

Sentinel® CPM - Compressor Performance Monitor



MMS, in collaboration with ACI Services, has developed Sentinel CPM. This product supports analyzing real-time dynamic pressure waveforms via its embedded eRCM Kernel enhanced with MMS performance calculations. Sentinel CPM's data can also be sent to the Rmonix cloud-based diagnostic software for additional review.

Sentinel CPM calculates compressor performance and determines compressor health and safety in real-time. After a customer uploads their eRCM Viewer™ file of the unit, Sentinel CPM compares actual measurements to theoretically expected values – and notable differences help identify compressor health and safety issues!

Sentinel CPM supports outputs that allow customers using 3rd party diagnostic software applications like ACI's eRCM or others, to allow engineers and analysts to further analyze data.

Sentinel CPM Key Features:

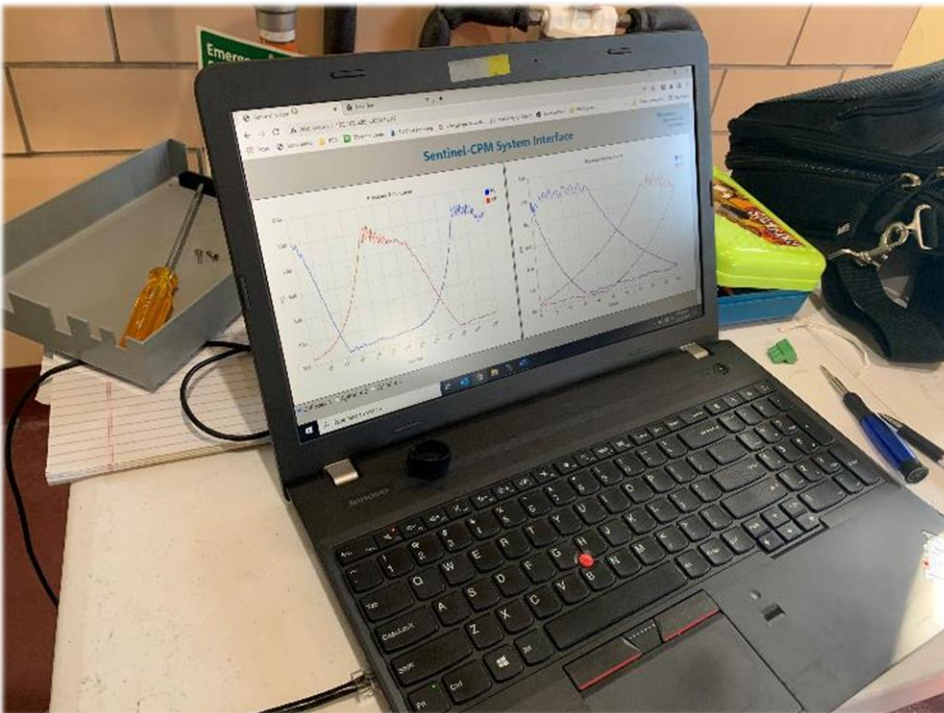
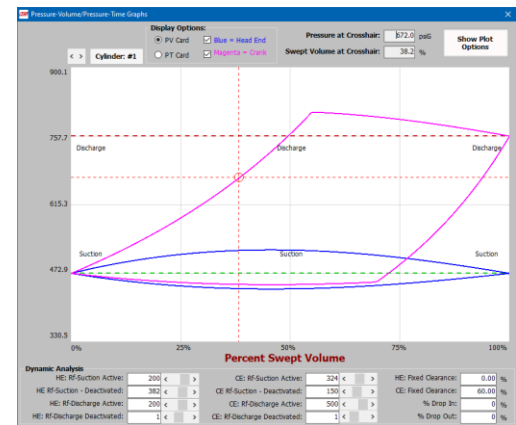
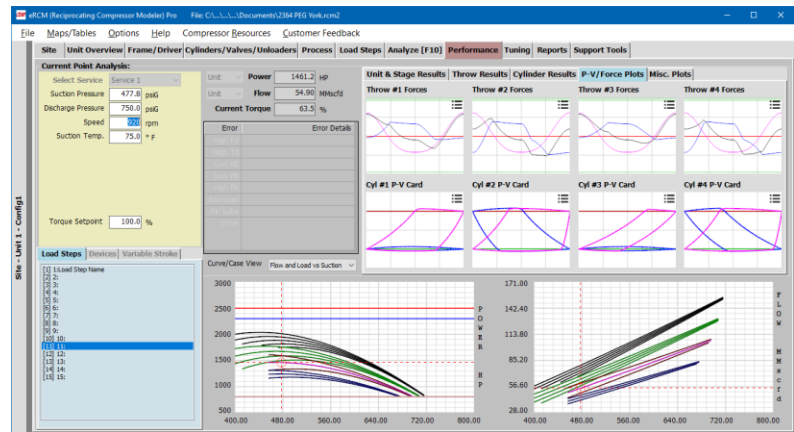
- Real time measurements and alarming of rod loads and degrees of reversal
- Automated leak detection of suction & discharge valves, rings and packing
- eRCM Kernel enhanced with MMS real time compressor performance calcs
- Changeable Usernames, Encrypted Passwords and Multi-Factor Authentication per TSA mandates
- Continuous monitoring of up to 6 double-acting compressor cylinders (up to 10 cylinders w/ an additional CPM module
- 12 pressure sensor inputs
- 2 Magnetic Pickup inputs (TDC & Deg)
- MODBUS (RS-485 & Ethernet) communication
- Class I, Division 2 rating pending
- Alarm Relay - Dry contacts



Sentinel CPM Calculations:

- Cylinder-End HPs
- Suction/Discharge Pressures
- Suction/Discharge VEs
- Rod Reversals & Rod Loads
- OEM Methods and Limits Used
- Theoretical PV Cards
- Theoretical Discharge Temps.
- Flows & Flow Balances
- Calculated Clearances
- Interstage Pressure Predictions
- Gas Leakage Rates

ACI eRCM Software:



Sentinel CPM Specifications

Hardware

| | |
|----------------------|---|
| Power Input | 13 W, 24 VDC (18 - 30 VDC) |
| Sensor Inputs | 12 Pressure (4-20 mA or 0-5 V) 2 Magnetic Pickup (TDC & Deg) |
| Alarm Relay | Dry contacts, Normally energized NO & NC contacts Resistive Load: 1 A, 28 VDC max |

Communications MODBUS, RS-485 & Ethernet

Physical & Environmental

| | |
|-----------------------|--|
| Size | 12 x 8 x 3 inch (305 x 203 x 76 mm) |
| Weight | 2.6 lbs. (1.2 Kg) |
| Operating Temp | 32 – 140 °F (0 – 60 °C) |
| Ratings | Class I, Division 2, Groups A, B, C & D (Pending) |