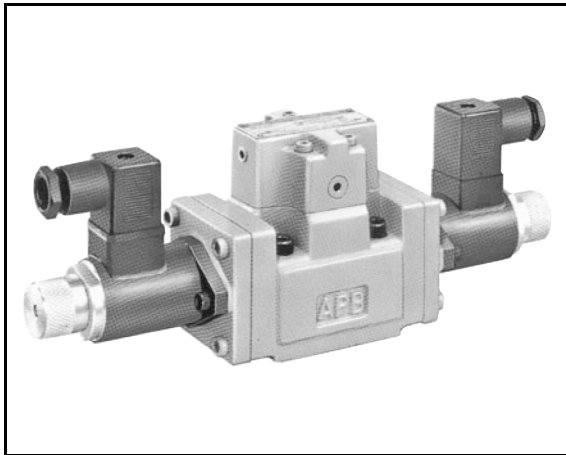


DIRECTIONAL AND FLOW CONTROL VALVE (EHD3)



This directional and flow control valve enables remote control of the direction and flow of hydraulic fluid by controlling the solenoid input current. The flow can be controlled steplessly in proportion to the current value.

FEATURES

1. This valve simplifies hydraulic circuit configuration.
2. The mounting dimensions of a size 06 valve are interchangeable with those of a solenoid valve. Therefore, counterbalance circuits, cylinder circuits, etc. can be simply and compactly configured together with stack valves.

NOTE: Due attention must be paid to the following points when a size 03 valve is used.

- 1) Drain piping is necessary. When a subplate other than model SEHD03-04** is used, measures for drainage must be considered. (Drain piping port is provided on the solenoid valve.)
 - 2) The valve cannot be used together with HK3K-R-Q*-03.
 - 3) When the valve is used together with HR3H-*B / D*-03, the drainage from the solenoid valve flows to the R port. Therefore, the pressure at the R port must be 0.2 MPa.
3. Fluid can be used in the same level of contamination management as ordinary management.
 4. The power consumption of the solenoid is as low as 3.6 W.
If the load pressure sensitive type valve is used, since the pump pressure is controlled to the minimum required level corresponding to the variations in load pressure, the required power can be drastically reduced.
 5. If the valve with internal feedback (EHD3-06-F type) is used, the throttle valve position is feedback controlled. This reduces hysteresis to enable precision control.

- The valve can be used for fluids equivalent to ISO VG32 to 56.
- The allowable maximum fluid temperature is 60°C.
- If a subplate is necessary, please order one separately.

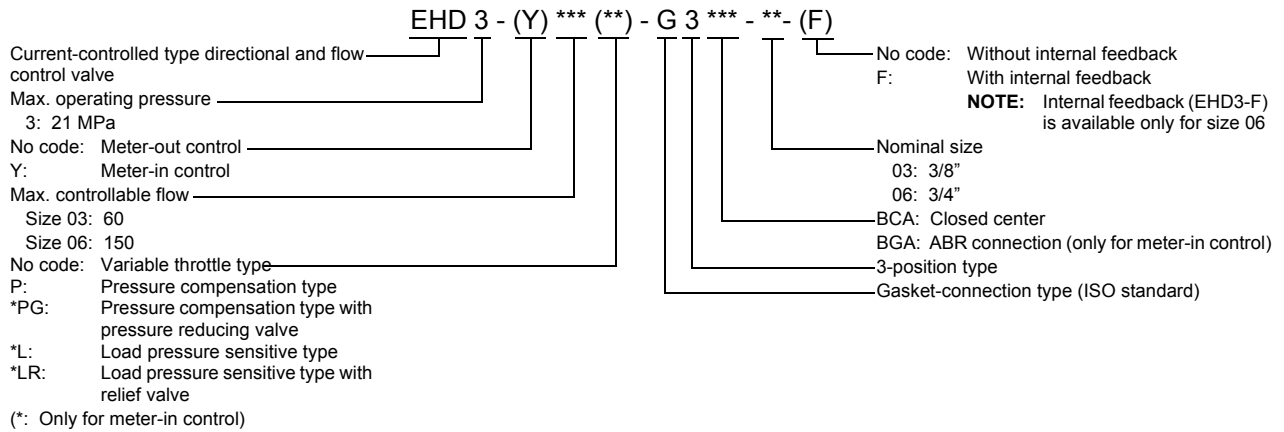
SPECIFICATIONS

| Item | Nominal Size / Type | Size 03 | | | Size 06 (includes the model with internal feedback) | | |
|---|---------------------|--------------------------|------------------------------|----------------------------|---|------------------------------|----------------------------|
| | | Variable Restrictor Type | Load Pressure Sensitive Type | Pressure Compensation Type | Variable Restrictor Type | Load Pressure Sensitive Type | Pressure Compensation Type |
| Max. Operating Pressure | MPa | | | | 21 | | |
| Max. Controllable Flow | L/min | 60 | | | 150 | | |
| Permissible Back Pressure at R Port | MPa | | | | 21 | | |
| Permissible Back Pressure at Drain Port | MPa | | | | 0.2 | | |
| Drain Flow | L/min | 3 or less | | | 3.5 or less | | |
| Supply Flow to P Port | L/min | — | 80 | — | — | 190 | — |
| Relief Valve Pressure Adjustment Range | MPa | — | 3.5 to 21 {35 to 210} | — | — | 3.5 to 21 {35 to 210} | — |
| Pressure Reducing Valve Pressure Adjustment Range | MPa | — | — | 3.5 to 21 {35 to 210} | — | — | 3.5 to 21 {35 to 210} |

SOLENOID CHARACTERISTICS

| Model | Coil Input Current | Coil Resistance |
|-------------|--------------------|-----------------|
| ESH-0103-D3 | 0 to 300 mA | 34 Ω |

MODEL DESIGNATION



VALVE TYPES

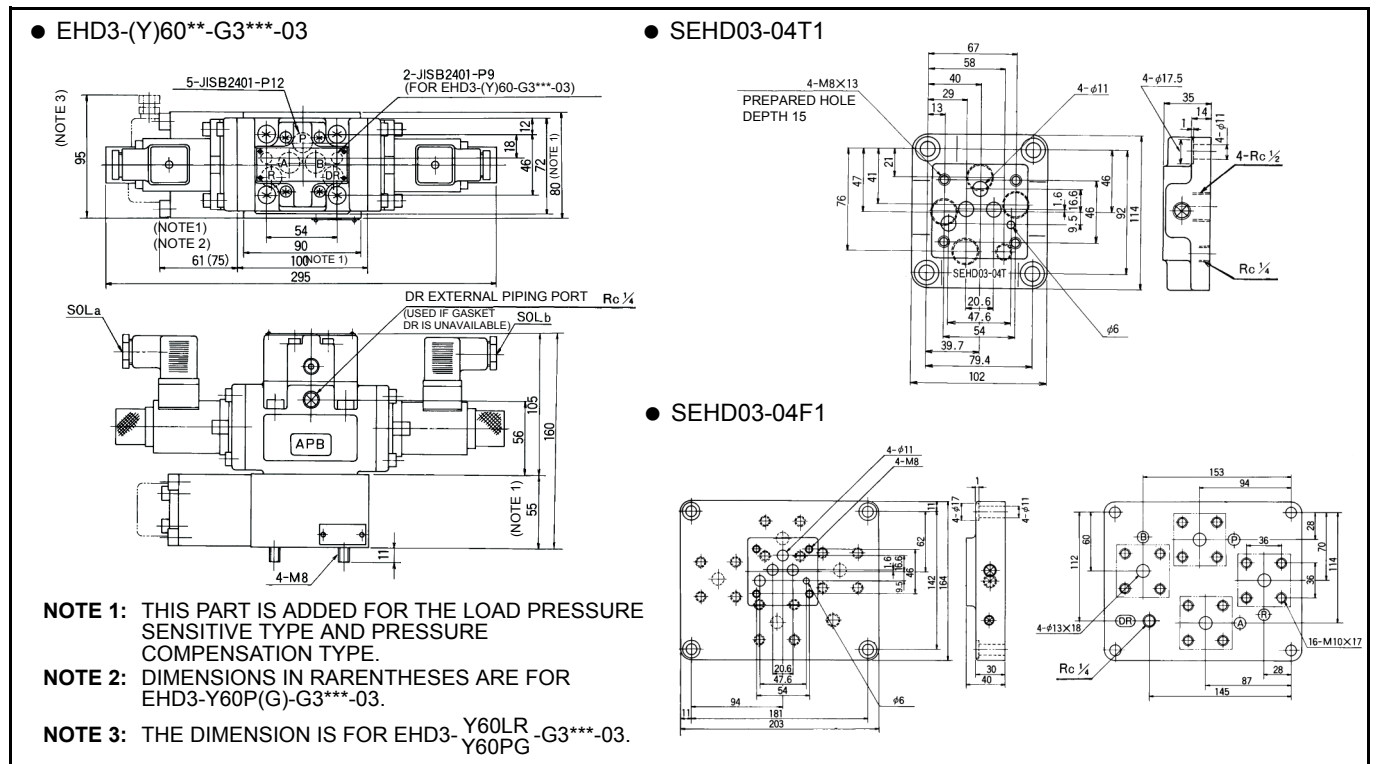
| Valve Type | Variable Restrictor Type | | Load Pressure Sensing Type | | Pressure Compensation Type | | |
|-----------------------|------------------------------------|--------------------------------|------------------------------|-------------------------------|------------------------------|-------------------------------|---------------------------------|
| | Meter-in | Meter-out | Meter-in | | Meter-in | | Meter-out |
| | | | — | With Relief Valve | — | With Pressure Reducing Valve | |
| Model (NOTE 1) | EHD3-Y*** -G3***-**-(-F) | EHD3-*** -G3BCA-**- (-F) | EHD3-Y***L- G3***-**-(-F) | EHD3-Y***LR- G3***-**-(-F) | EHD3-Y***P- G3***-**-(-F) | EHD3-Y***PG- G3***-**-(-F) | EHD3-***P -G3BCA-**- (-F) |
| Symbol (NOTE 2 and 3) | | | | | | | |
| Function | Flow control | ○ | ○ | ○ | ○ | ○ | ○ |
| | Pressure compensation | — | — | ○ | ○ | ○ | ○ |
| | Load pressure sensing | — | — | ○ | ○ | — | — |
| | Pump unloading at neutral position | — | — | ○ | ○ | — | — |
| | Relief control | — | — | — | ○ | — | — |
| | Pressure reducing control | — | — | — | — | ○ | — |

NOTE 1: In Model Designation, "****" indicates BCA or BGA. Please specify either of them.

NOTE 2: With size 03, the "b" and "a" positions are reversed.

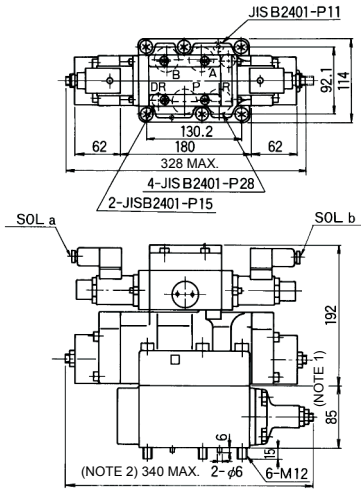
NOTE 3: Internal feedback is available only for size 06.

EXTERNAL DIMENSIONS



EXTERNAL DIMENSIONS

- EHD3-(Y)150***-06

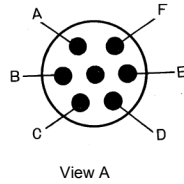
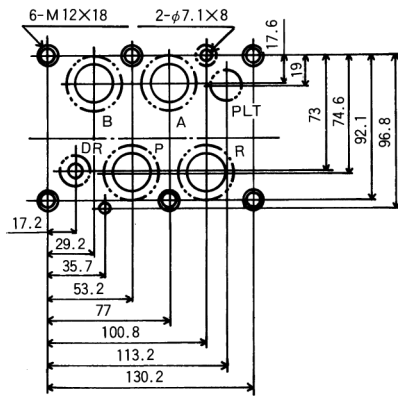
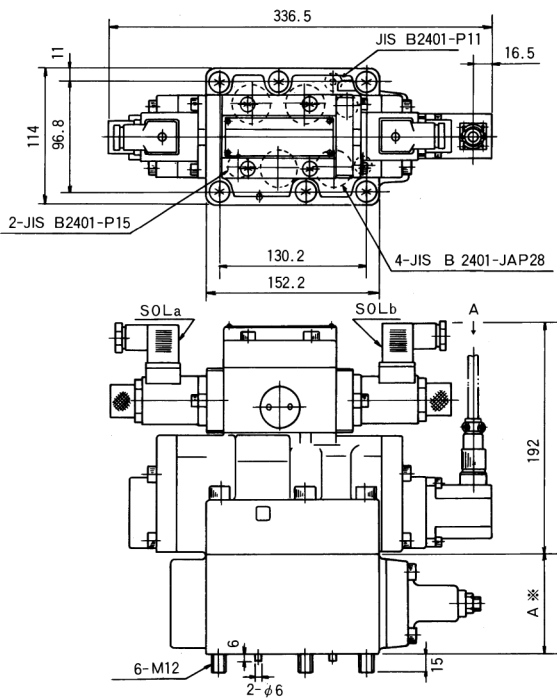


NOTE 1: THIS PART IS ADDED FOR THE LOAD PRESSURE SENSITIVE TYPE AND PRESSURE COMPENSATION TYPE.

NOTE 2: THE DIMENSION IS FOR EHD3- Y150LR -G3***-06.
Y150PG

- FOR SUBPLATES SHD06-**T1(A), REFER TO PAGE 303.

- EHD3-(Y)150(**)-G3***-06-F



| Unit: mm | |
|------------------------|----|
| Model | A |
| EHD3-Y150-G3***-06-F | - |
| EHD3-150-G3BCA-06-F | - |
| EHD3-Y150L-G3***-06-F | 85 |
| EHD3-Y150LR-G3***-06-F | 85 |
| EHD3-Y150P-G3***-06-F | 85 |
| EHD3-Y150PG-G3***-06-F | 85 |
| EHD3-150P-G3BCA-06-F | 85 |

NOTE: WIRING METHOD

For terminals A, B, C, D, E, and F in View A, refer to the explanation of the terminal function for ECAD-D1FB-* (amplifier for internal feedback) on page 231.