



**ICV DP controller is a use of the pressure of medium itself changes in self control while maintaining flows through the controlled system for medium pressure difference constant energy-saving products. Applicable to heating and central air conditioning water system dynamic pressure difference control, ensure the system pressure differential invariant. Thread to BS 21**

**Use:**  
For water to max. 90°C.

**Tests:**  
Hydraulic test to BS EN 12266  
Body: 1.5 x PN

**Marking:**  
Body: ICV logo, DN, PN, flow direction and Adjustable pressure range.  
Accessory: pressure pipe  
(Connection size: 1/4 in, Length: 1m)

**Materials**

Body	DZR, Brass
DP controller	PPS 40% glass
Flow setting	PPO
Spring	Stainless steel
Diaphragm	HNBR
Tube	Brass

Working pressure range:  
20-400KPa  
Control pressure range:  
5-30KPa (DN15-25) \*  
20-80KPa (DN32-50)

Accuracy: ±7%

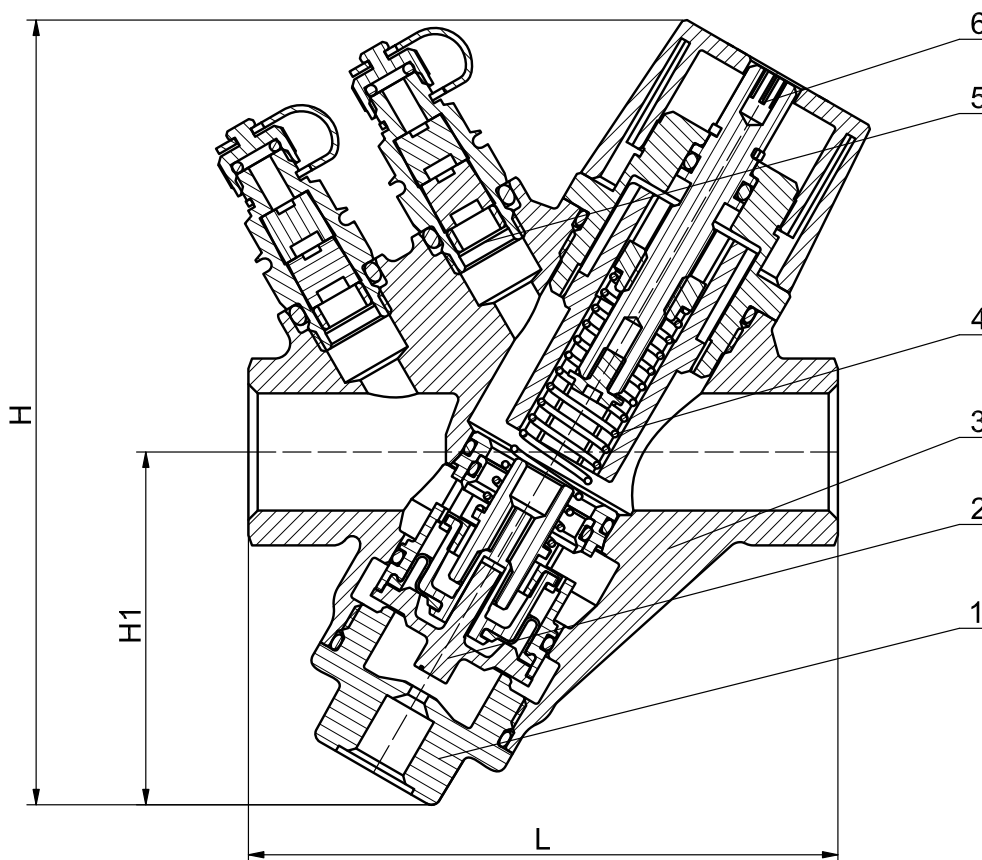
\*20-60KPa Optional



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**Component list**

- |                  |           |                 |
|------------------|-----------|-----------------|
| 1. Bonnet        | 3. Body   | 5. P/T port     |
| 2. DP controller | 4. Spring | 6. Flow setting |



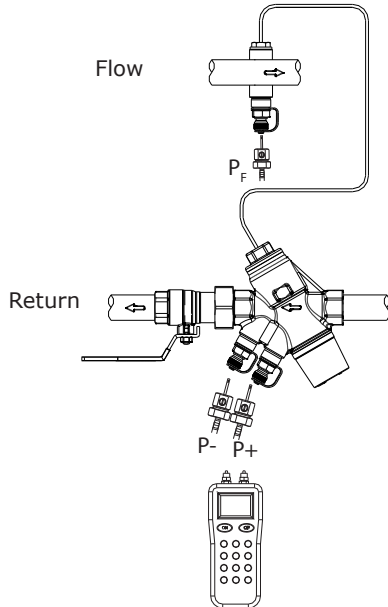
Ref.no.	DN	L mm	H mm	H1 mm	Flow rate m <sup>3</sup> /h	Kvs m <sup>3</sup> /h	Weight Kgs
9080300153004	15	95.5	127	70	0.05-0.60	3.6	0.86
908030015300401*	15	95.5	127	70	0.10-1.20	3.6	0.86
9080300203004	20	96.5	130	73	0.10-1.00	4	0.92
908030020300401*	20	96.5	130	73	0.15-2.00	4	0.92
9080300253004	25	132	166	91	0.60-4.20	9.5	1.87
908030025300401*	25	132	166	91	0.70-4.20	9.5	1.87
9080300323004	32	132	166	91	1.00-5.00	11.4	1.77
9080300403004	40	144.5	184	97	3.00-8.00	16.4	2.53
9080300503004	50	155	196	106	5.00-15.00	17.9	3.11

\* for non-standard products, please indicate control differential pressure when ordering.

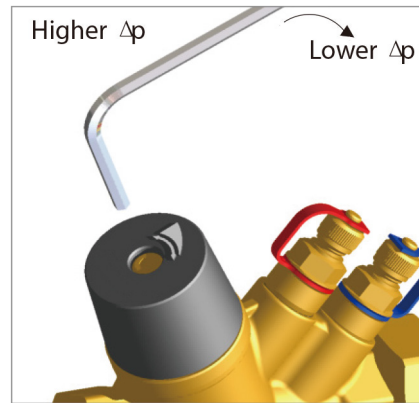


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Examples of installation and selection



Setting the valve



The valve is easily set by means of a 4mm hexagonal key. The flow rate of the valve can be determined from the flow rate graphs for the valve dimension in question.

In order to make reading easier the graphs indicating the pressure in the circuit are arranged at intervals of 5 kPa. Still, the graphs can be offset according to the specified pressure of 12 kPa in our circuit.

In the given example we want to maintain 12 kPa in the circuit at a flow rate of 500 l/h. From the intersection of the 12 kPa graph and the horizontal line indicating 500 l/h a line perpendicular to the x-axis is made to read the pre-set value. Now you will see that the valve is to be pre-set by app. 7 turns on the scale.

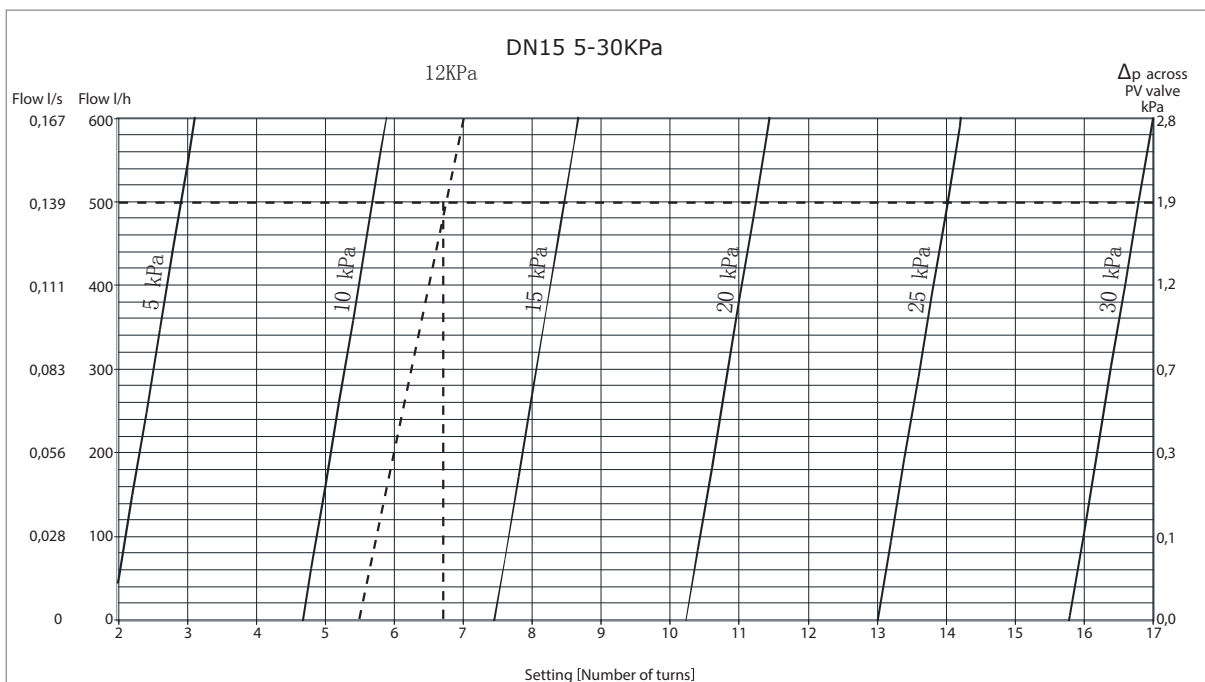
The minimum pressure drop required will be 1.9 kPa across the valve.

Consequently, the total pressure drop required when rating the pump will be:

$$\Delta PP = \Delta PS + \Delta PV = 12 + 1.9 = 13.9 \text{ kPa.}$$

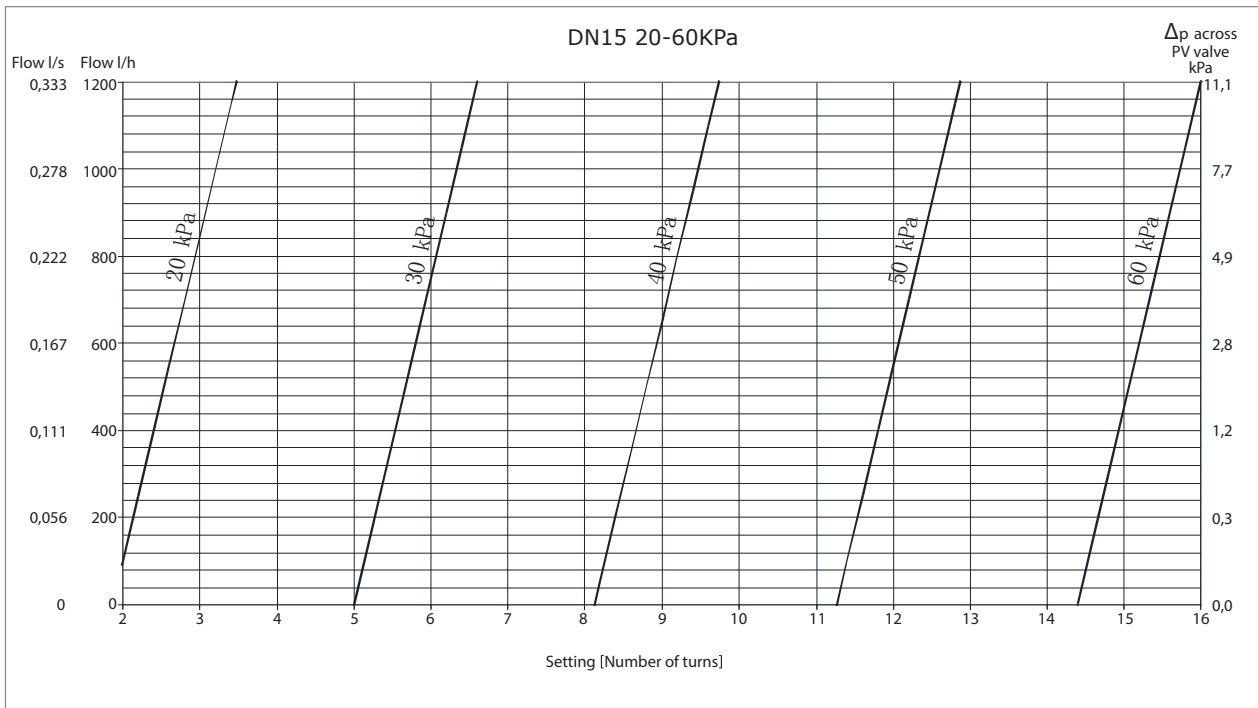
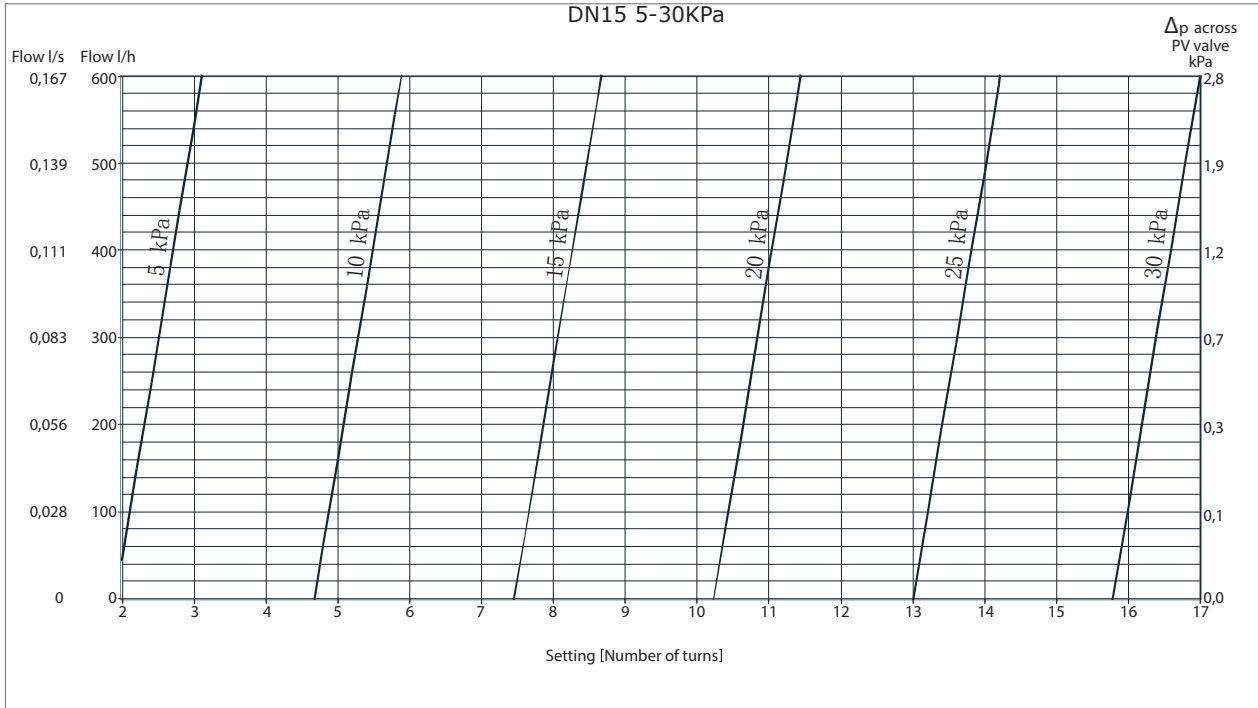
Now the pump can be throttled to operate at its optimum, by measuring from PF to P- ( $\Delta P_{\text{pump}}$ ).

To verify that the calculated secondary pressure drop across the circuit is correct, measurements can be carried out from PF to P+ , and should read 12 kPa as dimensioned.



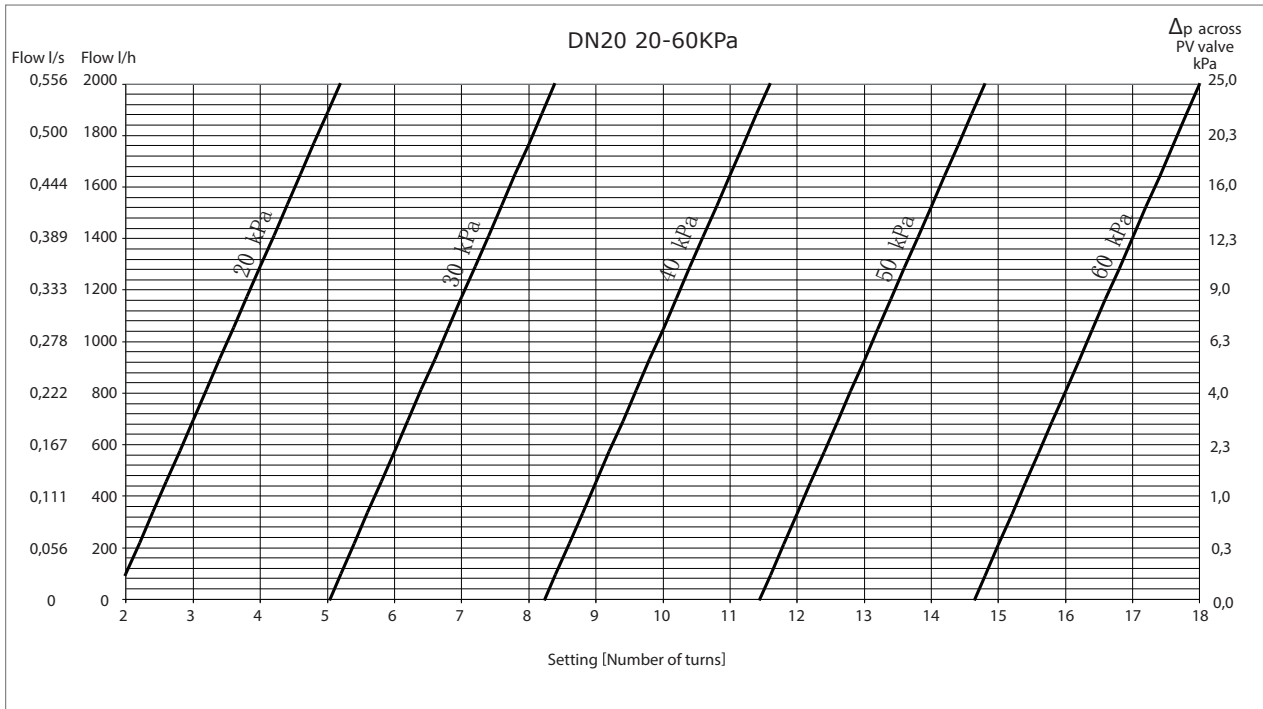
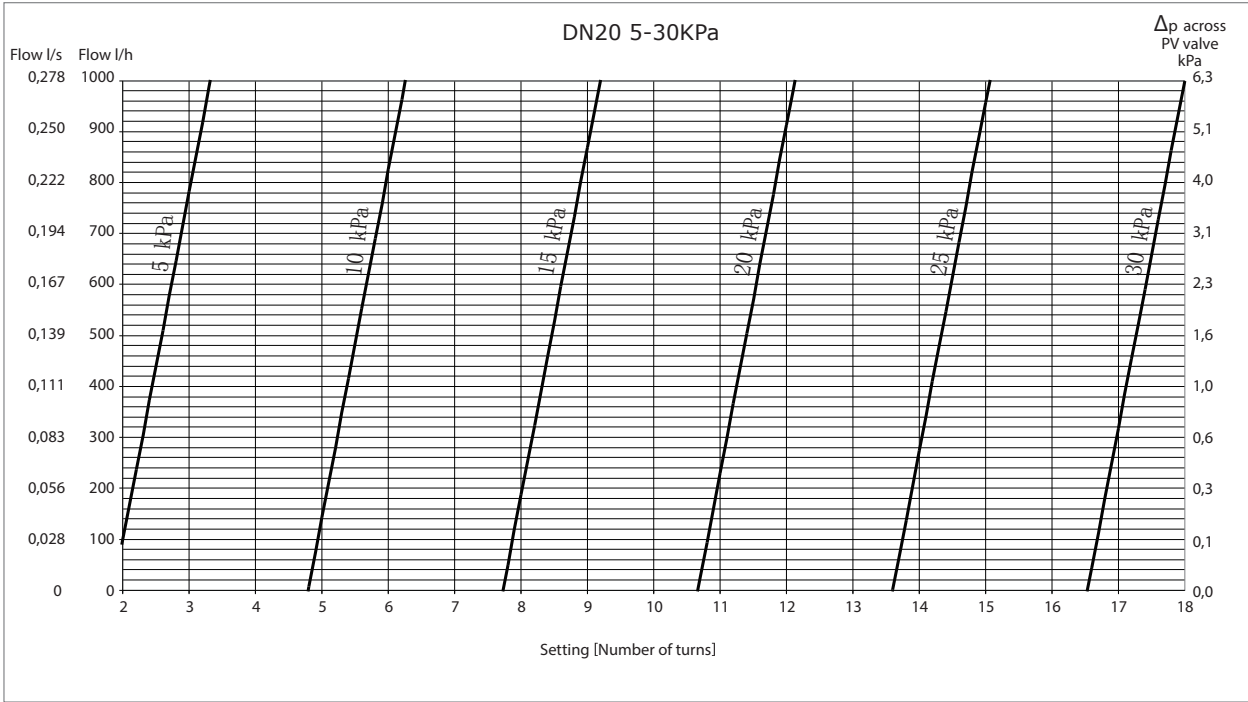
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Flow chart



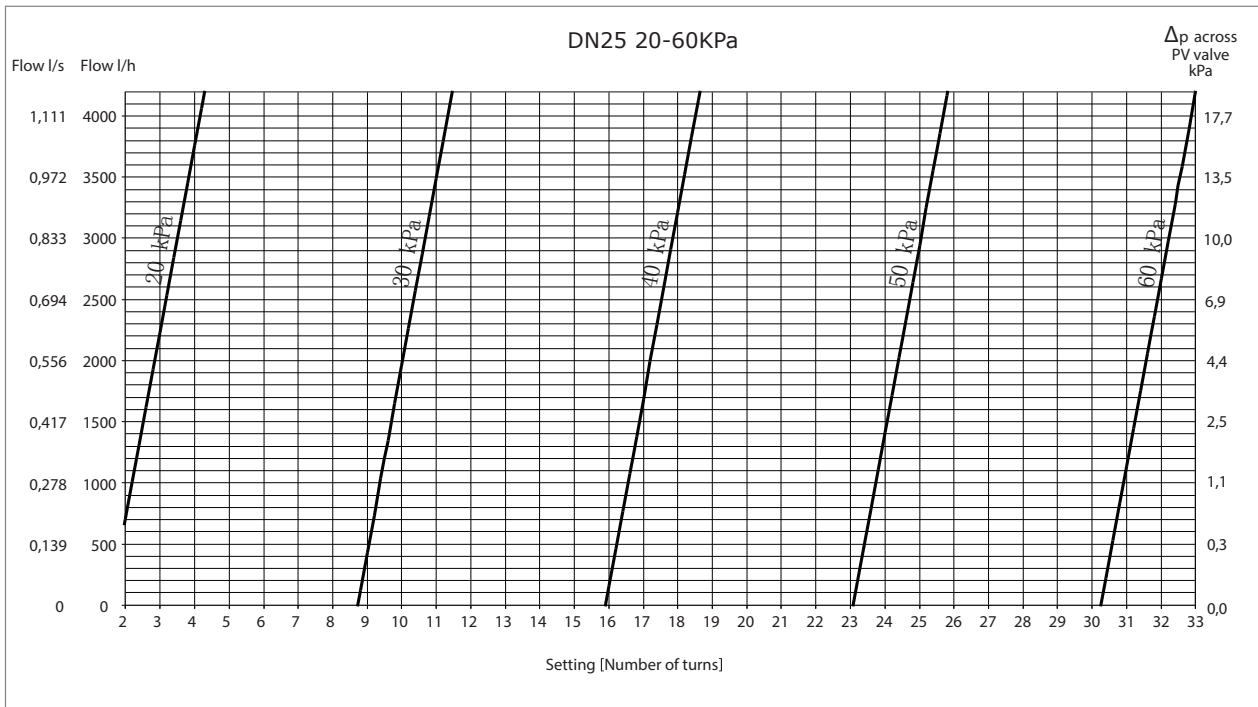
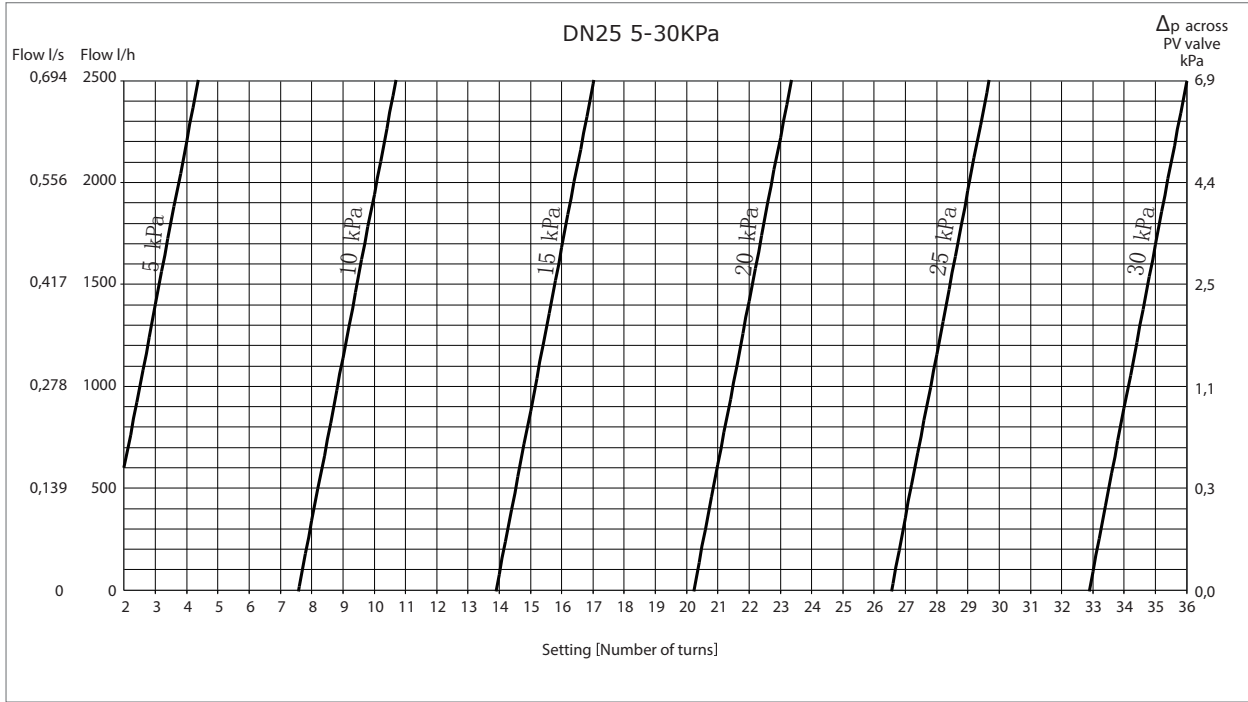
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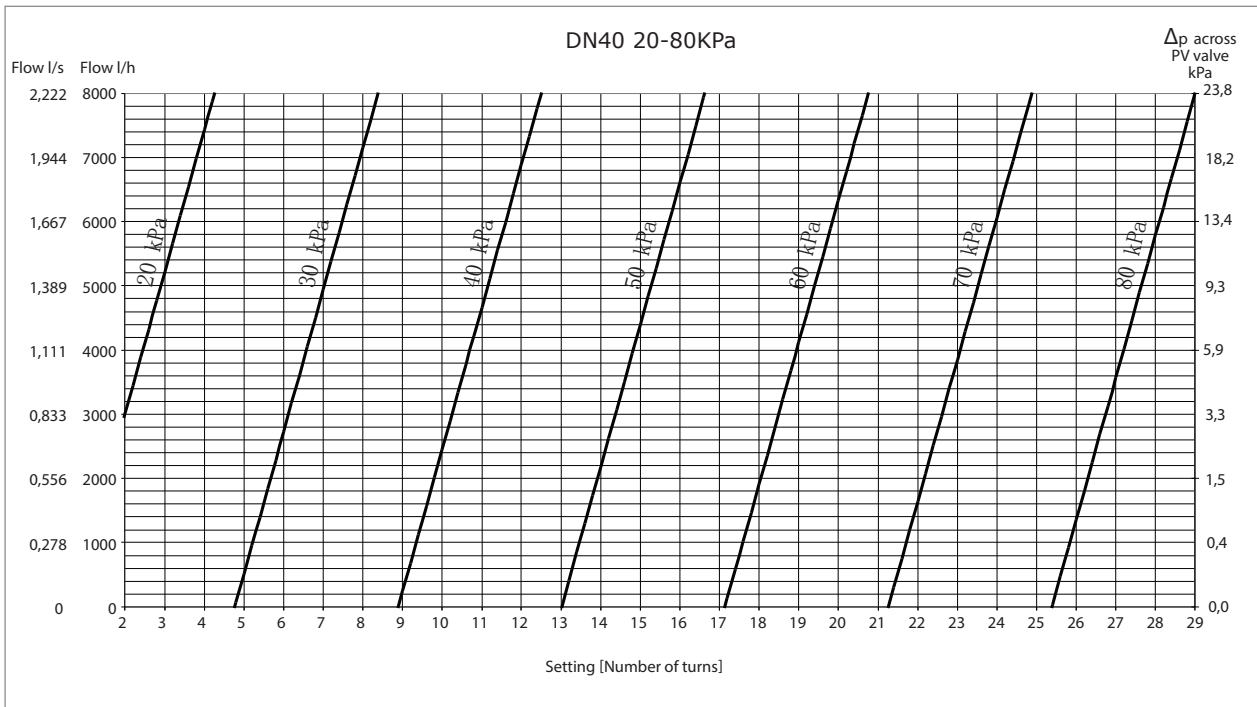
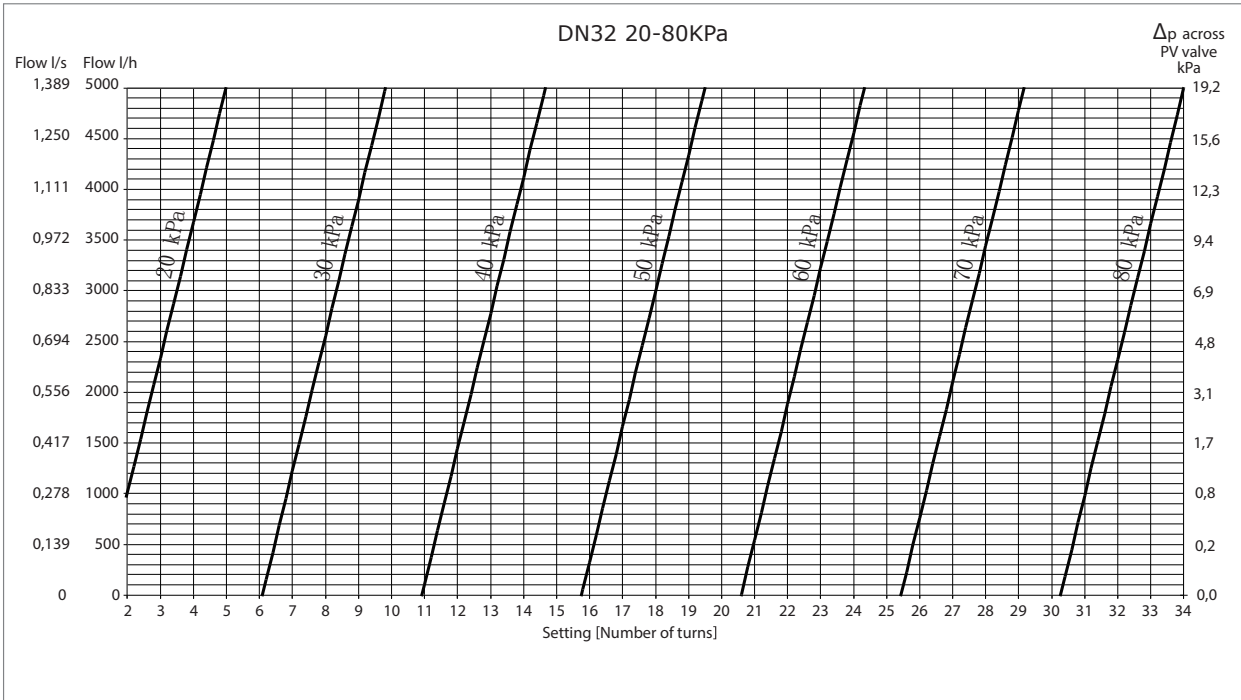
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