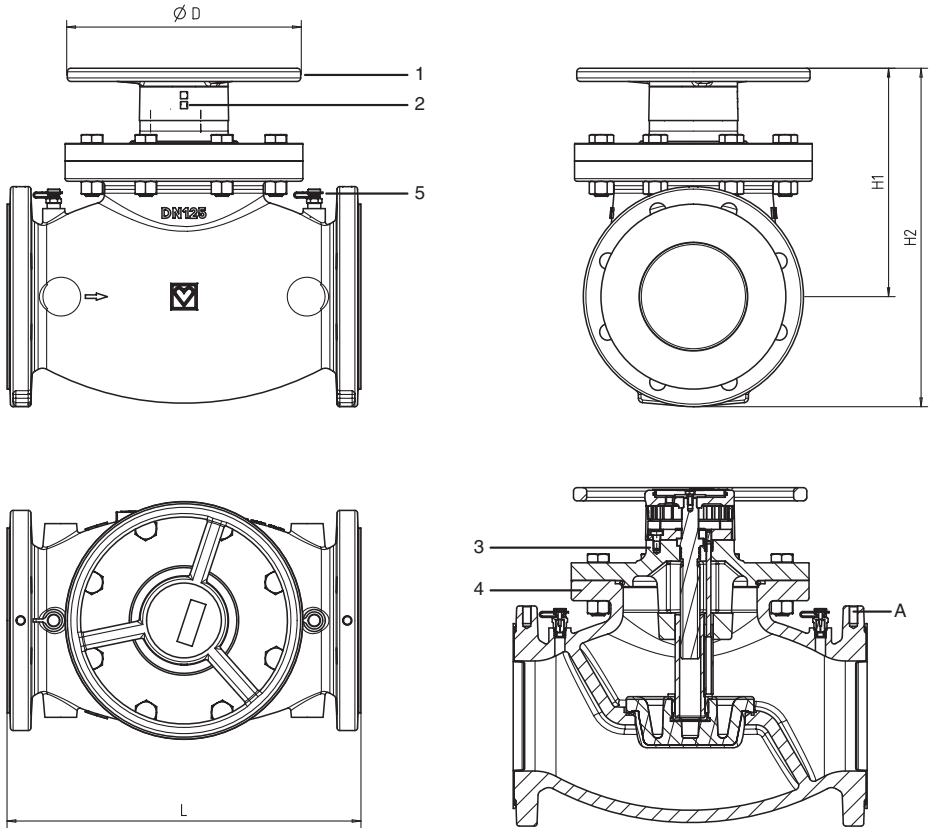
Commissioning valve STRÖMAX - 4218 GF

Data sheet for **4218 GF,** Issue **0321**

4218 GF STRÖMAX GF with test points



1. Handwheel
2. Digital display of the presetting levels
3. Valve upper part grey cast iron GJL 250
4. Valve body grey cast iron GJL 250
5. Test points 1/4

Flange dimensions according to EN1092-2

Dimensions in mm, order numbers

Order nr **4218 GF** linear characteristic according to BS-7350	DN	L	H1	H2	D	A	kg	PN	kvs
1 **4218** 80	50	230	169	252	150	-	17	16	34,96
1 **4218** 81	65	290	186	279	150	-	24	16	66,94
1 **4218** 82	80	310	208	307	175	M10	30	16	106,78
1 **4218** 83	100	350	235	344	175	M10	31	16	169,45
1 **4218** 84	125	400	260	385	265	M10	43	16	255,79
1 **4218** 85	150	480	310	450	265	M10	62	16	389,54
1 **4218** 86	200	600	400	569	450	M10	122	16	676,33
1 **4218** 87	250	730	453	655	450	M10	206	16	1082,72
1 **4218** 88	300	850	520	783	450	M12	323	16	1784,91
1 **4220** 87	250	730	453	655	450	M10	206	25	1082,72

Model

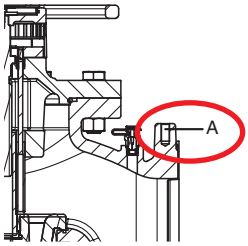
4218 GF **4218 GF STRÖMAX GF with test points DN 50 - 300**
Body of grey cast iron GJL 250 according to EN 1561, flange according to EN 1092, PN 16; length according to ÖNORM EN-558-1, basic series 1; painted blue. Thermostatic upper part of grey cast iron GJL 250. Digital display of the pre-setting levels. Non-rising spindle with triple O-ring seal.

Transport

The valve must not be lifted by the handwheel !!!

Suitable lifting eyes must be used for transporting and lifting the valve!

The valve is delivered from the factory ready for installation. The valve is closed to prevent contamination of the seat during storage and transport. To avoid contamination, the flange covers must remain in place during storage and transport. Storage: temperature -10 ° to + 50 ° C, humidity max. 70%.



Test point

Two test points 1 0284 and presetting marker 1 6517 05 are included. test points can be mounted on top. This arrangement ensures the best accessibility and optimal connection of measuring devices in all installation positions.

Dran valves

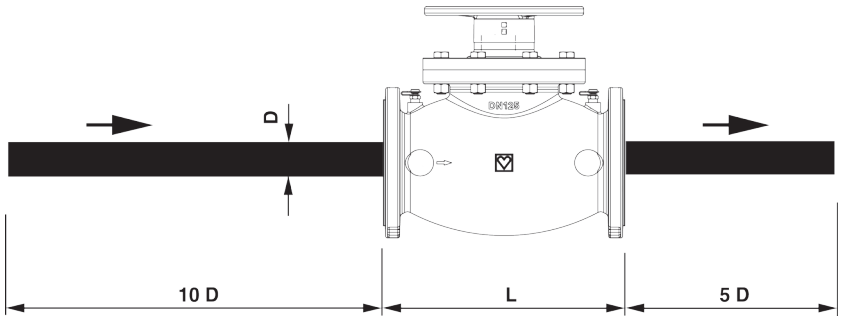
1 **0284** 2x Test point with drainage, swiveling hose connection, yellow version, hose connection 1 6206 02 must be ordered separately. A boiler fill and drain valve 4119 is used to drain the system.

Application

For hydraulic balancing in heating or cooling systems, regulating and shutting off distribution circuits, heat exchangers, heating and cooling terminals.

Installation

Any installation position. The direction of flow according to the arrow on the housing must be observed. It is recommended to maintain the inlet section of 10x the pipe diameter and the outlet section of 5x the pipe diameter.



Technical data

Max. operation temperature	110 °C
Min. operation temperature	-10 °C
Max. operation pressure	16 bar

Water purity in accordance with the ÖNORM H 5195 and VDI 2035 standards. Ethylene and propylene glycol can be used in a ratio of 25-50 vol. [%] are mixed..

Material

Upper part	Gray cast iron GJL 250 according to EN 1561
Body	Gray cast iron GJL 250 according to EN 1561
Spindle	DN50 - DN100 brass, DN125 - DN300 stainless steel
Regulation spindle	Brass/ stainless steel
Valve cone	Gray cast iron GJL 250 according to EN 1561/ EPDM coated
Counting device	Plastic
O-Ring	EPDM

Characteristic

Flow direction

When installing, observe the direction of flow according to the arrow on the body.

Installation

Due to the non-rising valve spindle, which is arranged perpendicular to the valve axis, optimal accessibility and operability of the valve must be guaranteed for every installation position.

Spindle seal

The spindle seal is made by means of an elastic tripple O-ring and thus ensures tightness and ease of movement in the long term.

Tripple-O-ring

The maintenance-free tripple O-ring seal ensures permanent, secure sealing of the valve spindle and ease of movement when the valve is operated.

Differential pressure measurement

The Strömax GF double regulating and commissioning valve is equipped with two test points: If a suitable measuring device is used, the differential pressure can be measured and the respective flow rate can be determined depending on the setting level. The respective flow rate can also be read directly on the HERZ measuring computers (see device manual).

When using antifreeze, the density of the medium changes, which must be taken into account when measuring differential pressure.

Correction factors

measured differential pressure / factor = actual differential pressure

measured amount of water x 1 / √ factor = actual amount of water

Medium temperature	Correction factor	Medium temperature	Correction factor
- 20 °C	1,98	30 °C	1,163
- 10 °C	1,737	40 °C	1,079
0 °C	1,567	50 °C	1
10 °C	1,412	60 °C	0,947
20 °C	1,281	70 °C	0,912

These correction factors are to be used for measurements with the HERZ differential pressure measuring devices. Intermediate values can be interpolated.

Glycol mixtures

Ethylene and propylene glycol can be used in a ratio of 25-50 vol. [%]. Mixing must take place before filling the system. Failure to comply leads to the exclusion of the guarantee.

Mass flow tolerances

The maximum deviation of the mass flow from the characteristic curves of the double regulating and commissioning valves corresponds to the VDI guidelines.

Preset

The line regulating valve Strömax GF is delivered in the closed position. The default setting allows the maximum possible stroke. The handwheel mechanism is set so that the digital display shows 0.0 when the valve is closed.

Adjustment and fixation

Presetting process

1. Set the required presetting level according to the calculation (digital display on the handwheel)
2. 1/10 of the revolution are the red numbers and the whole revolution are the blue numbers
3. The presetting spindle is located under the cover in the handwheel. This presetting spindle is operated with a slotted screwdriver, 8mm blade. After pre-setting, this spindle is screwed in clockwise as far as it will go. The default setting is now fixed. The preset double regulating and commissioning valve can be shut off at any time or can be set in any position below the fixed setting. The presetting spindle is again protected from unauthorized use by the cover.
4. Mark the set position on the presetting marker or mark the digits by removing the pins and attach them to the valve. It is therefore possible, during service work, to check or reset the presetting originally made when the system was adjusted without the aid of records.

With the STRÖMAX-GF valve, it is possible to set a specific flow value without specifying the setting level using a measuring device. The setting can be carried out with a differential pressure measuring device with the aid of the HERZ setting diagrams. When using a measuring computer, the operating instructions for the device must be observed.

Digital display, factory setting

The factory setting of the digital display is 0.0 when the valve is closed. If the complete handwheel (rotary handle, number wheels, base plate) is removed from the valve or a damaged part has to be replaced, proceed as follows to ensure the correct digital display:

1. Put on the complete upper case and then tighten three Allen screws and four hexagon screws.
2. Turn the valve clockwise to close.
3. If the digital display shows 0.0 in this position, the handwheel is correctly attached.
4. Then the handwheel is mounted on the spindle.
5. Screw in the handwheel fastening screw.
6. The valve can now be set to the desired position.

Test points

The quick Test points 0284 are installed and the presetting marker 1 6517 05 is included.
The HERZ measuring computer has matching couplings 1 0284 00 with which a perfect attachment to the test points is guaranteed.
Warning: The test points may only be opened when a measuring device is connected. There is a risk of injury from hot water that may escape!
Please note that the following flow and setting values for the dimensioning - design - of HERZ Strömax 4218 GMF double regulating and commissioning valves are given. To check preset values and to change the setting after measuring the differential pressure at the valve during operation, separate tables are sent on request.

Equipment

1	**6517** 05	Pre-setting marker
1	**0276** 09	Emptying valve 1/4 with handle and swiveling hose connection
1	**6206** 02	Hose connection
1	**0284** 00	Pressure transducer
1	**0284** 11	Quick test point, blue + e cap, extended design
1	**0284** 12	Quick test point, red + e cap, extended design
1	**0284** 21	HERZ test point with emptying, blue cap
1	**0284** 22	HERZ test point with emptying, red cap
2	**0284** 23	Long quick test point with drainage, blue cap
2	**0284** 24	Long quick test point with drainage, red cap
2	**0273** 09	Sealing screw 1/4
1	**0284** 01	Quick test point blue
1	**0284** 02	Quick test point red
1	**0284** 03	Quick test point with pulse line connection blue
1	**0284** 04	Quick test point with pulse line connection red
1	**0284** 10	Quick test point
1	**4218** 22-26	Spare parts set for 4218 GF

Warning notice

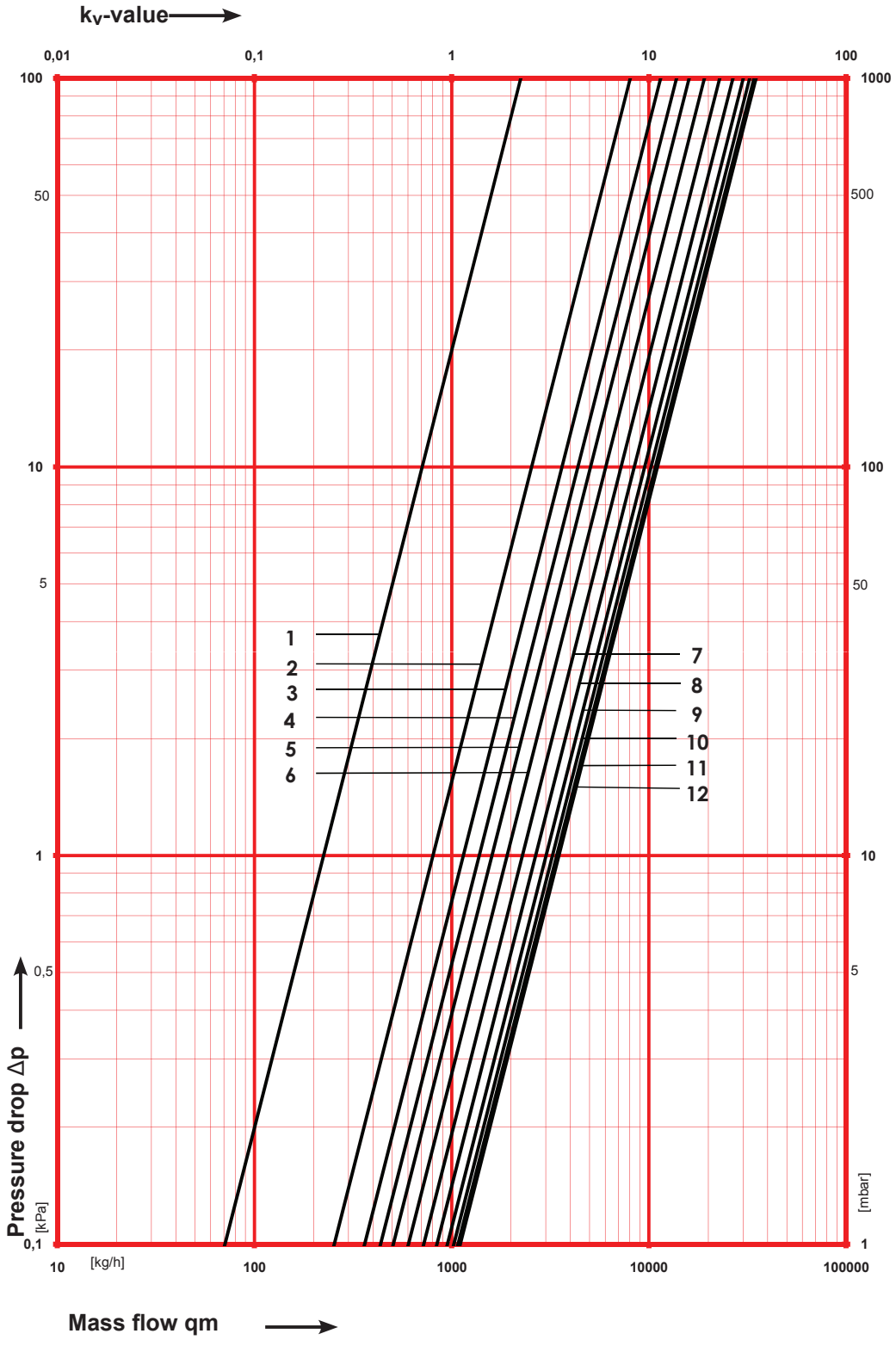
In accordance with the intended use of the fittings, clean processing is required. The introduction of dirt into the fittings is to be avoided. During assembly, make sure that the screws are tightened crosswise.

Coating

Primer based on alkyd resins (synthetic resin primer) and contains lead and chromate-free rust protection pigments.
Top coat with epoxy resin. Solvent content is lower than permitted in the VOC Plant Ordinance 2002.
Degree of gloss: matt
Dry layer thickness (TSD): ~ 100 µm

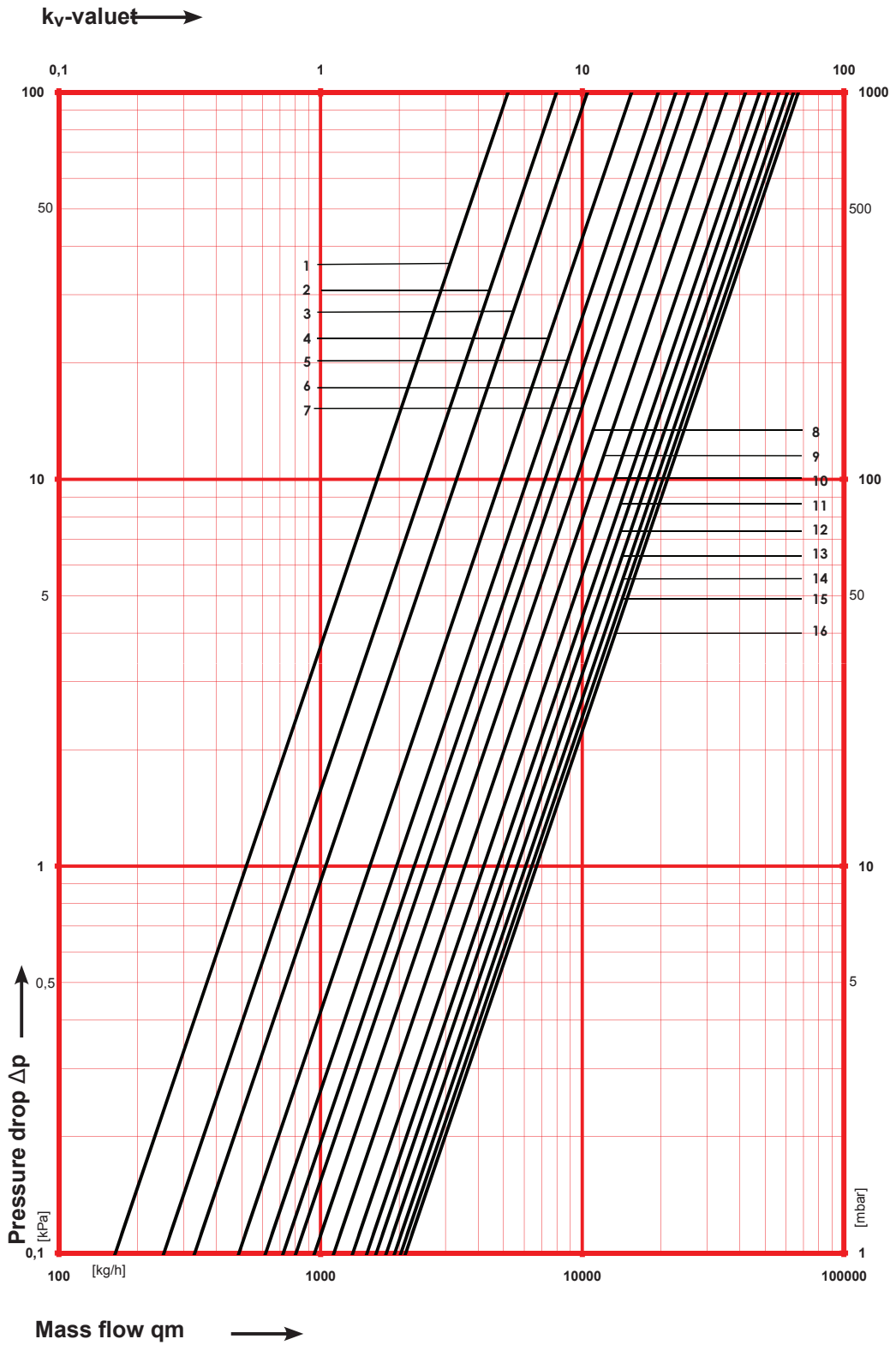
HERZ-Nomogram	STRÖMAX 4218 GF
Art. no. 1 **4218** 80	Dim. DN 50

STRÖMAX-GF Commissioning valve DN 50, PN 16, 1 **4218** 80



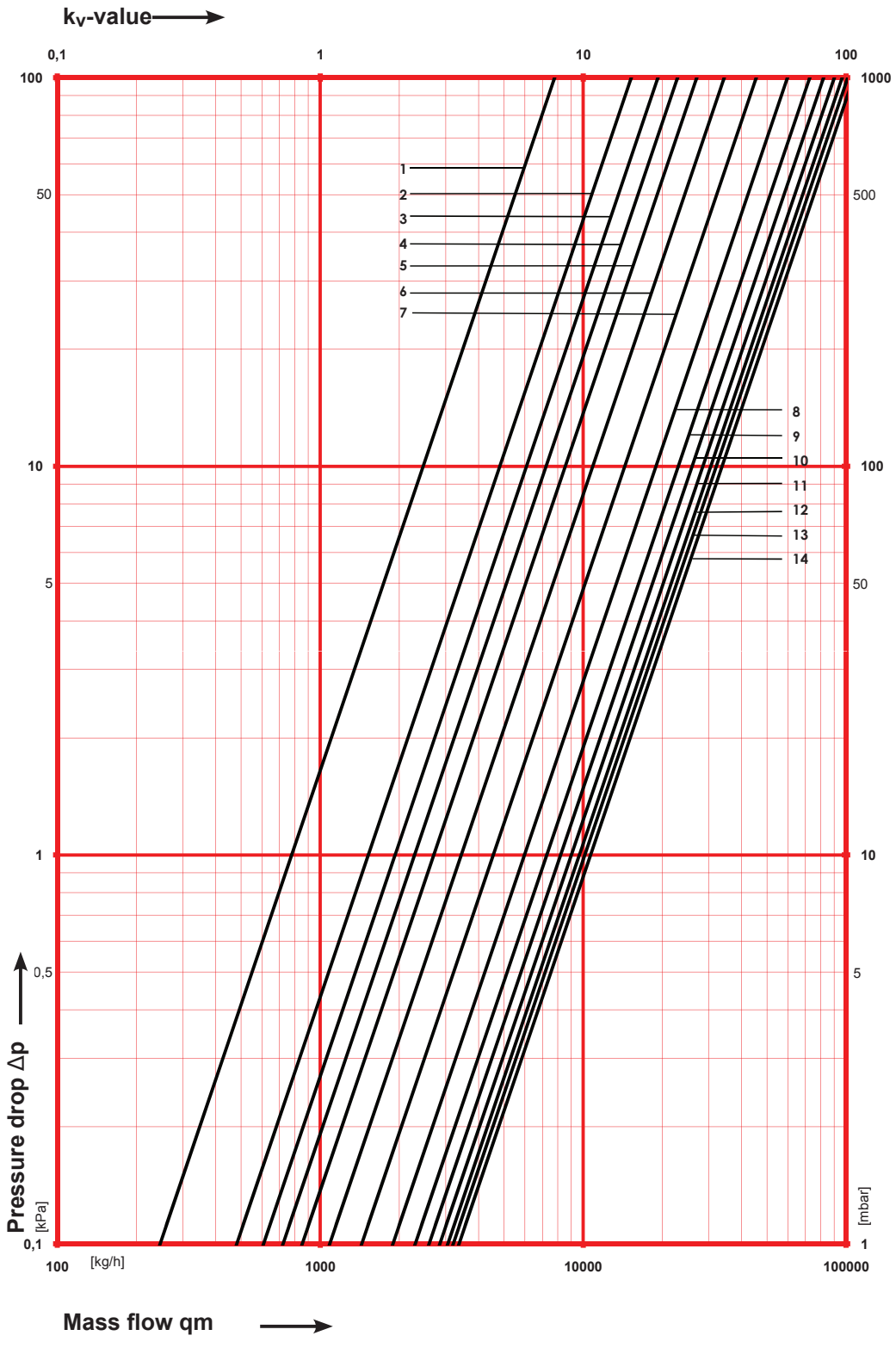
HERZ-Nomogram	STRÖMAX 4218 GF
Art. Nr. 1 **4218** 81	Dim. DN 65

STRÖMAX-GF Commissioning valve DN 65, PN 16, 1 **4218** 81



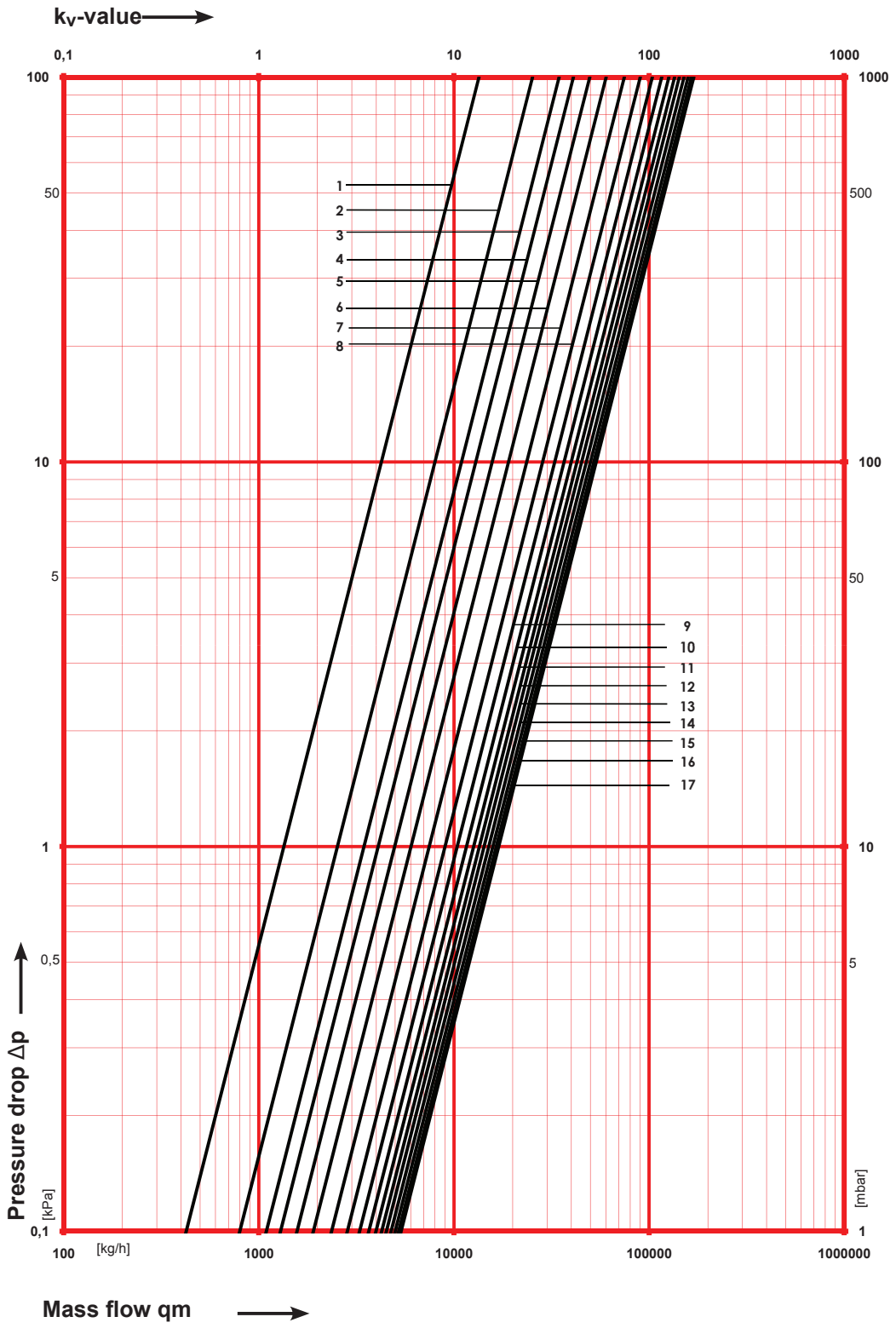
HERZ-Nomogram	STRÖMAX 4218 GF
Art. Nr. 1 **4218** 82	Dim. DN 80

STRÖMAX-GF Commissioning valve DN 80, PN 16, 1 **4218** 82



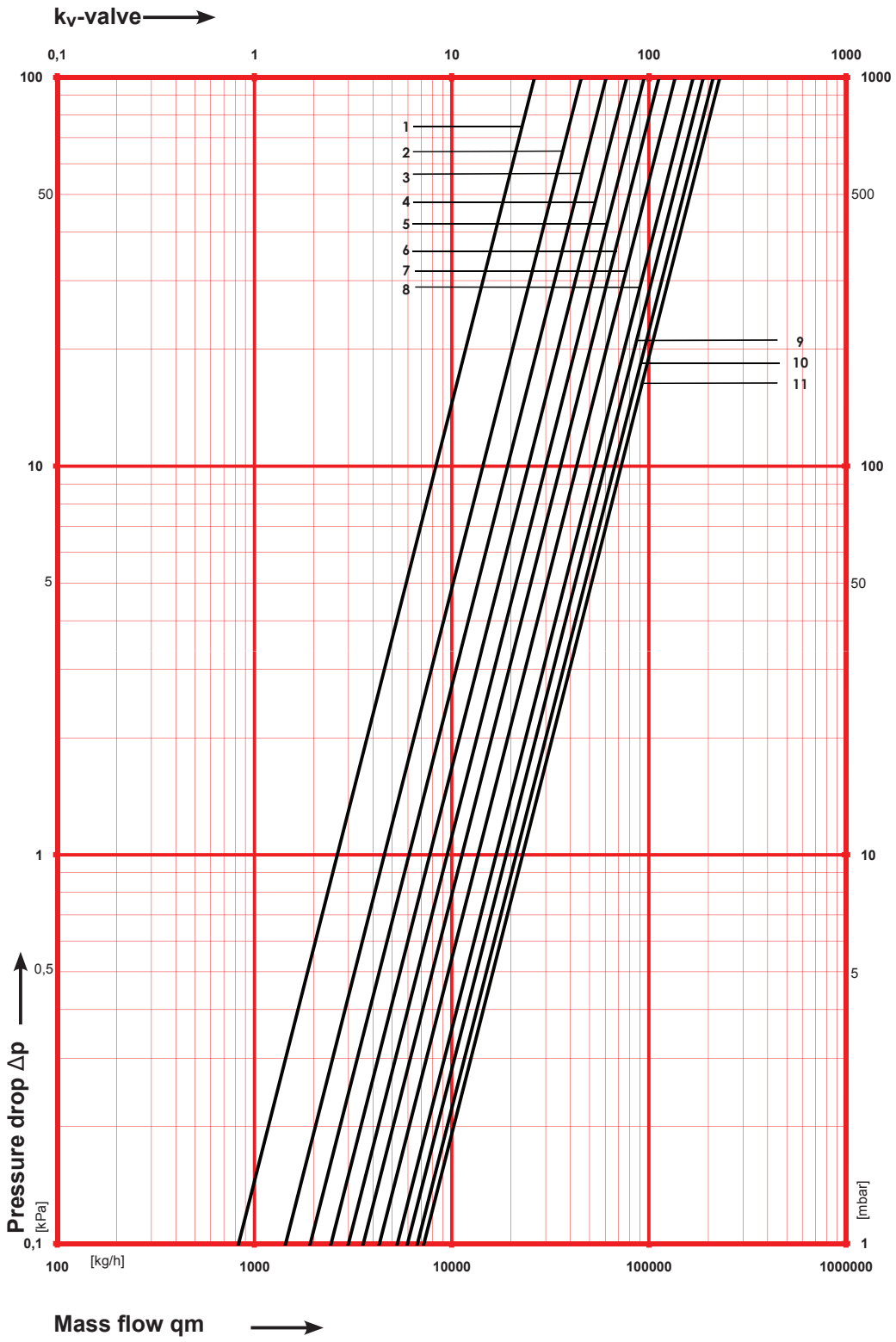
HERZ-Nomogram	STRÖMAX 4218 GF
Art. no. 1 **4218** 83	Dim. DN 100

STRÖMAX-GF Commissioning valve DN 100, PN 16, 1 **4218** 83



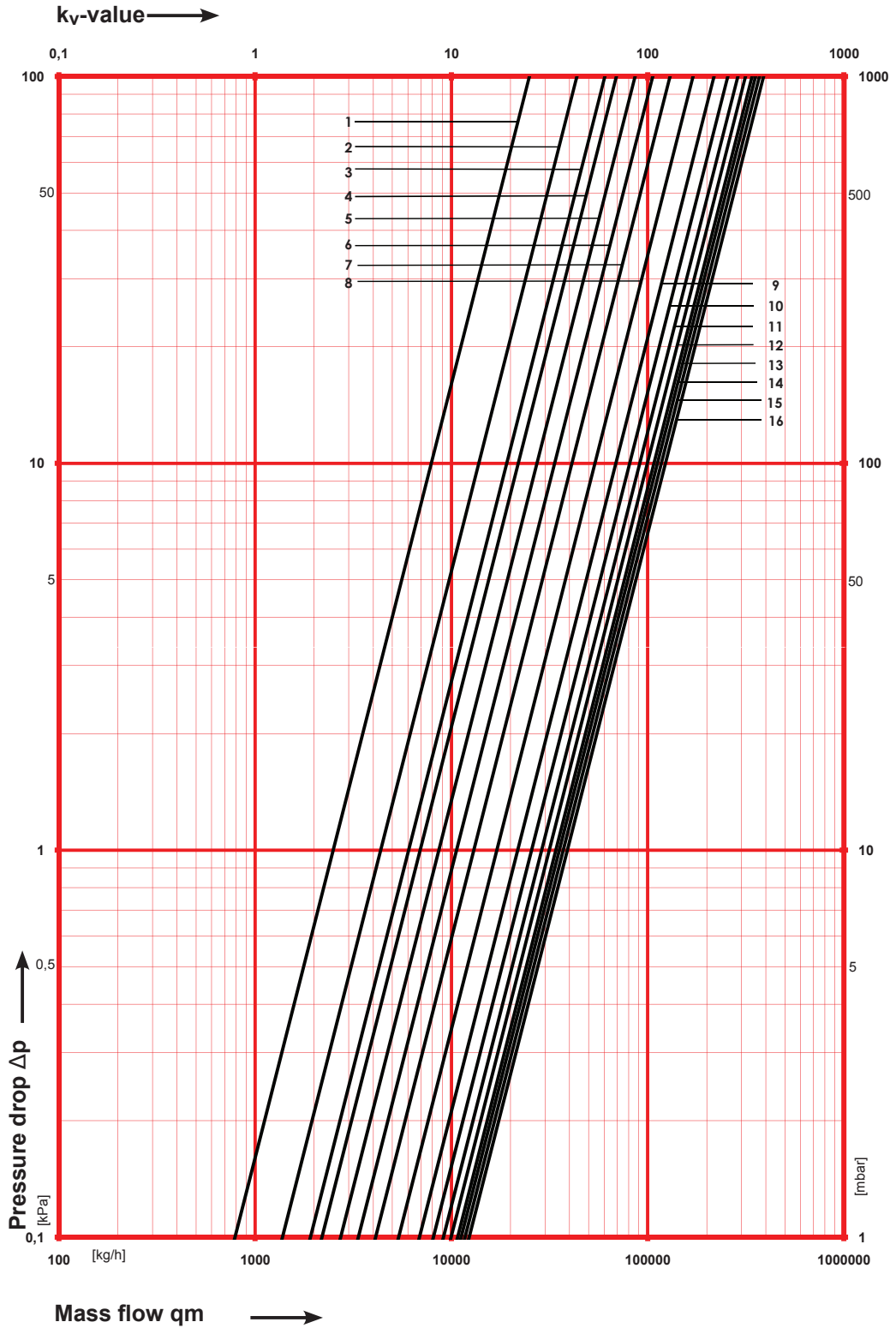
HERZ-Nomogram	STRÖMAX 4218 GF
Art. no. 1 **4218** 84	Dim. DN 125

STRÖMAX-GF Commissioning valve DN 125, PN 16, 1 **4218** 84



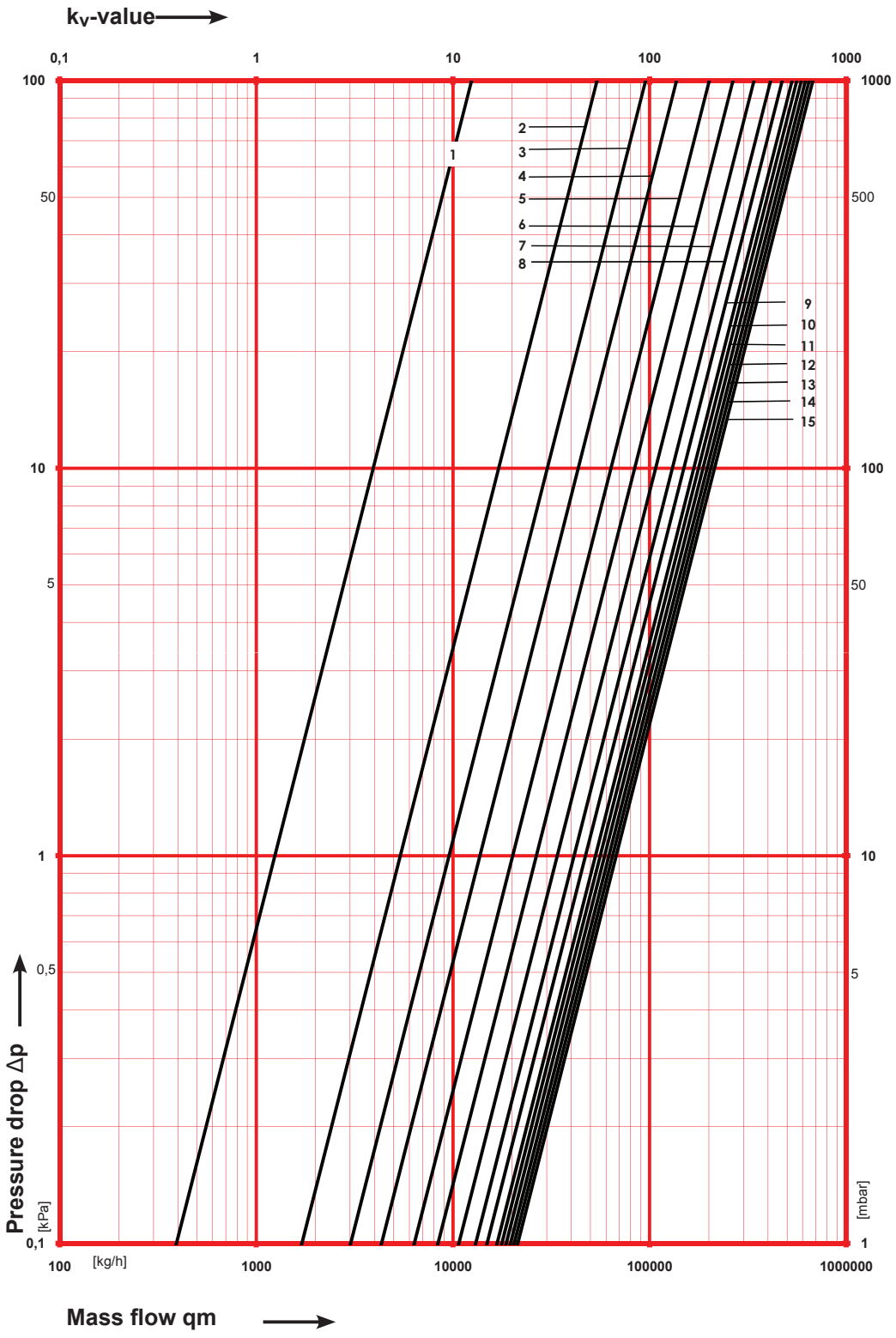
HERZ-Nomogram	STRÖMAX 4218 GF
Art. no. 1 **4218** 85	Dim. DN 150

STRÖMAX-GF Commissioning valve DN 150, PN 16, 1 **4218** 85



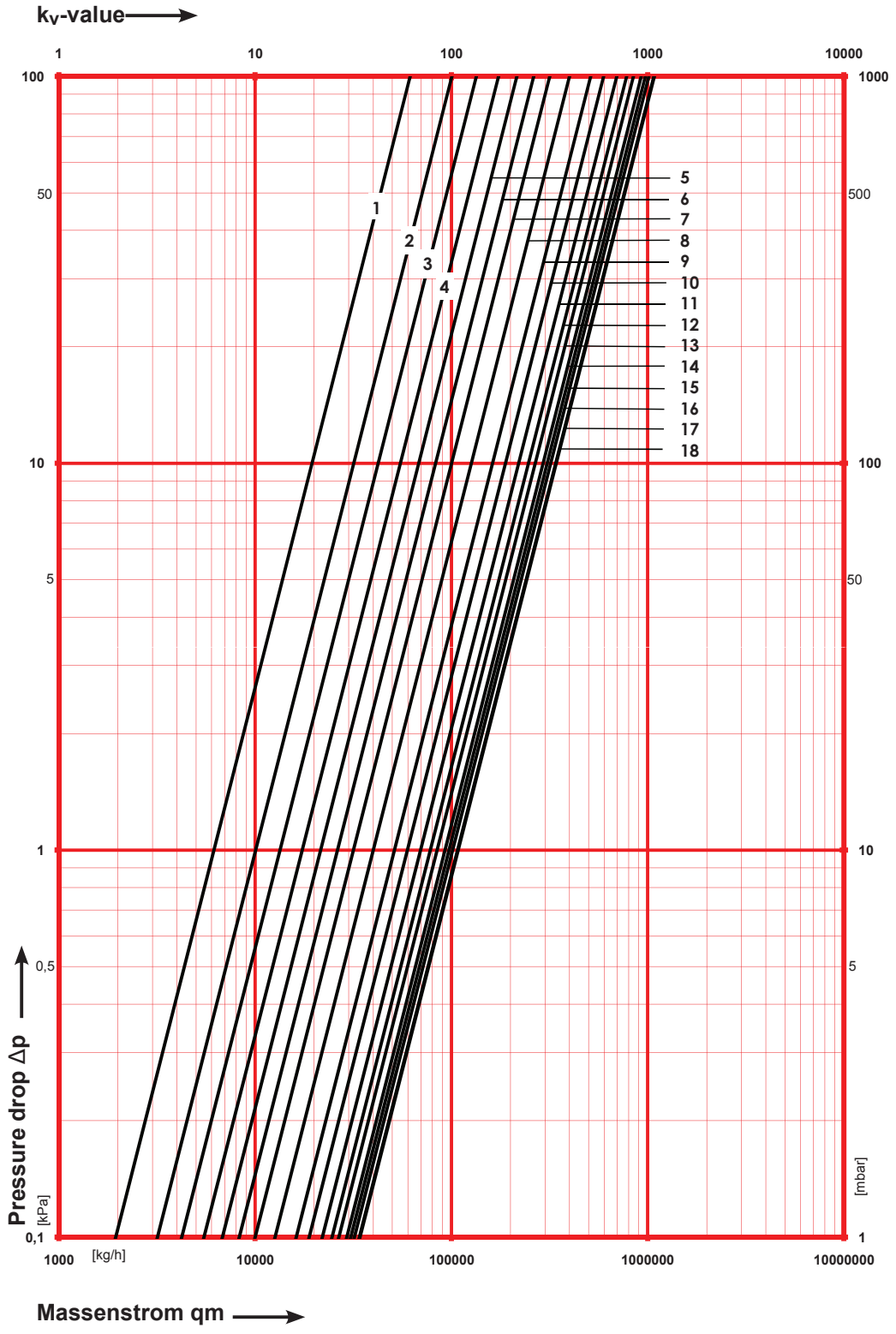
HERZ-Nomogram	STRÖMAX 4218 GF
Art. no. 1 **4218** 86	Dim. DN 200

STRÖMAX-GF Commissioning valve DN 200, PN 16, 1 **4218** 86



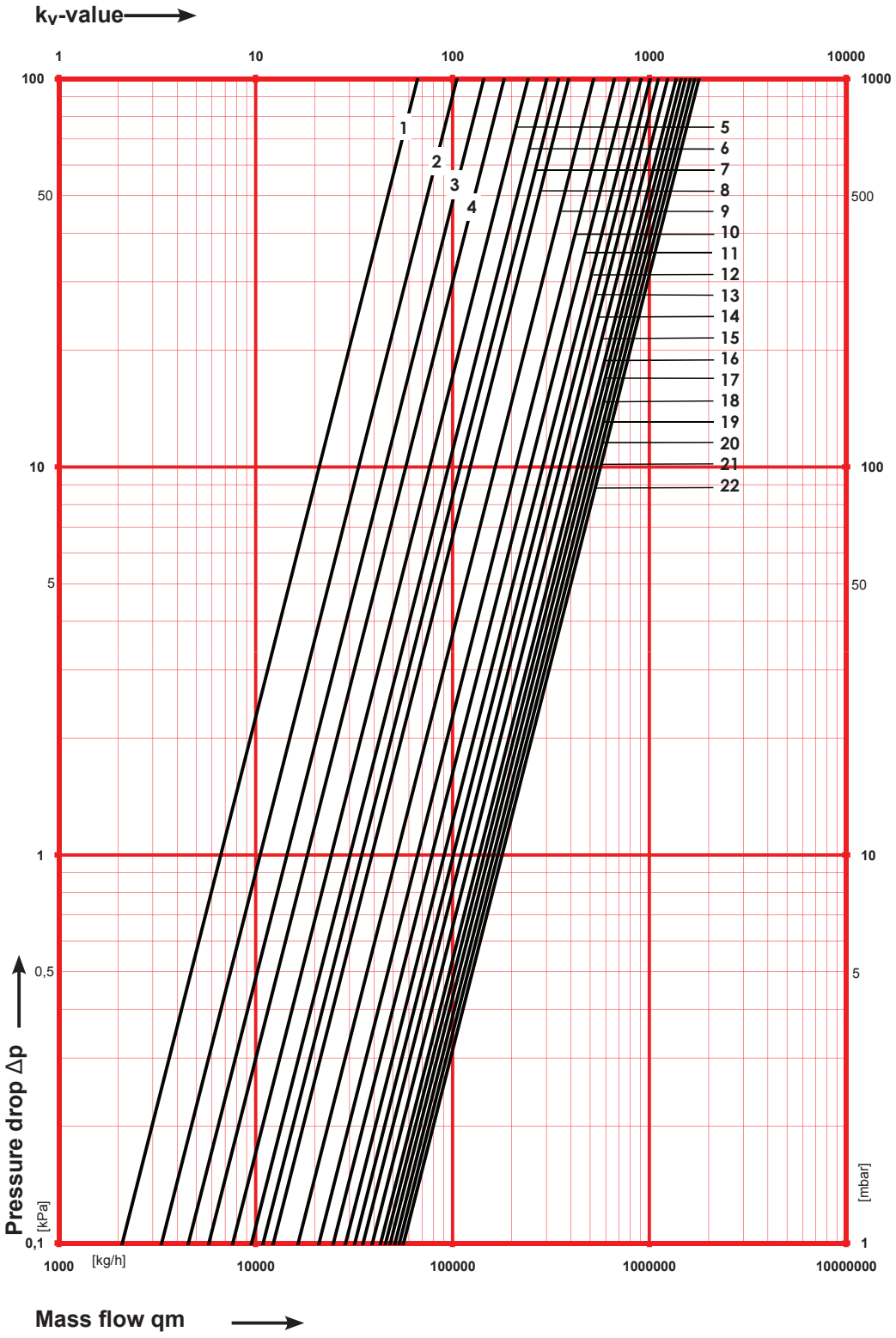
HERZ-Nomogram	STRÖMAX 4218 GF
Art. no. 1 **4218** 87, 1 **4220** 87	Dim. DN 250

STRÖMAX-GF Commissioning valve DN 250, PN 16, 1 4218 87
STRÖMAX-GF Commissioning valve DN 250, PN 25, 1 4220 87



HERZ-Nomogramm	STRÖMAX 4218 GF
Art. Nr. 1 **4218** 88, 1 **4220** 88	Dim. DN 300

STRÖMAX-GF Commissioning valve DN 300, PN 16, 1 4218 88
STRÖMAX-GF Commissioning valve DN 300, PN 25, 1 4220 88



HERZ STRÖMAX - GF

DN	50	65	80	100	125	150	200	250	300
Pos.	kv	kv	kv	kv	kv	kv	kv	kv	kv
0,5	0,44	3,7	4,04	7,54	16,72	15,68	4,124	42,13	47,09
0,6	0,44	4	4,79	8,72	18,64	17,54	4,124	46,03	50,97
0,7	0,44	4,3	5,54	9,9	20,56	19,4	4,124	49,93	54,85
0,8	1,04	4,6	6,29	11,08	22,48	21,26	4,124	53,83	58,73
0,9	1,64	4,9	7,04	12,26	24,4	23,12	8,277	57,73	62,61
1,0	2,24	5,2	7,79	13,44	26,32	24,98	12,43	61,63	66,49
1,1	2,84	5,5	8,54	14,62	28,24	26,84	16,583	65,53	70,37
1,2	3,44	5,8	9,29	15,8	30,16	28,7	20,736	69,43	74,25
1,3	4,04	6,1	10,04	16,98	32,08	30,56	24,889	73,33	78,13
1,4	4,64	6,4	10,79	18,16	34	32,42	29,042	77,23	82,01
1,5	5,24	6,7	11,54	19,34	35,92	34,28	33,195	81,13	85,89
1,6	5,84	7	12,29	20,52	37,84	36,14	37,348	85,03	89,77
1,7	6,44	7,3	13,04	21,7	39,76	38	41,501	88,93	93,65
1,8	7,04	7,6	13,79	22,88	41,68	39,86	45,654	92,83	97,53
1,9	7,64	7,9	14,54	24,06	43,6	41,72	49,807	96,73	101,41
2,0	8,04	7,97	15,24	25,28	45,55	43,59	53,96	100,65	105,29
2,1	8,38	8,22	15,64	26,21	47,07	45,28	58,113	103,98	109,17
2,2	8,72	8,47	16,04	27,14	48,59	46,97	62,266	107,31	113,05
2,3	9,06	8,72	16,44	28,07	50,11	48,66	66,419	110,64	116,93
2,4	9,4	8,97	16,84	29	51,63	50,35	70,572	113,97	120,81
2,5	9,74	9,22	17,24	29,93	53,15	52,04	74,725	117,3	124,69
2,6	10,08	9,47	17,64	30,86	54,67	53,73	78,878	120,63	128,57
2,7	10,42	9,72	18,04	31,79	56,19	55,42	83,031	123,96	132,45
2,8	10,76	9,97	18,44	32,72	57,71	57,11	87,184	127,29	136,33
2,9	11,1	10,22	18,84	33,65	59,23	58,8	91,337	130,62	140,21
3,0	11,46	10,46	19,26	34,61	60,74	60,49	95,49	133,92	144,09
3,1	11,69	10,96	19,52	35,23	62,41	61,37	99,643	137,9	147,97
3,2	11,92	11,46	19,78	35,85	64,08	62,25	103,796	141,88	151,85
3,3	12,15	11,96	20,04	36,47	65,75	63,13	107,949	145,86	155,73
3,4	12,38	12,46	20,3	37,09	67,42	64,01	112,102	149,84	159,61
3,5	12,61	12,96	20,56	37,71	69,09	64,89	116,255	153,82	163,49
3,6	12,84	13,46	20,82	38,33	70,76	65,77	120,408	157,8	167,37
3,7	13,07	13,96	21,08	38,95	72,43	66,65	124,561	161,78	171,25
3,8	13,3	14,46	21,34	39,57	74,1	67,53	128,714	165,76	175,13
3,9	13,53	14,96	21,6	40,19	75,77	68,41	132,867	169,74	179,01
4,0	13,8	15,43	22,86	40,89	77,46	69,31	137,02	173,71	182,95
4,1	14	15,83	23,28	41,77	79,19	71,01	143,44	177,89	188,88
4,2	14,2	16,23	23,7	42,65	80,92	72,71	149,86	182,07	194,81
4,3	14,4	16,63	24,12	43,53	82,65	74,41	156,28	186,25	200,74
4,4	14,6	17,03	24,54	44,41	84,38	76,11	162,7	190,43	206,67
4,5	14,8	17,43	24,96	45,29	86,11	77,81	169,12	194,61	212,6
4,6	15	17,83	25,38	46,17	87,84	79,51	175,54	198,79	218,53
4,7	15,2	18,23	25,8	47,05	89,57	81,21	181,96	202,97	224,46
4,8	15,4	18,63	26,22	47,93	91,3	82,91	188,38	207,15	230,39
4,9	15,6	19,03	26,64	48,81	93,03	84,61	194,8	211,33	236,32
5,0	16	19,53	27,05	49,65	94,78	86,33	201,22	215,54	242,25
5,1	16,3	19,83	27,78	50,71	96,57	88,32	207,64	220,26	248,18
5,2	16,6	20,13	28,51	51,77	98,36	90,31	214,06	224,98	254,11
5,3	16,9	20,43	29,24	52,83	100,15	92,3	220,48	229,7	260,04
5,4	17,2	20,73	29,97	53,89	101,94	94,29	226,9	234,42	265,97
5,5	17,5	21,03	30,7	54,95	103,73	96,28	233,32	239,14	271,9
5,6	17,8	21,33	31,43	56,01	105,52	98,27	239,74	243,86	277,83
5,7	18,1	21,63	32,16	57,07	107,31	100,26	246,16	248,58	283,76
5,8	18,4	21,93	32,89	58,13	109,1	102,25	252,58	253,3	289,69
5,9	18,7	22,23	33,62	59,19	110,89	104,24	259	258,02	295,62

6,0	19,1	22,79	34,39	60,27	112,71	106,26	265,48	262,7	301,57
6,1	19,47	23,08	35,5	61,71	115,04	108,64	272,86	268,09	305,96
6,2	19,84	23,37	36,61	63,15	117,37	111,02	280,24	273,48	310,35
6,3	20,21	23,66	37,72	64,59	119,7	113,4	287,62	278,87	314,74
6,4	20,58	23,95	38,83	66,03	122,03	115,78	295	284,26	319,13
6,5	20,95	24,24	39,94	67,47	124,36	118,16	302,38	289,65	323,52
6,6	21,32	24,53	41,05	68,91	126,69	120,54	309,76	295,04	327,91
6,7	21,69	24,82	42,16	70,35	129,02	122,92	317,14	300,43	332,3
6,8	22,06	25,11	43,27	71,79	131,35	125,3	324,52	305,82	336,69
6,9	22,43	25,4	44,38	73,23	133,68	127,68	331,9	311,21	341,08
7,0	22,83	25,49	45,53	74,68	136,05	130,1	339,28	316,64	345,47
7,1	23,23	25,94	46,96	76,21	139,24	134,12	346,66	324,96	349,86
7,2	23,63	26,39	48,39	77,74	142,43	138,14	354,04	333,28	354,25
7,3	24,03	26,84	49,82	79,27	145,62	142,16	361,42	341,6	358,64
7,4	24,43	27,29	51,25	80,8	148,81	146,18	368,8	349,92	363,03
7,5	24,83	27,74	52,68	82,33	152	150,2	376,18	358,24	367,42
7,6	25,23	28,19	54,11	83,86	155,19	154,22	383,56	366,56	371,81
7,7	25,63	28,64	55,54	85,39	158,38	158,24	390,94	374,88	376,2
7,8	26,03	29,09	56,97	86,92	161,57	162,26	398,32	383,2	380,59
7,9	26,43	29,54	58,4	88,45	164,76	166,28	405,7	391,52	384,98
8,0	26,65	30,01	59,85	90,01	167,92	170,26	412,98	399,81	389,29
8,1	26,99	30,57	61,14	91,4	170,02	174,99	418,86	411,12	403,03
8,2	27,33	31,13	62,43	92,79	172,12	179,72	424,74	422,43	416,09
8,3	27,67	31,69	63,72	94,18	174,22	184,45	430,62	433,74	429,15
8,4	28,01	32,25	65,01	95,57	176,32	189,18	436,5	445,05	442,21
8,5	28,35	32,81	66,3	96,96	178,42	193,91	442,38	456,36	455,27
8,6	28,69	33,37	67,59	98,35	180,52	198,64	448,26	467,67	468,33
8,7	29,03	33,93	68,88	99,74	182,62	203,37	454,14	478,98	481,39
8,8	29,37	34,49	70,17	101,13	184,72	208,1	460,02	490,29	494,45
8,9	29,71	35,05	71,46	102,52	186,82	212,83	465,9	501,6	507,51
9,0	30,08	35,6	72,73	103,97	188,92	217,54	471,78	512,88	520,57
9,1	30,32	36,25	73,66	105,16	191,24	221,38	477,66	521,28	533,63
9,2	30,56	36,9	74,59	106,35	193,56	225,22	483,54	529,68	546,69
9,3	30,8	37,55	75,52	107,54	195,88	229,06	489,42	538,08	559,75
9,4	31,04	38,2	76,45	108,73	198,2	232,9	495,3	546,48	572,81
9,5	31,28	38,85	77,38	109,92	200,52	236,74	501,18	554,88	585,87
9,6	31,52	39,5	78,31	111,11	202,84	240,58	507,06	563,28	598,93
9,7	31,76	40,15	79,24	112,3	205,16	244,42	512,94	571,68	611,99
9,8	32	40,8	80,17	113,49	207,48	248,26	518,82	580,08	625,05
9,9	32,24	41,45	81,1	114,68	209,8	252,1	524,7	588,48	638,11
10,0	32,44	42,05	82,07	115,92	212,12	255,9	530,55	596,85	664,16
10,1	32,6	42,61	82,87	116,95	213,79	259,12	533,56	606,81	676,28
10,2	32,76	43,17	83,67	117,98	215,46	262,34	536,57	616,77	688,4
10,3	32,92	43,73	84,47	119,01	217,13	265,56	539,58	626,73	700,52
10,4	33,08	44,29	85,27	120,04	218,8	268,78	542,59	636,69	712,64
10,5	33,24	44,85	86,07	121,07	220,47	272	545,6	646,65	724,76
10,6	33,4	45,41	86,87	122,1	222,14	275,22	548,61	656,61	736,88
10,7	33,56	45,97	87,67	123,13	223,81	278,44	551,62	666,57	749
10,8	33,72	46,53	88,47	124,16	225,48	281,66	554,63	676,53	761,12
10,9	33,88	47,09	89,27	125,19	227,15	284,88	557,64	686,49	773,24
11,0	34,08	47,66	90,17	126,18	228,85	288,11	560,65	696,48	785,36
11,1	34,17	47,06	90,82	127,06		290,8	563,66	704,89	797,48
11,2	34,26	46,46	91,47	127,94		293,49	566,67	713,3	809,6
11,3	34,35	45,86	92,12	128,82		296,18	569,68	721,71	821,72
11,4	34,44	45,26	92,77	129,7		298,87	572,69	730,12	833,84
11,5	34,53	44,66	93,42	130,58		301,56	575,7	738,53	845,96
11,6	34,62	44,06	94,07	131,46		304,25	578,71	746,94	858,08

11,7	34,71	43,46	94,72	132,34		306,94	581,72	755,35	870,2
11,8	34,8	42,86	95,37	133,22		309,63	584,73	763,76	882,32
11,9	34,89	42,26	96,02	134,1		312,32	587,74	772,17	894,44
12,0	34,96	51,63	96,7	134,97		315,05	590,75	780,57	906,57
12,1		52,13	97,17	135,75		317,57	593,76	787,09	916,81
12,2		52,63	97,64	136,53		320,09	596,77	793,61	927,05
12,3		53,13	98,11	137,31		322,61	599,78	800,13	937,29
12,4		53,63	98,58	138,09		325,13	602,79	806,65	947,53
12,5		54,13	99,05	138,87		327,65	605,8	813,17	957,77
12,6		54,63	99,52	139,65		330,17	608,81	819,69	968,01
12,7		55,13	99,99	140,43		332,69	611,82	826,21	978,25
12,8		55,63	100,46	141,21		335,21	614,83	832,73	988,49
12,9		56,13	100,93	141,99		337,73	617,84	839,25	998,73
13,0		56,49	101,38	142,74		340,27	620,86	845,73	1008,97
13,1		56,89	101,92	143,54		341,73	623,63	853,91	1019,21
13,2		57,29	102,46	144,34		343,19	626,4	862,09	1029,45
13,3		57,69	103	145,14		344,65	629,17	870,27	1039,69
13,4		58,09	103,54	145,94		346,11	631,94	878,45	1049,93
13,5		58,49	104,08	146,74		347,57	634,71	886,63	1060,17
13,6		58,89	104,62	147,54		349,03	637,48	894,81	1070,41
13,7		59,29	105,16	148,34		350,49	640,25	902,99	1080,65
13,8		59,69	105,7	149,14		351,95	643,02	911,17	1090,89
13,9		60,09	106,24	149,94		353,41	645,79	919,35	1101,13
14,0		60,77	106,78	150,79		354,84	648,56	927,53	1111,34
14,1		61,11		151,54		356,48	651,33	932	1124,05
14,2		61,45		152,29		358,12	654,1	936,47	1136,76
14,3		61,79		153,04		359,76	656,87	940,94	1149,47
14,4		62,13		153,79		361,4	659,64	945,41	1162,18
14,5		62,47		154,54		363,04	662,41	949,88	1174,89
14,6		62,81		155,29		364,68	665,18	954,35	1187,6
14,7		63,15		156,04		366,32	667,95	958,82	1200,31
14,8		63,49		156,79		367,96	670,72	963,29	1213,02
14,9		63,83		157,54		369,6	673,49	967,76	1225,73
15,0		64,21		158,31		371,26	676,33	972,25	1238,44
15,1		64,48		158,94		373,09		976,4	1251,15
15,2		64,75		159,57		374,92		980,55	1263,86
15,3		65,02		160,2		376,75		984,7	1276,57
15,4		65,29		160,83		378,58		988,85	1289,28
15,5		65,56		161,46		380,41		993	1301,99
15,6		65,83		162,09		382,24		997,15	1314,7
15,7		66,1		162,72		384,07		1001,3	1327,41
15,8		66,37		163,35		385,9		1005,45	1340,12
15,9		66,64		163,98		387,73		1009,6	1352,83
16,0		66,94		164,59		389,54		1013,7	1365,63
16,1				165,08				1018,82	1373,78
16,2				165,57				1023,94	1381,93
16,3				166,06				1029,06	1390,08
16,4				166,55				1034,18	1398,23
16,5				167,04				1039,3	1406,38
16,6				167,53				1044,42	1414,53
16,7				168,02				1049,54	1422,68
16,8				168,51				1054,66	1430,83
16,9				169				1059,78	1438,98
17,0				169,45				1064,89	1447,13
17,1								1066,67	1455,28
17,2								1068,45	1463,43
17,3								1070,23	1471,58

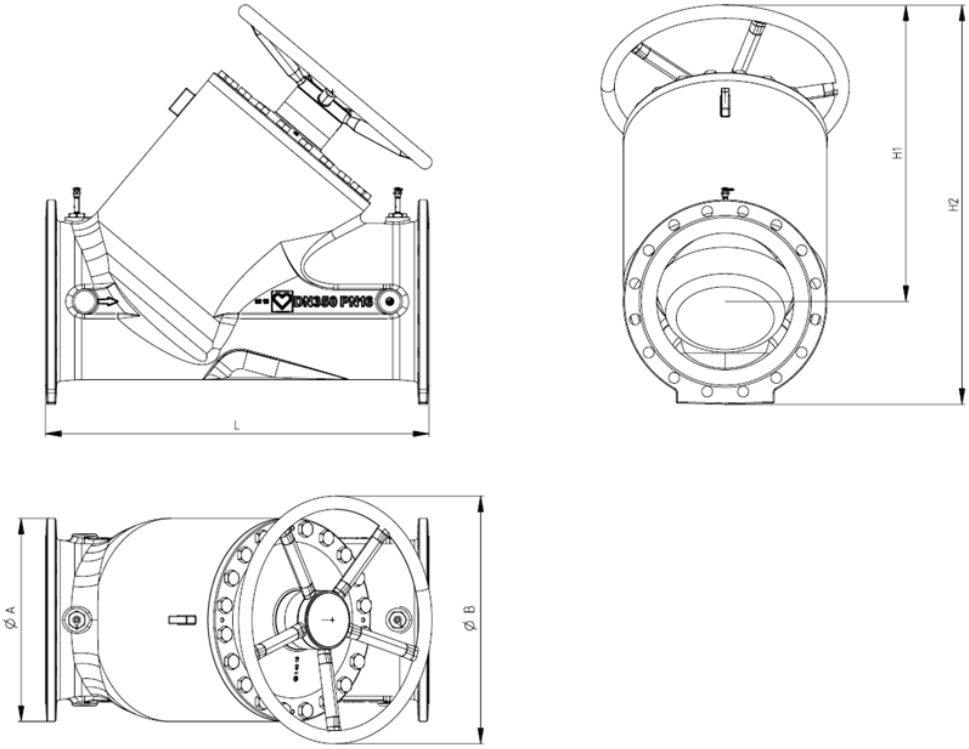
17,4								1072,01	1479,73
17,5								1073,79	1487,88
17,6								1075,57	1496,03
17,7								1077,35	1504,18
17,8								1079,13	1512,33
17,9								1080,91	1520,48
18,0								1082,72	1528,67
18,1									1537,25
18,2									1545,83
18,3									1554,41
18,4									1562,99
18,5									1571,57
18,6									1580,15
18,7									1588,73
18,8									1597,31
18,9									1605,89
19,0									1614,47
19,1									1623,05
19,2									1631,63
19,3									1640,21
19,4									1648,79
19,5									1657,37
19,6									1665,95
19,7									1674,53
19,8									1683,11
19,9									1691,69
20,0									1700,28
20,1									1704,51
20,2									1708,74
20,3									1712,97
20,4									1717,2
20,5									1721,43
20,6									1725,66
20,7									1729,89
20,8									1734,12
20,9									1738,35
21,0									1742,58
21,1									1746,81
21,2									1751,04
21,3									1755,27
21,4									1759,5
21,5									1763,73
21,6									1767,96
21,7									1772,19
21,8									1776,42
21,9									1780,65
22,0									1784,91

Commissioning valve STRÖMAX 4218 GF

Commissioning valve for differential pressure measurement in flanged design

Standard sheet **4218 GF / 4220 GF**

4218 GF / 4220 GF with test points



Dimensions in mm, order numbers

Order number	DN	PN	L	H1	H2	Ø A	Ø B	kg	flanged according to	kvs
1 **4218** 89	350	16	980	758	1021	520	634	536	EN 1092-2	2917,6
1 **4220** 89		25			1046	555		560		2917,6
1 **4218** 90	400	16	1100	805	1103	580		547		3854,8
1 **4220** 90		25			1124	620		611		3854,8
1 **4218** 92	500	16	1250	1051	1413	715	1034	968		5250,6
1 **4220** 92		25			1421	730		1109		5250,6

Model

STRÖMAX GF double regulating and commissioning valve with measuring valves, DN 350-500, body nodular cast iron GJS 400-15 according to EN 1561, flange according to EN 1092, PN 16 or PN 25, blue enamel. Valve upper part nodular cast iron GJS 400-15, with non-rising spindle, spindle sealing by means of a triple O-ring. Presetting steps are displayed digitally.

Transport

The valve must not be lifted by the handwheel !!!

The valve is delivered from the factory ready for installation. The handwheel and the two test points are not installed on delivery. To prevent possible contamination of the seat during storage and transport, the valve is closed. To avoid contamination during storage and transport, the flange cover must remain in place.

Storage: temperature -10 ° C to 50 ° C, humidity max. 70%

Test points

Two test points 1 0284 XX and presetting marker 1 6517 05 are included. The position of the measuring valves is optional. This arrangement ensures the best accessibility and optimal connection of measuring devices in all installation positions.

Drilling size

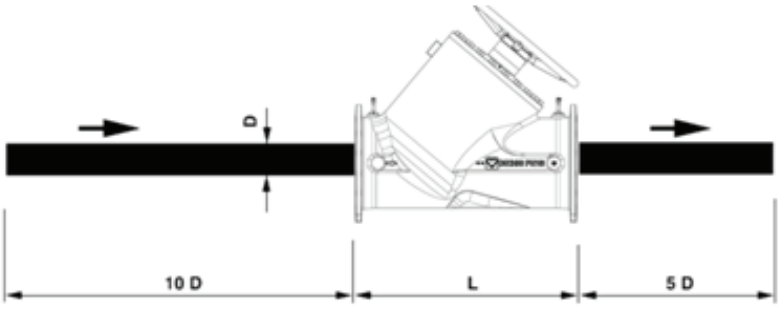
Pipe thread 1/4, for mounting measuring valves.

Application

For hydraulic balancing in heating or cooling systems, regulating and shutting off distribution circuits, heat exchangers, heating and cooling terminals.

Installation

Any installation position. The direction of flow according to the arrow on the housing must be observed. The inlet section of 5x the pipe diameter and the outlet section of 3x the pipe diameter must be observed.



5D 3D

Technical data

4218:

Max. operation temperature:	110°C
Min. operation temperature:	-10°C
Max. operation pressure:	16 bar

4220:

Max. operation temperature:	110°C
Min. operation temperature:	-10°C
Max. operation pressure:	25 bar

Heating water quality according to ÖNORM H 5195 or VDI guideline 2035. Ethylene and propylene glycol can be used in a ratio of 25-50 vol. [%] are mixed.

Material

Upper part	Ductile iron EN-GJS-400-15
Body	Ductile iron EN-GJS-400-15
Spindle	Stainless steel
Regulating spindle	Stainless steel
Valve cone	Ductile iron EN-GJS-400-15 according to EN 1561 / EPDM coated
Counter	Plastic material
O-Ring	EPDM

Coated

Base coating based on alkyd hair (resin primer) and contains lead and chromate corrosion protection. Surface coating with epoxy resin. Solvent content is less than accepted in the VOC Plant Ordinance in 2002.

Gloss: matt

Dry film thickness: ~ 100 microns

Constructive peculiarities

Flow direction

When installing, observe the direction of flow according to the arrow on the housing.

Mounting position

The non-rising valve spindle is arranged at an angle to the valve axis and thus offers optimal accessibility and easy handling in every position.

Triple O-ring

The maintenance-free triple O-ring seal ensures permanent, secure sealing of the valve spindle and smooth operation of the valve.

Seal between upper part and housing (EPDM)

The temperature-resistant and permanently elastic soft seal is corrosion-resistant and allows low closing forces.

Differential pressure measurement

The STRÖMAX GF double regulating and commissioning valve is equipped with two measuring valves: It is possible to measure the differential pressure with suitable measuring devices and to determine the flow rate accordingly.

Mass flow tolerances

The maximum deviation of the mass flow from the characteristic curve of control valves according to VDI guidelines.

Preset

The valve is delivered in the closed position. The presetting allows the maximum possible stroke. The handwheel mechanism is set so that the digital display shows 0.0 when the valve is closed.

Adjustment and fixation

Presetting process

1. Set the required presetting level according to the calculation (digital display on the handwheel)

2. 1/10 of the revolution are the red numbers and the whole revolution are the blue numbers.

3. The presetting spindle is located under the cover in the handwheel. The spindle can be adjusted with an 8mm screwdriver. To preset, turn it counterclockwise as far as it will go. The valve is now able to close and open the preset position. Replace the cover on the handwheel

4. The preset marker (1 6517 05) is attached as a tag over the valve or pipe. The setting of the respective valve is marked by cutting off or breaking off the teeth on the figures for full and partial turns. This allows you to review and / or restore the original preset made during system setup after maintenance without relying on documentation.

The flow rate is set with a measuring device using the flow charts. Please observe the operating instructions for the measuring device.

Digital display, factory settings

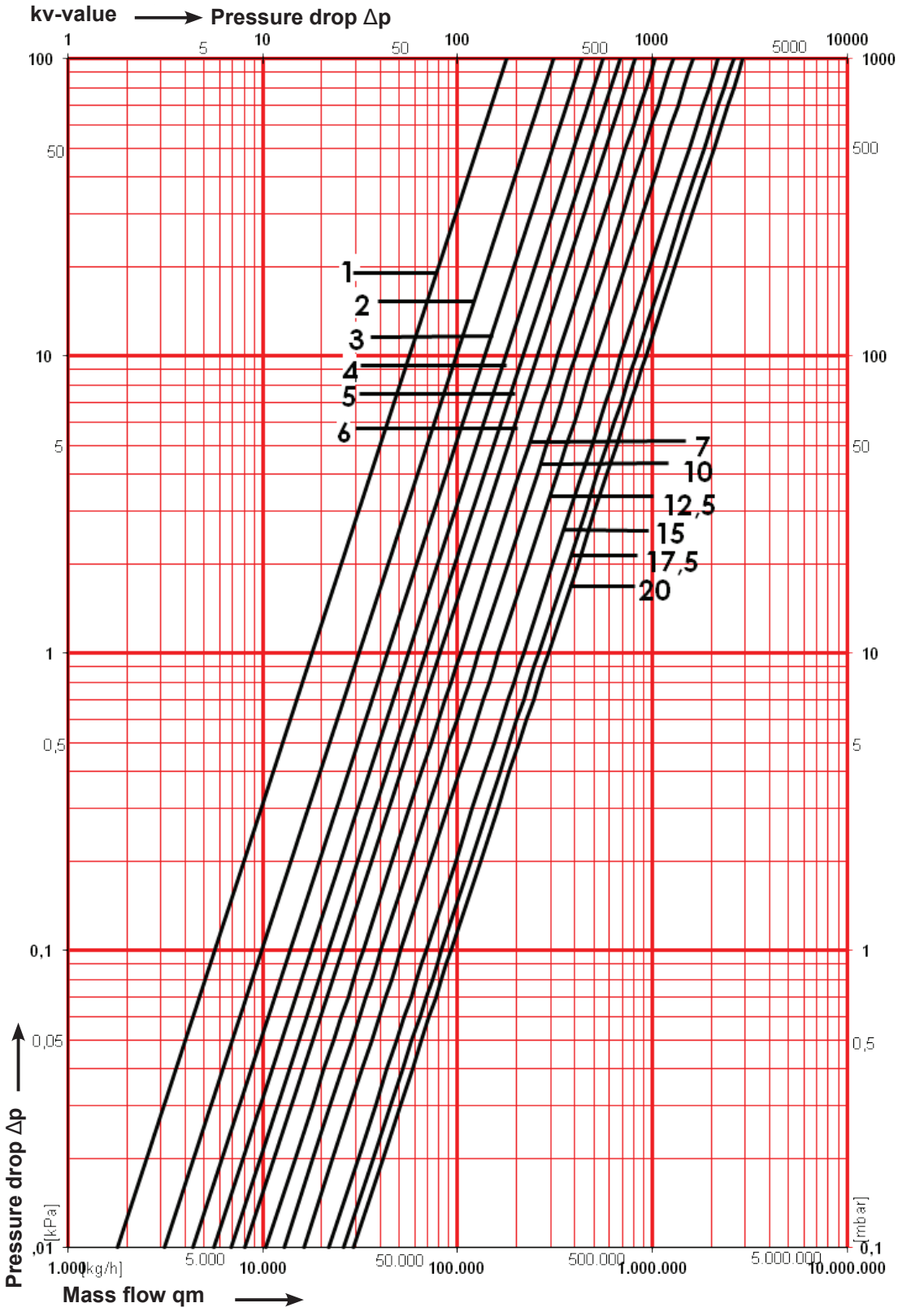
When the valve is closed, 0.0 is shown on the digital display. If you have to remove the complete handwheel (rotary handle, number wheels, base plate), do this as follows:

1. Adjust the complete upper part and fasten the three Allen screws and the four hexagon screws
2. Close the valve clockwise.
3. If the digital display shows 0.0, it is correct.
4. You can then mount the handwheel on the spindle
5. Screw in the handwheel fastening screw
6. The valve can now be set to the desired position.

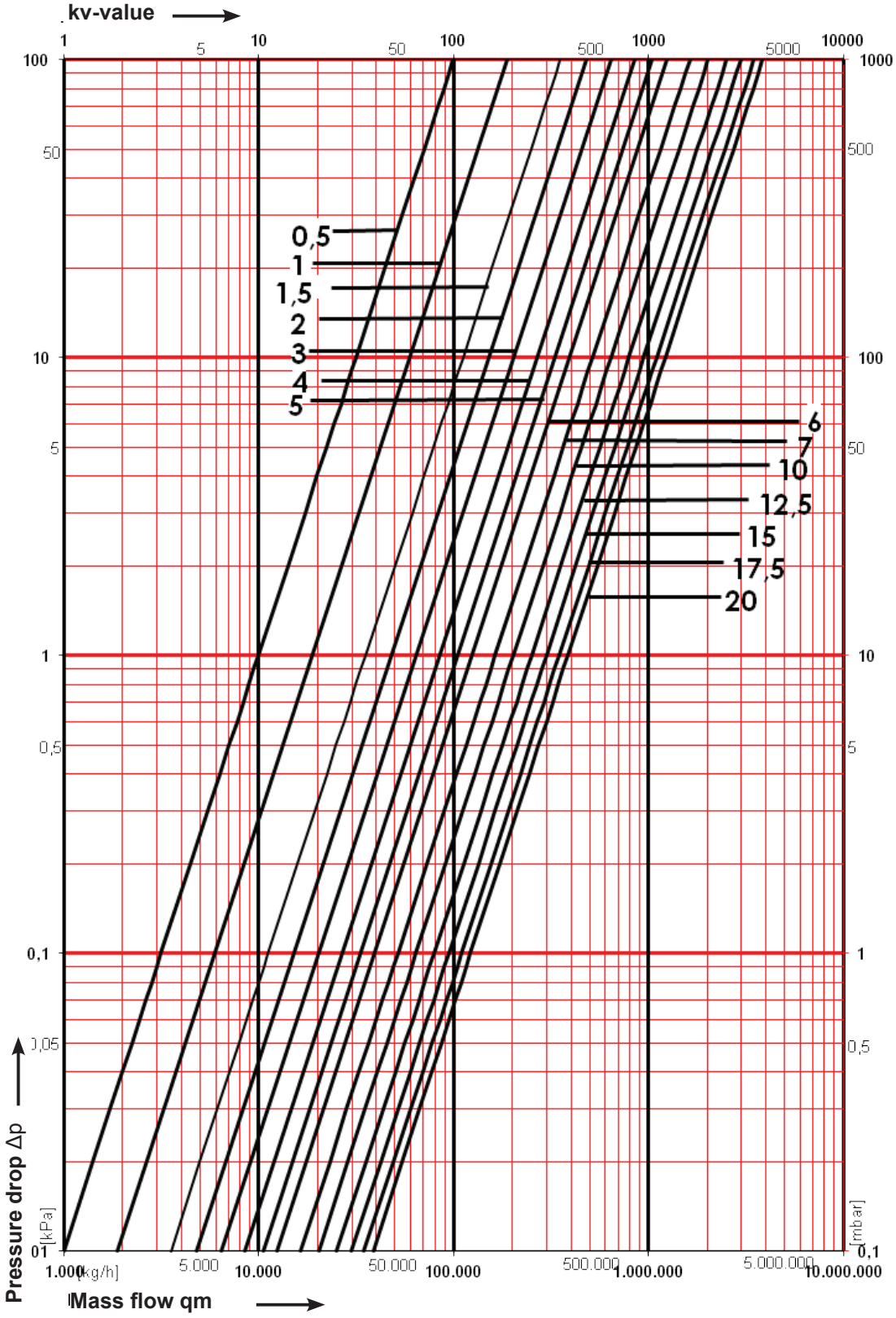
Equipment

1 6517 05	Presetting flag
1 0284 01	Test point, blue
1 0284 02	Test point, red

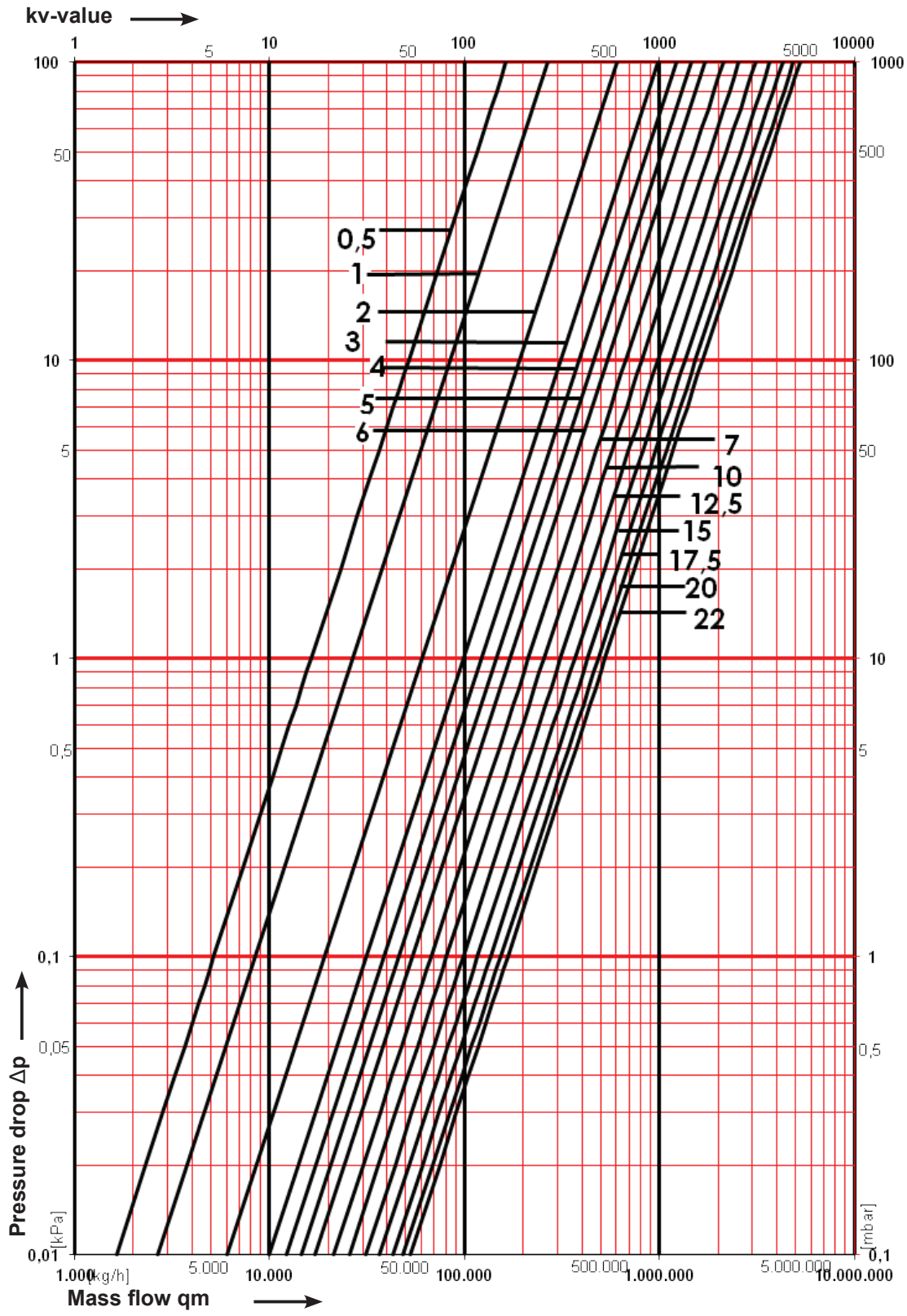
HERZ-Standard diagram	STRÖMAX 4218 GF
Artikel no.: 1 **4218** 89, 1 **4220** 89	Dim. DN 350



HERZ-Standard diagram	STRÖMAX 4218 GF
Artikel no.: 1 **4218** 90, 1 **4220** 90	Dim. DN 400



HERZ-Standard diagram	STRÖMAX 4218 GF
Artikel no.: 1 **4218** 92, 1 **4220** 92	Dim. DN 500



DN	350		400		500	
Kvs	2917,6		3854,8		5250,6	
Pos.	kv [m³/h]	Oppening [%]	kv [m³/h]	Oppening [%]	kv [m³/h]	Oppening [%]
0,5	-	-	99,4	6%	163,1	2%
1,0	178,0	5%	187,2	9%	265,5	5%
1,5	266,6	8%	352,3	11%	409,0	7%
2,0	311,3	10%	476,5	14%	605,2	9%
2,5	374,9	13%	549,0	16%	840,9	11%
3,0	434,1	15%	644,9	18%	986,7	14%
3,5	500,0	18%	740,4	21%	1149,1	16%
4,0	559,9	20%	844,5	23%	1222,6	18%
4,5	627,4	23%	945,0	26%	1453,5	20%
5,0	686,1	25%	1046,2	28%	1455,8	23%
5,5	749,0	28%	1155,0	31%	1639,6	25%
6,0	808,4	30%	1242,8	33%	1702,5	27%
6,5	872,4	33%	1319,5	35%	1839,2	30%
7,0	921,3	35%	1436,9	38%	1919,7	32%
7,5	991,3	38%	1498,6	40%	2022,8	34%
8,0	1030,5	40%	1629,8	43%	2124,2	36%
8,5	1102,5	42%	1692,3	45%	2221,1	38%
9,0	1146,4	45%	1826,3	47%	2341,6	41%
9,5	1211,8	47%	1915,0	50%	2429,9	43%
10,0	1276,8	50%	2022,9	52%	2556,3	45%
10,5	1327,9	52%	2165,9	55%	2653,1	47%
11,0	1421,4	55%	2220,7	57%	2776,9	50%
11,5	1459,9	57%	2443,9	59%	2880,5	52%
12,0	1585,3	60%	2415,9	62%	2993,2	55%
12,5	1614,5	62%	2742,3	64%	3106,3	57%
13,0	1783,8	65%	2612,5	67%	3214,2	59%
13,5	1800,9	67%	2707,1	69%	3328,0	62%
14,0	1987,2	70%	2798,9	71%	3421,5	64%
14,5	2012,5	72%	2900,6	74%	3539,0	66%
15,0	2173,5	75%	2985,9	76%	3676,5	68%
15,5	2231,3	77%	3090,4	79%	3772,8	71%
16,0	2354,8	80%	3186,0	81%	3919,9	73%
16,5	2442,6	82%	3281,9	83%	4024,7	75%
17,0	2458,4	85%	3363,9	86%	4164,2	77%
17,5	2603,1	87%	3467,7	88%	4281,3	79%
18,0	2608,4	90%	3542,3	91%	4393,9	82%
18,5	2738,9	92%	3649,1	94%	4525,7	84%
19,0	2758,2	95%	3714,4	96%	4603,6	86%
19,5	2862,9	97%	3823,3	99%	4741,4	88%
20,0	2917,6	100%	3854,8	100%	4849,6	91%
20,5					4962,1	93%
21,0					5080,3	95%
21,5					5189,5	97%
22,0					5250,6	100%

Due to different installation conditions in the laboratory and at the place of use, the table may contain deviations in the measurement results.