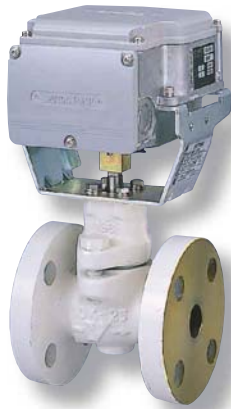


Compact Motorized Two-way Valves for HVAC Control

ACTIVAL

Yamatake presents **ACTIVAL**, our quality control valves with a proven track record for its high control performance and superior reliability offering the best **Energy Saving** and **Cost Benefits** into your facility ranging from air conditioning, heat source to sanitary inside buildings.

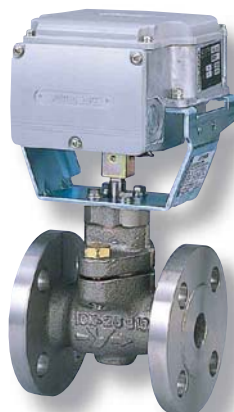


Flanged / cast iron / JIS10K



Flanged / cast iron / JIS20K

Flanged / stainless steel / JIS10K



Screwed / bronze casting / JIS10K

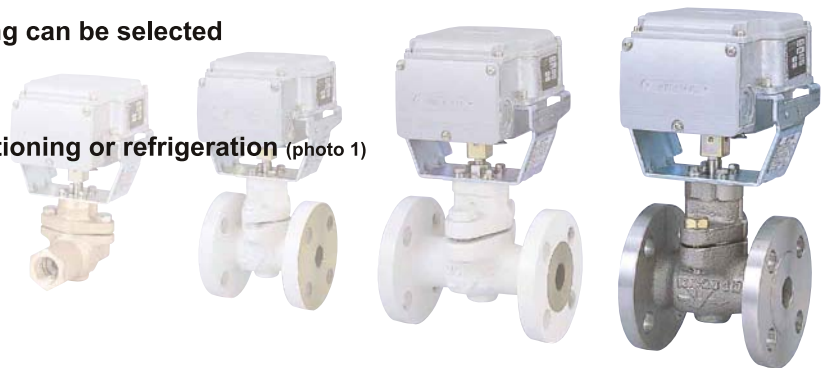


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Features

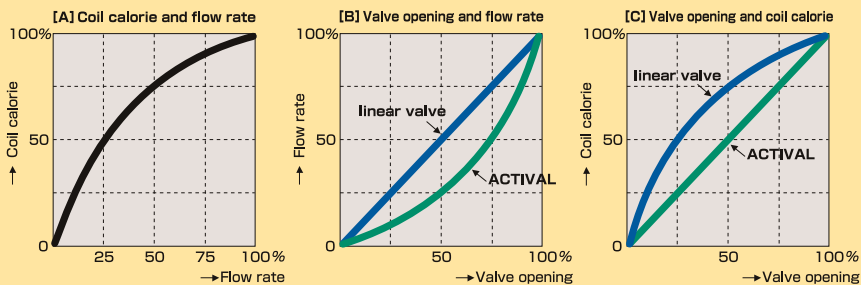
- Valve and actuator integrated in a single unit, which is compact and lightweight
- Motorized two-way (water/steam) valve
- Cast iron, stainless steel or bronze casting can be selected
- Water-proof
- Low power consumption
- Installation is available for both air conditioning or refrigeration (photo 1)
- Easy maintenance of actuator
- Equal percentage characteristics (data 1)
- Rangeability is 50:1 (data 2)
- Shut off pressure is up to 3 inches
- Low leakage of 0.01% of rated Cv value



Data 1

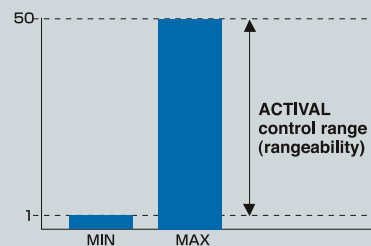
ACTIVAL has an equal percentage characteristics for accurate temperature control

Heat exchange characteristic of coil flow rate and calorific value will be a slow curve. [A]
 When coil calorie is 75%, flow rate is 50%. Opening of ACTIVAL will be 75%.
 When coil calorie is 50% and flow rate is 25%, ACTIVAL opening will be 50%. [B]
 When this is drawn, ACTIVAL opening and coil calorie characteristic have approximately a proportional connection which means ACTIVAL opening will fix the calorific value of coil [C]



Data 2

50:1 rangeability will accurately control minimal flow rate.



Applications

- For HVAC control
- For temperature control of heat sources or heat exchangers
- For constant temperature/humidity control in clean rooms



ACTIVAL

Model No.	VY51 series	VY52 series
Model	Flanged motorized two-way valve	Screwed motorized two-way valve
Body pressure rating	JIS10K (0.98MPa) , JIS20K (1.96MPa)	PN16 (1.57MPa) , PN20 (1.96MPa)
Size	15mm (1/2 in.) , 25mm (1 in.) , 40mm (1-1/2 in.) , 50mm (2 in.) , 65mm (2-1/2 in.) , 80mm (3 in.)	15mm (Rc1/2) , 20mm (Rc3/4) , 25mm (Rc1) , 32mm (Rc1-1/4) , 40mm (Rc1-1/2) , 50mm (Rc2)
Cv	1.0, *1.6, 2.5, *4.0, 6.0, 10, 16, 25, 40, 65, 95, 125 (*for steam only)	1.0, *1.6, 2.5, 4.0, 6.0, 10, 16, 25, 40 (*for steam only)
Pressure drop	Regular torque type: 980kPa (15mm~40mm) , 490kPa (50mm) High torque type: 980kPa (50mm, 65mm) , 686kPa (80mm)	980kPa (15mm~40mm) , 490kPa (50mm)
Body material	JIS10K: cast iron (FC200) , stainless steel (SCS13A) JIS20K: ductile cast iron (FCD 450) Bronze casting (CAC406)	Bronze casting (CAC406)
Materials	Plug, stem: stainless steel Seat ring: aluminum bronze (for water) , heat-proof teflon (for steam)	Gland packing: inorganic fiber Gasket: non-asbestos joint sheet
Piping connection	JIS10K flange, flat face (FF) : FC200 (body) / large raised face (RF) : SCS13A (body) JIS20K flange, large raised face (RF) : FCD450 (body)	Screwed (Rc)
Allowable fluid temperature	For water: 0 to 150 °C, for steam: 0 to 175 °C	
Flow characteristics	Equal percentage	
Rangeability	50:1	
Shut-off	0.01% or less of rated Cv value (15mm is max. 0.0006 Cv)	
Control signal	Relay contact feedback potentiometer/ nominal 135V potentiometer input/ 4 to 20mA DC input/ 2 to 10V DC input/ 0 to 10V DC input	
Power consumption	24V AC ±15% 50/60Hz	

※ Actuator

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