

# OrbiNEWS

Autumn 2005

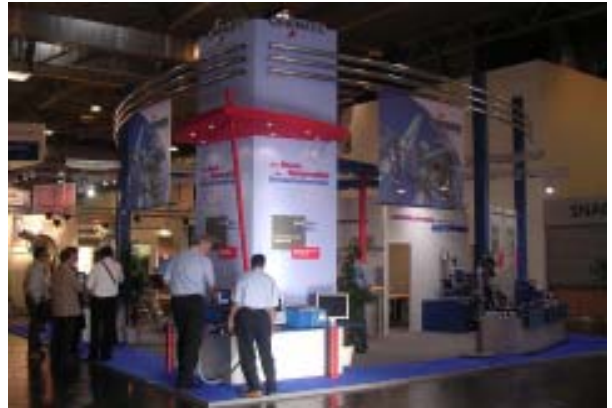
Keeping You Updated With The Latest Developments In Orbital Welding Technology

## Schwiesen & Schneiden 2005

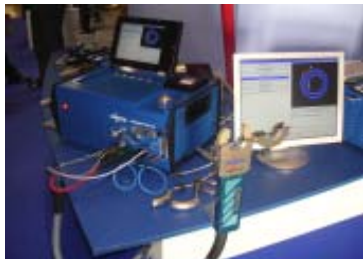
The Schweissen & Schneiden exhibition took place from 12-17 September 2005 in Essen, Germany and saw welding equipment displayed over 12 exhibition halls.

Orbimatic GmbH hosted their usual large stand with a range of new products, innovative ideas and future concepts.

The Orbimatic stand attracted a large amount of interest which



included visitors from all over the world, including Australia, New Zealand, South Africa, Malaysia, Canada, China, Korea, Japan as well as most countries from Europe. New distributors were appointed in many countries, including Genta Eng in Turkey (See page 4).



The new ORBIMAT 165CA was shown welding

The ORBIMAT 165C Advanced Power Supply was displayed and was demonstrated welding at the show to allow visitors to see the technology that will be available early in 2006. The ORBIMAT 165C Advanced was fully operational and was demonstrated working

in several different languages including Russian & Chinese, which highlighted that this machine will be able to be configured for use in any language, even those that use complex character sets.

Orbimatic also had two new developments on display, which are due for release in the coming months. The first was a slim line enclosed weld head which will accommodate



ORBIWELD 170 Enclosed Weld Head

tube diameters up to 170mm OD and is only 44mm wide. This new head uses the same revolutionary drive mechanism as the proven ORBIWELD TP range which allows the head to be designed as very compact units.



ORBIWELD TP Head with AVC & Oscillation

Also shown was the Electronic AVC (Arc Voltage Control) and oscillation module which will be introduced to the ORBIWELD TP weld heads in the second quarter of 2006. This will allow the ORBIWELD TP range of weld heads to be utilised for welding thicker walled pipes.



Internal Welding Fixture For Enclosed Weld Heads

In addition a range of simple tooling was shown which illustrated the flexibility of the ORBIWELD range of enclosed weld heads. An ORBIWELD 115 was displayed with a 90 degree adaptor and an ORBIWELD 76S with an internal welding mandrel.

## Orbital Welding News In Brief

The Schweissen & Schneiden exhibition in Essen saw the introduction of some new developments which will be introduced in early 2006, these included the ORBIMAT 165C Advanced power supply which was very well received by all who witnessed it

in action.

Mr Chan Teng Huat of Cryogas, Malaysia announced details of the introduction of a new venture, Orbitechnik, which will service the needs of clients throughout the far east regions.

Gen-Ta have been appointed as Orbimatic

agents for Turkey.

A new weld head, the M45, has been introduced for the welding of small diameter, thin walled stainless steel return bends.

Two new partners have been established in the UK to offer customers a wider range of orbital welding equipment for hire.

## BIAWS Offer Hire Service

**Bradshaw Industrial & Welding Services (BIAWS) of Bolton, UK are now able to offer an Orbital Welding hire service.**

BIAWS have purchased an ORBIMAT 165CB and ORBIWELD 76S enclosed weld head package which will be offered for long or short term hire contracts.

This package will cover tubes from 6mm to 76mm outside diameter.

BIAWS can also offer a range of associated accessories to accompany the orbital welding package including tungsten electrode grinders, weld purging equipment and tube cutting/preparation equipment.

BIAWS can be contacted at:

BIAWS Limited  
Tel: 07866 291645  
Fax: 01204 591870  
Email: [biaws@orbimatic.co.uk](mailto:biaws@orbimatic.co.uk)  
[www.orbimatic.co.uk/biaws.htm](http://www.orbimatic.co.uk/biaws.htm)

## New Orbital Welding Technology Centre For Malaysia

**Orbi Teknik Sdn. Bhd. has been established in Malaysia to serve the needs of the process engineering sectors in this region.**

Orbi Teknik bring together a range of high technology equipment for any companies involved in the installation of stainless steel tubes and pipes. All products in the Orbi Teknik portfolio are designed to give clients a one stop shop.

Orbi Teknik will offer three main ranges of equipment to cover orbital welding, tube & pipe cutting & preparation and visual inspection equipment.

The Orbimatic range of Orbital Welding equipment will be offered to give clients the option of enclosed, open arc or tube to tube sheet welding head packages. For tube & pipe cutting and preparation purposes the Georg Fischer range of equipment will be provided. For visual inspection purposes the viZaar range of video inspection equipment and Storz range of endoscopes and boroscopes will be offered.

Orbi Teknik carry out equipment demonstrations in different locations. For further details of the Orbi Teknik range or for details of their future planned regional demonstration sessions please contact Orbi Teknik at:

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No. 41, Jalan Putra Permai 1A, Equine Park  
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[info@orbitechnik.com](mailto:info@orbitechnik.com) - [www.orbitechnik.com](http://www.orbitechnik.com)

## ORBIMAT 165C Advanced

Orbimatic GmbH have developed the ORBIMAT 165C Advanced orbital welding power supply which is designed around the hardware of the successful and proven ORBIMAT 165C Basic, but sees the introduction of a state of the art software package.

The ORBIMAT 165C Advanced includes all the features of the ORBIMAT 165C Basic hardware including the PSS (Pro Service System), HMS (Hardware Monitoring System) and AWCC (Automatic Weld Current Calibration) systems which provide simple user to machine interface.



The ORBIMAT 165C Advanced is very compact and lightweight at only 24kg including a full coolant tank and is also very robust in design. A complete new software package has been developed for the ORBIMAT 165C Advanced using the latest software design methods and concepts to deliver a power and simple user interface.

The new software package allows welding procedures to be stored in individual project files and can be set to operate in nearly all languages including Chinese and Japanese. The software is operated with a 'Magic Eye' which is a concept used in the worlds most advanced executive cars.

The new software is displayed on a large, easy to read 10.5" Colour TFT display and provides on screen prompts for the operator. The new software uses a graphical interface which makes it easy for the operator to understand the structure of the welding procedure. When appropriate the display gives a visual predicted of the weld profile to reassure the operator that the selected parameters are appropriate.

The 'Magic Eye' provides a simple and logical method of splitting weld profiles into welding levels and gives the operator a easy to understand display of what section of the weld in being adjusted.

For further details please contact your local Orbimatic representative.

# M45 Return Bend Weld Head

Orbimatic GmbH have introduced the M45 weld head for the welding of return bends to thin walled tube in heating and cooling equipment.

The M45 weld head has been designed to enable the welding of thin walled stainless steel return bends to tubes fitted in to heating and cooling equipment. The M45 allows this task to be carried out using a precision Orbital Welding Power Supply, such as the Orbimat C range.



This means that not only is the rotation of the torch consistent, but the delivery of the welding current is also kept constant and can be varied around the circumference of the tube. Allowing the heat input to be reduced as heat builds up in the tube sheet.

The heads are controlled with closed loop servos and parameters are monitored 500 times per second to provide a precise and accurate control of the weld profile. It can be used for tubes which are flush, recessed or protruding from the tube plate and the tungsten can be angled by up to suit the specific application it is being used for.

Tubes from 6mm to 20mm OD can be welded with completely repeatable results. Because the welding arc is contained in an enclosed chamber which is filled with inert gas the M45 can be used to weld stainless steel, nickel alloys and titanium tubes.

The M45 weld head can be combined with any ORBIMAT power supply to give a technology leading orbital welding package.

For further details please contact your local Orbimatic representative.

## Qualitas Offer Hire Service

**Qualitas Technology Limited (QTL) of Peterborough, UK are now able to offer an Orbital Welding hire service.**

QTL have purchased an ORBIMAT 165CB and ORBIWELD 115 enclosed weld head package which will be offered for long or short term hire contracts.

This package will cover tubes from 20mm to 115mm outside diameter.

QTL can also offer a range of associated accessories to accompany the orbital welding package including tungsten electrode grinders, weld purging equipment and tube cutting/preparation equipment.

Qualitas Technology can be contacted at:

Qualitas Technology Limited  
Tel: 01733 555830  
Fax: 01733 555831  
info@p-w-s.co.uk  
www.p-w-s.co.uk

## UK Open House Announced

**Orbimatic (UK) Limited, have announced details of an open house to be held on 30 November 2005 at their Orbital Welding Technology Centre in Peterborough, UK.**

The Open House will allow existing, new and potential customers the opportunity to see a range of orbital welding equipment and associated accessories on display in an informal and no-pressure environment.

It will not just be orbital welding equipment on display, but also a range of associated products which will be of interest to any companies that are involved in metal fabrication and welding of any kind.

A range of associated accessories will also be shown, such as tube and pipe clamps, weld purge systems, tungsten electrode grinders and fume extraction equipment.

Orbimatic will show their current equipment range as well as the latest and soon to be released technology.

A 'Welding Clinic' will run on the day, which will allow visitors to speak to some of the industries leading experts to discuss production problems or any new applications. There will be specialists available to answer questions on TIG welding, MIG welding, orbital welding, tube cutting & preparation methods, weld cleaning, visual inspection methods and weld purging methods.

**It is recommended that if you wish to guarantee a consultation session, you book a fixed appointment to avoid disappointment.**

## **BUP Internal Purge Pressure Control**

Orbimatic GmbH have announced details of a new concept internal weld purging products to aid in the welding of small diameter, thick walled tubes and pipes.

The BUP Control Module is a 'Internal Purge Pressure' control module which can be interfaced in the ORBIMAT 165CA advanced power supply. The BUP Control Module allows the internal purge pressure to be adjusted according to weld pool position and then as the weld orbits around the tube the internal purge pressure is adjusted accordingly.

It has long been claimed that by controlling the pressure of the internal purging gas when welding, a more consistent weld profile could be produced. This method of controlling the internal pressure is commonly termed as the 'balanced pressure' system.

However, when the effect of gravity is considered into this equation it soon becomes obvious that this balanced pressure should be adjusted according to the position of the weld pool.

When using a single balanced pressure for a complete rotation of a tube the pressure will 'hold up' the weld pool in the 'over the top' position, but when welding 'underneath' the tube the pressure has an adverse effect in encouraging the weld to sag.

So to produce consistent and repeatable results the pressure would need to be adjusted according to the position of the welding pool. Now, this is where the BUP system comes into its own.

The BUP Control Module allows a higher pressure to be used in the 'over the top' position and then lower pressures to be used in the up, down and underneath positions, resulting in a consistent weld profile around the tube.

If you are interested in receiving further details of the BUP Control Module or would like to register to receive further updates about the latest developments from Orbimatic then please visit our international website and register your interest at:

[www.orbimatic.co.uk/join.htm](http://www.orbimatic.co.uk/join.htm)

## **New Force For Orbital Welding in Turkey**

**Gen-ta Mühendislik have been appointed as the approved distributor in Turkey for the Orbimatic range of orbital TIG welding equipment.**

Gen-Ta will offer customers in Turkey the full Orbimatic equipment and will be able to offer live demonstrations in Turkey for those companies that may find this type of technology of interest.

A comprehensive website has already been established in Turkish to assist customers who do not speak foreign languages and includes company information and product details. This website can be found at [www.genta-muh.com/e\\_main.html](http://www.genta-muh.com/e_main.html)

Gen-Ta also represent the G-Tec range of Natural Gas Systems in Turkey.

Further details of this new partnership can be obtained from Gen-Ta at:

**Gen-ta Mühendislik**  
**Uzunçayir Caddesi, Kadiköy Yapi Merkezi,**  
**D Blok, 31/5, Hasanpasa, İstanbul**  
**Tel : +90 216 428 87 40**  
**Fax : +90 216 428 87 41**  
**E-Posta : [info@genta-muh.com](mailto:info@genta-muh.com)**

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