

Application

Controller is intended for regulation of input (unsteady) pressure to a constant output pressure. This type is for water and air, for maximum pressures up to PN 40 and temperatures up to 300°C. Controller cannot be used for flammable and toxic fluids. Reduced (output) pressure is adjusted and controlled by a spring (each spring is for fixed expanse pressure). Kv number is volume rate of service fluid (in m³/h - water volume flow rate with water density 100kg/m³, when valve pressure drop is 1 bar).

Minimum differential pressure

$$\frac{p_1 \text{ (abs.)}}{p_2 \text{ (abs.)}} > 1,2$$

Set values of output pressure (p_2) and maximum allowable pressure load of a diaphragm (bar) are given in the table below.

Connecting and face-to-face dimensions

Face-to-face dimensions are given in the table below.

Material

Body	GG 25
Seat, conical disk	chrome steel
Valve bushing	brass (CuZn40)
Membrane	EPDM

Installation

Pressure controller is installed in horizontal piping with spring in vertical position under the axis of pipeline. The correct flow direction is indicated by an arrow on the body. The stop valve must be set upstream the strainer, which is set upstream the controller. The stop valve must have the same nominal inside diameter as the controller. Safety valve must be set in specified distance downstream the controller and stop valve must not be set between these elements.

DN	Temperature [°C]	Pressure [MPa]
15 - 20	120	34
	25 - 200	40
	200	34
	300	28
	400	25

DN	D	L	V ₁	V ₂	D ₁	D ₂	D ₃	a	f	d	n	kg	kg	kg	kg	kg
15	15	130	725	135	95	65	45	16	2	14	4	23	26	29	-	-
20	20	150	725	135	105	75	58	18	2	14	4	24	27	30	-	-
25	25	160	750	96	115	85	68	18	2	14	4	24	27	30	-	-
32	32	180	750	96	140	100	78	18	2	18	4	26	29	32	-	-
40	40	200	905	145	150	110	88	18	3	18	4	33	36	42	53	-
50	50	230	905	144	165	125	102	20	3	18	4	35	38	44	55	-
65	65	290	905	144	185	145	122	22	3	18	8	40	43	49	60	-
80	80	310	905	146	200	160	138	24	3	18	8	43	46	52	63	-
100	100	350	1120	204	235	190	162	24	3	22	8	70	73	79	93	108
125	125	400	1120	204	270	220	188	26	3	26	8	84	87	93	107	122
150	150	480	1210	294	300	250	218	28	3	26	8	139	142	148	162	177
200	200	600	1210	294	375	320	285	34	3	30	12	195	198	204	218	223
Size of diaphragm												120	160	225	330	430
Dk												175	220	285	395	495

Technical data

Leakage of a closed valve: DN 15-20 0,1% Kvs
DN 25-200 0,1% Kvs

Permeability: 5 - 100% of Kvs

DN	15	20	25	32	40	50	65	80	100	125	150	200
Kvs	0,63	2	5	8	12,5	20	31,5	50	80	125	200	280
	2	3,15	8	12,5	20	31,5	50	80	125	200	280	450

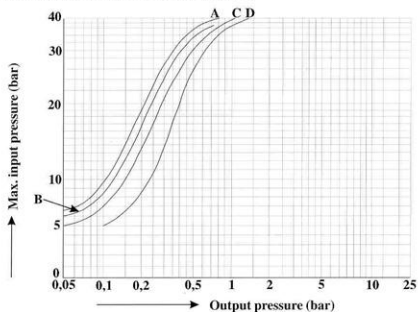
Set values of output pressure (p_2) and maximum diaphragm pressure load (bar):

DN	15 - 32				40 - 80				100 - 200				
Scope of output pressure p_2 (bar)	12-20	2,2-6	0,05-1,3		12-20	5-9	1,3-2	0,05-0,4	12-20	5-8	1,4-2	0,1-0,4	
	20-25	6-9	1,3-2,2		20-25	9-12	2-3,5	0,4-0,7	20-25	8-10	2-3,5	0,4-0,9	
		9-12					3,5-5	0,7-1,3		10-12	3,5-5	0,9-1,4	
Max. load on membrane (bar)	35	16	7		35	16	7		35	16	7	3	$p_2 + 1$ bar
Membrane size Kvs	120	160	225		120	160	225		120	160	225	330	

GRAPH:

Dependence of max. allowable pressure on inlet (p_1) and outlet (p_2) for liquids.

Differential pressure $p_1 - p_2 = 15$ bar must not be exceeded independently of graph data.



- A - for DN 25 - 32
- B - for DN 32 - 80
- C - for DN 80 - 125
- D - for DN 125 - 200

Note:

Max. input pressure for DN 15 is 34 bar