





HANS SASSERATH & Co. KG

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Differential pressure regulator (Differential by-pass valve) 391

In-line type



Field of application

The differential pressure regulator type 391 stabilises the rate of circulating water as well as the differential pressure in pumped central heating installations that regulate the room temperature by means of thermostatic radiator or zone valves. The differential pressure regulator type 391 can also be used for district heating systems. The circulating water quantity fluctuates between zero and the maximum value according to the heat requirement and as a result the pump pressure varies according to the pump specifications; the differential pressure regulator type 391 reduces both phenomena to a minimum. With the system load and the circulation rate being reduced, the differential pressure increases according to the pump specifications up to the opening pressure of the differential pressure regulator. Then, the latter maintains a defined circulating water quantity in the boiler circuit and prevents the differential pressure from rising to the maximum pump pressure. Advantages: for boilers with low water content, the risk of possible overheating of the heating chamber is eliminated. An additional boiler circulation pump is no longer required. In steel boilers, the mixing effect prevents low-temperature corrosion that results from excessively cold return water. As the differential pressure can only rise insignificantly above the required pressure, the regulating valves and the pump no longer generate annoying noise.



Differential pressure regulator 391

Design	The differential pressure regulator type 391 operates as a proportional by-pass valve. Ad- ditional control lines are not required as a result of the internal balance of the static pressure. The factory-set opening pressure	can be adjusted on a spindle by means of a lockable turning handle. In general, it is not necessary to re-adjust the system. A visible lift indicator allows to control functionality.
Materials	The body, cap, internal components and unions are made of a high quality low-lead brass alloy. The spring is made of corrosion	resistant spring steel wire. The diaphragm and sealing rings are made of heat resistant elastomeric synthetic material.
Installation	Install the differential pressure regulator type 391 behind the heating pump with a by-pass line between the radiator supply line and the	return line. The installation can be horizontal or vertical.
	Thoroughly flush the pipe prior to installation. Install the differential pressure regulator in the pipe without applying stresses under	consideration of the direction of flow. The valve should be readily accessible to facilitate service and setting.
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Technical data	Operating pressure:	max. 10 bar
	Operating temperature: Differential pressure:	max. 120 °C adjustable 0.05 - 0.7 bar, factory-set to 0.2 bar
	Mounting position:	any
	Fluid:	water
	Serial number:	0391.20.000
Maintenance	To adjust the pressure regulator type 391, loosen the fixing nut on the adjustment handle. To set the desired pressure, simply turn the handle to the desired value. The	integral lift indicator allows to control functionality. Re-tighten the fixing nut. The seal of the adjustment spindle can be exchanged without draining the installation.



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Nominal size		DN 20
	A	G 3⁄4
	d (mm)	22
Dimensions	H (mm)	76
	D (mm)	52
	L (mm)	112
	l (mm)	42
Weight	kg	0,5



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Components / Order numbers

 Screw cap unit DN 20 0391.20.900
Body

