

MotorMaster+ Executive Summary

Overview: MotorMaster+ is a free download from this site and the Department of Energy's (DOE) Advanced Manufacturing Office [here](#). That web site also provides a summary of the tool's primary inputs and outputs. A fact sheet and user's manual can be downloaded from that link as well.

The tool supports motor and motor systems planning by identifying the optimum action for a given repair or motor purchase decision. The tool includes an extensive database of over 20,000 low-voltage induction motors, and features repair/replace decision-making, motor inventory management tools, maintenance log tracking, efficiency analysis, savings evaluation, energy accounting, and environmental reporting capabilities. MotorMaster+ can help manage the inventory process or can be used for single motor selection. The tool helps users identify savings through: inventory control, reduced repair costs, energy efficiency upgrades, and reduction in motor purchase price.

Eastman Kodak's Rochester, NY plant launched a Total Motor Program (TMP) to reduce inventory and increase the efficiency of its motors. Beginning in 2002, they were able to replace over 600 motor to high efficiency motors based upon the recommendations from MotorMaster+. By the end of 2006, annual energy and cost savings were estimated as 5,802,000 kWh and \$664,000 respectively. The simple payback has been slightly more than 2 years. Additional information on Eastman Kodak's program can be found [here](#).

Data Collection Requirements: Data such as motor nameplate data and approximate hours of operation must be collected on the motors being evaluated. Additional information is needed for broader use of the tool. This data includes: Facility and department information, utility rate schedule, process-related operating schedules, motor inventory information (motor nameplate information, operating profile, load status, and field measurements), and life cycle economics (depreciation method, costs, financing, electricity use and cost, and project life). Other factors with data collection:

- The user must be familiar with motor data to use this software. DOE teams with utilities, states, and other organizations to offer training on motor systems management and use of the tool. Additional information is available [here](#).
- Data collection is required to use this software for motor management. The process requires an inventory of all motors with either name plate data or actual run time data. For a facility with hundreds of motor systems, it may take up to several weeks to gather the data required for the software. However, once complete you will have the ability to manage your motor inventory.
- Once data is collected it must be added to the software. This process may take several days for a large inventory of motors. DOE's EERE Information Center, operated by Washington State University, may be able to assist.

Qualifications: The only requirement is an understanding of motors and their use in the plant. An engineering degree is not required.

Usage of the tool: MotorMaster+ can be used as a single motor selection tool utilizing the extensive database of motors. This requires little time and saves many hours of individual searching. The software also supports the management of motors. This utilization will guide selection of inventory levels and replacement vs. repair decisions. Additional use is in negotiation of motor purchase prices. With an

understanding of companywide motor use and an inventory, the user can leverage their entire motor inventory to obtain the best pricing possible.

Ease of Use: Once set up, the tool is easy to use and operates on PCs running:

- Windows 3.1 and up
- 32-bit computer running Windows 95 to Windows Vista, (Windows 7 in XP mode)
- **Vista 64-bit and Windows 7 64-bit will NOT run MotorMaster+ 4.01.01** – [MotorMaster+ International](#) is recommended for these users.
- MotorMaster+ 4.01.01 does not run on the latest version of Microsoft Access. This does not affect the basic functionality of MotorMaster+, but will impede the ability to import motor inventory data into the tool.

Product roll-out roadmap: An upgrade of this tool is planned to start in 2012 with the release scheduled for 2013.