



SITWATCH IOT

SIMPLE | AFFORDABLE | WIRELESS
OPERATIONS & ENERGY MANAGEMENT

SiteWatch has recently added a new 'Machine Health & Maintenance' module to its **SiteWatch 360** real-time monitoring & measurement system, which tracks many types of operating data in a manufacturing facility or commercial building.

SiteWatch 360 uses small clip-on self powered sensors which can be installed on 50-100 machines in a single day to capture, store and analyze real-time operating data from dozens of machines in a facility.

The need for our machine health and maintenance module is based on our recent investigation of the top 20 Computerized Maintenance Management Systems (i.e., CMMS platforms) sold in the US. These platforms offer 3 very useful online services, but they're **missing a key capability**. They do a good job of...

- **Storing specifications** and spare parts lists for each machine — e.g., manufacturer's name, model & serial #, date of manufacture, rated output.
- **Providing a work-order system** to track maintenance activity based on maintenance intervals which are typically input manually by an experienced engineer or technician.

The missing capability, however, involves providing maintenance technicians and engineers with comprehensive data relating to the **load, stress, and wear-and-tear** on each machine over time.












Obviously, a machine operating for 8,000 hours at 90% of full load is under a lot more stress than one operating at 30% of full load — with a much greater likelihood of failure.

SiteWatch 360 can fill this data-gap by capturing real-time and historical load and operating data to help plant or maintenance engineers calculate and adjust maintenance intervals for all kinds of equipment used in many different processes.

SiteWatch 360 can capture this data from a single machine, a group of machines (such as a production line), an entire shop floor or multiple sites around the world — for any requested date range suitable for comparing today's load levels with last week's, last month's or last year's.



The matrix below shows a typical report layout. We don't provide recommendations for maintenance intervals on every possible type of machine, but we do give maintenance engineers the knowledge they need to make better decisions about the condition of their equipment and improvements to their current maintenance intervals.

Parameter		Current Week	Last Week	Historical <small>(previous 6 weeks)</small>
Energy Usage		3,250 kWh	2,800 kWh	3,125 kWh
Energy Costs		\$423	\$364	\$406
Peak Demand		35 kW @ 9AM 11/4	31 kW @ 10AM 10/30	33 kW
Average Demand		12.5 kW	11.2 kW	12.1 kW
Average Load		38%	35%	38%
Cycles (On/Off)		65 cycles	73 cycles	70 cycles
Run Hours		35 hours	31 hours	34 hours
Avg. Vibration (RMS)		5.6g	5.3g	5.2g
Peak Vibration		7.3g	7.1g	6.8g
Avg. Temperature		93°F	95°F	94°F
Peak Temperature		105°F	106°F	106°F

In addition, here is a link to a short article that compares the 2 main methods for monitoring machine loading and health, e.g., electrical monitoring or vibration monitoring, which concludes that neither method is sufficient on its own and **you need both**, which [SiteWatch 360](#) can provide.

[**Electrical Usage vs. Vibration Data for Predictive Maintenance \(PDF\)**](#)

Please call Kit Gutteridge at 484-406-5810 if you're interested in learning more about our machine health module as well as seeing the whole or any part of our system in operation.