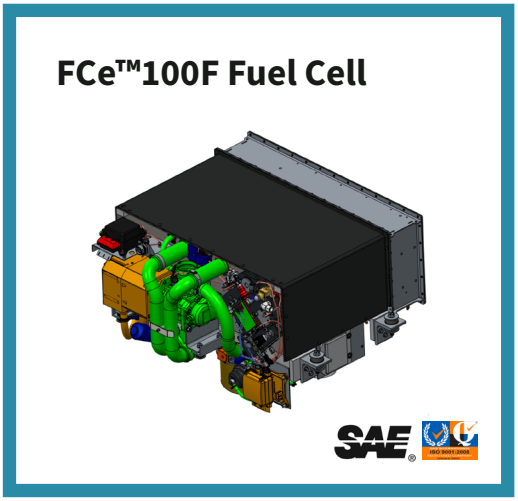
US HYBRiD
by Ideanomics

FCe™100F

The Leading Fuel Cell Engine for Commercial Vehicles



OVERVIEW

The 100kW Fuel Cell Engine is our most robust engine with 40 kW/sec transient power capabilities. It offers a fully integrated freeze capable system with a rapid startup design and industry leading power density that is specifically designed for medium and heavy duty, transit bus, drayage trucks, GSE, ports and logistics equipment, and off-road applications.

PRODUCT FEATURES

Electrical

- **Output Power‡ |** 15 - 100kW
- **Output Voltage |** 375 - 750V_{DC} (Integrated Isolated DC-DC Converter)
- Ramp Rate | 40 kW/sec

Efficiency

- **System Efficiency† |** 58.3 to 46% (10% to Full Power)

Temperature

- **Ambient Temperature |** -30 to 50°C
- **Cooling Inlet |** -30 to 57°C (50/50 WEG)

Fuel

- **Fuel Flow |** 6.25 kg/hr @ Full Power
- **Fuel Pressure |** 1200 ±200 kPa_g
- **Fuel Type |** SAE J2719 Hydrogen

Physical Characteristics

- **Dimensions (L x W x H) |** 916 x 879 x 614 mm
- **Weight |** 238 kg, (288 kg Including Isolated DC-DC Converter)

Interface

- **Vehicle Communications |** CAN SAE J1939

Startup/Shutdown

- **Startup Time |** 30 Seconds
- **Startup From Frozen Time |** 5 Minutes to Thaw, 60 sec to Initial Power
- **Shutdown Time |** 10 Seconds

† System efficiency represents energy delivered per energy fed in the form of hydrogen (calculated on a LHV basis).

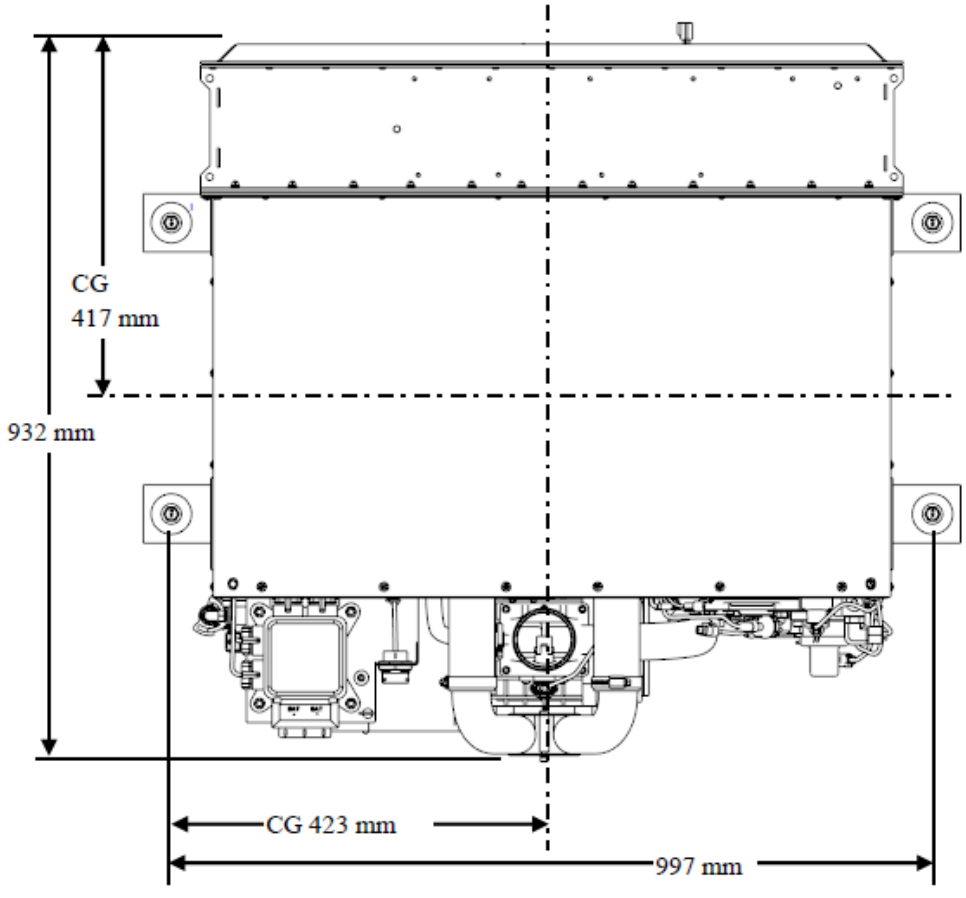
‡ Full power is the maximum power the electric engine can continuously deliver.

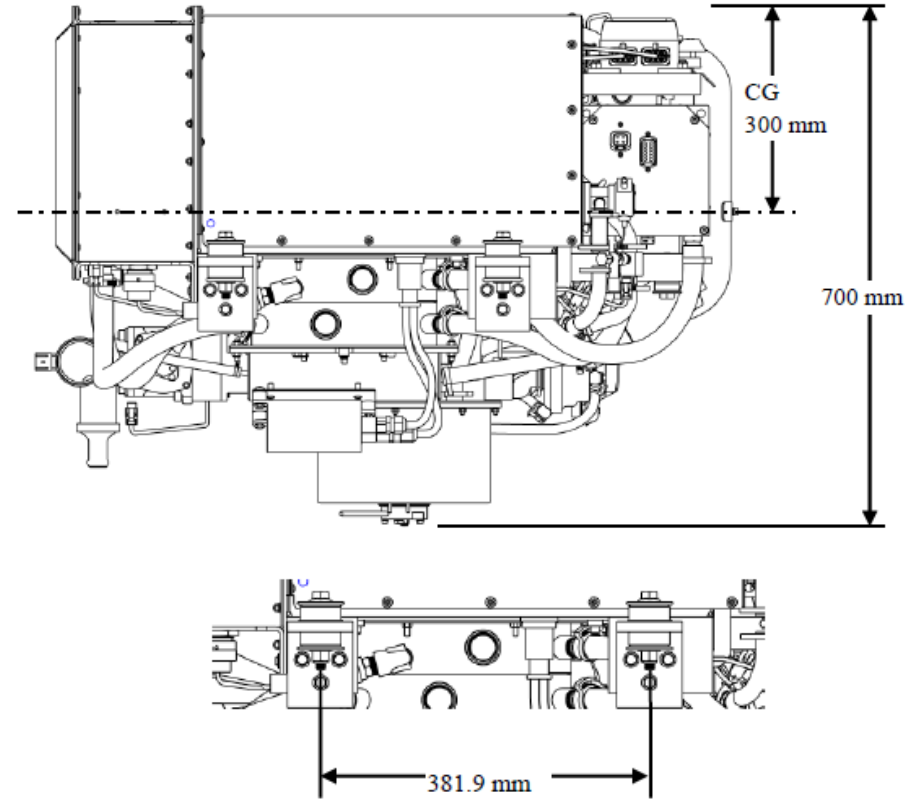
APPLICATIONS

Purpose-Built for MD/HD Vehicles Shock and Vibration Environment

FCe™100F is an integrated fuel cell engine that is purpose-built for heavy-duty vehicles meeting SAE J1455 shock and vibration and environmental requirement. The FC engine includes the integrated DC-DC converter and the safety disconnect and protection system with high voltage isolations. The FCe™100F engine is the most efficient fuel cell engine with all BOP components integrated and no demand from the vehicle. The low-pressure operation allows fast transient response with high efficiency even at low power range. The FC engine design allows ease with installation, and command and control similar to conventional engines. Cooling is 50/50 WEG system with no external DI water-cooling or circulation pump.

INTERESTED IN ORDERING TODAY?
CONTACT US AT 310.212.1200





Detail same on both sides.
Mounting locations in 4 places, use M12X1.75 bolts each.

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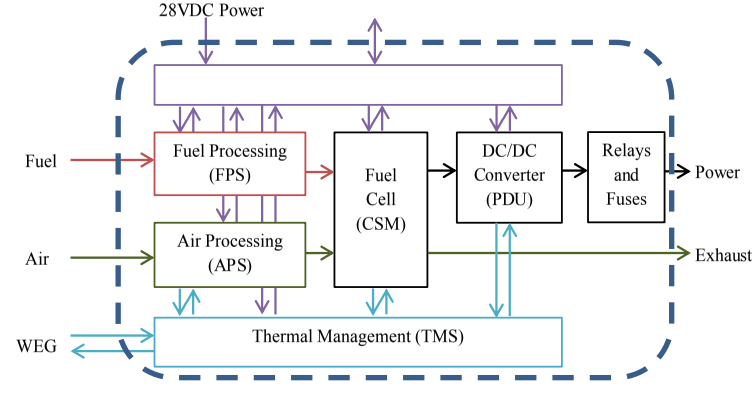

FCe™100 Integrated FC engine diagram