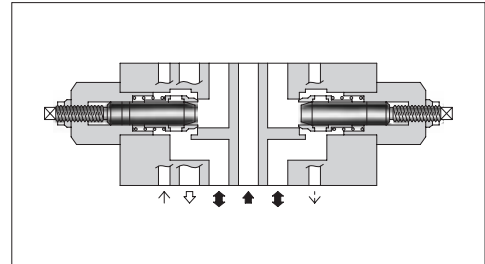


## Throttle and Check Modular Valves

### Specifications

Model Numbers	Max. Operating Pressure MPa (PSI)	Max. Flow L/min (U.S.GPM)
MSA-10-*-30/3090 MSB-10-*-30/3090 MSW-10-*-30/3090	25 (3630)	800 (211)



### Model Number Designation

F-	MSW	-10	-X	-30	*
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 Valves for A-Line <b>MSB :</b> Throttle and Check Valves for B-Line <b>MSW :</b> Throttle and Check Valves for A&B-Lines	<b>10</b>	<b>X :</b> Metre-out <b>Y :</b> Metre-in	<b>30</b>	Refer to ★

★ Design Standards: None ..... Japanese Standard "JIS" and European Design Standard 90 ..... N. American Design Standard

### Instructions

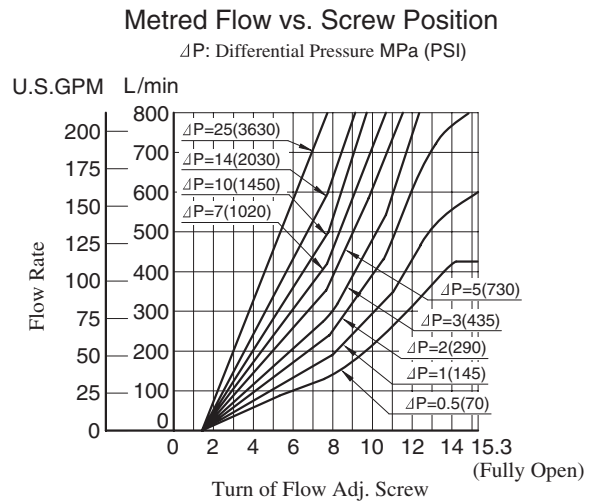
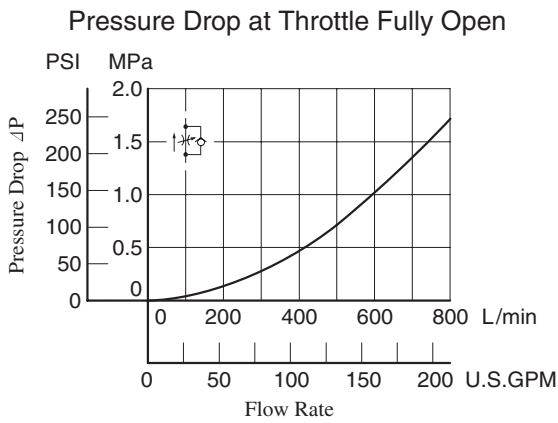
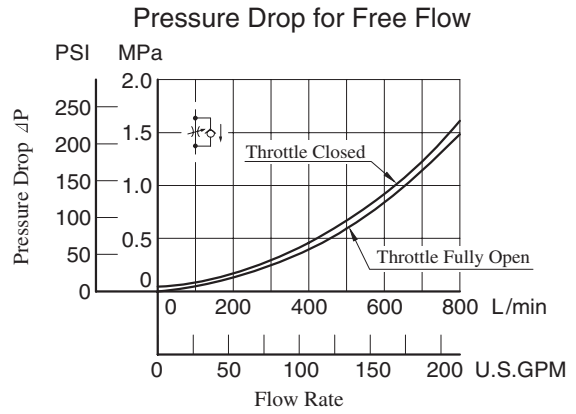
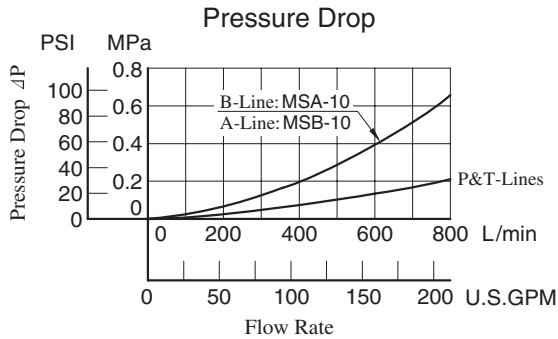
- To make flow rate adjustment, loosen the lock nut and turn the flow adjustment screw clockwise or anti-clockwise. To throttle the flow, turn the screw clockwise. Be sure to re-tighten the lock nut firmly after the adjustment of the flow rate is completed.

### Graphic Symbols

Metre-out	Metre-in
<p>MSA-10-X</p>	<p>MSA-10-Y</p>
<p>MSB-10-X</p>	<p>MSB-10-Y</p>
<p>MSW-10-X</p>	<p>MSW-10-Y</p>

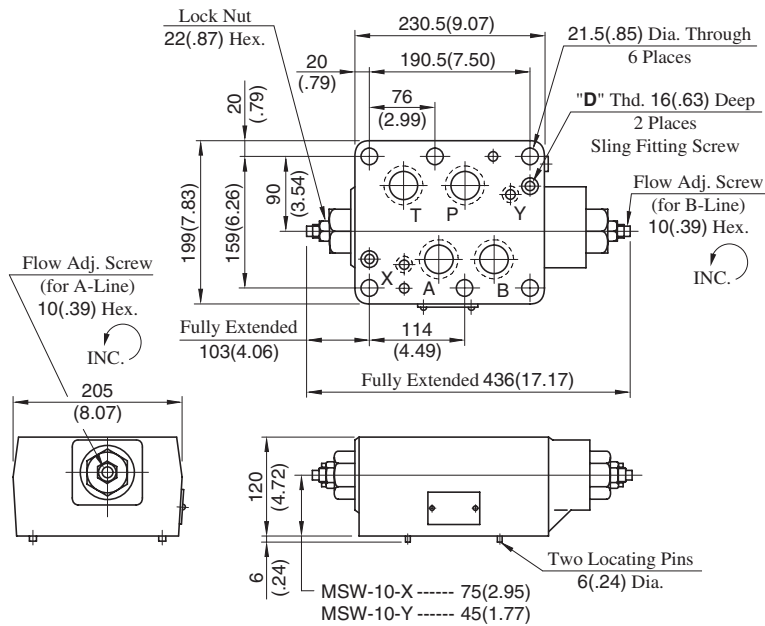
■ Typical Performance Characteristics

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



## MSW-10-X-Y-30/3090

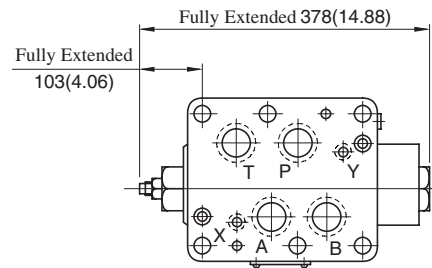
### DIMENSIONS IN MILLIMETRES (INCHES)



Model Numbers	"D" Thd.
MS*-10-*-30	M8
MS*-10-*-3090	5/16-18 UNC

Approx. Mass..... 35.7 kg (78.7 lbs.)

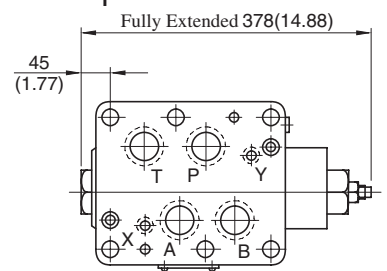
## MSA-10-X-Y-30/3090



Approx. Mass..... 35 kg (77.2 lbs.)

• For other dimensions, refer to "MSW-10" drawing left.

## MSB-10-X-Y-30/3090

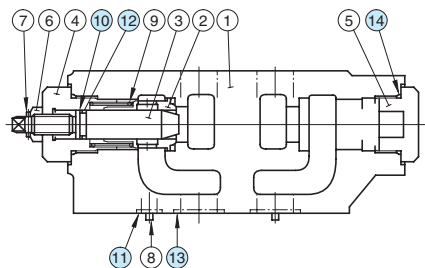


Approx. Mass..... 35 kg (77.2 lbs.)

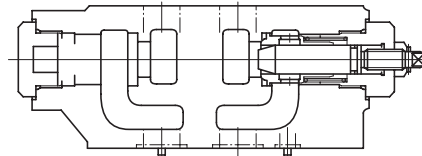
• For other dimensions, refer to "MSW-10" drawing left.

### Spare Parts List

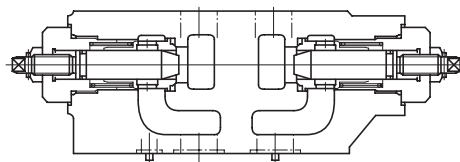
#### MSA-10-\*-30/3090



#### MSB-10-\*-30/3090



#### MSW-10-\*-30/3090



#### List of Seals

Item	Name of Parts	Part Numbers	Quantity		
			MSA-10	MSB-10	MSW-10
10	Back Up Ring	SO-BB-P20	1	1	2
11	O-Ring	SO-NB-P16	2	2	2
12	O-Ring	SO-NA-P20	1	1	2
13	O-Ring	SO-NB-P40	4	4	4
14	O-Ring	SO-NB-P44	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-10	KS-MSA-10-10
MSB-10	
MSW-10	KS-MSW-10-10