

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

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

Pressure and Temperature Compensated Flow Control (and Check) Modular Valves

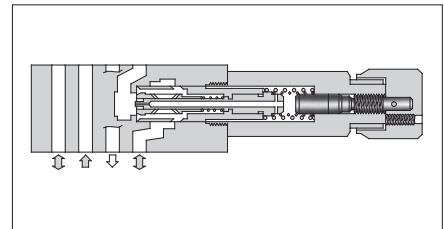
Specifications

| Model Numbers | Max. Operating Pressure MPa | Max. Metered Flow L/min | Max. Free Flow L/min |
|---------------|-----------------------------|-------------------------|----------------------|
| MFP-01-10 | 16 | 35 | — |
| MF*-01-*-10 | | | 35 |

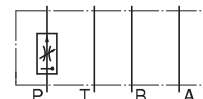


Model Number Designation

| MFA | -01 | -X | -10 |
|---|------------|-----------------------------|---------------|
| Series Number | Valve Size | Direction of Flow | Design Number |
| MFP: Flow Control Valve for P-Line | 01 | — | 10 |
| MFA: Flow Control and Check Valve for A-Line | | X: Meter-out Y: Meter-in | 10 |
| MFB: Flow Control and Check Valve for B-Line | | | |
| MFW: Flow Control and Check Valve for A&B-Lines | | | |



Graphic Symbols

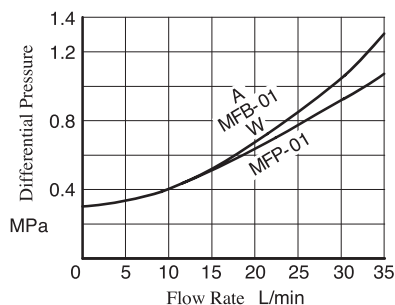


MFP-01

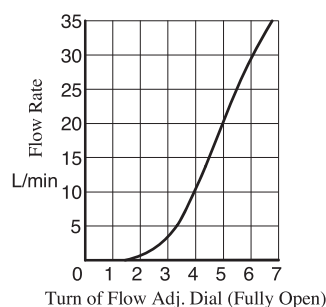
Typical Performance Characteristics

Hydraulic Fluid: Viscosity 35 mm²/s, Specific Gravity 0.850

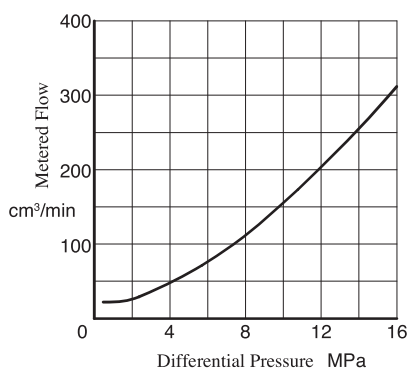
Min. Required Pressure Difference



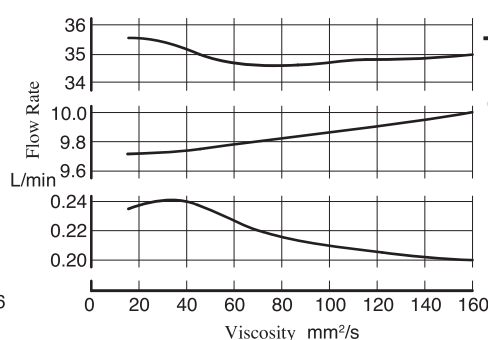
Metered Flow vs. Dial Position



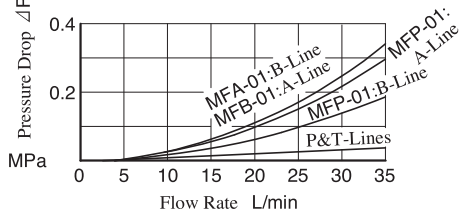
Min. Metered Flow



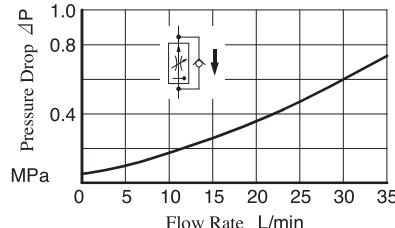
Metered Flow vs. Viscosity



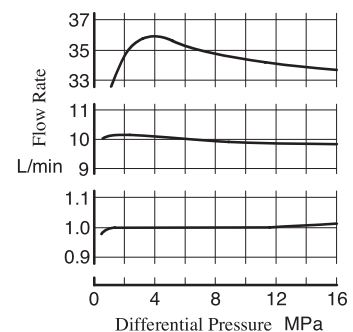
Pressure Drop



Pressure Drop for Free Flow



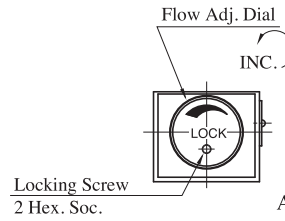
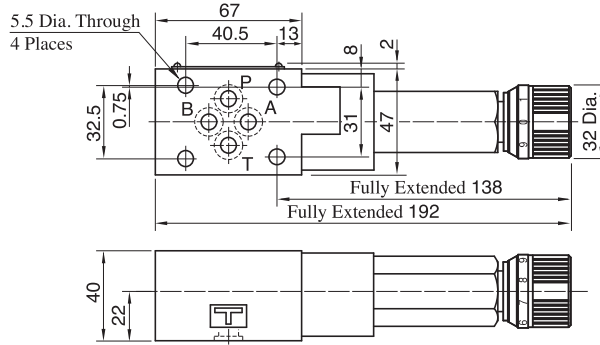
Metered Flow vs. Differential Pres.



Instructions

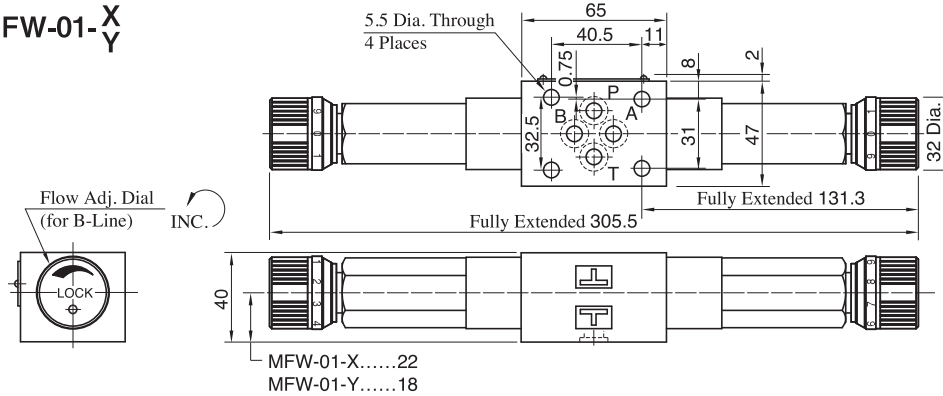
- To make flow rate adjustment, loosen locking screw for the dial and turn the flow adjustment dial clockwise or anti-clockwise. For a decrease of flow, turn the dial clockwise. Be sure to re-tighten the locking screw firmly after the adjustment of the flow rate.

MFP-01



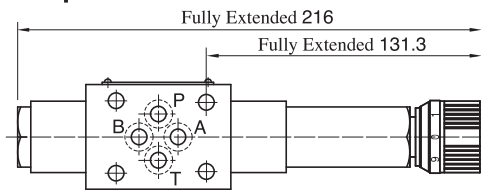
Approx. Mass.....1.7 kg

**MFW-01-X
Y**



Approx. Mass.....2.1 kg

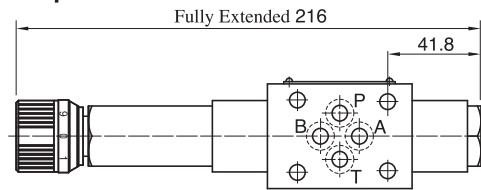
**MFA-01-X
Y**



Approx. Mass.....1.6 kg

For other dimensions, refer to "MFW-01" in the drawing above.

**MFB-01-X
Y**

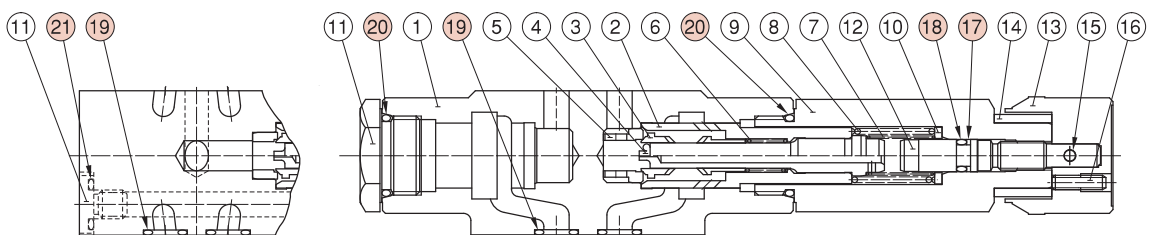


Approx. Mass.....1.6 kg

For other dimensions, refer to "MFW-01" in the drawing above.

List of Seals

**MFP-01
MFA-01
MFB-01
MFW-01**



MFP-01

MFA-01

● MFB-01: Flow control part is built in the left side.

● MFW-01: Flow control part is built in the both sides.

| Item | Name of Parts | Part Numbers | Qty. | | | |
|------|---------------|-----------------------|--------|--------|--------|--------|
| | | | MFP-01 | MFA-01 | MFB-01 | MFW-01 |
| 17 | Back-up Ring | BR JIS B 2401-4-T2-P6 | 1 | 1 | 1 | 2 |
| 18 | O-Ring | OR NBR-70-1 P6-N | 1 | 1 | 1 | 2 |
| 19 | O-Ring | OR NBR-90 P9-N | 4 | 4 | 4 | 4 |
| 20 | O-Ring | OR NBR-90 P18-N | 1 | 2 | 2 | 2 |
| 21 | O-Ring | OR NBR-90 P10-N | 1 | — | — | — |