



C-Guard

On-Guard® module for comprehensive reciprocating compressor cylinder monitoring

Key Features at a Glance

- Utilizes Windrock's Patented "Smart" Transmitter
- Comprehensive mechanical condition and performance monitoring
- Alarms on excessive rod load, lack of rod load reversal, excessive rod drop or rod runout
- Modular System Architecture that can be configured with other On-Guard® family modules to meet your monitoring requirements
- Installation is simple, fast and inexpensive
- Can be mounted on the machine deck to reduce the length of cable runs
- Optional On-Guard® Diagnostic software for monitoring, analysis, reporting, and trending
- On-Guard® Software available in single user, and multi-user network license versions

What's New

- Ethernet communication through device server
- Automated diagnostics with use of On-Guard® software

C-Guard

Windrock's patented online monitoring system utilizes a family of "smart" transmitters to monitor the performance and mechanical condition of critical machinery, providing continuous machine protection. The intelligent and unique design of these "smart" transmitters significantly reduces the installed cost of a system.

Each module accepts multiple inputs from a wide variety of sensors. The transmitter has its own internal processor and memory and is capable of performing complex calculations, alarm detection, and error checking.

Installation is fast and inexpensive because the modules are mounted on or near each machine's frame or cylinder and are connected with one small multi-wire cable.

The monitoring solution for critical compressor cylinder performance and mechanical condition is the patented seven-channel **C-Guard**. This smart transmitter accepts inputs from two pressure sensors (head and crank end cylinder pressures), two temperature inputs (gas suction and discharge

temperatures), one accelerometer, optional rod drop, and one auxiliary input. In addition, the C-Guard monitor accepts one or two speed/phase pickups.

The internal processor continuously monitors all inputs in "real time" and calculates compressor IHP, rod loading, rod reversal, percentage of load, and volumetric efficiencies. It compares the inputs and calculated results against alarm levels and communicates the values and alarm conditions back to the user's PLC/DCS systems via RS-485 (modbus) and/or Windrock's On-Guard® diagnostic software running on a local or remote workstation. An optional alarm relay is available for remote alarm indication.

Reports and Graphs

Reports

- Compressor Performance
- Machinery Alarms
- System Alarms

Diagnostic Plots

- Dynamic Plots (PVs)
- Multi-parameter Trends
- Multi-parameter Overlays
- Statistical Histograms
- X - Y Correlations



Modular design allows mounting on the machine deck reducing installation costs.

Questions? Contact us today:

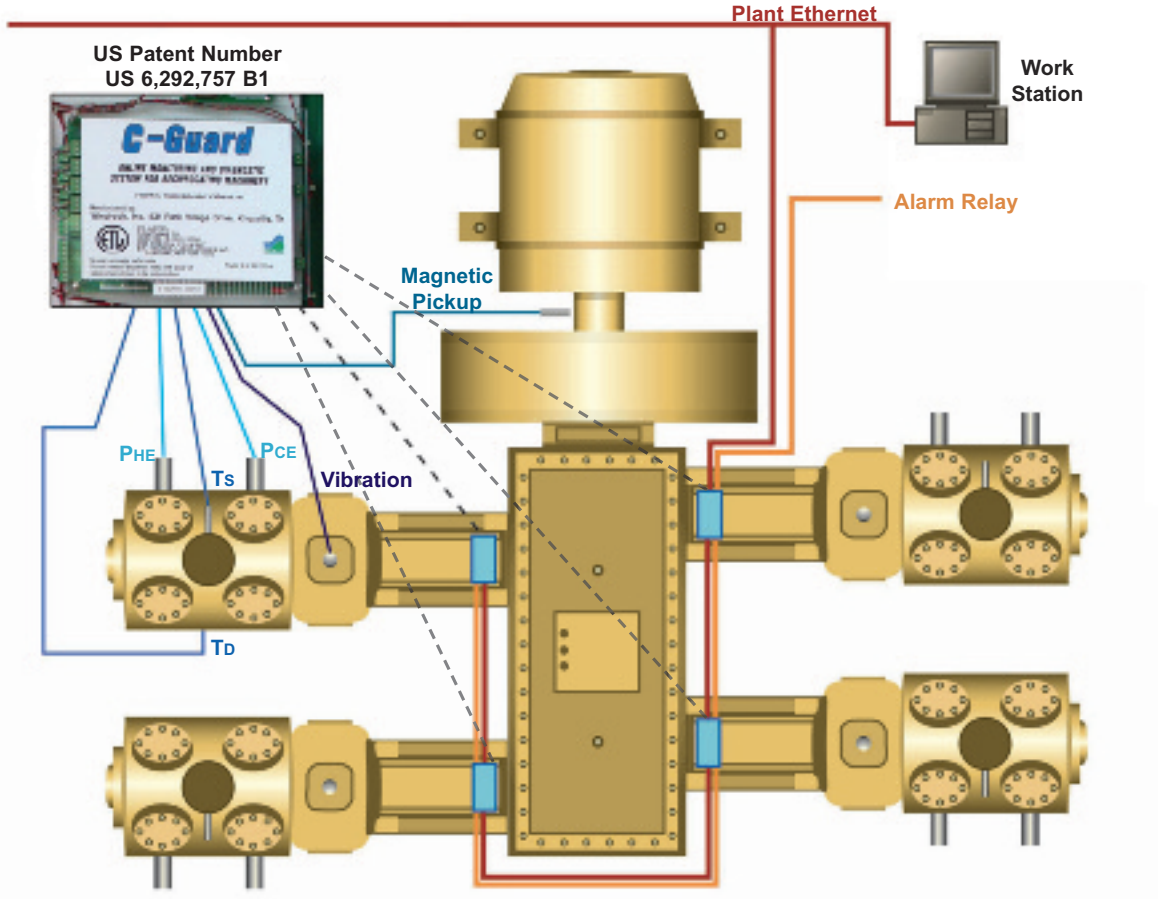
Phone: (865) 539-5944

Web Site: www.windrock.com

E-mail: sales@windrock.com

Specifications

Size:	8 inches high x 10 inches wide x 2 inches deep
Weight:	Less than 3 pounds
Number of Channels:	7 sensor inputs channels for cylinder monitored (dynamic cylinder-end pressures, suction/discharge temperatures, vibration, rod drop/rod runout, or auxiliary input)
Hazardous Area Ratings:	Suitable for Class I, Div 2, Groups A, B, C, D areas Sensors rated for Class 1, Div 1, Groups A, B, C, D areas
Outputs:	PLC / DCS Interface - standard integer-based modbus RS-485, RTU Alarm Relay - Hermetically sealed (optional)
Power:	+24 to +30 VDC, 200 mA maximum
Environmental Limits:	-25 degrees F to +150 degrees (operating); -40 degrees F to +185 degrees (storage) up to 95% humidity (non-condensing)



Windrock, Inc.
431 Park Village Drive, Suite L
Knoxville, TN (USA) 37923
Phone: (865) 539-5944
FAX: (865) 531-6470
Web Site: www.windrock.com
E-mail: sales@windrock.com