NACHI

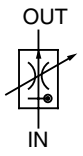
TEMPERATURE COMPENSATED
FLOW CONTROL <AND CHECK> VALVE

TS Type Flow Control (and Check) Valve

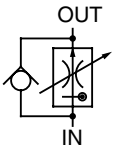
(Fine Adjustment Type With Pressure and Temperature Compensation)

0.01 to 2 ℓ /min
10.5MPa

TS-G01-2-11



CTS-G01-2-11



Features

①Original compact, lightweight configuration.

②High-precision control up to minute flow rates of 10cm³.

③Design allows large 20 ℓ /min reverse flow rate relative to control flow rate, which means there is no need to include an extra valve in the quick return circuit.

④Stable control of each setting flow rate, even as pressure and fluid temperature are fluctuating.

Specifications

Model No.	Nominal Diameter (Size)	Volume control flow rate ℓ /min	Maximum Working Pressure MPa{kgf/cm²}	Reverse Flow Rate ℓ /min	Cracking pressure MPa{kgf/cm²}	Weight kg
(C)TS-G01-2-11	1/8	0.01 to 2	10.5{107}	20	0.08{0.8}	0.9

● 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 0.6 to 10.5MPa {6.1 to 107kgf/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,

5 For flow rate control, make sure that the pressure differential between the input port and output port is at least 0.6MPa {6.1kgf/cm²}.

6 The control flow rate is increased by clockwise (rightward) rotation of the control handle.

7 Use the table to the right for specification when a sub plate is required.

Model No.	Pipe Diameter	Recommended Flow Rate ℓ /min	Weight kg
MTS-01Y-10	3/8	20	0.8

8 Bundled Accessories: Hex Socket Bolts: M4 x 35 ℓ (four)

Note) 1.For mounting bolts, use 12T or equivalent.
2.Tightening torque is 2.6 to 3.3N·m {27 to 255kgf·cm}.

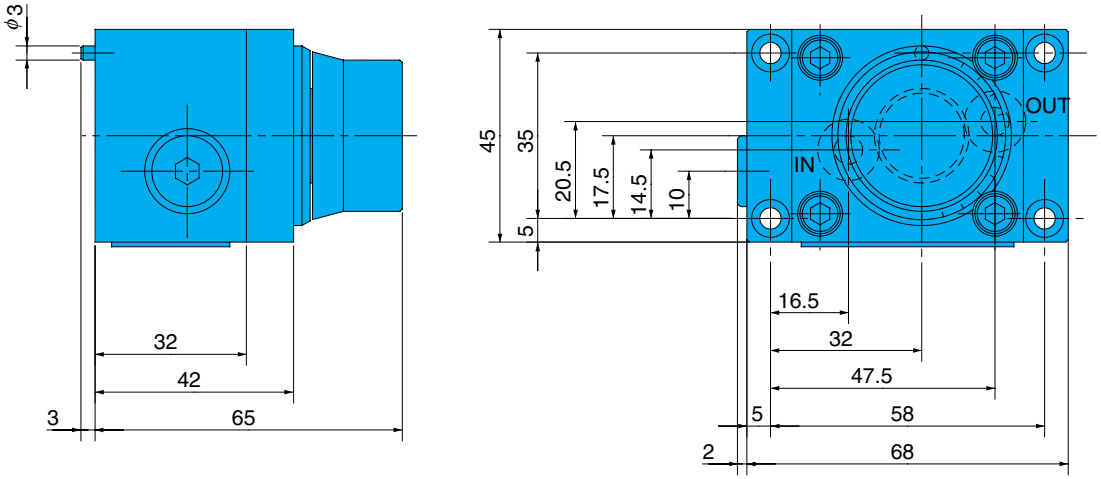
Understanding Model Numbers

(C) TS – G 01 – 2 – 11

- 11 — Design number
- 2 — Maximum control flow rate
- 01 — Nominal diameter (size)
- G — Mounting method G: Gasket type
- TS — Flow control valve
- (C) — Flow control and check valve

Installation Dimension Drawings

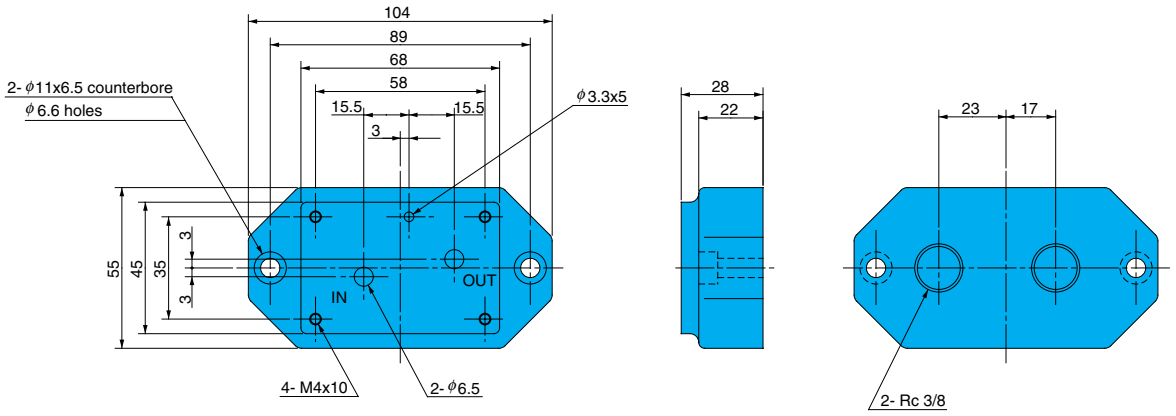
(C)TS-G01-2-11



G

Flow Control Valve

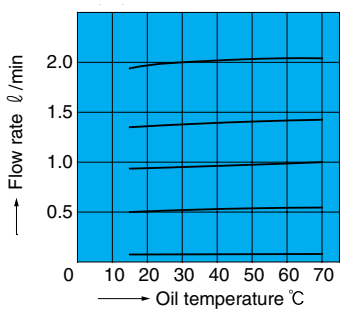
Sub Plate MTS-01Y-10



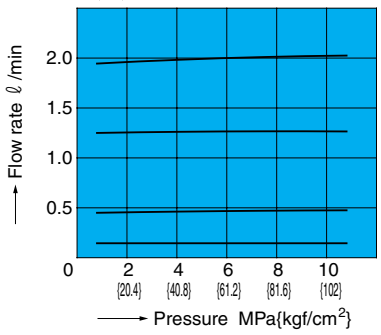
Performance Curves

Hydraulic Operating Fluid Viscosity 32mm²/s

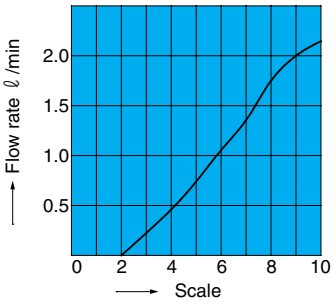
Fluid Temperature – Control Flow Rate Characteristics



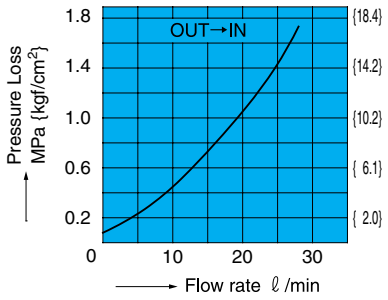
Pressure – Control Flow Rate Characteristics



Scale – Control Flow Rate Characteristics

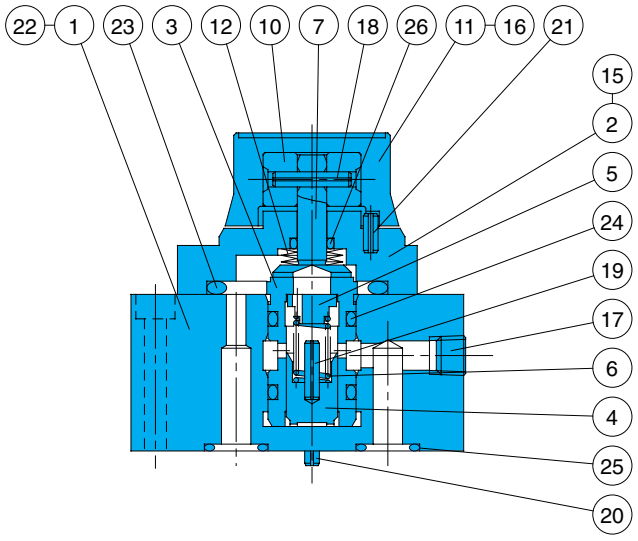


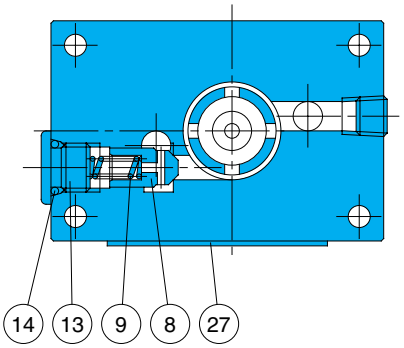
Pressure Loss Characteristics



Cross-sectional Drawing

CTS-G01-2-11





Part No.	Part Name	Part No.	Part Name
1	Body	14	O-ring
2	Cover	15	Screw
3	Sleeve	16	Screw
4	Piston	17	Plug
5	Guide	18	Spring pin
6	Spring	19	Spring pin
7	Throttle	20	Spring pin
8	Poppet	21	Spring pin
9	Spring	22	Spring pin
10	Spacer	23	O-ring
11	Knob	24	O-ring
12	Spring	25	O-ring
13	Plug	26	O-ring
		27	Nameplate

Seal Part List (Kit Model Number FKS-G01(C))

Part No.	Part Name	TS-G01-2-11		CTS-G01-2-11	
		Part Number	Q'ty	Part Number	Q'ty
14	O-ring	——	——	IB-P8	1
23	O-ring	IB-P31	1	IB-P31	1
24	O-ring	IB-P14	2	IB-P14	2
25	O-ring	IB-P10	2	IB-P10	2
26	O-ring	IB-P6	1	IB-P6	1

Note) O-ring 1B-** refers to JIS B2401-1B-**.
Specify C at the end of the model number for the CTS kit.