

2-Way Pressure Compensator, Spool-Type, Direct-Acting, Modular

TV2-102/M

Size 10 (D05) • Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)



Technical Features

- › 2-way pressure compensator, spool-type, built in a modular block for vertical grouping with mounting interface acc. to ISO 4401 (size 10), DIN 24340 (CETOP 05)
- › High flow capacity
- › Meter-in design with integrated load shuttle valve
- › The valve maintains a constant pressure drop on a flow control valve (e.g. proportional directional control valve) and thus a constant volumetric flow independent of actuator load
- › Rapid and smooth response to load changes
- › Stable function throughout the whole flow range
- › Precisely manufactured and hardened key parts
- › Pressure drop setting by adjusting screw in the range from 4 to 14 bar (58 – 203 PSI)
- › Possible external sensing of LS signal by means of an adapter, mounted instead the end plug with adjusting screw on the spring side
- › In the standard version, the valve housing is phosphated for basic surface corrosion protection and as preparation for painting. Steel parts are zinc-coated for 240 h salt spray protection acc. to ISO 9227. Enhanced surface protection for mobile sector available for the valve housing and steel parts (ISO 9227, 520 h salt spray)

Functional Description

The 2-way pressure compensator, built in a modular block, maintains a constant pressure drop on the flow control valve and thus a constant volumetric flow independent of actuator load changes or pump power fluctuation. The spool position of the compensator is controlled by pressure drop sensed upstream and downstream from the valve. The set pressure drop is defined by spring pressure acting on the spool face and is maintained by flow throttling on the spool control edge. In the basic position the compensator is open. The volumetric flow, and thus the moving velocity of piston rod or hydraulic motor shaft can be regulated by change of flow cross section on the flow control valve or by change of the set pressure drop on the pressure compensator with the adjusting screw.

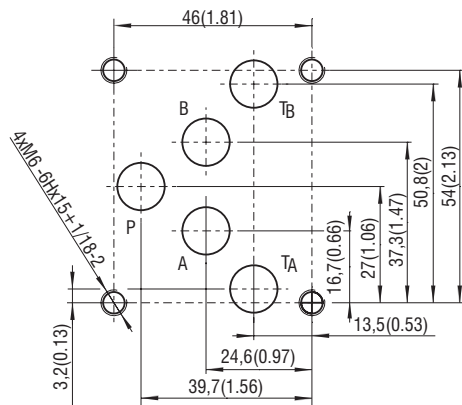
2-way pressure compensator for meter-in connection (models A, B, C)

Meter-in compensator is connected between the pump and flow control valve in the circuit. This connection can be used in the case of positive acting load on the actuator, it means in the opposite direction to the moving. The model C is equipped with an integrated load shuttle valve for pressure sensing in both actuator pipelines depending of moving direction.

Technical Data

Valve size		10 (D05)
Max. operating pressure	bar (PSI)	350 (5100)
Max. flow	l/min (GPM)	80 (21.1)
Control pressure differential	bar (PSI)	4 ... 14 (58 ... 203)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 ... +120 (-4 ... +248)
Weight (Models A, B, C / D, E, F)	kg (lbs)	3.7 (8.2) / 6.65 (14.7)
	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface	SMT_0019	Size 10
Spare parts	SP_8010	

ISO 4401-05-04-0-05

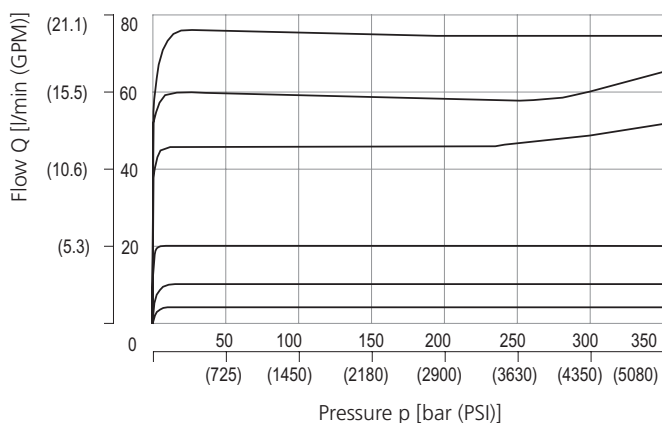


Ports P, A, B, T - max. \varnothing 11.2 mm (0.44 in)

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

Regulated flow related to input pressure

TV2-102/MC Meter-in compensator



The characteristic of the pressure compensator corresponds to the flow rate of a PRM2-103Z11/60 proportional directional valve. If the pressure resistance increases due to a flow rate increase, the pressure differential also has to increase in order to ensure correct regulation.

