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# ABB cuts £10,000 off energy bill for automotive trim manufacturer

A manufacturer of automotive trim for Nissan is using ABB variable speed drives to cut its energy bill by £10,000 per year.

R-TEK, based in Washington, Tyne and Wear, produces injection moulded automotive trim components. As part of a cost reduction programme, the company considered ways of making its injection moulding machines more energy efficient and asked ABB Drives Alliance partner Slater Drive Systems (SDS) to help.

SDS carried out an energy survey on R-TEK's machines and then verified the results by loaning an ABB ACS 600 160kW variable speed drive. The drive was used in conjunction with a Powermiser interface to the machine's hydraulic system.

Most injection moulding machines are hydraulically operated, using electric motors to drive pumps that pump oil from a sump and feed the pressurised oil to the moving parts of the machine. Under the control of the moulding machine's computer, various 'directional' valves are opened and closed at discrete points during a mould cycle. This can be inefficient because the pump runs at a fixed speed, has a fixed capacity and so delivers a fixed amount of oil all the time. The machine rarely needs all the oil delivered and the excess is simply dumped back to the sump. At some points in its cycle, the machine can be wasting up to 95% of the electrical energy supplied to the pump.

The tests performed by SDS, which were carried out with the machines operating normally, showed that, in conjunction with the Powermiser Interface, the drive could save around 40% of the energy consumption, resulting in a monetary saving of £5,000 per machine per year. This equates to a payback of less than two years and an annual reduction in CO<sub>2</sub> emissions of approximately 68 tonnes per machine.

Bryan Simpson, Quality Assurance Manager for R-TEK, says: "The ABB drives have been operational for a month and we have been pleased both with their performance and the service we received from SDS. The manufacturer of the electronic control system, Powermiser, has been back to review the system and has confirmed that we are getting the expected energy savings.

"We now want SDS to do similar work for us on two other moulding machines, as well as looking at how we can save energy on our compressors."

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**Caption:** Controlling the hydraulic system with variable speed drives from ABB is helping to save £10,000 per year on the energy consumption of R-TEK's injection moulding machines.

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