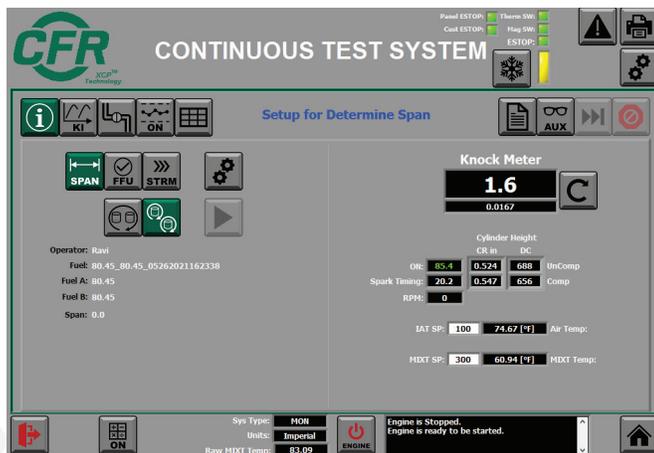# Continuous Testing System
(CTS)

Taking Online Blending to the Next Level

CFR Engines Inc. (CFR®) is taking online blending to the next level with its Continuous Testing System (CTS). Integrated with the state-of-the art XCP® TECHNOLOGY, it allows automatic, 24/7 operation linking one or more engines to the refinery's online octane blending system.

Like all CFR products, the CTS is designed, manufactured, and tested to work as part of an integrated and reliable solution for your operation. The engine, parts, accessories, instrumentation, and control system are all provided by CFR to operate together with seamless efficiency.

Compliance
Built by CFR to fully integrate with existing CFR systems and comply with the industry standard ASTM Method for Online Direct Comparison Tests.

D2885 – Online Test Method

Accountability
Supported by XCP TECHNOLOGY, the CTS has intuitive and accessible menus for total instrument control. Built-in prompts, automated calculations, universal graphic icons, the ability to set key online testing parameters, and data logging facilitate both quick cross-training and reduced testing errors.

Speed
With XCP TECHNOLOGY, the ability to conduct faster tests and increase productivity is achieved through its integrated computer, smart valve timing, and fuel management.

- User friendly Microsoft Windows-based operating system for easy integration, security, and upgrades

- Customizable site-specific set ups and fully automated fuel system (no manual valves)

- Visual interface with process flow graphics and engine/system status indicators, live data, including real-time feedback on blend quality/octane results

- Fully compatible and customizable with the on-site SCADA/HISTORIAN systems to allow maximum integration and operational oversight

- Full traceability and comprehensive reporting via saved historical operating data for every engine.

Remote monitoring system tracks real-time unit status and performance via TCP/IP communications.

Complete System Offerings by CFR®

Inherent to all XCP® plaforms, an on-board full function industrial PC for operation, measurement, data storage, and control are key features of the CTS. This design lends itself to easier integration of multiple units via Modbus onto a user's master SCADA system. Each machine maintains its own on-board data storage with external network connectivity.

The CFR system also comes with customizable remote monitoring and control capabilities through the CFR Remote Application Software (RAS) system. This allows for standard output screens, unit/system status and control, real-time performance curves, and data table summaries.

Configurations
Offered as a specified inclusion on new CFR F1/F2 units or as a full unit.

**p/n G-802-65**: F1/F2 XCP® CTS Upgrade Kit

Integrations
Carburetor/fuel bowl cooling and intake air humidity can be controlled and documented by CTS when integrated with a CFR Engine Air Control System (EACS).

Specifications
• Touch screen HMI with industrial PC
• Microsoft Windows operating system
• Modbus register for SCADA connectivity
• LIMS connectivity
• Adjustable bowl height
• Oxygen sensor to monitor Air / Fuel Ratio
• Bolt-on configuration on existing units
• Power Supply: 120V, 1Ph, 50/60 Hz
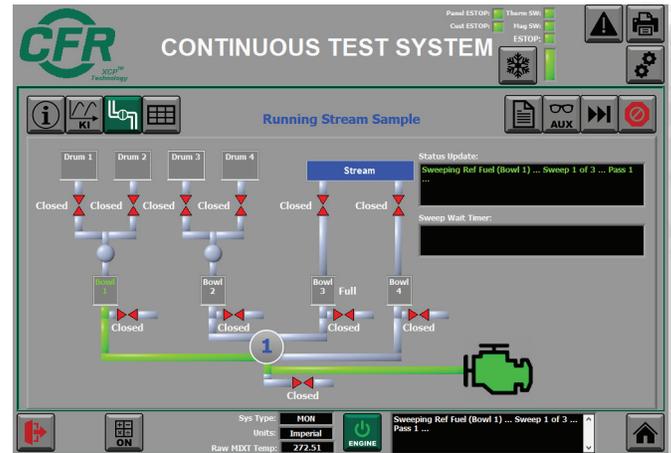
Animated diagrams display present state of system valves, pumps, and fuel flow - on unit or remote.
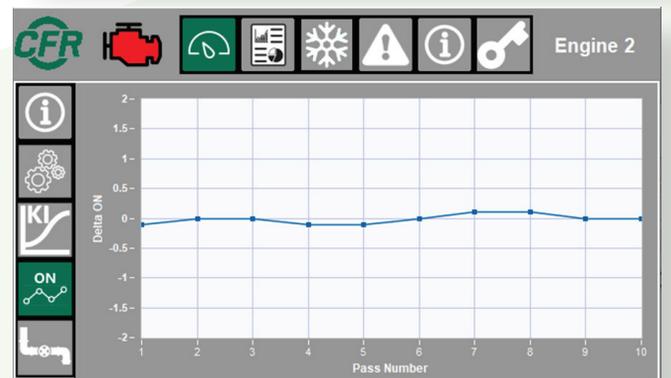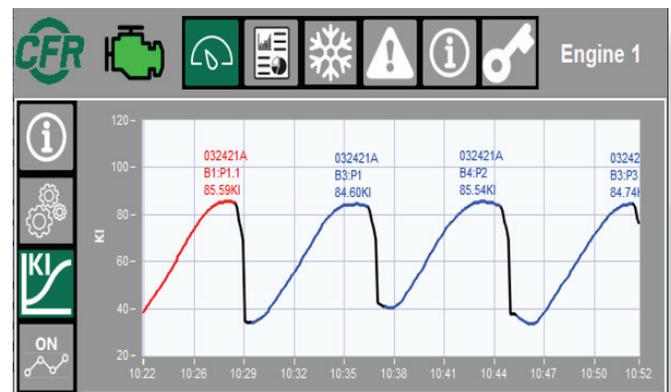
System provides intuitive menus for easy access to critical data, such as KI charting and Octane ratings across passes.