110.70 | 168.20 | 234.80 | 223.00 | 615.00 | 672.40 | 678.80  |
| 7.0        | 75.7  | 111.9  | 170.6  | 238.0  | 227.7  | 622.1  | 683.1  | 691.2   |
| 7.1        | 76.30 | 113.20 | 172.20 | 241.20 | 232.40 | 630.00 | 691.80 | 702.30  |
| 7.2        | 77.00 | 114.20 | 173.30 | 244.50 | 236.00 | 638.80 | 699.20 | 712.40  |
| 7.3        | 77.50 | 115.80 | 174.20 | 248.00 | 240.00 | 646.80 | 704.80 | 722.10  |
| 7.4        | 78.00 | 116.90 | 175.00 | 251.00 | 244.00 | 656.20 | 710.60 | 731.40  |
| 7.5        | 78.60 | 118.60 | 176.00 | 253.70 | 247.50 | 665.50 | 715.40 | 740.00  |
| 7.6        | 79.20 | 120.20 | 177.00 | 256.80 | 251.00 | 674.60 | 721.00 | 749.60  |
| 7.7        | 79.70 | 121.80 | 177.50 | 260.20 | 254.90 | 683.80 | 727.40 | 758.40  |
| 7.8        | 80.20 | 123.20 | 178.40 | 263.80 | 258.80 | 692.00 | 734.80 | 768.30  |
| 7.9        | 80.70 | 124.80 | 179.20 | 267.30 | 262.80 | 700.50 | 745.00 | 778.80  |
| 8.0        | 81.2  | 126.0  | 180.7  | 270.7  | 266.9  | 707.4  | 758.0  | 790.4   |
| 8.1        | 81.80 | 127.40 | 182.50 | 274.80 | 271.70 | 714.50 | 773.20 | 802.40  |
| 8.2        | 82.20 | 128.60 | 184.80 | 279.00 | 276.20 | 720.00 | 795.00 | 816.20  |
| 8.3        | 82.80 | 129.80 | 187.00 | 283.00 | 281.50 | 726.10 | 817.00 | 829.80  |
| 8.4        | 83.20 | 131.00 | 189.70 | 287.60 | 286.30 | 732.50 | 841.00 | 843.80  |
| 8.5        | 83.70 | 132.20 | 192.00 | 291.90 | 291.70 | 737.50 | 867.00 | 858.80  |
| 8.6        | 84.20 | 133.70 | 194.50 | 296.20 | 296.70 | 743.00 | 895.00 | 873.80  |
| 8.7        | 84.70 | 134.80 | 197.20 | 300.50 | 302.30 | 747.50 | 919.00 | 888.60  |
| 8.8        | 85.20 | 136.00 | 199.90 | 305.00 | 306.80 | 752.00 | 939.00 | 903.80  |
| 8.9        | 85.70 | 137.20 | 202.40 | 309.50 | 312.10 | 756.50 | 959.00 | 918.20  |
| 9.0        | 86.2  | 138.4  | 205.2  | 314.0  | 316.7  | 761.2  | 973.7  | 933.3   |
| 9.1        |       |        |        |        | 321.00 | 765.20 | 981.00 | 943.60  |
| 9.2        |       |        |        |        | 325.50 | 769.50 | 984.70 | 953.60  |
| 9.3        |       |        |        |        | 330.00 | 772.50 | 989.00 | 963.60  |
| 9.4        |       |        |        |        | 334.70 | 776.00 | 990.60 | 972.80  |
| 9.5        |       |        |        |        | 338.80 | 779.60 | 990.80 | 983.40  |
| 9.6        |       |        |        |        | 342.80 | 782.50 | 991.20 | 992.80  |
| 9.7        |       |        |        |        | 346.60 | 785.30 | 991.80 | 1003.40 |

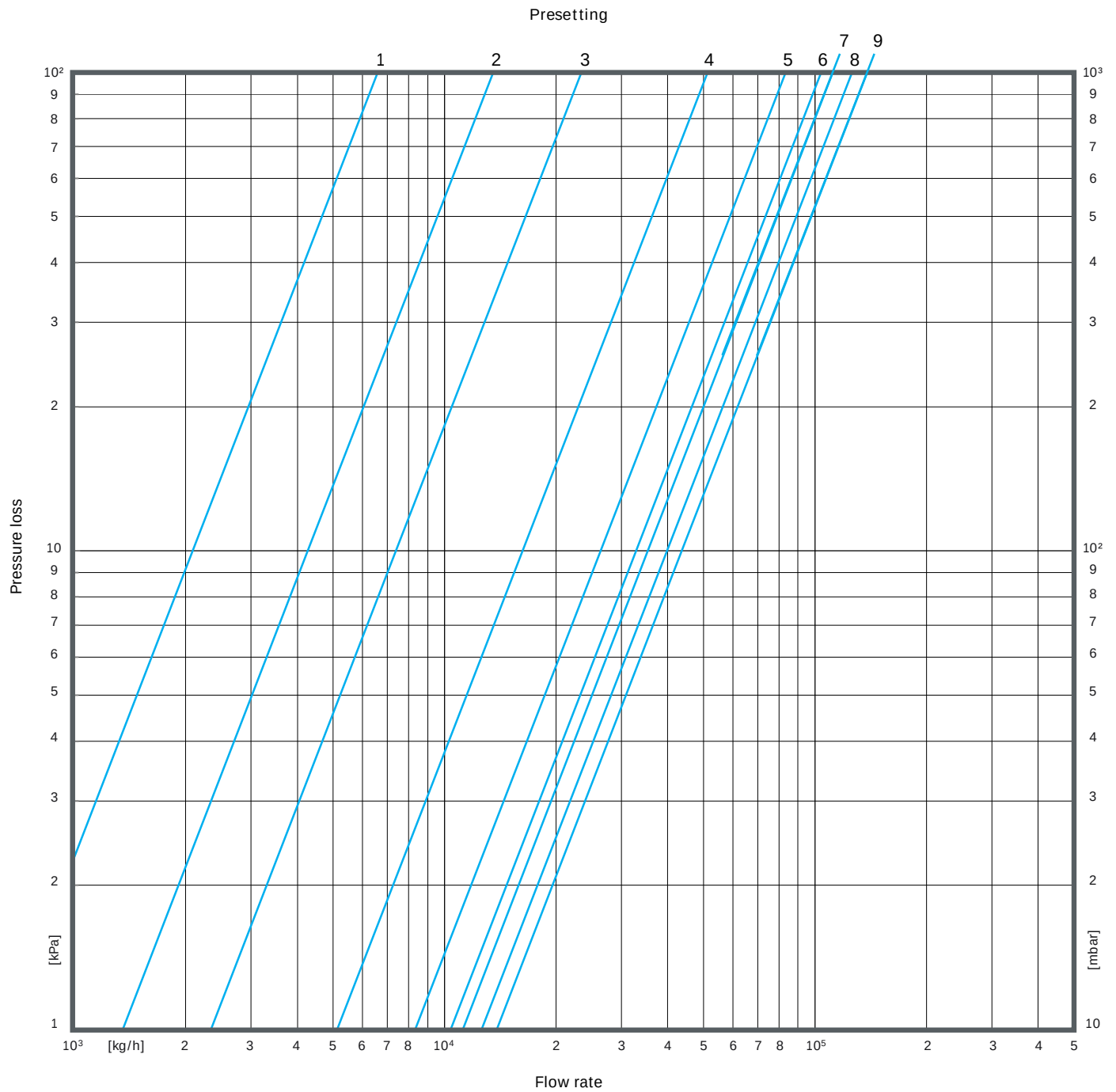
| Presetting  | DN 65 | DN 80 | DN 100 | DN 125 | DN 150       | DN 200       | DN 250        | DN 300        |
|-------------|-------|-------|--------|--------|--------------|--------------|---------------|---------------|
| <b>9.8</b>  |       |       |        |        | 350.30       | 788.80       | 992.60        | 1014.00       |
| <b>9.9</b>  |       |       |        |        | 354.40       | 792.30       | 993.00        | 1024.80       |
| <b>10.0</b> |       |       |        |        | <b>357.5</b> | <b>795.1</b> | <b>994.0</b>  | <b>1036.6</b> |
| <b>10.1</b> |       |       |        |        | 360.50       |              | 995.60        | 1048.50       |
| <b>10.2</b> |       |       |        |        | 364.00       |              | 996.80        | 1061.80       |
| <b>10.3</b> |       |       |        |        | 366.50       |              | 997.60        | 1076.20       |
| <b>10.4</b> |       |       |        |        | 369.40       |              | 998.20        | 1090.40       |
| <b>10.5</b> |       |       |        |        | 371.80       |              | 999.80        | 1104.60       |
| <b>10.6</b> |       |       |        |        | 374.50       |              | 1000.00       | 1118.60       |
| <b>10.7</b> |       |       |        |        | 376.50       |              | 1001.60       | 1132.80       |
| <b>10.8</b> |       |       |        |        | 379.10       |              | 1003.80       | 1145.80       |
| <b>10.9</b> |       |       |        |        | 381.40       |              | 1006.80       | 1157.80       |
| <b>11.0</b> |       |       |        |        | <b>383.6</b> |              | <b>1010.9</b> | <b>1168.7</b> |
| <b>11.1</b> |       |       |        |        | 385.80       |              | 1016.20       | 1177.80       |
| <b>11.2</b> |       |       |        |        | 388.40       |              | 1022.40       | 1186.20       |
| <b>11.3</b> |       |       |        |        | 390.50       |              | 1029.60       | 1193.60       |
| <b>11.4</b> |       |       |        |        | 392.70       |              | 1037.60       | 1199.80       |
| <b>11.5</b> |       |       |        |        | 394.90       |              | 1044.80       | 1206.00       |
| <b>11.6</b> |       |       |        |        | 396.90       |              | 1053.90       | 1211.70       |
| <b>11.7</b> |       |       |        |        | 399.50       |              | 1062.80       | 1216.60       |
| <b>11.8</b> |       |       |        |        | 401.40       |              | 1071.80       | 1221.80       |
| <b>11.9</b> |       |       |        |        | 403.60       |              | 1079.80       | 1226.80       |
| <b>12.0</b> |       |       |        |        | <b>405.8</b> |              | <b>1087.8</b> | <b>1232.2</b> |
| <b>12.1</b> |       |       |        |        |              |              |               | 1237.70       |
| <b>12.2</b> |       |       |        |        |              |              |               | 1242.20       |
| <b>12.3</b> |       |       |        |        |              |              |               | 1247.00       |
| <b>12.4</b> |       |       |        |        |              |              |               | 1251.60       |
| <b>12.5</b> |       |       |        |        |              |              |               | 1255.50       |
| <b>12.6</b> |       |       |        |        |              |              |               | 1259.70       |
| <b>12.7</b> |       |       |        |        |              |              |               | 1264.00       |
| <b>12.8</b> |       |       |        |        |              |              |               | 1267.80       |
| <b>12.9</b> |       |       |        |        |              |              |               | 1271.80       |
| <b>13.0</b> |       |       |        |        |              |              |               | <b>1276.2</b> |

# Flow charts

DN 65

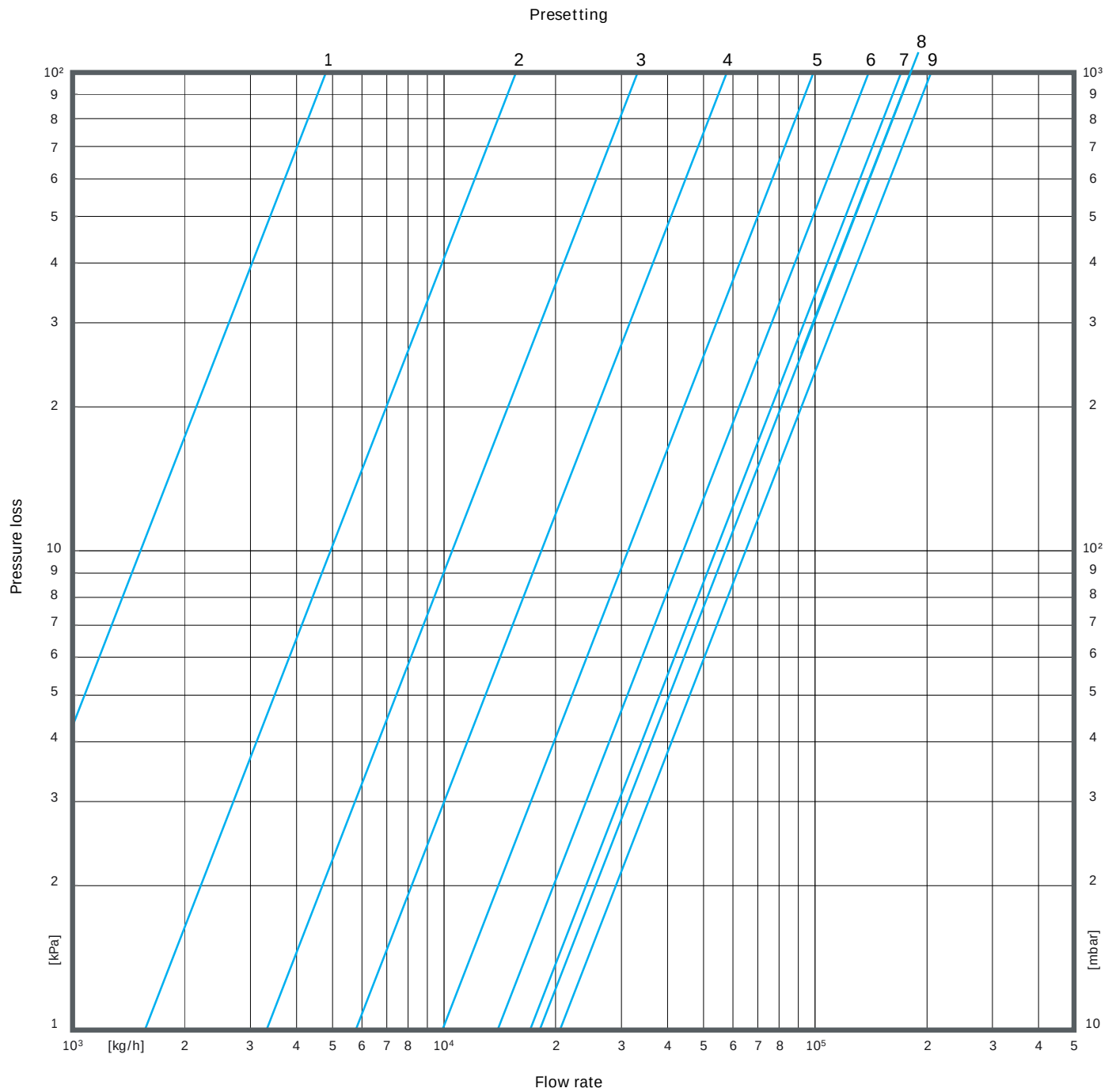


DN 80

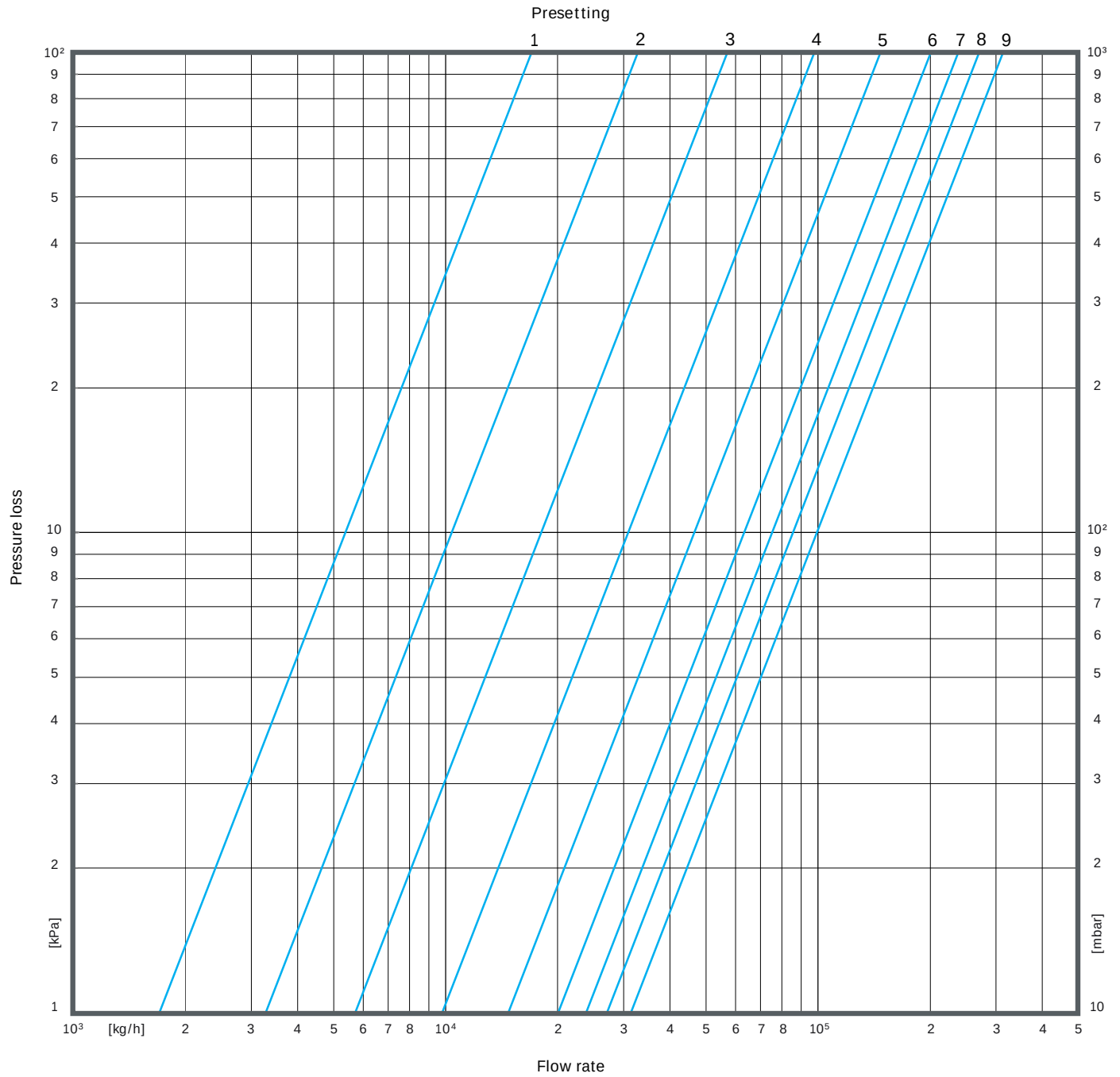




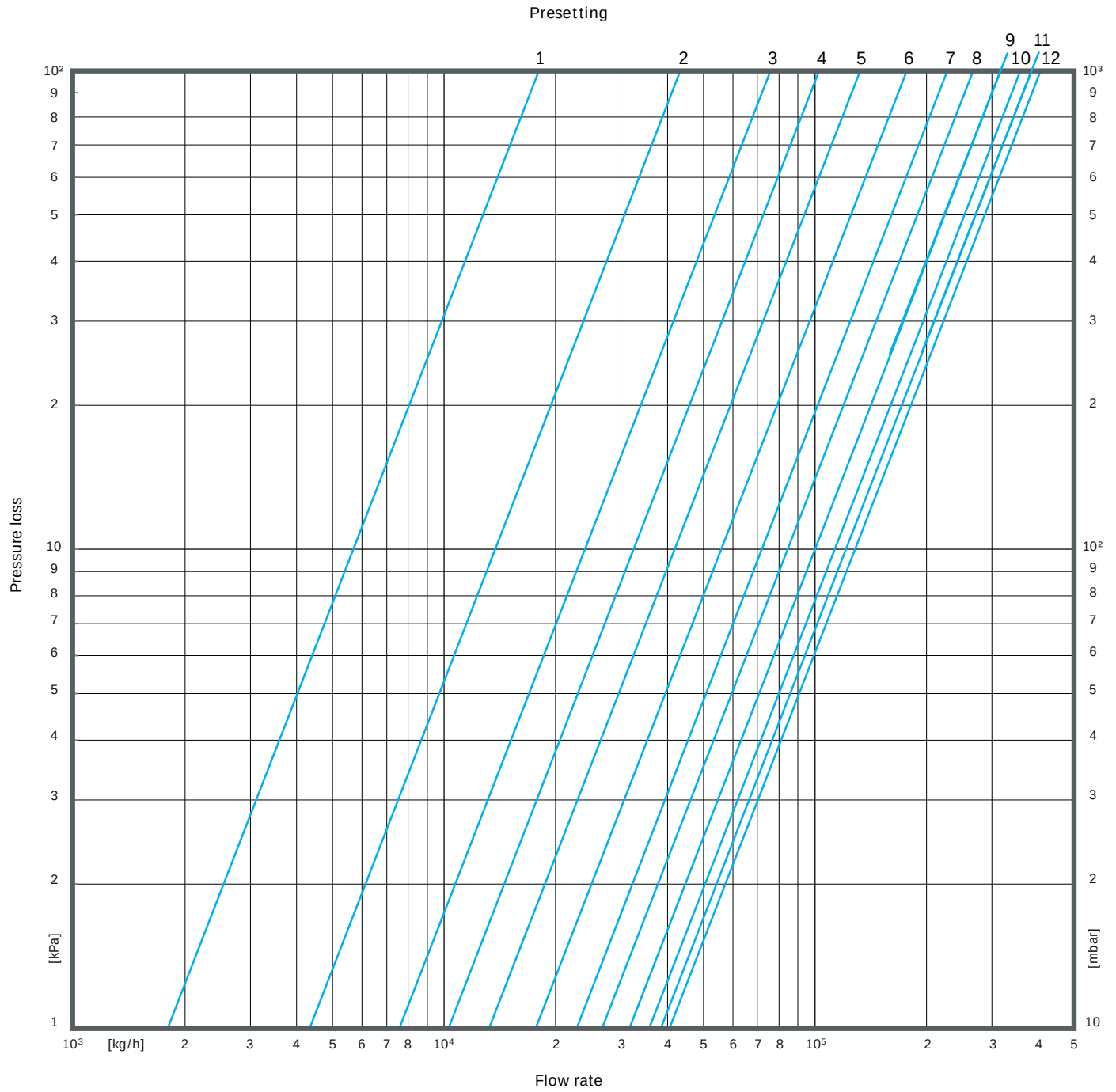
DN 100



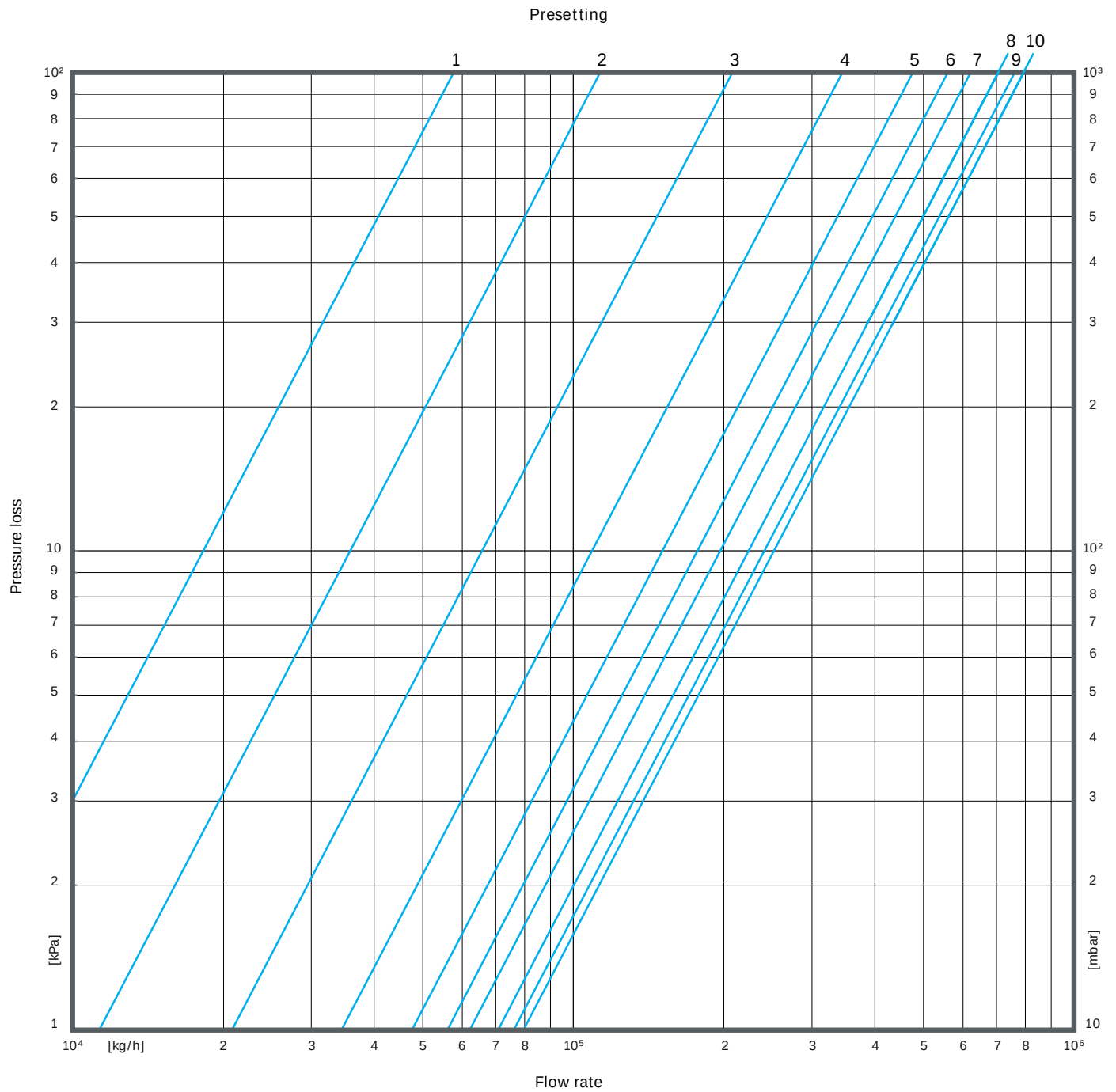
## DN 125



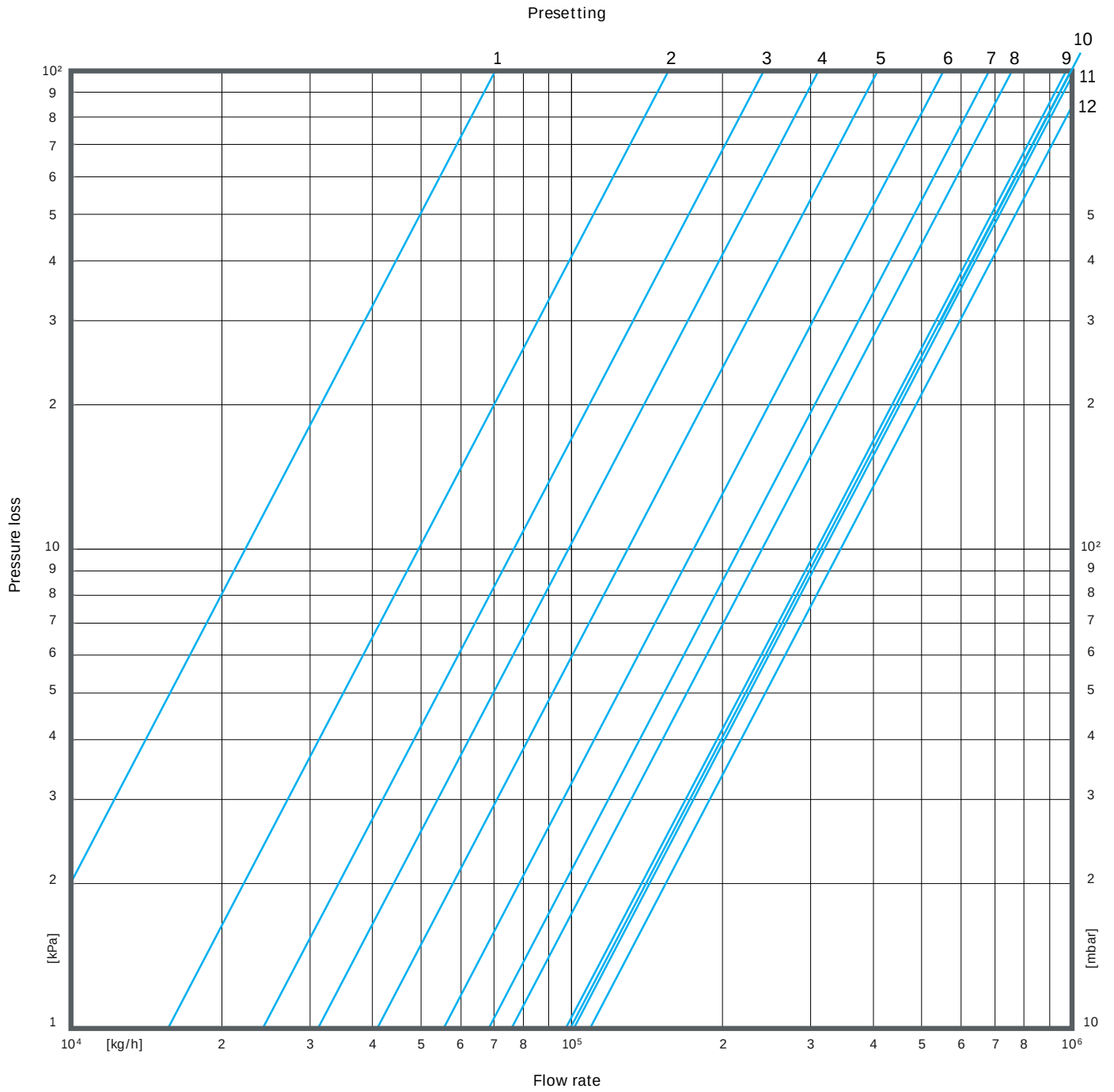
# DN 150



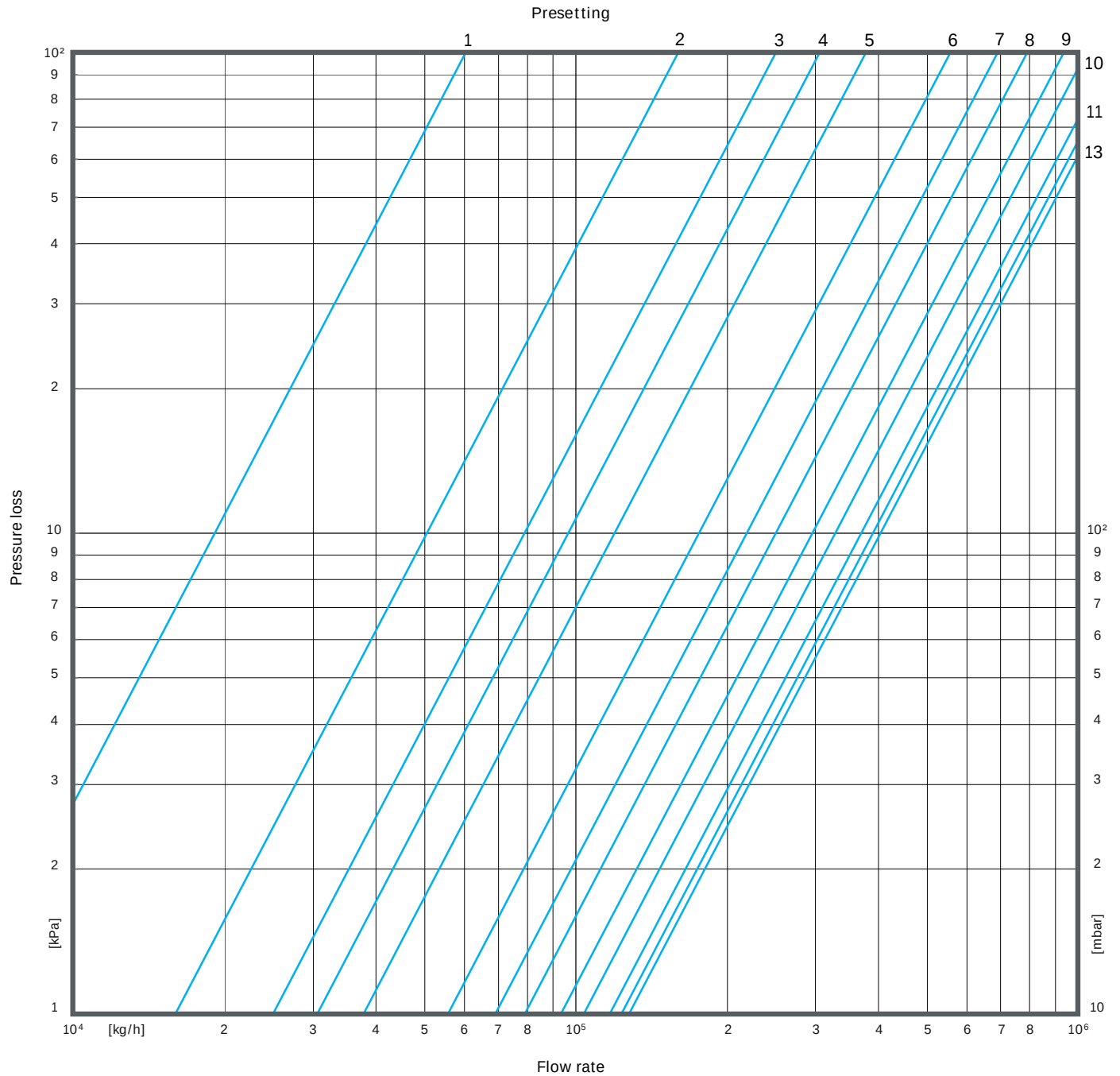
DN 200



# DN 250



## DN 300



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