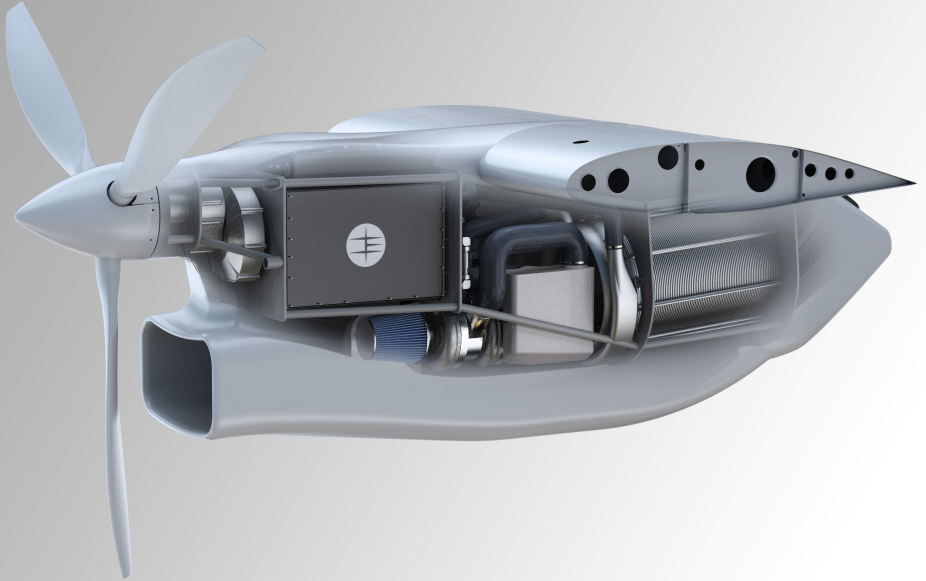




IE-FLIGHT™



Conceptual integration of an IE-FLIGHT F300 fuel cell product in a future fixed wing propulsion system

Powering the hydrogen future™ with our outstanding fuel cells and service.

IE-FLIGHT fuel cell systems enabling zero-emission aviation

IE-FLIGHT™ is our product line designed to provide a pathway for zero emission powertrains for aircraft serving sub-regional and regional markets for cargo and passengers.

IE-FLIGHT fuel cell systems are suitable for CS-23 and CS-25 aircraft as well as eVTOL and APU applications.

Benefits:

- Zero emissions
- Market-leading fuel cell system power densities
- Scalable for multi-MW fuel cell installations
- Low maintenance
- Class-leading transient response
- Patented direct water injection cooling technology means no external humidification required
- Simplified balance of plant, increasing reliability and reduced cost
- High-temperature architecture enabling smaller heat exchangers



IE-FLIGHT F300 fuel cell system specification

System architecture	Fuel cell stack	Intelligent Energy proprietary evaporatively-cooled PEM fuel cell stack, Gen4, metallic pressed plate.
System electrical	Rated net power output	300kW at sea level, derating to 180kW at 15000ft
	Gross current output	Up to 600A
	Gross voltage output	600VDC at maximum output end of life, up to 1200VDC at no-load / open circuit condition
	System voltage input	LV: 18 – 32VDC, up to 70A HV: 600 - 800VDC, up to 140A
Physical	Mass	200kg, excluding air-cooled condenser
	Volume (L x H x W)	2200 x 913 x 666mm, for product including air-cooled condenser, as illustrated inside a future fixed wing propulsion system
	Storage / shipment	-40°C to +85°C
	Environmental protection	IP67, where the air vehicle structure provides limited ingress protection
Fuel	Type	Gaseous hydrogen to ISO 14687:2 grade D
	Peak efficiency	57% (20 to 25kW at 2000m altitude)
	Fuel flow rate	21.1kg/h at BoL to 25.2kg/h at EoL at 300kW net
	Fuel supply pressure	11 to 16bar gauge

IE-FLIGHT architecture and F300 fuel cell system scope of supply

