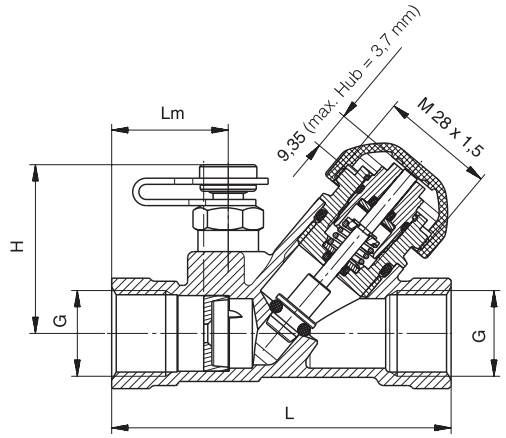
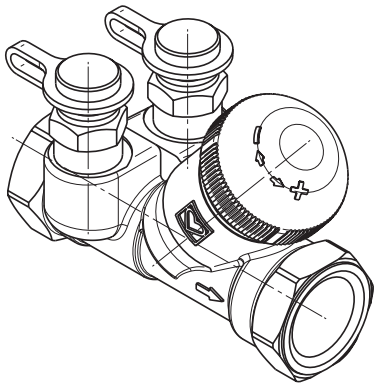
HERZ 7217 V

Integral Fixed Orifice Control Valve

Data sheet **7217 V,** Issue 0812





Size in mm

STRÖMAX	Fig No	DN	L	Lm	Rp	H	SW	kv	kvs
TS-V LF	1 **7217** 50	15	83	28,5	1/2	41	27	0,07 - 0,45	0,48
TS-V MF	1 **7217** 59	15	83	28,5	1/2	41	27	0,30 - 0,90	0,97
TS-V	1 **7217** 51	15	83	28,5	1/2	41	27	0,45 - 1,70	1,95
TS-V	1 **7217** 52	20	91	31	3/4	41	32	0,40 - 3,40	3,95

Version

The HERZ 7217TSV combined control, regulating and measuring valve has an integral orifice incorporated into the valve casting. Available in sizes from DN15 to DN20, with BSP female threaded ends to BS21. The valve is also available in Low Flow and Medium Flow DN15 versions.

Other Versions

1 **7217** 11 DN 15 Thermostatic Regulating Valve STRÖMAX TS-90 Straight model with test points, G (male thread)
1 **7217** 67 DN 15 Thermostatic Regulating Valve STRÖMAX TS-98-V Straight model with test points, G (male thread)
1 **7217** 21 DN 15 Thermostatic Regulating Valve STRÖMAX TS-90-E Straight model with test points, G (male thread)
1 **7217** 31 DN 15 Thermostatic Regulating Valve STRÖMAX TS-90-E Straight model with test points, Rp (female thread)
1 **7217** 01 DN 20 Thermostatic Regulating Valve STRÖMAX TS-E Straight model with test points, G (male thread)
1 **7217** 02 DN 25 Thermostatic Regulating Valve STRÖMAX TS-E Straight model with test points, G (male thread)
1 **7217** 03 DN 32 Thermostatic Regulating Valve STRÖMAX TS-E Straight model with test points, G (male thread)
1 **7217** 41 DN 20 Thermostatic Regulating Valve STRÖMAX TS-E Straight model with test points, Rp (female thread)
1 **7217** 42 DN 25 Thermostatic Regulating Valve STRÖMAX TS-E Straight model with test points, Rp (female thread)
1 **7217** 43 DN 32 Thermostatic Regulating Valve STRÖMAX TS-E Straight model with test points, Rp (female thread)
1 **7217** 68 DN 15 Thermostatic Regulating Valve STRÖMAX TS-99-FV Straight model with test points, G (male thread)
1 **7723** 82 DN 20 HERZ-Zone Valve
1 **7760** 51 DN 15 HERZ-Thermostatic Valve with reverse function
1 **7760** 52 DN 20 HERZ-Thermostatic Valve with reverse function

Technical data

Close the valve clockwise

Max. operating temperature	120 °C at 10 bar
Max. operating pressure	20 bar at 20 °C
Max. differential pressure on the seat	10 bar

Water purity in accordance with the OeNORM H5195 and VDI 2035 standards.
HERZ compression adapters for copper and steel pipes, allowable temperature and pressure ratings according to EN 1254-2 1998 Table 5. HERZ plastic pipe connections max. operating temperature 95 °C and max. operating pressure 10 bar, if approved by the pipe manufacturer.

Ammonia contained in hemp can damage brass valve bodies, EPDM gaskets can be affected by Mineral oils lubricants and thus lead to failure of the EPDM seals. Please refer to manufacturers documentation when using ethylene glycol products for frost and corrosion protection.

Application

Heating and Cooling for Fan coils and other terminal units, for control and balancing with high accuracy and good repeatability. Also used as zone control valve for heating and cooling circuits

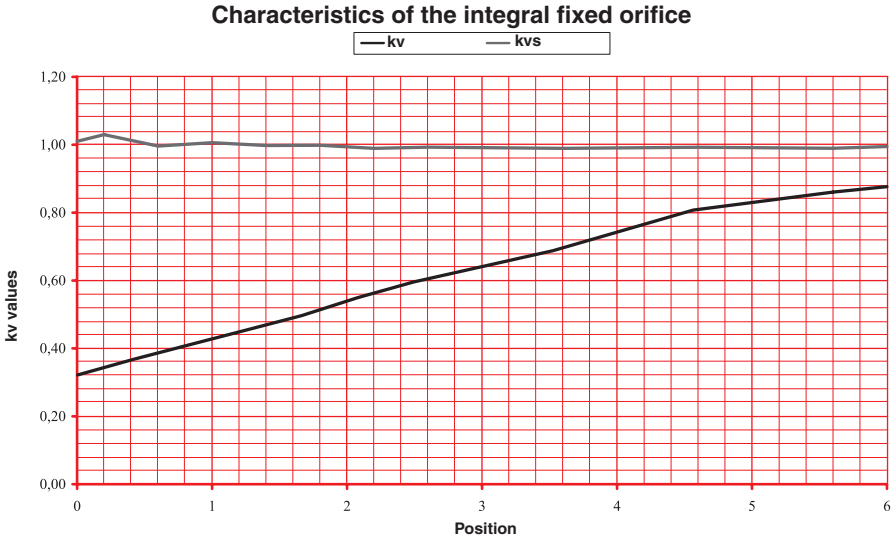
Special design features

Body is identical with STRÖMAX 4017 M

Flow direction
The flow is observed according to the arrow on the body. There are no special tools required.

Installation
In any orientation.

Integral Fixed Orifice Control Valve 7217 TS-V



Presetting

Presetting adjustments can be made to the valve by rotating the valve spindle by means of the adjustment nut.

The adjustment of the upper part is made by means of HERZ-setting key (1 **6819** 72).

The minimum effective operating position is 0,0

DN	15	15-LF	15-MF	20
Position	kv	kv	kv	kv
0,0	0,40	0,07	0,17	0,33
1,0	0,60	0,15	0,30	0,80
2,0	0,80	0,23	0,42	1,70
3,0	1,00	0,31	0,53	2,40
4,0	1,15	0,36	0,66	2,80
5,0	1,80	0,41	0,78	3,10
6,0	2,00	0,45	0,88	3,40

Flushing

If it is required to isolate the valve,during flushing or maintenance, please use the orange cap provided with the valve and screw completely down to achieve full shut off.

Actuators

1 **7990** 00	24 V / 100 Ohm	DDC actuating drive
1 **7708** 23	230 V	HERZ-Actuating drive for 2-point or pulse control with normally closed contact (NC).
1 **7708** 50	230 V	HERZ-Actuating drive for 2-point or pulse control with auxiliary contact.
1 **7709** 01	230 V	HERZ-Actuating drive for 2-point or pulse control with normally open contact (NO).

HERZ connection adapters for copper and steel pipes

The commissioning valves can optionally be connected to a threaded pipe or used on a calibrated copper pipe compression adapter. Compression adapters must be ordered separately.

Pipe dimension mm

	8	10	12	14	15	16	18
Valve DN	**15**						
Adapter	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01
connection adapter	1 **6274** 18	1 **6274** 00	1 **6274** 01	1 **6274** 02	1 **6274** 03	1 **6274** 04	
connection adapter			1 **6276** 12	1 **6276** 14	1 **6276** 15	1 **6276** 16	1 **6276** 18

Pipe dimension mm

	8	10	12	14	15	16	18	22
Valve DN	**20**							
Adapter	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 13
connection adapter	1 **6274** 18	1 **6274** 00	1 **6274** 01	1 **6274** 02	1 **6274** 03	1 **6274** 04		1 **6273** 01
connection adapter			1 **6276** 12	1 **6276** 14	1 **6276** 15	1 **6276** 16	1 **6276** 18	

When installing soft steel or copper pipes with a pipe wall of 1 mm or less with compression unions, we recommend the use of support sleeves (order no.: 1 0674 xx). When installing plastic pipes, suitable calibration tools are needed. Please refer to our instruction manual. For proper installation use silicone oil to lubricate the thread of the locking nut or olive screw as well as the olive.

Plastic pipe connections

The commissioning valves can be used in systems with plastic pipes. Plastic pipe connections are fitted to special adapters.

Pipe dimension mm

	14 x 2	16 x 2	16 x 2,2	17 x 2	17 x 2,5	18 x 2	18 x 2,5	20 x 2	20 x 2,5	20 x 3,5
Valve DN	**15**									
Adapter	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01	1 **6266** 01
Pipe connection	1 **6098** 02	1 **6098** 03	1 **6098** 12	1 **6098** 04	1 **6098** 05	1 **6098** 07	1 **6098** 06	1 **6098** 08	1 **6098** 11	1 **6098** 10

Pipe dimension mm

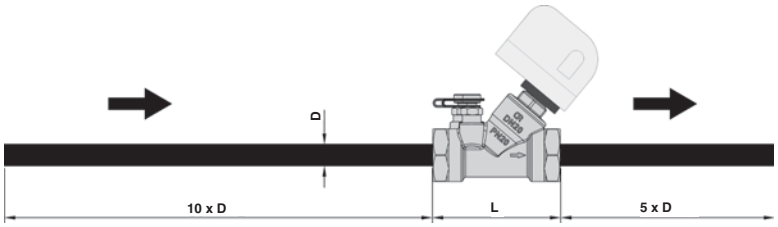
	14 x 2	16 x 2	16 x 2,2	17 x 2	17 x 2,5	18 x 2	18 x 2,5	20 x 2	20 x 2,5	20 x 3,5
Valve DN	**20**									
Adapter	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20	1 **6266** 20
Pipe connection	1 **6098** 02	1 **6098** 03	1 **6098** 12	1 **6098** 04	1 **6098** 05	1 **6098** 07	1 **6098** 06	1 **6098** 08	1 **6098** 11	1 **6098** 10

Spare parts

1 0284 01	1/4	test point for HERZ circuit control valve, blue cap (return)
1 0284 02	1/4	test point for HERZ circuit control valve, red cap (flow)
2 0284 01	1/4	test point for HERZ circuit control valve (for drinking water), blue cap (return)
2 0284 02	1/4	test point for HERZ circuit control valve (for drinking water), red cap (flow)
1 0284 11	1/4	test point for HERZ circuit control valve, extended model, blue cap (return)
1 0284 12	1/4	test point for HERZ circuit control valve, extended model, red cap (flow)
1 0284 22	1/4	HERZ test point with draining function, red cap (flow)
1 0284 21	1/4	HERZ test point with draining function, blue cap (return)

Measuring

Integral Fixed Orifice Control Valves must always be installed with a minimum of 10 pipe diameters of straight pipe, without intrusion, upstream of the orifice plate. Downstream of the valve a minimum of 5 pipe diameters of straight pipe are required.



When Ethylene glycol is used in systems with frost protection correction factors will be required as the water-glycol mixture has a different density than pure water, and is also still dependent on temperature.

Correction factors for glycol mixtures with measurements with HERZ-measuring computer

Temperature °C	Ethylene glycol 34% (Factor)	Ethylene glycol 40% (Factor)	Ethylene glycol 44% (Factor)
-20	1.98	2.133	2.235
-15	1.833	1.9908	2.096
-10	1.737	1.8738	1.965
-5	1.649	1.7702	1.851
0	1.567	1.6744	1.746
5	1.482	1.5876	1.658
10	1.412	1.505	1.567
15	1.342	1.4254	1.481
20	1.281	1.3554	1.405
25	1.226	1.2956	1.342
30	1.163	1.2284	1.272
35	1.123	1.1848	1.226
40	1.079	1.136	1.174
45	1.04	1.0928	1.128
50	1	1.0528	1.088
55	0.974	1.0214	1.053
60	0.947	0.9938	1.025
65	0.926	0.9714	1
70	0.912	0.9528	0.98
75	0.893	0.9332	0.96
80	0.884	0.9242	0.951

$dP_R / f = dP_{Display}$

$Q_R * 1 / \sqrt{f} = Q_{Display}$

dP_R	Real differential pressure
$dP_{Display}$	Differential pressure on the display
Q_R	Real flow rate
$Q_{Display}$	Flow rate on the display
f	Factor from the table above

Warning notices

The valves must be installed for the correct application using clean fittings.

Please avoid introducing any dirt into the system when installing the valve.

Screw the pipe into the valve and with a suitable assembly tool taking care to support the valve during tightening to avoid distortion.

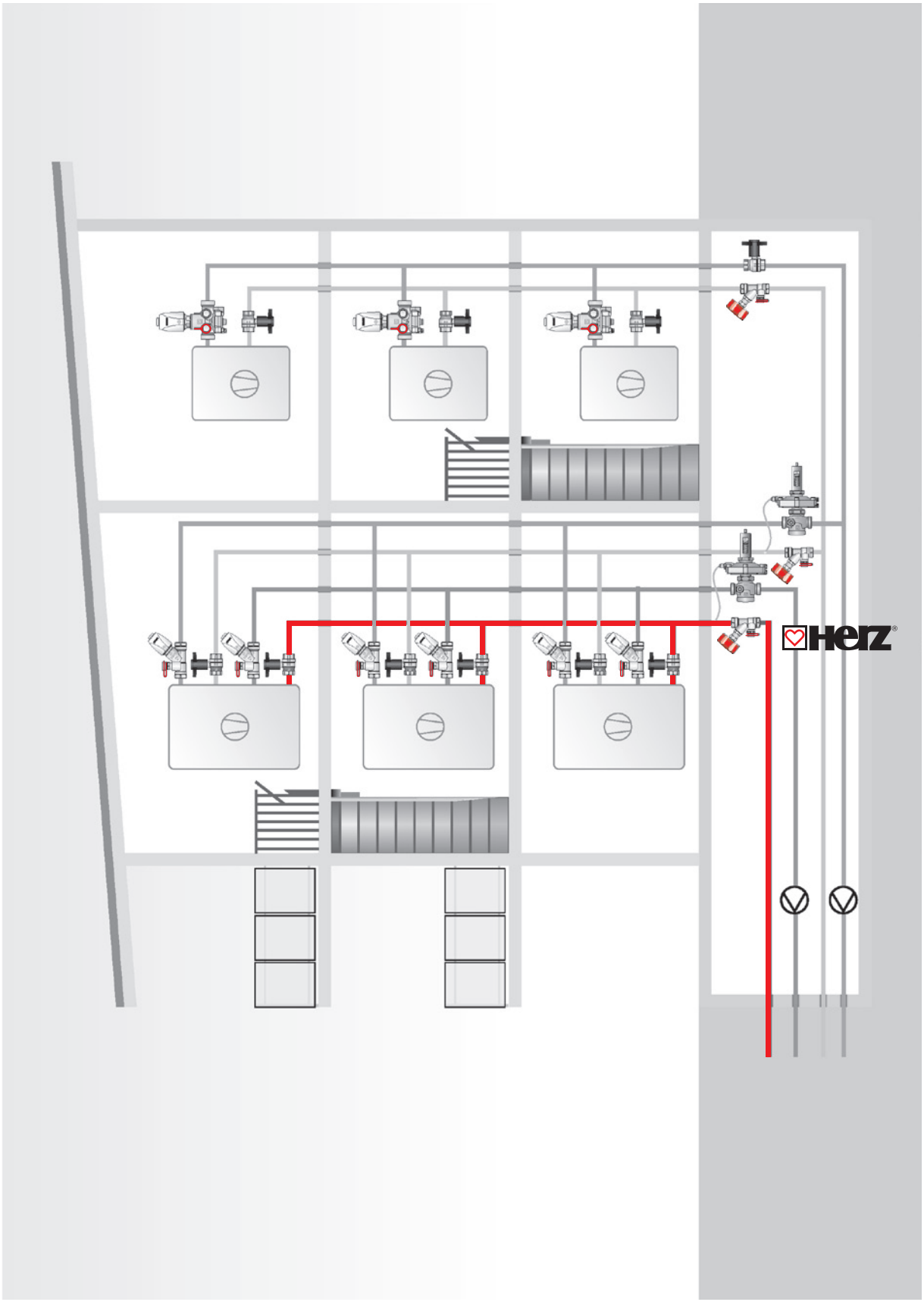
The installation of the valve should be carried out by competent trained professionals. Sealing materials should be used to seal the connection between the pipe and the valve. If space is restricted, the valve upper part can be removed during installation. When reassembling the upper part excessive tightening of the valve upper part is not necessary as the upper part is sealed with an O ring.

Test points

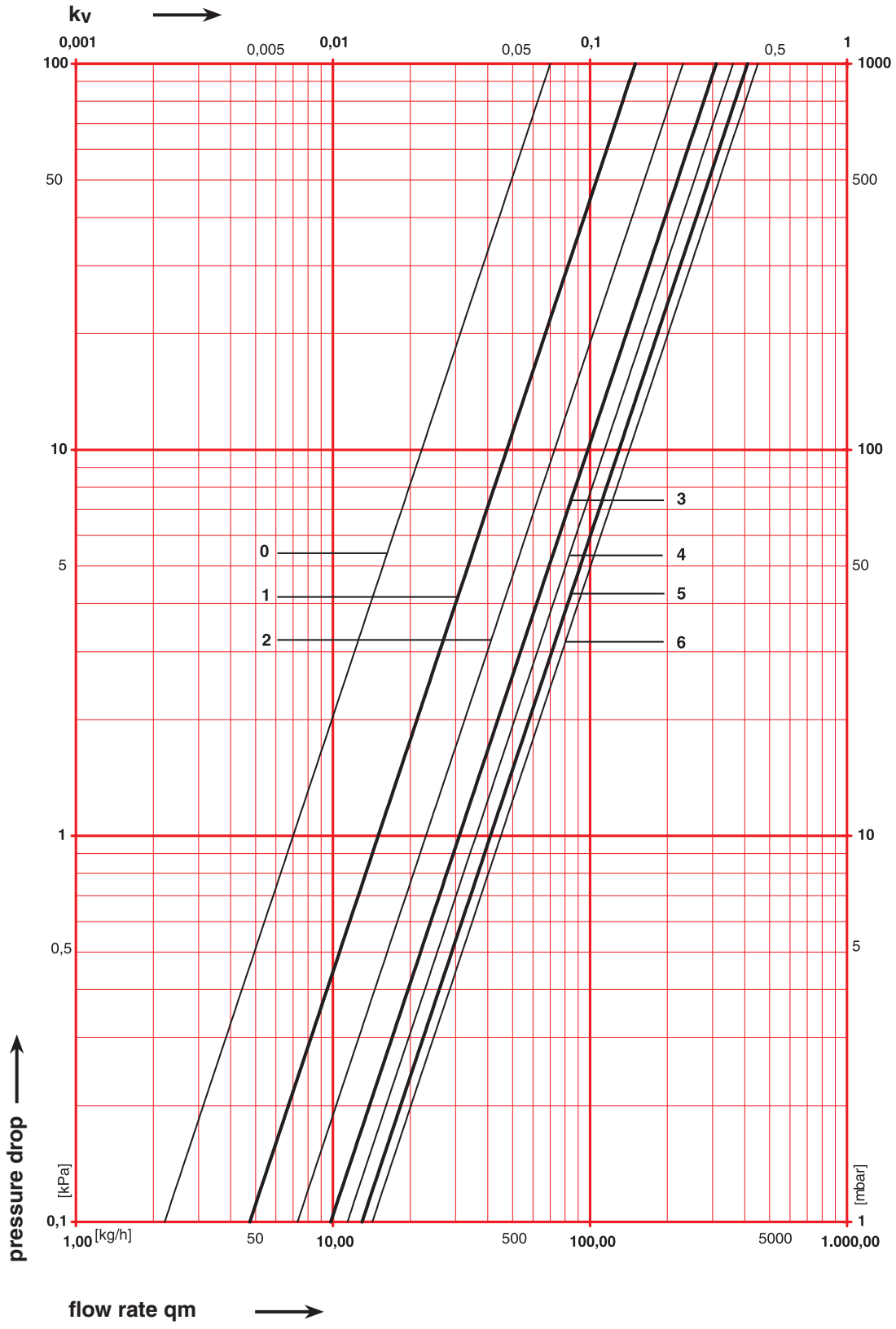
Two test points are fitted on the same side of the valve and factory sealed. This arrangement ensures the best accessibility in any position and optimum connection of measuring instruments.

Measuring computer

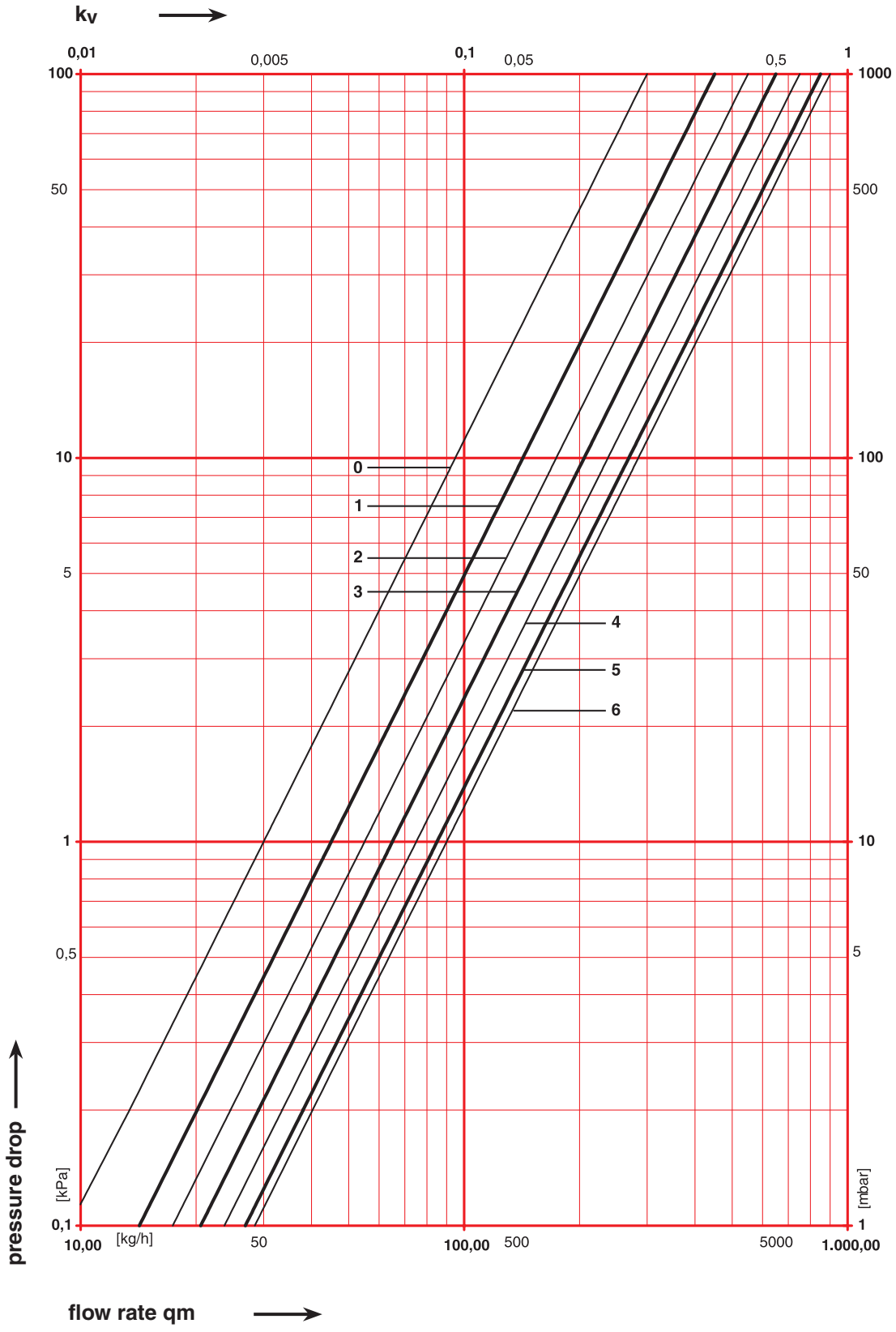
1 **8900** 03 HERZ-Measuring computer suitable for one-hand operation
1 **8904** 02 HERZ-Measuring computer for remote data interpretation



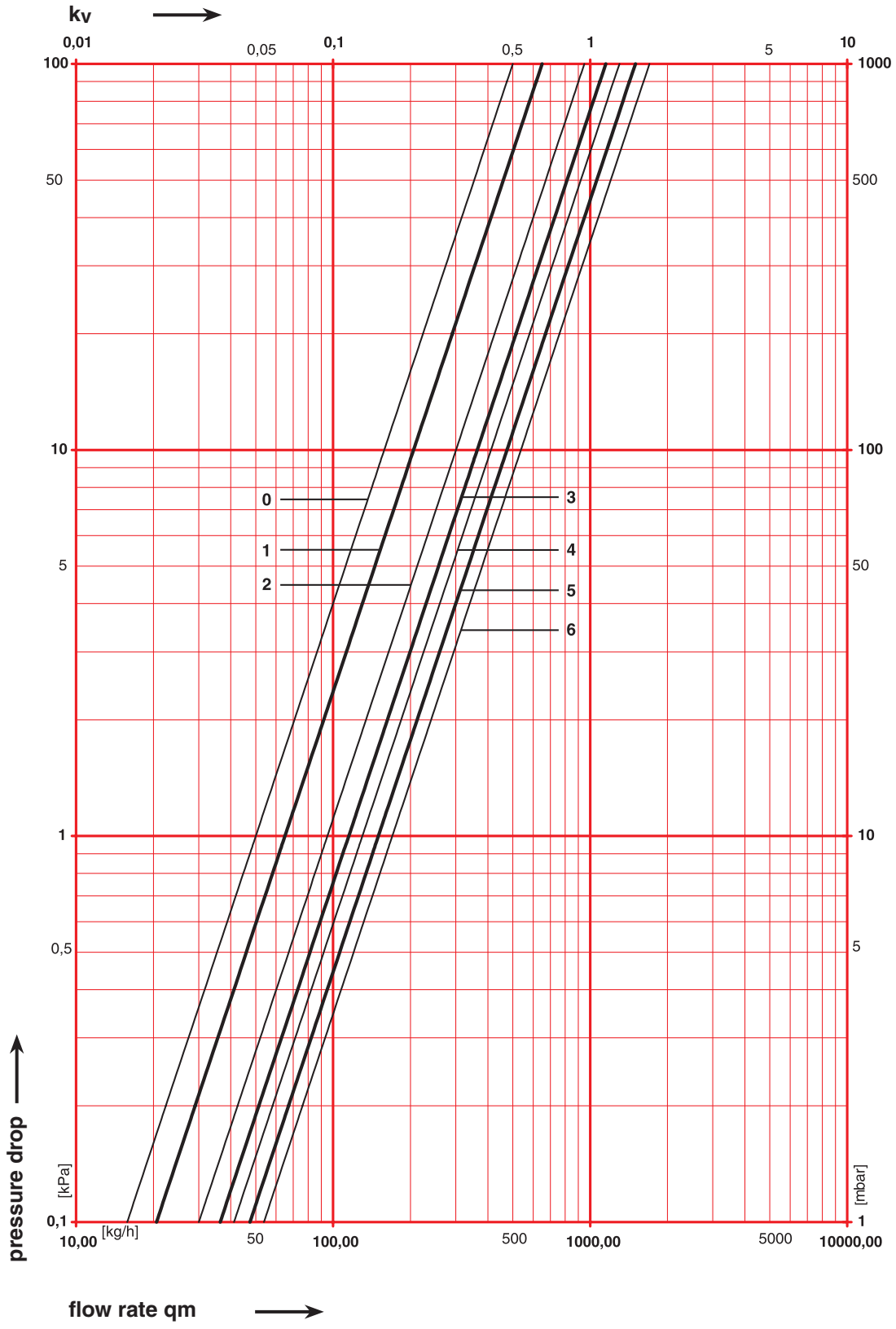
HERZ-flow data - pressure drop	STRÖMAX 7217 V
Art. Nr. 1 **7217** 50	DN 15-LF



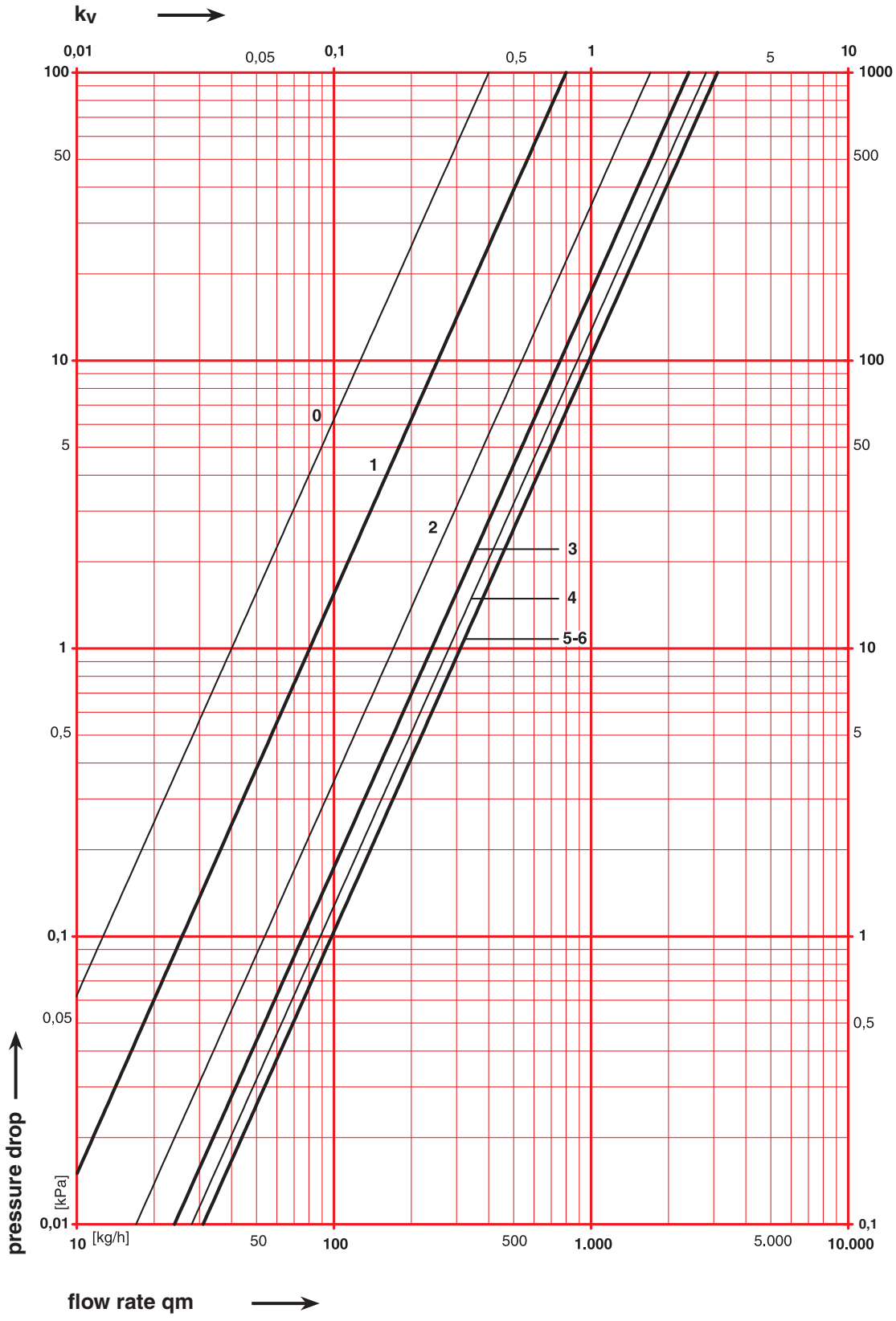
HERZ-flow data - pressure drop	STRÖMAX 7217 V
Art. Nr. 1 **7217** 59	DN 15-MF



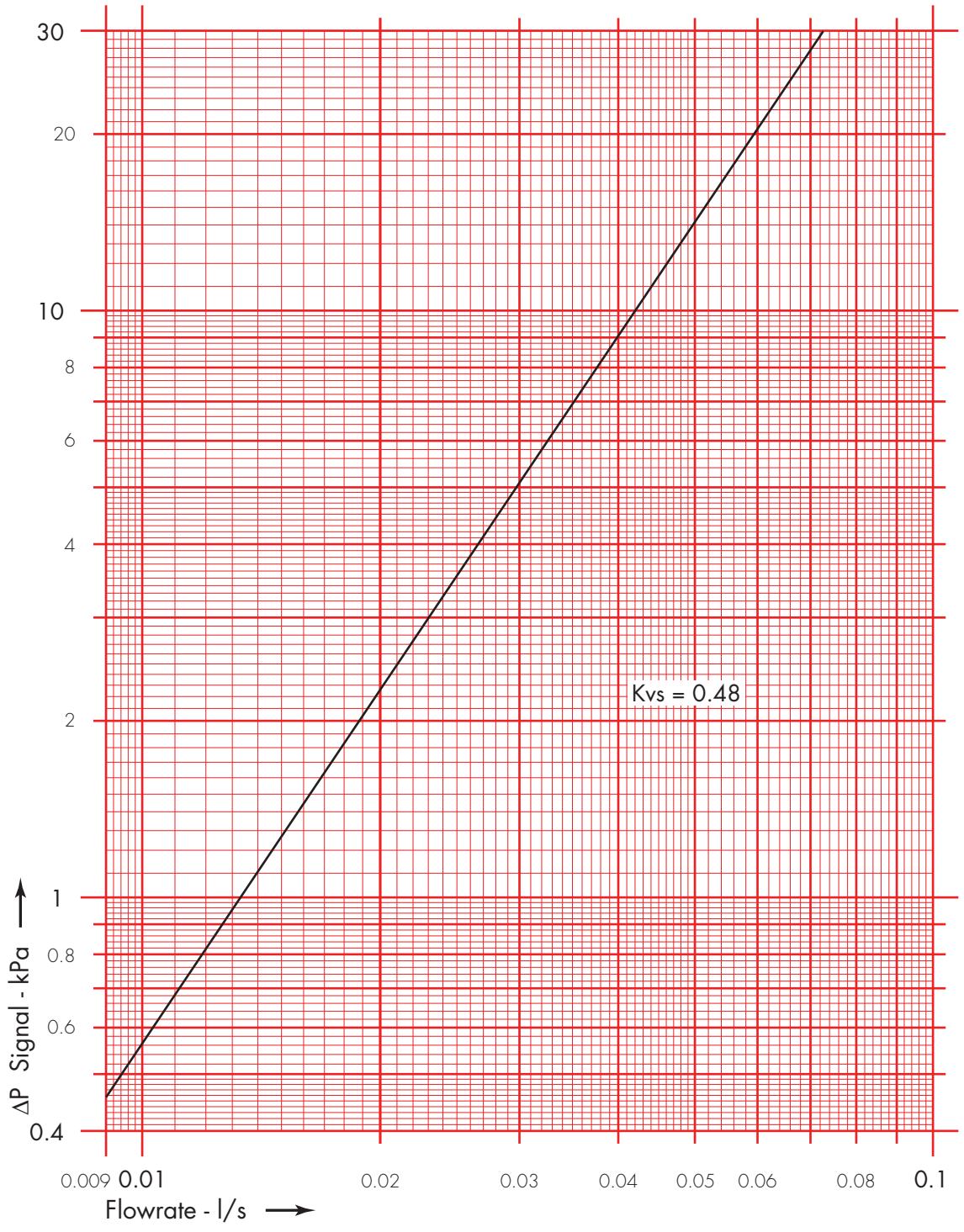
HERZ-flow data - pressure drop	STRÖMAX 7217 V
Art. Nr. 1 **7217** 51	DN 15



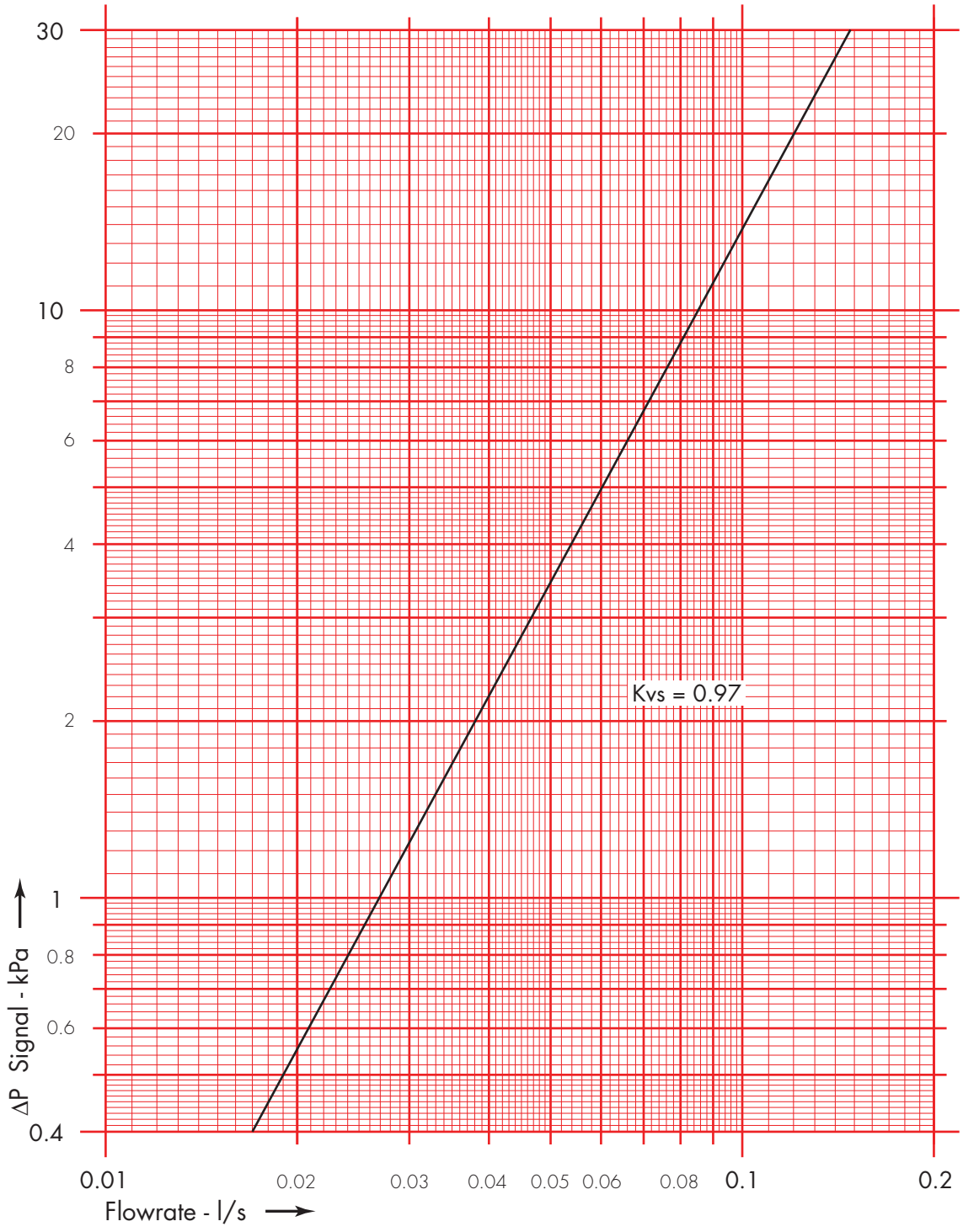
HERZ-flow data - pressure drop	STRÖMAX 7217 V
Art. Nr. 1 **7217** 52	DN 20



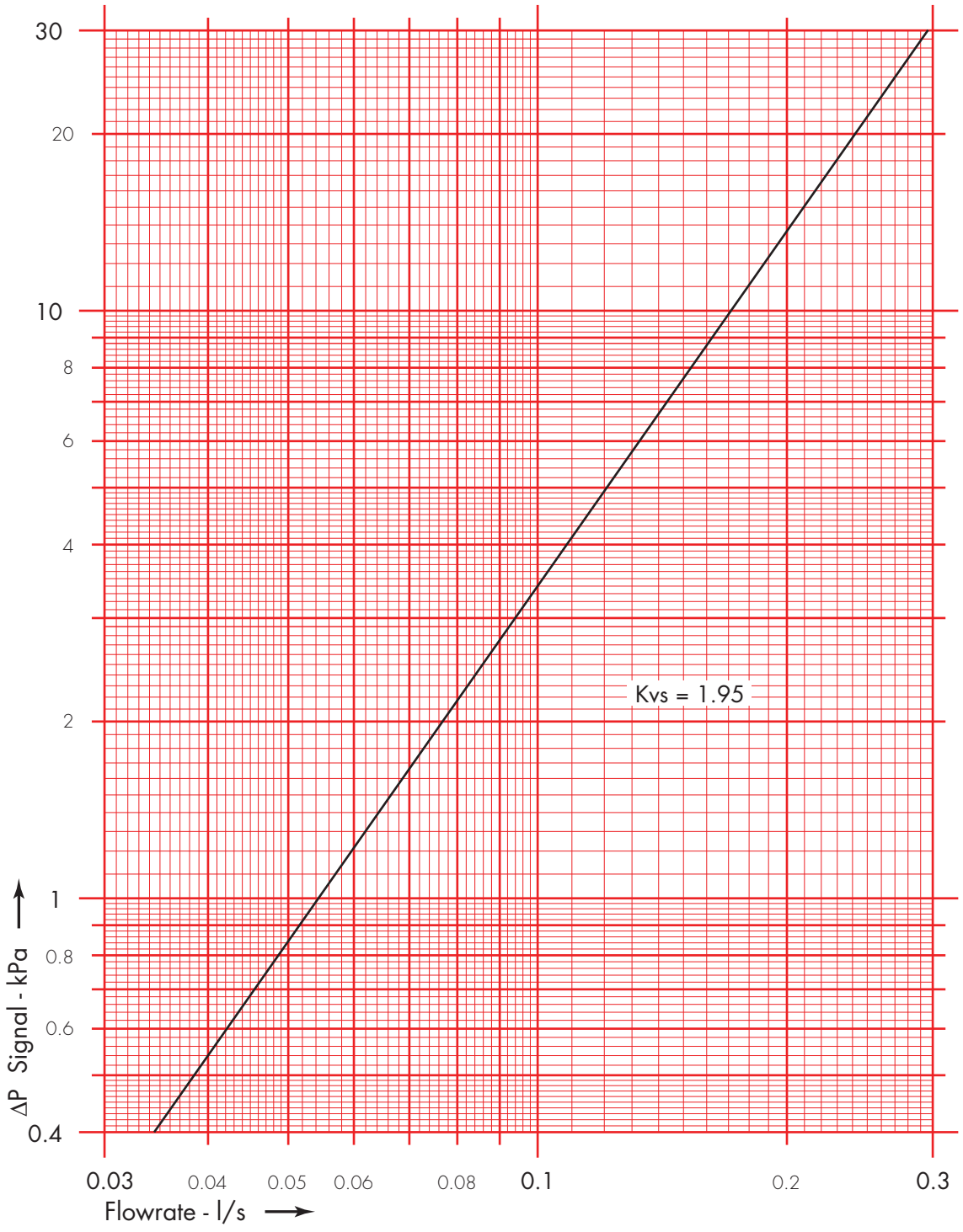
HERZ- flow data - flow signal	STRÖMAX 7217 V
Fig. No. 1 **7217 50**	Dim. DN 15-LF



HERZ- flow data - flow signal	STRÖMAX 7217 V
Fig. No. 1 **7217 59**	Dim. DN 15-MF



HERZ- flow data - flow signal	STRÖMAX 7217 V
Fig. No. 1 **7217 51**	Dim. DN 15



HERZ- flow data - flow signal	STRÖMAX 7217 V
Fig. No. 1 **7217 52**	Dim. DN 20