9555P

Variable Orifice Cast Iron Double Regulating Valve

Via Circonvallazione, 10
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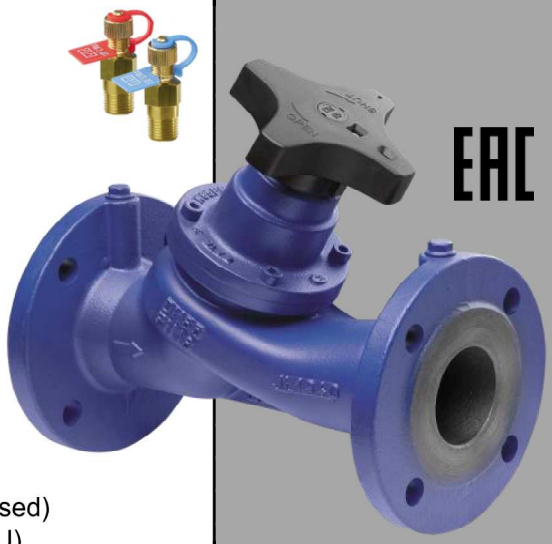
Variable orifice cast iron double regulating valve
Flanged PN16 according to EN1092-2 (ex DIN2533)
Lengths according to EN558-1 series 1 (ex DIN3202 F1)
Alkyd/acrylic single layer waterpaint coating (50-100µm)
Tolerance on nominal K_v for completely open valve ±5%
With plugged threaded drains (¼" ISO 7/1Rp) for test points
Provided with test points (given unmounted)
TR CU 010 compliant

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

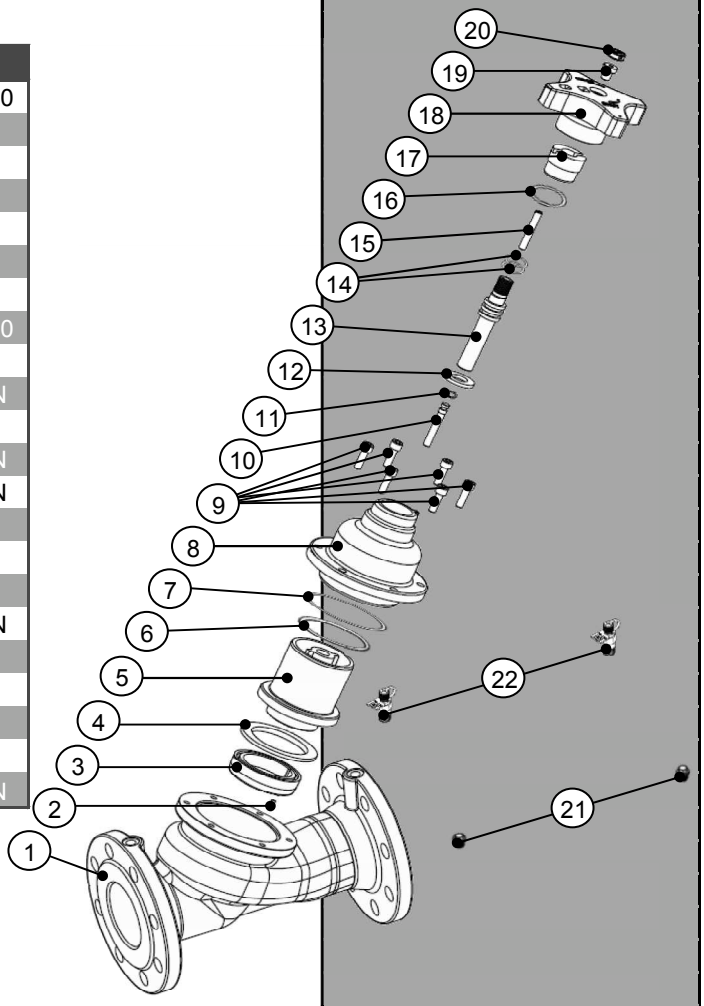


Working conditions

- Suitable for: water, -10°C to +110°C
  below 0°C only for water with added antifreeze fluids
  over 100°C only for water with added anti-boiling fluids
  (Ethylene glycol and propylene glycol mixtures up to 50% may be used)
- Not suitable for: gases group 1 & 2, liquids group 1 (Dir. 2014/68/EU)

PARTLIST

N.	Part	Material	Norm
1	Body	Cast iron	EN-GJL-250 JL1040
2	Cone screw[1]	Stainless steel	A2
3	Balancing cone	Composite material	-
4	Gasket disc	EPDM	-
5	Shutter	Composite material	-
6	Shut./bon. O-ring	EPDM	-
7	Body/bon. O-ring	EPDM	-
8	Bonnet[2]	Cast iron	EN-GJL-250 JL1040
9	Screws[1]	Carbon steel	8.8 A2A
10	Memory stop	DZR Brass	EN12164 CW602N
11	Mem. stop O-ring	EPDM Perox	-
12	Washer[1]	DZR Brass	EN12164 CW602N
13	Stem	DZR Brass	EN12164 CW602N
14	Stem O-ring[1]	EPDM	-
15	Screw[1]	Brass[3]	CW508L
16	Bushing O-ring[1]	EPDM	-
17	Bushing	DZR Brass[4]	EN12164 CW602N
18	Handwheel	Polyamide[5]	PA6.6
19	Handwheel screw	Brass[6]	CW508L
20	Handwheel cap	Polyamide	PA6.6
21	Plug	Steel[7]	C35E
22	Test point	DZR Brass[8]	EN12164 CW602N



[1]DN50 excluded
[2]Screwd bonnet in CW602N for DN50
Two-pieces bonnet (screwed) with EPDM gasket for DN65
Two-pieces bonnet with bottom part in ductile iron EN-GJS-500-7 JL1050 and 8.8 A2A steel joint screws for DN≥200
[3]X5CrNi18-10 steel for DN≥200
[4]Copper nut and steel ring for DN50
[5]CuZn40Pb2 brass screw and washer for DN≥200
[6]5 A2A steel for DN≥200
[7]Caps with carbamide rubber gaskets
[8]Test points with EPDM gaskets and polypropylene ties

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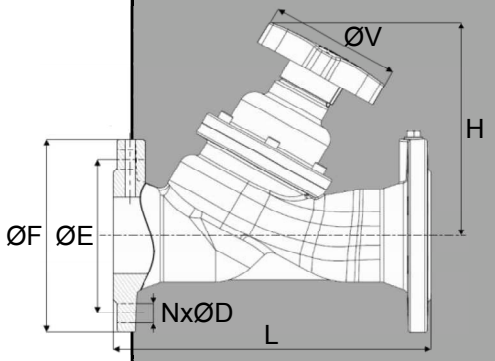
DIMENSIONS

DN	ØF [mm]	ØE [mm]	NxØD [mm]	L [mm]	H [mm]	ØV [mm]	Weight [kg]	Flow range[1] [l/s]
050	165	125	4x19	230	130	74	8,3	1,52-3,51
065	185	145	4x19	290	215	130	13,4	3,02-6,95
080	200	160	8x19	310	220	130	17,8	6,40-15,36
100	220	180	8x19	350	240	130	22,7	10,85-26,04
125	250	210	8x19	400	260	130	34,0	16,85-39,75
150	285	240	8x23	480	285	130	48,5	23,71-56,91
200	340	295	12x23	600	480	310	114,5	41,86-100,47
250	405	355	12x28	730	525	310	159,0	66,58-156,78
300	460	410	12x28	850	535	310	210,5	94,16-255,99

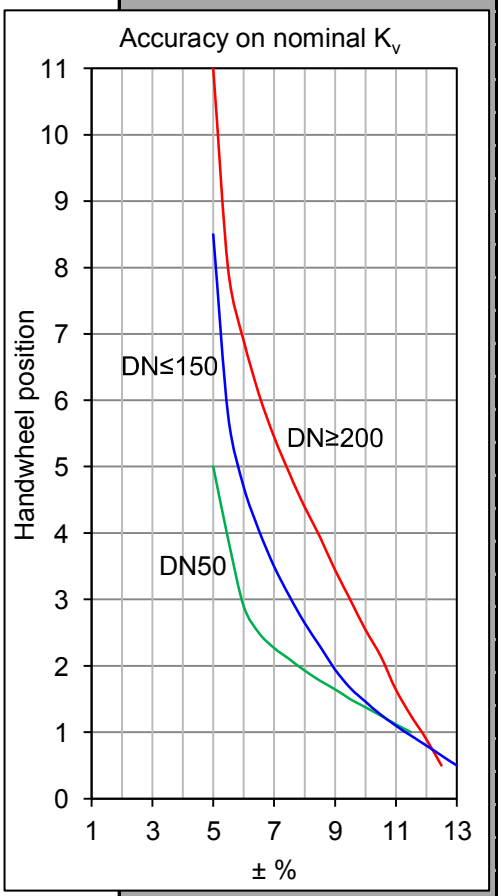
[1]Suggested flow range applicability (BS7350)



If used with measuring manometers different from those proposed by VIR please verify that sensibility of the measuring device is compatible with indicated minimum flow (see flow measurement paragraph)

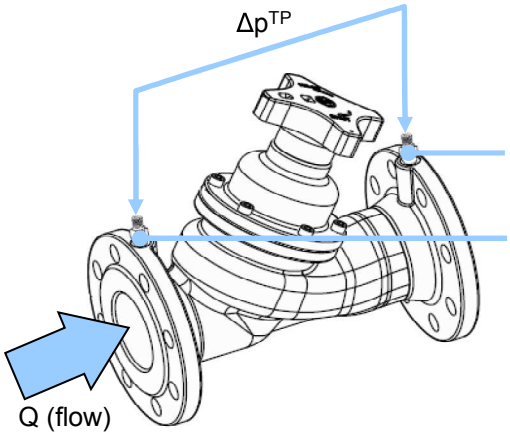
FLOW MEASUREMENT

Handwheel position	K_v [m^3/h @ 1bar] 050	065	080	100	125	150	200	250	300
1,0	3,7	21,9	7,9	9,6	13,0	14,8	38,6	62,3	57,1
1,5	5,2	26,4	9,9	12,8	17,8	19,1	45,6	73,1	72,2
2,0	8,9	31,1	11,8	16,6	23,7	29,7	54,6	87,3	89,8
2,5	13,6	35,7	13,8	22,9	33,1	51,8	71,2	115,8	110,2
3,0	17,6	40,1	16,7	34,0	51,2	83,7	99,9	163,9	140,7
3,5	21,9	44,4	21,9	50,5	77,0	132,0	148,6	239,2	202,0
4,0	25,5	49,3	31,2	71,4	106,5	183,7	216,2	345,3	331,7
4,5	29,0	53,2	45,9	90,9	135,7	219,5	283,9	451,4	500,2
5,0	32,2	57,5	65,0	107,4	160,9	247,1	341,2	543,3	634,1
5,5	-	64,4	79,5	121,6	182,1	273,3	387,7	622,0	733,2
6,0	-	71,8	89,3	135,0	201,9	298,2	430,1	694,0	825,1
6,5	-	76,6	96,6	148,1	221,6	321,3	471,7	765,2	922,9
7,0	-	80,4	102,7	159,9	239,8	342,2	507,6	823,7	1018
7,5	-	84,1	108,2	169,8	255,9	360,7	535,2	876,3	1100
8,0	-	88,8	113,4	177,9	270,8	376,8	560,8	925,3	1170
8,5	-	-	-	184,7	285,1	390,2	590,0	974,4	1230
9,0	-	-	-	-	-	-	619,3	1022	1285
9,5	-	-	-	-	-	-	644,9	1068	1340
10,0	-	-	-	-	-	-	667,2	1110	1394
10,5	-	-	-	-	-	-	688,4	1150	1449
11,0	-	-	-	-	-	-	710,0	1188	1504



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

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.
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.



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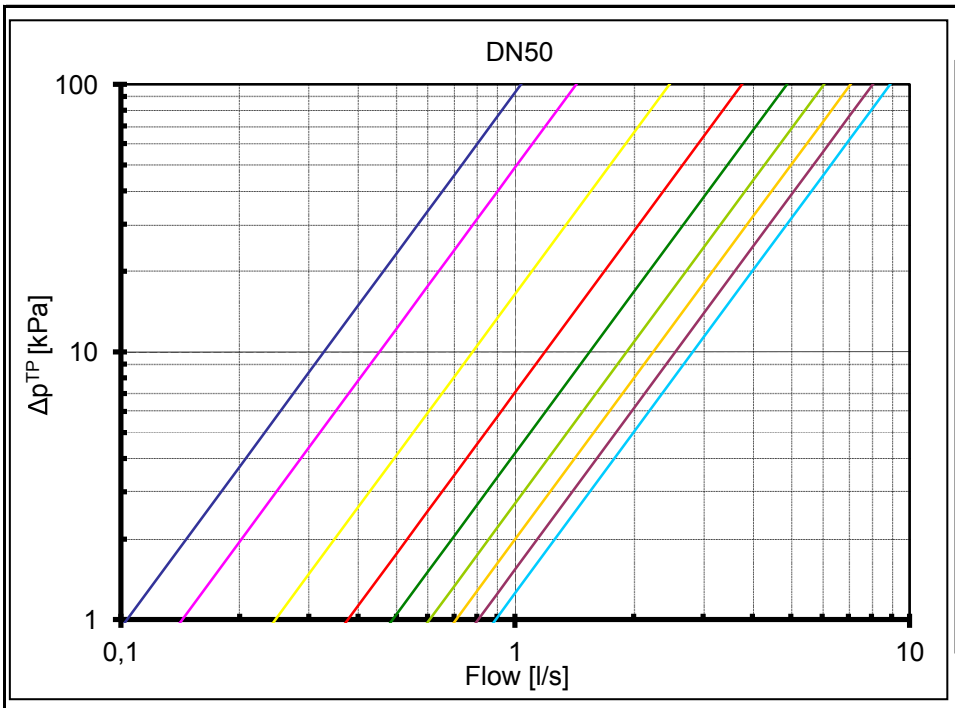

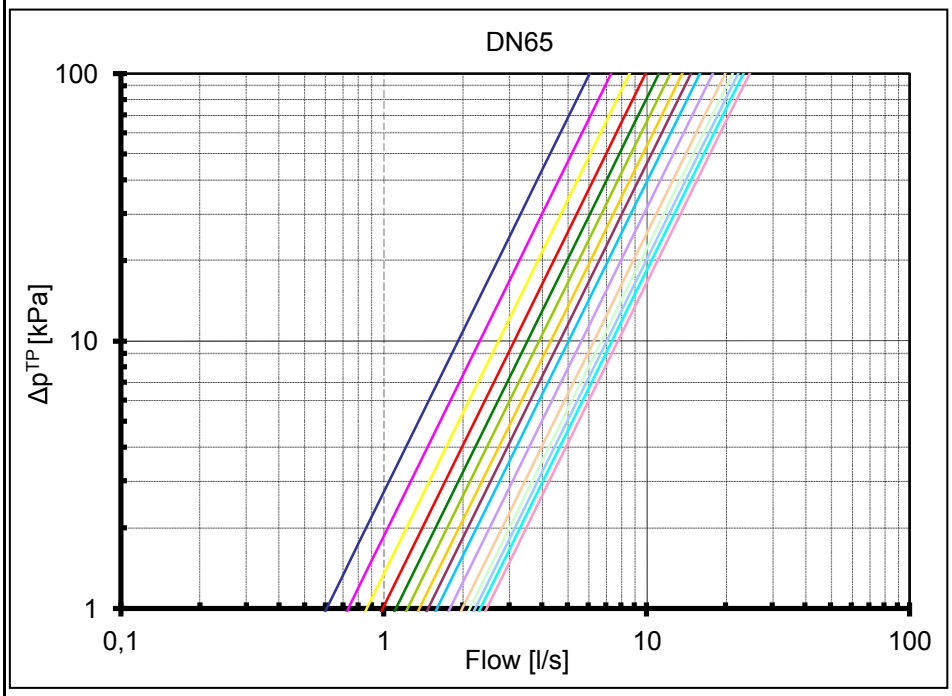

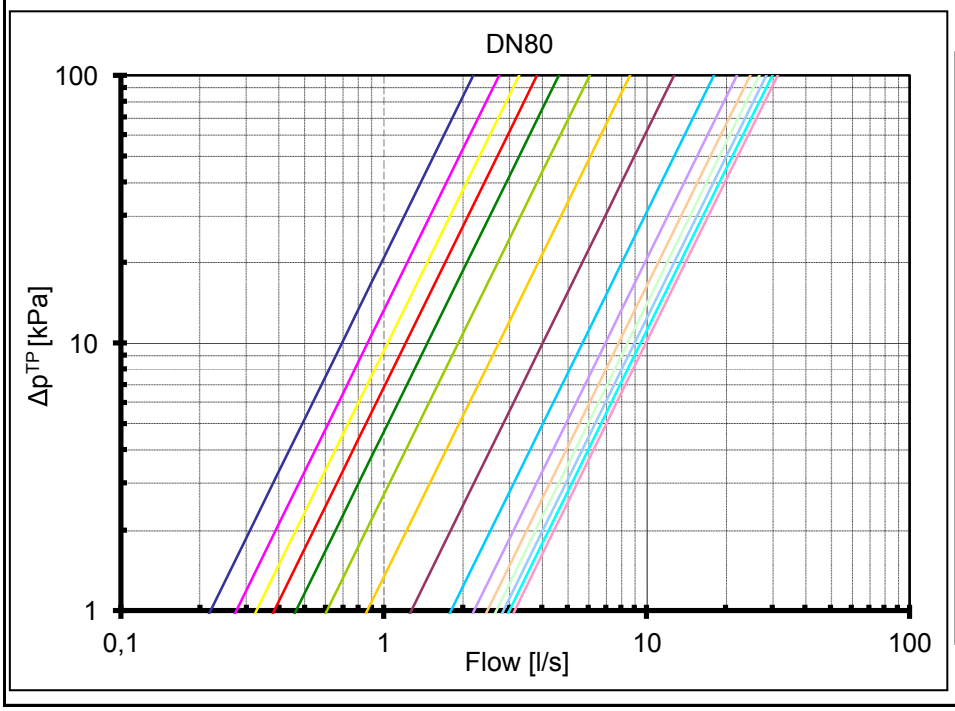

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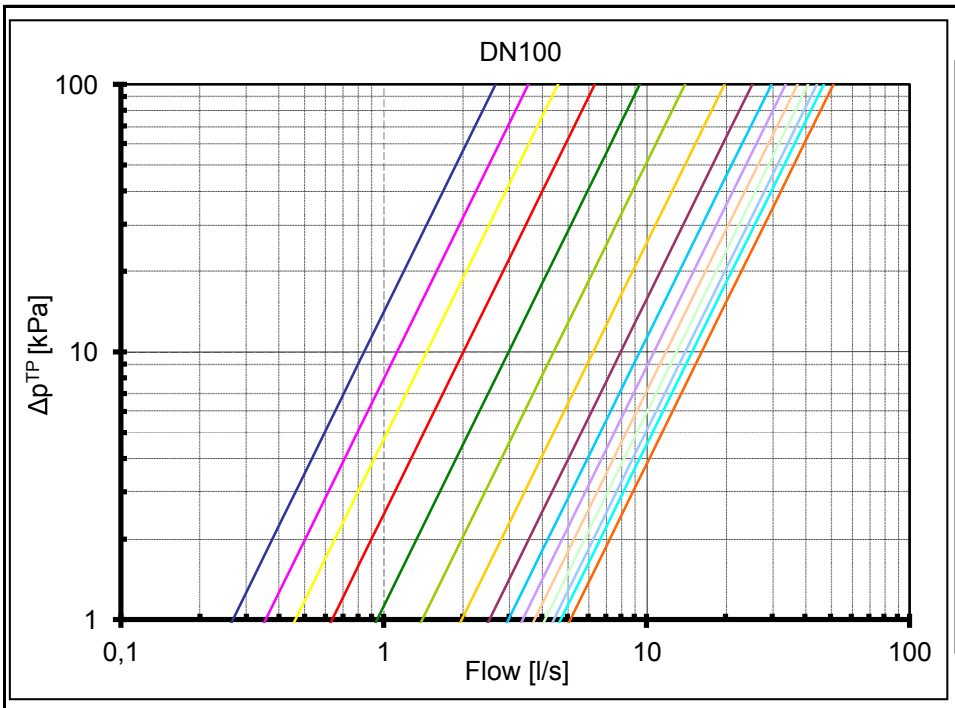

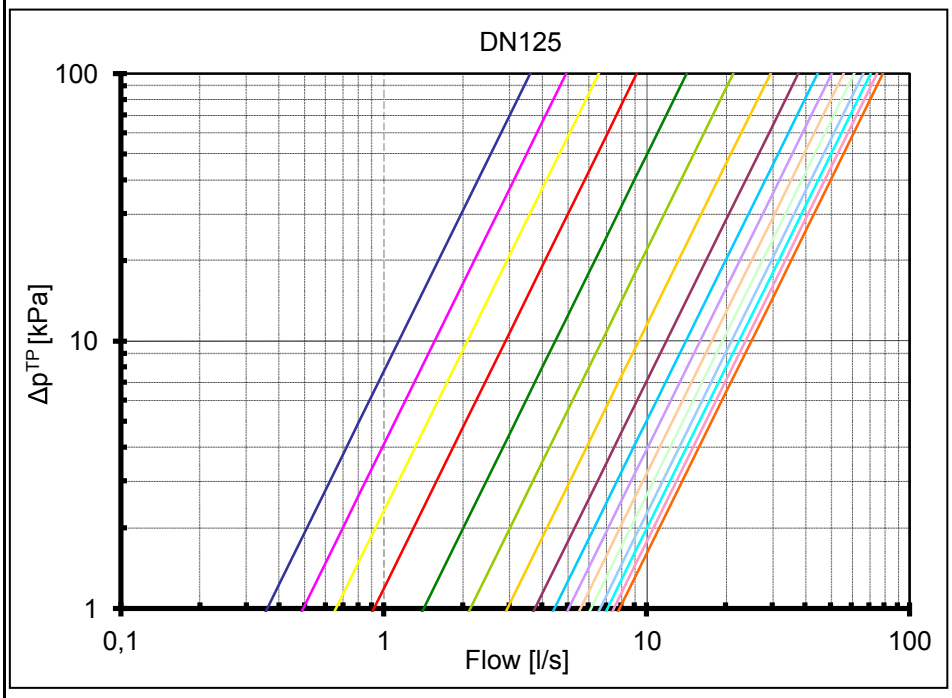

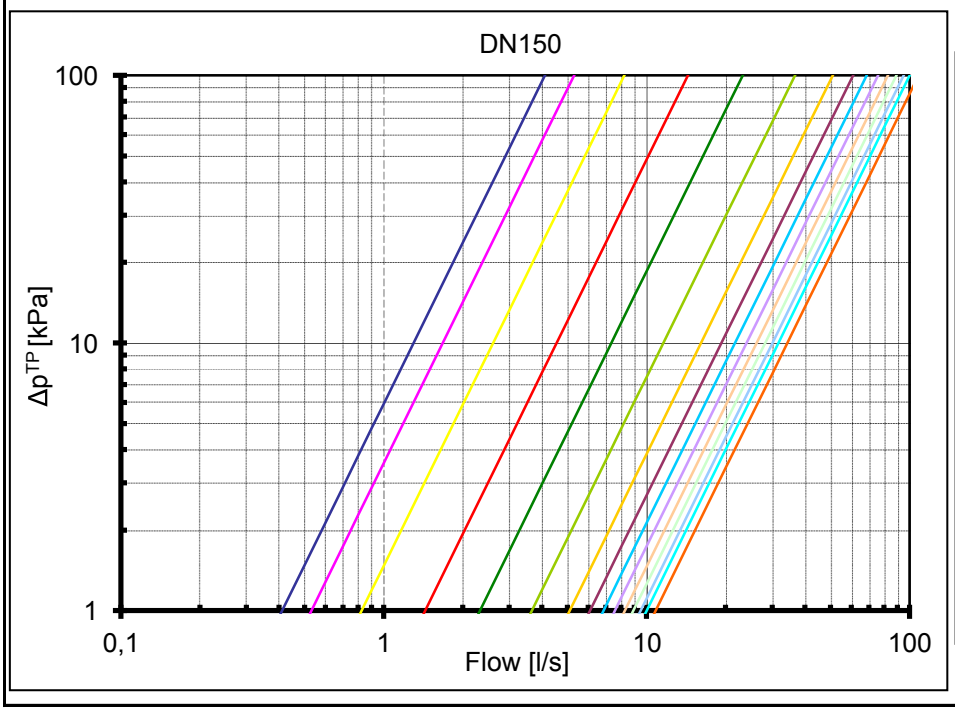

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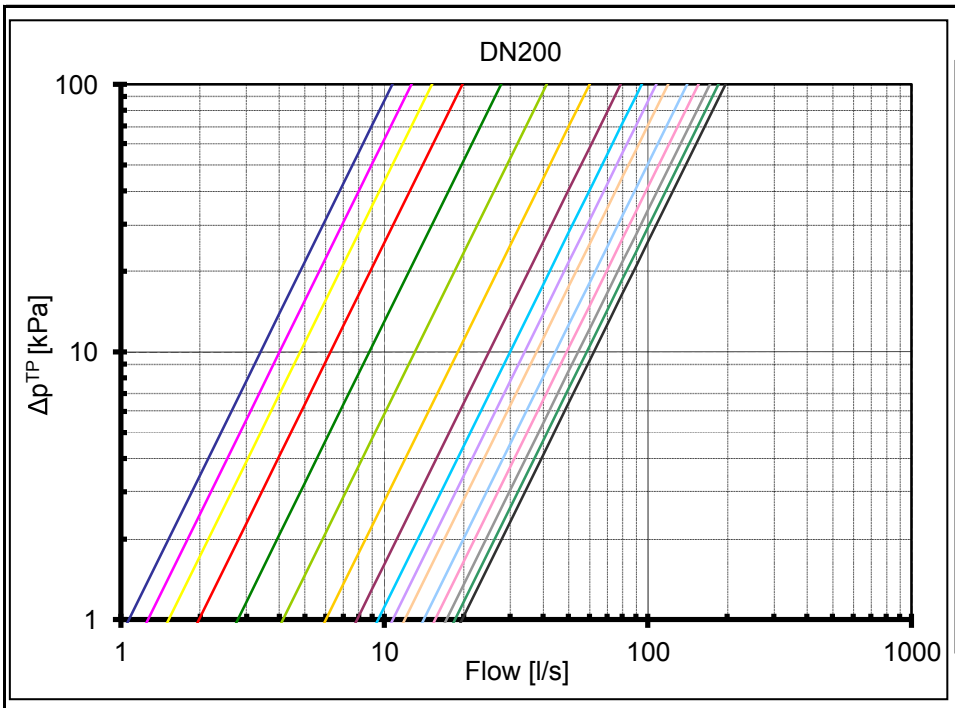

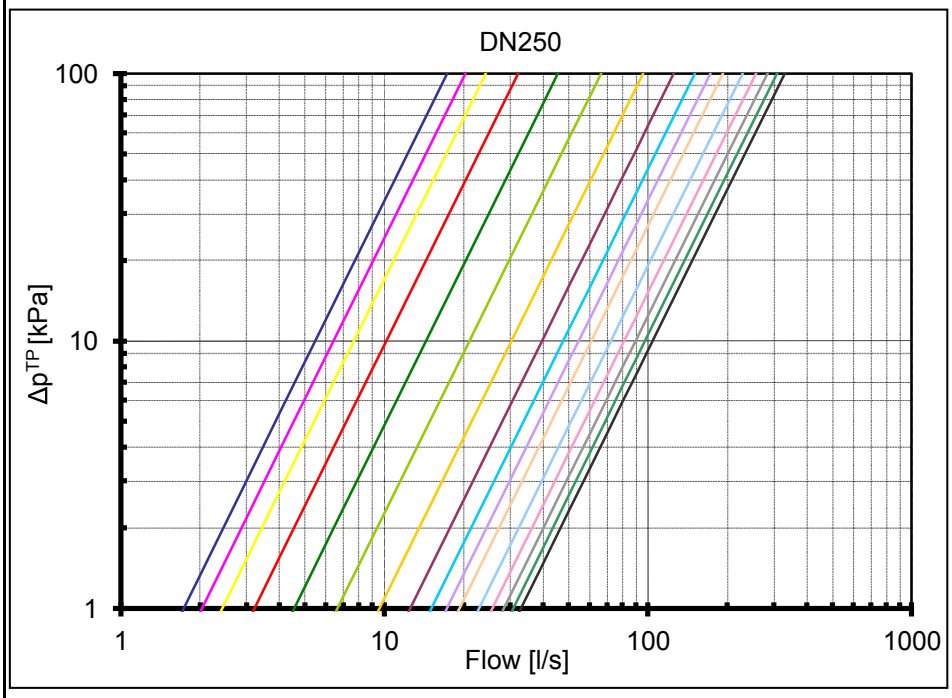

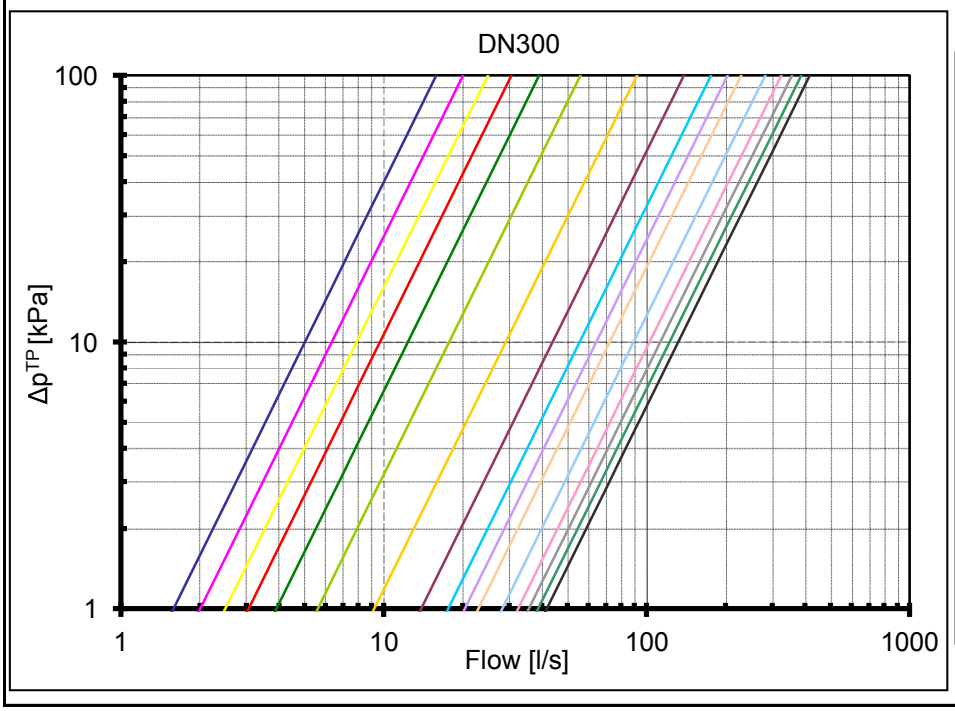

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HEADLOSS CALCULATION

Handwheel position	K_v [m^3/h @ 1bar]								
	050	065	080	100	125	150	200	250	300
1,0	3,7	21,9	7,9	9,6	13,0	14,8	38,6	62,3	57,1
1,5	5,2	26,4	9,9	12,8	17,8	19,1	45,6	73,1	72,2
2,0	8,9	31,1	11,8	16,6	23,7	29,7	54,6	87,3	89,8
2,5	13,6	35,7	13,8	22,9	33,1	51,8	71,2	115,8	110,2
3,0	17,6	40,1	16,7	34,0	51,2	83,7	99,9	163,9	140,7
3,5	21,9	44,4	21,9	50,5	77,0	132,0	148,6	239,2	202,0
4,0	25,5	49,3	31,2	71,4	106,5	183,7	216,2	345,3	331,7
4,5	29,0	53,2	45,9	90,9	135,7	219,5	283,9	451,4	500,2
5,0	32,2	57,5	65,0	107,4	160,9	247,1	341,2	543,3	634,1
5,5	-	64,4	79,5	121,6	182,1	273,3	387,7	622,0	733,2
6,0	-	71,8	89,3	135,0	201,9	298,2	430,1	694,0	825,1
6,5	-	76,6	96,6	148,1	221,6	321,3	471,7	765,2	922,9
7,0	-	80,4	102,7	159,9	239,8	342,2	507,6	823,7	1018
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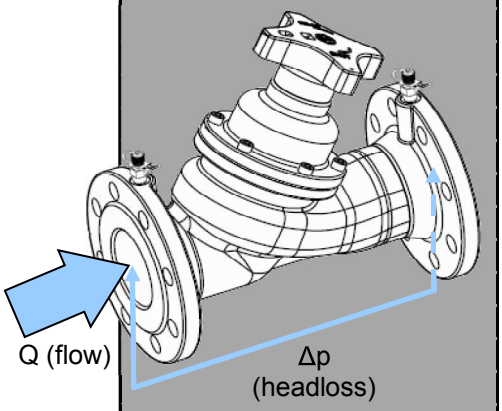
9,0	-	-	-	-	-	-	619,3	1022	1285
9,5	-	-	-	-	-	-	644,9	1068	1340
10,0	-	-	-	-	-	-	667,2	1110	1394
10,5	-	-	-	-	-	-	688,4	1150	1449
11,0	-	-	-	-	-	-	710,0	1188	1504

Copy of the table presented in flow measurement paragraph

Δp (headloss) approximately equal to Δp^{TP}

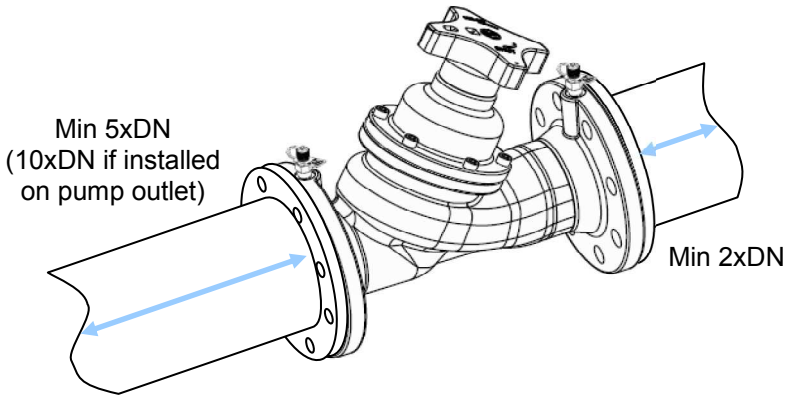


$$\Delta p = \left(\frac{36 \cdot Q}{K_V} \right)^2$$

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

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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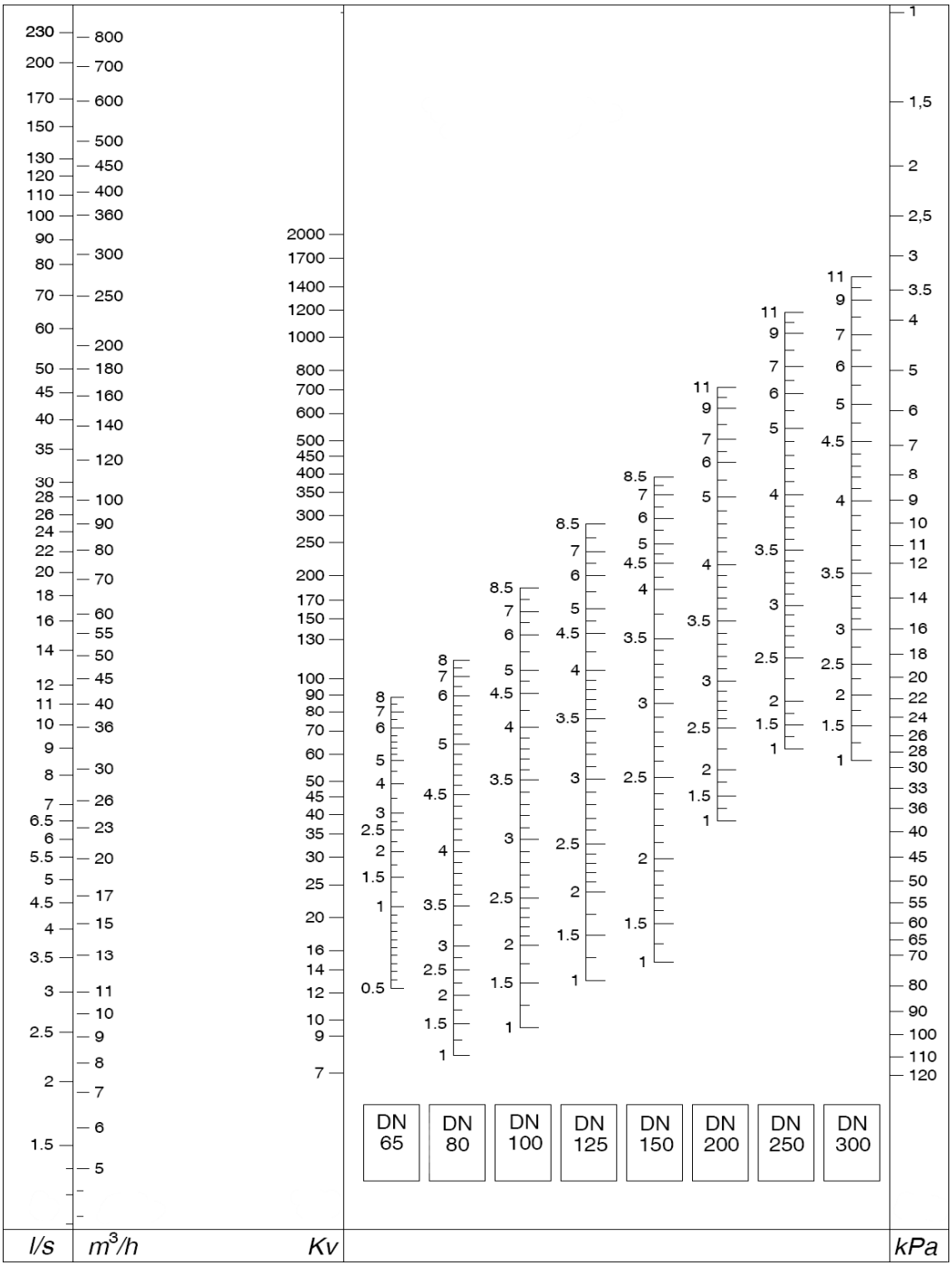
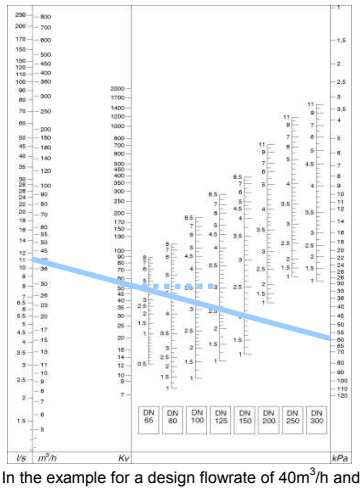
PRESETTING



Using diagram above, determine the presetting position of the valve with the given design flowrate and headloss:

1) draw a straight line joining design flowrate and design headloss;
2) determine design K_v value as intersection of drawn line and K_v axis;
3) draw a straight horizontal line from intersection previously identified and the specific valve DN Axis;
4) intersection determines handwheel position to use for presetting.



In the example for a design flowrate of 40m³/h and design Δp 60kPa handwheel position of 3,0 is determined for a DN125 valve

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