



This range of Eaton low pressure fuel pumps has been developed for use on aircraft with a variable frequency power supply.

The range includes different motor technologies so that each application can make use of the optimum solution tailored to the individual system demands.

Part of the range consists of pumps driven by high efficiency permanent magnet brushless DC motors and controlled by integral electronics modules. The electronics module, which is fully immersed and fuel cooled, is designed to provide a low level of Total Harmonic Distortion of the aircraft's power supply. It also has a soft start capability to avoid excessive in-rush currents.

The pump impellers are designed to maintain optimum performance over a wide range of operating conditions, including high altitude with hot fuel. The pumps have excellent dry running capabilities and have thermal protection to prevent overheating under any fault condition. Additional features are incorporated to protect against internal failures, and all electrical components are housed within explosive proof chambers to safeguard the integrity of the aircraft fuel system.

Other pumps retain the permanent magnet brushless DC motors but with electronics modules mounted in the aircraft avionics bay.

A third option is the use of specially designed AC induction motors that incorporate features which allow the pumps to operate across the power supply frequency range.

Pumps can be mounted on the tank floor or walls and all are installed in canisters that incorporate inlet and outlet valves to allow the pump to be removed without the need to drain the fuel tanks.

Eaton can work with the aircraft designer to establish the optimum lifetime solution for each individual application.

Design Features

- Fuel pumps available for engine feed, fuel transfer and jettison functions
- Canister-mounted with dry-running capability
- Versions available for base or spar mounting
- High efficiency brushless DC motor drive
- Explosion proof and thermally protected



Powering Business Worldwide

Specification

Engine Feed:

Operating power supply
frequency range 360-810Hz
Supply voltage range 92-130Vac
Peak current 16 Amps
Power Factor > 0.9

Fuel Transfer:

Operating power supply
frequency range 360-810Hz
Supply voltage range 92-130Vac
Peak current 14 Amps
Power Factor > 0.9

Trim Transfer:

Operating power supply
frequency range 360-810Hz
Supply voltage range 92-130Vac
Peak current 7 Amps
Power Factor > 0.9

Typical Performance Curves for Brushless DC Pumps

