

Handling

● Hydraulic oil

- Use a petroleum-based hydraulic fluid equivalent to ISO VG32 to 68.
- Use the proportional pressure control valves in an environment where both the following conditions are satisfied: viscosity range from 15 to 400 mm²/s {cSt} and oil temperature from -15 to 70°C.
Use the proportional flow control valves and servo valves in an environment where both the following conditions are satisfied: viscosity range from 16 to 200 mm²/s {cSt} and oil temperature from -5 to 70°C.
- Contamination of the hydraulic fluid causes valve trouble and reduces the service life, so pay due attention to controlling contamination and ensure that it goes no higher than NAS contamination class 12 for the proportional pressure control valves and NAS contamination class 9 for the proportional flow control valves and servo valves.

● Ambient temperature, relative humidity

- Use the product under the following conditions. Ambient temperature: -5 to 50°C, Relative humidity: 0 to 90%

● Filters

- Use a line filter with a filtration accuracy of 25 μm or better for the proportional pressure control valve and 10 μm or better for the proportional flow control valves.

● Installation and maintenance

- Install the proportional pressure control valves such that the iron core of the proportional solenoid is leveled. Install the proportional flow control valves such that the spool shaft is leveled.
- Finish the face on which the valve is mounted to a surface roughness of 1.6a or better and a flatness tolerance within 0.01 mm.
- Use an O-ring with a hardness of Hs90 for the valve's gasket.
- Dip the end of the pipe connected to the proportional valves into oil in the tank.

● Tank/drain port piping

- Connect piping to the tank and drain ports such that the ports are always filled with the fluid.
- Ensure that no surge pressures beyond the permissible back pressure are applied to the tank and drain port.

● Bleeding air from the solenoid

- To enable secure proportional control over the entire control range, fill the iron core of the proportional solenoid with fluid by loosening the air bleeding screw and bleeding air adequately, until fluid containing air no longer oozes out from the top.

● Applicable driver

- Use the dedicated driver cited for each model.