9555K EN series

Variable Orifice Ductile Iron Double Regulating Valve

280 B Zharokova st.,
050000 Almaty, Kazakhstan
Tel: +7 (727) 228 85 00
www.enko.kz

Variable orifice ductile iron double regulating valve
Flanged PN16 according to EN1092-2
Lengths according to EN558-1 Series 1
Designed according BS7350
Provided with test points

PN16
Free of CE marking (cat. according to Art. 4.3 Dir. 2014/68/EU)

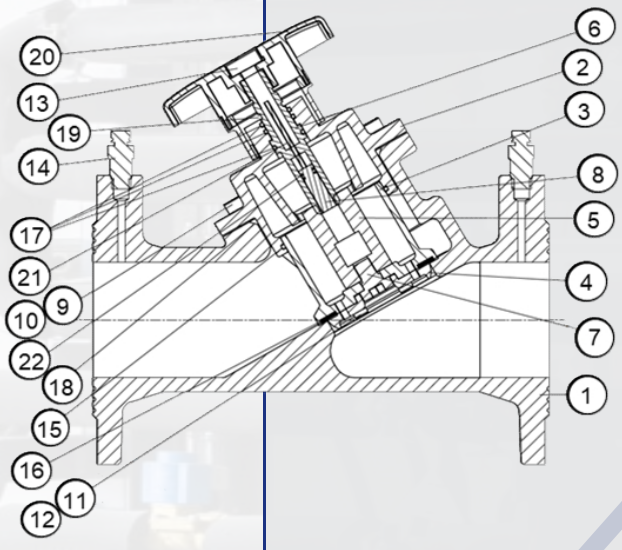
Working conditions

- Suitable for: water, -10°C to +110°C

  below 0°C only for water with added antifreeze fluids compatible with valve materials
  over 100°C only for water with added anti-boiling fluids compatible with valve materials
- Not suitable for: gases group 1 & 2, liquids group 1 (Dir. 2014/68/EU)

PARTLIST

N.	Part	Material	Norm
1	Body	Ductile iron	EN-GJL-400-18
2	Bonnet	Ductile iron	EN-GJL-400-18
3	Sleeve	Ductile iron	EN-GJL-400-18
4	Disc	Ductile iron	EN-GJL-400-18
5	Stem barrel	Brass[2]	-
6	Stem	Brass	-
7	Connectiong bolt	Brass[3]	-
8	Pin	Stainless steel	AISI 304
9	Bonnet hex sock. bolt	Galvanized steel	-
10	Bonnet washer	Galvanized steel	-
11	Disc hex socket bolt[1]	Stainless steel	AISI 304
12	Disc washer[1]	Stainless steel	AISI 304
13	Handwheel bolt	Galvanized steel	-
14	Testing point	Brass	-
15	Bonnet/Sleeve O-ring[1]	EPDM	-
16	Disc gasket	EPDM	-
17	Stem O-ring	EPDM	-
18	Body/Bonnet O-ring	EPDM	-
19	Jump ring	Stainless steel[4]	AISI 304
20	Handwheel	Nylon	-
21	Screw	Stainless steel	AISI 304
22	Pin O-ring	EPDM	-

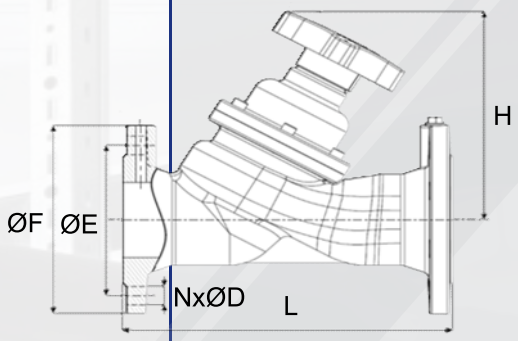


[1]DN50-DN65 excluded
[2]For DN200 up to DN300 Ductile iron EN-GJL-400-18
[3]For DN200 up to DN300 Galvanized steel
[4]For DN200 up to DN300 Carbon steel

DIMENSIONS

DN	ØF [mm]	ØE [mm]	NxØD [mm]	L [mm]	H [mm]	Weight [kg]	Flow range [l/s]
050	165	125	4x19	230	204	9,5	1,52-3,51[1]
065	185	145	4x19	290	210	13,0	3,02-6,95[1]
080	200	160	8x19	310	220	17,2	6,40-15,36[1]
100	220	180	8x19	350	245	25,1	10,85-26,04[1]
125	250	210	8x19	400	260	34,0	16,85-39,75[1]
150	285	240	8x23	480	280	48,0	23,71-56,91[1]
200	340	295	12x23	600	435	93,0	41,86-100,47[1]
250	405	355	12x28	730	480	135,0	66,58-156,78[1]
300	460	410	12x28	850	525	185,0	94,16-255,99[1]

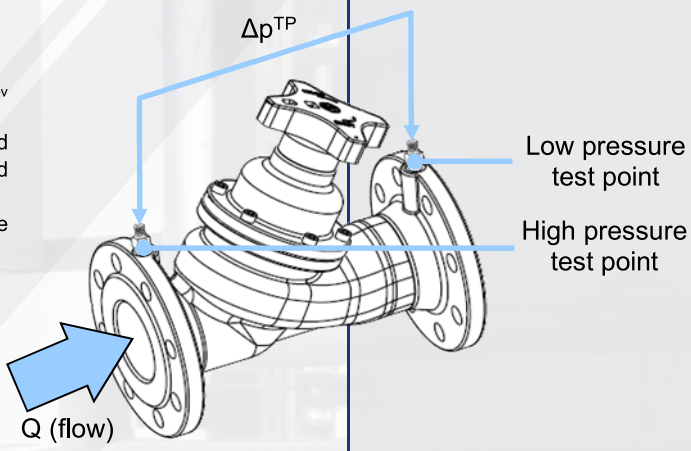
[1]Suggested flow range applicability (BS7350)



FLOW MEASUREMENT

Formula linking flow Q (in l/s) and Δp measured at test points (in kPa). K_v depends on handwheel position as indicated on table in the next page.
Minimum flow that can be measured for each diameter may be calculated by using in the formula minimum Δp that can be measured by used manometer.
Valves are anyway designed for best performances when used on range previously suggested and as indicated by BS7350.

$$Q = \frac{K_v \cdot \sqrt{\Delta p^{TP}}}{36}$$



Handwheel position	K_v [m³/h @ 1bar]								
	050	065	080	100	125	150	200	250	300
1,0	6	7	7	12	17	17	41	56	56
2,0	16	18	13	20	28	39	97	138	134
3,0	30	34	17	35	51	78	157	236	233
4,0	40	48	31	49	82	115	254	291	302
5,0	48	59	53	78	118	154	398	451	372
6,0	59	69	71	113	141	209	523	575	570
7,0	65	80	83	138	162	251	587	658	764
8,0	76	87	90	166	180	322	645	764	852
9,0	81	93	103	194	229	402	702	902	947
10,0	-	-	-	-	-	-	-	998	1055
11,0	-	-	-	-	-	-	-	1042	1195
12,0	-	-	-	-	-	-	-	1124	1275
13,0	-	-	-	-	-	-	-	-	1296

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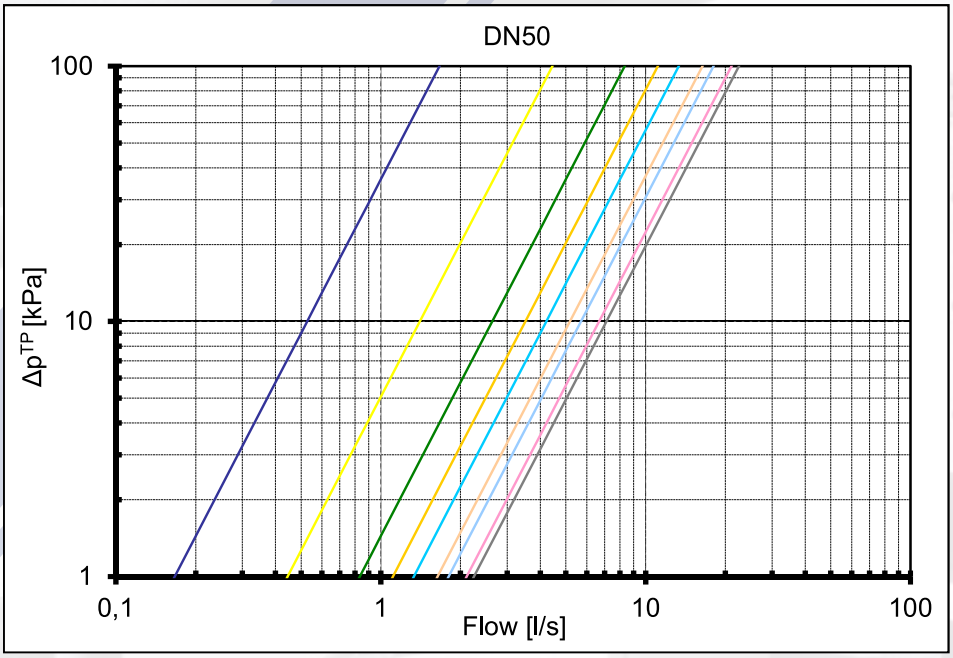

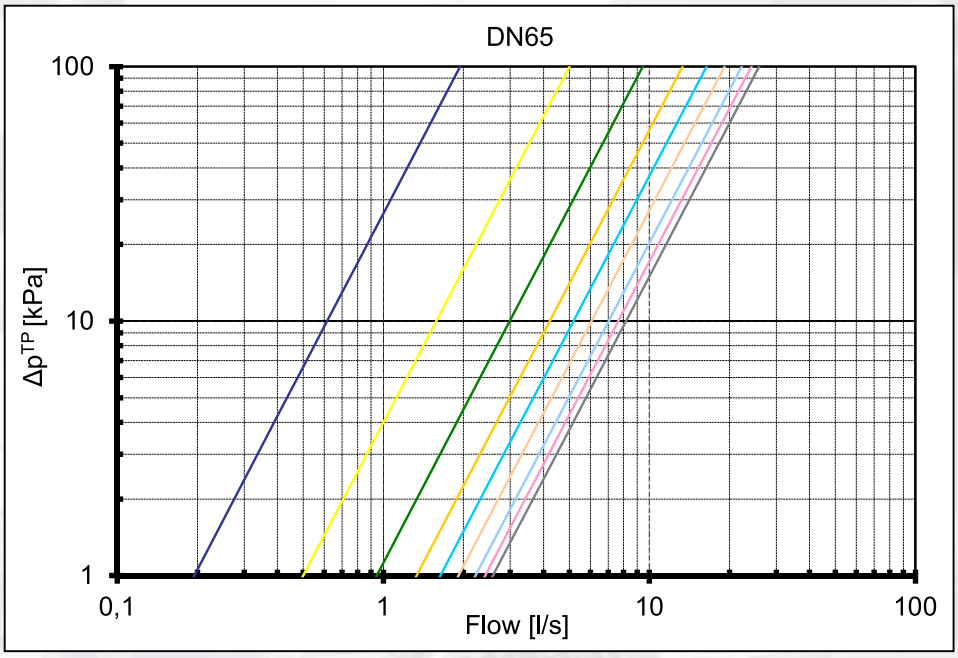

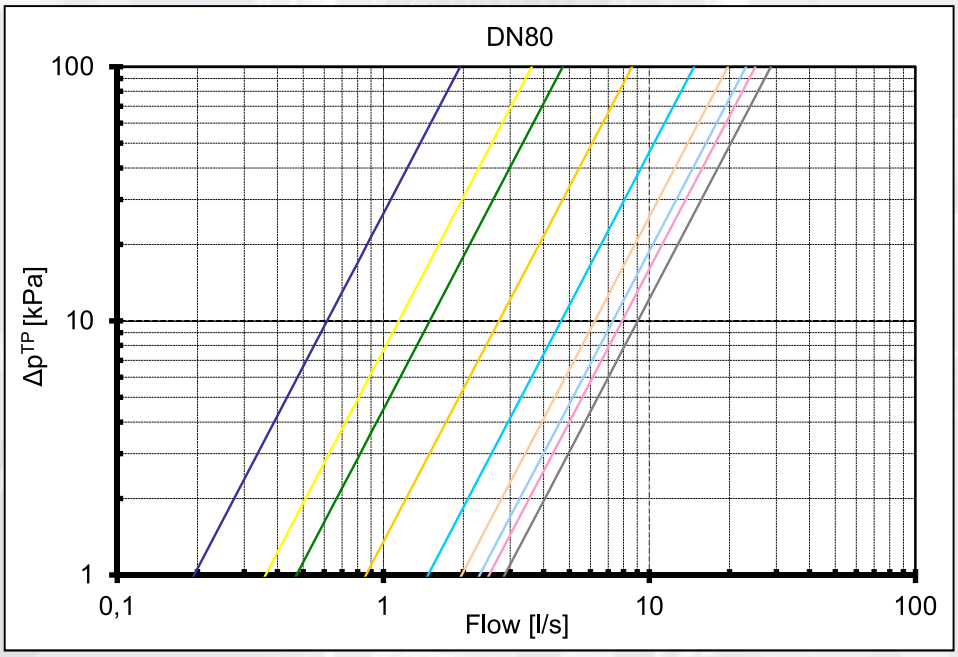

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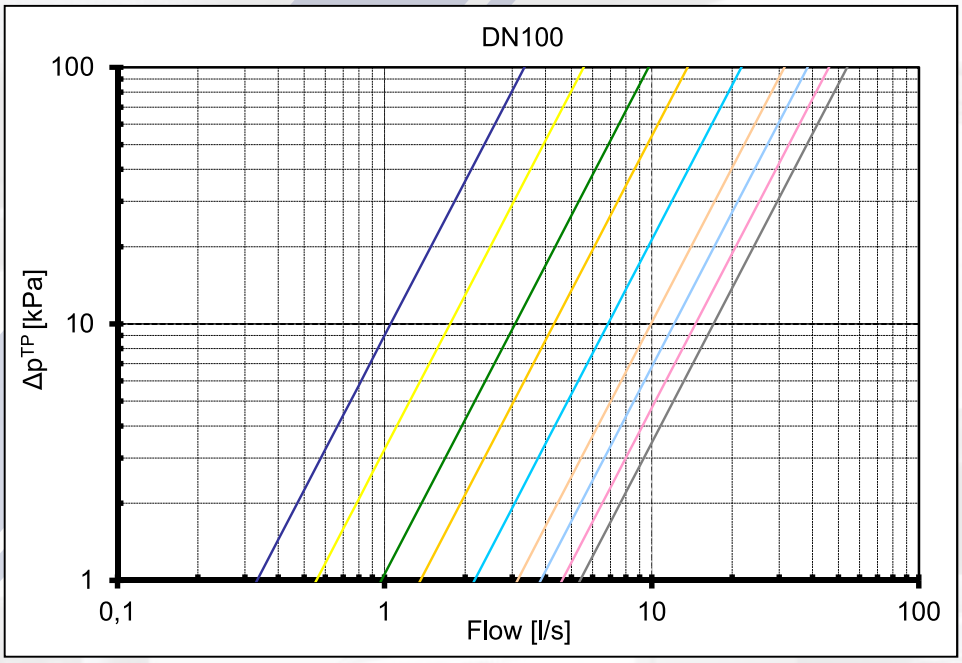

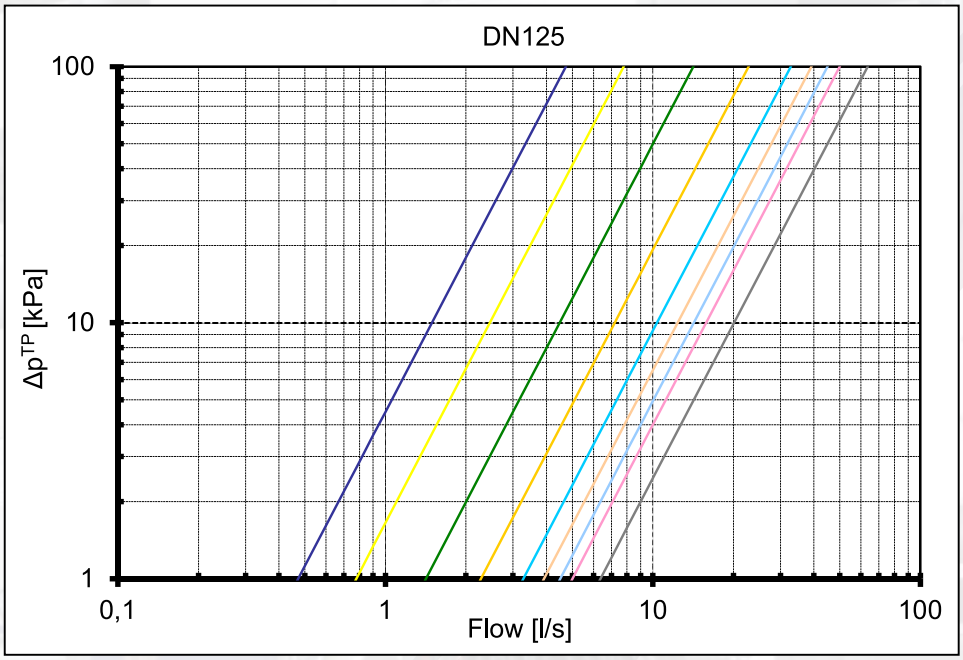

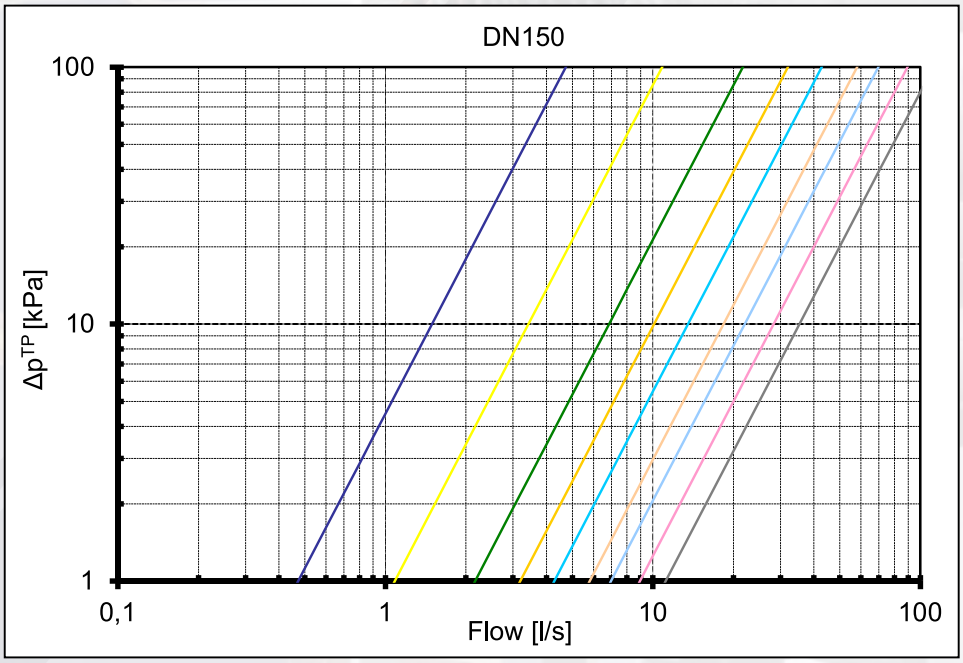

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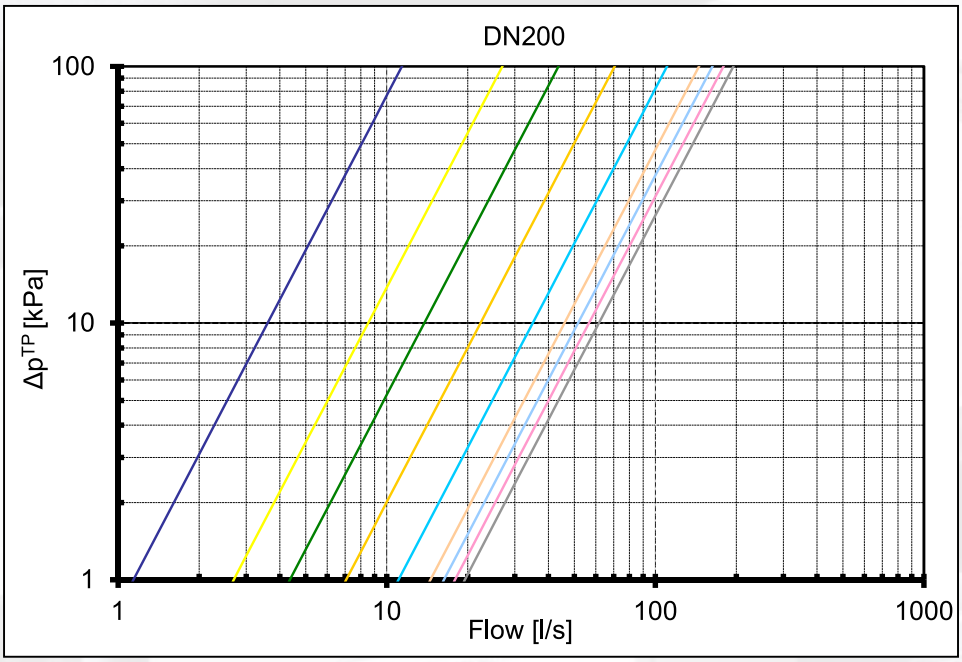

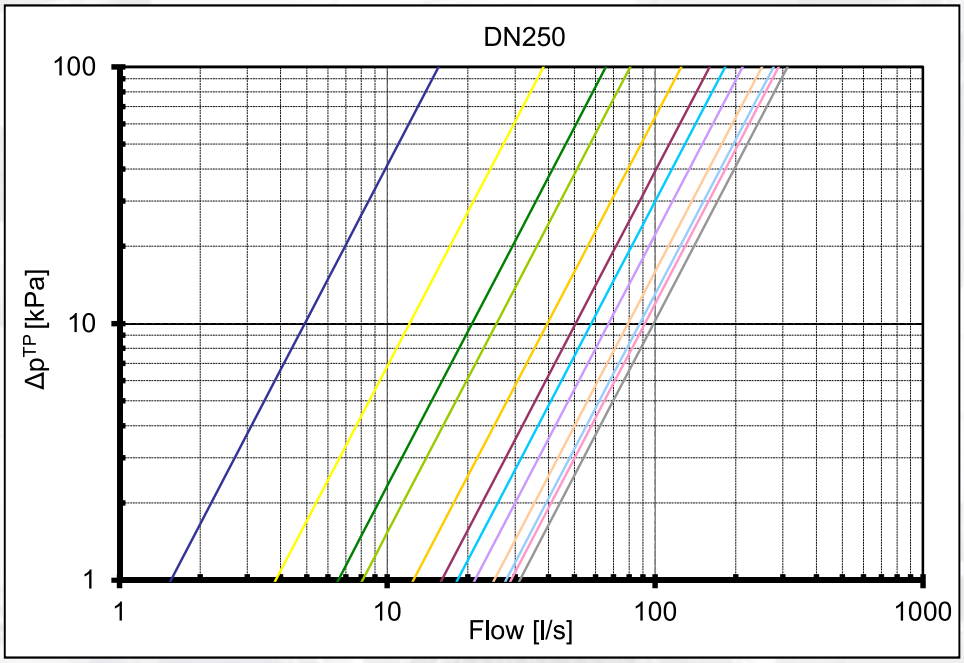

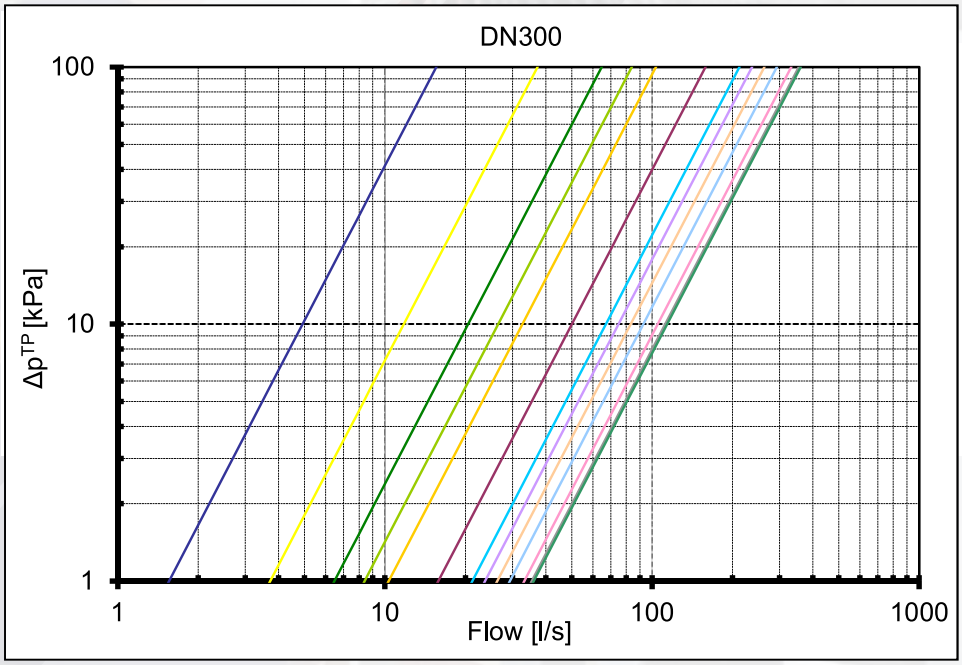

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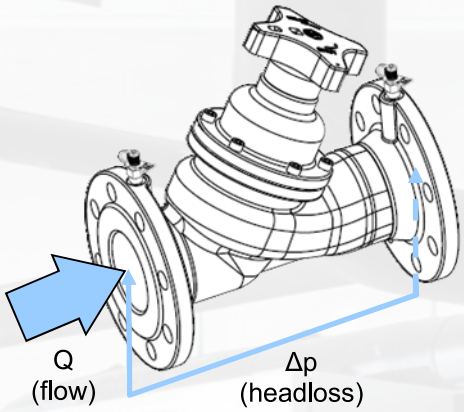
HEADLOSS CALCULATION

$$\Delta p = \left(\frac{36 \cdot Q}{K_V} \right)^2$$

Formula linking flow Q (in l/s) and theoretical valve headloss Δp (in kPa).
K_V depends on handwheel position as indicated on table in the next page.

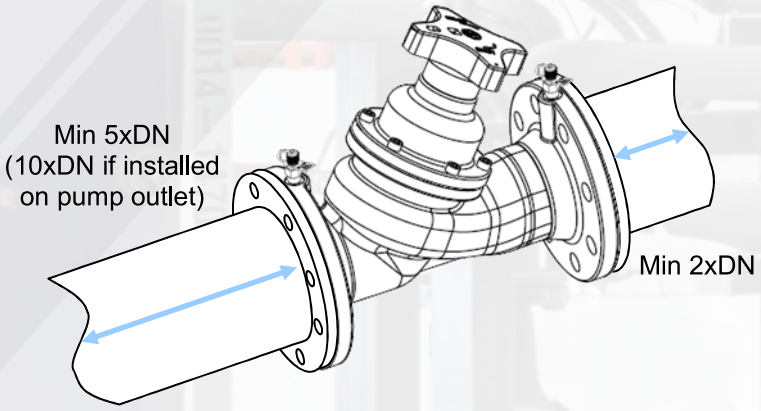


Handwheel position	K_V [m^3/h @ 1bar]							
	065	080	100	125	150	200	250	300
1,0	7,0	7,0	12,0	17,0	17,0	41,0	56,0	56,0
2,0	18,0	13,0	20,0	28,0	39,0	97,0	138,0	134,0
3,0	34,0	17,0	35,0	51,0	78,0	157,0	236,0	233,0
4,0	48,0	31,0	49,0	82,0	115,0	254,0	291,0	302,0
5,0	59,0	53,0	78,0	118,0	154,0	398,0	451,0	372,0
6,0	69,0	71,0	113,0	141,0	209,0	523,0	575,0	570,0
7,0	80,0	83,0	138,0	162,0	251,0	587,0	658,0	764
8,0	87,0	90,0	166,0	180,0	322,0	645,0	764,0	852
9,0	93,0	103,0	194,0	229,0	402,0	702,0	902	947
10,0	-	-	-	-	-	-	998	1055
11,0	-	-	-	-	-	-	1042	1195
12,0	-	-	-	-	-	-	1124	1275
13,0	-	-	-	-	-	-	-	1296

Copy of the table presented in flow measurement paragraph
Δp (headloss) approximately equal to Δp^{TP}

INSTALLATION

To obtain the best performances valve must be installed on a pipe with its same nominal size preceded and followed by straight pipe lengths as per figure indications.



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