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Pressure regulator with relieving seat stainless steel Series PR09

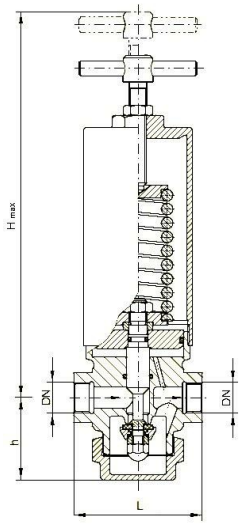
Design type	Pressure regulator without secondary exhaust venting, piston-operated, spring-loaded, with pressure-relieved seat
Function	Secondary pressure regulation
Connection	G1/8"...G21/2" according to ISO228/1
Pressure gauge connection	G1/4" according to ISO228/1
Materials	G1/8"...G1/4" or rather G11/2"...G21/2": Spring cap, Body, Internal parts Stainless steel 1.4571 G3/8"...G11/4": Spring bonnet and body stainless steel 1.4301, Internal parts Stainless steel 1.4571
Medium	gaseous and liquid media that do not attack the materials used
Medium temperature	-20...+200°C, depending on the seal used
Ambient temperature	-20...+95°C
Inlet pressure	see table
Control range	see table
Flow direction	is marked by an arrow
Mounting type	Installation in rigid piping system
Mounting position	any
Scope of delivery	without Pressure gauge
Approvals	ATEX-Manufacturer's declaration
Special versions	extended secondary pressure ranges, Pressure regulator for oxygen and steam, Stainless steel pressure regulator with flange connection, Food-grade version
Accessories	Pressure gauge 0-0.6, 0-1.6, 0-2.5, 0-4, 0-6, 0-10, 0-16, 0-25, 0-40, 0-60, 0-100 bar
Ordering note	When ordering, please additionally specify the actually required inlet and outlet pressure, because in some outlet pressure ranges two or more springs are used.

+43 512 52076
austria@stasto.eu

Sealing options

Material	Temperature range [°C]	maximum Set pressure [bar]
FKM	-20...+200	40
EPDM	-40...+140	25
PTFE	-200...+200	50
PA	-40...+80	160
PEEK	-60...+250	200

Dimensions



Connection	DN [mm]	max. inlet pressure*	H_{max}	h	L	Kv value [m^3/h]	Weight [kg]
G1/8"	6	16	160	36	58	0,63	1,1
G1/4"	8	16	160	36	58	0,63	1,1
G3/8"	10	63	205	48	70	2,0	1,8
G1/2"	15	100	275	58	90	3,0	3,7
G3/4"	20	63	275	58	90	3,2	3,7
G1"	25	63	305	68	105	6,3	5,2
G11/4"	32	63	305	68	105	6,5	5,2
G11/2"	40	63	325	85	145	12,5	9,6
G2"	50	40	325	85	145	13,0	9,6
G21/2"	65	40	325	85	210	13,5	

*The actually permissible maximum inlet pressure depends on the actually set downstream pressure. The inlet pressure may be a maximum of 40 times the actual downstream pressure.

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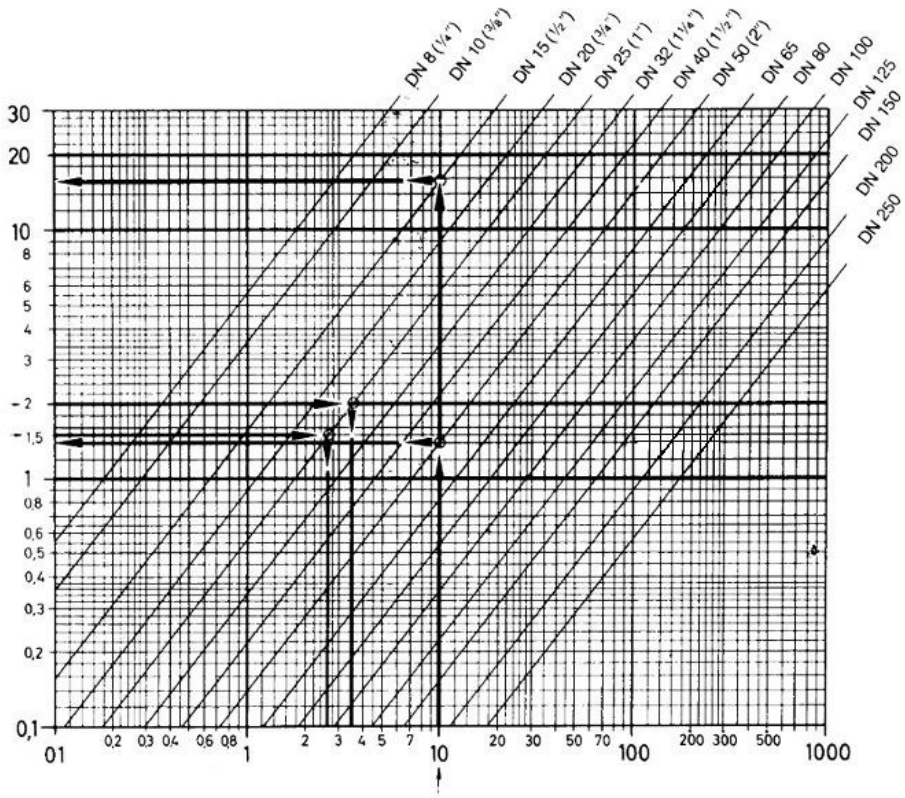
Control ranges of the back pressure

Connection	DN6, DN8	DN10	DN15, DN20	DN25, DN32	DN40, DN50, DN65
	G1/8", G1/4"	G3/8"	G1/2", G3/4"	G1", G11/4"	G11/2", G2"; G21/2"
Piston plate					
Ø 99	-	-	-	-	0,25 - 0,35
	-	-	-	-	0,36 - 0,60
	-	-	-	-	0,61 - 1,00
Ø 84	-	-	-	0,25 - 0,35	1,10 - 1,40
	-	-	-	0,36 - 0,65	1,50 - 2,00
	-	-	-	0,66 - 1,00	2,10 - 2,50
	-	-	-	1,10 - 1,50	-
	-	-	-	1,46 - 2,00	-
Ø 64	-	0,35 - 0,50	0,35 - 0,69	2,10 - 2,80	2,60 - 3,50
	-	0,60 - 0,80	0,70 - 1,20	2,90 - 4,00	3,60 - 4,00
	-	0,90 - 1,20	0,70 - 1,50	-	-
	-	1,30 - 1,80	1,30 - 2,00	-	-
	-	1,90 - 2,30	2,10 - 3,00	-	-
	-	-	3,10 - 4,50	-	-
Ø 48	-	2,40 - 3,00	4,60 - 5,00	4,10 - 5,00	4,10 - 6,50
	-	3,10 - 4,00	5,10 - 8,00	5,10 - 7,00	6,60 - 7,50
	-	-	-	-	7,60 - 8,50
	-	-	-	-	8,60 - 12,00
	-	-	-	-	12,10 - 17,00
Ø 38	1,00 - 2,00	4,10 - 5,00	8,10 - 8,50	7,10 - 8,00	-
	2,10 - 3,00	5,10 - 6,50	8,60 - 12,00	8,10 - 11,00	-
	3,10 - 4,00	-	-	11,10 - 14,00	-
	4,10 - 5,00	-	-	14,10 - 17,00	-
	5,10 - 6,00	-	-	17,10 - 23,00	-
	6,10 - 7,00	-	-	-	-
Ø 27	-	6,60 - 10,00	12,10 - 17,00	-	-
	-	10,10 - 12,00	17,10 - 25,00	-	-
	-	12,10 - 17,00	25,10 - 30,00	-	-
	-	-	30,10 - 38,00	-	-
	-	-	38,10 - 53,00	-	-
	-	-	53,10 - 73,00	-	-

Flow diagram



Vertical axis: Flow rate in m/s
Horizontal axis: Flow rate in m³/h

For liquids, a flow velocity of 2 m/s should not be exceeded.
With compressed air, a flow velocity of 20 m/s should not be exceeded.
When using the diagram for compressed air, the flow rate V must always be entered in operating cubic metres/hour.. The conversion into operating cubic meters is carried out by dividing the standard cubic meters by the **Absolute pressure = Operating pressure + 1 [bar].**

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