

## Force to be reckoned with

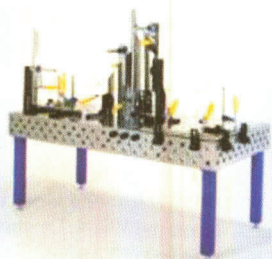
Hainbuch's easy-to-use TESTit clamping force gauge is capable of measuring clamping forces greater than 200kN and of measuring internal and external workholding systems, such as mandrels and manual/power jaw or collet chucks.

Says Mark Jones, MD of Hainbuch's UK agent, **Leader Chuck Systems**: "Design necessity and optimum material selection means that some components require lighter clamping forces, or

manufacturers risk damaging the part. However, if it not clamped securely the machining operation will be compromised. With the margin between clamping too tightly and not tight enough being so narrow it is vital that the actual clamping force is known. Using the TESTit gauge the clamping force can then be calibrated to exactly match the process requirements."

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## RAPID CLAMPING



Available from **Surface Technology Products**, the S4 System welding table is suitable for tasks such as clamping, measuring, monitoring, fixture construction, bending and folding. It can also be used as a

machine base for light milling work, but, in 80% of applications, it is used as a welding table.

At the heart of the system is a universal ball bolt. Its mechanical design means it can be reliably fixed in place with one hand in a second, reducing set-up and changeover times.

The S4 system is made with a tolerance of 0.03mm and has more than 100 additional tools, making it suitable for the manufacture of individual welded parts and prototypes and as the basic clamping system for series manufacture – both for manual and robotic welding tasks.

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## Planetary mixers

Some materials, such as silver-loaded pastes, adhesives and inks, can suffer degradation in storage. This can be rectified by re-mixing and degassing – quickly achieved by use of the Thinky ARE series of planetary mixers supplied by **Intertronics**.

Particles of silver of a high specific gravity settle during storage and are difficult to disperse evenly by manual mixing. Reduced electrical conductivity and inconsistent quality



can result from poor homogeneity and air entrapment. Re-dispersion of silver-loaded materials is achieved by mixing and de-aeration with an ARV-310. It takes just 15 to 30s of re-mix prior to use to de-gas and disperse stored silver paste to optimal performance.

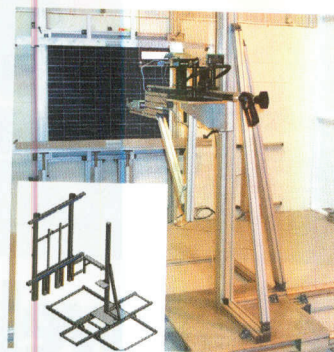
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## PASSING THE TEST AT IPSOL

From its base in Nottingham IPSOL Energy provides product test, R&D and consultancy services in clean energy with particular emphasis on the Solar Photovoltaic market. IPSOL's Centre of Excellence includes test and measurement equipment based around MiniTec Profile System machine framing and building components.

MiniTec's structural elements and machine frame hardware have been used for three IEC certification tests that each required the flexibility to cater for an assortment of solar panel types and sizes as the Unit Under Test, and provide a stable structure for measurement and test-support equipment. Tests included an enclosed 30m<sup>2</sup> Soak Room where PV panel performance is measured, a UV-Degradation test-stand, and Hail Test.

MiniTec worked with IPSOL, using its own in-house design service to develop 3D CAD concept drawings for each test-stand, which were then developed. IPSOL sourced and



supplied third party components to MiniTec to ensure their correct installation and to coordinate electrical cabling requirements.

Rails, hardware and frame construction can be adapted during build. MiniTec's Powerlock fastening system is an effective frame connector that requires just the twist of an Allen key with no profile pre-machining. This makes profile re-use and adaptation possible with minimum cost and effort.

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## Accreditation for heat treatment

Following a 12-month period of investment in new technology, processes and training, spring, bent wire form and assembly manufacturer **William Hughes** has gained Nadcap

accreditation for its heat treatment facility, one of just a handful of companies in the UK to achieve this.

The company procured a new industrial oven. As part of gaining Nadcap accreditation, the oven is subject to rigorous temperature uniformity surveys to ensure a tolerance of  $\pm 5^{\circ}\text{C}$  can be maintained over a range from 300-750°C.

William Hughes has also invested in a Zwick tensile testing machine and software. This has been audited for room temperature tensile testing and accreditation achieved.

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## TUBE BENDING TECHNOLOGY ON SHOW

At Tube 2012 (26 to 30 March, Düsseldorf), all-electric tube bending machine specialist **Unison** will be demonstrating a machine with laser-controlled spring-back correction system. This will be the first time the equipment will be shown publicly in Europe.

The tube bending machine will be equipped with a new form of quick-release tooling and a barcode identification system, which enables machine operators to handle

complete tool changeovers within 2 to 5min, with full verification of the process.

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