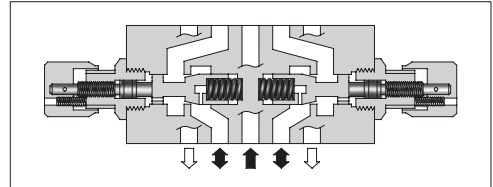


## Throttle and Check Modular Valves

### Specifications

Model Numbers	Max. Operating Pressure MPa (PSI)	Max. Flow L/min (U.S.GPM)
MSA-03-*-40 MSB-03-*-40 MSW-03-*-40	25 (3630)	120 (31.7)



### Model Number Designation

F-	MSW	-03	-X	-40	*
Special Seals	Series Number	Valve Size	Direction of Flow	Design Number	Design Standard
<b>F:</b> Special Seals for Phosphate Ester Type Fluids (Omit if not required)	<b>MSA</b> : Throttle and Check Valve for A-Line <b>MSB</b> : Throttle and Check Valve for B-Line <b>MSW</b> : Throttle and Check Valve for A&B-Lines	<b>03</b>	<b>X</b> : Metre-out <b>Y</b> : Metre-in	<b>40</b>	Refer to ★

★ Design Standards: None ..... Japanese Standard "JIS", European Design Standard and N. American Design Standard

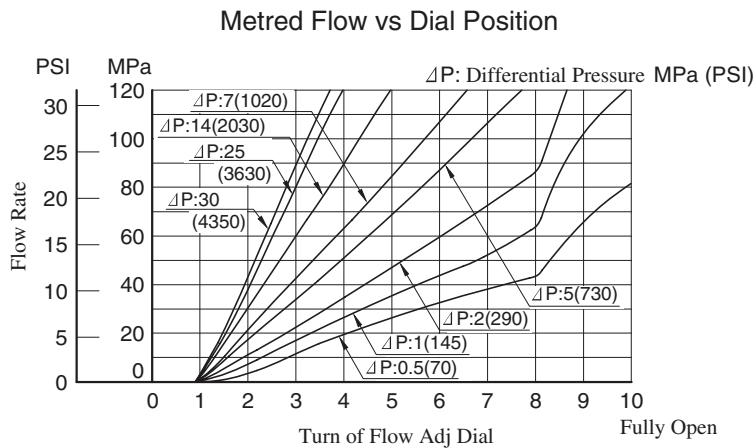
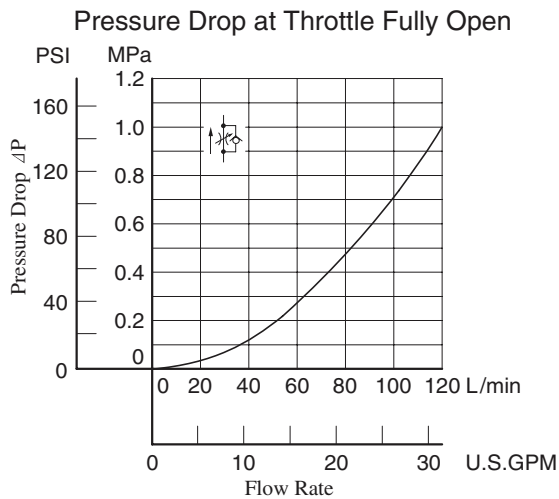
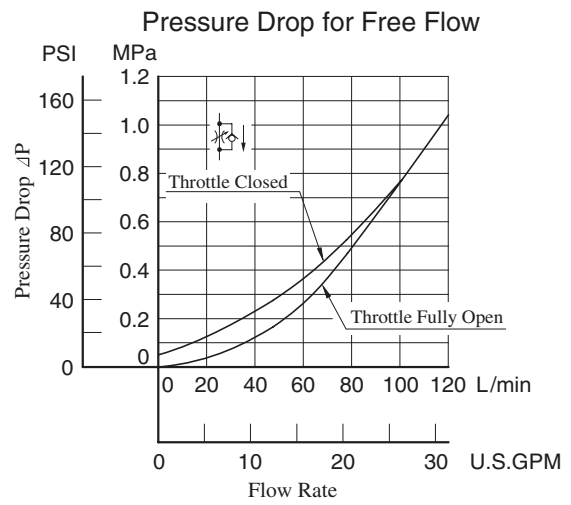
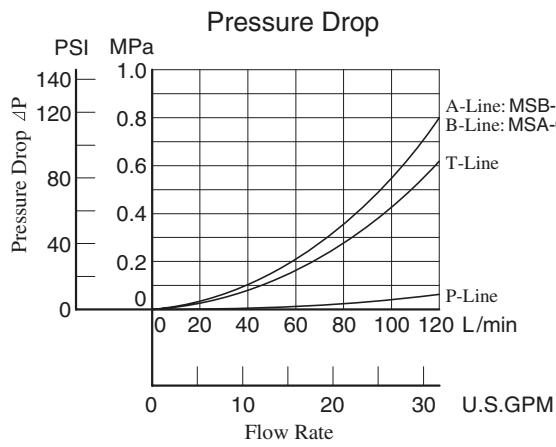
### Instructions

- To make flow rate adjustment, loosen locking screw for the dial and turn the flow adjustment dial clockwise or anti-clockwise. For a decrease of flow, turn the dial clockwise. Be sure to re-tighten the locking screw firmly after the adjustment of the flow rate.

Model No.	Graphic Symbols	Detailed Graphic Symbols	Model No.	Graphic Symbols	Detailed Graphic Symbols
	Metre-out			Metre-in	
MSA-03-X			MSA-03-Y		
MSB-03-X			MSB-03-Y		
MSW-03-X			MSW-03-Y		

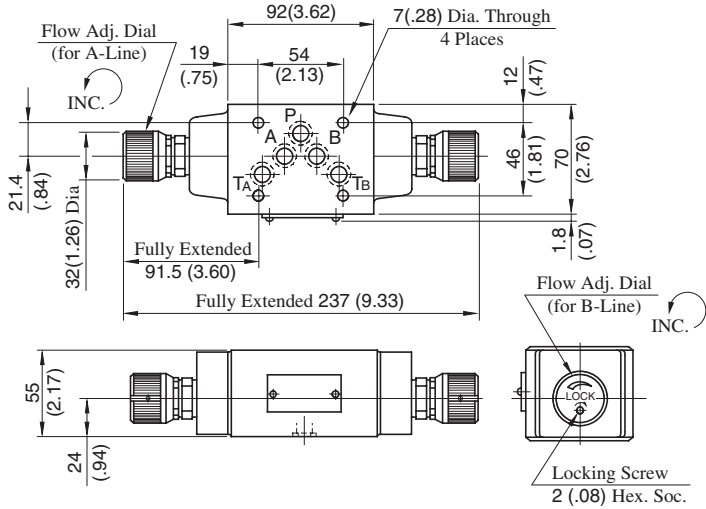
## Typical Performance Characteristics

Hydraulic Fluid: Viscosity 35 mm<sup>2</sup>/s (164 SSU), Specific Gravity 0.850



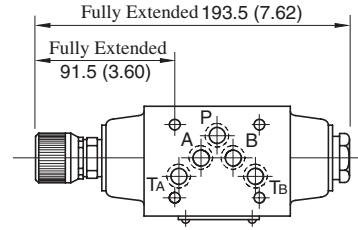
**MSW-03-X<sub>Y</sub>-40**

**DIMENSIONS IN MILLIMETRES (INCHES)**



Approx. Mass.....3.7 kg (8.2 lbs.)

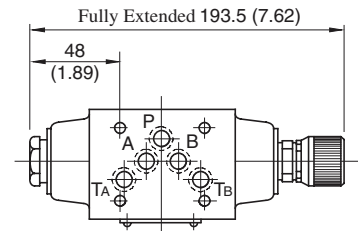
**MSA-03-X<sub>Y</sub>-40**



Approx. Mass.....3.5 kg (7.7 lbs.)

• For other dimensions, refer to "MSW-03" drawing left.

**MSB-03-X<sub>Y</sub>-40**

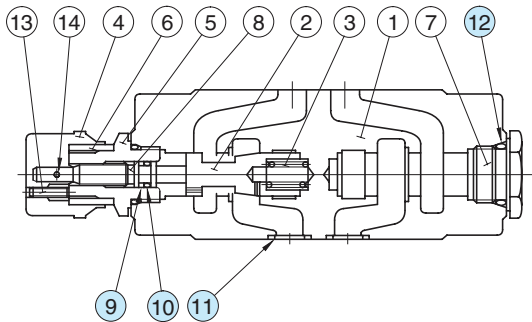


Approx. Mass.....3.5 kg (7.7 lbs.)

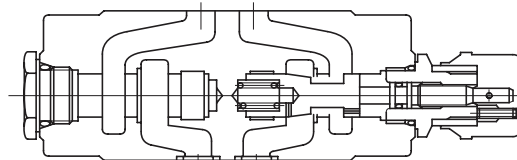
• For other dimensions, refer to "MSW-03" drawing left.

**Spare Parts List**

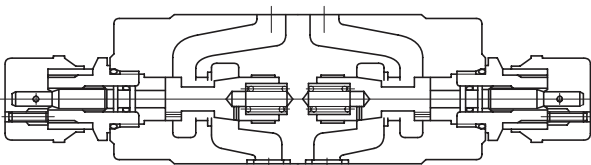
**MSA-03-X<sub>Y</sub>-40**



**MSB-03-X<sub>Y</sub>-40**



**MSW-03-X<sub>Y</sub>-40**



• **List of Seals**

Item	Name of Parts	Part Numbers	Quantity		
			MSA-03	MSB-03	MSW-03
9	Back Up Ring	SO-BB-P8	1	1	2
10	O-Ring	SO-NA-P8	1	1	2
11	O-Ring	SO-NB-A014	5	5	5
12	O-Ring	SO-NB-P18	2	2	2

Note: When ordering seals, please specify the seal kit number from the table right.

• **List of Seal Kits**

Valve Model Numbers	Seal Kit Numbers
MSA-03	KS-MSA-03-40
MSB-03	
MSW-03	KS-MSW-03-40