## **Solar Turbines**

A Caterpillar Company

Powering the Future Through Sustainable, Innovative Energy Solutions

# INTELLIGENT FUEL MODULE

The intelligent fuel module (IFM) is a compact, cost-effective, fuel system upgrade for customers with older turbomachinery and limited budget. The IFM design is unique to Solar and was developed to ensure enhanced safety features and reliability improvements.

#### **Fuel System Solution**

The IFM provides an innovative and simple path to the latest electronic fuel control technology. It is designed to complement your existing control system and can be combined with other machinery renewals such as turbine overhauls and uprates.

Upgrading your existing fuel system from a mechanical to an electronic valve allows for precision fuel control using modern algorithms. This modular solution is designed to fit within the existing fuel system footprint and is comprised of a fuel valve, engine flameout module, torch module and manifold kit.



IFM Package Hardware

#### **Fuel Valve Upgrade**

- Reduces unplanned downtime for maintenance due to self-cleaning design
- Provides up to 10x increase in system reliability when compared to traditional hydro-mechanical systems

The IFM also includes a control box (which can be placed on or off the turbine skid) with a programmable logic controller to manage the system, input/output modules to monitor and regulate the system, and an HMI display to annunciate system status and alarms.



IFM Control Box

This stand-alone control system communicates with the existing package control system, sending and receiving necessary data for seamless integration. Built-in safety features, such as flame-out protection and high fuel flow monitoring, reduce the risk of hazardous events and improves the safe operation of your turbine fuel system.

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**HMI** Display

### **Integrated Modules**

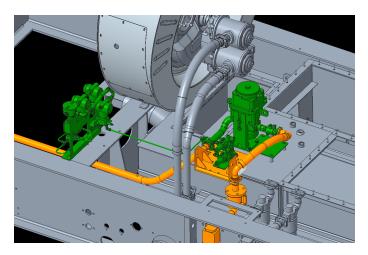
- Flexible Installation Options
- Improved System Safety
- Pre-Configured for Your Application

### **Intelligent Product Line**

The intelligent line of system upgrade products provide the same customer experience as standard offerings from Solar – reliable solutions with exceptional support throughout the equipment's life cycle. With intelligent modular upgrades, you can convert individual systems on older packages to current technology without the cost and downtime associated with traditional package retrofits. For additional intelligent product offerings, please contact your local Solar Account Manager.

### **IFM Currently Suitable for:**

- Saturn® 10/20, Centaur® 40/50, and Taurus™ 60 Compressor Sets, Mechanical Drives and Generator Sets
- Conventional, Gas Fuel Systems
- All Legacy Control Systems
- NEC: Class 1, Division 2 Applications



Typical Centaur® 40 Installation