

## HYUNDAI WIA VTL RUNS RINGS AROUND TRADITIONAL SLIDE SYSTEM TIMES



World renowned linear, rotary and continuous motion system manufacturer HepcoMotion has not only improved the machining quality and cut cycle times on certain components by up to 50 per cent with a Hyundai-Wia vertical boring and turning machine,

but its new VTL has also enabled the company to bring in-house the machining of larger components that were formerly outsourced – thus generating further savings in time and money.

Supplied by T W Ward CNC Machinery (Ward CNC), the Hyundai-Wia LV800RM VTL is the latest evidence of how HepcoMotion's Group Manufacturing Director, Barry Engstrom, has instigated a range of continual improvements at the Tiverton (Devon) site, including the introduction of cell-type/flowline production and the continuous upgrading of machining technology to further improve manufacturing efficiencies.

The new Hyundai-Wia was, however, also installed to satisfy another major demand – the need to increase in-house machining capability – as Mr Engstrom explains:

“We are experiencing at least 35 per cent growth in requests for rings of 351 mm to 612 mm diameter [PRT2 rings for ring slide systems for circular/part circular movement]. Rather than continue to sub-contract the machining of these larger components, we knew it would made more economic sense to invest ourselves in the appropriate VTL technology – a machine with a suitable table capacity – to handle these larger parts in-house.”

He continues: “Installing the Hyundai-Wia has allowed these components to benefit from the advantages of CNC machining – reduced set-up times and quicker machining cycles, for example, as well as gain guaranteed accuracy and repeatability. So, we went to the market for a solution, initially creating a hit list of

14 possible machines.”

Highlighting how the rising order book added pressure to finding a solution quickly, HepcoMotion looked at a number of likely machines but settled on the Hyundai–Wia, knowing that Ward CNC had a suitable machine in stock and that the purchase price aligned with the budget.

Mr Engstrom and HepcoMotion’s CNC process engineer, Martin Shapland, visited Ward’s Sheffield headquarters to view the machine and carry out trial machining on the tool steel rings (stainless steel is an option) where, after rough machining of the blank, the Hyundai–Wia completed all drilling and turning operations in a single set–up.

After reading about the experiences of a Hyundai–Wia VTL user on the Advanced Manufacturing Park in Rotherham, while at Ward CNC the duo made the short trip to visit this user and speak with the machine operators. “We realised immediately that the LV800RM was exactly the machine we needed,” reflects Mr Shapland.

With a 800 mm/2,000 revs/min table and a swing diameter of 890 mm, complemented by 800 mm maximum turning diameter and height, the Hyundai–Wia LV800RM boasts a 30/37 kW spindle motor and a 5/7.5 kW driven tool motor, plus C axis indexing in 0.001deg steps. Rapid traverse rates in X and Z axes are both 20 m/min.

Processing the rings in batches of one– to 20–off, “the machine has exceeded all our expectations”, says Mr Shapland. “We knew we would gain a host of cycle time and quality benefits by introducing CNC to the machining of these rings, but the Hyundai–Wia has also allowed us to machine the rings unmanned and at night.

“This follows the example set by our other Ward CNC–supplied machines – a pair of re–engineered large machining centres that are used for the production of linear systems.”

As the originator of the linear Vee guide system, HepcoMotion today manufactures many variations of the system, from light high precision systems for accurate positioning at high speed to heavy load, slow moving applications in hostile, no–maintenance installations. The company also offers a range of driven products, belt, ballscrew, rack and pinion assemblies, as well as complete machine gantries and systems.

Interested in our machines? Contact our sales team:

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