



LPI12 Self-Operated Temperature Control Valve



Code	Actuator	Action	Air Fail PositiiorControl	Structure	Body Material	Sealing Material	Core Material	Connection	DN	PN
LPI12-	0 Others	A Heating B Cooling	0 Others B Self-regulating 0 Others	7 Normal 0 Others	A CF3M B CF8M C CF8 D WCB I CF3 L CE3MN 2 Ti 5 WCC 0 Others	P PTFE Y FEP(F46) R BODY S Stellite 3 Gr 4 WC 0 Others	A CF3M B CF8M C CF8 I CF3 L CE3MN 2 Ti 0 Others	1 Flange 0 Others		



Overview

LPI12 self-operated temperature(heating type/cooling type)control valve is composed of the control valve and a temperature controller provided with fixed point control.

It is suitable for controlling differential pressure in the pipes of non-corrosive liquids,gases and steams.when the temperature of the controlled mediums rises,the control valve is closed.

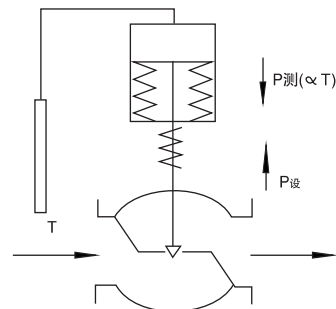
The main features are as follows:

- 1.It has the pressure balancing function with high sensitivity.
- 2.Low noise, reliable performance, free of maintenance.
- 3.The standard modular design is adopted.
- 4.It adopts the imported fixed point controller which has the over temperature protection function with reliable quality.
- 5.Various combined controls can be carried out through the assemblies.

Working Principle

A. Heating Type Temperature Control Valve

When the temperature of the controlled object is lower than the set temperature, the liquid in the temperature sensor will contract, the force acted on the push rod of the actuator decreases, and the plug makes the valve open under the action of the spring force. The flow of steam, hot oil and other heating media is enhanced, so that the temperature of the controlled object rises. The valve will be closed when the temperature of the controlled object rises to the set value. After the valve is closed, the temperature of the controlled object falls and the valve is opened again. The heating media enter the heat exchanger and the temperature rises again, so as to make the temperature of the controlled object be a constant. The opening of the valve is related to the difference between the actual temperature of the controlled object and the set temperature.



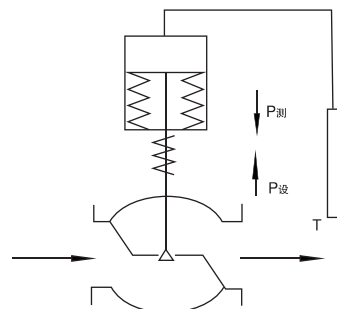


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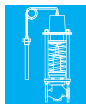
B. Cooling Type Temperature Control Valve

When the temperature of the controlled object is higher than the set temperature, the liquid in the temperature controller will swell, the force on the push rod of the actuator increases, and the plug makes the valve open under the action of the temperature controller, the flow of water, or other cooling media is enhanced, so that the temperature of the controlled object decreases, the valve will be closed when the temperature of the controlled object decrease to the set value. After the valve is closed, the temperature of the controlled objected rises and the valve is opened again. The cooling media enter the heat exchanger and the temperature decreased again, so as to make the temperature of the controlled object be a constant. The opening of the valve is related to the difference between the actual temperature of the controlled object and the set temperature.



Specifications

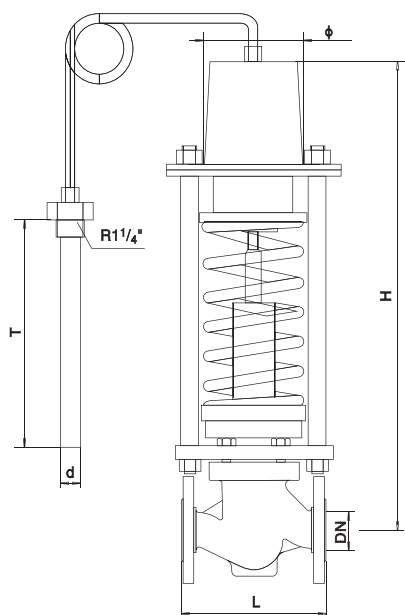
Regulating mechanism	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	
	KV	3.2	5	8	12.5	20	32	50	80	125	190	280	420	500	
	PN	1.6、2.5、4.0													
	Medium temperature	220													
	Pressure balance devices	Bellows										Cage			
	Connection	JIS B2201–1984, ANSI B16.5–1981, GB/T 9112~9124–2000													
Actuator	Characterisics	Quick opening													
	Bulb pressure	6.4													
	Temperature setting range	40–100(≥100)													
	Allowable overload value	Within 20% of the set value													
	Time constant	Bulb 70', With protective jacket 120'													
	Capillary length	3,5													
	Fitted joints	R1 ¹ / ₄ "													
Deviation		≤ ±2.5℃													
Leakage	Metal seal	Single–seat:IV, Cage:III													
	Soft seal	DN15~50				DN65~125				DN150~250					
		10Bubble/min				20Bubble/min				40Bubble/min					
Allowable differential pressure (MPa)		1.6									1.5 0.5				



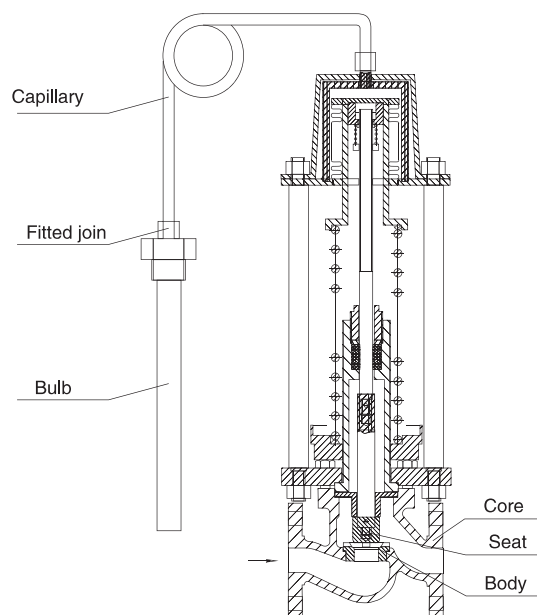
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Dimensions and Weight



Exploded View



mm

DN	15	20	25	32	40	50	65	80	100	125	150	200	250
Face-to-face	160	160	180	200	230	290	310	350	400	451	543	673	
Height	593	593	596	608	608	608	633	641	657	717	757	792	817
Bulb length	400												
Actuator diameter	160												
Bulb diameter	32												
Bulb interface size	R1 1/4"												
Weight(KG)	26		37		43	70	90	110	130	146	182	200	