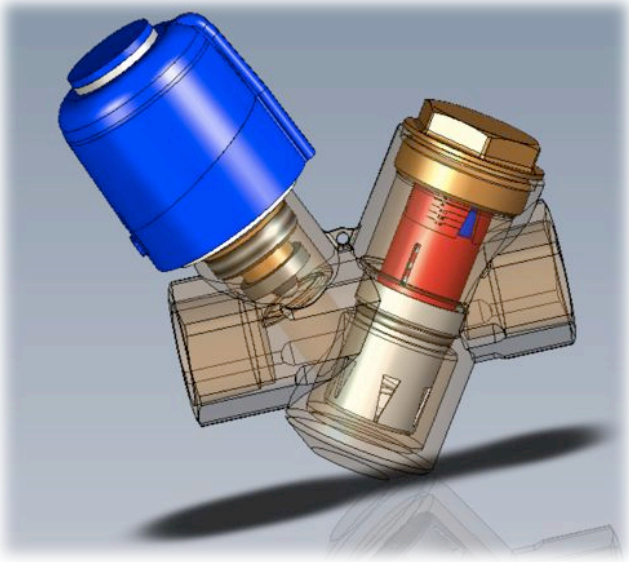
FlowMate

Automatic Balancing Control on/off Valve

ABC series

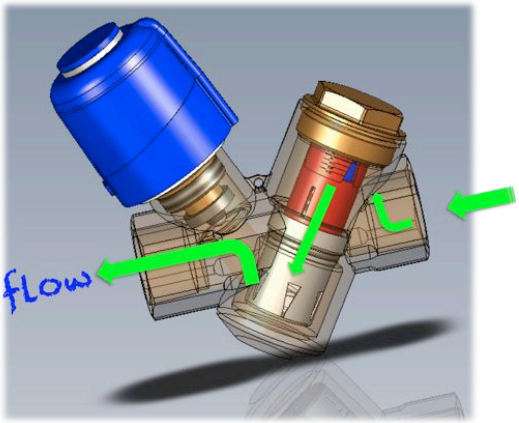


Automatic Balancing Control Valve (On/off Type)

Function

The FlowMate Automatic Balancing Control Valve combines the functions of automatic balancing and control valve which enable it to supply an accurate and constant flow rate at a tolerance of ± 5% within varying system differential pressure ranges.

With its simple on/off control, the valve can be used for many different applications, and at the same time advantage is derived from the automatic control principles.



Features & Benefits

Automatic Balancing
Achieving precise flow rate for each circuit automatically. Flow rate is maintained as each valve compensates for pressure fluctuations in the systems.

Two Valves in One
Replacing both manual balancing valve and two way control valve.

CNC Machine Milled and Turned Cartridge
Maintaining high tolerances and ensuring accuracy and repeatability of flow.

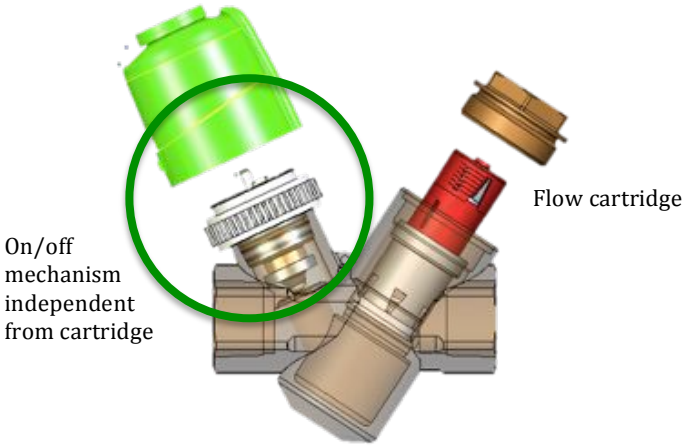
No Oversized Pumps and Control Valves
Reducing equipment cost and hunting of the conventional control valve.

One Piece Installation
Saving labor cost, installation space, and investment for balancing valve.

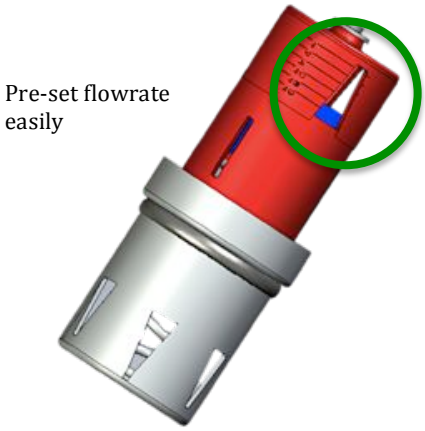
Flexible Commissioning
Preventing overflow or underflow, minimizing commissioning time due to automatic balancing of the system.

Easy maintenance
By unscrewing the cap, the internal flow cartridge can be removed easily from the valve body for inspection, cleaning or replacement.

Adjustable Flowrate
Always at designed flow rate, no excess flow and head pressure, maximizing efficiency.



A-Class



Cartridge for A-Class

Automatic Balancing Control Valve (On/off Type)

Operating Principle

The cartridge is composed of a cylinder, a spring-loaded piston, and a combination of fixed and variable geometric orifices through which the fluid flows. These variable orifice sizes increase or decrease by the piston movement, contingent on the system fluid thrust. A specially calibrated spring counteracts this movement to regulate the amount of fluid which may pass through the valve orifices, maintaining the constant flow.

Specifications

Mechanical	
Static pressure	2500kPa, 362psi
Ambient temperature	-10 …+ 60˚C
Medium temperature	-10 …+ 120˚C
Material	
Body	forged brass
Flow Control Cartridge	stainless steel/POM
Spring	stainless steel
Seat Plug	EPDM
O-rings	EPDM
Diaphragm*	EPDM
End connection	ISO
Body Tapings	Optional
Maximum close off pressure	400 kPaD, 58 psid
Shut off leakage	tight

* Diaphragm not applicable to A-Class

Electric Actuator (on/off)

	AA 2001	**AA 4001**
Version	closed when de-energized	closed when de-energized
Voltage	230V AC, ±10%, 50-60 Hz	24V AC/DC, ±20%, 50-60 Hz
Operating power / current	2W / 8 mA	2W / 75 mA
Closing and opening time	approx. 3 minutes	approx. 3 minutes
Actuating force	100N ± 5%	100N ± 5%
Operating temperature	0...50˚C	0...50˚C
Ambient temperature	0 to +60˚C	0 to +60˚C
Degree / class of protection	IP 54 / II	IP 54 / II
CE conformity standard	EN 60730	EN 60730
Over voltage protection	integrated	integrated
Housing / housing colour	polyamide / white	polyamide / white
Connecting cable / cable length	2 x 0.75mm2 PVC, white / 1 m	2 x 0.75mm2 PVC, white / 1 m
Special length of connecting cable	maximum up to 2 m	maximum up to 2 m

Flow*Mate* Automatic Balancing Control on/off Valve
A-B-Cs of Hydronic Balancing

Technical Data

Part no	A015	A020	A025
Connection	DN15	DN20	DN25
Max flowrate	1.85 m^3/hr	1.85 m^3/hr	2.31 m^3/hr
Part no	**B032**	**B040**	
Connection	DN32	DN40	
Max flowrate	4.0 m^3/hr	6.0 m^3/hr	

Dimension and Weight

Part no	L (mm)	H1 (mm)	H2 (mm)	Weight (kg)
A015	93	40.7	81.8	.84
A020	95	40.7	81.8	.82
A025	97	40.7	81.8	.82
B032	165	82	135.5	3.5
B040	165	82	135.5	3.5

Configuration of B-Class will be different from A-Class