

Improve Motor System Efficiency with MotorMaster+

MotorMaster+ (Version 4.0) Software Aids Replace/Rewind Decisions

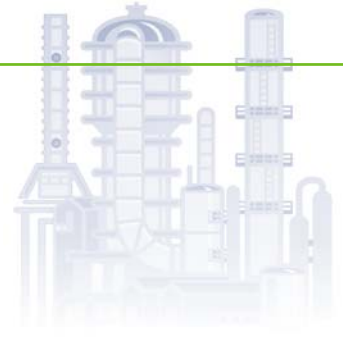
Whether you're a novice or an expert at managing motor systems, MotorMaster+ is designed for you. The separate but communicating modules make the software exceptionally flexible and **easy to learn and use**. This software tool handles everything from calculating payback on a single motor purchase to comprehensive, integrated motor system management.

Version 4.0 has the same look and feel as the popular Version 3.0 and is available as an easy-to-install upgrade. It quickly identifies inefficient or oversized facility motors and computes the savings that can be achieved with more energy-efficient models. The software runs on local or wide-area networks for access by multiple users.

In response to comments and suggestions from diverse industrial facilities, MotorMaster+ 4.0 carries expanded capabilities for inventory management, maintenance logging, lifecycle costing, savings tracking and trending, conservation analysis, savings evaluation, energy accounting, and environmental reporting. It continues to serve as a respected, nonbiased source for motor data.

Helpful Features

- Expanded list of over 25,000 motors from 18 manufacturers, including NEMA Premium medium-voltage (>6,600 volts) motors.
- Improved predictive maintenance testing—facilitates rapid data entry, sorting by condition, and rewind/replace recommendations.
- Enhanced user manual—new reporting methods and efficient predictive maintenance practices.
- Technical data to help optimize drive systems, such as data on motor part-load efficiency and power factor; full-load speed; and locked-rotor, breakdown, and full-load torque.
- Motor purchasing information, including list prices, warranty periods, catalog numbers, motor weights, and manufacturer addresses.
- Capability to calculate energy savings, dollar savings, simple payback, cash flows, and the after-taxes rate of return-on-investment for energy programs—taking into account such variables as load factor, motor efficiency, purchase price, energy costs, hours of operation, and utility rebates.



Motor-driven equipment accounts for 64% of the electricity used in the U.S. industrial sector.

"MotorMaster+ is easy for us to work with....It gave me the numbers I need to justify the purchase."

Irma Grogan, Foreman, Ellensburg Wastewater Treatment Plant, WA

Download free tools from the U.S. Department of Energy to manage electric motor systems more efficiently and save energy and \$\$\$\$. Visit www.oit.doe.gov/bestpractices.

MotorMaster+ Gets Results

MotorMaster+ is a popular tool with thousands of industrial end users, vendors, and consultants. They use it for a variety of reasons—

- To create lists of motors that meet user-specific requirements.
- To calculate the savings and simple payback period for premium-efficiency motors versus standard-efficiency units.
- To optimize the motor repair-versus-replace decision.
- To manage motor systems comprehensively.

A large motor repair shop uses Motor-Master+ to assist customers in making sound motor purchase and replacement decisions. One of these applications at a large facility in Indiana led to the replacement of 125 motors with premium-efficiency motors, saving the plant approximately \$80,000 per year. MotorMaster+ also specified premium-efficiency motors on new OEM equipment at the facility for another \$128,000 in annual savings.

"We've saved a significant amount of energy in our forest products plants and increased reliability through an aggressive motor management plan that relies on DOE motor system publications and MotorMaster+."

In 2001, the Ellensburg Wastewater Treatment Plant in Washington State had to decide whether to replace or rewind two large 50-horsepower aerator motors. Initial use of the MotorMaster+ software indicated that it would be more cost-effective to purchase new motors than to rewind the existing motors. In a second run, MotorMaster+ compared the cost effectiveness and simple payback periods of various new 50-horsepower motors and helped justify the purchase of new standard-efficiency units.

***An independent study
(published in 2000)
credited MotorMaster+
with nationwide annual
savings of over \$2.4
million and 50,687 MWh.***

*John Holmquist, Senior Scientist,
Weyerhaeuser Company*

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

*Office of Industrial Technologies
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