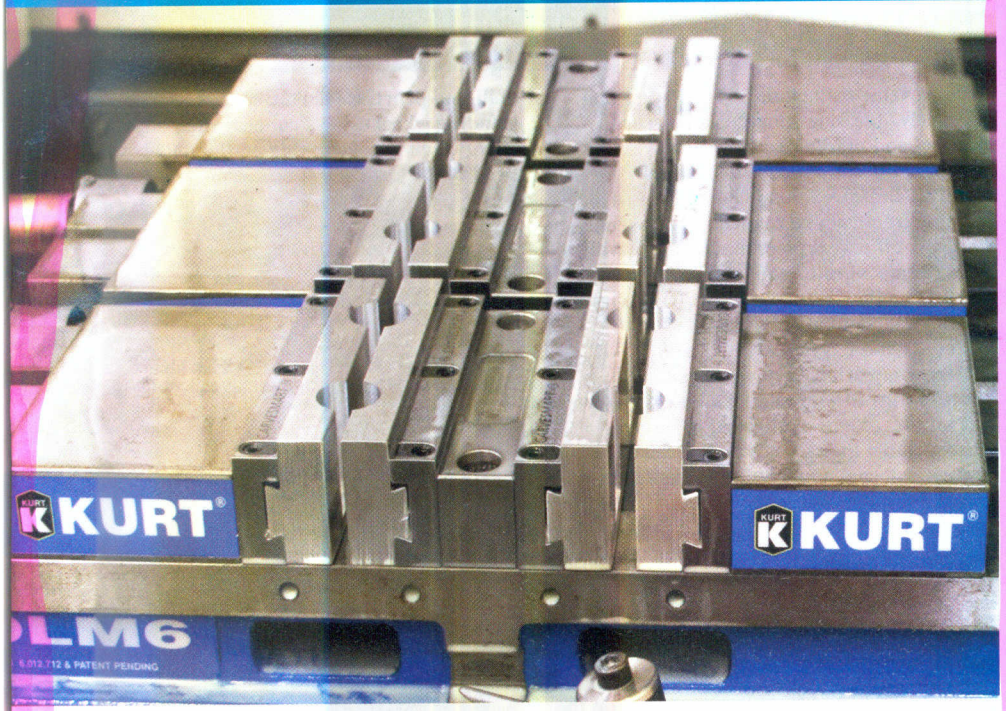
New equipment



Quick-change vice jaw system

The patented CarveSmart quick-change vice jaw system from America is now available in the UK exclusively from the work-holding specialist Leader Chuck Systems Ltd, Tamworth (www.leaderchuck.com). The jaw system has been developed to simplify set-up for production vices and tool-room vices. It uses a dovetail interface to quickly and accurately locate and secure the jaws.

With conventional vices, the jaws attach to the face of master jaws via cap screws. However, the CarveSmart system uses master jaws with a female dovetail profile designed to accept vice jaws with a male dovetail profile; this design allows the jaws to be front-loaded or slid into the side of the master jaws. They are secured via clamping elements at the top of the master jaws; these provide downward pressure to keep the jaws in place.

Existing jaws are removed by loosening — but not removing — three channelled clamping elements in the top of each master jaw; and because the clamping elements are located at the top of the master jaws, it is not necessary to open the vice as might be required to access cap screws in a conventional vice configuration. A jaw can be changed in less than 1min.

Because the CarveSmart system does not rely on cap screws, the jaws feature an increased machinable clamping area, allowing larger parts to be held deeper within the jaws and, therefore, more securely in the vice.

Dovetailed jaw blanks are available in a number of different sizes. Extruded-aluminium jaw blanks are available in sizes 19 × 50mm, 25 × 57mm and 50 × 75mm; blank lengths are 150, 790 and 2,400mm. Additionally, dovetailed 19 × 50mm EN32B steel bar stock is available in 150 or 790mm lengths. Quick-change hard jaws and knife-edge jaws can also be specified.

Software for the shipbuilding industry

CAD/CAM/MES/ERP solutions provider Lantek Systems Ltd, Malvern (www.lantek-systems.co.uk), has invested years in the research and development of tailored software solutions to optimise the processes of sheet metal design, nesting and machining — to make them more cost-effective for the construction of ships and other vessels.

Lantek software includes CAD importers that are compatible with the top ship design systems; the company also offers technology options for machining management, such as loops and chamfers that help in the programming of the cutting machines. It also accommodates programmable clamps that allow very long pieces to be cut.

Specific options for naval applications include the ability to manage cutting with multiple torches to increase the production of each machine, continuous cutting to eliminate drilling times and increase the wear life of the cutting nozzles, and the ability to manage any marking, engraving or piercing process available on the machine.

Lantek's software includes automatic and semi-automatic nesting algorithms, as well as nesting for multiple torches; this allows users to optimise material utilisation and reduce machining times. Shipbuilding-specific technology allows for the nesting and automatic machining of double and symmetrical sheets, comprehensive control of sheet remnants, and pre-nesting to select the ideal sheet format for the best cutting performance.

Other functions that Lantek has adapted to the needs of this sector include time and cost calculations, previews of machine loading, traceability, and integration with any existing management system.

Shopfloor-proof digital indicators

Bowers Group, Camberley (www.bowers.co.uk) — the UK agent for the Swiss metrology equipment manufacturer Sylvac — has launched a range of shopfloor-proof Sylvac digital indicators that are resistant to water and coolant. Available with a measuring capacity of 50mm, the S_Dial Pro indicators have a resolution of 0.0001mm and a repeatability of 0.0002mm.

Manufactured from materials that can withstand extended shopfloor use and employing a mixed ceramic bearing/ball bearing system for smooth operation and extended working life, the new Sylvac digital indicators can be fitted with a wide range of contact points. Features include a large LCD digital read-out displaying all measurements, plus a simple three-button operating system that gives easy access to a wide range of functions — for example, metric/inch conversion, zero setting, a pre-set input facility, and the possibility to change the measurement direction. In addition, a user-defined tolerance function allows integrated LEDs to graphically display tolerance status.

If required, S_Dial PRO indicators can be programmed manually or by a PC; they can also transmit their readings via USB or an RS232 output. Battery life is maximised by an automatic wake-up and sleeping system. A period of inactivity puts the indicators into an energy-saving 'sleep' mode; any indicator activity will then re-activate the gauges and return them to their pre-sleep status.

In brief . . .

➤ Heidenhain (GB) Ltd, Burgess Hill (www.heidenhain.co.uk), has uprated its LF series of sealed incremental linear encoders; they now offer improved positioning accuracy for use in precision machine tools such as jig borers and jig grinders, as well as linear-motor applications. From a grating period of 8µm, the encoders generate 1 Vpp scanning signals that are free from harmonics and can be highly interpolated. On the new LF 185 and 485 units, the resulting position error within one signal period is typically smaller than 0.4µm. LF encoders are available in lengths up to 3m.

➤ Leicester-based Taylor Hobson Ltd (www.taylor-hobson.com) has launched the Talyrond 500H range of roundness instruments that use rotary, vertical and horizontal measuring datums to duplicate a machine tool's movement and exactly reproduce the workpiece shape. The resulting high-precision simulation of the cutting tool's path allows precise control of the manufacturing process. This single instrument provides five types of measurement: roughness; roundness; contour (radius, angle, height, length and distance, for example); cylindrical mapping; and the measurement of non-round parts (such as cams and pistons).