Versatile



Connect- 4 Smart

Simple and reliable connection for Fan-coils and terminal units

Connect-4 SMART has been designed to give a simple connection to fan-coils, or other terminal units, and utilises the 4006 SMART Pressure Independent Balancing Control Valve with 2190 extended lever ball valves, a 4111 strainer and a 4017 Fixed Orifice Valve to enable flow verification and isolation. On/off or modulating 0 – 10 V DC actuators can be fitted and integrated to a BMS if required.

The unit allows pressure independent control ensuring full stroke regardless of pressure fluctuations, while guaranteeing a constant flow rate to the terminal unit maximising energy efficiency for the system. The connect 4 unit also permits flushing and isolating operations to be undertaken.

The Connect-4 is fitted with extended handles and test points to allow for lagging after installation. This means there is no product differentiation between heating and chilled, one unit does both applications.

The drain cock fitted to the strainer allows flushing without the need to remove the strainer basket and also allows the strainer basket to be cleaned in-situ.

Valve Size	**Flow rate range**	**Part No**
DN15 LF	0.003 – 0.010 l/s	1 4500 40
DN15 LF	0.010 – 0.030 l/s	1 4500 49
DN15 MF	0.026 – 0.060 l/s	1 4500 41
DN15	0.053 – 0.099 l/s	1 4500 44
DN20	0.091 – 0.180 l/s	1 4500 42
DN20 HF	0.180 – 0.385 l/s	1 4500 39
DN25	0.180 – 0.505 l/s	1 4500 43

Benefits to Designers

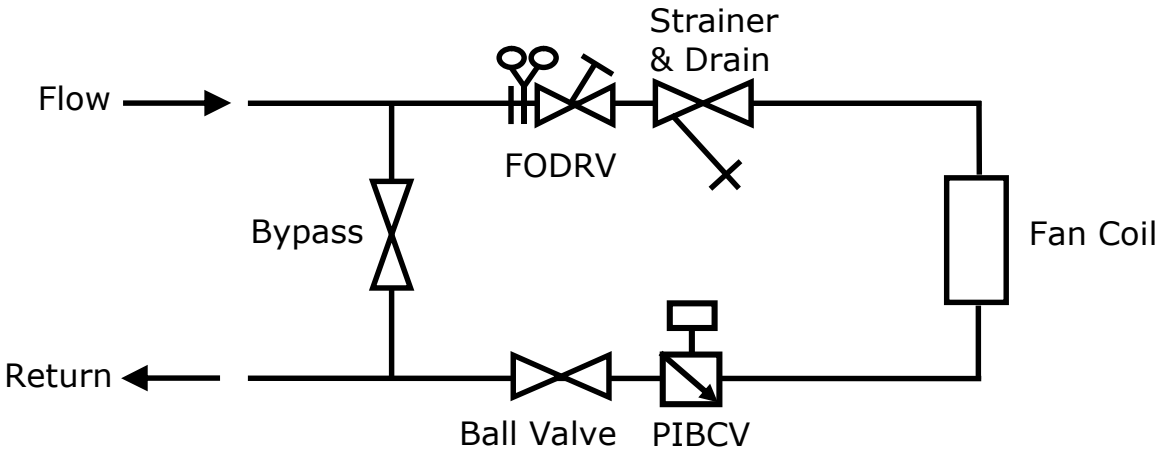
- Known envelope dimensions
- 100% Authority
- Maximise energy efficiency
- PIBCV replaces control valve, commissioning valve & DPCV
- Reduced commissioning time

Benefits to Contractors

- Reduction in on-site labour, time and cost
- Fast connection (only four connections are required)
- Reduces need for pre-fabrication area
- One unit does both heating and cooling makes it easier to order
- Reduction of purchase orders (line items)
- Reduced possibility of incorrect installation

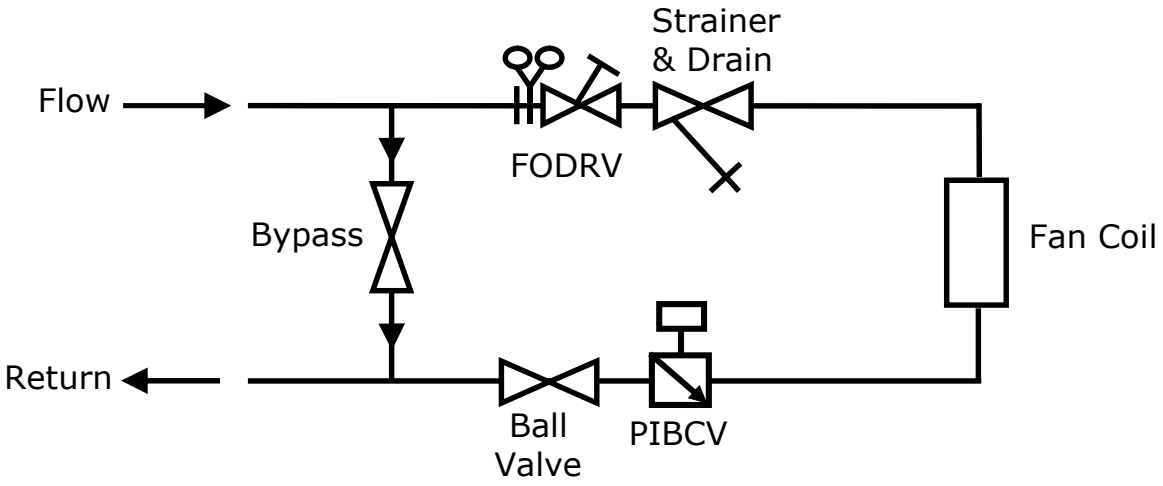
Normal Operation

For normal operation the Bypass valve is closed, FODRV is open, Strainer Drain Valve is closed, Ball valve open, PIBCV preset to flow rate.



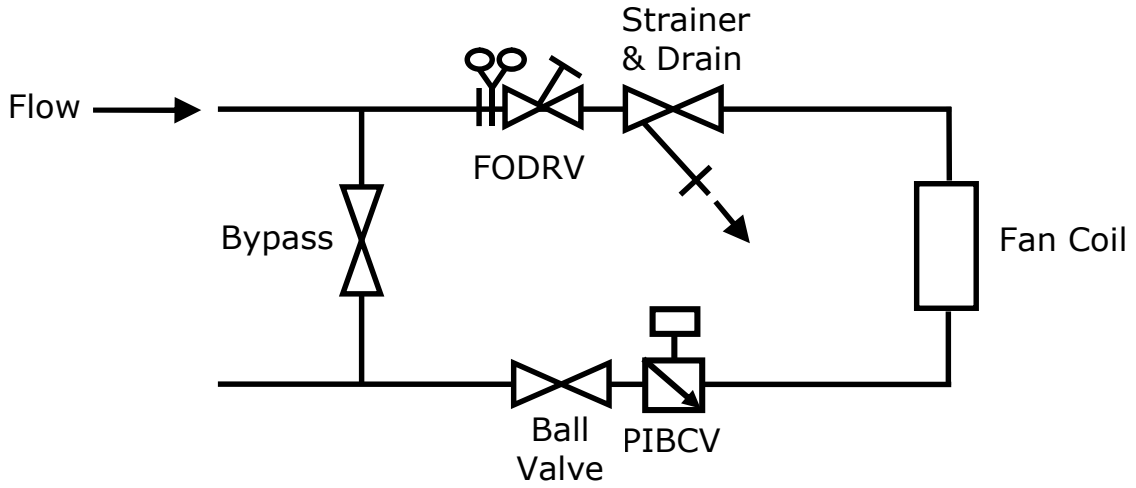
Bypass Operation

For the normal flushing method the Bypass Valve is open, FODRV is closed, Strainer Drain Valve closed, Ball Valve closed.



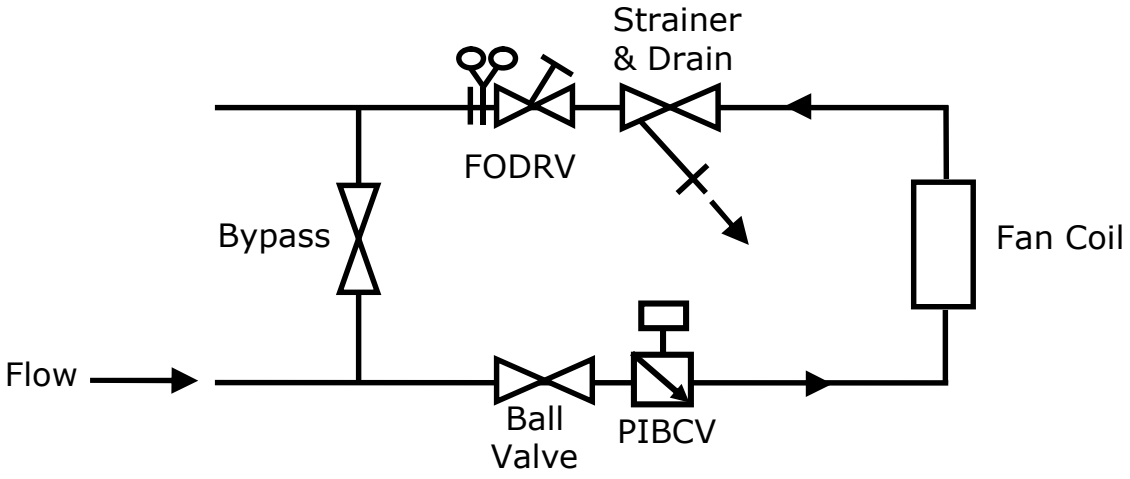
Forward flush Operation

For forward flushing operation the Bypass Valve is closed, FODRV is open, Strainer Drain Valve is open, Ball Valve is closed and flushing through the strainer to atmosphere.



Backflush Operation

For Backflush operation the bypass Valve is closed, FODRV is closed, Strainer Drain Valve is open, Ball Valve open & PIBCV open. Flushing through Ball valve, PIBCV, FCU and strainer to atmosphere.



Flow verification Valve

Please note that due to the extremely low flowrates balanced by the low flow version 4500-40, it is not possible to use a fixed orifice to verify flowrate. A VODRV 4217-30 is used instead which allows a smaller kv value to be utilised. The 4017 or 4217 balancing valve is intended as a flow verification and isolation valve only and should not be used to regulate the flow.

Size	C4 Fig No	FODRV Fig No	Orifice kv	Pos 6 kv	Pos 5 kv	Pos 4 kv	Pos 3 kv	Pos 2 kv
DN15 LF	1450040	1421730		0.95	0.66	0.43	0.31	0.19
DN15 LF	1450049	1401711	0.51					
DN15 MF	1450041	1401721	1.01					
DN15	1450044	1401701	1.89					
DN20	1450042	1401702	4.63					
DN20 HF	1450039	1401702	4.63					
DN25	1450043	1401703	8.52					

Actuators

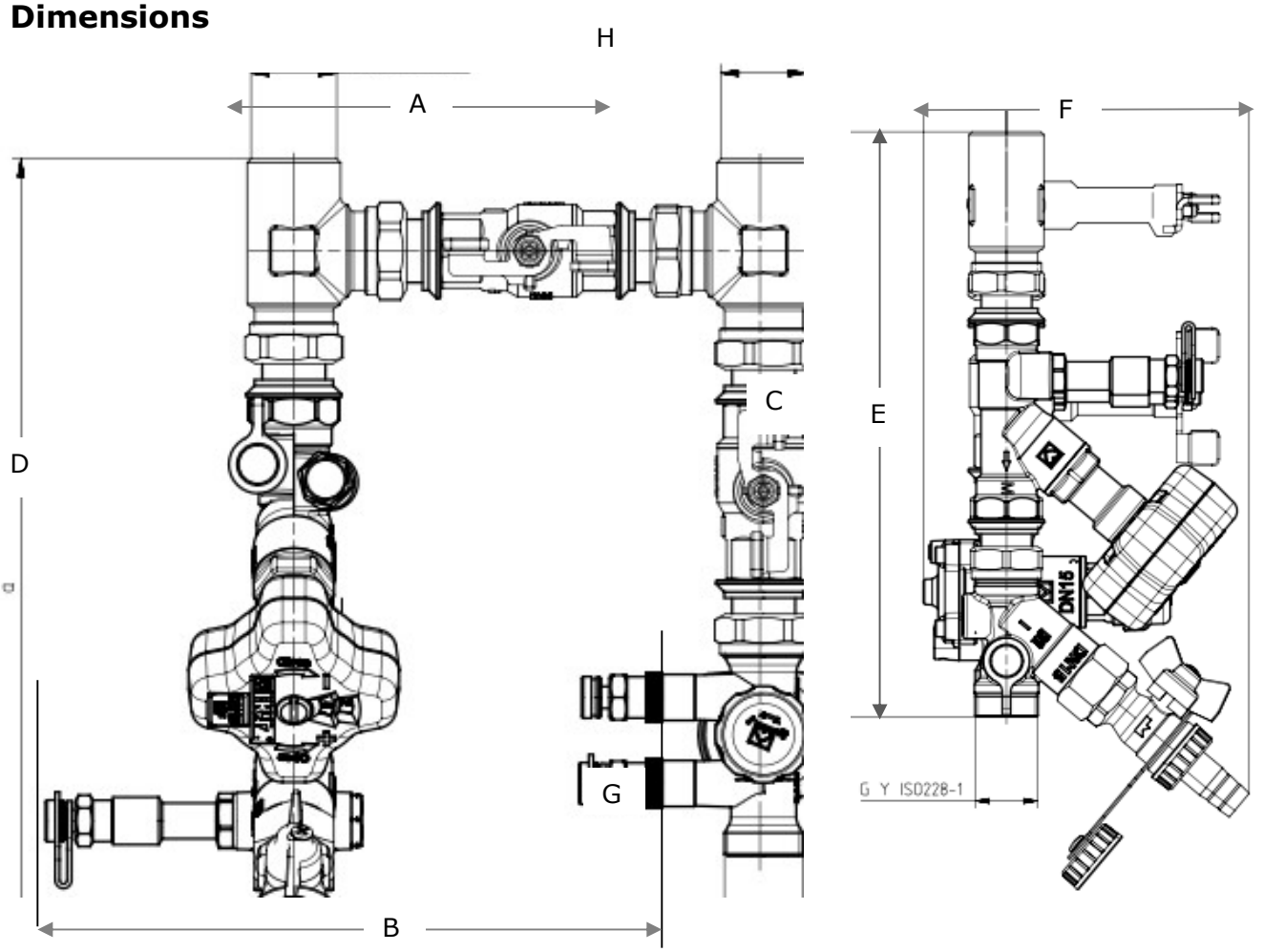
On/Off Actuator NC	1770853	240V	
On/Off Actuator NC	1770852	24V	
On/Off Actuator NO	1770824	240V	
Modulating Actuator	1779032	24V	0–10V DC
Modulating Actuator Motorised	HVACTMOD24-01		

Please note that blue actuator mounting rings should be used with the PICV thermo-electric actuators above.

Installation

On chilled water applications the Connect 4 unit must be insulated with an effective vapour seal in accordance with BS 5970:2001

Dimensions

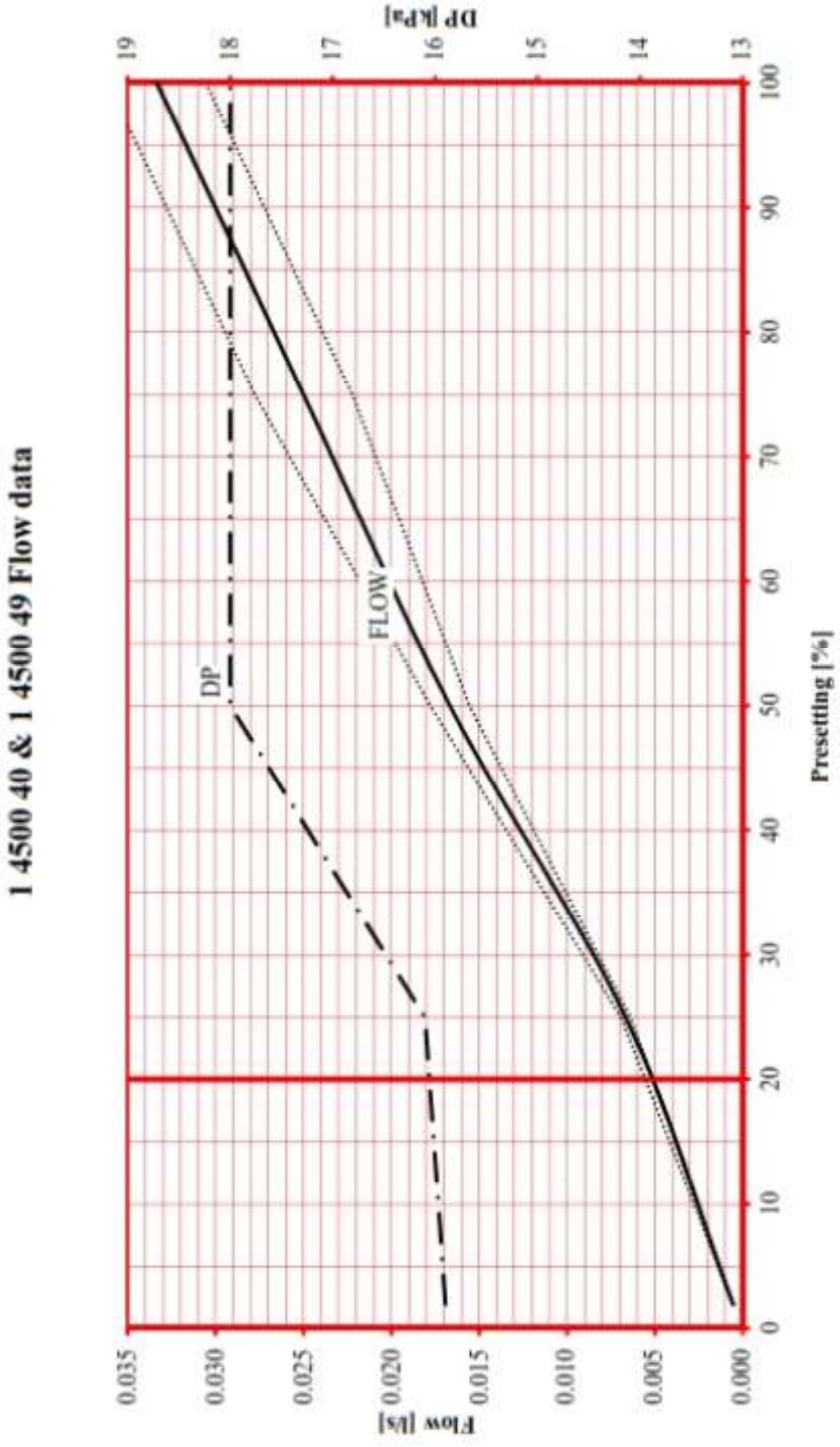


Size	Fig no	A	B	C	D	E	F	G	H
		mm	mm	mm	mm	mm	mm	G Male thread	RP Female thread
DN15	1450040	158	265	235	306	264	137	G ¾	½"
DN15	1450049	158	265	235	289	246	137	G ¾	½"
DN15	1450044	158	265	235	289	246	137	G ¾	½"
DN15	1450041	158	265	235	289	246	137	G ¾	½"
DN20	1450042	170	277	244	335	289	132	G 1	¾"
DN20	1450039	170	277	244	335	289	132	G 1	¾"
DN25	1450043	209	374	270	340	304	172	G 1¼	1"

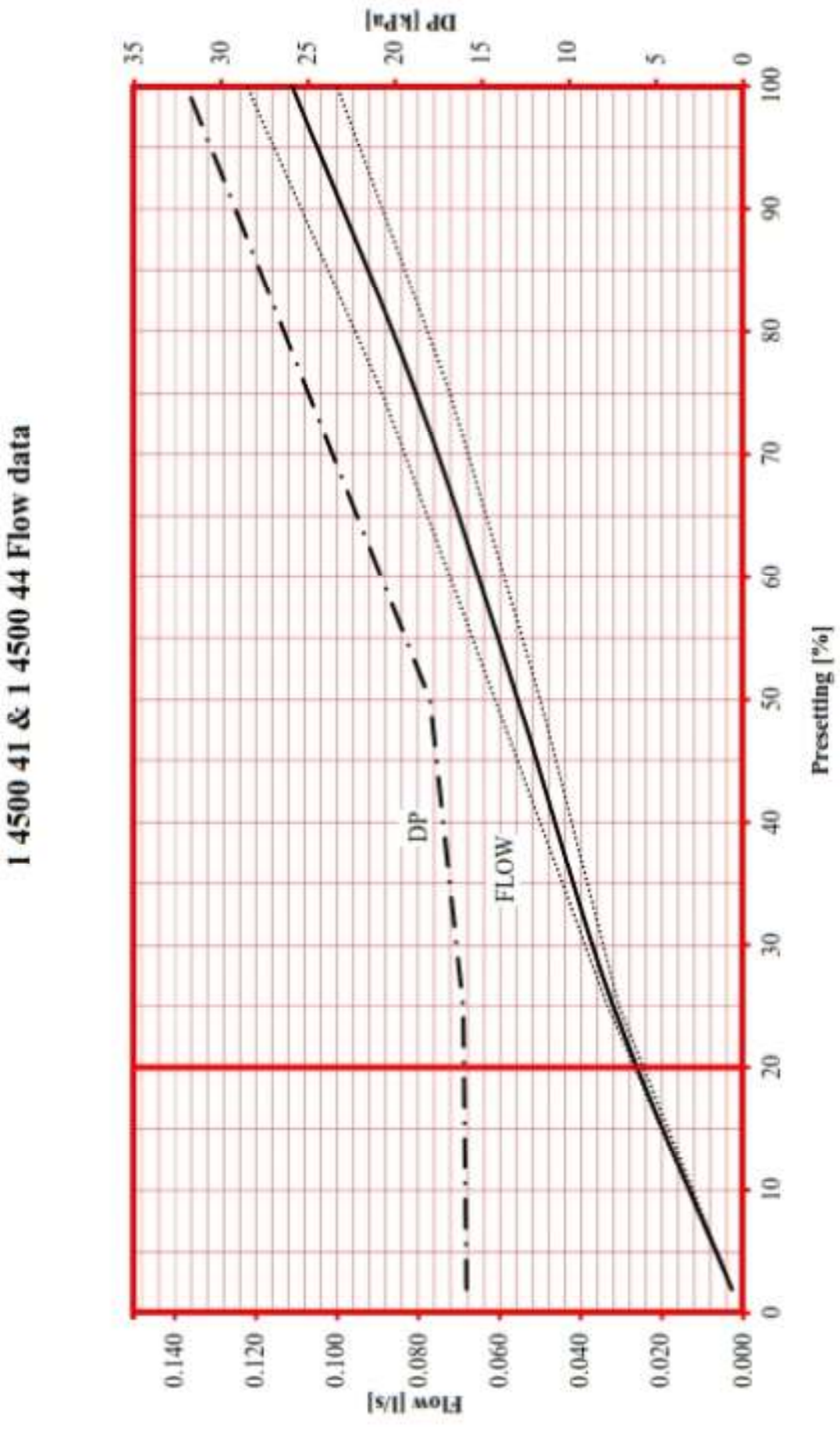
Pressure Rating: PN16
Operating Temperatures: -20 to 100°C

Please refer to separate data sheets for further info on Herz 4006 SMART PICV

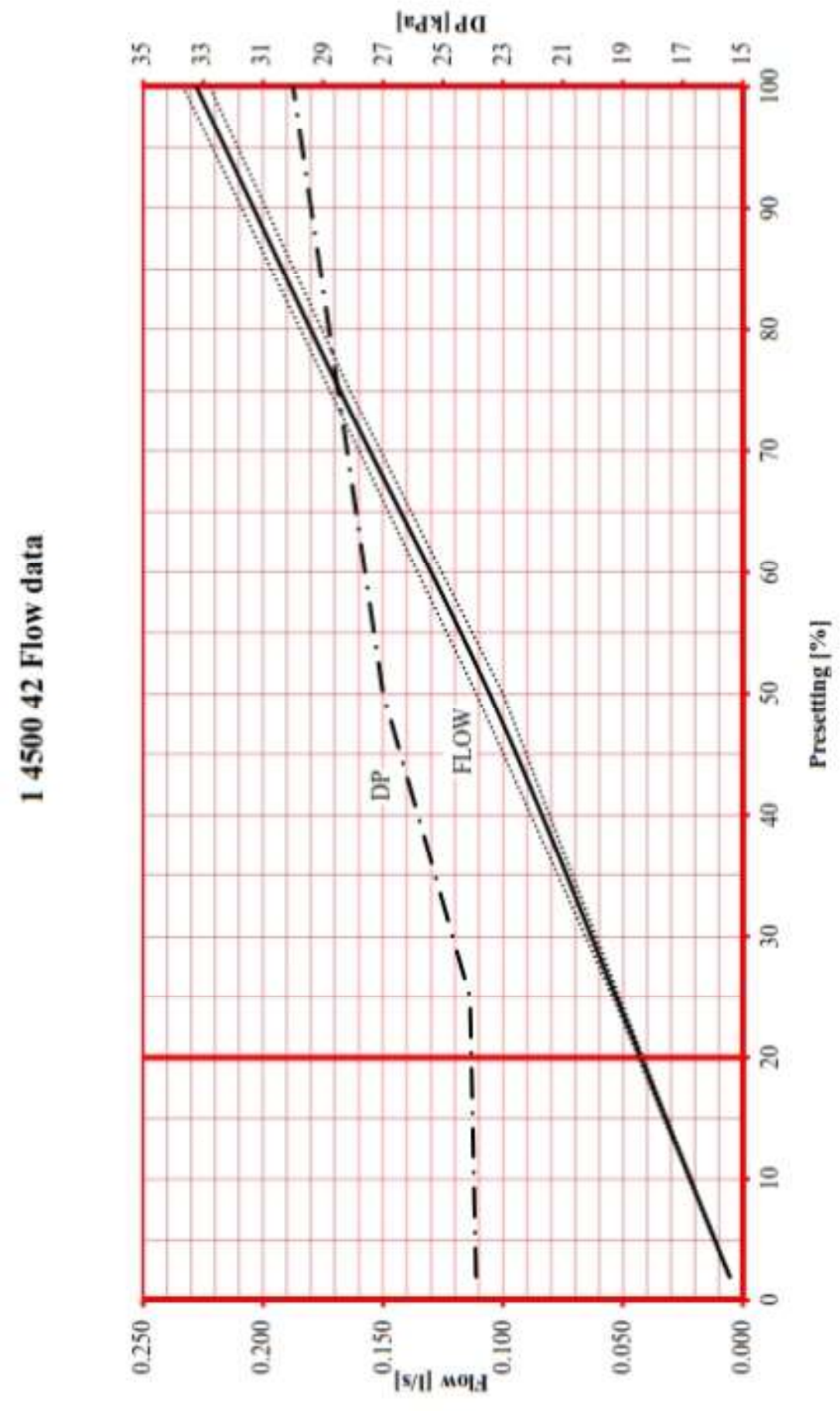
Standard diagram	
Art Nr: 1 **4006** 20	DN15 LF



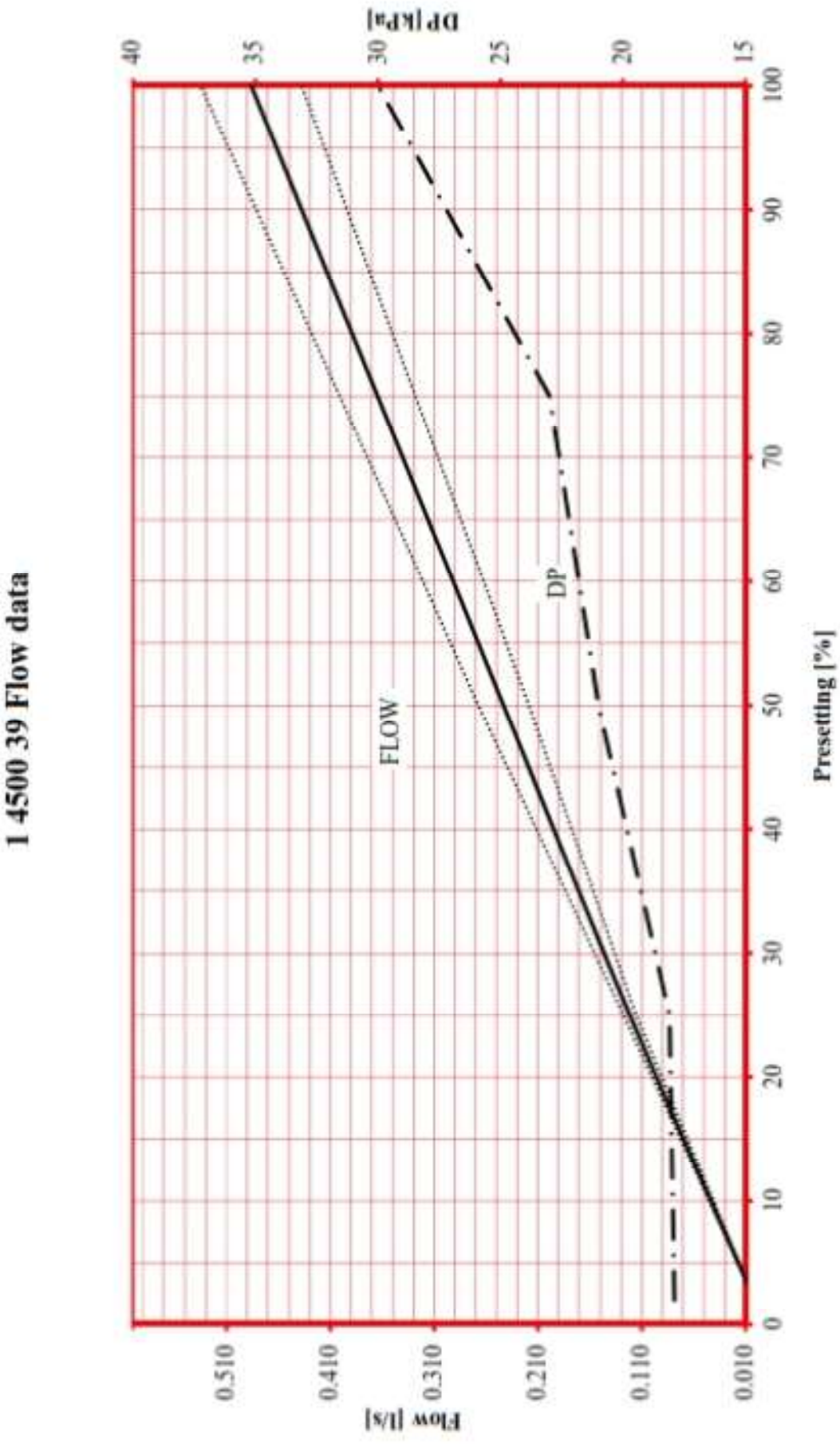
Standard diagram	
Art Nr: 1 **4006** 21	DN15



Art Nr: 1 **4006** 22	DN20



Standard diagram	
Art Nr: 1 **4006** 72	DN20 HF



Standard diagram	
Art Nr: 1 **4006** 13	DN25

