

Electric Motor-Driven Positive-Displacement Pump

The modular electric motor pump (EMP) is a positive-displacement pump designed for aircraft applications using a variety of di-electric fluids. This product is a fixed-speed device and flow can be easily adjusted by changing width of the gerotor to meet the specific application.

The maximum-discharge pressure is controlled by a pressure relief valve that can be modified to provide safety margin in the system. The EORU is designed to operate down to -20F.

The EMP is designed to work with the engine oil replenishment unit (EORU), another product that can be incorporated into any business jet. The EORU is a 28Vdc system that can accommodate two or three engines. Oil volume can be customized to accommodate the application.

EMP fluid must be di-electric to allow for motor cooling. The maximum pressure and flow are restricted by the maximum design torque of the motor.



Product Features

- Positive-displacement pump designed for aircraft applications using a variety of di-electric fluids
- Fixed-speed device with flow that can be easily adjusted to meet specific applications
- Operates in environments as low as -20F
- Maximum-discharge pressure controlled by a pressure-relief valve

Specifications

Attributes	Values
Voltage (VAC)	115 vac, 400hz
Maximum current (amps)	25 amps
Torque rating (in-lbs)	11.5 in lbs maximum
Flow capacity	Fixed displacement from 12 to 25 gpm
Motor type	Liquid cooled
Maximum pressure (psig)	150 psig controlled by a pressure relief valve
Fluid type	Di-electric (Mil-L-23699, PAO, Galden, etc.)
Temperature range (F)	20F to 150F

Applications

This product has thermal management systems (TMS) applications that include:

- Electronic cooling systems on military applications
- Supplemental engine oil cooling systems

Optional Features

- Can be designed to accommodate an accumulator

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