MACHINERY
MONITORING
SYSTEMS, LLC

Data Sheet
M1501-01
Sentinel® CPM

Sentinel® CPM - Compressor Performance Monitor

MMS, in collaboration with ACI Services and Resonance Systems, 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 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!
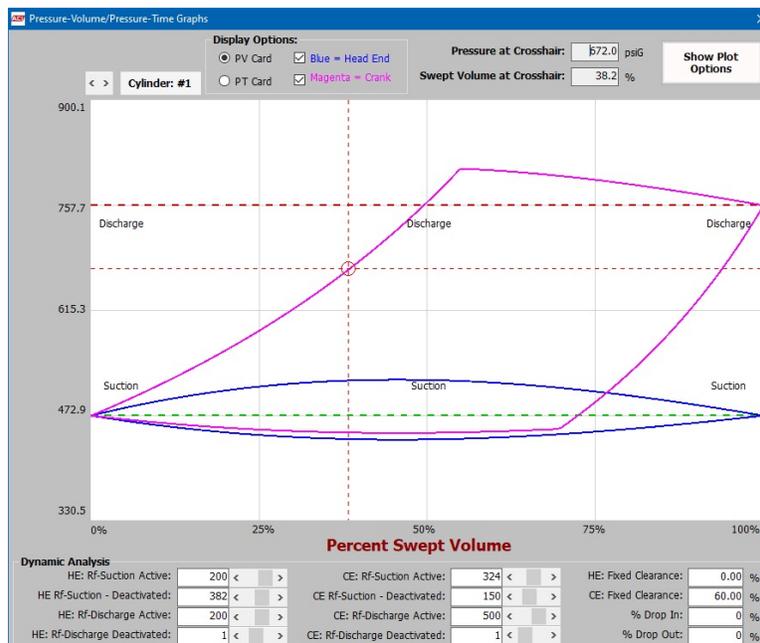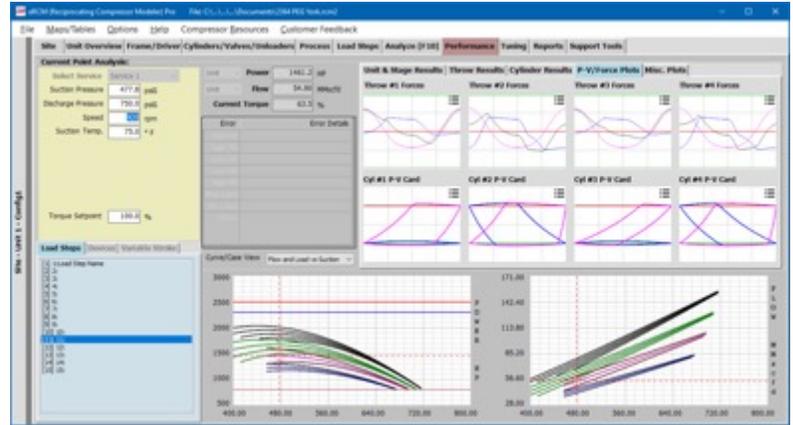
Sentinel CPM
Key Features:

- 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

eRCM Software:

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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)