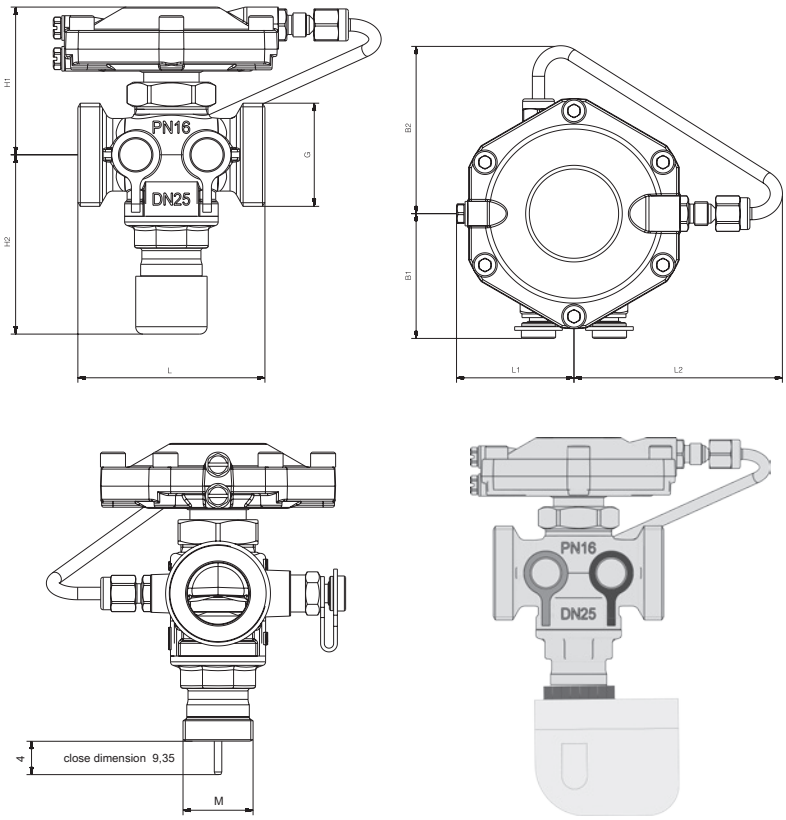
HERZ-Motorised flow controler

Control and regulating valve

Data sheet 4006, Issue 0916



	Order no:	DN	G	L	H1	H2	H2+Actuator	B1	B2	L1	L2	M
with test points.	1 4006 11	15	¾ G	66	59	73	132	49	63	48	81	28 x 1.5
	1 4006 12	20	1 G	76	60	73	132	51	68.5	48	85	28 x 1.5
	1 4006 13	25	1¼ flatsealing	76	60	73	132	51	68.5	48	85	28 x 1.5
	1 4006 14	32	1½ flatsealing	114	76	86	143	76	47	57	89	28 x 1.5
	1 4006 15	40	1¾ flatsealing	132	86	95	154	75	47	70	81	28 x 1.5
	1 4006 16	50	2 flatsealing	140	86	95	154	75	47	70	81	28 x 1.5
without test points.	1 4006 41	15	¾ G	66	59	73	132	49	63	48	81	28 x 1.5
	1 4006 42	20	1 G	76	60	73	132	51	68.5	48	85	28 x 1.5
	1 4006 43	25	1¼ flatsealing	76	60	73	132	51	68.5	48	85	28 x 1.5
	1 4006 44	32	1½ flatsealing	114	76	86	143	76	47	57	89	28 x 1.5
	1 4006 45	40	1¾ flatsealing	132	86	95	154	75	47	70	81	28 x 1.5
	1 4006 46	50	2 flatsealing	140	86	95	154	75	47	70	81	28 x 1.5

Technical data

Max. operating pressure	25 bar
Max. differential pressure on the body	6 bar
Min. operating temperature	2 °C (pure water)
Min. operating temperature	- 20 °C (frost protection)
Max. operating temperature	up to DN 32 130 °C
	from DN 40 110 °C
Lift	4 mm

The integrated control unit together with the actuating drive is responsible for modular control. Various actuating drives might be used. Integrated DP controller gives the control valve 100% authority.

Materials

Body:	dezincification-resistant brass
Membranes and O-rings:	EPDM

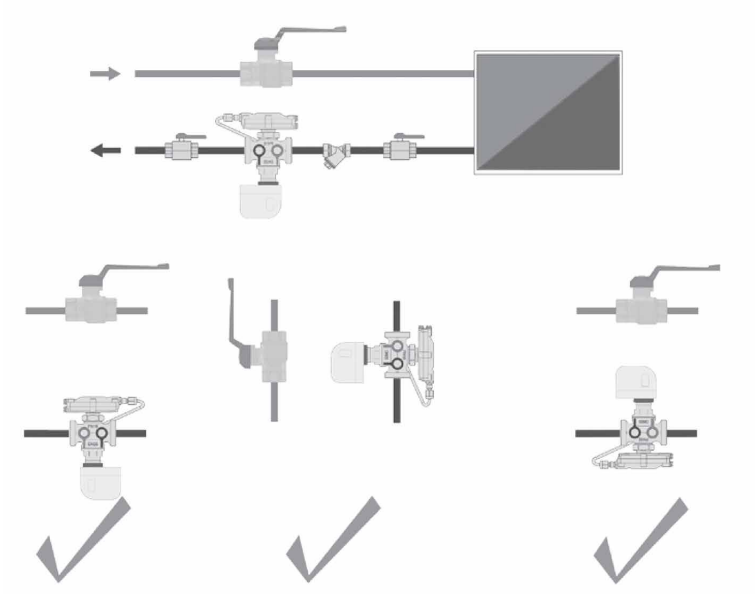
Water purity in accordance with the ÖNORM H 5195 and VDI 2035 standards
Ethylene and propylene glycol can be mixed to a ratio of 25 - 50 vol. [%].

Application

The Pressure Independent Balancing Control Valve (PIBCV) is used in all heating and cooling systems with circulation pumps. The valve automatically maintains flow to the required part of the system at the set rate by measuring and immediately adjusting to any variation in pressure. No additional measurements are necessary and the correct flow rate is achieved at all operating conditions. The diaphragm responds to the pressure upstream and downstream of the regulating valve (via an internal impulse line). The valve settings directly affect the volumetric flow through the valve. It is thus possible to set the maximum flow rate based on the flow chart when the valve is fitted. This allows for the balancing of heating circuits, cooling water systems, ceiling cooling and heating panels, air heaters, etc. without any need to first assess the pressure variations in the system. The valve 's principal application is as a control valve for terminal units. As it is pressure independent, it maximizes energy efficiency and negates the requirement for DP control valves. In addition to the PIBCV, HERZ Ball Valves (2190) can be fitted in the corresponding flow pipe. If control measurements of the flow rate are required, then STRÖMAX-M valves (4017 M, 4 117 M, 4217 GM) must be fitted instead.

Installation

The valve is fitted in the return in any orientation. The arrow on the valve body should align with the direction of flow.
It is recommended that an isolation valve is fitted both upstream and downstream of the PIBCV.
The PIBCV may be isolated using the HERZ pre-setting key (1 4006 02).
For pre-setting, turn the key right (clockwise) up to the stop. The setting should then read < 0%.

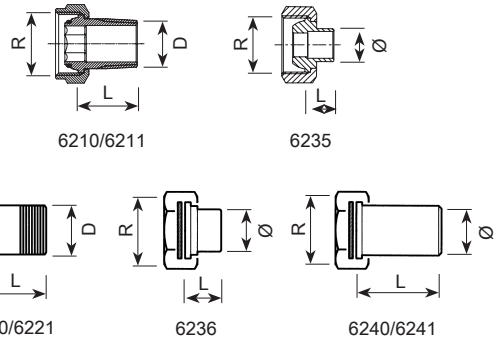


kvs-values

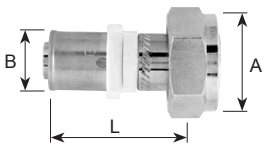
DN 15	0.4 m3/h	DN 32	2.5 m3/h
DN 20	0.9 m3/h	DN 40	5 m3/h
DN 25	1.9 m3/h	DN 50	5 m3/h

HERZ-Connection elements

1 6220 .. Iron pipe connection, consisting of nut, seal and pipe nipple with male pipe thread
1 6236 .. Soldering connection, consisting of nut, seal and soldering nipple
1 6240 .. Welding connection, consisting of nut, seal and welding nipple
1 6210 .. Iron pipe connection consisting of nut, seal and pipe nipple with male pipe thread
1 6235 .. Soldering connection, consisting of nut, seal and soldering nipple



Valve Dimension	Order number	R	D	ø	L
DN 15	1 6210 21	¾	½	-	25
DN 20	1 6210 02	1	¾	-	30
DN 25	1 6220 63	1¼	1	-	35
DN 32	1 6220 64	1½	1	-	40
DN 40	1 6220 65	1¾	1½	-	49
DN 50	1 6220 66	2⅜	2	-	56



Valve Dimension	Order number	A	B	L
DN 15	P 7014 81	G¾	14 X 2	50
DN 15	P 7016 81	G¾	16 X 2	50
DN 15	P 7018 81	G¾	18 X 2	50
DN 15	P 7020 81	G¾	20 X 2	50
DN 25	P 7026 43	G1¼	26 X 3	50
DN 25	P 7032 43	G1¼	32 X 3	50
DN 25	P 7040 43	G1¼	40 X 3.5	70
DN 32	P 7032 44	G1½	32 X 3	50
DN 32	P 7040 44	G1½	40 X 3.5	70
DN 32	P 7050 44	G1½	50 X 4	70

Tips

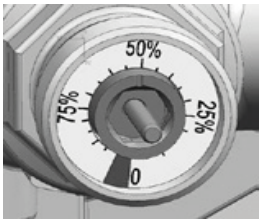
The valves must be installed for the correct application using clean fittings. A HERZ strainer (4111) should be fitted to prevent impurities.

Test points

Two test points are fitted on the same side of the valve and factory sealed. Thanks to this arrangement they are easily accessible and measurement devices can be quickly fitted, no matter in what position the valve has been installed.

Pre-setting

The valve setting is clearly shown in percent. The pre-set value can be easily adjusted. The pre-set PIBCV can be isolated at any time or adjusted to the required flow rate.

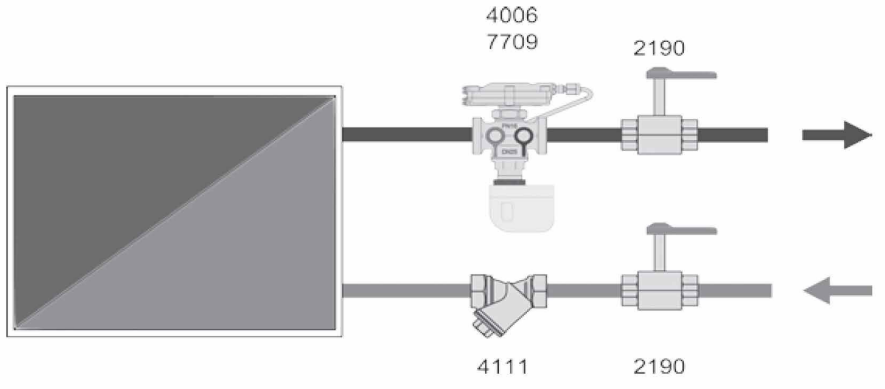


1 4006 02

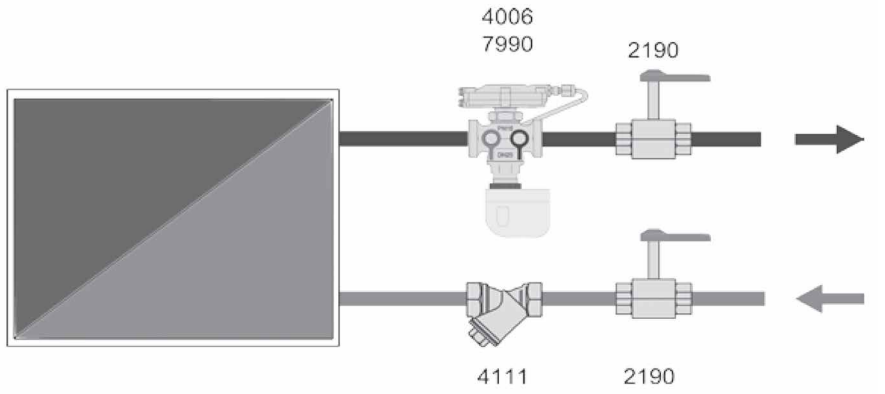
Application examples

Fan coil system with variable speed pump

Two-point control

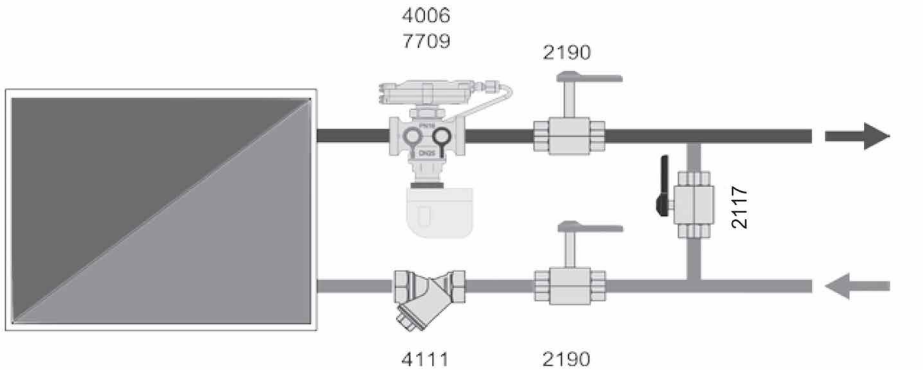


Modulating control

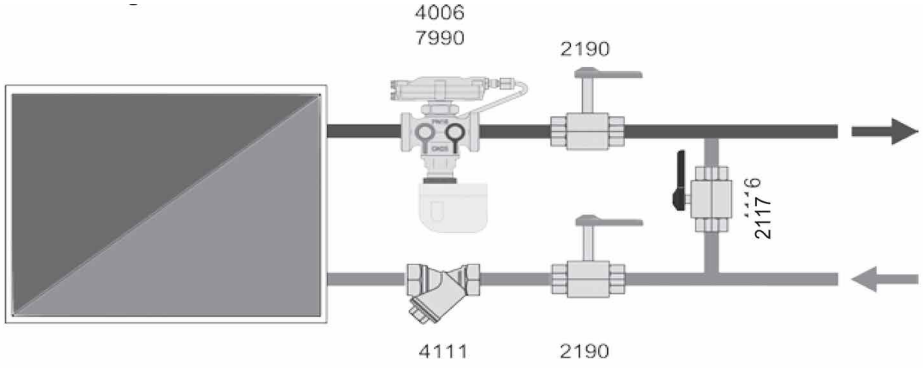


Fan coil system with constant-speed pump

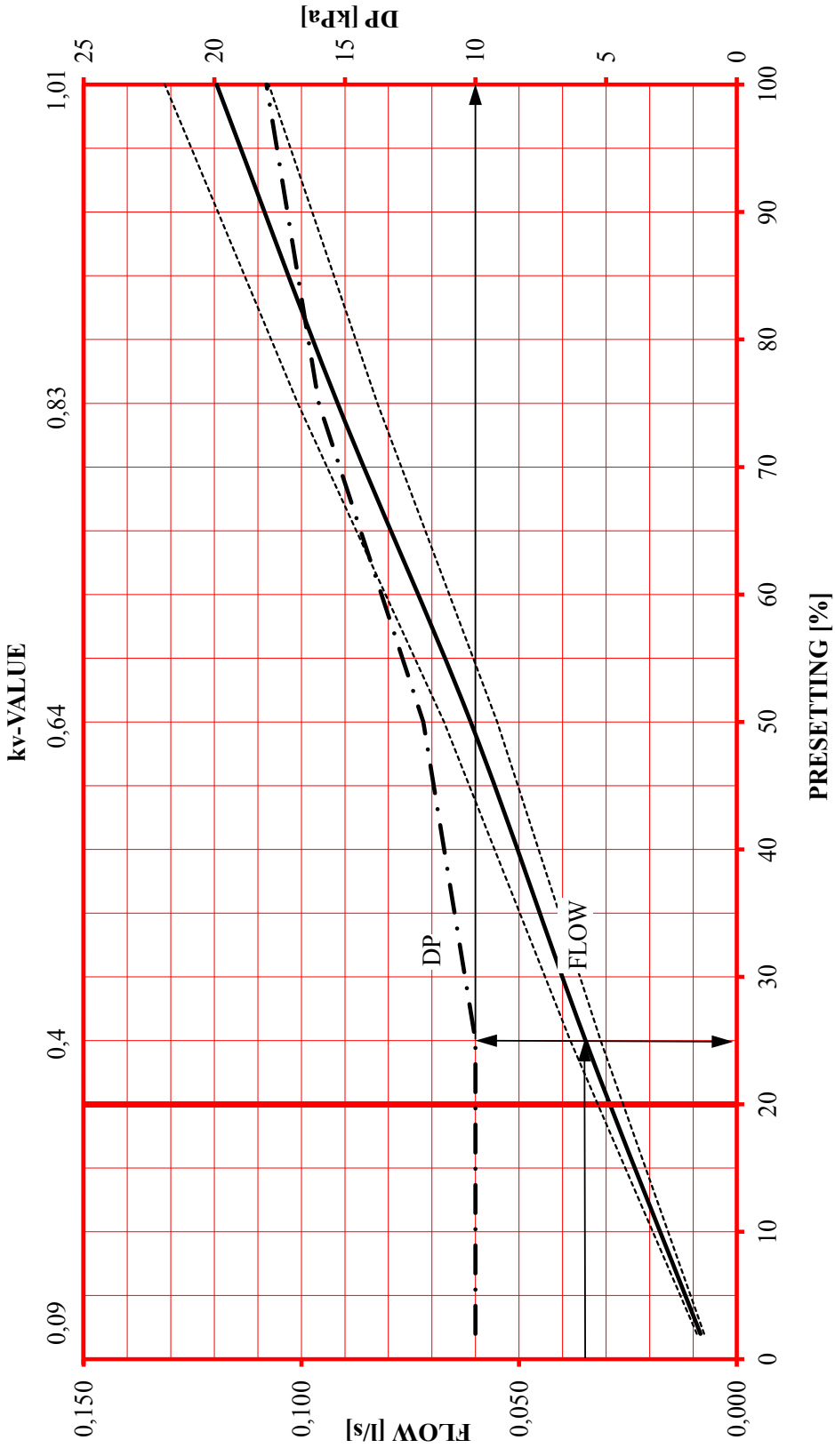
Two-point control



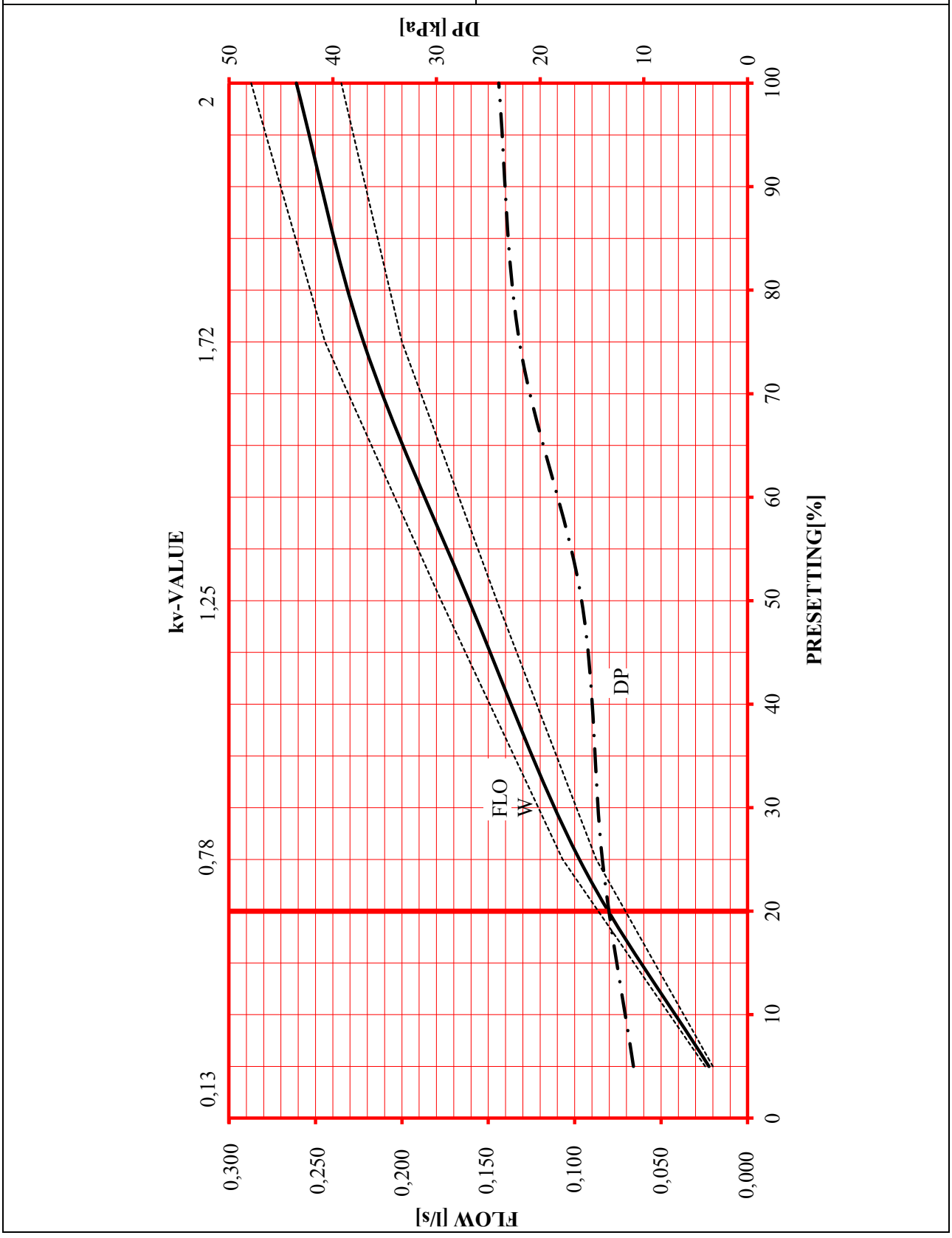
Modulating control



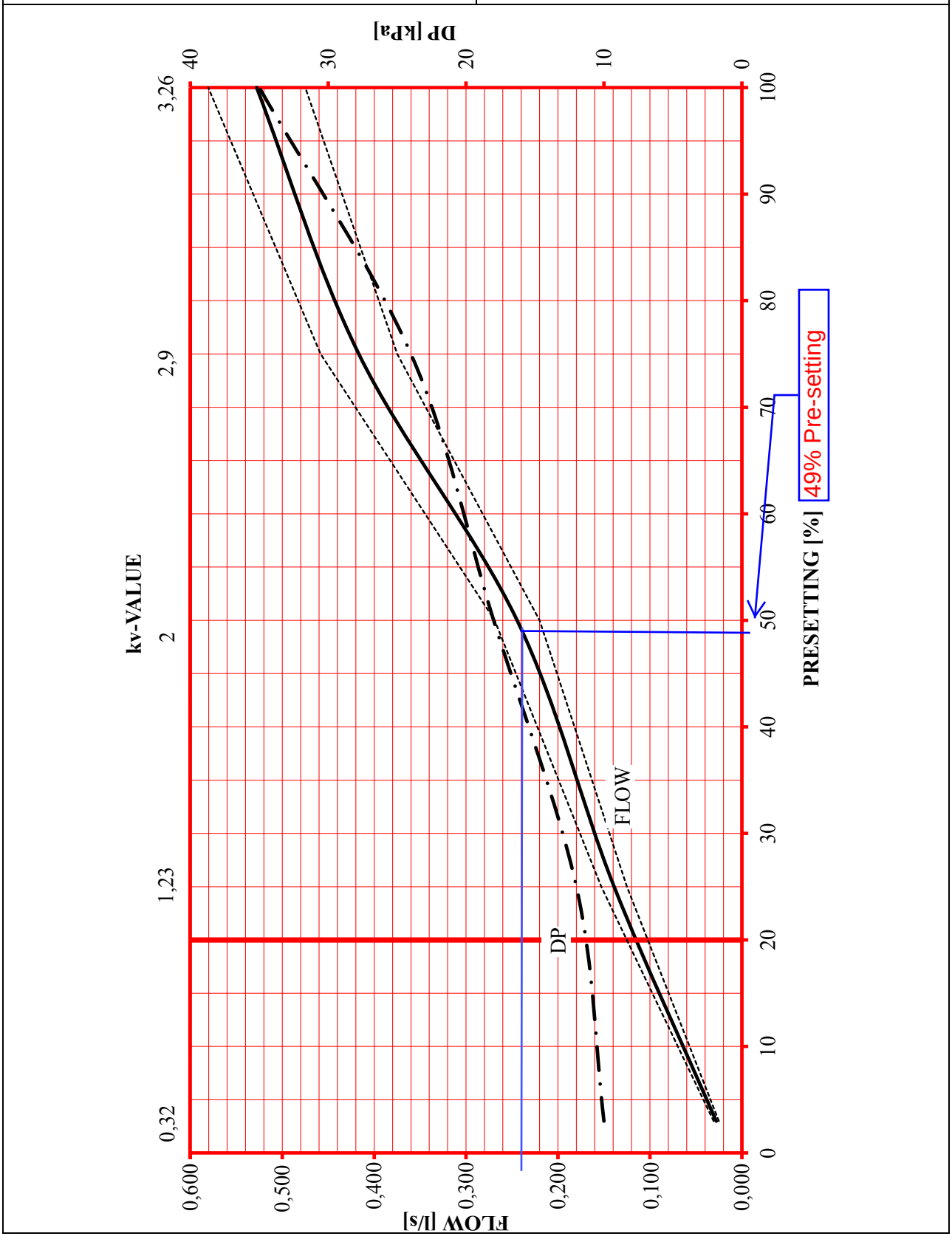
HERZ standard diagram	
Art. Nr. 1 4001 21, 1 4006 11	DN 15



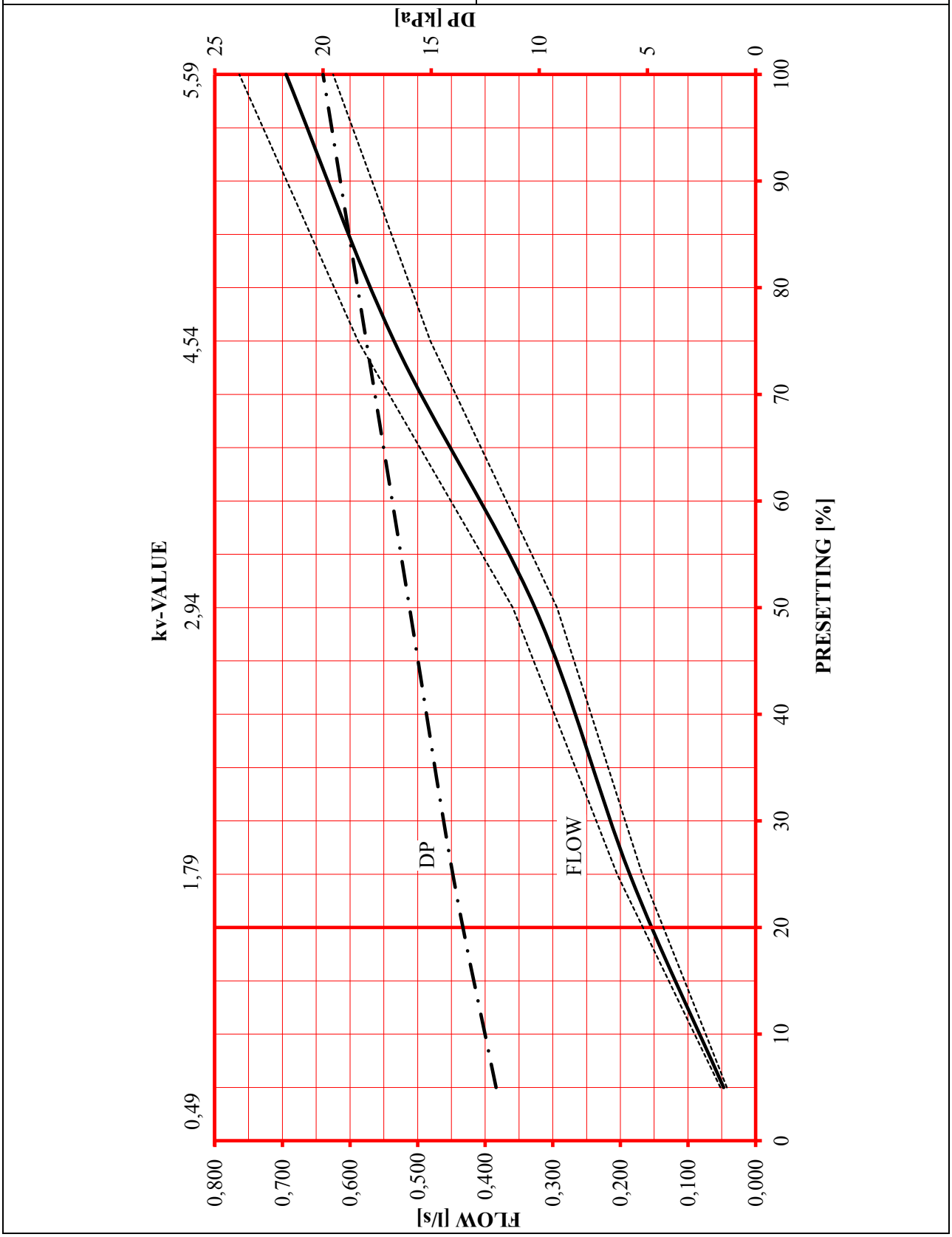
HERZ standard diagram	
Art. Nr. 1 4001 22, 1 4006 12	DN 20



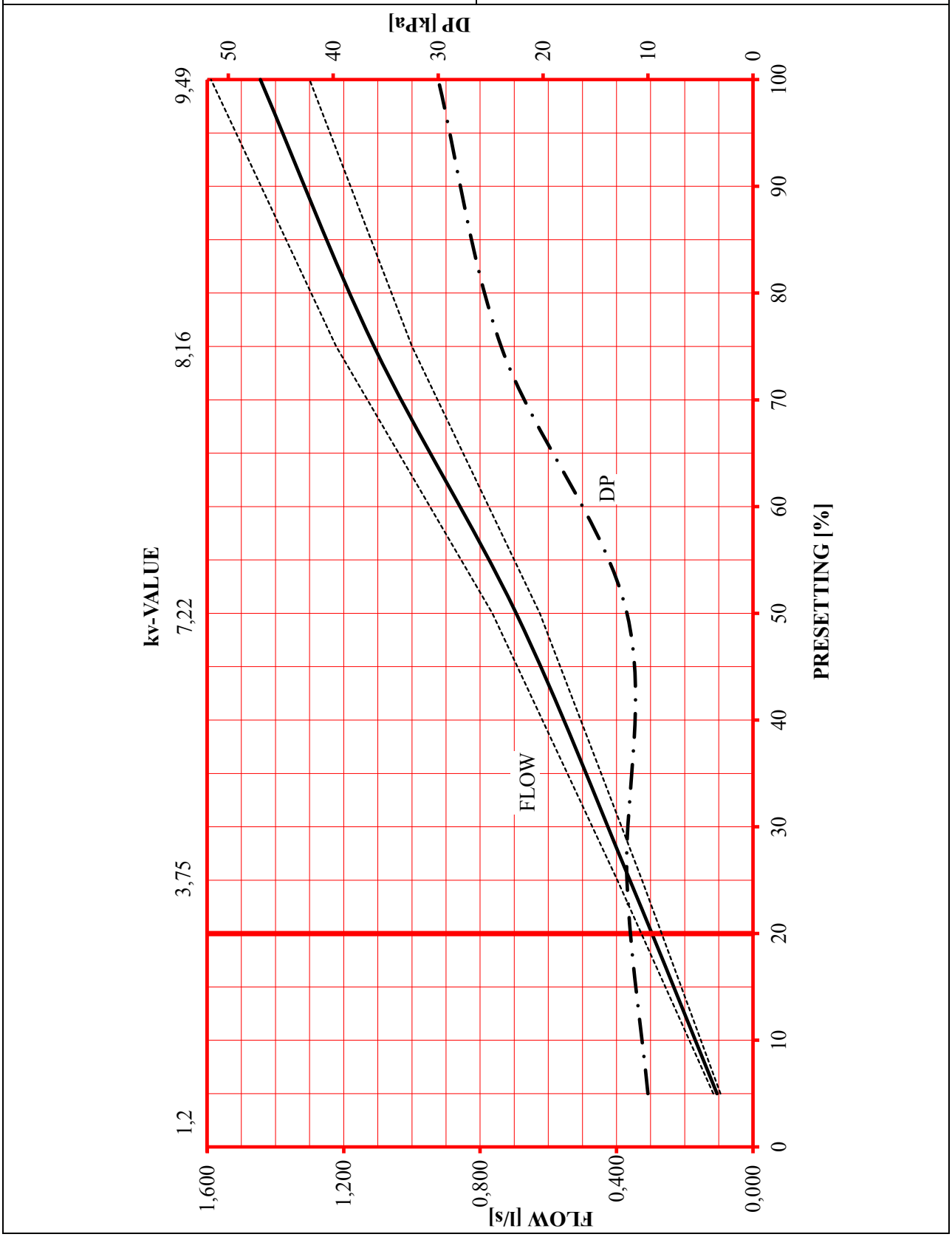
HERZ standard diagram	
Art. Nr. 1 4001 23, 1 4006 13	DN 25



HERZ standard diagram	
Art. Nr. 1 4001 24, 1 4006 14	DN 32



HERZ standard diagram	
Art. Nr. 1 4001 25, 1 4006 15	DN 40



HERZ standard diagram	
Art. Nr. 1 4001 26, 1 4006 16	DN 50