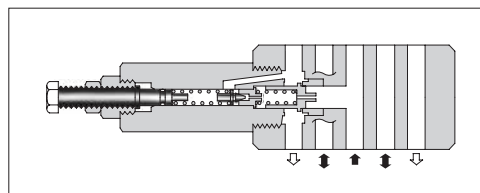


## Relief Modular Valves

### Specifications

| Model Numbers                                                | Max. Operating Pressure<br>MPa (PSI) | Max. Flow<br>L/min (U.S.GPM) |
|--------------------------------------------------------------|--------------------------------------|------------------------------|
| MBP-03-* -30<br>MBA-03-* -30<br>MBB-03-* -30<br>MBW-03-* -30 | 31.5 (4570)                          | 70 (18.5)                    |



### Model Number Designation

| F-                                                                                         | MBA                                                                                                                                                             | -03        | -B                                                                            | -30           | *                       |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------|---------------|-------------------------|
| Special Seals                                                                              | Series Number                                                                                                                                                   | Valve Size | Pres. Adj. Range<br>MPa (PSI)                                                 | Design Number | Design Standard         |
| <b>F:</b><br>Special Seals for<br>Phosphate Ester<br>Type Fluids (Omit<br>if not required) | <b>MBP</b> : Relief Valve for P-Line<br><b>MBA</b> : Relief Valve for A-Line<br><b>MBB</b> : Relief Valve for B-Line<br><b>MBW</b> : Relief Valve for A&B-Lines | <b>03</b>  | <b>B:</b> *-7 ★ <sup>1</sup><br>(* -1020)<br><b>H:</b> 3.5-31.5<br>(510-4570) | <b>30</b>     | Refer to ★ <sup>2</sup> |

★<sup>1</sup>. See the "Minimum Adjustment Pressure" of the next page for the item marked \*.

★<sup>2</sup>. Design Standards: None ..... Japanese Standard "JIS", European Design Standard and N. American Design Standard

### Instructions

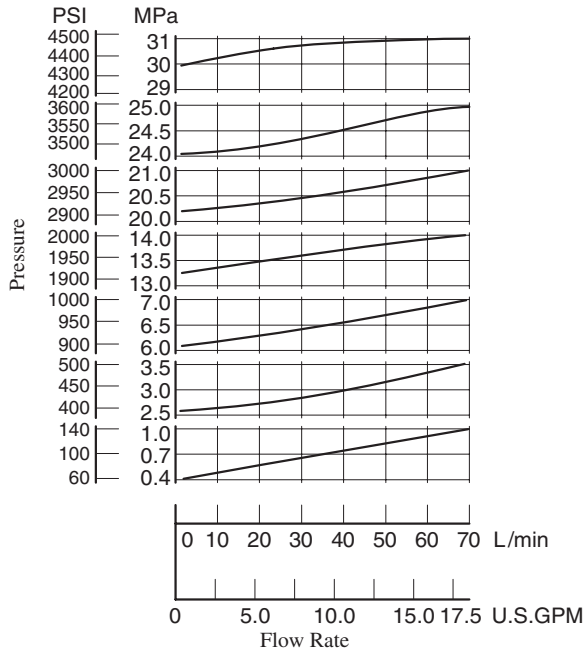
- The minimum adjustment pressure equals the value obtained from the minimum adjustment pressure characteristics plus the tank line back pressure of the [next page](#). This back pressure should include the value of the T-line pressure drop characteristics of the valves stacked to the base plate side of the modular valve.
- To make pressure adjustment, loosen the lock nut and turn the pressure adjustment screw clockwise or anti-clockwise. For an increase of pressure, turn the screw clockwise. Be sure to re-tighten the lock nut firmly after making adjustment to the pressure.
- In case of a small flow, the setting pressure may become unstable. To avoid this, refer to the minimum flow characteristic curve of the next page and use the valve within a range as shown with .

| Model Numbers | Graphic Symbols | Detailed Graphic Symbols |
|---------------|-----------------|--------------------------|
| MBP-03        |                 |                          |
| MBA-03        |                 |                          |
| MBB-03        |                 |                          |
| MBW-03        |                 |                          |

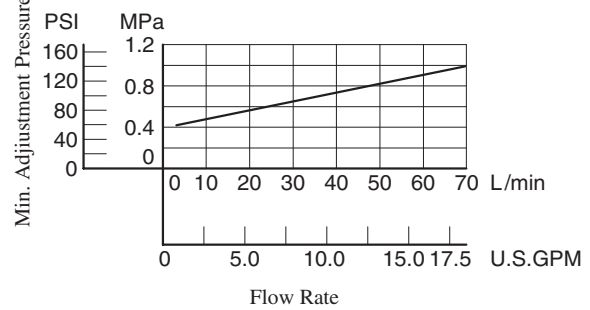
## Typical Performance Characteristics

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

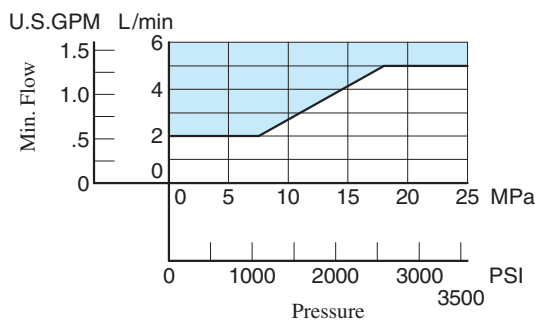
### Nominal Override Characteristics



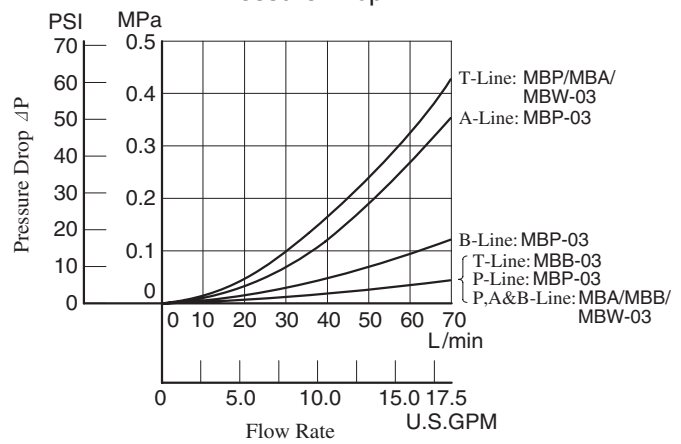
### Min. Adjustment Pressure



### Min. Flow vs. Adjustment Pressure



### Pressure Drop

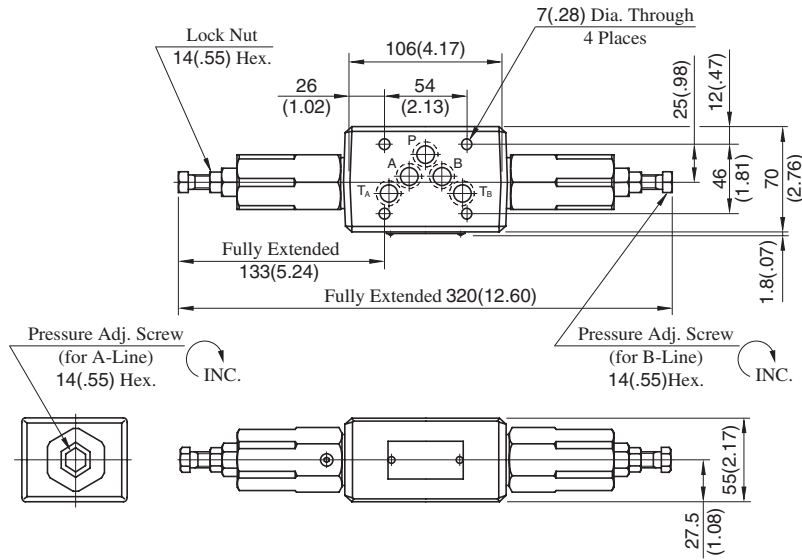


F

03 Series Modular Valves

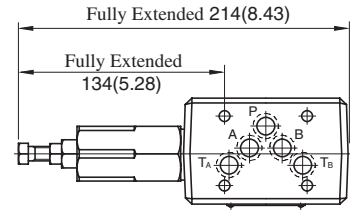
**MBW-03-\*-30**

**DIMENSIONS IN  
MILLIMETRES (INCHES)**



Approx. Mass.....3.8 kg (8.4 lbs.)

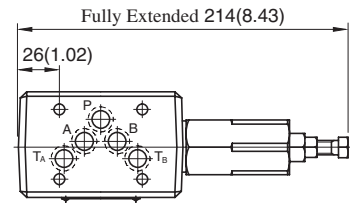
**MBP-03-\*-30  
MBA-03-\*-30**



Approx. Mass.....3.1 kg (6.8 lbs.)

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

**MBB-03-\*-30**

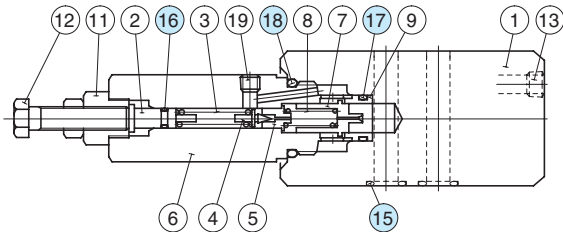


Approx. Mass.....3.1 kg (6.8 lbs.)

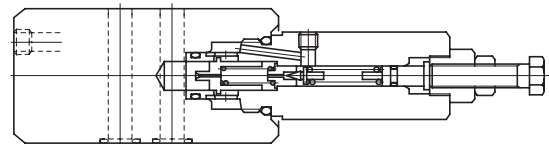
• For other dimensions, refer to "MBW-03" drawing left.

**■ Spare Parts List**

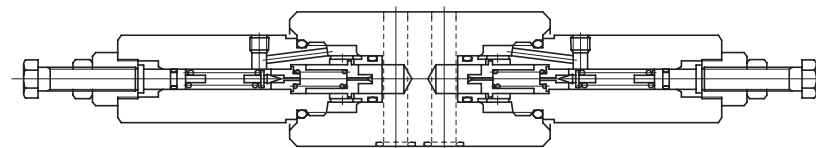
**MBP-03-\*-30  
MBA-03-\*-30**



**MBB-03-\*-30**



**MBW-03-\*-30**



**● List of Seals**

| Item | Name of Parts | Part Numbers | Quantity |        |        |        |
|------|---------------|--------------|----------|--------|--------|--------|
|      |               |              | MBP-03   | MBA-03 | MBB-03 | MBW-03 |
| 15   | O-Ring        | SO-NB-A014   | 5        | 5      | 5      | 5      |
| 16   | O-Ring        | SO-NA-P6     | 1        | 1      | 1      | 2      |
| 17   | O-Ring        | SO-NB-P16    | 1        | 1      | 1      | 2      |
| 18   | O-Ring        | SO-NB-P26    | 1        | 1      | 1      | 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 |
|---------------------|------------------|
| MBP-03              | KS-MBP-03-30     |
| MBA-03              |                  |
| MBB-03              |                  |
| MBW-03              | KS-MBW-03-30     |