

100 YEARS OF MANUFACTURING TECHNOLOGY INSIGHT

MACHINERY



EMO 2017

Second preview

Subcontracting

Automating operations

Marking & traceability

Broad-ranging benefits

In the round

From CNC to manual,
bars to billets, latest
lathes offer advantage

FRICITION BENEFITS AEROSPACE

WELDING REDUCES TITANIUM AIRFRAME PART MACHINING REQUIREMENTS

SEPARATE CAD/CAM & PRODUCTION IT SUPPLEMENT

Leonard, who has been production manager at the company for over two decades, says that Cosmopolitan Engineering has been dealing with Ward CNC for many years, working with the applications engineering department to machine/manufacture items such as tool posts, to accompany new machine (lathe) sales.

Along with the spindle ratings of 22 kW spindle motor on the L300C, 26 kW on the SKT-300 and 30 kW with the L400LMC, quality of construction that promotes rigidity and accuracy (for example, to 3.5 microns on the SKT-300), plus minimal downtime, are important, he adds.

Concludes Leonard: "As each machine

has been installed and put into service, we've obviously noted its reliability and, subsequently, each time we needed to expand our CNC portfolio, we didn't have to worry too much about the quality of the machines or the back-up from Ward CNC nor, indeed, the cost-effectiveness of the packages on offer.

COMMONALITY OF CONTROLS A BONUS

"We ideally like to have one operator running two machines, so commonality of CNC systems [Fanuc] has been a factor in our choice of machines, although the support on offer from this local supplier takes some beating."

At Kingsmill Industries, a leading

manufacturer and distributor of earthing materials and lightning protection equipment, an XYZ Compact Turn 52 (52 mm bar diameter) with an optional LNS barfeed (<https://is.gd/jexete>) has replaced an ageing CNC lathe.

The Pinxton, Derbyshire-based business is seeing significant growth, driven by the booming construction sector in the Middle East and, with the majority of its products manufactured in-house, it needed to increase production and productivity, turning to XYZ Machine Tools (<https://is.gd/ogogon>) for help. (In fact, the lathe is the second XYZ machine at Kingsmill Industries; it previously purchased an SMX 2500 bed-mill to help manage its milling requirements.)

Emco CNC lathe quintet supports German manufacturer

At German firm Karl Dungs GmbH & Co KG based in Urbach, Baden-Wuerttemberg, five Emco (<https://is.gd/wagelo>) turning machines are supporting production. Gas safety and control technology is the company's core competence, with Dungs manufacturing important functional components, such as cylindrical solenoid tubes, in-house. Klaus Frenz, marketing and communications manager, refers to them as "the solenoid valve's heart." In order to machine these parts, Dungs has installed five Emco machines: one Vertical Turn 250 MY vertical lathe and four Hyperturn 45 horizontal turning and milling centres, each of them equipped with different, component-specific workpiece feeding devices. Since their commissioning in 2014, they have achieved very good results, as Matthias Hottinger, production engineer for machining processes, underlines by saying: "Dungs is the Mercedes Benz of gas safety and control technology."

The company had been running an Emco machine already, performing reliably from 1998 to 2014. By the end of 2012, Dungs had planned to expand its machining capacity. New and efficient machines compatible with CAD/CAM systems were required for tapping, turning, milling, drilling, grinding and spinning of the housings and solenoid tubes, but available space was an issue, requiring compact solutions. Automation was a further requirement.

The Vertical Turn 250 MY is for chuck parts with a diameter of up to 250 mm; it performs turning, drilling and milling tasks, featuring Y-axis. It is a self-loading machine with the spindle set in a moving column above the turret. A pallet conveyor transports parts into the machine; the pallet clamps can be quickly and easily adjusted to the seven different sizes of the gas pressure regulator housings. Set-up and production times have been radically reduced.

The Hyperturn 45 has a capacity of a 300 mm diameter by 480 mm length; bar up to 48 mm diameter can also be fed.



Karl Dungs GmbH & Co KG has installed five Emco turning machines to support expanded production. Inset: solenoid tubes that the firm machines on a Hyperturn 45, above

Important features include the main and sub-spindle and two 12-location turrets, each with 12 driven tools. Its milling spindle with direct drive, the stable Y-axis with a 70 mm stroke, and roller guides in all linear axes that contribute to high process quality. Two of the four horizontal turning centres are equipped with bar loaders and one each with swivel and/or pallet loader.

The machine with swivel loader is where solenoid tubes requiring sophisticated processing are produced. They are assembled as a cylinder in three parts and are machined in approximately two minutes. "Thanks to its excellent thermal stability, the Hyperturn 45 has no trouble coping with the forces generated during the removal of the large chip volume," says Hottinger, adding: "Using the Hyperturn 45 for producing this thin-walled hollow part, we are perfectly able to master this process in a reproducible and safe manner."