

ROBOTS, CHUCKS, CLAMPS & WORKHOLDING

A VICE OF SOME VIRTUE UNVEILED AT TIMTOS

From 5th to 10th March 2013, TIMTOS 2013 was held at the Taipei World Trade Center. The biennial exhibition has already become established as a focus for international buyers, and is a prominent international event in the industry. Visitors to Autogrip Machinery's stand, represented exclusively in the UK and Eire by workholding specialist, Leader Chuck Systems, 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.

As Leader Chuck's 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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AEROSPACE WORKHOLDING COLLABORATION GETS THE GREEN LIGHT

A bespoke fixturing solution, for use in a new Aerospace 'green button' cell, was developed as a result of a major collaboration between Brown & Holmes (Tamworth) Limited and Roemheld (UK) Limited.

Engineers from a major Aerospace supplier approached precision machining and workholding subcontractor, Brown & Holmes, to deliver a purpose-built solution for manufacturing a series of components within a 'green button' cell. One of the main goals of this new cell was to radically reduce the amount of manual intervention in the manufacturing process. The fixtures would move the components through the mill/turn cell utilising robot handling, without any human interaction from when the fixtures entered the cell until they returned to storage after the completion of the machining processes.

Kevin Ward, Joint Director of Brown & Holmes, said: "This presented us with several challenges. We needed to ensure accurate and repeatable positioning of the components into

the fixture, repeatable fixture location onto the machine tool and positive clamping and support of the component through the machining processes: alongside a number of size and weight constraints."

In addition, all fixtures and clamping elements had to be of stainless steel construction. A hot water wash within the cell would clean down fixtures and components between operations and at the end of the process. This could give rise to water staying on the fixtures for an extended period of time. If stainless steel was not used, there was a risk that standing water could lead to corrosion and ultimately failure of the fixtures.

To help meet these challenges, Brown & Holmes worked closely with hydraulic workholding and handling technology supplier, Roemheld (UK), who delivered the hydraulic cylinders and work supports for the final bespoke, fixturing solution. The total stainless construction raised several challenges for Brown & Holmes during manufacture but also required Roemheld to

NEWTECH LTD ACCREDITED WITH ABB ROBOTICS EXCLUSIVE AVP NETWORK

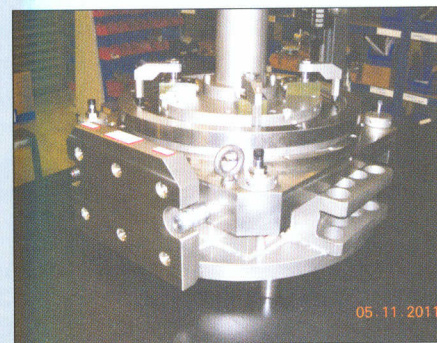
Newtech Limited, one of the leading UK suppliers of ultrasonic cutting systems, has joined ABB Robotics' exclusive Authorized Value Provider network. The accreditation was granted in recognition of Newtech's achievements in expanding the original core portfolio of ultrasonic cutting systems and machine manufacturing. Newtech is dedicated to developing automated technology that is specially designed for efficient operation and increased productivity.

The Bedfordshire based company has developed a reputation for quality and service within the world of food manufacturing for over 25 years, delivering timely, cost-effective results for some of the UK's major food manufacturers.

As an ABB Authorized Value Provider, Newtech will be able to offer its customers an expanded range of services and solutions incorporating the latest ABB robot technologies and software. The company will also be provided with sales, marketing, technical, application and service support from ABB, together with software training for all employees.

Phil Waters for Newtech Limited comments, "Over the last 10 years we have established the company one of the leading UK manufacturer of ultrasonic slicing equipment. Our focus on the product handling aspect of food production lines will be further developed with ABB's support and expertise. We are looking forward to building on our relationship with ABB to help expand the automation solutions we offer."

Web: www.abb.com/robotics



re-design a number of clamping elements from its 'standard' product range and create one-off specials, due to the unusual material requirements.

The finished application met all end user needs requirements and is in production today.

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