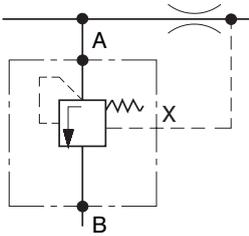


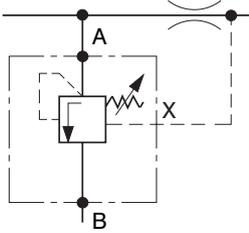
TV2-103/S

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

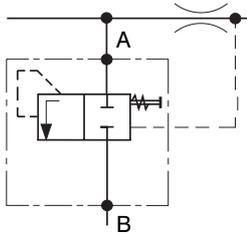
TV2-103/S*C



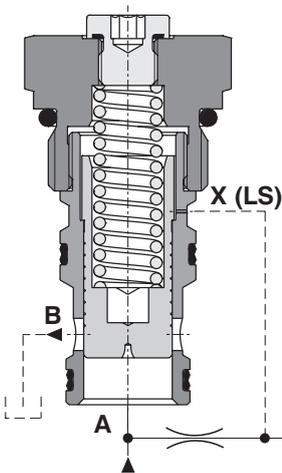
TV2-103/S*S (RP)



TV2-103/S*FRS



TV2-103/S*C



Technical Features

- › Screw-in cartridge 3-way pressure compensator, spool-type
- › High flow capacity
- › 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 is zinc-coated for 240 h protection acc. to ISO 9227. Enhanced surface protection for mobile sector available for the steel parts (ISO 9227, 520 h salt spray)

Functional Description

The 3-way pressure compensator 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 (A) and downstream (X) from the valve. The set pressure drop is defined by spring pressure acting on the spool face and is maintained by releasing of excessing flow back to the tank (B). In the basic position the compensator is closed. 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 the set pressure drop on the pressure compensator with the adjusting screw.

The three-way pressure compensator is connected parallel to the flow control valve. It maintains a constant pressure drop on the valve by dividing the flow from the pump. When the actuator is stopped, the pressure compensator opens and allows full fluid flow from the pump to the tank at low pressure losses. It takes over the function of unloading valve and protects the circuit against overheating. The three-way pressure compensator is very often used for system pressure regulation depending of the load (LS-regulation) in the circuits with a constant displacement pump.

Technical Data

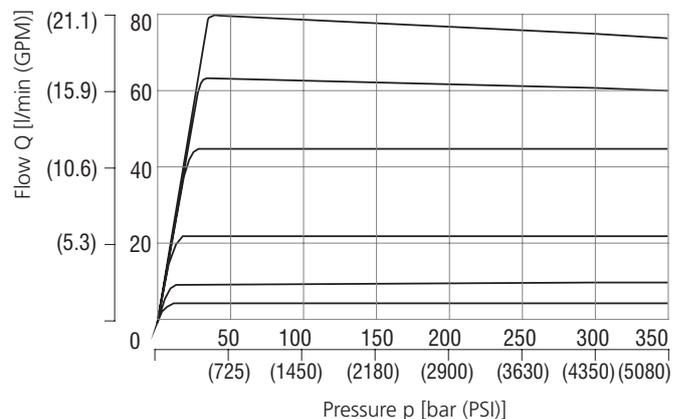
Valve size / Cartridge cavity		M27x2 / QM3
Max. operating pressure	bar (PSI)	350 (5100)
Max. flow	l/min (GPM)	80 (21.1)
Control pressure differential	bar (PSI)	4 ... 14 (58 ... 203)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 ... +120 (-4 ... +248)
Weight	kg (lbs)	0.15 (0.3)

		Datasheet	Type
General information		HA 0060	Products and operating conditions
Valve bodies	Sandwich mounted	HA 0028	SB-*QM3*
Cavity details		HA 0019	SMT-QM3*
Spare parts		HA 8010	

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

Regulated flow related to input pressure

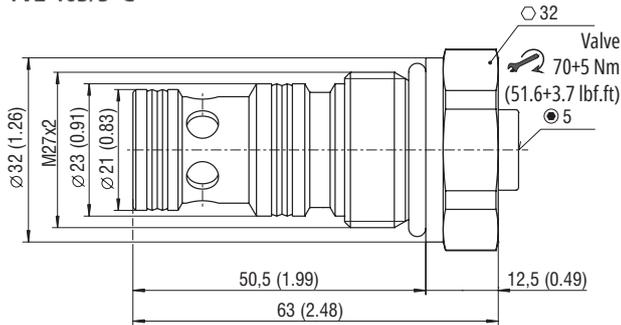
The characteristic of the pressure compensator corresponds with the flow rate of a PRM2-103Z11/60 proportional valve.



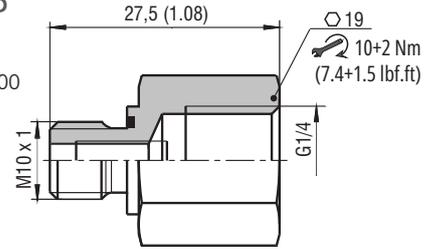
If the pressure resistance increases due to a flow rate increase, the pressure differential also has to increase in order to ensure correct regulation.

Dimensions in millimeters (inches)

TV2-103/S*C

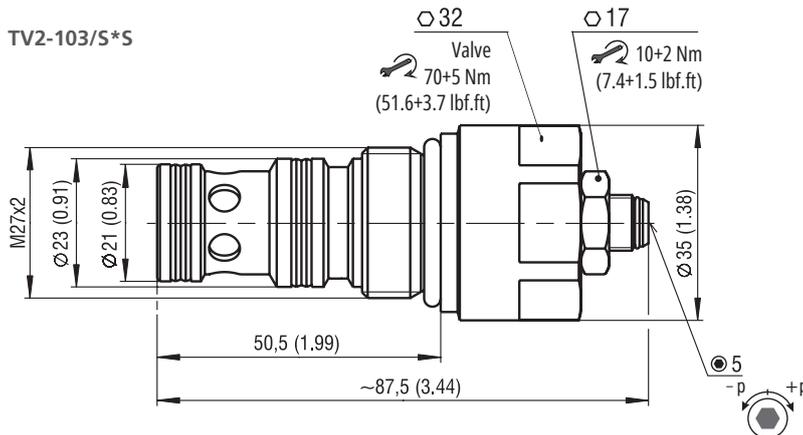


Adapter M10x1/G1/4-ED
addition of equipment
for external LS connection
Ordering number: 19860700

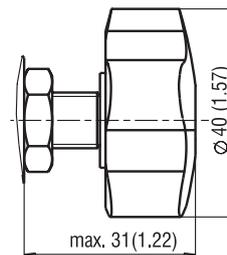


Applicable only for „TV*C“ versions. (Fixed setting, not adjustable)

TV2-103/S*S

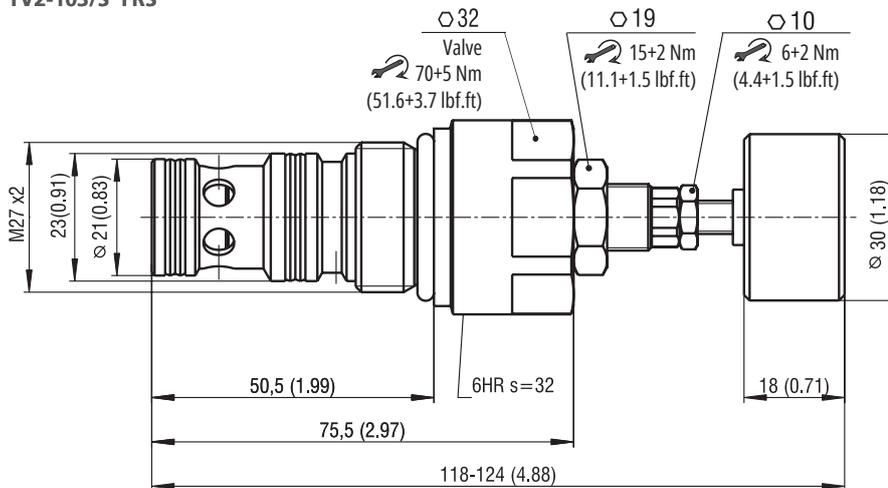


TV2-103/S*RP



Version with Blocking function

TV2-103/S*FRS



The Blocking function of Pressure compensator is intended for circuits to which can be connected either fix displacement pump or pump with load sensing regulation.

In case when Fix displacement pump is used the hand wheel of pressure compensator must be fully open.

On the other side when the load sensing pump is used the hand wheel of pressure compensator must be fully closed.

Ordering Code

3-Way pressure compensator, spool-type, direct-acting					
Nominal size 10 M27x2 / QM3					
3-Way pressure compensator					
Cartridge design					
Pressure range 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					
				Surface treatment	
				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	
				C	fixed setting, not adjustable
				S	allen key (hex. 5), without protective cap
				RP	hand knob, plastic
				FRS	blocking function with hand knob, steel