

Sensor Synergy Compressed Air Energy Savings Program

Integrating Energy-Use Monitoring with Air Leak Measurement & Detection Tools

Sensor Synergy's Compressed Air Energy Savings Program is a turn-key approach to identify ways to reduce energy wasted on compressed air systems in manufacturing facilities. This program assesses, locates, monitors, calculates, and confirms energy reduction opportunities in manufacturing facilities.



Continuous Energy Monitoring

- instant visual feedback
- 24/7 data logging
- easy-to-read graphs
- measures real-time power usage
- measures real-time pressure usage

Identify Cost Saving Opportunities

- measure total leakage, pre and post survey
- calculate capacity of leaks in CFM
- identify usage patterns
- indicate usage condition changes

Fast & Easy Implementation

- installed by plant personnel in less than 1 hour
- immediately ready to display & track power usage
- easy-to-use ultrasound air leak detector kit
- pre-installed software
- no recharging of batteries

Program Includes:

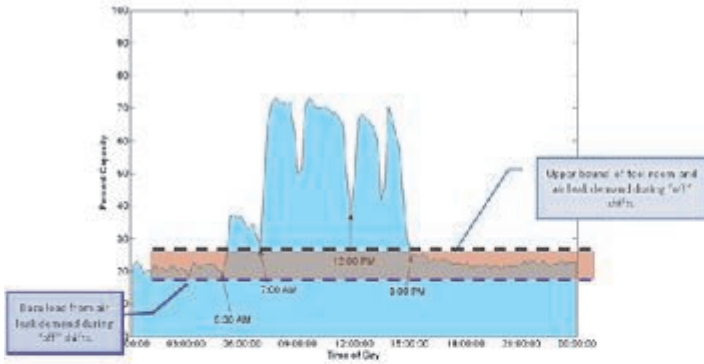
- UL101 ultrasound detector kit
- Watts Aware 135 with remote data delivery
- netbook computer, data logger software, wireless router
- energy monitoring sensors for 2 compressors
- pressure sensors for 2 compressors
- 1-1/2 days on-site implementation



How It Works

The WA-135 monitoring system determines the total air leakage in your compressed air system by measuring power use and air pressure during start-up and shut-down events. The monitoring system uses preset leakage thresholds to automatically indicate the need for an air leakage survey. When an air survey is required, technicians will use the UL101 ultrasound detector to locate the leaks and verify repairs. Measurements before and after air leak repairs can be used to

Significant cost savings to the bottom line



Reports Identify Cost Saving Opportunities

UL101 Kit Specifications

- Sensitivity: Minimum Intensity = 10^{-12} Watts/m²
- Sensitivity: Minimum Ultrasonic Pressure = 2.0×10^{-5} PA @ 40 kHz
- Working Resonance Frequency: 40 kHz +/- 1.5 kHz
- Battery: Standard 9-volt operates 45-50 continuous hours

WA-135 Data Collection

- **Monitors Electricity, Air Pressure and Temperature**
- Data is stored, displayed on stake-holder computers, and analyzed
- Actionable messages are triggered by measured data
- 1-second resolution (typical)
- Internet, Intranet, or LAN connectivity

Sensor Options

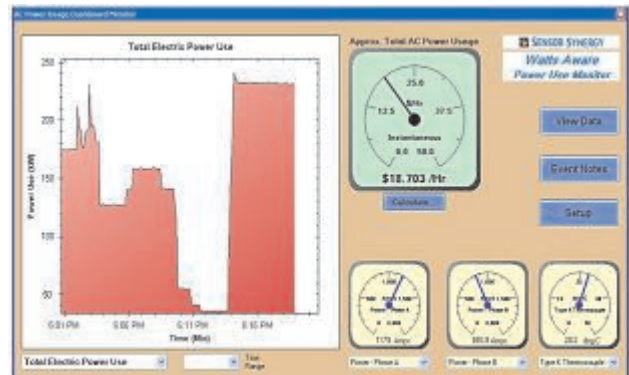
- 200 or 500 amp power monitoring (6 sensors)
- Max 250 psi pressure monitoring (2 sensors)

Benefits of Compressed Air Energy Savings Program

- measures results from leak audit/repairs
- delivers data directly to netbook
- delivers emergency alerts to cell phone or e-mail
- allows for condition based vs. time based audits
- automates data collecting & reporting
- assures on-going savings

What does the typical plant save?

A typical facility can reduce its overall electric bill between 5% and 15%. According to a U.S. Department of Energy survey, between 10% and 30% of electricity consumed is for compressed air. The typical compressed air system uses only 50% of its air supply for production. The rest is wasted or lost to air leaks.



Real-Time Monitoring & Calculation of Costs, Power, Pressure

Creating Engineered Solutions for Real-World Applications with a Focus on ROI

Sensor Synergy's approach to energy saving is to combine science and engineering into applications that provide good return on investment to our customers. The WA-135 combined with the UL-101 provide condition-based monitoring to better manage compressed air systems for cost effective energy savings. Air leak surveys are triggered by actual measurements of your system's aggregate air leakage and are not time-based. With this approach, air leak surveys are performed only when needed which saves facility maintenance teams time and resources.