KADIA CONTINUES TO REFINE ITS ULTRA-PRECISION HONING SPINDLES

Every micron counts when it comes to honing high-precision components, such as those required for fuel injection systems or hydraulic applications. To meet the high quality requirements, honing machine manufacturer KADIA Produktion in Nürtingen, Germany, uses direct drive technology to power the company's LH (Lean-Highspeed) spindles and their stroke.

The first LH honing spindles for small to medium diameters were introduced and patented in 2004. For the first time, they used direct drive for the stroke move-ment via a wear-free linear motor. The design offers high material removal rates and imparts almost no vibrations to the honing tool, improving accuracy. A direct-drive, synchronous, built-in motor provides the spindle drive and offers similar advantages. The honing stones are expanded electromechanically in increments measured in nanometres by means of a high-resolution servomotor. KADIA has arranged the spindle motor and the expansion motor coaxially, one above the other and close to the linear drive, resulting in a compact and powerful system. The innovative concept is completed by an internal coolant supply.

Henning Klein, managing director of KADIA comments: "We have supplied 700 spindles over the past decade. Meanwhile, the second generation of even more compact and energy efficient LH honing spindles has been launched.

"Despite a weight reduction of almost 30%, our latest LH2 spindle achieves the same forces and torques as our previous standard spindle. The other new vari-ant, the larger LH3, matches the performance of the previous most powerful model yet weighs nearly 20% less.

"Coolant supply and tool clamping have been improved, as has access for maintenance. The hydraulic expansion chuck is now seated within the honing spindle rather than on the tip, shortening the overall length and leading to ultra-precise radial runout of the spindle.

"Even demanding, high-precision applications such as match honing with clearance tolerances of less than one micron can be safely implemented."

Tel: +49 (0) 7022 90 39 73
Email: info@pressco.de

SUMITOMO EXTENDS HIGH PERFORMANCE MILLING GRADES

Five different grades of RDMT button-style indexable milling inserts for carbon, alloy and stainless steels as well as cast iron are added to the high performance milling portfolio of Sumitomo Electric Hardmetal. The new inserts span application advantages where benefits from high wear resistance to high resistance to insert fracturing are required.

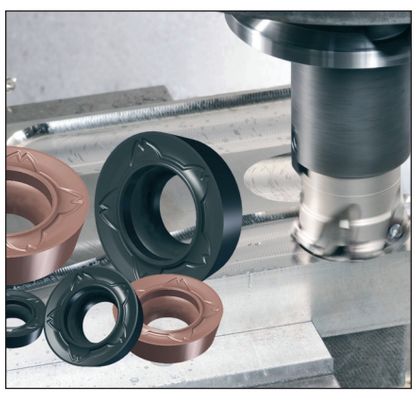
Available in sizes of 8, 10, 12 and 16 mm inscribed circle, the five grades cover physical vapour deposition (PVD) coated ACP100, 200 and 300 and chemical vapour deposition (CVD) coated ACK200 and 300.

The ACP100 for cutting steel and ACK200 grades for cast iron incorporate Sumitomo's Super FF ultra-hard coating that employs a tough carbide substrate with an ultra-fine TiCN crystal structure. It has an ultra-smooth alumina on the surface and faces of the insert. This amalgamation of coating combinations enable up to 1.5 times greater efficiency in machining and provides more than a doubling of tool life over conventional grades under normal cutting conditions. The coated surface also has excellent chipping resistance and improved adhesion strengths.

The ACP200 and 300 grades for milling steel and ACK300 for cast iron employs Sumitomo's Super ZX multi-layer nano technology coating which combines alternating 10 nanometre thin layers of TiAN and AlCrN. Like Super FF, Super ZX delivers 1.5 times greater efficiency and double the tool life over conventional grades under normal cutting conditions. The coated surface also has excellent chipping resistance and improved adhesion strengths.

The ACP200 is ideal for general milling applications of steel as well as die steels, while ACP300 is better for interrupted machining and is ideally applied for stainless steel processing. Meanwhile, ACK300 is specifically developed for general and interrupted milling of cast and ductile irons.

Tel: 01844 342 081
Web: www.sumitomotool.com



ESAB DONATES WELDING MACHINE TO MENTAL HEALTH CHARITY

ESAB has donated a Thermal Arc Fabricator 252i welding machine and Tweco Fusion 250 MIG welding torch to Key Enterprises, an independent Registered Charity based in North Tyneside that provides purposeful occupational training and support for people with mental health problems, learning disabilities and learning needs. The charity had needed a new welding machine for several years but, because of a lack of funds, was unable to purchase one. The machine provided free of charge by ESAB has made a substantial difference to the charity's trainees in the metalwork department.

Within the metalwork department, welding is very important. Unfortunately the old transformer-style 170A welding set had become very unreliable, so the charity had wanted to replace it for several years. Initially Gary Smith, the Metalwork Supervisor, contacted ESAB who suggested that they could donate a Fabricator 252i from the Victor Technologies Thermal Arc range (Victor Technologies is now part of the ESAB Group).

The Thermal Arc Fabricator 252i is a modern, compact, portable, inverter-based welding power source that can be used for MIG, DC TIG and stick (MMA) welding, though Key Enterprises will initially be using it only for MIG, hence ESAB also provided a Victor Technologies Tweco Fusion 250 MIG welding torch. Thanks to the inverter technology, the new welding machine is far more controllable than the one it is replacing, plus it is more powerful.

Gary Smith comments: "We are using the Fabricator 252i for both training and fabrication of custom metalwork and it is 100 per cent better than the old welding machine. Also, the old machine was repeatedly breaking down, so having a reliable piece of equipment is such an asset."

Lisa Donnalley, Operational Manager at Key Enterprises, adds: "We are extremely grateful for ESAB supplying this machine free of charge, as we didn't have the finances to fund it ourselves. It is wonderful to receive high-value equipment that is benefiting both our trainees and the production of custom metalwork that generates income for us."

Tel: 0800 3893152
Email: info@esab.co.uk
Web: www.esab.com