

Compliance Controls **MEC-L** LEAN-BURN AIR-FUEL CONTROL SYSTEM

Businesses that run lean-burn, spark-ignited, natural gas industrial engines face the same challenges as other engine operators **AND MORE:**



- **EMISSIONS CONTROL COMPLIANCE.**

While lean-burn engine NOx output is lower than in a rich burn engine, it's difficult and expensive to reduce lean-burn NOx levels with emission after-treatment systems. With high-variance applications like power generation and gas compression, that job is hard for any emissions system.

- **TROUBLESHOOTING & MAINTENANCE.**

Engine misfires and detonation, valve recession and scorching: these and other glitches not only impair engine performance and fuel efficiency they can also cost you plenty in maintenance and parts replacement.

- **OPERATIONAL ISSUES.**

In any competitive arena, your business suffers when you're not getting the benefits of today's most advanced technologies, and tomorrow's. But keeping up with technology can be costly – in dollars, time, headaches and hassles. And who can afford to keep *rocket scientists* on board to run engines day-to-day?

PLUS: Lean-burn engine operators need to meet all these challenges and more while *maximizing fuel economy*.

We deliver the best solution your money can buy:

THE MEC-L LEAN-BURN AIR-FUEL CONTROL SYSTEM™



Compliance 
CONTROLS™

The best. Bar none.

THE MEC-L LEAN-BURN AIR-FUEL CONTROL SYSTEM was engineered specifically for lean-burn, spark-ignited natural gas engines. It minimizes engine emissions, maximizes fuel efficiency, and cuts engine maintenance costs, by maintaining the proper air-fuel ratio over varying engine loads, speeds, fuel quality, ambient temperatures and barometric pressures.

And the MEC-L works *without operator intervention*.

Easy to install, even easier to use, and equipped with a comprehensive on-board diagnostics and troubleshooting system, the Windows®-based MEC-L simply redefines the state-of-the-art: in hardware, microprocessor power, control system software, operator interface options, fast response to varying engine operating conditions, software upgradeability, you name it.

DOLLARS & SENSE. Reduced emissions. Improved engine performance – with greater fuel efficiency and reduced fuel costs. Longer, more trouble-free equipment service-life. Fail-safe troubleshooting. Fast, easy installation. Easy, user-friendly operation, with minimal training. Network compatibility, with high-speed data transfer. Powerful smart-system features and benefits you won't find anywhere else. All with the flexibility to tailor solutions to your specific current and future wants and needs.

Top management, financial officers, engineers, IT and operations managers can all agree: the Compliance Controls MEC-L Lean-Burn Air-Fuel Control System is simply the best value on the market, bar none.

ABOUT COMPLIANCE CONTROLS. Compliance Controls was formed by two of the best-known, most trusted leaders in industrial engine emissions control and equipment management solutions: **MIRATECH CORPORATION** and **F.W. MURPHY**. Backed by our parent companies' distribution networks, Compliance Controls focuses exclusively on delivering and supporting MEC Air-Fuel Control System solutions tailored to our customers' specific requirements.



management solutions:
MIRATECH Corporation and

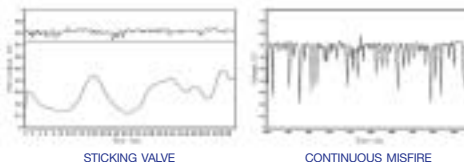


FEATURES

- >> Fast, easy, low-cost installation
- >> Fits virtually any lean-burn, spark-ignited natural-gas industrial engine
- >> Windows® -based platform compatible with all computers
Software can be installed on laptop, PC, Palm®-type handheld or network
- >> Adaptive valve-learn software
Continually updates look-up tables for rapid transient response and continuous control in Open Loop mode
- >> At-a-glance on-screen dashboard graphics
LED Driver (COMM Modules) for Power, Alarm & Shutdown, Controller Communication and more
- >> Comprehensive failsafe diagnostics
Continuous oxygen sensor health monitoring; detection of ashed catalysts, misfiring, overheating, valve sticking and more
- >> Data plotting for easy, accurate troubleshooting
- >> Alarm and shut down dry contacts
- >> Closed loop, exhaust oxygen feedback control
- >> Variable set-point for pre-catalyst exhaust oxygen control
For automatic, real-time response to varying engine loads and transients
- >> Catalyst temperature monitoring to protect the catalyst from engine fueling malfunctions
- >> Two-dimensional open-loop valve positioning, based on engine speed and load
Maintains compliance even with critical oxygen sensor malfunction
- >> Drives up to two fuel-metering valves for "V" engine configurations
- >> Valve control options:
 - **Smart Valve Electronic Pressure Regulator**
Controls all engine fuel with full authority, with differential fuel pressure control in case of control system failure
 - **Full Authority Valve**
Controls all engine fuel via system-controlled butterfly valve
- >> RS-485/ModBus® and CAN link communications support for high-speed data transmission
- >> UL/cUL listed control valves
- >> NEMA 12 enclosure

COMPREHENSIVE FAILSAFE DIAGNOSTICS

- >> Covering 44 critical parameters



BENEFITS

- >> Minimum engine emissions
- >> Reduced fuel consumption; better fuel economy
- >> Reduced lube oil nitration
- >> Improved equipment performance
- >> Minimized misfires and detonations
- >> Longer, more trouble-free equipment life
- >> Fail-safe troubleshooting & diagnostics, with automatic shutdowns
 - *Eliminates operator guesswork and look-see troubleshooting*
 - *Prevents costly equipment damage and failures*
 - *Better-managed maintenance costs; lower replacement costs*
- >> Fully automatic; no operator required in normal operation
- >> Minimal operator training
- >> Flexible network compatibility – with high-speed data transfer
- >> Responsive, full-service support: 24-7-365
- >> Software, upgrades and documentation available on disk or online

Visit Our Website. Or Give Us A Call.

To find out more about the MEC-L Lean-Burn Air-Fuel Control System, please visit our website: www.compliancecontrols.com.

Or simply give us a call:

918-627-5050

Compliance 
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