

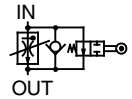
TL (TLT) Type Feed Control Valve

(Fine Control Type With Pressure Compensation)

0.08 to 8 ℓ /min
7MPa

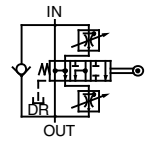


TL-G0*-*-11



Note: 04 has DR

TLT-G04*-*-11



Features

- ① Very compact, lightweight, and economically priced.
- ② Applicable for control of machine tool table operations.
For example, a single valve provides smooth control of: Fast Feed => Cutting
- ③ Stable control of each setting flow rate, even as pressure and fluid temperature are fluctuating.
- ④ Dial markings are proportional to flow rate for simple control flow rate adjustment.
- ⑤ Sealing the gasket surface allows as-is screw-in connection.

Specifications

Model No	Nominal Diameter (Size)	Volume control flow rate ℓ/min		Reverse Flow Rate ℓ/min	Maximum Working Pressure MPa(kgf/cm ²)	Cracking pressure MPa(kgf/cm ²)	Weight kg
		Feed 1	Feed 2				
TL-G03-2-11 8-11	3/8	0.08 to 2 0.1 to 8	—	35	7{71.4}	0.1{1.0}	2.2
TL-G04-2-11 8-11		0.08 to 2 0.1 to 8	—	53			7.0
TLT-G04-2-1.5-11 8-2-11		0.1 to 2 0.1 to 8	0.1 to 1.5 0.1 to 2				

• Handling

- ① In the temperature range of 20°C to 60°C, flow rate fluctuation is within ±5% of the standard flow rate at 40°C.
- ② In the pressure range of 1.0 to 7.0MPa {10.2 to 71.4kgf/cm²}, flow rate fluctuation is within ±5% of the setting flow rate.
- ③ Note that flow rate fluctuation exceeds the rated fluctuation amount slightly in the vicinity of the minimum control flow rate, due to changes in operating temperature and hydraulic fluid viscosity.
- ④ When controlling flow rates that are less than 0.2 ℓ /min, use with a line filter no greater than 10μm.
- ⑤ Make sure that the pressure differential between the inlet port and outlet is at least 0.6MPa {6.1kgf/cm²} at 4 ℓ /min or less, and at least 1.0MPa {10.2kgf/cm²} at 4 ℓ /min or greater.
- ⑥ The control flow rate is increased by clockwise (rightward) rotation of the control handle.
- ⑦ For connection to piping, normally connect to the sub plate. Valve mounting is gasket type, using an O-ring. When a screw in connection is required, seal the gasket surface, remove the side plug, and create a screw in connection directly to the valve unit. In this case, remove all seal material affixed to the plug.
- ⑧ See the table below for installation hex socket bolts.
- ⑨ Use the table to the right for specification when a sub plate is required.

Model No.	Pipe Diameter	Recommended Flow Rate ℓ/min	Applicable Valve Type
MTL-03-10	3/8	35	TL-G03*-*-11
MTL-04-10	1/2	53	TL(T)-G04*-*-11

TL-G03-11

Cam Down Force

120N {12.2kgf} minimum

TLT-G04*-*-11

Feed 1 Cam Down Force

140N {14.3kgf} minimum

Feed 2 Cam Down Force

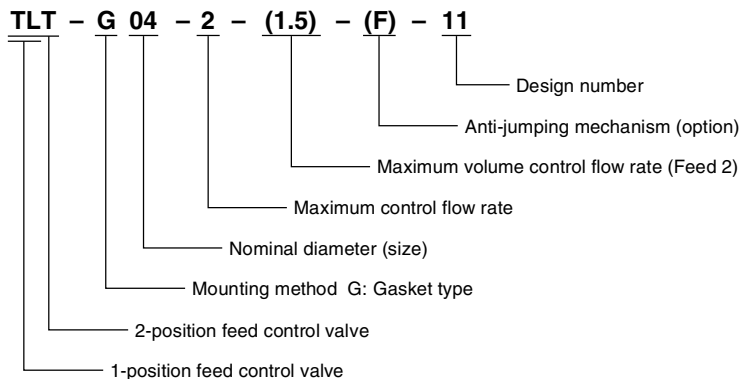
200N {20.4kgf} minimum

- ⑫ Make the cam angle no greater than 30 degrees.

Applicable Model	Bolt Size	Q'ty	Tightening Torque N·m(kgf·cm)
TL-G03*-*-11	M8 × 60 ℓ	4	20 to 25{205 to 255}
TL(T)-G04*-*-11	M10 × 75 ℓ	4	45 to 55{460 to 560}

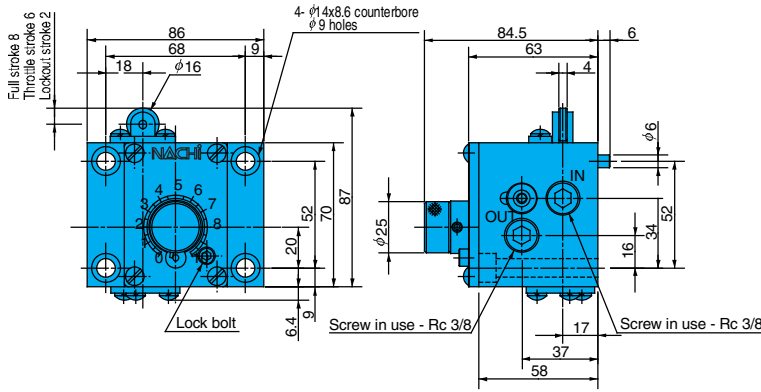
Note) For mounting bolts, use 12T or equivalent.

Understanding Model Numbers

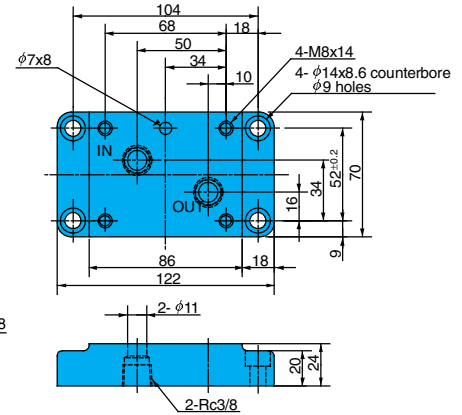


Installation Dimension Drawings

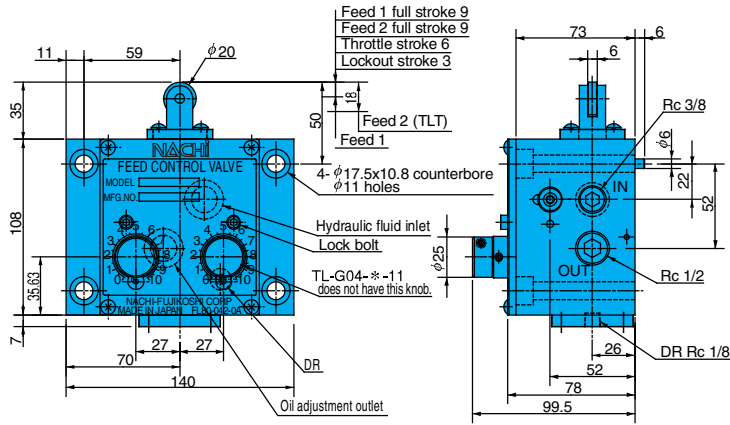
TL-G03-*-*11



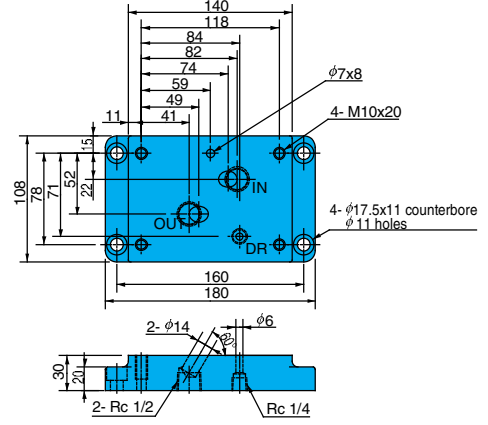
Sub Plate MTL-03-10



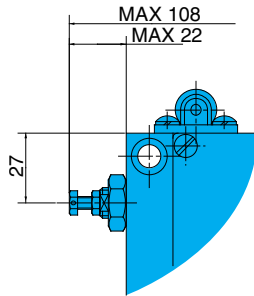
TL(T)-G04-*-*11



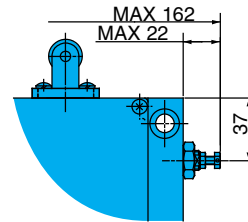
Sub Plate MTL-04-10



Anti-jumping Mechanism TL-G03-*-*F-11



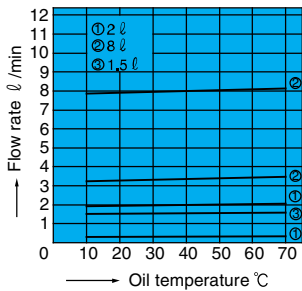
TL(T)-G04-*-*F-11



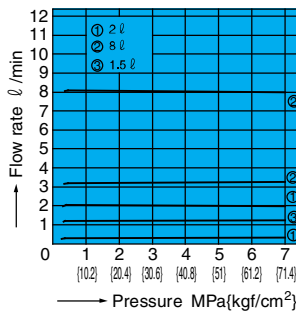
Performance Curves

Hydraulic Operating Fluid Viscosity 32mm²/s

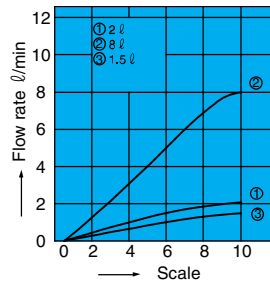
Fluid Temperature - Control Flow Rate Characteristics



Pressure - Control Flow Rate Characteristics



Scale - Control Flow Rate Characteristics



Pressure Loss Characteristics

