

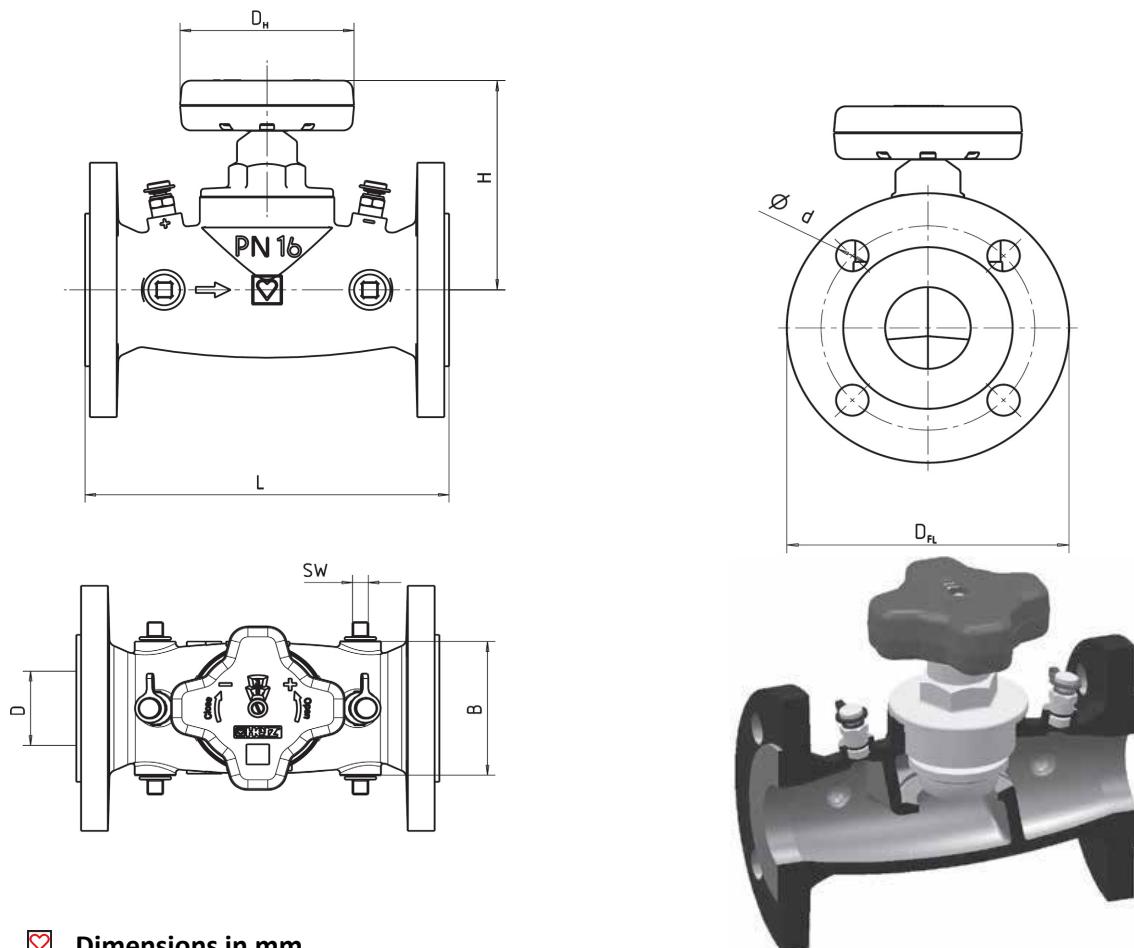
# Circuit regulating valve STRÖMAX-GMF

Circuit Regulating Valve for Differential Pressure Measurement,

flanged version, Screw-down model, with Test Points

data sheet 4218 GMF, Issue 0916

**4218 GMF** STRÖMAX-GMF with measuring valves and draining option



**Dimensions in mm**

Order no. <b>4218 GMF</b>	DN	L	H	B	DH	DFL	D	d	Hex Square
1 4218 43	25	160	110	58	71	115	25	14	10
1 4218 44	32	180	110	64	71	140	30	19	10
1 4218 45	40	200	110	72	71	150	40	19	10
1 4218 46	50	230	135	90	110	165	50	19	10
1 4218 47	65	290	145	112	110	185	65	19	10
1 4218 48	80	310	145	116	110	200	80	19	10
1 4218 49	100	350	190	158	190	220	100	19	10
1 4218 50	125	400	230	188	190	250	125	19	10
1 4218 51	150	480	264	212	190	285	150	23	10

**Model 4218 GMF**

## 4218 GMF STROMAX-GMF circuit regulating valve with test points DN 25 - 150

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).

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## Other models

<b>4218 AGF</b> DN 25 - 80	STRÖMAX-AGF shutoff fitting in flanged version, 4 bores for draining option
<b>4007 F</b> DN 25 - 80	differential pressure control, flanged version, 50 to 300 mbar, 4 bores for draining option
<b>4217 GM</b> DN 15 - 80	STRÖMAX-GM circuit regulating valve with test points; screw-down model
<b>4217 GR</b> DN 15 - 80	STRÖMAX-GR circuit regulating valve without measuring valve, screwdown model, female screwed x female screwed
<b>4215 G</b> DN 15 - 80	STRÖMAX-G, shutoff fitting, screw-down model
<b>4215 AG</b> DN 15 - 80	STRÖMAX-GM shutoff fitting, screw-down model with 2 bores for draining option
<b>4007</b> DN 15 - 80	differential pressure control, 50 x 300 mbar

### Measuring valves

Two test points 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

Max. operating temperature 130°C (up to DN 32), 110 °C (from DN 40)

Max. operating pressure 16 bar

Ethylene and propylene glycol is to be used in a mixing ratio of 25 - 50 Vol. [%].

### Materials

Valve body cast iron GJL 250 according to EN 1561

Valve upper part made of DZR copper alloy.

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.

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## **Measuring of differential pressure**

The STRÖMAX-GMF circuit regulating valve is equipped with two test points. 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.

## **Setting and fixing**

### **pre-setting process**

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 show 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.
6. The valve can now be set them to the requested position.

## **Test points**

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

## **Operation**

The HERZ-measuring computer provides appropriate couplings 0284 that guarantee trouble free fastening on the test points.

## **Dimensions**

STRÖMAX-GMF, STRÖMAX-AGF and differential pressure control 4007 F valve bodies are identical, upper parts 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 8900 04** 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

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 **kvs-values**

DN	25	32	40	50	65	80	100	125	150
Kvs	11.56	16.6	28.6	37.84	60.3	67.8	99.55	186.58	279.05
position	kv	kv	kv	kv	kv	kv	kv	kv	kv
0.5	0.35	1.15	1.4	2.7	8.36	11.5	0	1.58	8.75
1	0.75	1.9	2.5	7.8	11.56	15.9	12.35	4.36	17.5
1.5	1.15	2.65	3.6	12.9	14.76	20.3	18.04	10.72	26.08
2	1.9	3.4	4.7	18.6	17.8	24.69	23.74	17.08	34.66
2.5	4.1	4.15	5.95	22.6	20.15	27.74	29.84	20.27	38.27
3	6.3	4.9	7.2	27.8	22.5	30.6	35.96	23.45	41.88
3.5	7.7	7.35	9.85	29.3	26.55	36.1	42.56	24.93	44.53
4	9.1	9.8	12.55	31.6	31.6	41.7	49.2	26.41	47.17
4.5	9.8	12.4	16.05	33.6	38.1	50.7	51.1	28.09	50.34
5	10.5	15	19.7	35.5	43.9	60.3	53	29.77	53.5
5.5	10.55	15.8	21.6	37.15	47.4	62	57.5	32.57	57.43
6	10.65	16.6	23.5	37.84	51	63.78	61.96	35.37	61.36
6.5	10.7		25.15		53.85	65.88	66.86	38.62	66.14
7	11.5		26.8		56.7	67.8	71.81	41.87	70.92
7.5	11.53		27.3		58.5		77.11	46.01	76.3
8	11.53		27.8		60.3		82.42	50.14	81.68
8.5			28.2				87.77	54.94	87.87
9			28.6				93.2	59.74	94.06
9.5							99.55	65.47	100.52
10								71.19	106.98
10.5								78.53	114.74
11								85.87	122.5
11.5								95.99	132.72
12								106.1	142.93
12.5								117.92	155.86
13								129.73	168.79
13.5								141.12	181.98
14								152.51	195.17
14.5								162.6	207.69
15								172.69	220.21
15.5								179.64	233.05
16								186.58	245.88
16.5									255.72
17									265.56
17.5									272.31
18									279.05

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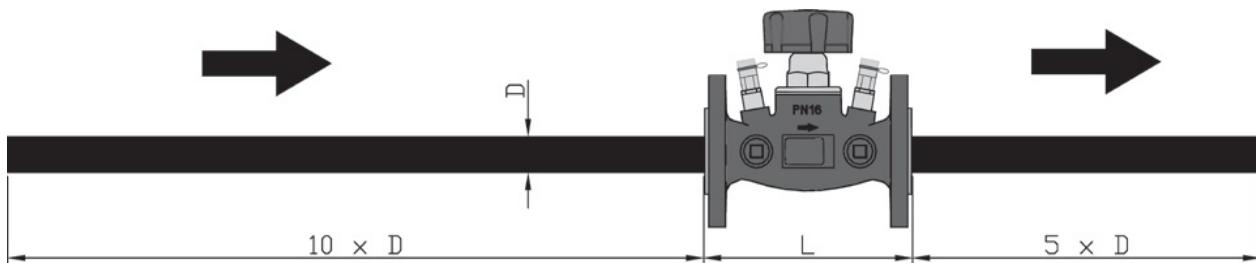
### Spare Parts

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 6517 10	DN 100 - 150	STRÖMAX-GMF hand wheel
1 6387 12	DN15 - 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

Please Note. The following flow and setting values are valid for dimensioning and location of HERZSTRÖMAX-4218 GMF circuit regulating valves.

### Measuring

The valves must always be installed with a minimum of 10 pipe diameters of straight pipe, without intrusion, upstream. Downstream of the valve a minimum of 5 pipe diameters of straight pipe are required.



### Coating

Base coat based on alkyd resins (resin primer) and contains lead and chromate anticorrosive.

Top coating with epoxy resin.

Solvent content is less than in the VOC plant regulation in 2002 accepted.

Gloss: matt Dry film thickness (DFT): ~ 100 microns