

TGM-8, 50 series (ISO 4401-08)

Common Specifications

- Ambient temperature: -20°C~+80°C
- Hydraulic fluid
 - Working temperature: -20°C~+80°C (mineral oil)
+10°C~+54°C (water based)
 - Max. recommended temperature:
+65°C (to prevent fluid deterioration)
 - Recommended viscosity: 13~54 mm²/s
At startup (max.): 500 mm²/s
- Seals and fluids
Standard seals are nitrile rubber which are suitable for anti-wear hydraulic fluids, and water-glycol fluids.
- Mounting dimensions (see Fig. 1)
Drain port W is not provided with the TGM-8 series of valves so it is not possible to stack pressure centered solenoid pilot or pilot operated directional valves for use.

- Mounting bolts
 - Use strength class 12.9 mounting bolts - JIS B 1176 (hex socket bolts).
 - Set the length of the mounting bolts to +15 or more for M10 and +9 or more for M6 relative to the “uppermost valve bolt tightening length” + “total height of stacked valves”.
 - Tightening torque
M12: 75~81 N·m
 - Mounting bolts must be ordered separately.
- Valves can be mounted at any attitude.
- Characteristics curve
Characteristics curve is based on fluid viscosity 32 mm²/s (fluid temperature 40°C), specific gravity 0.87. (see “Notes”.)

Notes:

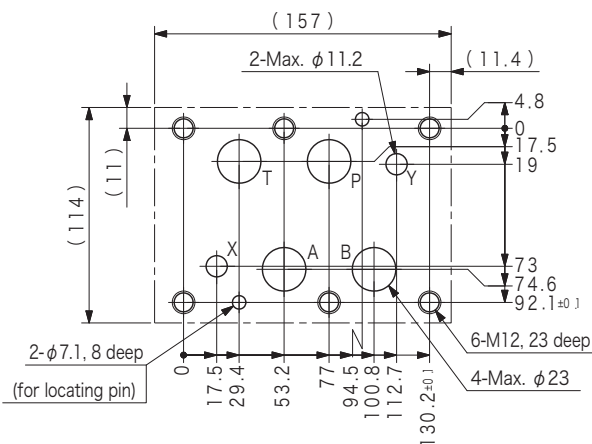
1. For pressure drops (ΔP_1) of viscosities other than 32 mm²/s, calculate using multiplier coefficients shown in below table.
2. The formula to calculate pressure drops (ΔP_1) for specific gravities other than 0.87 is as follows.

$$\Delta P_1 = \Delta P \times G_1 / G$$

ΔP Values according to characteristics curve
 G 0.87
 G_1 ... Desired specific gravity value

Viscosity mm ² /s	10	20	30	32	40	50	60	70	80	90	100	110	120	130	140	150
Coefficient	0.75	0.89	0.98	1.00	1.06	1.12	1.17	1.22	1.26	1.30	1.33	1.36	1.39	1.42	1.45	1.47

Fig. 1: Mounting dimensions



Note: The broken lines indicate the dimensions of the minimum required seating surface.

- Normal mounting-related dimensional tolerance ± 0.2 (unless otherwise indicated)
- Mounting surface machining accuracy

Surface Roughness	1.6 μm Ra	1.6 μm Ra
Flatness	Less than 0.01 (\square per 100 mm)	0.01 μm (\square 100)

Subplate

Subplate Model	Connection Port Dia.	
	P, T, A, B	X, Y
DGSMV-06-10	Rc3/4	Rc1/4
DGSMV-06X-10	Rc1	

- Subplate must be ordered separately.
- See page R6-5 for dimensions.
- Max. working pressure is 21 MPa. For higher pressures, install on a manifold block, etc.