

DH2490

## Double Regulating Valve

Brass Body, Includes Test Points, BSPP Female, Fixed Orifice

### Pressure/Temperature Ratings

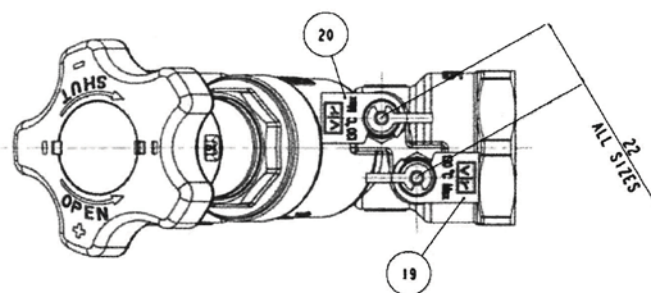
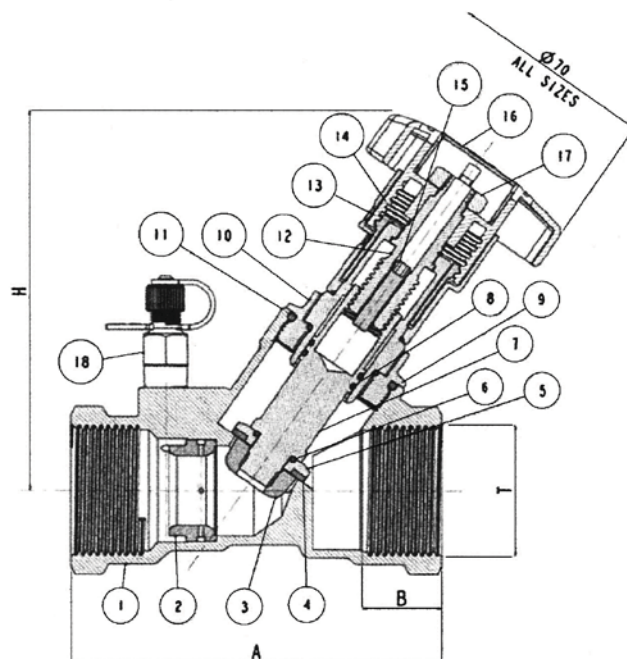
Maximum Pressure	PN25
Temperature	-10°C to 130°C

### Material List

No.	Component	Materials
1	Body	CuZn3Pb2 (CW602N) DZR
2	Venturi Insert	(CW602N) DZR
3	Balancing Cone	EN 12165
4	Gasket Disk	PTFE
5	Disk	CuZn3Pb2 (CW602N) DZR
6	O-Ring	EPDM
7	Disk Stem	CuZn3Pb2 (CW602N) DZR
8	O-Ring	EPDM
9	O-Ring	EPDM
10	Union	CuZn3Pb2 (CW602N) DZR
11	O-Ring	EPDM
12	Stem	CuZn3Pb2 (CW602N) DZR
13	Stem	EN 12165
14	Stop Spring Ring	Spring Steel
15	Screw	Steel
16	Handwheel	ABS
17	Nut	Steel Zinc Plated
18	Pressure Tap	CuZn3Pb2 (CW602N) DZR
19	Tie	Polypropylene

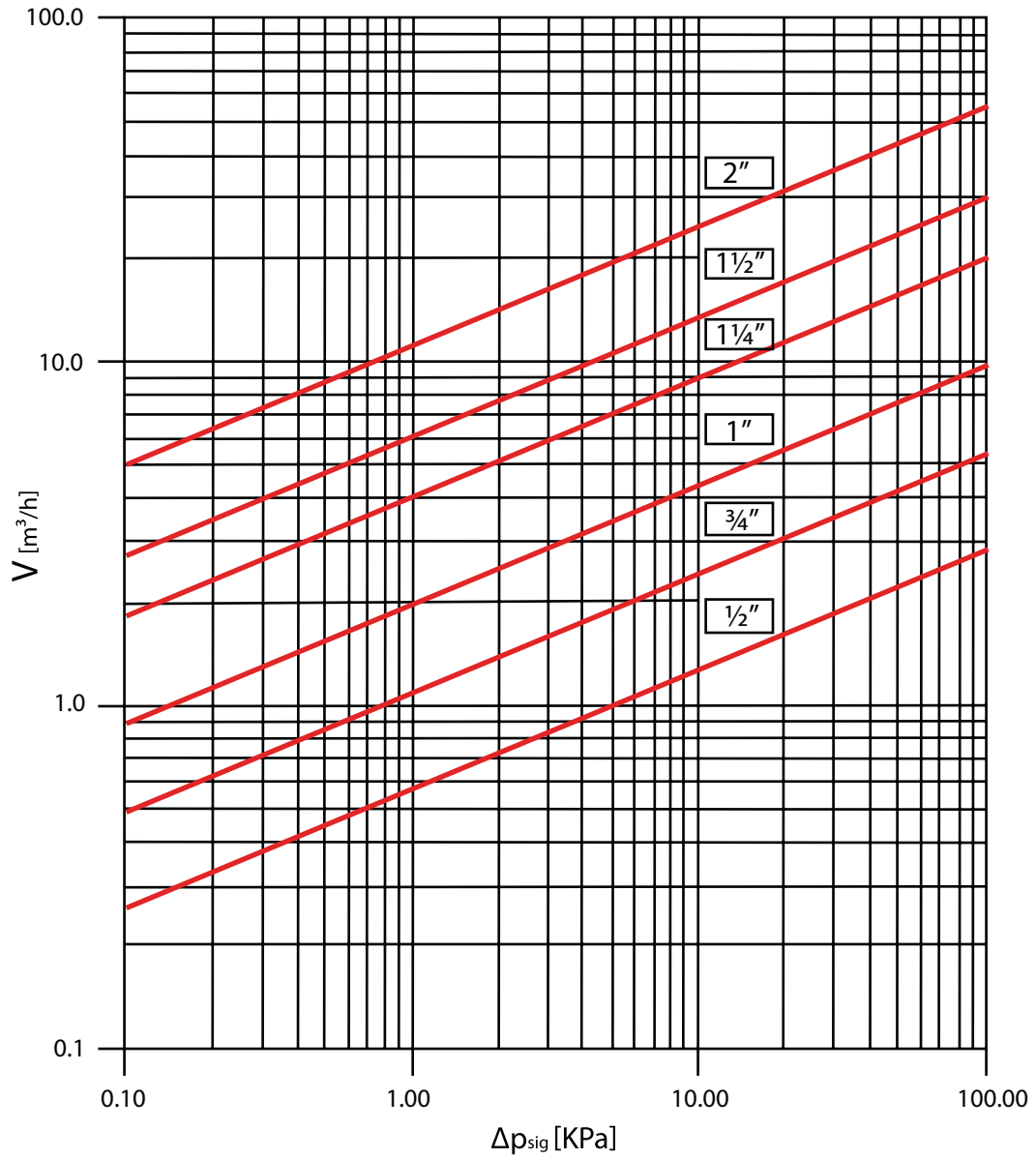
### Dimensions

DN	T	A	B	H	I (Kg)
15	1/2"	87.8	17.5	103.0	0.55
20	3/4"	95.9	19.0	103.0	0.62
25	1"	100.0	22.5	103.0	0.75
32	1 1/4"	117.5	24.8	123.3	1.19
40	1 1/2"	127.0	24.8	125.4	1.45
50	2"	145.3	29.2	135.6	2.06



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Flow Rates					
DN	In	KV <sub>sig</sub>	Kv	HLF	K
15	1/2"	2.8	1.92	2.14	29.3
20	3/4"	5.33	3.66	2.12	26.5
25	1"	9.72	6.25	2.42	22.8
32	1 1/4"	20.25	12.64	2.57	16.9
40	1 1/2"	30.23	19.65	2.37	12.8
50	2"	55.07	29.59	3.46	14.6

$$\text{Flow rate } V = \frac{KV_{sig} \sqrt{\Delta p_{sig}}}{36} \text{ [L/sek]} \quad V = 0,1 \cdot KV_{sig} \sqrt{\Delta p_{sig}} \text{ [m}^3\text{/h]}$$

$$\text{Pressure loss in fully open position } \Delta p = HLF \cdot \Delta p_{sig} \text{ [KPa]}$$

$$\text{Pressure loss in fully open position } \Delta p = \frac{v^2}{2 \cdot g} \text{ [mH}_2\text{O]}$$

KV<sub>sig</sub> [m<sup>3</sup>/h]

Kv [m<sup>3</sup>/h]

HLF

K

v [m/sek]

g [9,81m/sek<sup>2</sup>]

Δp<sub>sig</sub> [KPa]

Flow coefficient through the pressure test points of the valve

Flow coefficient through the valve

Head loss factor

Head loss coefficient

Flow velocity

Gravitational constant

Differential pressure through the pressure test points of the valve

Settings						
Handwheel Position	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
0.5	0.41	0.41	1.47	2.56	2.72	5.36
0.7	0.41	0.47	1.73	2.92	3.12	6.54
1.0	0.53	0.58	2.09	3.42	3.69	8.35
1.3	0.62	0.78	2.44	3.88	4.29	10.54
1.5	0.70	0.97	2.70	4.18	4.82	12.37
1.7	0.78	1.08	3.01	4.54	5.71	14.39
2.0	0.86	1.20	3.57	5.42	7.78	17.45
2.3	0.95	1.40	4.18	6.76	10.45	20.20
2.5	1.02	1.72	4.57	7.92	12.29	21.73
2.7	1.14	1.94	4.87	9.05	14.13	23.06
3.0	1.38	2.13	5.27	10.56	16.34	24.84
3.3	1.63	2.54	5.61	11.58	17.88	26.44
3.5	1.76	2.93	5.74	12.06	18.63	27.44
3.7	1.83	3.24	5.88	12.40	19.17	28.42
4.0	1.89	3.51	6.14	12.54	19.59	29.72
4.4	1.92	3.67	6.24	--	--	--

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Flow Rates		
DN15 / ½"		KV <sub>sig</sub> = 2.8 m <sup>3</sup> /h
Flow rate		Signal
[l/s]	[m <sup>3</sup> /h]	[kPa]
0.01	0.04	0.02
0.02	0.07	0.07
0.03	0.11	0.15
0.04	0.14	0.26
0.05	0.18	0.41
0.06	0.22	0.60
0.07	0.25	0.81
0.08	0.29	1.06
0.09	0.32	1.34
0.10	0.36	1.65
0.20	0.72	6.61
0.30	1.08	14.88
0.40	1.44	26.45
0.50	1.80	41.33
0.60	2.16	59.51
0.70	2.52	81.00
0.80	2.88	105.80
0.90	3.24	133.90
1.00	3.60	165.31
2.00	7.20	661.22
3.00	10.80	1487.76

Flow Rates		
DN20 / ¾"		KV <sub>sig</sub> = 5.33 m <sup>3</sup> /h
Flow rate		Signal
[l/s]	[m <sup>3</sup> /h]	[kPa]
0.01	0.04	0.00
0.02	0.07	0.02
0.03	0.11	0.04
0.04	0.14	0.07
0.05	0.18	0.11
0.06	0.22	0.16
0.07	0.25	0.22
0.08	0.29	0.29
0.09	0.32	0.37
0.10	0.36	0.46
0.20	0.72	1.82
0.30	1.08	4.11
0.40	1.44	7.30
0.50	1.80	11.40
0.60	2.16	16.42
0.70	2.52	22.35
0.80	2.88	29.20
0.90	3.24	36.95
1.00	3.60	45.62
2.00	7.20	182.48
3.00	10.80	410.58
4.00	14.40	729.91
5.00	18.00	1140.49
6.00	21.60	1642.30

Flow Rates		
DN25 / 1"		KV <sub>sig</sub> = 9.72 m <sup>3</sup> /h
Flow rate		Signal
[l/s]	[m <sup>3</sup> /h]	[kPa]
0.01	0.04	0.00
0.02	0.07	0.01
0.03	0.11	0.01
0.04	0.14	0.02
0.05	0.18	0.03
0.06	0.22	0.05
0.07	0.25	0.07
0.08	0.29	0.09
0.09	0.32	0.11
0.10	0.36	0.14
0.20	0.72	0.55
0.30	1.08	1.23
0.40	1.44	2.19
0.50	1.80	3.43
0.60	2.16	4.94
0.70	2.52	6.72
0.80	2.88	8.78
0.90	3.24	11.11
1.00	3.60	13.72
2.00	7.20	54.87
3.00	10.80	123.46
4.00	14.40	219.48
5.00	18.00	342.94
6.00	21.60	493.83
7.00	25.20	672.15
8.00	28.80	877.91
9.00	32.40	1111.11
10.00	36.00	1371.74

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## Double Regulating Valve

Flow Rates		
DN32 / 1¼"		KV <sub>sig</sub> = 20.25 m <sup>3</sup> /h
Flow rate		Signal
[l/s]	[m <sup>3</sup> /h]	[kPa]
0.01	0.04	0.00
0.02	0.07	0.00
0.03	0.11	0.00
0.04	0.14	0.01
0.05	0.18	0.01
0.06	0.22	0.01
0.07	0.25	0.02
0.08	0.29	0.02
0.09	0.32	0.03
0.10	0.36	0.03
0.20	0.72	0.13
0.30	1.08	0.28
0.40	1.44	0.51
0.50	1.80	0.79
0.60	2.16	1.14
0.70	2.52	1.55
0.80	2.88	2.02
0.90	3.24	2.56
1.00	3.60	3.16
2.00	7.20	12.64
3.00	10.80	28.44
4.00	14.40	50.57
5.00	18.00	79.01
6.00	21.60	113.78
7.00	25.20	154.86
8.00	28.80	202.27
9.00	32.40	256.00
10.00	36.00	316.05
20.00	72.00	1264.20

Flow Rates		
DN40 / 1½"		KV <sub>sig</sub> = 30.23 m <sup>3</sup> /h
Flow rate		Signal
[l/s]	[m <sup>3</sup> /h]	[kPa]
0.01	0.04	0.00
0.02	0.07	0.00
0.03	0.11	0.00
0.04	0.14	0.00
0.05	0.18	0.00
0.06	0.22	0.01
0.07	0.25	0.01
0.08	0.29	0.01
0.09	0.32	0.01
0.10	0.36	0.01
0.20	0.72	0.06
0.30	1.08	0.13
0.40	1.44	0.23
0.50	1.80	0.35
0.60	2.16	0.51
0.70	2.52	0.69
0.80	2.88	0.91
0.90	3.24	1.15
1.00	3.60	1.42
2.00	7.20	5.67
3.00	10.80	12.76
4.00	14.40	22.69
5.00	18.00	35.45
6.00	21.60	51.05
7.00	25.20	69.49
8.00	28.80	90.76
9.00	32.40	114.87
10.00	36.00	141.82
20.00	72.00	567.27
30.00	108.00	1276.35
40.00	144.00	2269.07

Flow Rates		
DN50 / 2"		KV <sub>sig</sub> = 55.07 m <sup>3</sup> /h
Flow rate		Signal
[l/s]	[m <sup>3</sup> /h]	[kPa]
0.01	0.04	0.00
0.02	0.07	0.00
0.03	0.11	0.00
0.04	0.14	0.00
0.05	0.18	0.00
0.06	0.22	0.00
0.07	0.25	0.00
0.08	0.29	0.00
0.09	0.32	0.00
0.10	0.36	0.00
0.20	0.72	0.02
0.30	1.08	0.04
0.40	1.44	0.07
0.50	1.80	0.11
0.60	2.16	0.15
0.70	2.52	0.21
0.80	2.88	0.27
0.90	3.24	0.35
1.00	3.60	0.43
2.00	7.20	1.71
3.00	10.80	3.85
4.00	14.40	6.84
5.00	18.00	10.68
6.00	21.60	15.38
7.00	25.20	20.94
8.00	28.80	27.35
9.00	32.40	34.61
10.00	36.00	42.73
20.00	72.00	170.93
30.00	108.00	384.60
40.00	144.00	683.74
50.00	180.00	1068.34
60.00	216.00	1538.41
70.00	252.00	2093.95