

Technical Bulletin 07TB

Series 07TB

Teflon Block Valve

70-16-14-05-EN REV. 2

09/2014

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Specification

Series 07TB Features

General

The model 07TB is designed to use for chemical injection service and acid or alkaline fluid service. This valve realized a very compact control valve assembling with multi-spring diaphragm actuator.

FEATURES & CONSTRUCTION

Integral Body Construction

All the wetted parts of the valve body are made of PTFE and realized superior anticorrosive valve for acid or alkaline service. Main body is covered with stainless steel case providing high durability and long life.

Compact Design

It is possible to install Series 07TB to a limited space with compact design.

Wide Cv Range and Controllability

The rated Cv value is 0.8~52 and rangeability is 30:1

Actuation

The rated Cv value is 0.8~52 and rangeability is 30:1

Actuation :
3600 : Multi-spring Single Acting Diaphragm Actuator

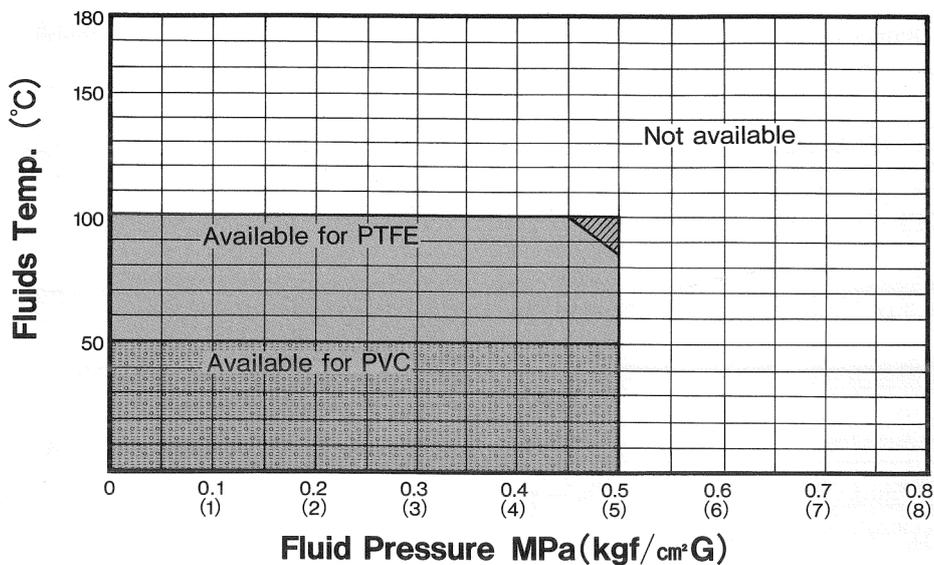
Caution : This product is controlled under Foreign Exchange and Foreign Trade Control Law as one of the strategic products when body material is PTFE.



1. SPECIFICATIONS

Valve type			Model 07TB Acid proof control Valve				
VALVE BODY	VALVE SIZE	(mm)	15 (Note2)	20	25	40	50
		(in.)	1/2 (Note2)	3/4	1	1 1/2	2
	Pressure Rating		Max. applicable press. 0.49MPa(5kgf/cm ² G) and lower. <in case of vacuum service : atmospheric press.~1.2kPa abs(9torr)>				
	End Connections		Stud type equivalent. to JIS10K, ANSI150, JPI150				
	Body Material		PTFE(Body case is made of SCS13A)				
	Bonnet Type		Bellows seal				
	Bellows Material		PTFE				
	O-ring Materials		FPM or PTFE(O-ring is attached to PTFE body only)				
	Guiding		Top guide				
	Valve Plug Action		Push-down close				
	Valve Plug Shape		Contoured type(P)				
	Valve Plug Characteristics		Equal percentage, Linear, Quick opening				
	Trim Material		PTFE				
ACTUATOR	Actuator Type		3600 multi-spring Single Acting Diaphragm Actuator				
	Sizes (mm)		T-1, T-2				
	Supply Air Press. kPa (kgf/cm ² G)		250(2.5)				
	Spring Range kPa (kgf/cm ² G)		70~180 (0.7~1.8)				
	Action		Direct Action, Reverse Action				
	Air Connection		Rc1/4 (Option : NPT1/4 with Adaptor)				
	Ambient Temperature		-30°C ~ 60°C				
VALVE CHARACTERISTICS AND PERFORMANCE	Valve Action		Direct Action (Air-to close), Reverse Action (Air-to open)				
	Application press. Range		0.49Mpa (5kgf/cm ² G)				
	Application Temp. Range		PVC : 0~50°C, PTFE : -0~100°C				
	Rated Cv Value		See page 3 "Rated Cv Value"				
	Flow Cv Value		See page 3 "Flow Characteristics"				
	Inherent Rangeability		30:1				
	Allowable Seat Leakage Ratio		0.01% of rated Cv value (ANSI/FCI Class IV)				
	Action Accuracy	Hysteresis Error		Max. 2.0% (with Positioner)			
Linearity		Max. ±2.0% (with Positioner)					
OPTIONS	Accessories		Electro-Pneumatic Positioner, Pressure Regulator with filter, Solenoid Valve, Limit Switch, etc.				
	Others		Handwheel (Top-mounted), Oil-free, Water-free				

2. APPLICABLE PRESSURE & TEMPERATURE OF BELLOWS MATERIALS



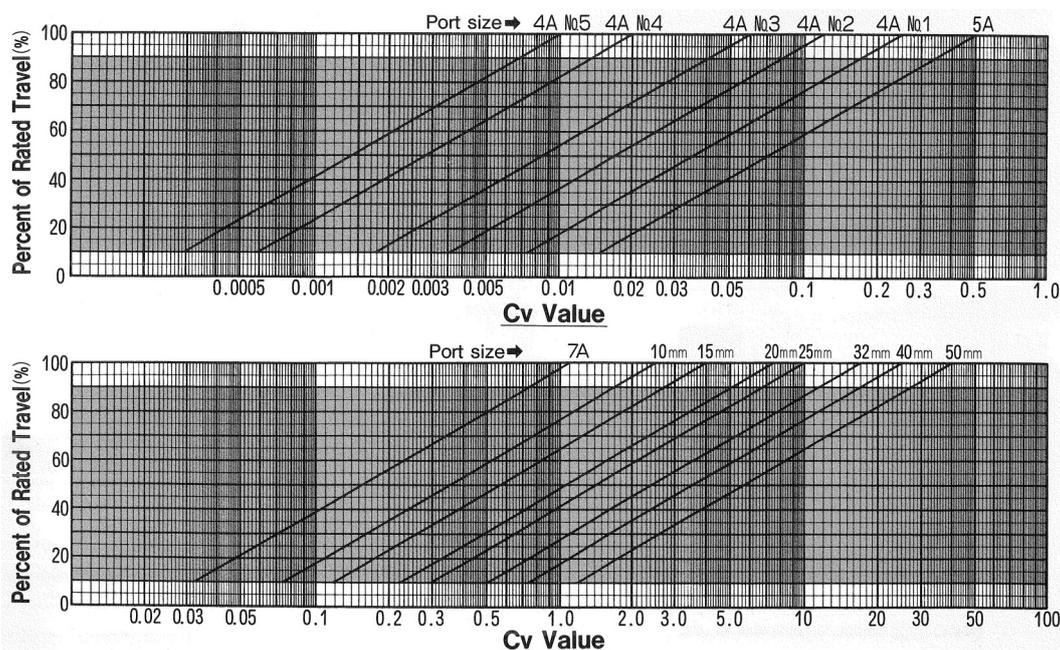
3. FLOW CHARACTERISTICS

(1) Rated Cv Value

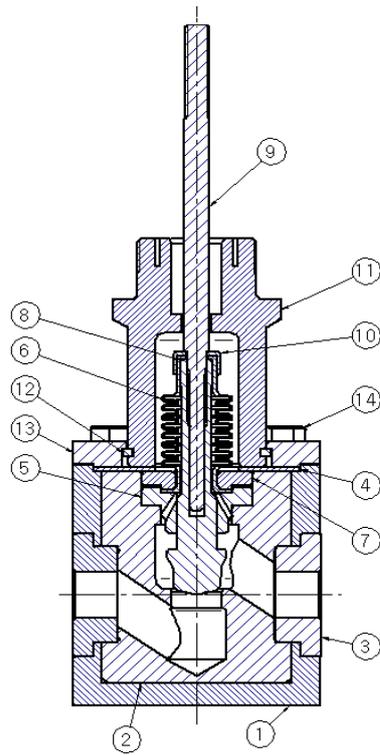
Port Size	3/16 in	1/4 in	3/8 in	1/2 in	3/4 in	1 in	1½ in	2 in
	7mm	8mm	10mm	15mm	20mm	25mm	40mm	50mm
Cv	0.8	1.5	3.0	5.2	7.5	10	21	34

(2) Flow Characteristics

■ Contoured plug Equal percentage (P)

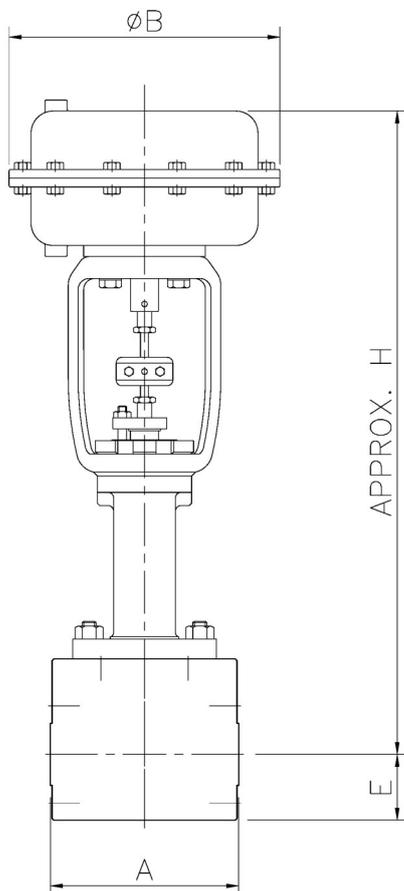


4. Part Material



No.	Name of Parts	Material	QTY
1	Body Housing	SUS 304	1
2	Body	TEFLON	1
3	Flange Seat	TEFLON	2
4	Bonnet Gasket	TEFLON	1
5	Guide	TEFLON	1
6	Bellows	PTEF	1
7	Bellows Seat	SUS 304	1
8	Inner Port	TEFLON	1
9	Stem	SUS 304	1
10	Bellows Cap	SUS 304	1
11	Bonnet	SUS 304	1
12	Stop Ring	SUS 304	1
13	Bonnet Flange	SUS 304	1
14	Hex. Head Bolt	SUS 304	4

5. DIMENSIONS AND MASSES



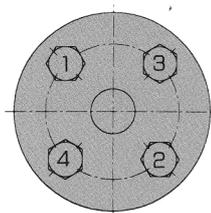
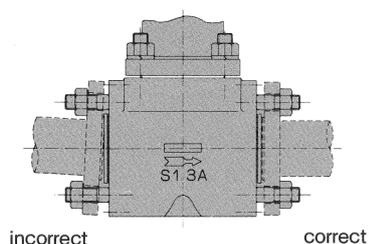
	A	H	E	ØB
15 (mm) 20	123	483	60	Ø257
25	123	493	70	Ø257
40	180	531	85	Ø298
50	180	551	95	Ø298

6. CONNECTION

CAUTION

Pipe lines are mainly made of PVC pipes, PTFE lining pipes, glass lining pipes, and the like. In this case, if you install the valve to pipe lines as like metal valve, pipes may be damaged. Therefore, first, set up the valve on the foundation by support screws, and then, install the piping to the valve.

NOTE 1) Before tightening the nuts, be sure valve flange and pipe flange are correctly aligned. Don't tighten unevenly. (See the left figure)



NOTE 3) Tighten flange bolts alternately and equally on the diagonal position

NOTE 2) For PTFE body valve, PTFE or FPM O-ring is to the body, therefore install the valve to pipe line without gasket. For PVC body valve, rubber or soft-PTFE gasket should be used.

NOTE 4) Recommend Tightening Torque. As valve body is made of PVC . PTFE resin, don't tighten valve body too much. Torque for tightening in each body size is recommended as shown on the table below.

Size	Torque N-cm (kgf-cm)
15(mm), 20	1470 (150)
25	2450 (250)
40	3920 (400)
50	5880 (600)

Warranty / Remedy

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