



**walvoil**  
MOTION BY PEOPLE

NEW

**PL..M**

Pressure compensator priority  
on-demand valves

### PL..M VALVES

- Priority on-demand
- Static and dynamic load sense
- Priority flow rate independent from the load
- Zinc-plated and corrosion-proof external components
- Hardened parts to ensure minimal wear and long life
- Spool profile optimized through CFD analysis
- Industry common cavities
- Heavy duty polyurethane seals



**DESCRIPTION:**

Walvoil has launched the new PL..M cartridge valve series, with priority on demand and pressure compensator with static or dynamic load sense.

An external orifice defines the flow to the valve and it provides the priority flow on demand, regardless of pressure, while the exceeding flow can be used for auxiliary functions.

The PL..M valve series is available in SAE 10, 12 & 16 size and different pressure ranges; it can be used to supply steering control units and have the required flow for additional auxiliary functions.

**OPERATION:**

In neutral position all input flow at port 3 is sent to the priority port 4 and exceeding flow is sent to the port 2 to supply the auxiliary function. When the function at port 2 requires the flows, the priority flow is supplied before any other function in the system.

The flow on port 4 is not subject to variation and remains constant under all working conditions, even if ports 4 and 2 are at different pressure level.

## WORKING CONDITIONS

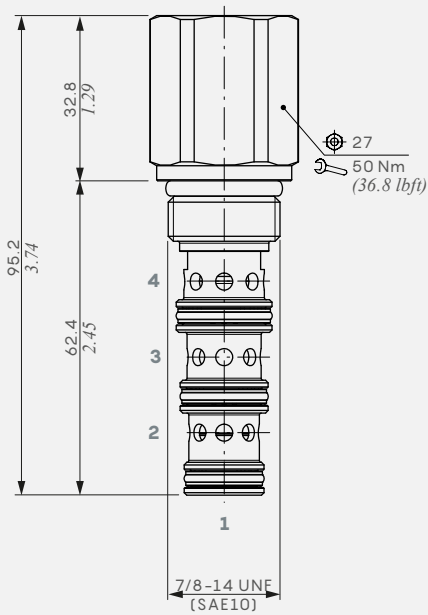
Technical specifications and diagrams measured with mineral oil of 46 mm<sup>2</sup>/s (46 cSt) viscosity at 40°C - (104°F) temperature.

		PL10M	PL12M	PL16M
<b>Nominal flow</b>	Port 3	50 l/min 13.2 US gpm	100 l/min 26.4 US gpm	160 l/min 42.2 US gpm
	Max. on port 4	40 l/min 10.5 US gpm	80 l/min 21.1 US gpm	140 l/min 36.9 US gpm
<b>Max pressure</b>		350 bar 5100 psi		
<b>Stand-by</b>	PL..M/..AB	5 bar 72.5 psi	5 bar 72.5 psi	5.5 bar 79.7 psi
	PL..M/..BB	10 bar 145 psi	7.5 bar 108 psi	11 bar 159 psi
	PL..M/..CB	-	10 bar 145 psi	22 bar 319 psi
<b>Fluid</b>		hydraulic mineral oil-based		
<b>Viscosity</b>		10-200 cSt		
<b>Max level of contamination</b>		18/16/13 ISO4406		
<b>Fluid temperature</b>	Polyurethane + NBR seals	from -20 to +80 °C from -4 to +176 °F		
	FPM seals	from -20 to +100 °C from -4 to +212 °F		
<b>Environmental temp. for working conditions</b>		from -20 to +60 °C from -4 to +140 °F		
<b>Cavity</b>		SAE 10/4	SAE 12/4	SAE 16/4

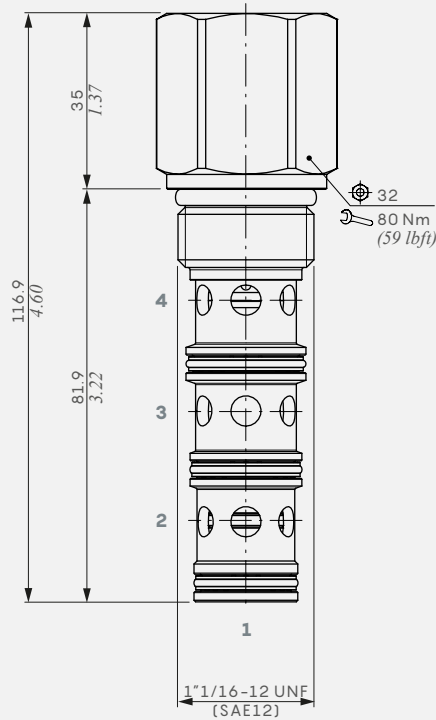
Note: For different conditions, please contact Sales Department.

**DIMENSIONAL DATA AND HYDRAULIC CIRCUITS**

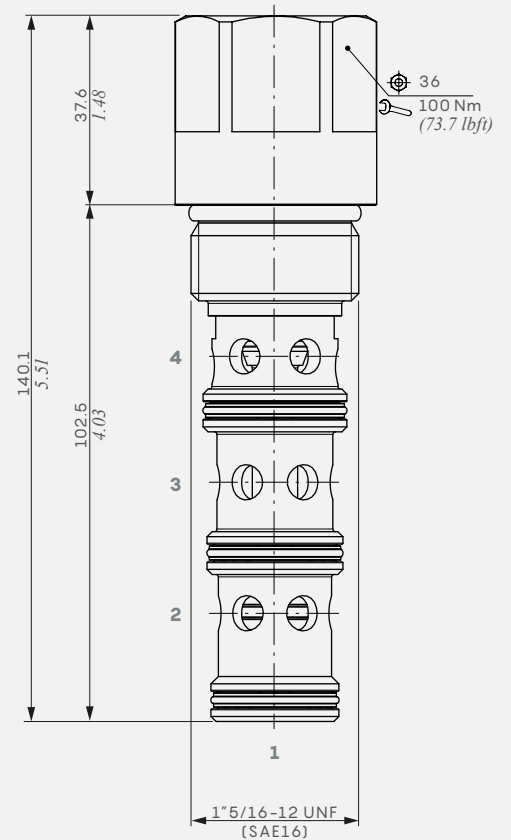
**PL10M valve**



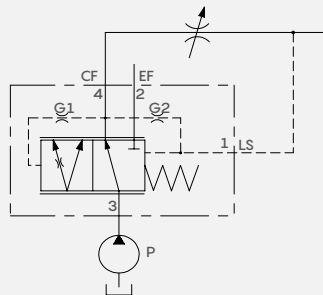
**PL12M valve**



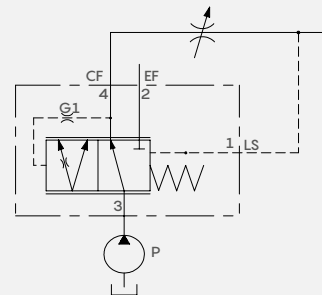
**PL16M valve**



**Dynamic circuit**

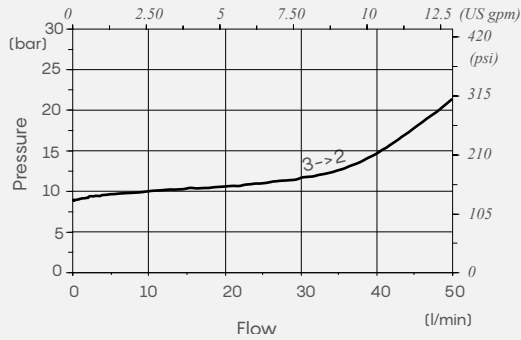


**Static circuit**

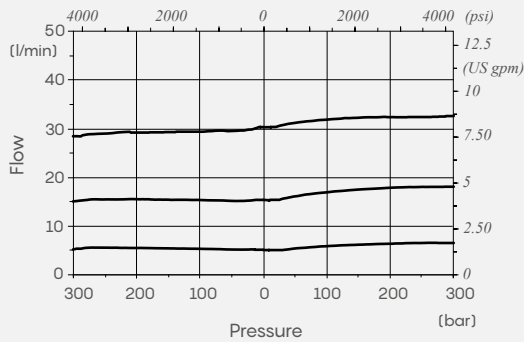


**PERFORMANCE DATA**

**PL10M valve**  
 Pressure drop vs. flow



**PL10M valve**  
 Priority flow vs. Load  
 (inlet flow 45 l/min - 11.8 US gpm)



**PL12M valve**  
 Priority flow vs. Load  
 (inlet flow 100 l/min - 26.4 US gpm)

