

1. Standards

- ✓ Sanitary certificate of conformity 19 ACC LY 017
- ✓ Pipe connection: thread according to ISO 228/1
- ✓ Drain plug: cylindrical thread G1/4" conf. ISO 228/1
- ✓ Connection to pressure ports: 3/8" 24 UNF thread according to ANSI B1.1

2. Features

Use :	For static balancing of heating circuits and where it is necessary to regulate and measure the flow of a fluid with facility
Size :	DN15 (1/2") to DN50 (2")
Connection :	Female BSP
Min Temperature :	0°C (without icing conditions)
Max Temperature :	+110°C
Max Pressure :	25 bar
Specifications :	Graduated scale handle allows the flow rate through the valve to be adjusted from maximum value to complete closure without the use of tools 2 pressure taps allow to measure the pressure difference at the ends of a calibrated Venturi pipe (fixed orifice) allowing an extreme precision in the flow calculation Pre-setting system that allows to quickly return to the previously set flow rate value after using the shut-off function A drain plug is provided and can be used to connect the capillary tube of the DPCV differential pressure control valve
Materials :	

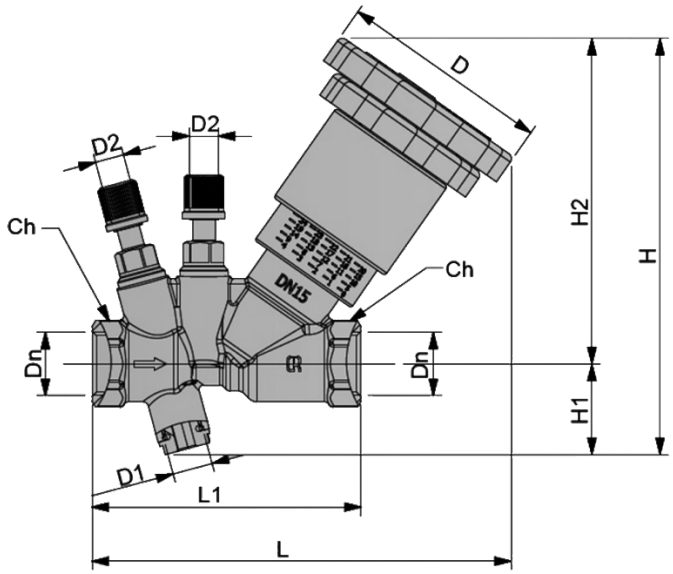
Information provided as an indication and subject to possible modification

3. Materials



Designation	Materials
Body and internal parts in contact with water	brass DZR CW602N
Internal parts not in contact with water	brass CW614N
O-ring washers and other sealing elements	EPDM rubber
Seat	PTFE
Plastics	polyamide reinforced with fibreglass polypropylene

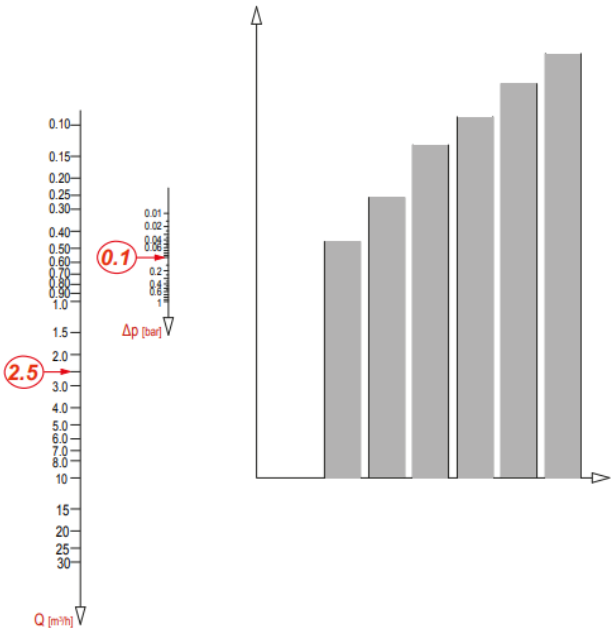
4. Size (in mm)



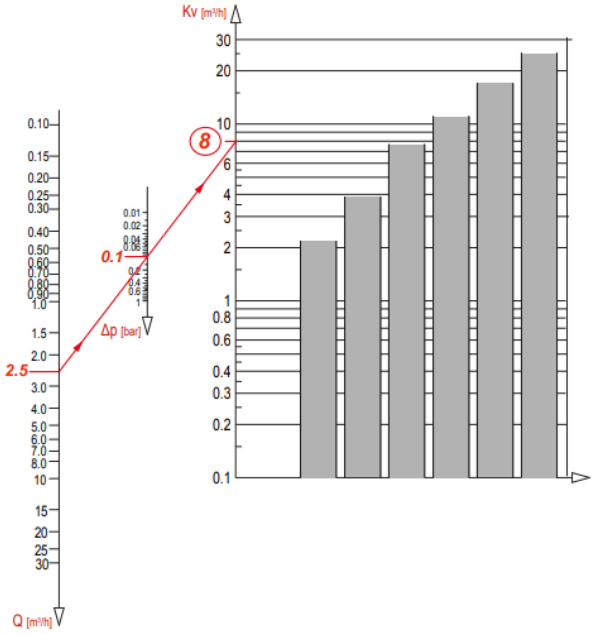
DN	D (mm)	D1	D2	L (mm)	L1 (mm)	H (mm)	H1 (mm)	H2 (mm)	Ch (mm)	Kv Venturi
1/2"	70	1/4"	3/8" – 24 UNF	138	89	137	30	107	26	2,5
3/4"	70	1/4"	3/8" – 24 UNF	144	96	142	33	109	33	4,2
1"	70	1/4"	3/8" – 24 UNF	158	111	156	35	121	40	8,4
1"1/4	70	1/4"	3/8" – 24 UNF	163	121	162	41	121	48	18,5
1"1/2	70	1/4"	3/8" – 24 UNF	186	148	183	44	139	56	27,5
2"	70	1/4"	3/8" – 24 UNF	190	160	190	51	139	66	38,0

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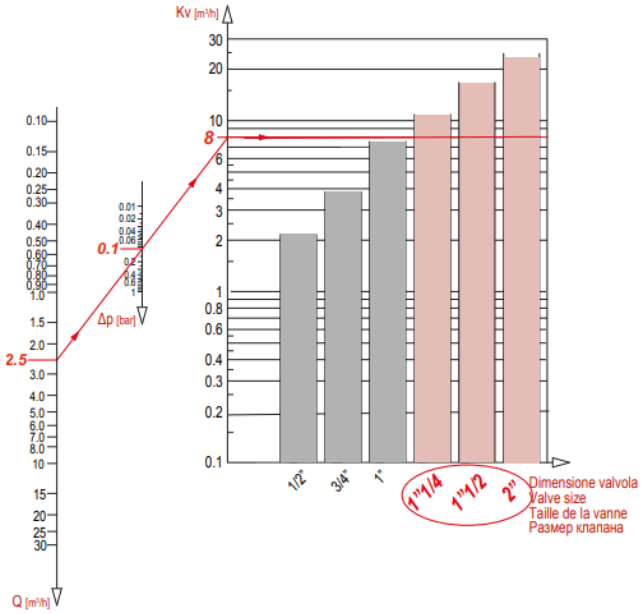
Guide to sizing



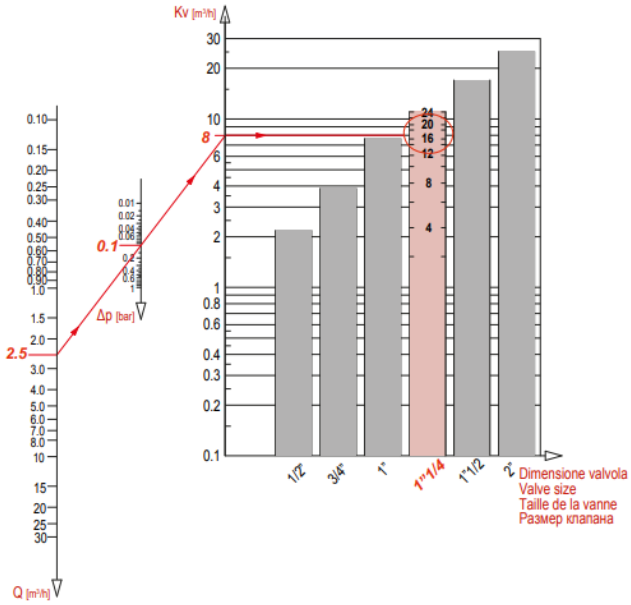
A Detect the sought values of flow rate Q and pressure drop ΔP on the related axis;
for example, assume that Q=2,5 m^3/h and ΔP=0,1 bar.
For ease of reference, note that
1 l/s= 3,6 m^3/h
1 bar= 10 mH_2O =100 kPa



B Draw a line passing through the determined values and extend it to the intersection with the axis of the Kv values; following the example Kv=8 m^3/h.



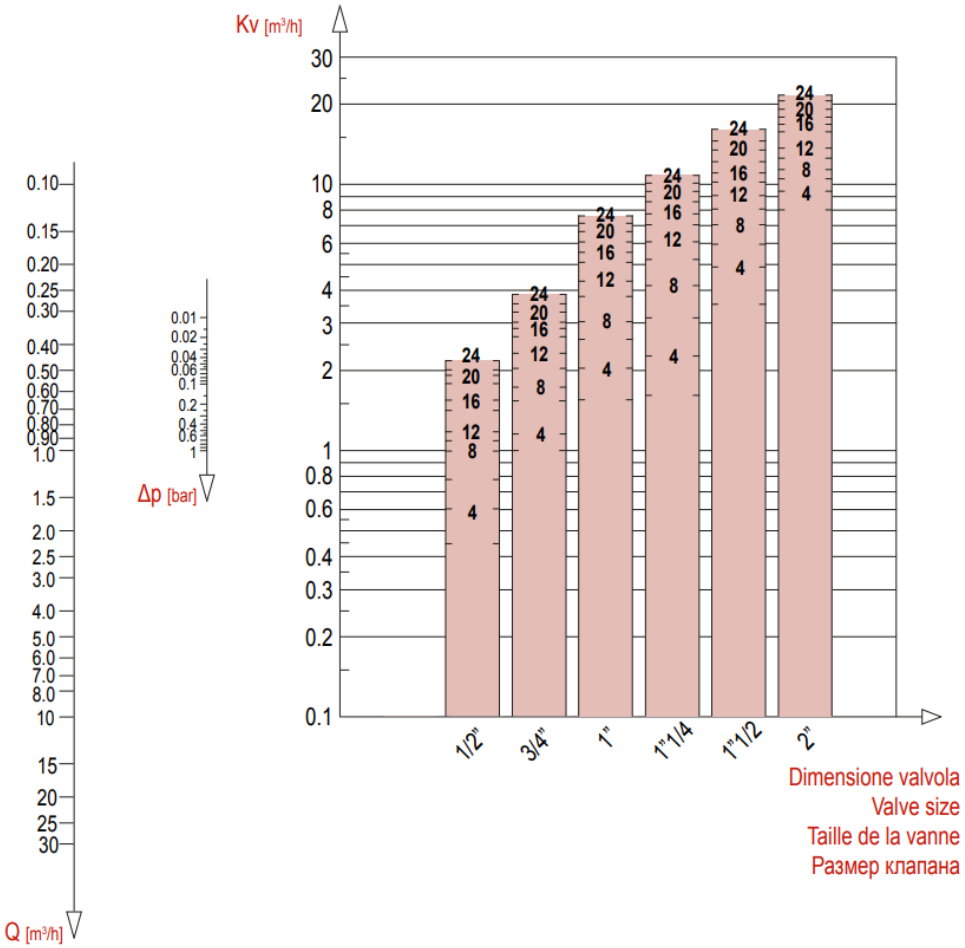
C Continue along the horizontal line of the detected Kv value: the intersected bars refer to the valves suitable for the selected installation; in this instance the valves with size 1"1/4, 1"1/2 and 2" can be used.



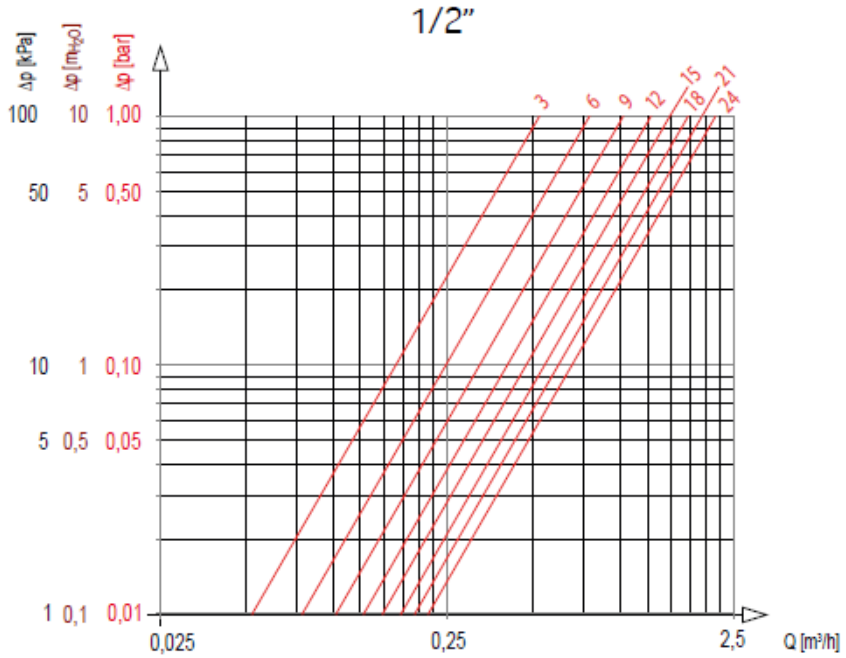
D Pick the valve with the lower appropriate size; in this example the 1"1/4 size one. The intersection of the selected bar and the horizontal line will determine the required value of calibration; in this case 17.

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Sizing diagram

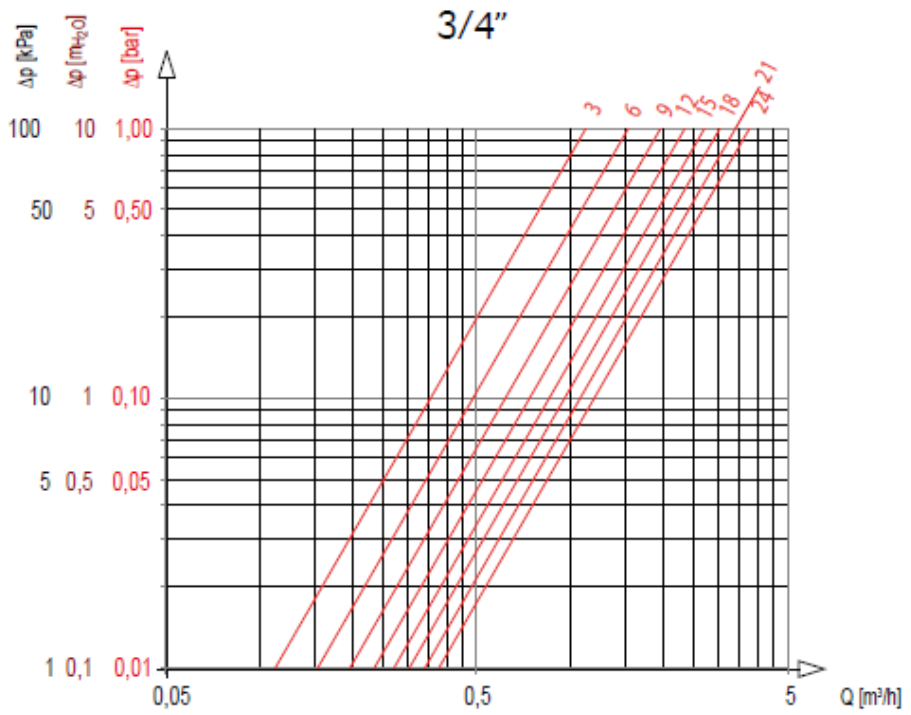


Head Loss diagram

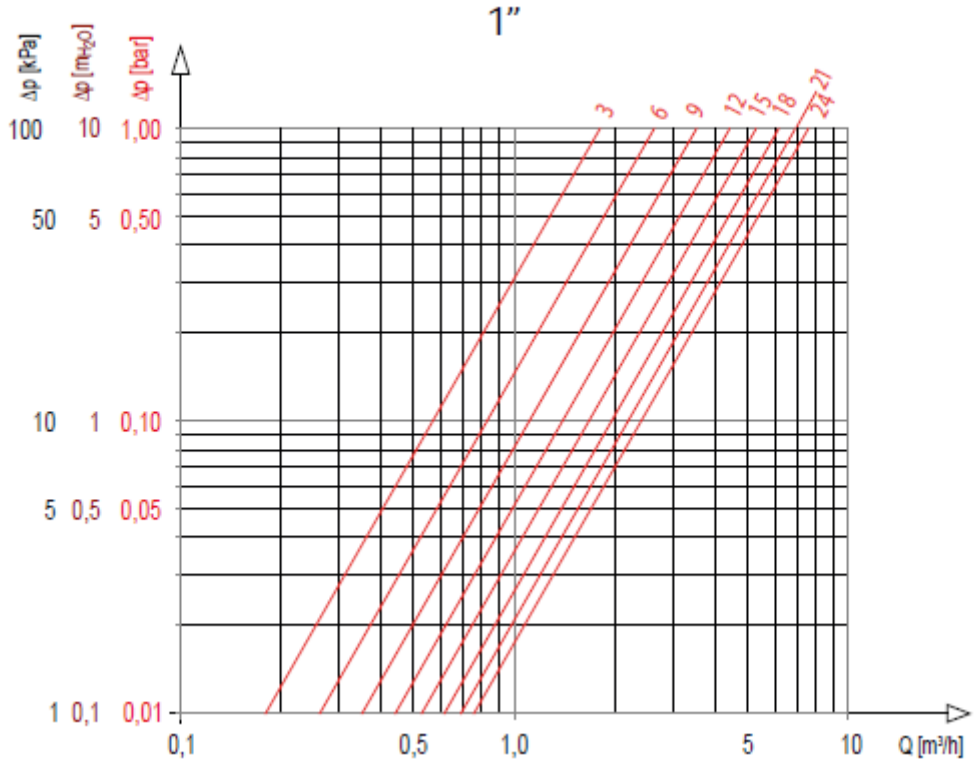


Set	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Kv	2,16	2,07	2,00	1,93	1,88	1,81	1,73	1,66	1,59	1,49	1,42	1,34	1,28	1,21	1,12	1,03	0,96	0,88	0,78	0,71	0,60	0,52	0,46	0,38

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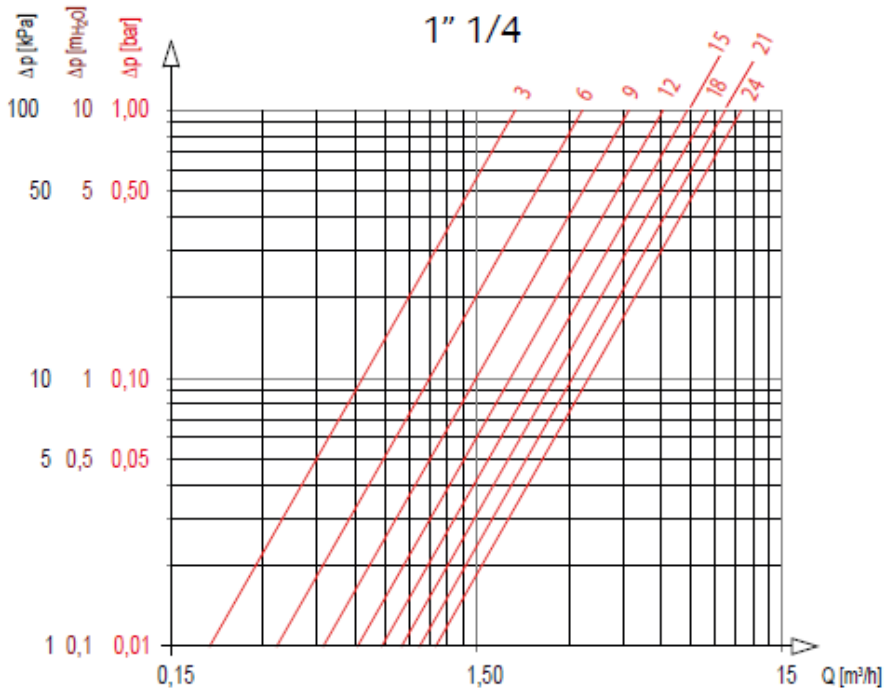


Set	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Kv	3,78	3,69	3,54	3,41	3,27	3,14	3,04	2,90	2,80	2,71	2,60	2,46	2,34	2,21	2,06	1,96	1,79	1,65	1,54	1,42	1,25	1,12	0,96	0,85

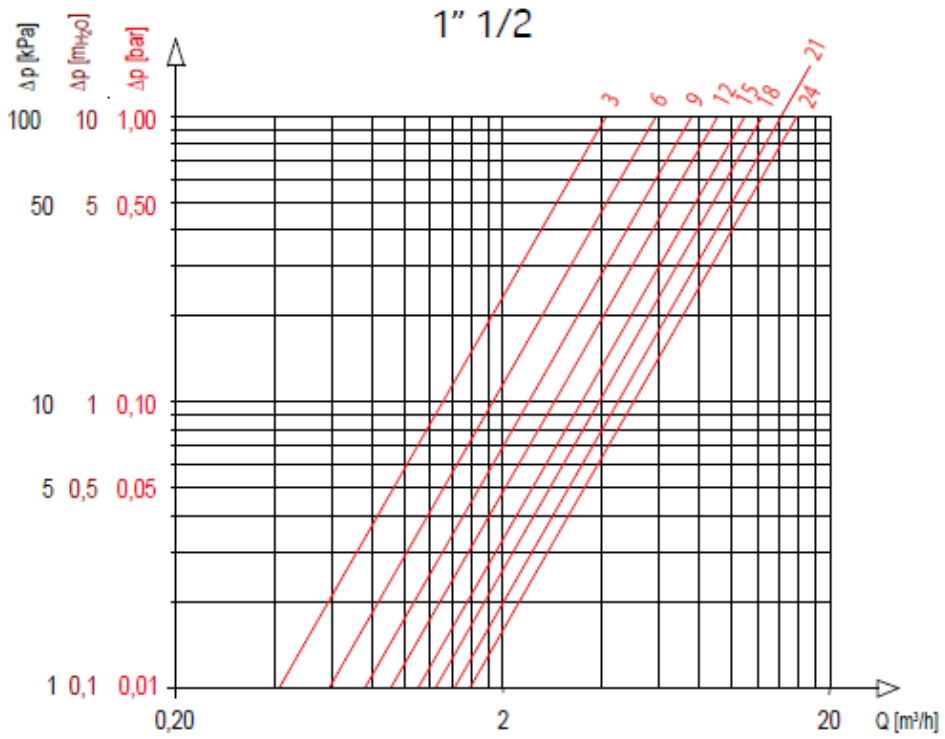


Set	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Kv	7,57	7,38	7,14	6,92	6,61	6,38	6,17	5,85	5,60	5,28	5,03	4,68	4,40	4,13	3,84	3,50	3,18	2,94	2,62	2,37	2,08	1,80	1,50	1,15

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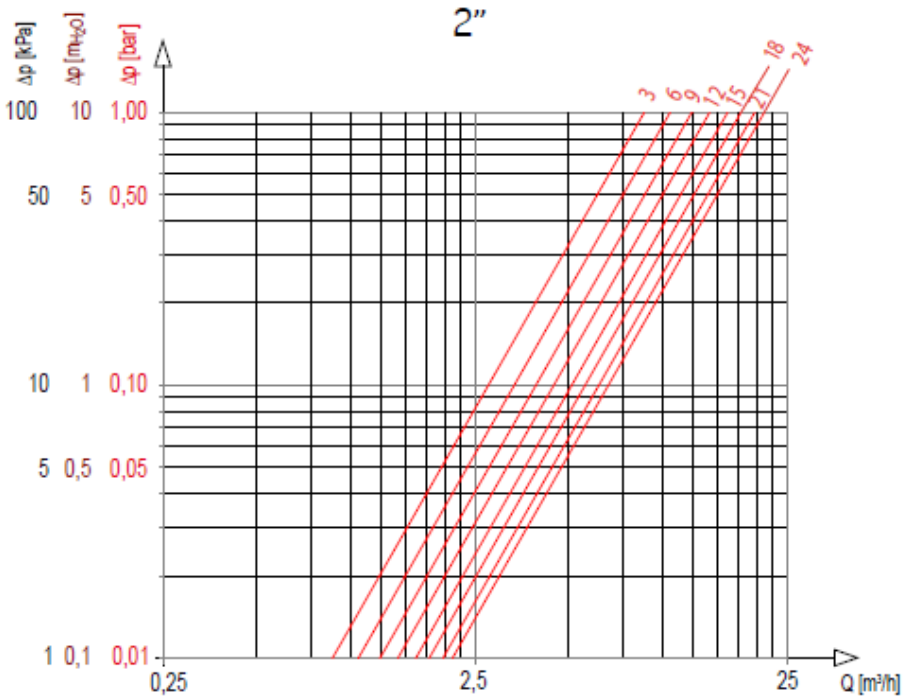


Set	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Kv	11,00	10,59	10,18	9,74	9,38	8,93	8,51	8,11	7,77	7,33	7,01	6,61	6,11	5,67	5,22	4,72	4,24	3,81	3,32	2,83	2,42	2,01	1,64	0,92



Set	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Kv	15,87	15,40	14,72	14,21	13,68	13,01	12,44	12,07	11,52	11,00	10,16	9,73	9,08	8,71	8,20	7,57	7,00	6,51	5,89	5,27	4,88	4,14	3,62	3,19

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Set	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Kv	21,17	20,91	20,30	19,73	19,04	18,41	17,83	17,32	16,68	16,15	15,51	14,80	14,15	13,69	13,14	12,40	11,82	11,19	10,57	9,90	9,40	8,73	7,98	5,93

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