PL..M

Pressure compensator priority on demand valves

walvoil
FLUID POWER E|MOTION

PL..M

Pressure compensator priority on demand 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 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 prioritary flow on demand, regardless of pressure, while the exceeding flow can be used for auxiliary functions.

The PL 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.

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C *(104°F)* temperature.

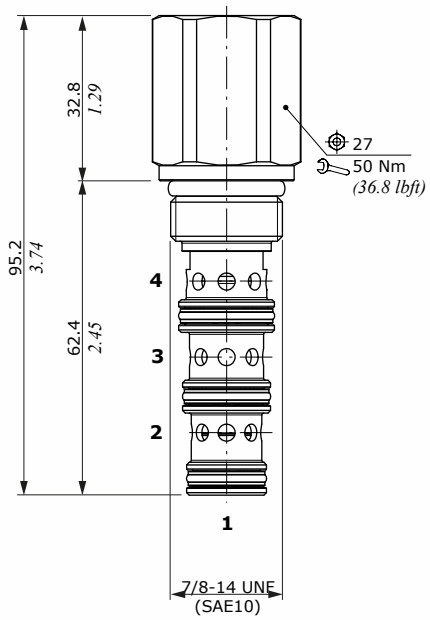
Working condition				
		PL10M	**PL12M**	**PL16M**
Nominal flow	port 3	50 l/min *(13.2 US gpm)*	100 l/min *(26.4 US gpm)*	160 l/min *(42.2 US gpm)*
	max. on port 4	40 l/min *(10.5 US gpm)*	80 l/min *(21.1 US gpm)*	140 l/min *(36.9 US gpm)*
Max. pressure		350 bar *(5100 psi)*		
Stand-by	PL..M/..AB	5 bar *(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)*
Fluid		mineral based oil		
Viscosity		10-200 cSt		
Max level of contamination		18/16/13 ISO4406		
Fluid temperature	with NBR seals	from -20°C *(-4°F)* to 80°C *(176°F)*		
	with FPM seals	from -20°C *(-4°F)* to 100°C *(212°F)*		
Environmental temp. for working conditions		from -20°C *(-4°F)* to 60°C *(140°F)*		
Cavity		SAE 10/4	SAE 12/4	SAE 16/4

Note - For different conditions, please contact Walvoil Sales Department.

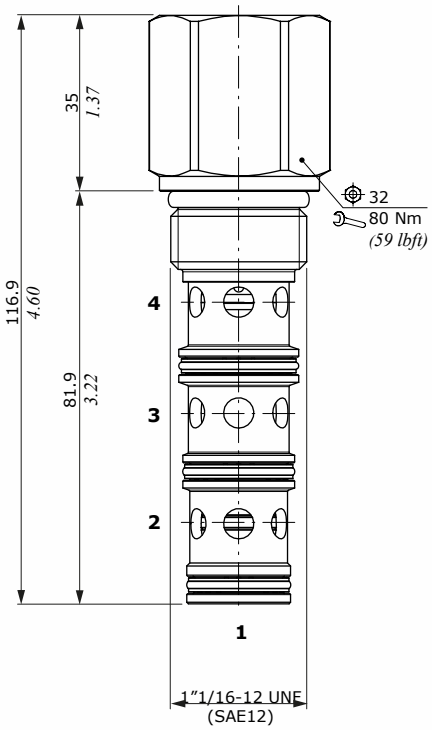
NEW

Dimensions and hydraulic circuits

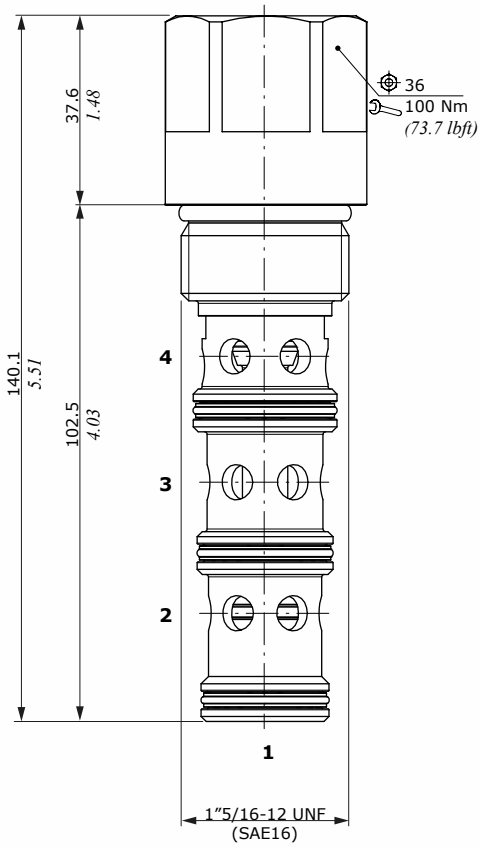
PL10M valve



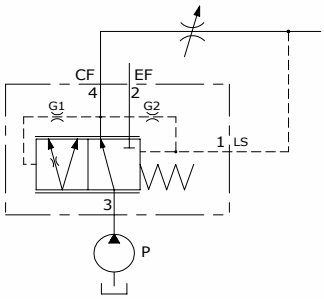
PL12M valve



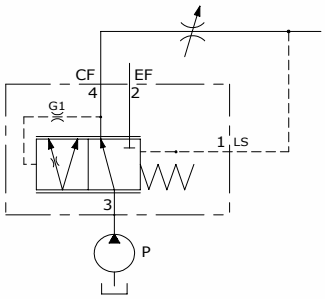
PL16M valve



Dynamic circuit

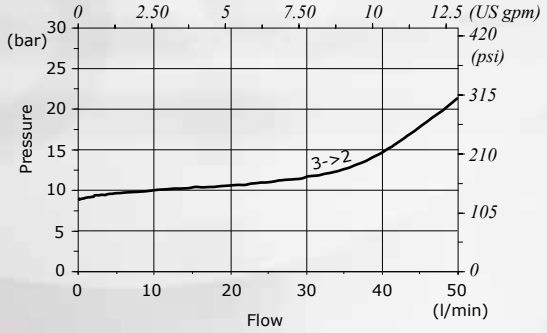


Static circuit

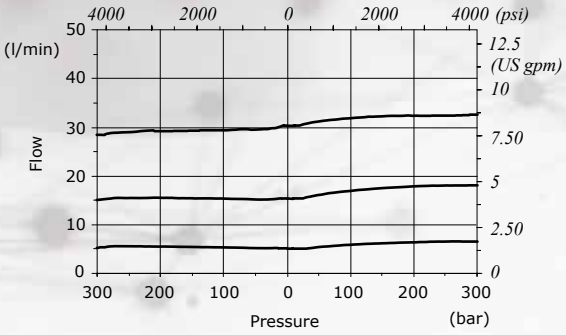


Performance data

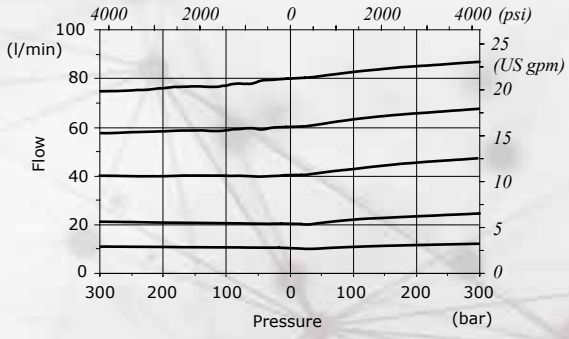
PL10M
Pressure drop vs. flow



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



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



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