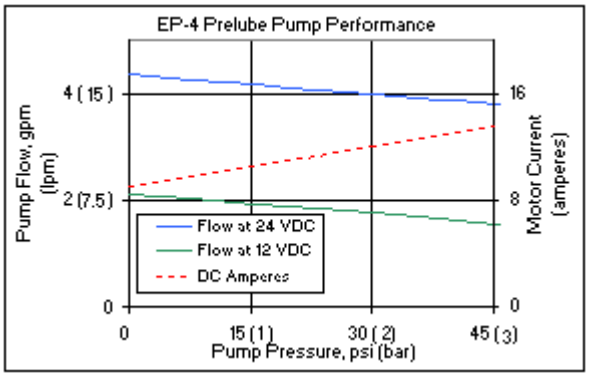
EP4 Oil Pump

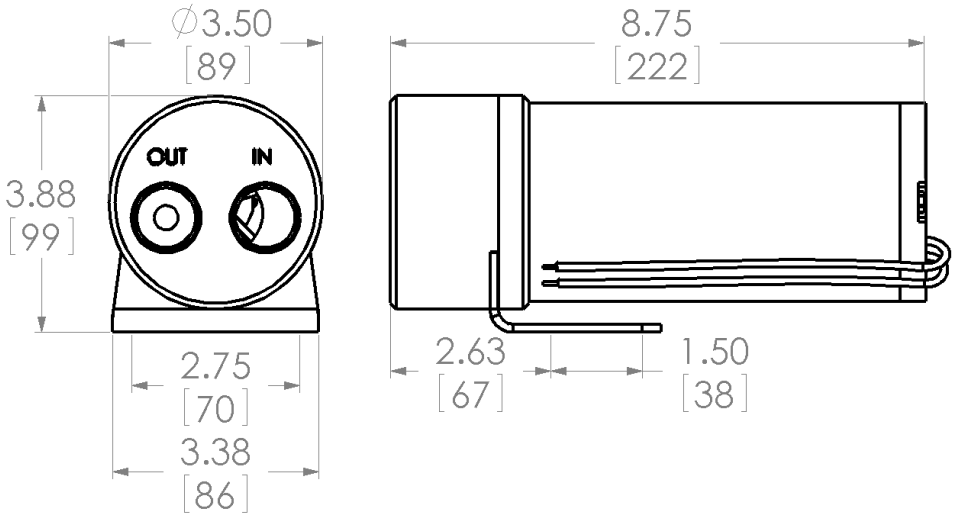
Compact, Heavy Duty, Industrial, Quality
Dual voltage motor rated for 12 or 24vdc
Flow rate of 1.75gpm or 4gpm



Nominal current draw for the EP-4 pump motor is 15 amps. Motor current varies with pressure. The motor should be fused. See wiring considerations.

Feature and Specifications Comparison	EP4-24	EP4-12
Operating voltage	24vdc	12vdc
Flow rate at 30psi (2 bar)	4 GPM (15 LPM)	1.75 GPM (6.6 LPM)
Attainable Pressure	60+psi (4+ bar)	
Integrated low loss check valve in pressure port	Y	
Built in gauge on face of pump to verify pump output pressure	Y	
Whisper-Vane positive displacement technology, Self Priming	Y	
Port Size, SAE straight thread O-ring	3/4"	
Ambient environmental temperature range	0°f(-18°c) to 175°f (80°c)	
Max oil temperature	300°f (149°c)	
Max oil viscosity	~25,000 cSt	

- Whisper Vane Technology
- Pressure Gage to show performance
- Direct shaft coupling, simple, long life
- 4gpm at 24vdc, or 1.75gpm at 12vdc



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Plumbing Considerations

The EP4 pump delivers up to 4 gpm (15 l/m) of oil flow. It is a self-priming and quiet-running vane pump. It includes a self-contained, low-pressure loss check valve to prevent backflow. This is particularly valuable in prelube applications to prevent backflow from the main engine lube pump. It can produce up to 60 psi (4 bar) pressure at either 12 or 24vdc.

Because these oil pumps do not run at thousands of psi like a hydraulic system, excessive pressure drop caused by small pipes can be detrimental to system performance. Small suction pipes will starve the pump and reduce output flow by causing cavitation. Small pressure pipes will create excessive backpressure that will reduce output flow by slowing down the pump motor. Therefore, elbows and long runs of pipe should be avoided. 4 gpm (15 l/m) of cold oil can easily eat up 60 psi (4 bar) when the plumbing is too restrictive.

The pump itself does not create pressure. It produces flow. Like a turnstile, every rotation of the pump delivers a metered volume of oil to the other side. Whatever system is connected to the pump has flow resistance that produces backpressure as the pump works to maintain flow.

Available pump motor horsepower can develop only a given amount of pressure, in this case about 60 psi (4 bar). Each elbow and each inch of pipe has a cumulative effect. If the plumbing uses up all available pressure there will be no pressure left for the job the pump is intended to do.

It is recommended that hose or pipe no smaller than ¾" (19mm) at 24v or ½" at 12v be used and that the suction hose in particular is kept as short as possible and no longer than 36".

Wiring Considerations

The nominal current draw for the EP4 pump motor is about 15 amperes. The motor current varies with the viscosity and the pressure required to pump the oil through the system. The colder the oil, the more current the motor draws. We recommend the Altech 16A TR-11 Series breaker be used on the power supply line to protect the motor from thermal overload under adverse conditions. This particular breaker has an amp/time curve that closely matches the motor/pump combination to properly protect the pump within it's operating envelope.

The EP4 pump motor is rated for Intermittent Duty. Under normal prelube operation the total accumulated run time during any 15 minute period should not exceed 5 minutes. The maximum run time can be extended if the current draw is less than 15 amperes. For example in a turbo soakback situation when the oil is hot and the pressure requirements are low, the run time can be extended.

Application Engineering

It is challenging to address every possible installation type. We are always happy to help in choosing an appropriate installation package. Give us a call for engineering assistance and support. 888-676-7770