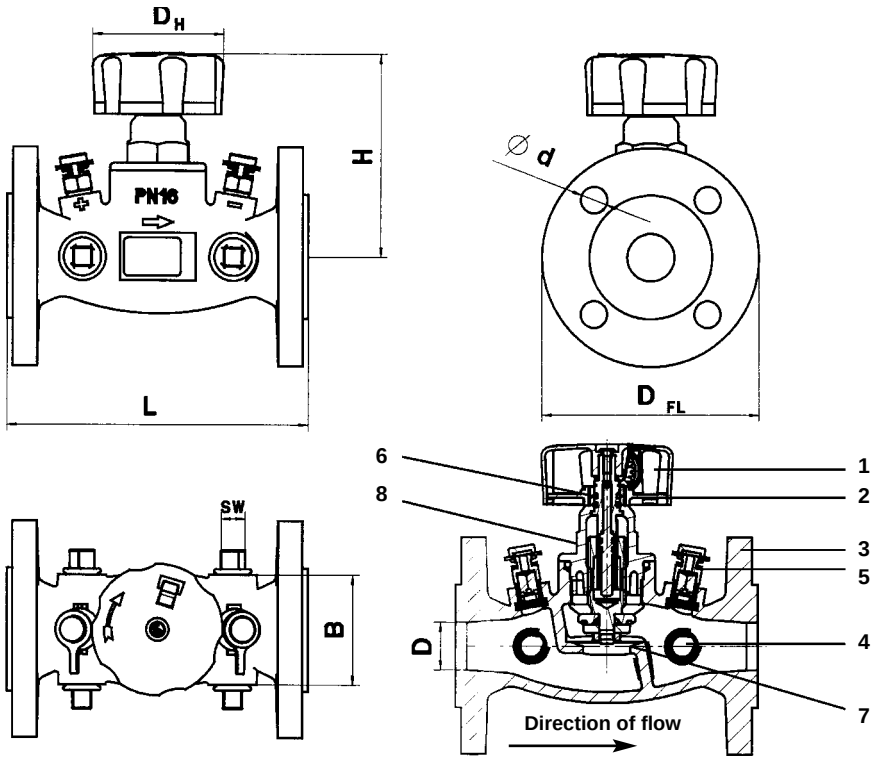
Circuit regulating valve STRÖMAX - GMF

Circuit Regulating Valve for Differential Pressure Measurement, flanged version, Srew-down model, with Measuring Valves

Data sheet for
4218 GMF
Edition 0803 (0803)



4218 GMF
STRÖMAX-GMF
with measuring valves and draining option

1 Hand wheel with viewing window for digital display
2 Valve spindle
3 Valve body, cast iron GJL 250
4 Plug 3/8 for draining option
5 Quick measuring valve 1/4
6 Spindle seal
7 Valve seat
8 Valve upper part

Model

Article numbers **4218 GMF**	DN	L	H	W	D_H	D_{FL}	D	d	Hex Square
1 **4218** 43	25	160	110	58	70	115	25	14	10
1 **4218** 44	32	180	110	64	70	140	30	19	10
1 **4218** 45	40	200	110	72	70	150	40	19	10
1 **4218** 46	50	230	135	90	95	165	50	19	10
1 **4218** 47	65	290	145	112	95	185	65	19	10
1 **4218** 48	80	310	145	116	95	200	80	19	10

Dimensions in mm
Article numbers

4218 GMF STRÖMAX-GMF circuit regulating valve with measuring valves DN 25 - 80
Screw-down model, body made of cast iron GJL 250, according to EN 1561, flange according to EN 1092, PN 16, blue coating. Brass upper part, screwed, with non-rising spindle, spindle seal by means of double O-Ring. Pre-setting by limitation of valve lift and inside spindle. Pre-setting step is shown on the digital display in the hand wheel window. Two quick measuring valves are mounted next to hand wheel. Four bores for draining fittings, closed with screw plugs 3/8 (DN10).

Model

4218 GMF

We reserve the right to make modifications in line with advances in engineering.

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Other models

4218 AGF	DN 25 - 80	STRÖMAX-AGF shutoff fitting in flanged version, 4 bores for draining option
4007 F	DN 25 - 50	differential pressure control, flanged version, 50 to 300 mbar, 4 bores for draining option
4217 GM **4417 GM**	DN 15 - 80 female screwed DN 15 - 50 external threads	STRÖMAX-GM circuit regulating valve with measuring valves-screw-down model
4217 GR	DN 15 - 80	STRÖMAX-GR circuit regulating valve without measuring valve, screw-down model, female screwed x female screwed
4215 G **4415 G**	DN 15 - 80 female screwed DN 15 - 50 external threads	STRÖMAX-G, shutoff fitting, screw-down model
4215 AG **4415 AG**	DN 15 - 80 female screwed DN 15 - 50 external threads	STRÖMAX-GM shutoff fitting, screw-down model with 2 bores for draining option
4007 **4207**	DN 15 - 50 female screwed DN 15 - 50 external threads	differential pressure control, 50 x 300 mbar 2 bores for draining option

Measuring valves STRÖMAX-GMF

Two measuring valves are mounted next to the hand wheel and in the same plane. The valves are pre-sealed. This arrangement guarantees optimum accessibility in every mounting position and optimum installation of measuring devices.

Bore size

Pipe thread 3/8 (DN10).

Draining Fittings

1 **0276** 00 draining valve with handle and swivelling hose connection, brass version, hose connection 1 **6206** 01 must be ordered separately.

Application

For hydraulic line-up in heating or cooling installations, adjustment and shutoff of distributors, leg, heat exchangers, heating and cooling systems.

Operational data

Maximum operating temperature	110 °C
Maximum operating pressure	16 bar

Hot water quality according Austrian Standard ÖNORM H 5195 and/or VDI-Regulation 2035.

Materials

Valve body	cast iron GJL 250 according to EN 1561
Valve	upper part made of brass
O-Rings	EPDM

Constructional characteristics

Flow direction
Ensure that the flow direction is in accordance with the arrow shown on the valve body.

Mounting position
The non-rising valve spindle is mounted vertically to the valve axis and consequently offers optimum accessibility and easy valve handling in every position.

Spindle seal
The spindle seal is equipped with an elastic double O-Ring and it guaranteed to be impermeable and offer easy handling.

Double O-Ring
The double O-Ring seal is maintenance-free and is guarantees a durable and secure sealing of the valve spindle, as well as easy handling of the valve.

Seat seal
The permanently elastic soft seal provides constant temperature. It is corrosion-resistant and allows minor closing pressure.

Measuring of differential pressure

The STRÖMAX-GMF circuit regulating valve is equipped with two quick measuring valves. Using an appropriate measuring device the differential pressure can be measured. You can also determine the flow quantity dependent on the adjustment level. The appropriate flow quantity is also displayed on the HERZ-8900 and 8903 measuring computers (see operational manual).

Pre-setting

The circuit regulating valve STRÖMAX-GMF is delivered in open position. The pre-setting allows the maximum possible lift. The hand wheel mechanism is set in order to display the digital display value 0,0 when the valve is closed.

Pre-setting process

Setting and fixing

1. Set the valve at the pre-setting required (digital display of hand wheel).
2. Remove fastening screw of hand wheel. Hand wheel may not be pulled off.
3. The pre-setting spindle is now accessible. Screw in blade 3 x 60 until stop.
4. Replace the hand wheel fastening screw again.
5. Install pre-setting seal.
6. Mark the set position on the pre-setting marker and mount it to the valve. Steps 5 and 6 are not necessary but recommended. When using a measuring device for the STRÖMAX-GM valve, it is possible to set a particular flow value without indicating the adjustment value.

The setting can be effected by a differential pressure measurement and the HERZ-setting diagrams. When using a measuring computer please observe the operating instructions of the device.

Digital display Pre-setting

When the valve is closed the pre-setting of the digital display is 0,0. If the complete hand wheel (twist handle, numerical display, mounting base) is removed from the valve or a damaged part has to be renewed, it is recommended re-set the digital display as follows:

1. Mount complete hand wheel and slide it until the hexagonal of the body and the toothed spindle engage.
2. Turn the valve clockwise and close it.
3. If the digital displays shows a value of 0,0 the hand wheel is correctly mounted and can be fastened by a screw. If another value is displayed remove the hand wheel.
4. Twist mounting base and twist handle to set the digital display to 0,0 again. Remount the hand wheel without twisting the spindle.
5. Screw in the fastening screw of the hand wheel.

The valve can now be set the to the requested position.

Measuring valves

Operation

Both quick measuring valves **0284** are equipped with a soft seal and are mounted captivated to the circuit regulating valve.

The HERZ-measuring computer provides appropriate couplings 1 **0284** 00 that guarantee trouble-free fastening on the measuring valves.

Dimensions

STRÖMAX-GMF, STRÖMAX-AGF and differential pressure control 4007 F valve bodies are identical, upper parts are identical to GM/GR, G/GA and differential pressure controls are identical to the appropriate female screwed and external thread models.

Accessories

1 **6517** 04 Pre-setting seal
1 **6517** 05 Pre-setting marker
1 **6640** 00 HERZ-universal key
1 **8903** 00 HERZ-Measuring computer Flow Plus
1 **8900** 03 HERZ-Measuring computer for one-hand operation
1 **0276** 00 Draining valve 3/8 with handle and swivelling hose connection
1 **6206** 01 Hose connection
1 **0284** 00 Needle for pressure absorption device

Spare Parts

1 **0273** 00 Screw plug 3/8
1 **0284** 01 Quick measuring valve, blue
1 **0284** 02 Quick measuring valve, red

1 **6517** 06	DN 15 - 40	STRÖMAX-GMF	hand wheel
1 **6517** 08	DN 50 - 80	STRÖMAX-GMF	hand wheel
1 **6387** 12	DN 15 - 20	STRÖMAX-GMF	valve upper part, complete
1 **6387** 13	DN 25	STRÖMAX-GMF	valve upper part, complete
1 **6387** 14	DN 32	STRÖMAX-GMF	valve upper part, complete
1 **6387** 15	DN 40	STRÖMAX-GMF	valve upper part, complete
1 **6387** 16	DN 50	STRÖMAX-GMF	valve upper part, complete
1 **6387** 17	DN 65	STRÖMAX-GMF	valve upper part, complete
1 **6387** 18	DN 80	STRÖMAX-GMF	valve upper part, complete

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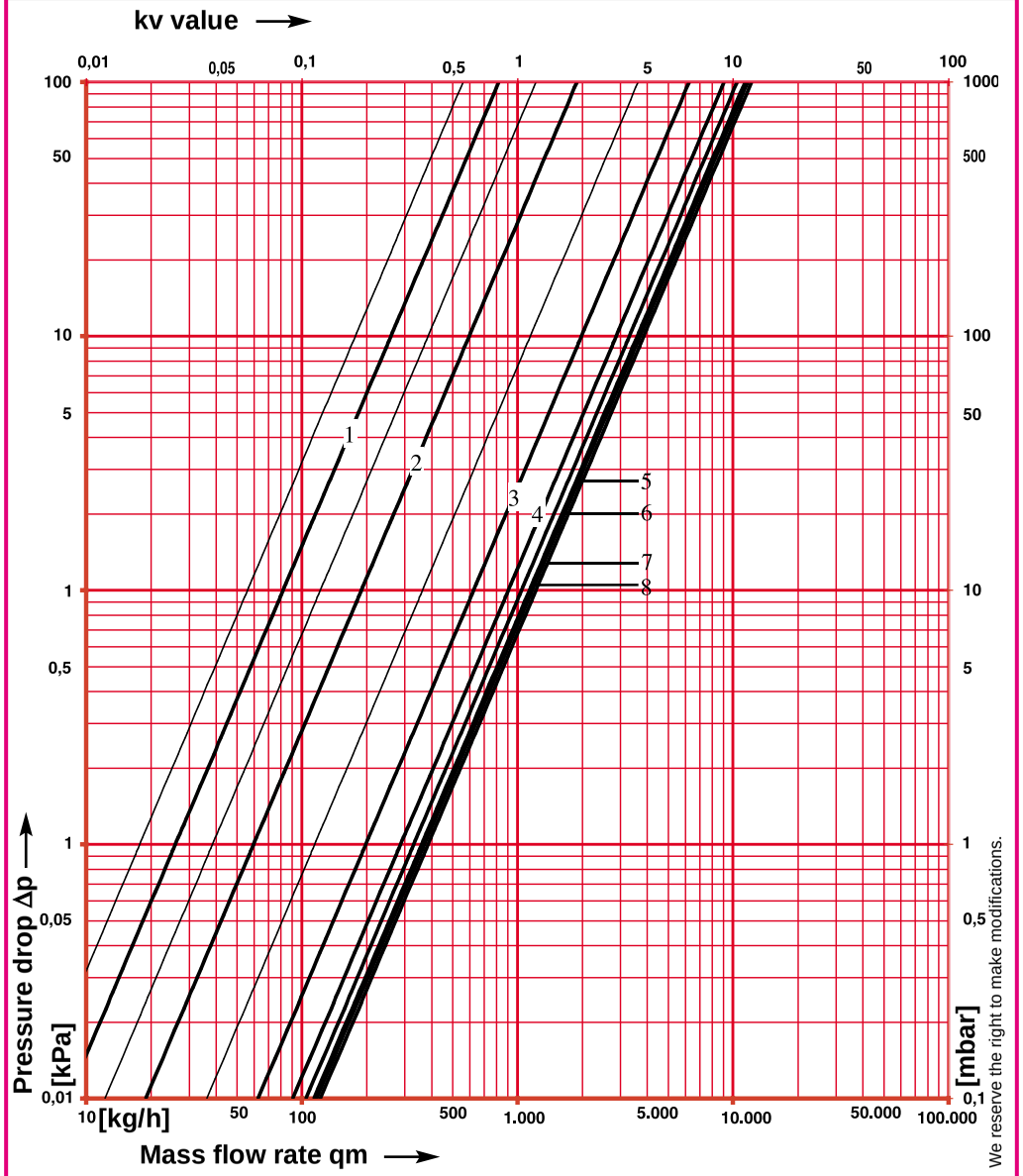
kvs values

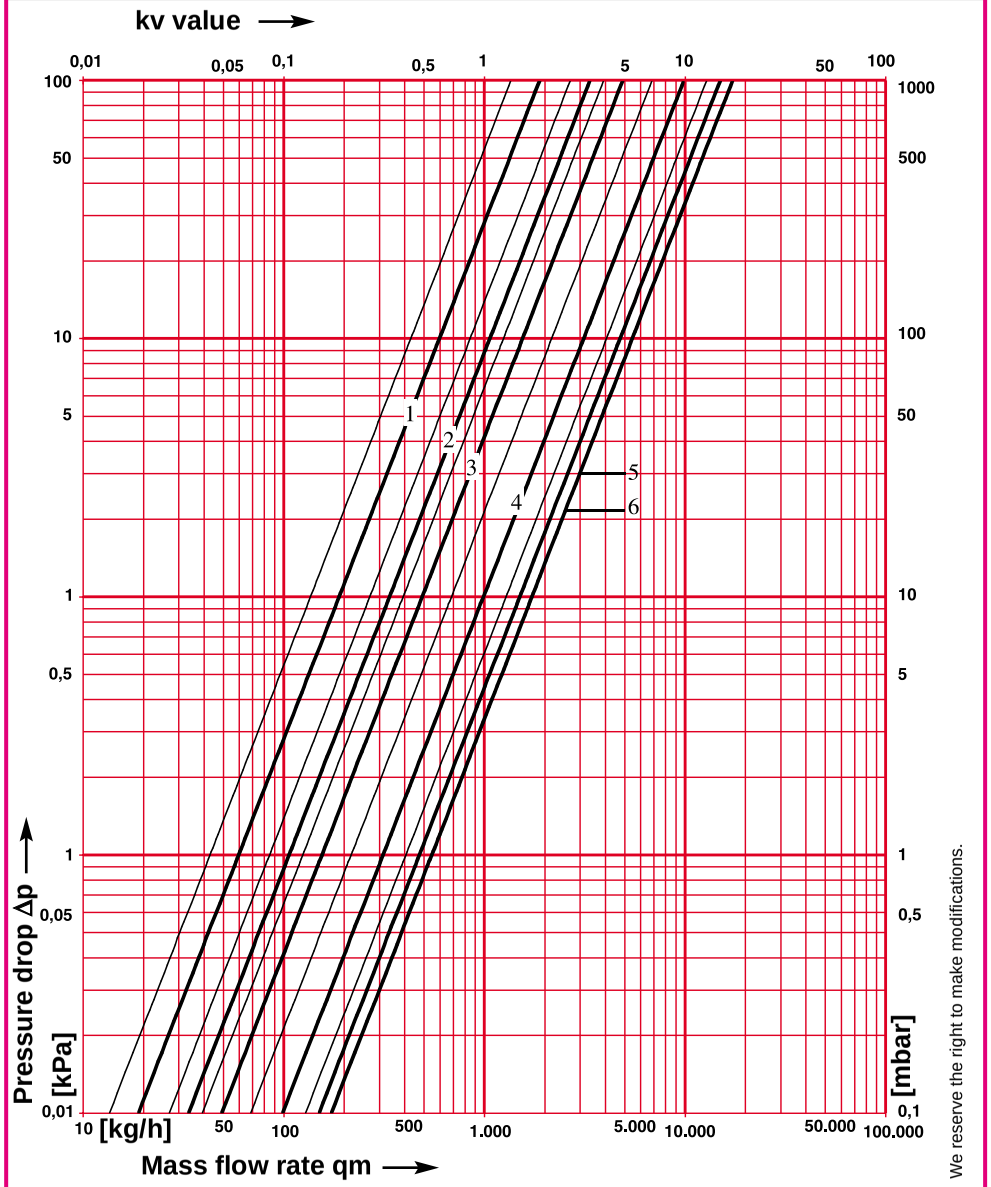
Article numbers **4218 GMF**	DN	**STRÖMAX-4218 GMF**
1 **4218** 43	25	12.2
1 **4218** 44	32	17.3
1 **4218** 45	40	28.6
1 **4218** 46	50	38.0
1 **4218** 47	65	60.3
1 **4218** 48	80	68.5

Please Note. The following flow and setting values are valid for dimensioning and location of HERZ-STRÖMAX-4218 GMF circuit regulating valves. Special tables showing how to control the pre-set value or change the setting after measuring the differential pressure of the valve during operation can be ordered.

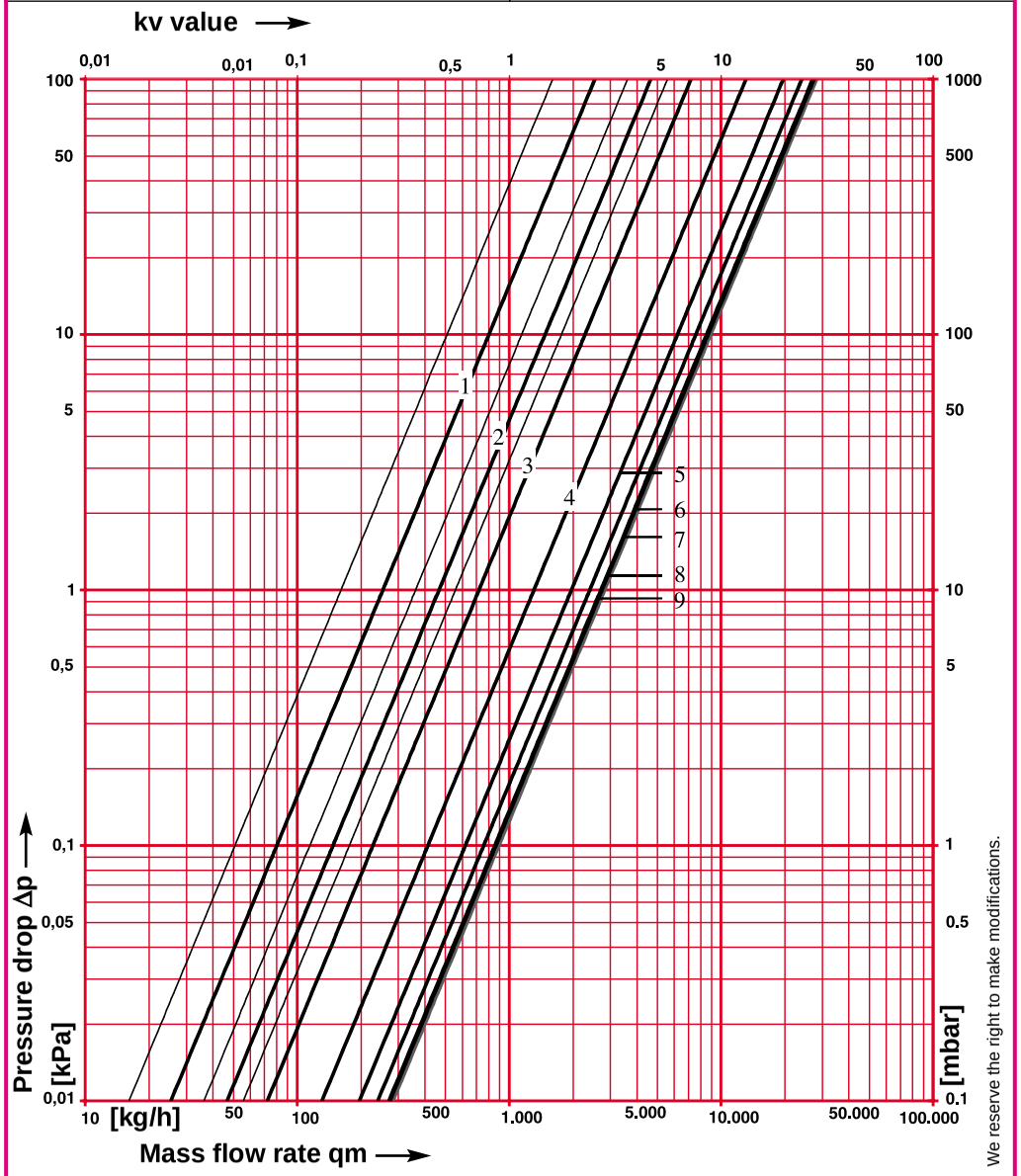
HERZ-standard diagram	STRÖMAX-GMF
1 **4218** 43	DN 25



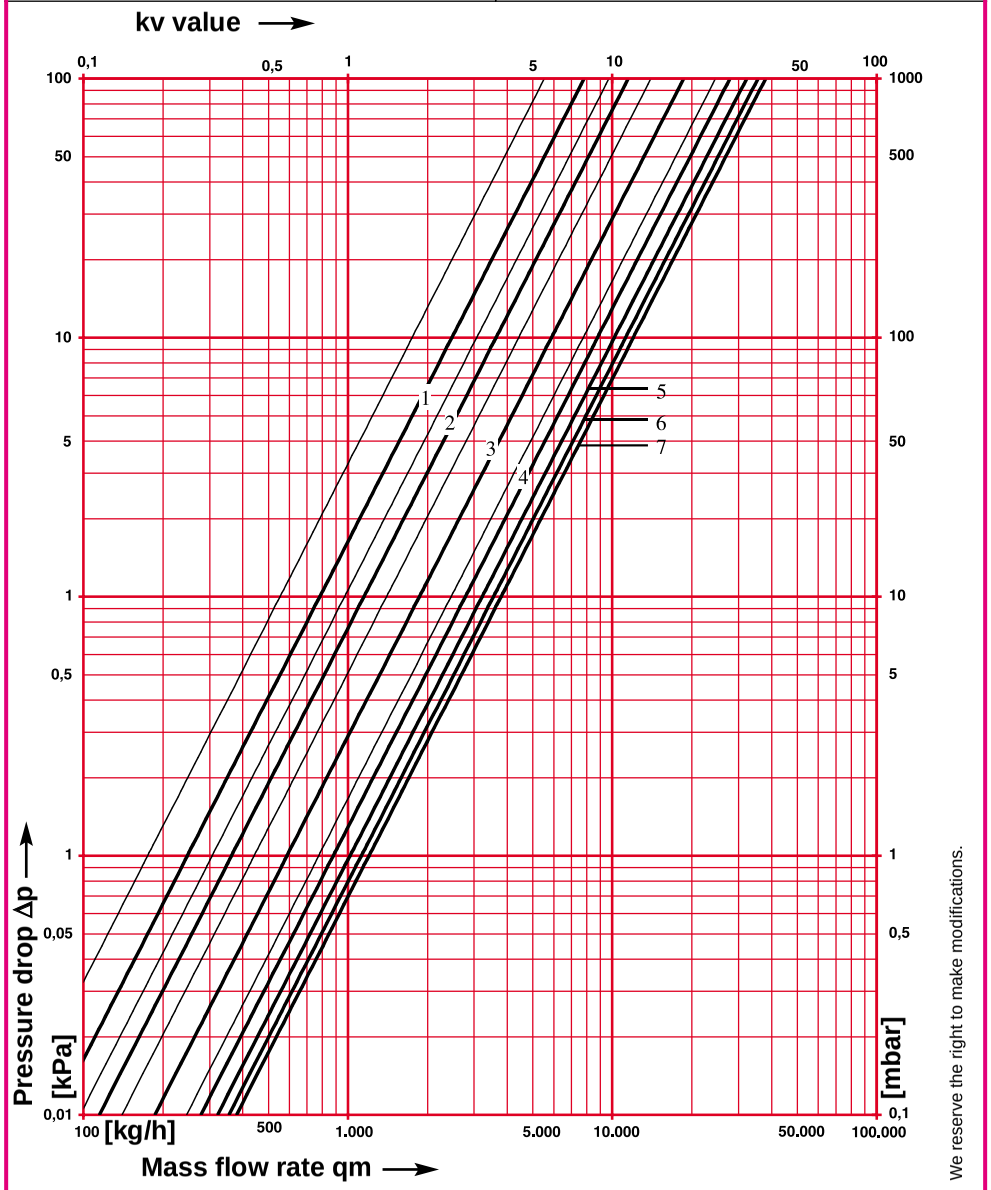
HERZ-standard diagram	STRÖMAX-GMF
1 **4218** 44	DN 32



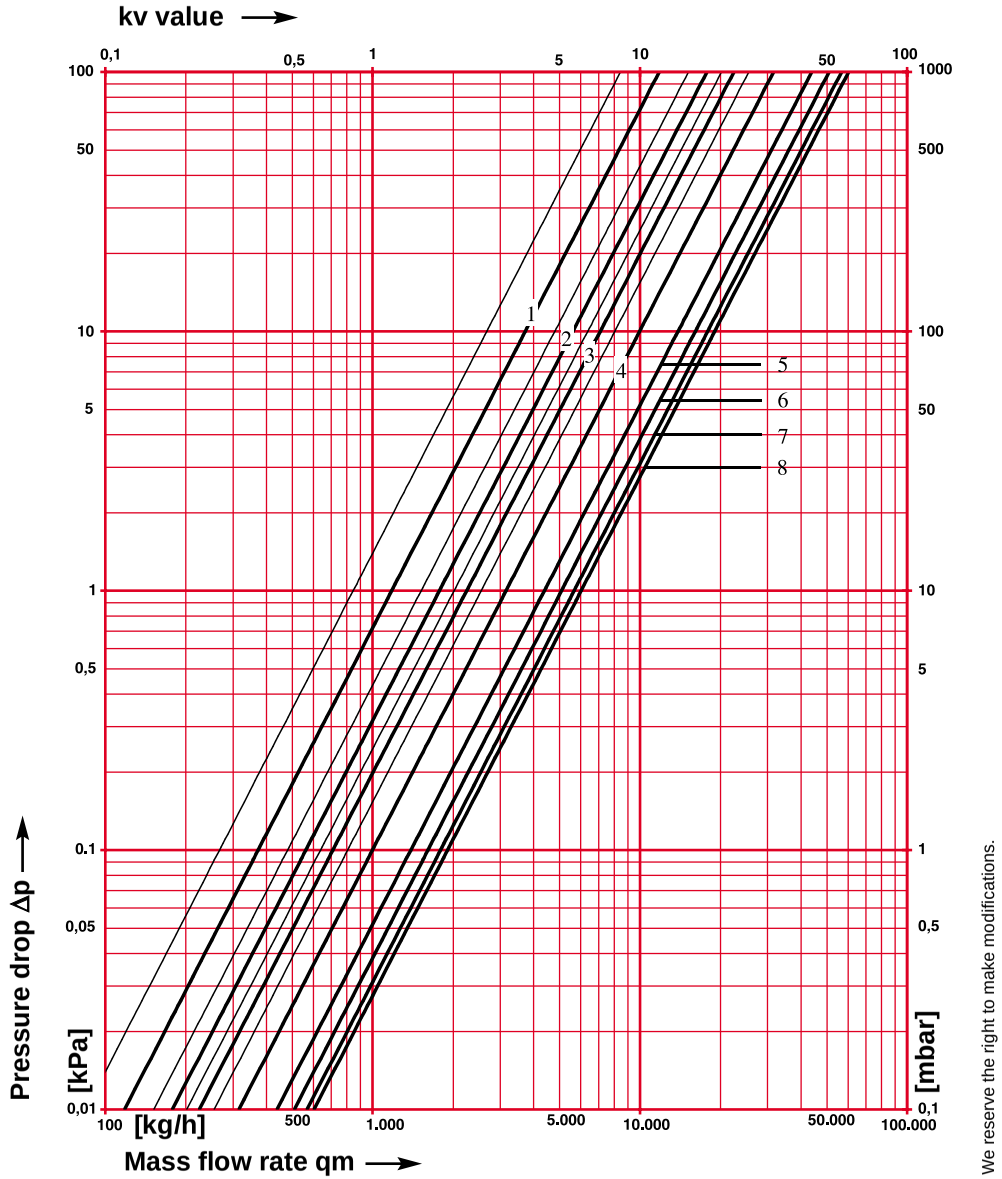
HERZ-standard diagram	STRÖMAX-GMF
1 **4218** 45	DN 40



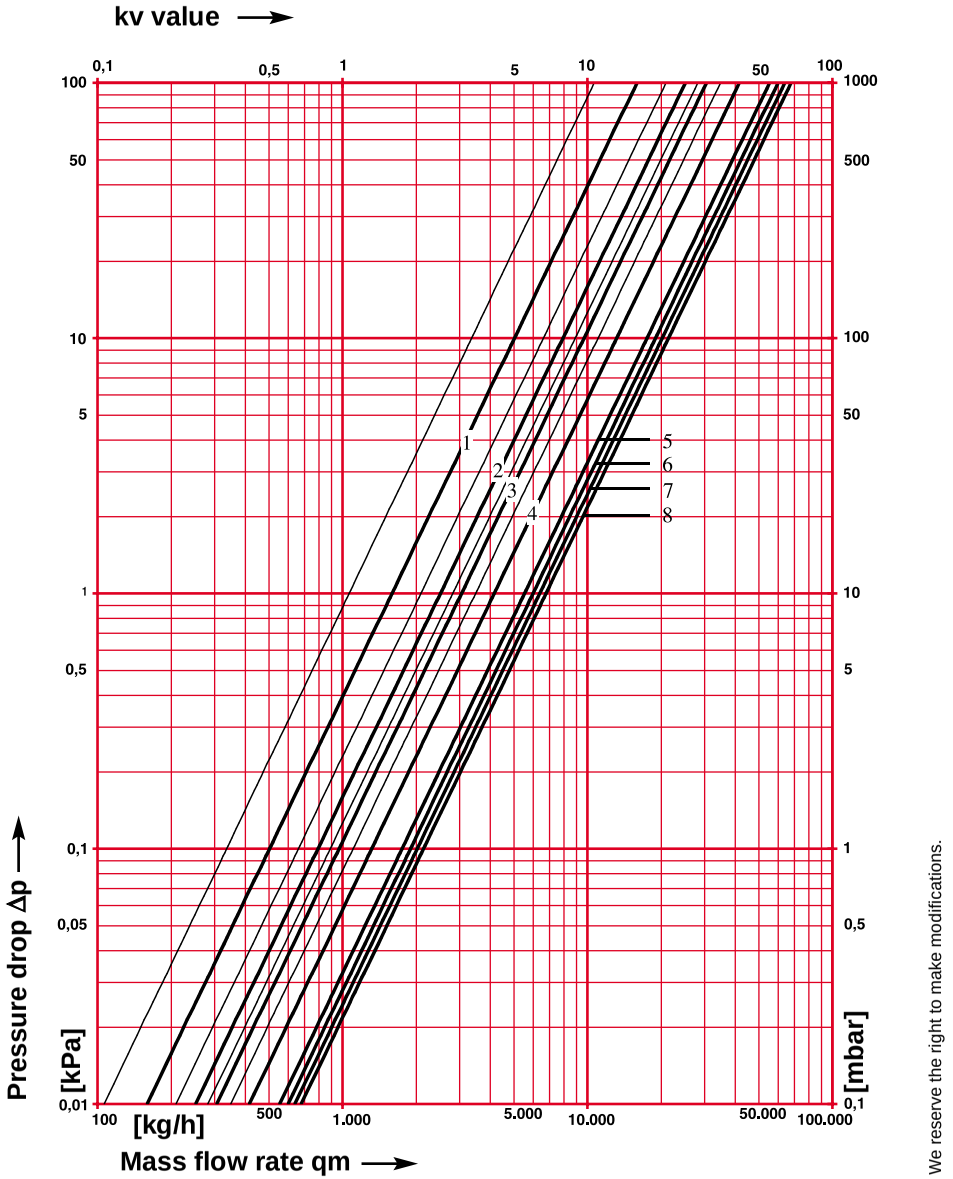
HERZ-standard diagram	STRÖMAX-GMF
1 **4218** 46	DN 50



HERZ-standard diagram	STRÖMAX-GMF
1 **4218** 47	DN 65



HERZ-standard diagram	STRÖMAX-GMF
1 **4218** 48	DN 80



HERZ-Kvs values - table

STRÖMAX-GMF

Art. Nr. 1 **4218** 43 - 1 **4218** 48

DN 25 - DN 80

pre-setting level	1 **4218** 43	1 **4218** 44	1 **4218** 45	1 **4218** 46	1 **4218** 47	1 **4218** 48	pre-setting level
	DN 25	**DN 32**	**DN 40**	**DN 50**	**DN 65**	**DN 80**	
0,5	0,6	1,4	1,6	5,5	8,5	10,6	**0,5**
0,6	0,6	1,4	1,8	6,0	9,4	11,9	**0,6**
0,7	0,6	1,5	2,0	6,3	10,2	12,9	**0,7**
0,8	0,7	1,6	2,1	6,8	10,8	13,9	**0,8**
0,9	0,8	1,8	2,4	7,4	11,3	14,9	**0,9**
1,0	0,8	1,9	2,5	7,8	11,8	15,9	**1,0**
1,1	0,9	2,0	2,8	8,3	12,5	16,9	**1,1**
1,2	1,0	2,2	3,0	8,8	13,2	17,9	**1,2**
1,3	1,1	2,4	3,2	9,1	13,8	18,9	**1,3**
1,4	1,2	2,5	3,4	9,5	14,5	19,9	**1,4**
1,5	1,2	2,7	3,6	9,7	15,2	20,9	**1,5**
1,6	1,4	2,8	3,9	10,1	15,7	21,9	**1,6**
1,7	1,5	3,0	4,1	10,4	16,3	22,8	**1,7**
1,8	1,6	3,1	4,2	10,7	16,9	23,7	**1,8**
1,9	1,7	3,3	4,4	11,0	17,5	24,5	**1,9**
2,0	1,9	3,4	4,7	11,5	17,8	25,1	**2,0**
2,1	2,2	3,5	4,9	11,9	18,5	25,8	**2,1**
2,2	2,6	3,6	5,1	12,4	19,0	26,4	**2,2**
2,3	2,9	3,7	5,2	12,9	19,4	27,0	**2,3**
2,4	3,3	3,8	5,5	13,6	19,8	27,5	**2,4**
2,5	3,6	3,9	5,6	14,0	20,2	28,2	**2,5**
2,6	4,2	4,1	5,9	15,0	20,5	28,4	**2,6**
2,7	4,8	4,3	6,3	15,9	20,9	28,9	**2,7**
2,8	5,3	4,5	6,6	16,9	21,4	29,4	**2,8**
2,9	5,8	4,7	7,0	17,9	21,8	30,0	**2,9**
3,0	6,3	4,9	7,2	18,6	22,5	30,6	**3,0**
3,1	6,6	5,3	7,7	20,0	22,9	31,4	**3,1**
3,2	7,0	5,6	8,2	21,1	23,5	32,2	**3,2**
3,3	7,4	6,1	8,6	22,1	24,2	33,0	**3,3**
3,4	7,7	6,5	9,1	23,2	25,0	34,0	**3,4**
3,5	8,2	6,9	9,6	24,6	25,5	34,9	**3,5**
3,6	8,3	7,4	10,3	25,2	26,8	36,3	**3,6**
3,7	8,6	7,9	11,0	25,9	27,9	37,5	**3,7**
3,8	8,7	8,5	11,7	26,6	29,0	38,9	**3,8**
3,9	8,9	9,2	12,4	27,3	30,2	40,3	**3,9**
4,0	9,1	9,8	13,1	27,8	31,6	41,7	**4,0**
4,1	9,3	10,4	13,8	28,4	32,7	43,3	**4,1**
4,2	9,4	11,1	14,5	28,9	34,0	44,8	**4,2**
4,3	9,6	11,7	15,3	29,3	35,5	46,3	**4,3**
4,4	9,7	12,3	16,0	29,7	36,6	47,8	**4,4**
4,5	9,9	12,9	16,7	30,1	37,8	49,7	**4,5**
4,6	10,0	13,3	17,3	30,6	39,2	50,7	**4,6**
4,7	10,1	13,7	18,0	31,0	40,4	52,0	**4,7**

pre-setting level	1 **4218** 43	1 **4218** 44	1 **4218** 45	1 **4218** 46	1 **4218** 47	1 **4218** 48	pre-setting level
	DN 25	**DN 32**	**DN 40**	**DN 50**	**DN 65**	**DN 80**	
4,8	10,2	14,2	18,4	31,3	41,6	53,3	**4,8**
4,9	10,3	14,6	19,1	31,7	42,7	54,4	**4,9**
5,0	10,5	15,0	19,7	32,2	43,9	55,4	**5,0**
5,1	10,6	15,2	20,1	32,4	44,7	56,4	**5,1**
5,2	10,7	15,4	20,6	32,7	45,7	57,2	**5,2**
5,3	10,8	15,7	21,0	33,1	46,5	57,9	**5,3**
5,4	10,9	15,8	21,4	33,5	47,3	58,5	**5,4**
5,5	11,0	16,0	21,8	33,8	47,8	58,9	**5,5**
5,6	11,1	16,3	22,3	34,2	48,7	59,3	**5,6**
5,7	11,2	16,5	22,7	34,6	49,3	59,6	**5,7**
5,8	11,2	16,8	23,2	35,0	49,9	59,9	**5,8**
5,9	11,3	17,1	23,6	35,3	50,4	60,1	**5,9**
6,0	11,4	17,3	24,0	35,5	51,0	59,9	**6,0**
6,1	11,4		24,5	35,8	51,5	60,4	**6,1**
6,2	11,4		24,8	11,0	17,5	24,5	**6,2**
6,3	11,5		25,2	36,1	52,7	60,8	**6,3**
6,4	11,5		25,6	36,3	53,2	61,0	**6,4**
6,5	11,5		26,0	36,4	53,9	61,8	**6,5**
6,6	11,6		26,2	36,6	54,5	61,7	**6,6**
6,7	11,6		26,4	37,0	55,1	62,2	**6,7**
6,8	11,6		26,7	37,3	55,7	62,8	**6,8**
6,9	11,7		26,9	37,7	56,3	63,4	**6,9**
7,0	11,7		27,1	38,0	56,8	63,8	**7,0**
7,1	11,8		27,2		57,2	64,8	**7,1**
7,2	11,8		27,4		57,7	65,5	**7,2**
7,3	11,9		27,4		58,0	66,2	**7,3**
7,4	11,9		27,5		58,3	66,8	**7,4**
7,5	12,0		27,6		58,6	67,3	**7,5**
7,6	12,0		27,6		58,9	67,5	**7,6**
7,7	12,1		27,7		59,2	67,6	**7,7**
7,8	12,1		27,8		59,5	67,7	**7,8**
7,9	12,1		27,8		59,9	67,7	**7,9**
8,0	12,2		27,8		60,3	67,8	**8,0**
8,1			28,0			67,9	**8,1**
8,2			28,1			68,1	**8,2**
8,3			28,1			68,3	**8,3**
8,4			28,2			68,5	**8,4**
8,5			28,3			68,7	**8,5**
8,6			28,4			68,9	**8,6**
8,7			28,5				**8,7**
8,8			28,5				**8,8**
8,9			28,6				**8,9**
9,0			28,6				**9,0**