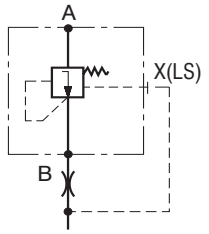
2-Way Pressure Compensator, Spool-Type, Direct-Acting

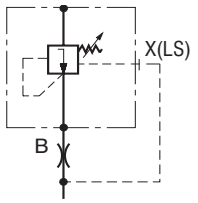
TV2-102/S

M27x2 • Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)

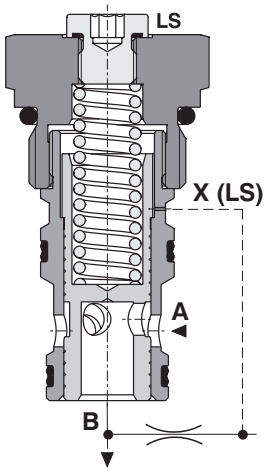
TV2-102/S*C



TV2-102/S*S(RP)



TV2-102/S*C



Technical Features

- The valve keeps the pressure drop between the inlet and the pilot connection at a constant level
- Used as a load sensing valve with proportional directional and flow valves to control the flow rate independently of the pressure variations
- Excellent stability throughout the flow range, rapid response to dynamic pressure changes
- Spring setting of the variable adjustment compensator can be varied from 4 to 14 bar (58 to 203 PSI)
- Quiet and modulate response to load changes
- Integrated stroke limiter for reliable operation
- Adjustable by allen key or hand knob, or delivered with fix setting
- Hardened precision parts
- High flow capacity
- In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

Functional Description

A normally open, direct-acting, spring loaded pressure compensator in the form of a screw-in cartridge.
The outlet of the controlled directional or proportional flow valve can be connected back to the pressure compensator port X as a load sensing signal.
Typically, 2-way pressure compensators are used in serial connection with a flow restrictor valve to control raising or lowering a variable load at the same velocity.
The pressure compensator valve then keeps a nearly constant pressure difference between its pressure inlet and the pressure at the output port of the regulated flow valve.
When the pressure differential exceeds the pre-set value, the pressure compensator closes and restricts the flow to the flow valve. If there is no flow demand from the consumer, the compensator remains open.

Technical Data

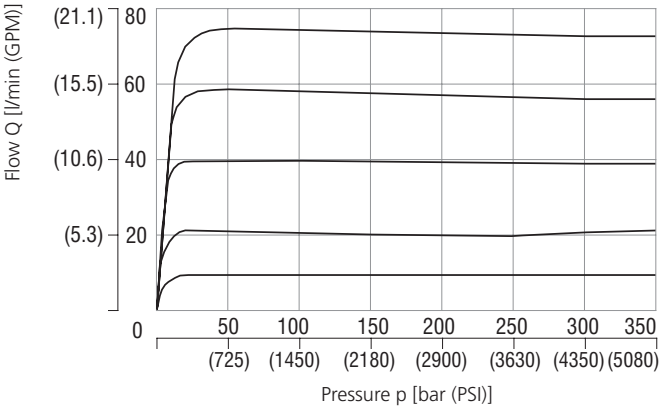
Valve size / Cartridge cavity		M27x2 / QM3
Max. operating pressure	bar (PSI)	350 (5080)
Max. flow	l/min (GPM)	80 (21.1)
Control pressure differential	bar (PSI)	4 ... 14 (58 ...203)
Fluid temperature range (NBR)	°C (°F)	-30 .... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 .... +120 (-4 ... +248)
Mass	kg (lbs)	0.15 (0.3)

		Data Sheet	Type
General information		GI_0060	Products and operating conditions
Valve bodies	Sandwich mounted	SB-04(06)_0028	SB-*QM3*
Cavity details		SMT_0019	SMT-QM3*
Spare parts		SP_8010	

Characteristics measured at ν = 32 mm²/s (156 SUS)

Regulated flow related to input pressure

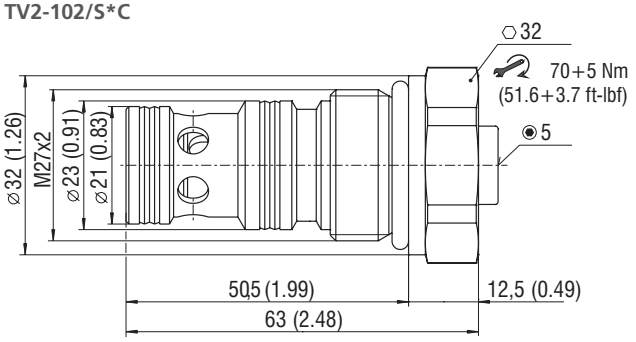
The characteristic of the pressure compensator corresponds to the flow rate of a PRM2-103Z11/60 proportional directional valve.



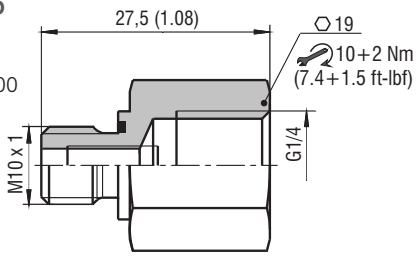
If the pressure resistance increases due to a flow rate increase, the pressure differential also has to increase in order to ensure correct regulation.

Dimensions in millimeters (inches)

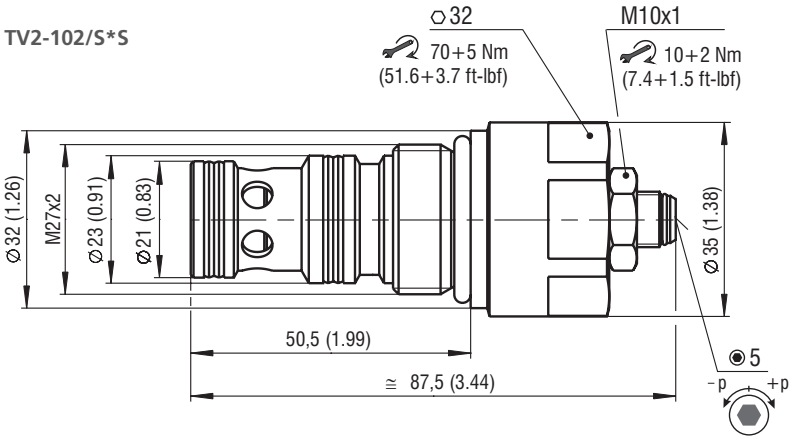
TV2-102/S*C



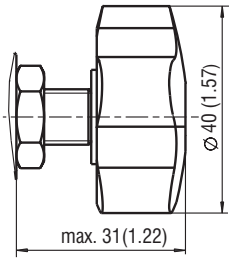
Adapter M10x1/G1/4-ED
addition of equipment
for external LS connection
Ordering number:19860700



TV2-102/S*S

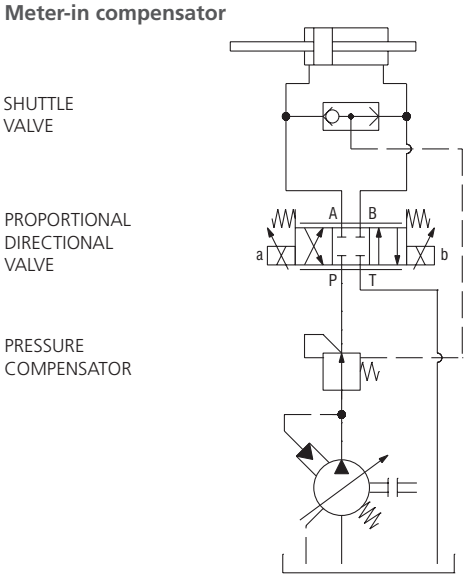


TV2-102/S*RP

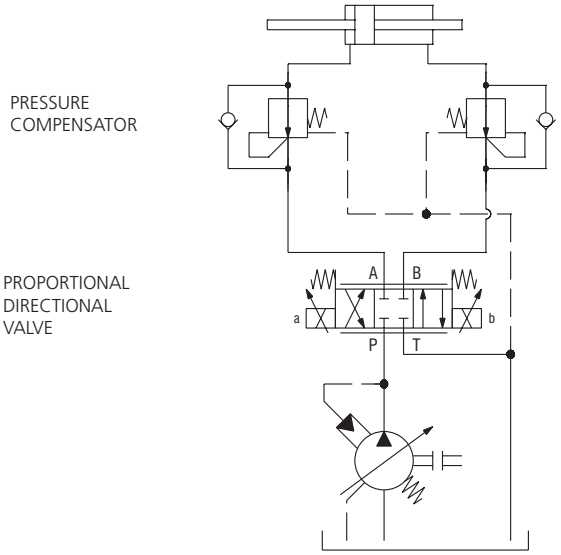


Application Example

Meter-in compensator



Meter-out compensator



Ordering Code

TV2-102/S ☐ ☐ ☐ - ☐

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

Nominal size
M27x2 / QM3

2-way pressure compensator

Cartridge design

Control pressure differential

4 - 12 bar (58 - 174 PSI), 10 bar (145 PSI) "C" Model	1
10 - 14 bar (145 - 203 PSI), 14 bar (203 PSI) "C" Model	2

Adjustment option

C	fixed setting, not adjustable
S	allen key (hex. 5), without protective cap
RP	hand knob, plastic

Seals

No designation	NBR
V	FPM (Viton)

Surface treatment

A	zinc-coated (ZnCr-3), ISO 9227 (240 h)
B	zinc-coated (ZnNi), ISO 9227 (520 h)