



## OVERVIEW

Inverterk Drives are achieving savings in MoD Spend to Save programme

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## COMPANY

**MOTOR CONTROL WAREHOUSE**

MoD invests in Inverterk for energy efficiency drive

UK

Variable speed drives from Inverterk Drives, supplied and commissioned by Motor Control Warehouse, are helping CarillionEnterprise (C-E) to achieve savings at Beachley Barracks as part of the Ministry of Defence's (MoD) energy Spend to Save programme.

The programme involves investing in projects throughout the Defence estate to achieve significant reductions in its £1 million a day spend on heat, light and power. Motor Control Warehouse has worked with C-E on a number of MoD sites - the largest single site installation has recently been completed at RAF Cosford where 48 drives from Inverterk have been installed as part of DIO's Spend to Save programme.

The savings at Beachley Barracks, Chepstow, are expected to be achieved by the introduction of 12 Optidrive HVAC variable speed drives on ventilation systems and boilers across the site to regulate the speed and flow of water and air.

Kevin Muttitt, Energy Implementation Manager at C-E says, "The variable speed drives have been introduced as one of seven key energy reduction technologies forming part of our 2012/13 Spend to Save programme of works. We estimate that the savings of over £16,000 per annum will see the scheme pay for itself in just under 15 months."

C-E manages the site for the Defence Infrastructure Organisation (DIO), the MoD's property and services provider. It appointed Motor Control Warehouse to survey the site and produce a detailed analysis of all the drives that could be controlled. The equipment chosen included Inverterk Optidrive HVAC fan-pump inverters. A total of 12 inverters were installed on various fan and pump applications with motor frequencies/speeds typically reduced from 50 hz to between 35 and 40hz, easily meeting the project objectives of a minimum 20% reduction.

Using Optidrive HVAC to reduce fan/pump speed during periods when maximum flow is not required provides the maximum possible energy savings. A 20% reduction in speed can reduce the energy consumption by up to 50%.

Kevin said, "Installing the inverters provided less mechanical stress on belts and couplings as the inverters offer an inherent soft start and soft stop for the load under control. As an example a 15kw hot water circulation pump running at a load of 14.7kw, 50hz operation, had its frequency reduced to 40hz and the load dropped to 7.4kw, achieving a 50% reduction."

Steve Setterfield, C-E Assistant Site Estate Delivery Manager, said, "The variable speed drives were installed in Beachley. Motor Control Warehouse worked closely with C-E on all aspects of the drives installation C-E is managing an extensive variable speed drives programme roll out across 25 of the Establishments it manages for DIO - find out more by visiting [www.carillionenterprise.com](http://www.carillionenterprise.com). More details about Inverterk's energy efficient fan and pump control can be found here.



email: [sales@inverterk.co.uk](mailto:sales@inverterk.co.uk) web: [www.inverterk.co.uk](http://www.inverterk.co.uk)

**Inverterk Drives Limited**

Offa's Dyke Business Park, Welshpool, Powys. UK. SY21 8JF  
Tel:+44 (0)1938 55 68 68 Fax:+44 (0)1938 55 68 69