



INDUSTRY CASE STUDY

PLASTIC INJECTION MOULDING

Cyclic loads such as Injection Moulding 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 moulding tool. During the rest of the cycle the motor typically runs off-load.

As the motor is commonly left idling off-load during certain times; e.g. during tool changes, Powerboss' no-load timed shut-off feature can provide significant cost saving and safety benefits.

Although Powerboss automatically adjusts supply to an application in proportion to the torque required at a given point in the duty cycle, it is evident that during the cooling phase of an injection moulding machine additional savings can be generated by use of Powerboss' Signal Optimisation feature. A fixed reduced voltage is maintained whilst the mould is cooling; however, Powerboss reverts to standard optimisation on receipt of the signal that the cycle is commencing again.

POWERBOSS IN ACTION

MANUFACTURER OF PLASTIC AUTOMOTIVE COMPONENTS

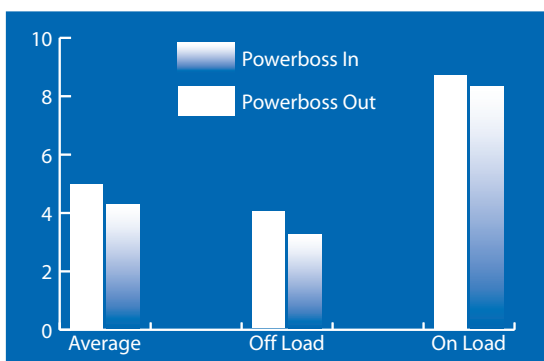
Powerboss was installed by a leading European manufacturer designing, developing and delivering high quality products of technical and visual excellence for the world's leading automotive manufacturers. Automotive component manufacturing is not only highly competitive, but demands very high quality control and reliability in the manufacturing process. Powerboss' ability to dramatically reduce maintenance costs and downtime is therefore a significant benefit for this along with many other industries. The company state that they "believe best value is achievable only through the continual assessment and consideration of our customers' needs for high quality and cost efficiency". Powerboss has been able to help them meet these demands as part of an overall energy policy.

Powerboss units were attached to a number of Plastic Injection Moulding Machines producing automotive components. The following extract from the Facilities Manager's letter to the Distributor clearly illustrates his satisfaction at the performance of Powerboss.

"The introduction to your product and the benefits indicated in the survey carried out were difficult to believe and had I not seen them myself I also would have doubted the benefits indicated. The main usage of electricity

within my company is on injection moulding machines. They account for approximately 40% of the total electricity consumption. The total overall electricity bills subsequent to installing Powerboss on all the machines, have shown a reduction in excess of the 5% that I had budgeted. Some of the moulding machines indicated a saving more than 20%. I have tried various other means of reducing power usage but none have given the benefits of yours. In addition to the cost reduction, the motors run cooler and quieter and this in turn will result in fewer motor failures and down time."

- Soft Starter
- Peak Demand Savings
- Energy Saving Optimisation
- Enhanced Signal optimisation
- Reduced Maintenance Costs
- Reduced Downtime
- Quieter Machinery
- No-load Timed Shut-Off



A simple illustration based on actual measurements of the effect of Powerboss in operation on an injection moulding machine.

Case Study Savings	
Annual Consumption	£2030.00
% Savings	16%
Annual Savings	£326.00
Cost of Powerboss	£650.00
Return on Investment	24 Months

S O M A R

Somar International Ltd., Somar House,
Truro Business Park, Threemilestone, Truro,
Cornwall, TR4 9NH. England
Tel: +44 (0)1872 223000 Fax: +44 (0)1872 264325
www.somar.co.uk

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