

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

TV2-042/M

Size 04 (D02) • Q_{max} 16 l/min (4 GPM) • p_{max} 320 bar (4600 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 04), DIN 24340 (CETOP 02)
- › 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
- › 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.

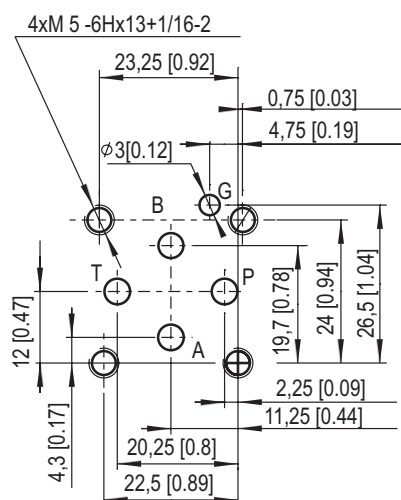
2-way pressure compensator for meter-in connection (models A, B, C)

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 movement. The model C is equipped with an integrated load shuttle valve for pressure sensing in both actuator pipelines depending on movement direction.

Technical Data

Valve size		04 (D02)
Max. operating pressure	bar (PSI)	320 (4640)
Max. flow	l/min (GPM)	16 (4.2)
Control pressure differential	bar (PSI)	10 (145)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 ... +120 (-4 ... +248)
Weight (all models)	kg (lbs)	0.6 (1.32)
	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface	SMT_0019	Size 04
Spare parts	SP_8010	

ISO 4401-02-01-0-05

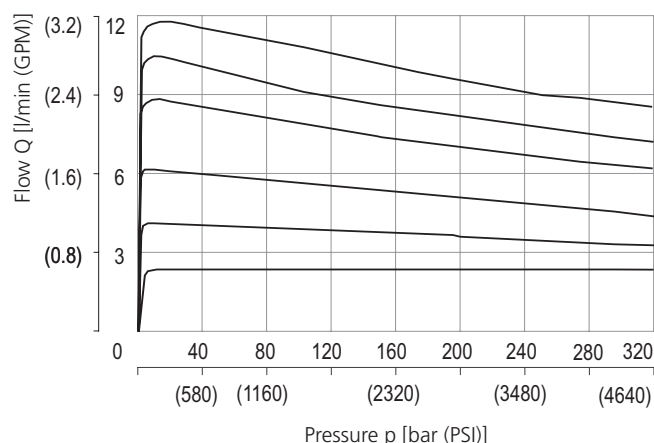


Ports P, A, B, T - max. $\varnothing 4.5$ mm (0.18 in)

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

Regulated flow related to input pressure

TV2-042/MC Meter-in compensator

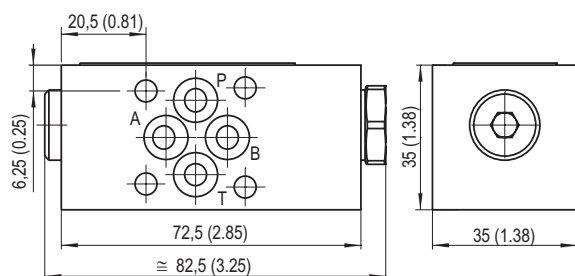


The characteristic of the pressure compensator corresponds to the flow rate of a PRM2-043Z11/12 proportional directional valve.

If the pressure resistance increases due to a flow rate increase, the pressure differential also has to increase in order to ensure correct regulation.

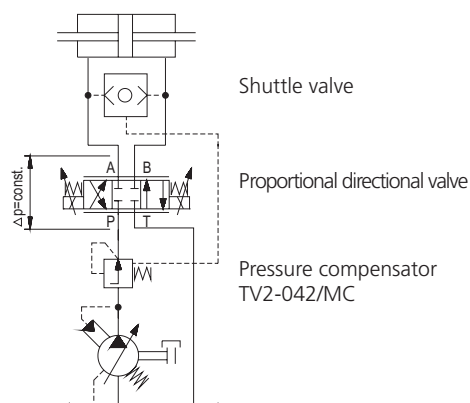
Dimensions in millimeters (inches)

TV2-042/MA (B, C) Meter-in compensator

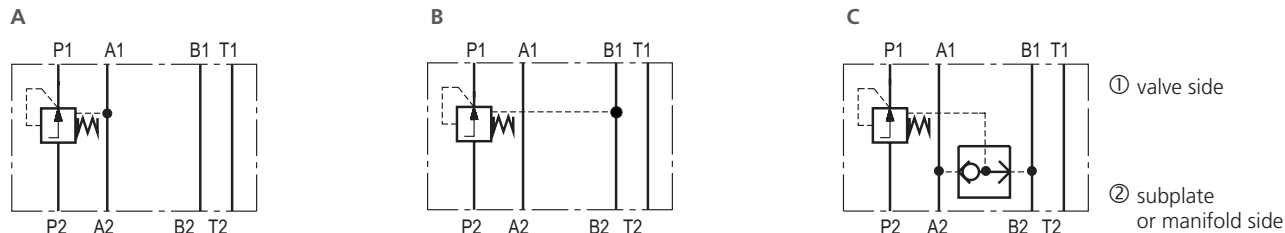


Application Example

TV2-042/MC Meter-in compensator



Functional Symbols



Notice: The orientation of the symbol on the name plate corresponds with the valve function.

Ordering Code

2-Way pressure compensator, spool-type, direct-acting, modular	TV2-042/M	1	C	-			
Nominal size 04 ISO 4401-02-01-0-05, DIN 24340 (CETOP 02)							
2-way pressure compensator							
Sandwich plate							
Model Meter-in compensator in port A Meter-in compensator in port B Meter-in compensator in port A and B							
A B C							
Surface treatment No designation housing phosphated, steel parts zinc-coated (ZnCr-3), ISO 9227 (240 h) A zinc-coated (ZnCr-3), ISO 9227 (240 h) B zinc-coated (ZnNi), ISO 9227 (520 h)							
Seals No designation NBR V FPM (Viton)							
Adjustment option fixed setting, not adjustable							
Control pressure differential 10 bar (145 PSI)							