

# 01 Series Modular Valves

## Type of Modular Valve

| Class                             | Name and Model Numbers                                                                                                     | Graphic Symbols | Page | Class                             | Name and Model Numbers                                                              | Graphic Symbols | Page |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|------|-----------------------------------|-------------------------------------------------------------------------------------|-----------------|------|
| Pressure Control Valves           | Solenoid Operated Directional Valve<br>(S-) DSG-01-***-70<br>E-DSG-01-***-D*-70<br>T-DSG-01-***-D24*-70<br>G-DSG-01-***-51 |                 | ★    | Flow Control Valves               | Throttle Valves<br>(for "P-Line")<br>MSP-01-50                                      |                 | F-29 |
|                                   | Relief Valves<br>(for "P-Line")<br>MBP-01-***-70                                                                           |                 | F-12 |                                   | Throttle Valves<br>(for "T-Line")<br>MST-01-50                                      |                 | F-29 |
|                                   | Relief Valves<br>(for "A-Line")<br>MBA-01-***-70                                                                           |                 | F-12 |                                   | Check and Throttle Valves<br>(for "P-Line")<br>MSCP-01-30                           |                 | F-30 |
|                                   | Relief Valves<br>(for "B-Line")<br>MBB-01-***-70                                                                           |                 | F-12 |                                   | Throttle and Check Valves<br>(for "A-Line", Meter-out)<br>MSA-01-X-70               |                 | F-31 |
|                                   | Reducing Valves<br>(for "P-Line")<br>MRP-01-***-70                                                                         |                 | F-14 |                                   | Throttle and Check Valves<br>(for "A-Line", Meter-in)<br>MSA-01-Y-70                |                 | F-31 |
|                                   | Reducing Valves<br>(for "A-Line")<br>MRA-01-***-70                                                                         |                 | F-14 |                                   | Throttle and Check Valves<br>(for "B-Line", Meter-out)<br>MSB-01-X-70               |                 | F-31 |
|                                   | Reducing Valves<br>(for "B-Line")<br>MRB-01-***-70                                                                         |                 | F-14 |                                   | Throttle and Check Valves<br>(for "B-Line", Meter-in)<br>MSB-01-Y-70                |                 | F-31 |
|                                   | Two Pressure Reducing Valves<br>(for "P-Line")<br>MRDP-01-***-10                                                           |                 | F-16 |                                   | Throttle and Check Valves<br>(for "A&B-Lines", Meter-out)<br>MSW-01-X-70            |                 | F-31 |
|                                   | Brake Valves<br>MBR-01-***-30                                                                                              |                 | F-18 |                                   | Throttle and Check Valves<br>(for "A&B-Lines", Meter-in)<br>MSW-01-Y-70             |                 | F-31 |
|                                   | Sequence Valves<br>(for "P-Line")<br>MHP-01-***-70                                                                         |                 | F-19 | Directional Control Valves        | Throttle and Check Valves<br>(for "A&B-Lines", Meter-out, Meter-in)<br>MSW-01-XY-70 |                 | F-31 |
| Flow Control Valves               | Counterbalance Valves<br>(for "A-Line")<br>MHA-01-***-70                                                                   |                 | F-19 |                                   | Throttle and Check Valves<br>(for "A&B-Lines", Meter-in, Meter-out)<br>MSW-01-YX-70 |                 | F-31 |
|                                   | Counterbalance Valves<br>(for "B-Line")<br>MHB-01-***-70                                                                   |                 | F-19 |                                   | Check Valves<br>(for "P-Line")<br>MCP-01-***-70                                     |                 | F-33 |
|                                   | Pressure Switch Valves<br>(for "P-Line")<br>MJP-01-***-10                                                                  |                 | F-22 |                                   | Check Valves<br>(for "A-Line")<br>MCA-01-***-70                                     |                 | F-33 |
|                                   | Pressure Switch Valves<br>(for "A-Line")<br>MJA-01-***-10                                                                  |                 | F-22 |                                   | Check Valves<br>(for "B-Line")<br>MCB-01-***-70                                     |                 | F-33 |
|                                   | Pressure Switch Valves<br>(for "B-Line")<br>MJB-01-***-10                                                                  |                 | F-22 |                                   | Check Valves<br>(for "T-Line")<br>MCT-01-***-70                                     |                 | F-33 |
|                                   | Pressure Switch Valves<br>(for "A&B-Line")<br>MJW-01-J*-10                                                                 |                 | F-22 |                                   | Check Valves<br>(for "A&B-Line")<br>MCW-01-***-70                                   |                 | F-33 |
|                                   | Flow Control Valves<br>(for "P-Line")<br>MFP-01-10                                                                         |                 | F-25 |                                   | Anti-Cavitation Valves<br>MAC-01-30                                                 |                 | F-35 |
|                                   | Flow Control and Check Valves<br>(for "A-Line", Meter-out)<br>MFA-01-X-10                                                  |                 | F-25 |                                   | Pilot Operated Check Valves<br>(for "A-Line")<br>MPA-01-***-70                      |                 | F-36 |
|                                   | Flow Control and Check Valves<br>(for "A-Line", Meter-in)<br>MFA-01-Y-10                                                   |                 | F-25 |                                   | Pilot Operated Check Valves<br>(for "B-Line")<br>MPB-01-***-70                      |                 | F-36 |
|                                   | Flow Control and Check Valves<br>(for "B-Line", Meter-out)<br>MFB-01-X-10                                                  |                 | F-25 | Modular Plates and Mounting Bolts | Pilot Operated Check Valves<br>(for "A&B-Lines")<br>MPW-01-***-70                   |                 | F-36 |
| Modular Plates and Mounting Bolts | Flow Control and Check Valves<br>(for "B-Line", Meter-in)<br>MFB-01-Y-10                                                   |                 | F-25 |                                   | End Plates<br>(Blocking Plates)<br>MDC-01-A-30                                      |                 | F-38 |
|                                   | Flow Control and Check Valves<br>(for "A&B-Lines", Meter-out)<br>MFW-01-X-10                                               |                 | F-25 |                                   | End Plates<br>(Bypass plates)<br>MDC-01-B-30                                        |                 | F-38 |
|                                   | Flow Control and Check Valves<br>(for "A&B-Lines", Meter-in)<br>MFW-01-Y-10                                                |                 | F-25 |                                   | Connecting Plates<br>(for "P&A-Lines")<br>MDS-01-PA-30                              |                 | F-38 |
|                                   | Temperature Compensated Throttle and Check Valves<br>(for "A-Line", Meter-out)<br>MSTA-01-X-10                             |                 | F-27 |                                   | Connecting Plates<br>(for "P&B-Lines")<br>MDS-01-PB-30                              |                 | F-38 |
|                                   | Temperature Compensated Throttle and Check Valves<br>(for "B-Line", Meter-out)<br>MSTB-01-X-10                             |                 | F-27 |                                   | Connecting Plates<br>(for "A&T-Lines")<br>MDS-01-AT-30                              |                 | F-38 |
|                                   | Temperature Compensated Throttle and Check Valves<br>(for "A&B-Lines", Meter-out)<br>MSTW-01-X-10                          |                 | F-27 |                                   | Base Plates<br>MMC-01-***-40                                                        |                 | F-39 |
|                                   |                                                                                                                            |                 |      |                                   | Bolt Kits<br>MBK-01-***-70                                                          |                 | F-41 |
|                                   |                                                                                                                            |                 |      |                                   |                                                                                     |                 |      |
|                                   |                                                                                                                            |                 |      |                                   |                                                                                     |                 |      |
|                                   |                                                                                                                            |                 |      |                                   |                                                                                     |                 |      |

★ Please refer to the catalog page of "E: Directional Control Valves"

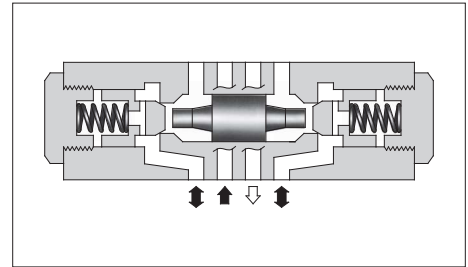
# Pilot Operated Check Modular Valves

## Specifications

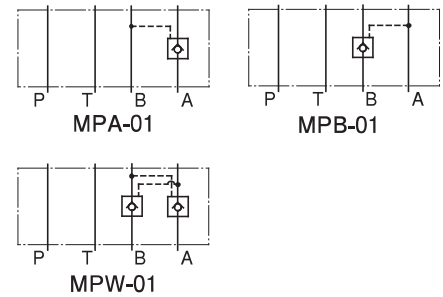
| Model Numbers                      |                 | Max. Operating Pressure<br>MPa | Max. Flow<br>L/min |
|------------------------------------|-----------------|--------------------------------|--------------------|
| Standard                           | MP *-01-* -70   | 35                             | 60                 |
| Low Pilot Pressure<br>Control Type | MP *-01-* -L-70 |                                |                    |

## Model Number Designation

| MPA                                                                                                                                                                    | -01        | -2                                                | -L                                                                  | -70              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------|---------------------------------------------------------------------|------------------|
| Series Number                                                                                                                                                          | Valve Size | Cracking Pressure<br>MPa                          | Pilot Operation<br>Format                                           | Design<br>Number |
| <b>MPA:</b> Pilot Operated Check Valve<br>for A-Line<br><b>MPB:</b> Pilot Operated Check Valve<br>for B-Line<br><b>MPW:</b> Pilot Operated Check Valve<br>for A&B-Line | <b>01</b>  | <b>0:</b> 0.035<br><b>2:</b> 0.2<br><b>4:</b> 0.4 | <b>None:</b><br>Standard<br><b>L:</b><br>Low Pilot<br>Pressure Type | <b>70</b>        |



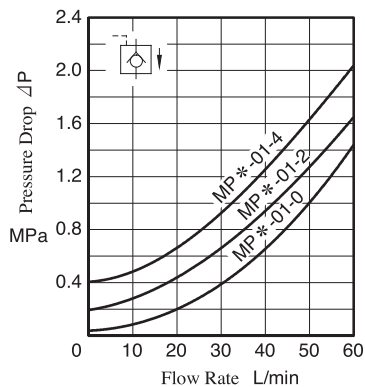
## Graphic Symbols



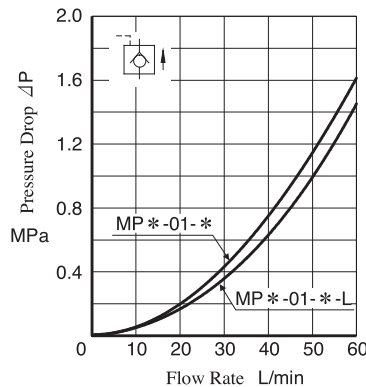
## Typical Performance Characteristics

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

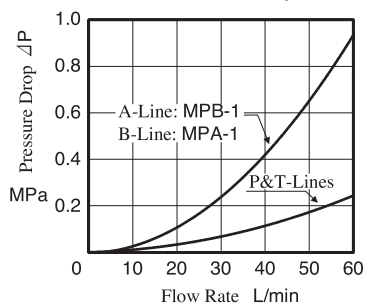
Pressure Drop for Free Flow



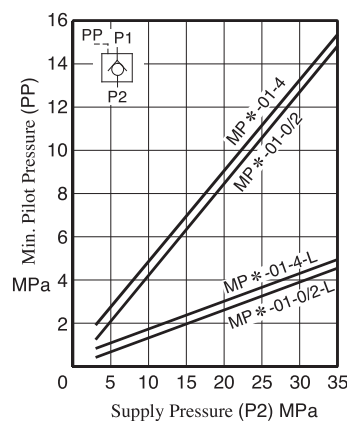
Pressure Drop for Reversed Controlled Flow



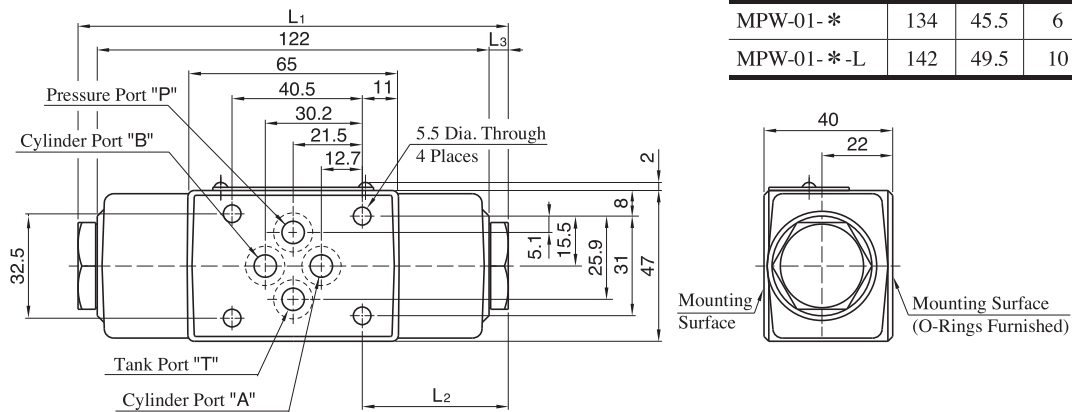
Pressure Drop



Min. Pilot Pressure

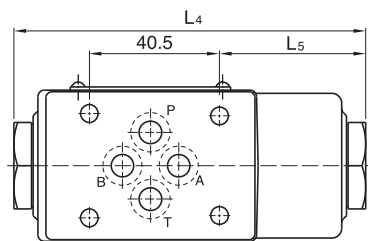


## MPW-01



| Model Numbers | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | Approx. Mass<br>kg |
|---------------|----------------|----------------|----------------|--------------------|
| MPW-01-*      | 134            | 45.5           | 6              | 1.4                |
| MPW-01- *-L   | 142            | 49.5           | 10             | 1.45               |

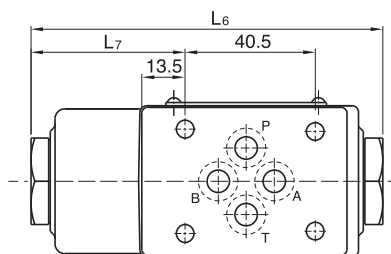
## MPA-01



| Model Numbers | L <sub>4</sub> | L <sub>5</sub> | Approx. Mass<br>kg |
|---------------|----------------|----------------|--------------------|
| MPA-01-*      | 109.5          | 45.5           | 1.15               |
| MPA-01- *-L   | 113.5          | 49.5           | 1.2                |

● Please refer to the drawing above (MPW-01) for other dimensions.

## MPB-01

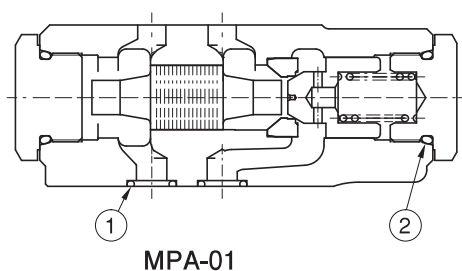


| Model Numbers | L <sub>6</sub> | L <sub>7</sub> | Approx. Mass<br>kg |
|---------------|----------------|----------------|--------------------|
| MPB-01-*      | 109.5          | 48             | 1.15               |
| MPB-01- *-L   | 113.5          | 52             | 1.2                |

● Please refer to the drawing above (MPW-01) for other dimensions.

## List of Seals

### MPA-01 MPB-01 MPW-01



| Item | Name of Parts | Part Numbers    | Qty. |
|------|---------------|-----------------|------|
| 1    | O-Ring        | OR NBR-90 P9-N  | 4    |
| 2    | O-Ring        | OR NBR-90 P18-N | 2    |

- MPW-01 has a check valve built in the left side.
- MPW-01 has check valves built in the both left and right sides.