

PRODUCT FAMILY

Variable Frequency AC Large Frame Fuel Pump

Parker Aerospace, FSD-Elyria has a long history of supplying fuel pumps to the civilian and military aviation markets. Many civilian and military aircraft utilize either 200 VAC (L-L) or 400 VAC (L-L), variable frequency power for the products in the fuel system. These pumps supply pressurized fuel from the main tank(s) directly to an engine or auxiliary power unit (boost function) or move fuel to another fuel tank on the aircraft (transfer function). The product catalog covers numerous mounting arrangements from spar mounted (cartridge/canister mounted to vertical spar wall) to skin mounted (cartridge/canister mounted vertically through the tank bottom). Extensive qualification testing has been completed on these products. This past testing, combined with operational field experience means that these pumps can provide a low-risk, cost-effective solution for fuel systems utilizing either 200 VAC (L-L) or 400 VAC (L-L), variable frequency power.



Model 9C211/9C212 family
Cartridge/canister skin mounting

Product Features

There are numerous fuel pumps available in the variable frequency AC – large frame pump family. An existing product can almost always be found that provides a proven solution for a new or retrofit application. Some of the key features that provide versatility are as follows:

Mounting Configuration

- Two piece, cartridge/canister assembly that mounts on the bottom of the fuel tank or to the rear spar (enables cartridge removal and replacement without draining fuel tank)

Hydraulic Elements

- Centrifugal impeller
- Centrifugal Inducer on selected models

Motor Drive

- Three phase, 400 Hz, induction motor designed for either 200 volts (line-to-line) or 115 volts (line-to-neutral) or 400 volts (line to line) or 230 volts (line-to-neutral). Motors are designed to meet requirements of MIL-STD-704 and RTCA DO160.
- Motor is fuel cooled for long life
- Motors utilize non-resettable thermal fuses for locked rotor protection
- Selected motors utilize resettable thermal switches for dry run protection

Power Conversion

- One pump, the Model 9C204 utilizes a separate power conversion module to transform the aircraft delivered variable frequency to a constant frequency signal that is delivered to the pump. This power conversion is necessary because of the high input power levels.

Applications

Pumps from the variable frequency – large frame pump product family are used on the following aircraft:

- Airbus A350
- Bombardier C Series CS100 & CS300
- COMAC C919

Optional Features

There are numerous pumps available within the product line family that each have unique features. Any specifications associated with a new application should be sent to Parker, and the best available option from the product catalog will be presented to the customer for consideration.

Specifications

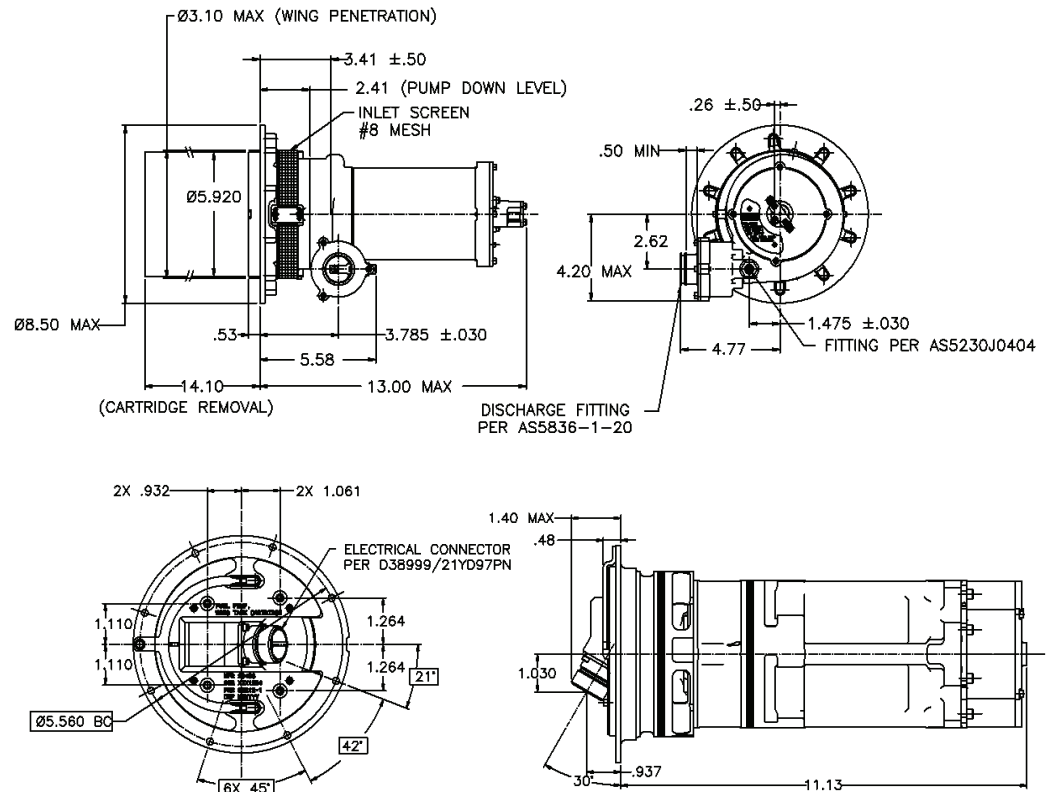
Attributes	Values
Flow range	0 to 75,000 pph
Discharge pressure range	4 to 55 psi
Required input range	1200 to 7600 volt-amps
Fluid temperature range	-40°F to +160°F
Ambient temperature range	-40°F to +160°F
Assembly weight	17 to 22 pounds
Duty cycle	Intermittent to continuous

Contact Information

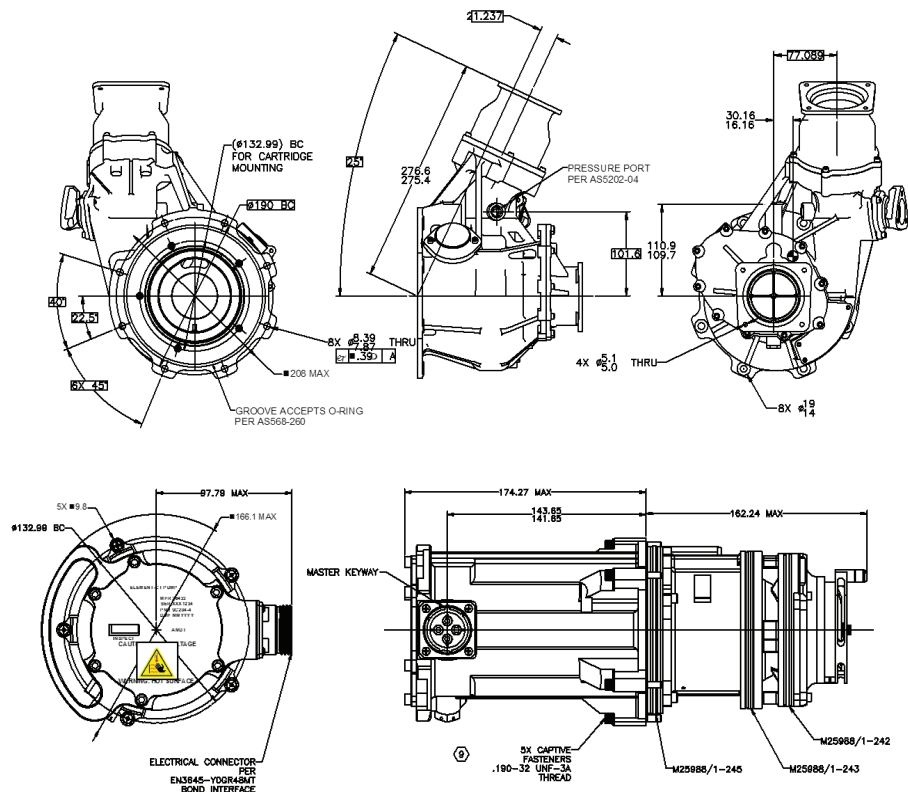
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Cartridge/canister skin mounting

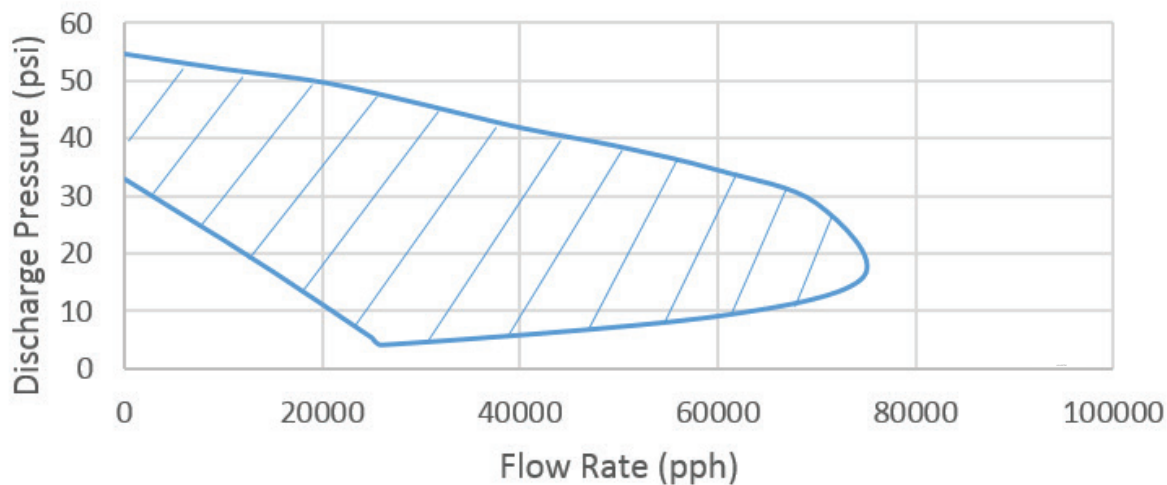


Cartridge/canister spar mounting

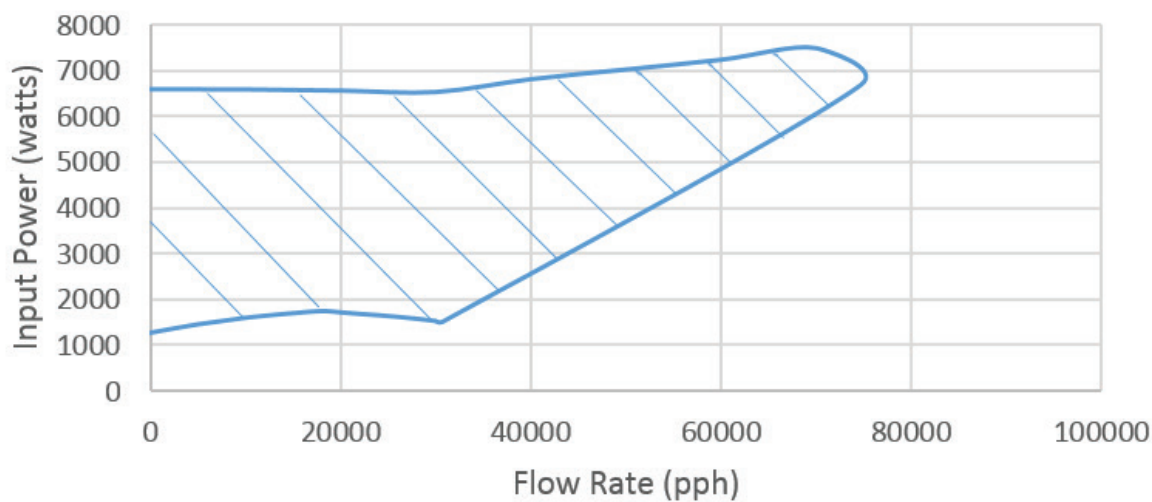


Product range curves for fuel flow versus discharge pressure and fuel flow versus input power

VAC Large Frame Pump
Flow vs. Discharge Pressure



VAC Large Frame Pump
Flow vs. Input Power



If the required flow, discharge pressure, and input power fit within the cross-hatched areas, then a product already exists that may fit the new application. Any pressure requirements below the cross-hatched region will also be satisfied.

Contact Information

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