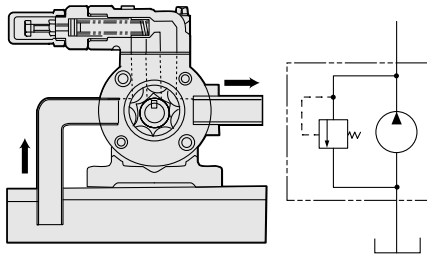


How to install a Trochoid pump relief valve properly in a pump system

Internal return (as a safety valve)

VB Type

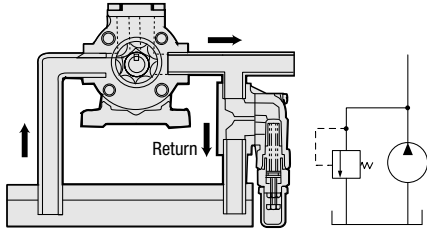


The valve is used as a safety valve to lower pressure instantly during oil transfer, which is attached to the pump directly.

If the valve is being activated constantly and/or the discharge port is being closed completely for a long time in the system, air bubbles, large noise and oil temperature increase might occur. In such a case, we recommend external return type as shown below.

External return (as a safety valve/pressure control valve)

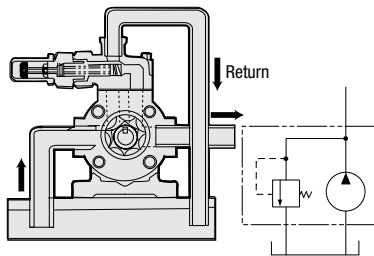
VBD Type



The valve is used as a pressure control valve for hydraulic oil or circulation oil lubricating system, which is installed with a sub plate.

The VB type valve with a sub plate is installed in a bypass circuit of the system. It is the most suitable for the system bypassing the full flow for a long time and/or using the valve constantly as the pressure control valve.

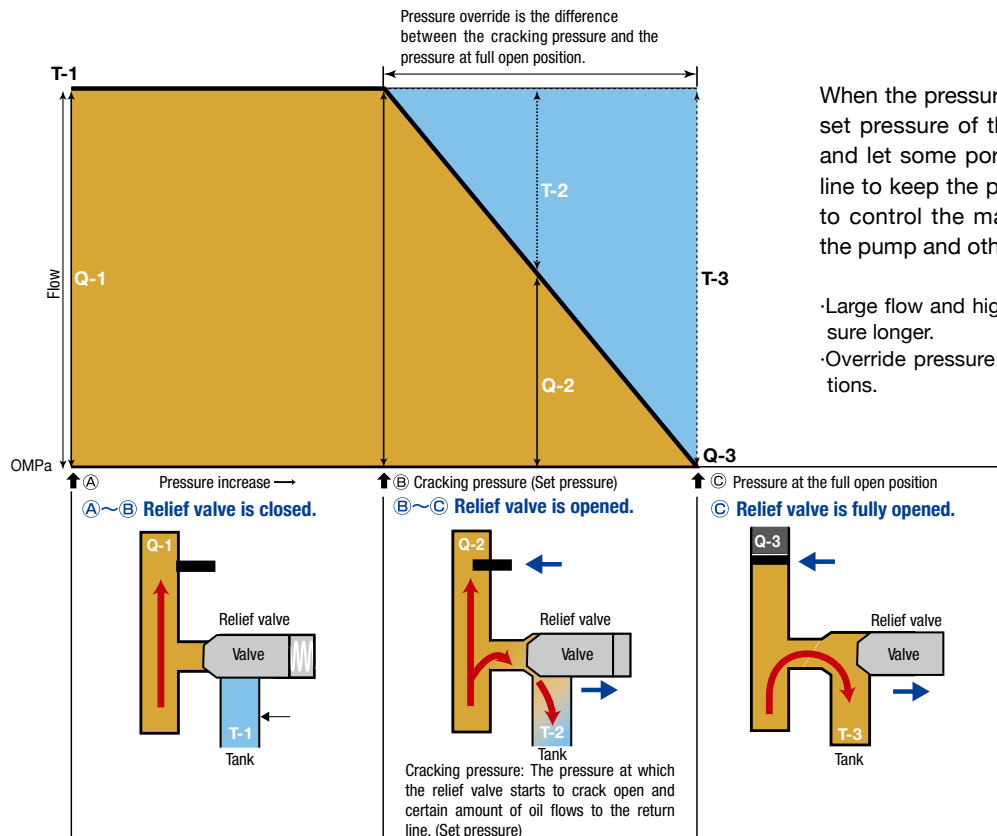
2VD Type



This is the same as the system above except for using a valve attached to Trochoid Pump 2HB directly.

- Be sure to attach a plate to block the suction line when 2VD type is installed.
- Be sure to connect the return line to the oil tank.

Operational description



When the pressure in a hydraulic circuit reaches the set pressure of the valve, the valve starts to open and let some portion or all of oil flow to the return line to keep the pressure in the system constant or to control the maximum pressure, which protects the pump and other devices

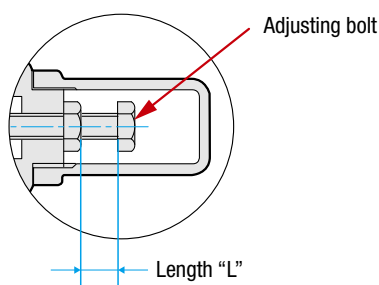
- Large flow and high viscosity of oil make override pressure longer.
- Override pressure might vary depending on the conditions.

Any disassembly or alteration of the product will void the warranty.

How to adjust the pressure

1. Remove the cap.
2. Loosen the hexagon nut.
3. To increase the set pressure, turn the adjusting bolt to the right.
To lower the set pressure, turn the adjusting bolt to the left.
4. Tighten the hexagon nut to fix.
5. Reinstall the removed cap.

Note: If selecting the model with spring No.1, be careful not to damage the gasket when tightening the cap with the tightening torque of 13N·m.



*Set pressure: The pressure at which the relief valve starts to crack open (Cracking pressure) Refer to ③ in the operation chart described on the previous page.

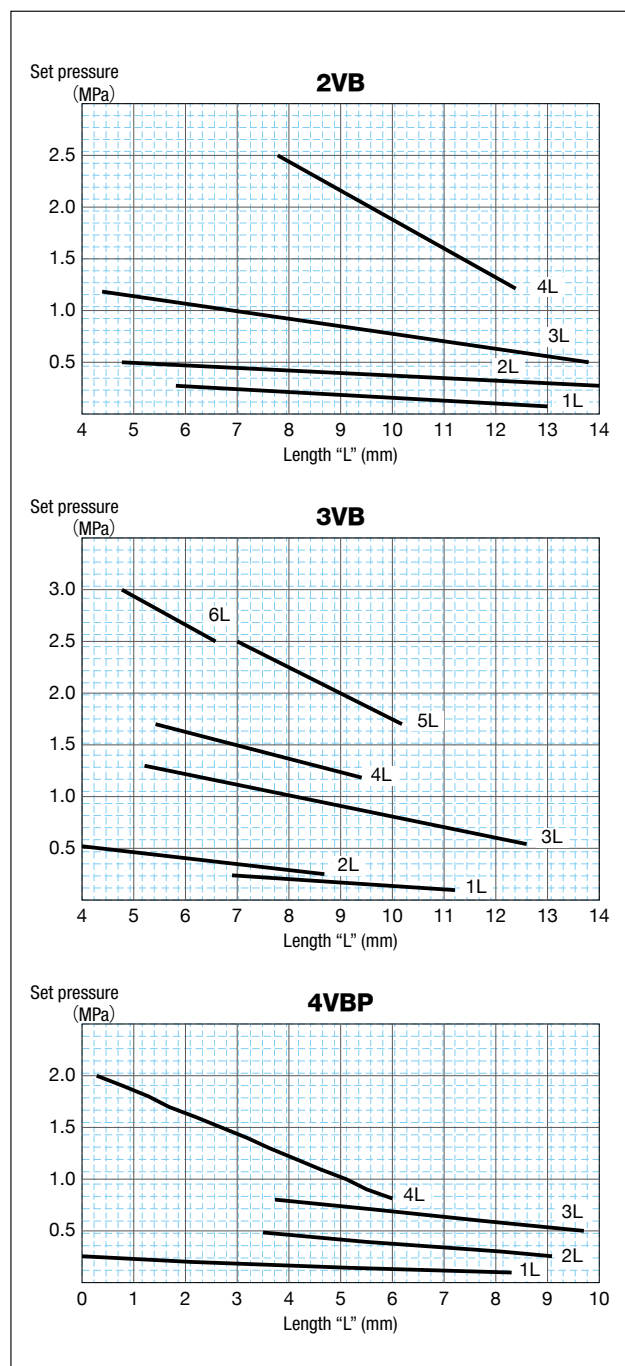
Instructions for selecting a relief valve

1. Check the allowable maximum pressure of the motor and pump.
2. Check whether the devices in the system require protection.

Note: Trochoid pump is a positive-displacement pump, which requires a relief valve to prevent unusual pressure rise.

Length of an adjusting bolt and set pressure*

You can get a rough idea of the set pressure by referring to the length of adjusting bolt on the table below.



The tables above only show the typical values of the set pressure.