

Flattest pneumatic Quick-Change Pallet Module

With a height of only 20mm, the VERO-S NSE mini module from SCHUNK is believed to be the flattest pneumatic Quick-Change Pallet Module in the world. This new module provides ideal conditions for retrofitting existing machines, giving the end user full use of the work envelope to allow the direct clamping of small workpieces.

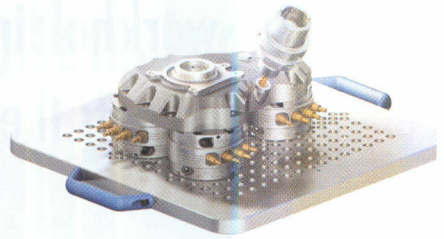
The patented drive concept consists of a fast stroke and a clamping stroke to ensure the compact module has a highly compact performance. At a module diameter of 90mm and a clamping pin diameter of only 20mm, the NSE mini also has integrated turbo function for enormous pull-in forces of up to 1500N. The clamping pin is positioned via a short taper and is fixed with three clamping slides. Locking is done mechanically via spring force that is self-locking and form-fitted. The large contact surfaces between the clamping slide and pin minimize the surface pressure when working in an unclamped condition, this also minimises the wear upon the module.

Since the minimum clearance between two clamping pins amounts to 100 mm, the NSE mini has particularly small and variable

gauges for bore holes for workpiece and pallet clamping. It provides flexibility in the field of zero point clamping that has never been seen before. Even small workpieces can be directly clamped and completely machined from five sides without interference.

For this purpose, the clamping pins of the Quick-Change Pallet Systems are directly screwed in the workpiece. The components are quickly exchanged in the machine and are positioned, fixed and clamped in the Quick-Change Clamping Modules at a repeat accuracy of less than 0.005mm. In order to optimise accessibility, the clamping height of the workpieces can be adjusted with module height extensions. Therefore, the machine spindle can reach all five sides of the workpiece without requiring special tooling.

The NSE mini and all the other VERO-S modules are designed for maximum service lifetime and reliability. All functional components such as the base body, clamping pin and clamping slide are made of stainless steel. Moreover, the maintenance-free modules are protected against chips, dust and coolant. In order to avoid chips jamming in the



module during workpiece change, the base plate can be provided with a bore hole for an air purge connection underneath the opening of the clamping pin. If the modules are automatically loaded, the clamping slide positions can also be monitored. Like all of the SCHUNK Quick-Change Pallet Modules, the VERO-S NSE mini can be integrated into the world's largest modular system for highly efficient workpiece clamping.

This offers a great variety of clamping pallets, clamping devices and multi clamping stations. Setup costs of up to 90% can be saved with this clamping system.

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Large power chuck unveiled at TIMTOS

Visitors to the Autogrip Machinery's stand at TIMTOS 2013, held at the Taipei World Trade Center, were able to see first-hand the largest power chuck the company has ever produced. The machine tool industry forms a crucial element in Taiwan's manufacturing sector, Taiwan is currently the world's fourth largest producer of machine tools. As this year's exhibition is centred on the procurement of top-quality 'Made in Taiwan' machine tools and total solutions for industry, the unveiling of the 3-jaw 1,600 mm diameter power chuck was ideal for the show's focus.

Autogrip is represented exclusively in the UK and Eire by workholding specialist, Leader Chuck Systems. Managing director, Mark Jones, explains: "Demonstrating Autogrip's capability, this particularly large power chuck has been designed and manufactured for a renowned VTL (vertical turning lathe) machine tool builder. The end customer supports the aerospace and oil/gas/petrochemical industries. However, to produce the chuck Autogrip had to invest in a specially built very large grinding machine with 2,000 diameter

by 300 mm capacity. It features four separate grinding heads, one each dedicated to inside, outside, surface and slot grinding."

Autogrip has an established reputation for producing high quality workholding products, manufacturing power chucks and hydraulic rotary cylinders for a number of world class OEM machine tool builders. Leader can offer the complete cost-effective workholding range from Autogrip, with stocks of popular items and spare parts being held at the company's extensive logistics facility in Leamington Spa.

For bar feed or billet loading precision turning applications Autogrip has a range of through-bore and closed centre standard and long stroke 2-, 3- and 4-jaw power chucks, designed to operate at up to 8,000 rpm. For drilling, milling, grinding and other machining operations, a range of 3-jaw stationary power chucks is available. All the chucks are produced from hardened and ground steel and feature direct lubrication.

All Autogrip hydraulic rotary cylinders are constructed from light-weight materials, with through-bore and closed centre workholding



solutions offering class-leading performance characteristics.

Mark Jones concludes: "Not every manufacturer requires a power chuck as large as the one shown at TIMTOS. However, it is important for those that do to know that Autogrip applies the same product quality focus to all of its workholding solutions."

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