

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-***-D*-70 T-DSG-01-***-D24*-70 G-DSG-01-***-51 | | ★ | 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"

Sequence Modular Valves/Counterbalance Modular Valves

Specifications

| Model Numbers | Max. Operating Pressure MPa | Max. Flow L/min |
|------------------|-----------------------------|-----------------|
| MHP-01- *- *-70 | 35 | 60 |
| MHA/MHB-01- *-70 | | |

Model Number Designation

| MHP | -01 | -B | -B | -70 |
|--------------------------------------|------------|--|-------------------------------------|---------------|
| Series Number | Valve Size | Pres. Adj. Range MPa | Pres. Adj. Screw Position | Design Number |
| MHP: Sequence Valve for P-Line | 01 | B: ★-7 C: 3.5-14 H: 7-21 K: 14-35 | None: A Port Side B: B Port Side | 70 |
| MHA: Counterbalance Valve for A-Line | | | — | |
| MHB: Counterbalance Valve for B-Line | | | — | |

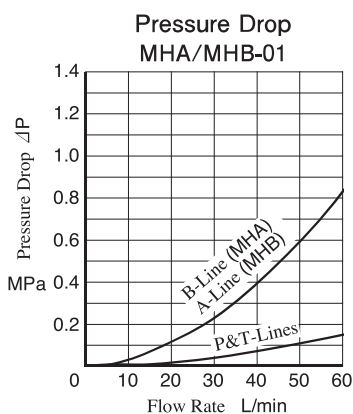
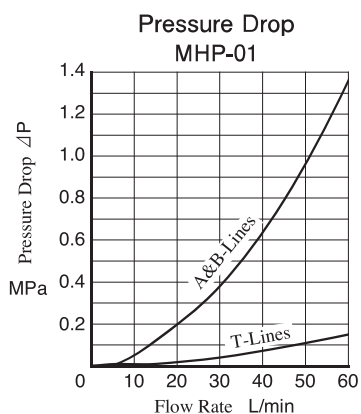
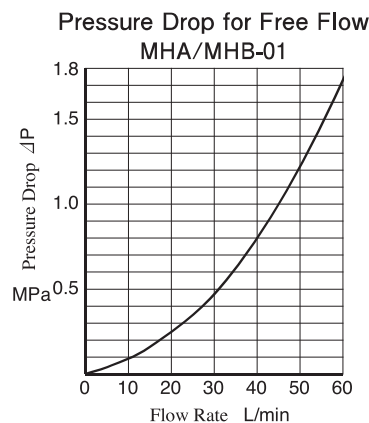
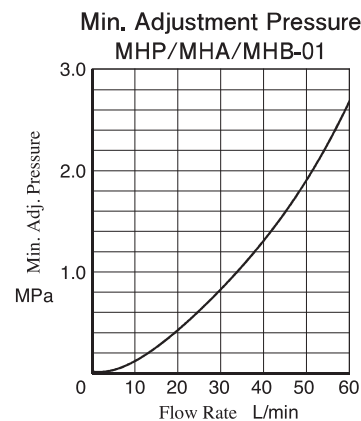
★ See the "Min. Adjustment Pressure" on this page.

Instructions

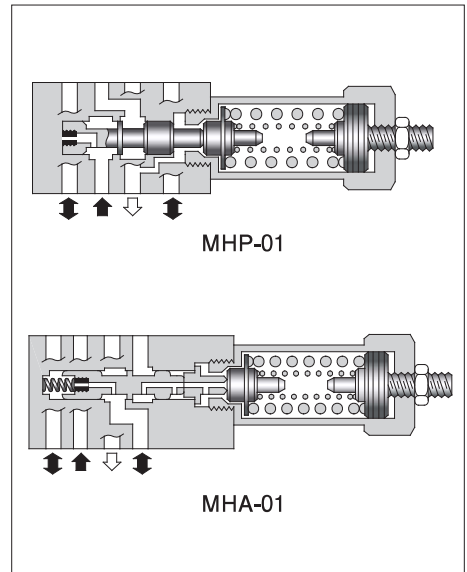
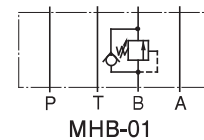
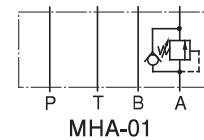
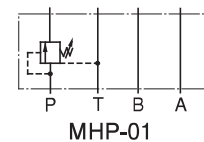
- The minimum adjustment pressure for MHP-01 equals the value obtained from the minimum adjustment pressure characteristics plus the tank line back pressure. This back pressure should include the value of the T-Line pressure drop characteristics of the valves stacked.
- The minimum adjustment pressure for MHA-01 and MHP-01 equals the value obtained from the minimum adjustment pressure characteristics plus the outlet-side back pressure of the valve. The outlet-side back pressure should include the values of the A(B)-Line pressure drop.
- To make pressure adjustment, loosen the lock nut and turn the pressure adjustment screw clockwise or anti-clockwise. For increasing pressure, turn the screw clockwise. Be sure to re-tighten the lock nut firmly after making adjustment to the pressure.

Typical Performance Characteristics

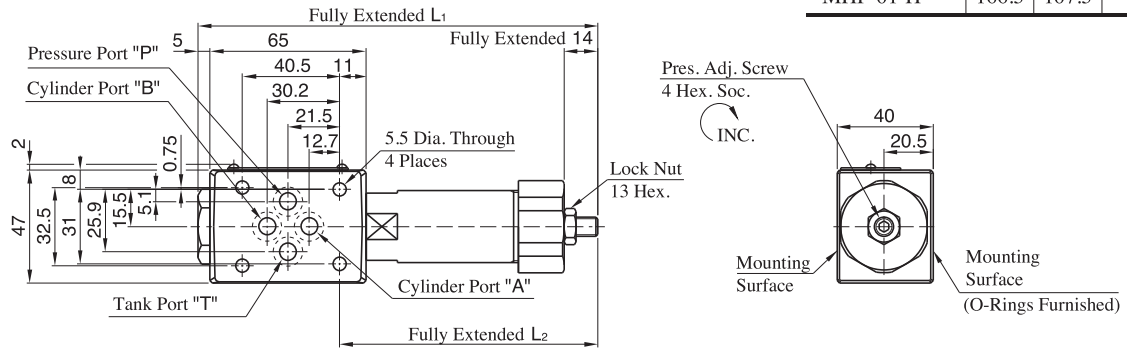
Hydraulic Fluid: Viscosity 35 mm²/s, Specific Gravity: 0.850



Graphic Symbols

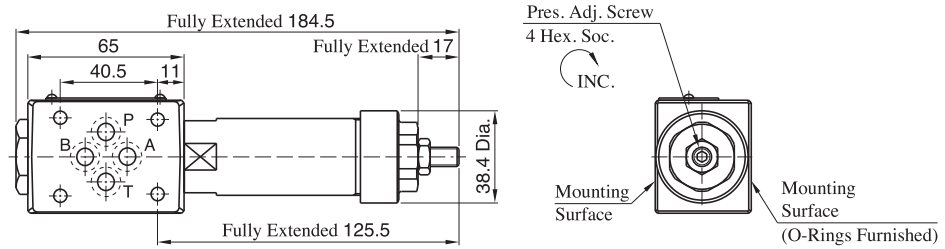


MHP-01-B/C/H



| Model Numbers | L ₁ | L ₂ | Mass kg |
|---------------|----------------|----------------|---------|
| MHP-01-B/C | 151 | 92 | 1.45 |
| MHP-01-H | 166.5 | 107.5 | 1.55 |

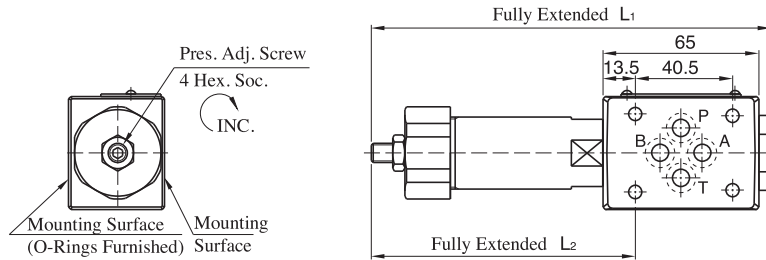
MHP-01-K



● For other dimensions, refer to "MHP-01-B/C/H" in the above figure.

Approx. Mass.....1.65 kg

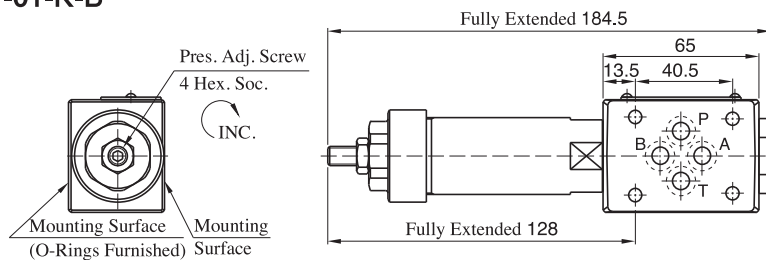
MHP-01-B-B MHP-01-C-B MHP-01-H-B



● For other dimensions, refer to "MHP-01-B/C/H" drawing above.

| Model Numbers | L ₁ | L ₂ | Mass kg |
|--------------------------|----------------|----------------|---------|
| MHP-01-B-B MHP-01-C-B | 151 | 94.5 | 1.45 |
| MHP-01-H-B | 166.5 | 110 | 1.55 |

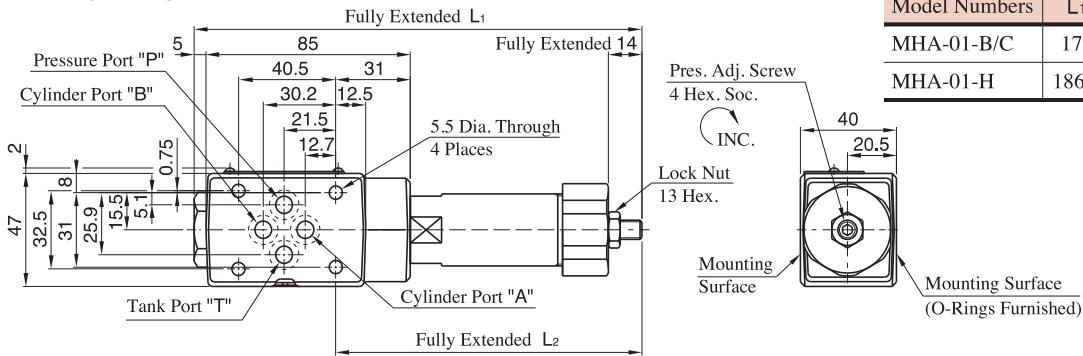
MHP-01-K-B



● For other dimensions, refer to "MHP-01-K" in the above figure.

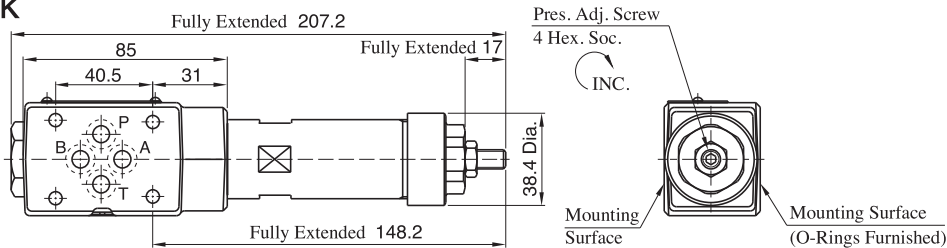
Approx. Mass.....1.65 kg

MHA-01-B/C/H



| Model Numbers | L1 | L2 | Mass kg |
|---------------|-------|-------|---------|
| MHA-01-B/C | 171 | 112 | 1.65 |
| MHA-01-H | 186.5 | 127.5 | 1.75 |

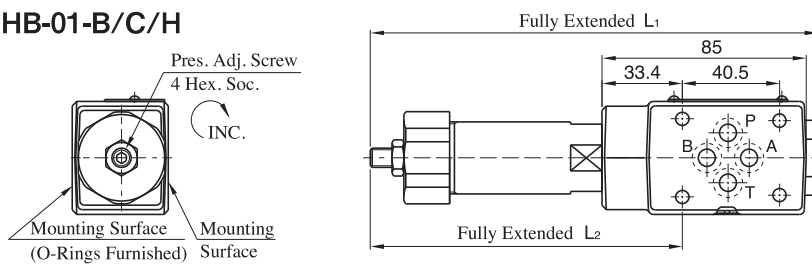
MHA-01-K



● For other dimensions, refer to "MHA-01-B/C/H" in the above figure.

Approx. Mass.....1.85 kg

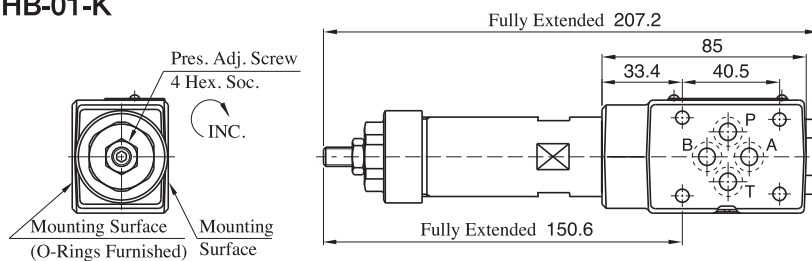
MHB-01-B/C/H



● For other dimensions, refer to "MHA-01-B/C/H" in the above figure.

| Model Numbers | L1 | L2 | Mass kg |
|---------------|-------|-------|---------|
| MHB-01-B/C | 171 | 114.4 | 1.65 |
| MHB-01-H | 186.5 | 129.9 | 1.75 |

MHB-01-K

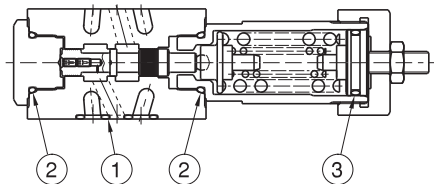


● For other dimensions, refer to "MHA-01-K" in the above figure.

Approx. Mass.....1.85 kg

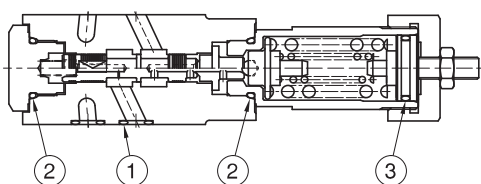
List of Seals

MHP-01



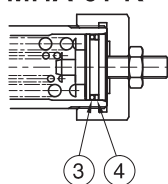
● MHP-01 - * -B has the pressure adjustment part on the left side.

MHA-01



● MHB-01 has the pressure adjustment part on the left side.

MHA-01-K



| 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 |
| 3 | O-Ring | OR NBR-70-1 P20-N [MHP-01-B/C/H] OR NBR-70-1 P22-N [MHP-01-K] | 1 |

| 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 |
| 3 | O-Ring | OR NBR-90 P20-N [MHA-01-B/C/H] [MHB-01-B/C/H] OR NBR-90 P22-N [MHA-01-K] [MHB-01-K] | 1 |
| 4 | Back-up Ring | BR JIS B 2401-4-T2-P22 [MHA-01-K] [MHB-01-K] | 1 |