

## CASE STUDY: Plastic Injection Molding #1

Cyclic loads such as Injection Molding machines are perfect applications for Powerboss. The hydraulic pump motor within the machine is only on load for a relatively short period of the total machine cycle; the period when the material is injected into the molding tool. During the rest of the cycle the motor runs at around 5% load.



One of the world's leading suppliers of office automation, electronic devices and photographic equipment has been evaluating Powerboss for the last 18 months with excellent results.

Worldwide, the company employs in excess of 75,000 people. The group environmental vision "aims at pursuing sustainable management and continues environmental conservation practices" and Powerboss is seen as an important tool in reducing both energy costs and CO2 emissions.

In its manufacturing process, it employs many applications that are particularly well suited to Powerboss including plastic injection molding and vacuum compressors to name just two.

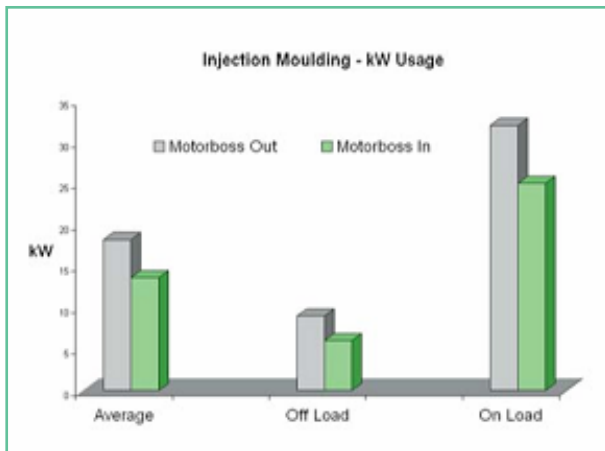
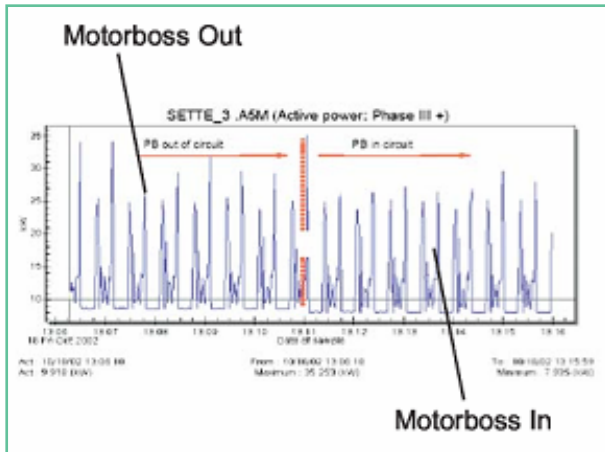


### Plastic Injection Molding - The Benefits of Powerboss:

- Soft Starter
- Peak Demand Savings
- Energy Saving Optimization
- Enhanced Signal Optimization
- Reduced Maintenance Costs
- Quieter Machinery
- Reduced Downtime

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Seven 22kW Powerboss units were fitted to plastic injection molding machines producing paper trays and other associated components for photocopiers.

The load cycle (time on-load versus time off-load) varies depending on the component being produced, but the three-phase analyzer showed that 40% on-load/60% off-load is typical. All seven injection molding machines operate 24 hours per day 6 days per week.

It was identified that 24% kW savings were translated into a return of investment of less than two years with significant and quantifiable CO2 savings. The units have also given trouble free operation in continuous service over an 18-month period.



Annual Consumption	\$3,275
Savings	24%
Annual Savings	\$786
Cost of Powerboss	\$1,540
Return on Investment	24 months

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