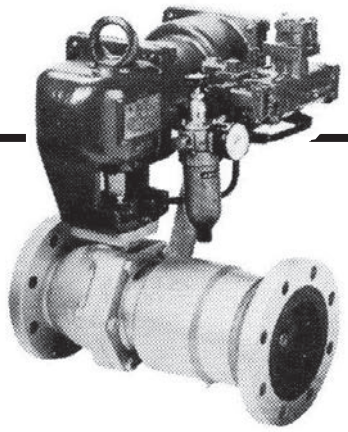
GENERAL SPECIFICATIONS

TOKICO GS-F5090E-01

FLOW CONTROL VALVE (two-stage regulating type)



Overview

FLOW CONTROL VALVE of two-step regulating type is a compact flow regulating stop valve that integrates the flow controller by which controls flow rate under the predetermined value however much pressure within a flow passage varies with the two-step regulating ball valve having double cylinders. This is the optimal regulating stop valve that is required to be space saving and of high accuracy for firmly taking the specified amount, especially in a tanker, tank truck or steel drum for shipment of petrochemicals.

Features

● Unfailing and Stable Operation

As its actuator has a mechanism with double cylinders, our valve operates more unfailingly than the ball valve with positioner and the consequent valve opening angle is free from variation.

● Optimal for Flow Regulating Stop Valve

Since the flow controller always keeps flow rate constant however much pressure within the flow passage varies, this valve is optimal for a stop valve for a quantity meter that needs restraint of excessive flow rate and fluid hammer as well as measures against static electricity.

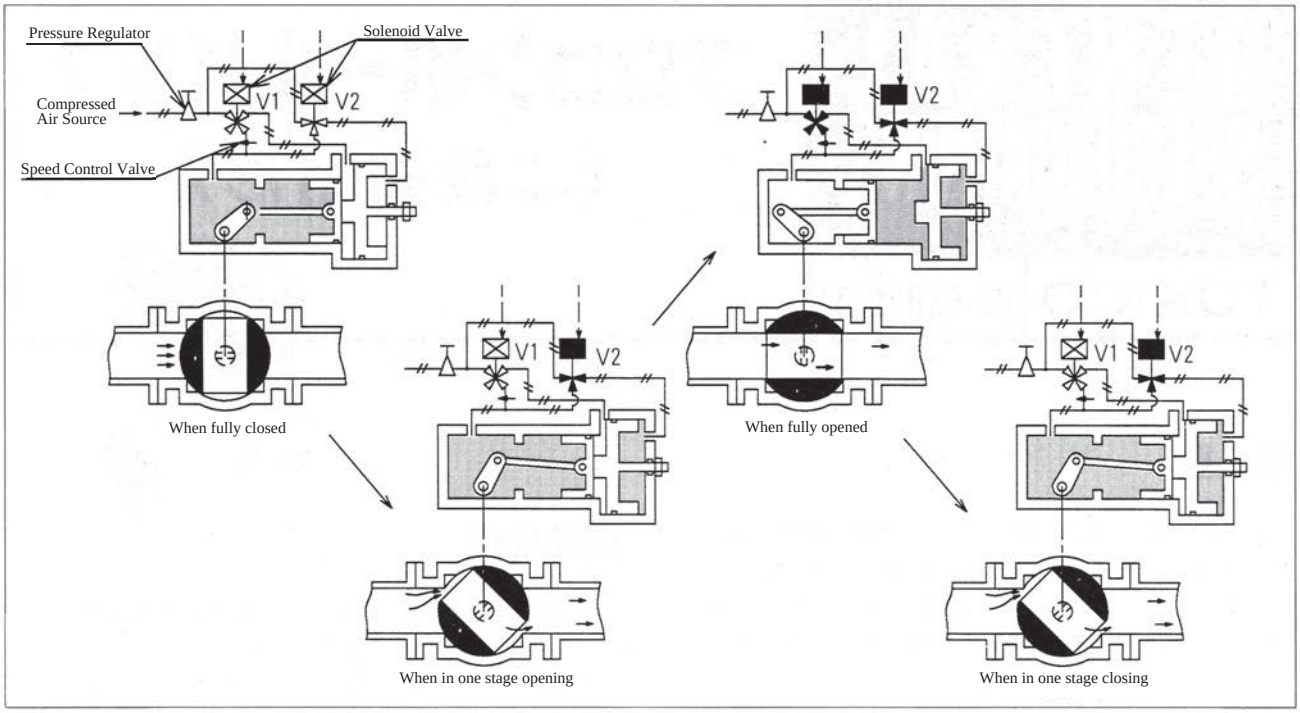
● Compact Structure

Since its ball valve section is made to be compact by using the dedicated solenoid valve and its flow controlling section is structured as the self-regulating axial flow type, this valve is maintenance free and needs no auxiliary power source.

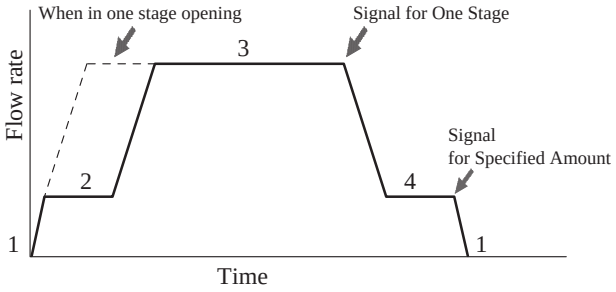
Standard Specification

Main Body	Applicable Fluid		Gasoline, Kerosene, Light Oil, Heavy Oil, Lubricant
	Fluid Temperature		MAX. 80℃
	Fluid Pressure		MAX.1.0MPa
	Connection Size		100mm (4B)
	Flange Rating		JIS 10K FF (In case of FC250) JIS 10K RF (In case of SCPH2) ASME・JPI150RF (In case of SCPH2)
	Material	Main Body	FC250, SCPH2
		Ball	SUS304
		Seat	Teflon
		O-ring	Fluoro Rubber (Viton)
Driving Section	Cylinder Structure		Multiple Operation (Double Cylinder Mechanism)
	Opening and Closing Operation		Two-stage Opening and Closing
	Operating Pneumatic Pressure		0.4MPa
	Connection Port to Compressed Air Source		RC1/4 (PT 1/4 Internal Thread)
	Solenoid Valve	Structure	Explosion-proof (d2G4)
		Power Source	100V AC ± 10% 50/60 Hz
		Electric Power Consumption	60 VA
		Wiring Port	G1/2 (PT 1/2 internal thread)
Flow Controlling Section	Material	Main Body	FC250 or SCPH2
		Trim	FC250, SS400, SUS420
	Set flow Rate	MBF1010	80m³/h (MAX. 100m³/h)
		MBF1013	80m³/h (MAX. 125m³/h)
	Control Accuracy		±10%(Form Set Flow Rate)
	Differential Pressure Range		0.1 ～ 1.0MPa(Capacity-10 type)
			0.07 ～ 1.0MPa(Capacity-13 type)
Ambient Temperature			-20 ～ 60℃
Piping Installation			Horizontal or Vertical Piping
Paint Color			Silver

Operation Diagram



Operation Program



Operational Sequence of Solenoid Valve

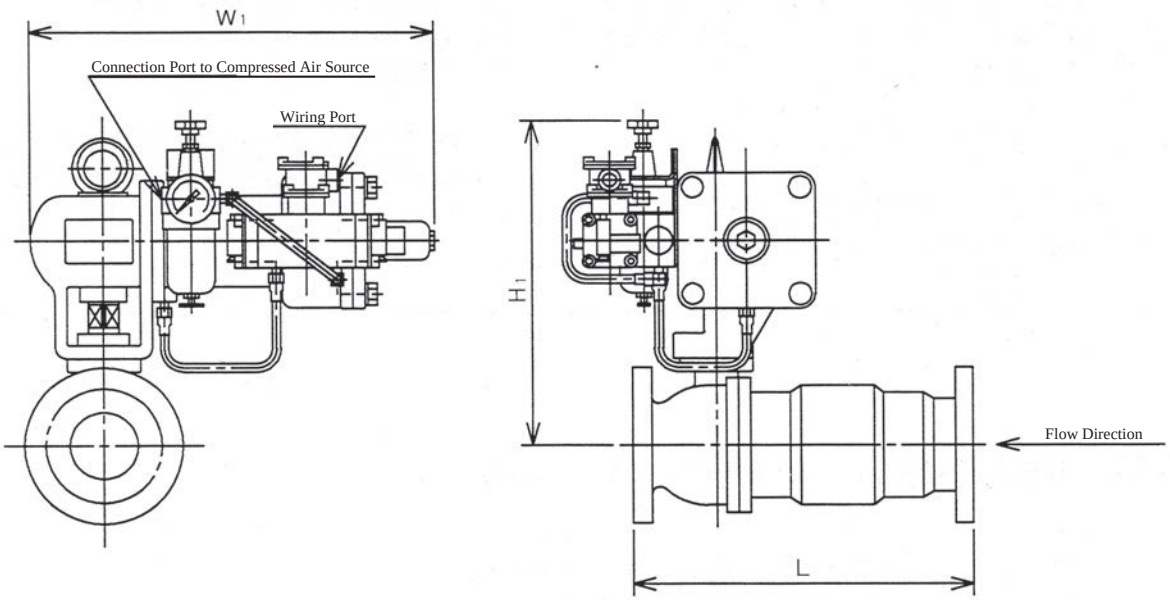
Solenoid Valve / Stroke	V1	V2
1（Full Closing）	OFF	OFF
2（One-stage Open）	OFF	ON
3（Full Open）	ON	ON
4（One-stage Closing）	OFF	ON

Specification Code

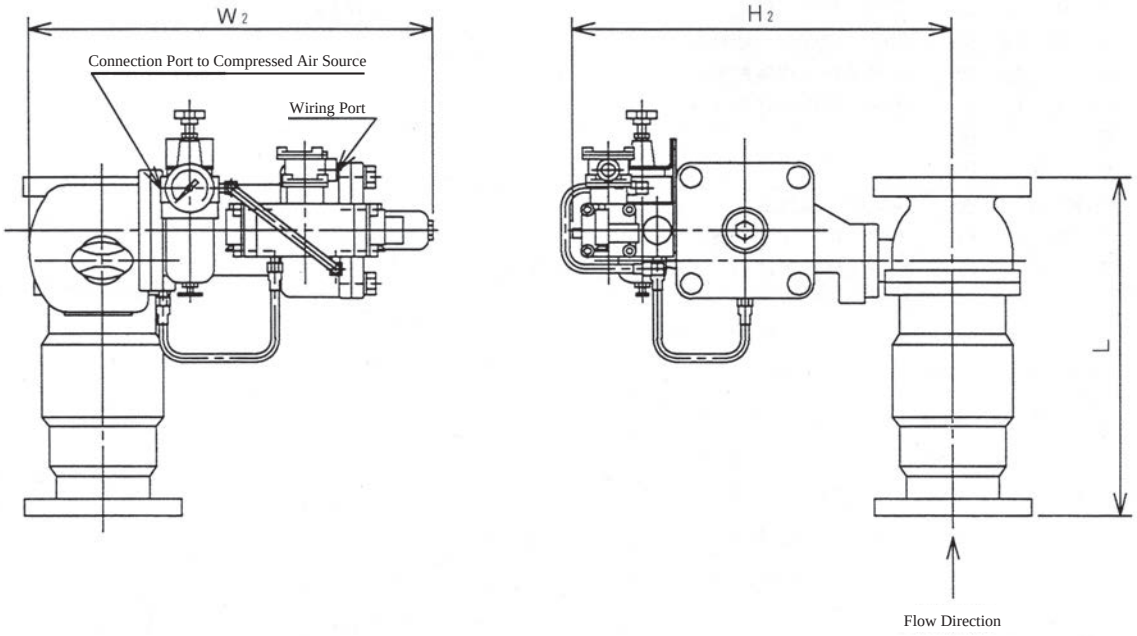
1	2	3	4	5	6	7	8	9	10	Contents				
M	B	F								FLOW CONTROL VALVE (two-stage regulating type)				
Conn.Size			1	0						4B (100mm)				
Capacity Model										Ball Size	Controller Size	Fitting Diameter	Differential Pressure Range	
					1	0				3B	100mm	100mm	0.1 ～ 1.0MPa	
					1	3					125mm	100mm	0.07 ～ 1.0MPa	
Pressure										Maximum Working Pressure MPa		Testing Pressure MPa	Applicable Flange Standard	
													JIS	ASME・JPI
							B			1.0		1.5	10K	150
Material										Main Body			Ball Size	Seat/O-ring
								A	R	FC250			SUS304	Teflon /Fluoro rubber
								N	R	SCPH2				

External Dimensions

In case of horizontal piping



In case of vertical piping



Capacity Model	Conn.Size (mm)	Dimension (mm)					Cylinder Volume (L)	Estimated Weight (kg)
		Flange-to-flange Dimension	Horizontal Piping		Vertical Piping			
		L	W_1	H_1	W_2	H_2		
10	100	400	499	418	499	486	3.2	76
13	100	400	499	418	499	486	3.2	93

⚠ Note in use

● Please take care not to let foreign matter including scale and dust in when you fit to piping. In particular, newly installed pipe may sometimes contain a lot of fine scale inside of its conduit so that you need to conduct sufficient flashing.

● Please set the valve downstream of the flow meter.

● Please prepare clean and dehumidified air under pressure between 0.4 and 0.7MP as the air source.

● Although the higher pressure to the ball valve with soft seat increases, the more its sealability is improved but the degree of fatigue at the seat surface grows high.Please take leak under low pressure after its use for a long time into account when you design piping.

Please specify your detailed usage conditions below when you inquire of us

No.	Item	Contents	
1	Applications	For process control, Business Transaction, Receiving, Shipment or such	
2	Applicable Fluid	Name, Composition, Presence of Impurity and Corrosiveness	
3	Flow Rate	Maximum, Regularly Used and Minimum (Operating time per day)	(L/h or ㎥ /h)
4	Fluid Temperature	Maximum, Regularly Used and Minimum	(degrees Celsius)
5	Fluid Pressure	Maximum, Regularly Used and Minimum	(MPa)
6	Connection Standard	Diameter, Flange Standards, so on	
7	Piping Installation	Horizontal or Vertical Piping	
8	Applicable Laws and Regulations	Name of Law or Regulation	
9	Power Source		
10	Compressed Air Source		
11	Operation Valve Method	Pneumatic Type or Electric Type	
12	Specified Material	Material of Main Body and Ball	
13	Others	Please contact us to discuss other specifications than standard one	

*Be sure to read the instruction manual carefully before you use this meter to ensure you use it correctly.
*Note that the contents may be subject to change without notice.

● Contact

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