Dynamic Balance Electric Control Valve

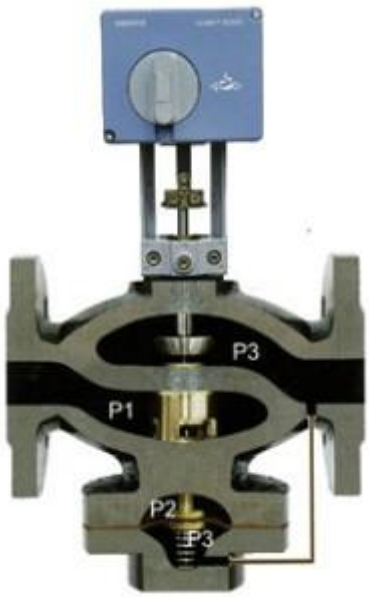
Overview

Dynamic Balance Electric Control Valve is an integration product with dynamic balance and dynamic electrical adjustment, it is mainly used for temperature control at the end of air conditioning equipment in HVAC system, it controls the devices by configuring intelligent modules, it is convenient for it to automatically control flow and temperature of each loop and achieve the rational use of energy, energy saving, intelligent management. Apply this valve, the end device is only affected by the standard control signals, and is not affected by pressure fluctuations in the system, so that the system adjustment is more stable, more energy-saving, especially for the variable flow systems with large changes in system load.

Product Features

1. Stable: the flow variations of terminal equipment are not affected by changes in system pressure fluctuations, flow variations do not interfere with each other.
2. Energy-saving: compared with traditional systems, the energy saving increases 6-20%.
3. High efficient: greatly shorten the debug time, the system runs with high efficiency.
4. Comfortable: higher precision of temperature regulation and more comfortable than traditional variable flow systems.
5. The actuator is straight trip, with good interchangeability.
6. The flow characteristic curve: Linear / equal percentage.

Working Principle



(1) When the valve inlet P1 increases, P1-P3 is increased, the automatic balancing valve will turn down through the function of the pressure sensitive diaphragm, so that to increase P1-P2, then maintain the constant of P2-P3; when the inlet P1 reduces, P1-P3 is reduced, the automatic balancing valve will turn up by the function of the spring, causing a decrease of P1-P2, to maintain the constant of P2-P3.

In the variable flow system with a large load fluctuation, when the system pressure changes:

(2) When the electric actuator receives a control signal then let the valve rod move upward or downward, it makes the valve plug up or down, the degree of opening between P2, P3 also changes. Because no matter the system differential pressure how to change, the differential pressure (P2 - P3) between P2, P3 is always the same, and therefore correspond to any open position, the water flow conveyed is certain.

Technical Parameters

Valve Form	Specification	Pressure Differential	Flow Range （m3/h）	Working Pressure	Flow Error	Liquid Temperature

		Range（PKa）				
Two Direction Link	DN25	30-300	0.2-2.9	PN16	5%	0-100℃
	DN32	30-300	0.5-4.7			
	DN40	30-300	1-7.7			
	DN50	30-300	2-12.1			
	DN65	30-300	3-20.4			
	DN80	30-300	5-30.8			
	DN100	30-300	10-45.3			
	DN125	30-300	15-70.7			
	DN150	30-300	20-101.8			
	DN200	33-300	5.0-360			
	DN250	22-210	4.0-460			

Ordering model

Basic Model	Nominal Diameter	Nominal Pressure	Material	Illustration
FCDDF				Self-operated flow control valve
	25~250			Nominal Diameter 15~350mm
		1.6		Nominal Diameter 1.6Mpa
			CZT	Cast iron
			CZG	Cast steel
			C304	304 stainless steel