Precision pressure regulator
FHR 250

Description:

The precision pressure regulator FHR 250 serves the pressure reduction of air and neutral gases down to pressures within the mbar range. This is reached by a very thin diaphragm from strengthened synthetic rubber, as well as a Cantilever transmission for the actuation of the valve piston.
The diaphragm housing can be rotated steplessly against the tubing ports. Thus a horizontal adjustment of the diaphragm is possible in all installation positions.
An optionally installed blow-off valve is in the position to regulate excessive pressure on the outlet pressure side.

Application area:

The particular area of application of these pressure control valves are where high requirements are required in accuracy, stable regulation, as well as durable building quality. Through different valve seat diameters, as well as various adjusting springs, these pressure control valves can be individually adjusted to the requirements needed e.g. as tank ventilation regulators and burning and heating gas regulation.

Technical details:

Casing:	Aluminium
Valve seat:	Aluminium
	Ø6,3 to 32mm
Seat:	NBR
Diaphragm:	NBR
max. inlet pressure:	1,4 / 2 / 2,75 / 5,5 / 7 / 10 bar
Regulating area:	8 mbar to 345 mbar
Operating temp.:	-20°C to +80°C
Size:	420 x 335 x 305
Weight:	4200g
Connections:	In / outlet G 2“

Hornung Quality standard
The company Hornung is certified to
DIN EN ISO 9001
All single parts are manufactured, assembled and tested in house.
The finished parts are therefore under the criteria of our exact quality control with 100% final control.

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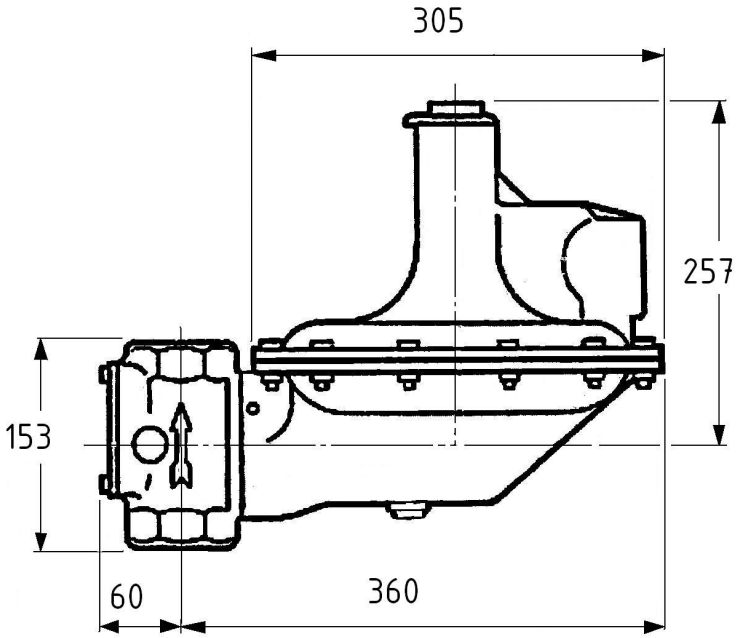

Performance diagram:

FHR 250

See data sheet / sides 3 and 4

The following performance diagrams are the maximum throughput with completely opened valve depending on seat size with given in and outlet pressures.

To achieve a good controlling action of the pressure regulator, no more than 90% of the indicated flow rate should be used.

Order details:

Seat size:

1	= 6,3 mm	**5**	= 19,0 mm
2	= 9,5 mm	**6**	= 22,0 mm
3	= 12,7 mm	**7**	= 25,0 mm
4	= 16,0 mm	**8**	= 32,0 mm

Pressure area:

1	=	8 - 15 mbar
2	=	14 - 20 mbar
3	=	20 - 35 mbar
4	=	35 - 70 mbar
5	=	70 - 140 mbar
6	=	100 - 170 mbar
7	=	140 - 210 mbar
8	=	210 - 345 mbar

Blow-off valve:

S1 = without blow-off valve
S2 = with blow-of valve

Order example:

Regulator type	
19	**FHR 250**

19	**-1**	**2**	**S2**	**Gas**
Typ	Seat	Pressure	Valve	Gas

Accessories:

- Flanges DN 50 / PN 10 / Form C

Flow rate in Nm³/h (Air) for FHR 250

Seat / Nozzle 6,3 mm; Inlet pressure max. 10bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,350	28	28	28	30	20	21	18	--
0,690	36	40	40	37	32	30	36	28
1,000	48	48	48	48	44	45	44	44
1,500	60	64	56	64	60	60	56	60
2,000	68	72	76	72	76	76	72	76
3,000	100	100	96	96	96	96	88	92
4,000	124	120	124	124	116	124	112	120
5,000	128	132	140	140	136	144	136	140
6,000	144	148	144	148	144	152	144	148
8,000	184	184	192	184	184	192	172	180
10,000	216	216	216	216	216	210	208	208

Seat / Nozzle 9,5 mm; Inlet pressure max. 7bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,070	24	24	20	--	--	--	--	--
0,140	32	32	28	--	--	--	--	--
0,200	40	40	36	36	--	--	--	--
0,350	56	56	48	52	40	44	44	--
0,690	80	80	72	80	72	72	76	60
1,000	100	100	96	100	84	92	100	80
1,500	124	124	124	112	108	120	128	108
2,000	148	152	152	152	132	152	152	136
3,000	196	200	200	204	184	200	204	184
4,000	248	252	252	252	240	252	252	240
5,000	264	268	272	276	268	268	272	268
7,000	--	--	--	324	320	324	332	328

Seat / Nozzle 12,7 mm; Inlet pressure max. 5,5bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,050	20	24	20	--	--	--	--	--
0,070	24	28	24	--	--	--	--	--
0,140	40	44	36	40	--	--	--	--
0,200	56	60	48	52	32	32	--	--
0,350	80	88	68	80	68	56	64	--
0,690	120	128	104	116	84	92	108	72
1,000	152	160	132	152	108	120	144	104
1,500	196	204	180	200	144	164	192	144
2,000	236	244	196	244	180	204	240	180
3,000	304	328	312	344	252	284	336	252
4,000	344	368	412	432	352	384	424	348
5,000	--	--	464	464	432	440	464	428

Seat / Nozzle 16,0 mm; Inlet pressure max. 5,5bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,050	28	30	--	--	--	--	--	--
0,070	36	38	24	--	--	--	--	--
0,140	60	64	44	--	--	--	--	--
0,200	72	76	52	68	40	--	--	--
0,350	104	108	76	96	56	64	64	--
0,690	164	168	120	152	92	108	108	92
1,000	208	212	164	192	116	148	148	132
1,500	268	276	228	256	156	196	204	184
2,000	304	320	288	320	204	252	256	236
3,000	356	376	420	444	296	364	372	336
4,000	--	--	536	564	416	480	484	436
5,000	--	--	--	--	--	560	560	512

Seat / Nozzle 19,0 mm; Inlet pressure max. 5,5bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,050	28	36	--	--	--	--	--	--
0,070	36	48	36	--	--	--	--	--
0,140	56	68	60	72	--	--	--	--
0,200	72	88	80	96	52	--	--	--
0,350	104	116	108	132	84	104	108	--
0,690	152	164	160	200	124	164	176	136
1,000	188	200	200	240	168	212	323	188
1,500	256	264	264	312	220	284	320	360
2,000	396	316	336	388	280	364	400	328
3,000	372	392	452	480	412	488	524	472
4,000	--	--	480	524	492	552	608	608
5,000	--	--	--	536	500	560	628	628

Seat / Nozzle 22,0 mm; Inlet pressure max. 2,75bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,050	32	36	--	--	--	--	--	--
0,070	36	44	--	--	--	--	--	--
0,140	56	68	64	--	--	--	--	--
0,200	76	88	80	100	--	--	--	--
0,350	104	113	112	136	84	96	100	--
0,690	156	164	164	192	128	152	172	132
1,000	192	200	200	236	168	200	228	180
1,500	256	264	264	312	232	268	300	248
2,000	--	--	336	392	288	344	388	312
2,500	--	--	--	448	352	416	464	380
3,000	--	--	--	--	432	484	516	436

Seat / Nozzle 25,0 mm; Inlet pressure max. 2,0bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,050	40	36	32	--	--	--	--	--
0,070	52	46	38	--	--	--	--	--
0,140	80	76	60	--	--	--	--	--
0,200	108	100	80	112	60	72	--	--
0,350	140	134	108	144	96	112	64	--
0,690	212	208	184	240	152	184	120	136
1,000	264	268	244	288	200	240	168	196
1,500	--	--	297	333	264	264	240	288
2,000	--	--	--	--	336	408	300	368

Seat / Nozzle 32,0 mm; Inlet pressure max. 1,4bar

Spring range (mbar)	8 - 15	14 - 20	20 - 35	35 - 70	70 - 140	100 - 170	140 - 210	210 - 345
Setting pressure(mbar)	15	17,5	35	70	140	170	210	345
Inlet pressure (bar)	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h	Nm³/h
0,050	52	48	40	--	--	--	--	--
0,070	64	64	48	--	--	--	--	--
0,140	104	100	84	--	--	--	--	--
0,200	132	132	108	144	88	--	--	--
0,350	176	176	152	196	120	144	128	--
0,690	--	--	232	292	192	224	232	172
1,000	--	--	304	360	260	276	312	252
1,500	--	--	--	--	368	392	416	372
2,000	--	--	--	--	--	480	504	456