

# NEW PRODUCTS – NEW PRODUCTS – NEW PRODUCTS

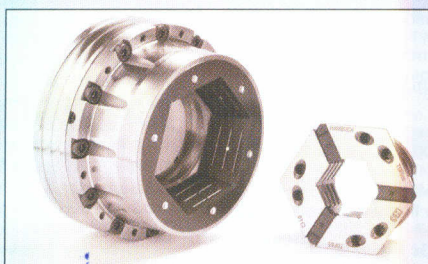
## MINI-MUM EFFORT PROVIDES MAXIMUM REWARDS

The recently extended TOPlus Mini range features significant real-world benefits. Available from Leader Chuck Systems, the new chuck features a mass reduction of 38 per cent, is one third shorter and one third smaller in diameter. This means reduced energy consumption during operation and better cutting tool accessibility.

Thanks to the reduced mass and size the choice of suitable tools is much broader. Also, the tools used can be shorter and therefore more stable – for both the main and sub-spindles. This is particularly key where installation space is limited and in batch production operations where part-to-part consistency is vital. TOPlus Mini is ideal for lowering energy consumption, providing dynamic spindle acceleration and shorter cycle times to lower the cost per workpiece.

Managing Director, Mark Jones, states: "A typical CNC lathe has a 20 to 30 kW spindle motor, which costs around £1,000 per month to run. By reducing the mass of the chuck you can directly reduce the power drawn, which will result in ongoing energy savings. With industrial electricity costs only going up, every step you take towards energy efficiency is rewarded within the business profits. The TOPlus Mini range supports these business goals."

The TOPlus Mini is available in two variants; pull-back and deadlength. The pull-



back TOPlus Mini features a Vulcanized clamping head with pull-back and hexagonal geometry for optimum chuck sealing and a 25 per cent higher clamping force. The fixed base end-stop for clamping with pull-back effect, or central mounting thread for component-specific end-stops makes it perfect for clamping workpieces with shorter collars or shoulders. Additionally, this can be removed when necessary to facilitate a through-bore for bar work. A bespoke mounting thread for drawtube connection is also provided.

For radial clamping without axial movement of the clamping head the deadlength TOPlus Mini is suitable for component transfer between spindles such as horizontally opposed twin spindle lathes, also known as kissing-spindle lathes, and for vertical turning pick-up spindles. Again, the chuck can be used for through-bore work with bar fed raw material.

Providing a concentricity of 0.025 mm there are five TOPlus Mini deadlength chucks in the

range, 26, 40, 52, 65 and 100, the figure denoting the maximum workpiece diameter. The smallest chuck is rated up to 10,000 rpm and a radial clamping force of 35 kN. The Mini 40 and 52 are rated to 7,000 rpm, and offer radial clamping forces of 103 kN and 108 kN and axial compression force of 33 kN and 40 kN respectively. The rotational mass of much larger workpiece capacity of the TOPlus Mini 65 and 100 means these chucks are rated at 6,000 rpm and 5,000 rpm, and accordingly the clamping forces have also been increased. The 65 has a radial clamping forces of 120 kN and an axial compression force of 45 kN, while the largest chuck in the range has a radial clamping forces of 172 kN and an axial compression force of 65 kN.

Covering the same five workpiece diameter ranges, with equivalent speed ratings, radial and compression forces, the TOPlus Mini pull-back chuck range increases concentricity to 0.015 mm.

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## SECO INTRODUCES NEW M06 INSERT GEOMETRY TO TURBO 10 SERIES

Seco has launched the new M06 geometry as part of its Turbo 10 Square shoulder milling range of inserts. The new geometry delivers high productivity and is a cost effective solution for the machining of Stainless Steels and titanium alloys.

The new M06 geometry, part of the company's XOEX10T3 insert range, is now available in grades F40M, T350M, MP2500, MP1020, MM4500, MS2500 and MS2050, and with corner radii from 0.4 mm to 3.1 mm.

All Turbo 10 cutters feature precision milled pocket seats that improve run-out, stability and tool life by providing stable and rigid contact between the tool body and insert.

The tools have through-coolant channels that improve productivity, reduce heat generation and ensure excellent chip evacuation.

Turbo 10 cutters provide precision component manufacturers with a reliable and flexible solution when machining tough materials and are the number one choice for slotting, shouldering, ramping, facing, pocketing, plunging and turn milling operations.

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## NTK OFFERS NEW MILLING GRADE

The new SX9 ceramic insert grade for high speed milling from NTK has proven to be a priceless commodity to manufacturers in the Oil & Gas industry. The remarkably tough insert grade has been launched to offer high speed and feed machining beyond 800m/min, which compared to carbide grade tooling offers significant productivity benefits.

Developed for the machining of Inconel, ductile cast irons and additionally difficult to cut materials, the astounding toughness of the new grade enables it to machine at higher feeds and heavier depths of cut than alternate ceramic grades. The engineers at NTK have recently recognised a niche application for the new grade, the high speed milling of Inconel overlays and Stellite welds that are commonplace in the Oil & Gas industry.

The refurbishment work on valve bodies for the sector that includes extensive welding and re-machining processes with the extremely difficult materials, has until now,



proven problematic for the Offshore industry. With abrasive weld materials and rough surfaces, ceramic insert grades have until now been rendered too brittle to conduct such intermittent machining applications.

The development engineers at NTK have developed a number of insert designations that enable the SX9 to be utilised in turning and milling toolholders alike. For milling, the round RNGN and RPGN inserts can be used as can square SNGN, SNEN and SNGF inserts and rectangular LNX and APCW geometry inserts for shell, face and end milling cutters.

For high feed roughing, as highlighted with its Oil & Gas customers, NTK recommends its XTM face mill cutter body that is available in diameters from 25 to 160mm with two to 20 insert pockets depending upon the diameter of the cutter body.

For higher speed and feed milling, the QTS shell mill is available with diameter options from 40 to 125mm with four to nine insert pockets depending upon diameter selection.

The diverse availability of insert types, geometries and cutter bodies ensure that NTK can provide the marketplace with a comprehensive range of milling applications that are in many instances, the only choice for specific Oil & Gas milling processes.

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