



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
- › Meter-out design with integrated by-pass check 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 body is phosphated. The steel parts are zinc-coated for corrosion protection 240 h in NSS acc. to ISO 9227

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.

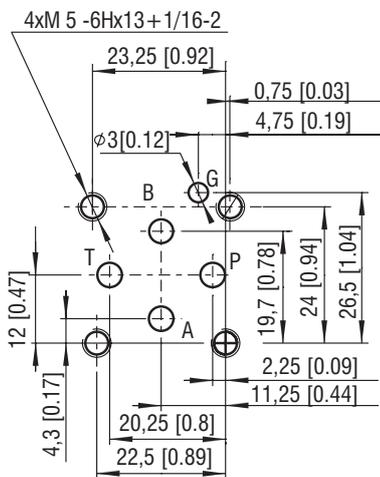
2-way pressure compensator for meter-in connection (models A, B, C)

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.

2-way pressure compensator for meter-out connection (models D, E, F)

Meter-out compensator is connected between the flow control valve and actuator in one or both pipelines of actuator. This connection must be used in the case of negative acting load on the actuator, it means in the same direction to the movement, e.g. et the lowering of load. The pressure drop is stabilised in the flow direction A → T and B → T. In the opposite flow direction (to the actuator) the fluid flows freely through the opened integrated bypass check valve.

ISO 4401-02-01-0-05



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

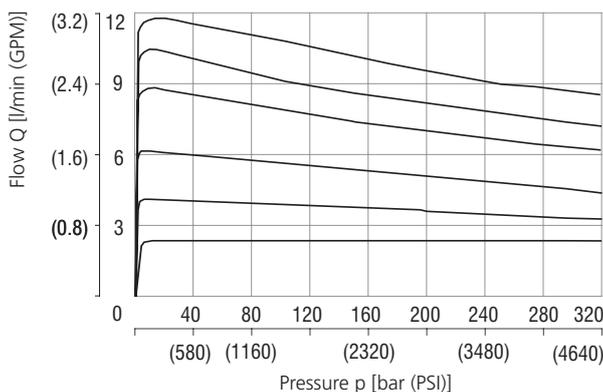
Technical Data

| | | |
|-------------------------------|-------------|-----------------------------------|
| 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 | |

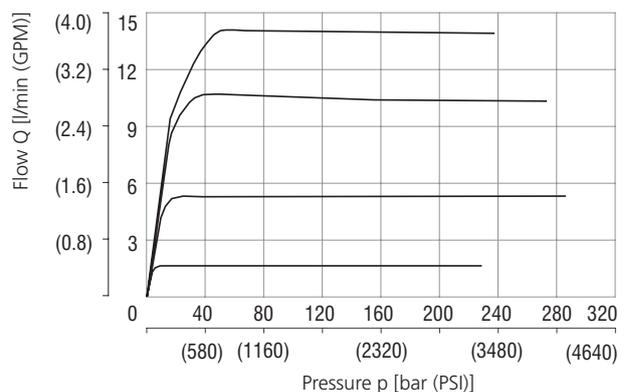
Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

Regulated flow related to input pressure

TV2-042/MC Meter-in compensator



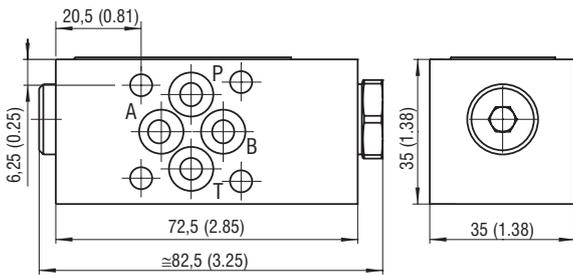
TV2-042/MD Meter-out compensator



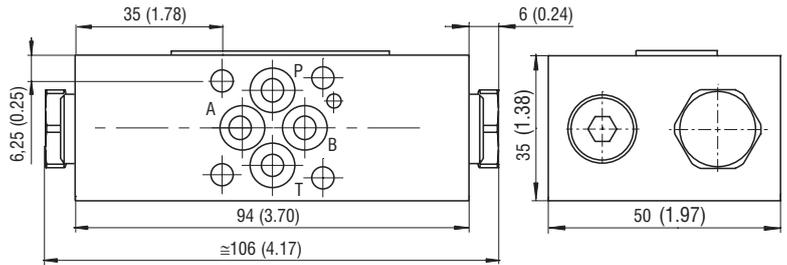
The characteristic of the pressure compensator corresponds to the flow rate of a PRM2-043Z11/12 proportional directional valve. If the pressure resistance increases due to a flow rate increase, the pressure differential also has to increase in order to ensure correct regulation.

Dimensions in millimeters (inches)

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

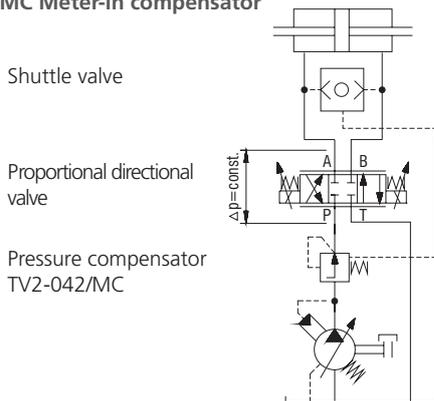


TV2-042/MD (E, F) Meter-out compensator

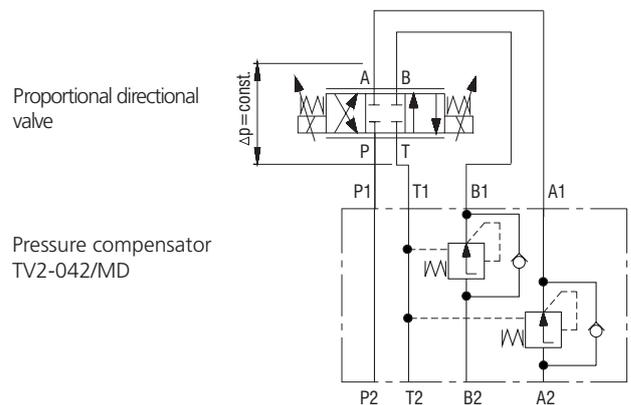


Application Example

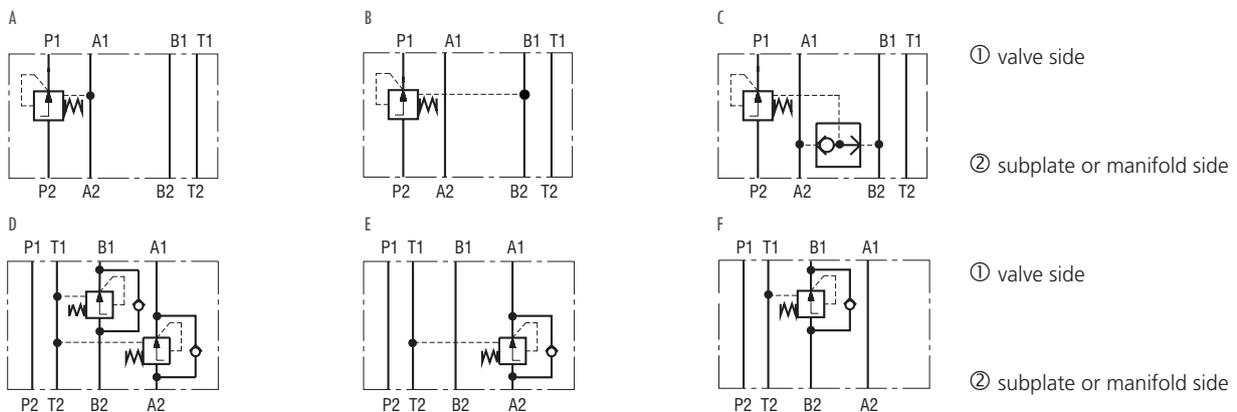
TV2-042/MC Meter-in compensator



TV2-042/MD Meter-out compensator



Functional Symbols



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

Ordering Code

TV2-042/M **1** **C** -

2-Way pressure compensator, spool-type, direct-acting, modular

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 **A**
Meter-in compensator in port B **B**
Meter-in compensator in port A and B **C**
Meter-out compensator in port A and B **D**
Meter-out compensator in port A **E**
Meter-out compensator in port B **F**

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)