

### **PARKER AEROSPACE**

# Fuel pump cartridge/canister

Product data matrix and performance index

Some civilian aircraft utilize 230 VAC (L-N), variable frequency power for fuel system products. The 9C203-2/9C204-6 pump utilizes a two piece (cartridge/canister) assembly that allows for the main pumping element (cartridge) to be removed and replaced during service without performing additional maintenance on the fuel tank, such as draining the fuel from the tank to gain access to the pump. The 9C203-2/9C204-6 is spar mounted on the side of the fuel tank and utilizes a liquid ring assembly to "lift" fuel through an inlet snorkel. The pump assembly is connected to a Fixed Frequency Supply Unit (FFSU) that acts as an intermediate power conditioner by accepting the aircraft input power and optimizes it prior to directing power to the pump.

Extensive qualification testing has been completed, and the 9C203-2/9C204-6 pump assembly has shown excellent field reliability. The combination of certification testing and field experience provides a low risk, cost effective solution for fuel pump applications utilizing a 230 VAC, variable frequency power system.

#### Product attributes and benefits

- Two piece assembly (cartridge/canister), mounted to the vertical spar of the aircraft fuel tank
- · Single inlet utilizing a centrifugal impeller
- Connected to a Fixed Frequency Supply Unit (FFSU) power conditioner that accepts aircraft variable voltage and frequency
- · Motor is fuel cooled for long life

#### **Contact information**

#### Bill Heilman

bill.heilman@parker.com (440) 284-6284

Parker Hannifin Corporation Parker Aerospace Fluid Systems Division 711 Taylor Street Elyria OH 44035



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#### Model 9C204-6

| Characteristic                   | Value                         | Pump performance   |
|----------------------------------|-------------------------------|--|
| Model number<br>Application      | 9C204-6<br>Cartridge assembly | Typical model 9C203-2/9C204-6 pump performance at 142 VAC/236 Hz for room temperature Jet A at sea lev   |
| •                                | , ,                           | ·  |
| Pumping data                     |                               | 60   |
| Hydraulic element                | Single stage, centrifugal     | 50   |
| Rated flow                       | 110 gpm                       | 180  |
| Minimum discharge pressure       | 35 psig                       | um 40  |
| Typical discharge pressure       | 42 psig at sea level          | Olischarge pressure [psi]  |
| Maximum operating altitude       | 43,100 ft                     | 20 Discharge 20 Di |
| Qualified fuels                  | Jet A, TS-1, JP-5, RT         | _ 10   |
| Temperature range                | -40°F to +122°F               |  |
| Duty cycle                       | Continuous                    | 0 10000 20000 30000 40000 50000 60000 80000 9000   |
| Motor data                       |                               | Flow (pph)   |
| Motor type                       | Variable freq. AC             | Discharge pressure   |
| Voltage/frequency                | 142 VAC/236 Hz                | Current  |
| Current at rated flow            | 15.5 amps at sea level        |  |
| Maximum current                  | 17.5 amps                     |  |
| Dry run capability               | Yes                           |  |
| EMI filtering                    | No                            |  |
| Stator thermal protection        | Yes                           |  |
| Electrical connection            | EN3645-Y0GR48MT               |  |
| Geometric assembly data          |                               |  |
| Assembly mounting                | Into canister                 |  |
| Bypass flow valve                | No                            |  |
| Lift capability                  | Up to 18"                     |  |
| Approximate envelope (L x W x H) | 13.3" x 7" x 5.6"             |  |
| Weight (maximum)                 | 13.95 lbs                     |  |
| Model 9C203-2                    |                               |  |
| OL                               |                               |  |
| Characteristic                   | Value                         |  |
| Characteristic  Model number     | <b>Value</b><br>9C203-2       | •  |

## Geometric assembly data Assembly mounting

Model number Application

Assembly mounting Spar, wall mount Inlet port 4 bolt custom flange Discharge port 4 bolt custom flange

Canister assembly

Discharge check valve Yes Bypass flow valve No

Approximate envelope (L x W x H)  $7.9^{\circ}$  x 10.3" x 14.1"

Weight (maximum) 7.55 lbs

