AHEAD OF THE CURVE
IN WELDING TECHNOLOGY
THE FIREFLY, COMMONLY REFERRED TO AS A ‘WELDING BUG’ OR ‘WELD HEAD’, IS A SEMI-AUTOMATIC WELDING MACHINE DESIGNED AND MANUFACTURED IN THE UK BY IPWL.

The firefly’s unique features give you a clever welding machine that will work with you in the most challenging environments. The firefly is designed to meet the most rigorous standards and is particularly suited to applications requiring a high level of weld repeatability.

The main purpose of the firefly system is to improve the productivity of the welder by continually producing a consistent weld result.

We believe this gives our customers a competitive edge in today’s ever demanding economic climate.
Firefly is an adaptable system for welding, cutting and beveling and is full of clever features to make your life easier:

Features & Benefits

- Firefly incorporates leading digital technology for precise control of key welding parameters.
- Firefly has multiple pass welding capability for workpieces in all gravity positions.
- Firefly has sector control. This feature enables the customisation of specific sectors to give the maximum flexibility and repeatability to weld parameters.
- Firefly has an automatic torch height adjustment feature as standard (with suitable inverters).
- Firefly’s robust design features cope with the most demanding applications and terrain.
- Firefly systems are calibrated to enable all weld procedures to perform exactly the same when using multiple Firefly machines.
- Firefly has a root pass capability without the need for copper or ceramic backing shoes.
- Firefly’s compact size means it can work in confined areas.
- Firefly has both hard wire and flux core welding capability due to the high torque motor installed, effective feed of all types of weld wire is possible.
- Firefly is compatible with suitable inverters from all manufacturers.
- All this combines to give you a clever welding machine that fulfils your automated welding requirements.

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Firefly includes an integrated arc welding data logger and monitoring unit.

The unit offers a built in solution – a seamless integration with minimal start up times and no external cabling.

Mounted to the front of the firefly control box, the eight-inch touch screen unit will monitor variables such as arc voltage, arc current, wire feed speed, travel speed, arc time and traverse speed.

Data is captured digitally, direct from the weld power source.

**PURPOSE**

The purpose of the unit is to aid the decision making process by providing users with information about the actual weld.

- **Real time weld monitoring** – the unit measures the defined variables to enable the comparison of those variables to upper and lower limits within the weld procedure, then communicates the results of this comparison.
- **Weld data acquisition** – the unit measures, displays and stores the defined variables to evaluate specific arc characteristics.
- **Production data** – the unit provides various layers of productivity related information.

The value of the unit comes when the output is compared to the pre-set tolerances for the workpiece.

Armed with real time information, the user can quickly identify potential process variances and take appropriate remedial action to ensure the weld procedure is followed.

**USING THE UNIT**

The unit is already fully integrated; there is no additional setting up time.

The operator enters basic data about the weld – such as user ID, weld number, welder position – then it’s good to go.

Just press ‘arc-on’ and the unit starts to record the weld data.

**KEEPING UP WITH INFORMATION DEMANDS**

Weld records are a significant part of the huge amount of documentation required to achieve weld validation.

The unit will allow the actual weld data to be exported directly to a computer for compilation of weld records for the job – there is no need to re-enter data manually from reams of printed material.

If printed documentation is required for QA purposes, data can be printed from automatically generated PDF reports.
The firefly weld head has a simple band clamping latch mechanism to enable fast and effective clamping of the weld head to the band. Positioning the weld head on the workpiece is straightforward by using a ‘free wheel’ setting before final locking of the weld head into the chosen position.

Removing firefly from the band is equally simple with a latch release mechanism. Mounting the guide band to the workpiece is aided by a simple attach and release mechanism on the guide band.

Firefly can operate on various band designs – orbital on an external track or orbital on an internal track. Firefly also has a linear capability; where it can operate on a flat track, both vertical and horizontal.

For applications where the workpiece is neither round or linear, but oval or curved instead, a specially modified Firefly is possible. Firefly has a bi-directional capability on all band configurations – there is no need for separate left and right hand machines.

Firefly is a semi-automated machine – the welder must use their skill to make final adjustments to the weld by operating the remote once the weld is underway.

With constant use throughout a welding shift, firefly’s operator’s remote is designed for ease of handling and operation. Much attention has been given to the size, weight and physical robustness of the unit. Similar attention has been given to the positioning and colour of the positive click buttons. The remote incorporates leading digital technology to enhance response times.

A hi-visibility display screen enables ease of parameter identification and quality buttons offer long life and reliability.

The remote is connected to firefly’s control box and controls functions such as travel speed, travel direction and oscillation.

Each firefly remote is inter-changeable with all firefly control boxes.

After extensive field testing, the ease of use design features and physical robustness of the remote will suit most users. However, other options are available.

HMI PROGRAMMING LAPTOP
Firefly uses a ruggedized laptop computer as a programming pendant to enable welding parameter set-up in a familiar windows environment – 50 parameter memories come as standard. Each firefly HMI is compatible with all firefly control boxes, so only one HMI is required per worksite.

The firefly HMI has a ‘team viewer’ remote assist capability. This feature enables on-line diagnostics to be carried out by technicians. Firefly’s HMI allows the user to download actual weld programming data to a USB memory stick for further processing in an Excel spreadsheet format.

TRAVEL BANDS
Firefly is a ‘bug and band’ system – the bug or weld head runs on a travel guide band (sometimes called a track or ring) which is mounted to the workpiece.

With set-up times a key factor for most welding projects, much attention has been given to aid this important process.
SERVICES

Rent or buy
The firefly welding system is available to rent or buy.

If the duration of your welding project is a few months, then renting firefly equipment may be a good option to consider.

If you have longer term projects, or several projects lined up, then buying the equipment may be a better option.

To make a sales enquiry or to ask a question about our rent or buy options, please contact us.

Welding services
We can provide firefly operators to support your project.

This service includes welding crews, supervisory staff, technicians and support staff.

We can also help with weld procedure development for your project.

Training
Although the firefly system is intended to be used by trained welders, a training and familiarisation course is provided to customers.

An experienced welder can be trained to use firefly in one to two days.

Each course is tailored to the skill and experience of the trainee and the intended application.

The course in practical with an emphasis on ‘hands on’ use of firefly.

Ancillary equipment
The firefly welding system can be supplied with ancillary equipment – integrated inverter sets, induction heating equipment and automated cutting equipment.

After sales support
The firefly welding system is supported by your local distributor and the UK-based manufacturer.

> Spare parts
An extensive stock of spare parts is maintained for rapid despatch to customers.

> Online technical support
Technicians have access to online remote assist diagnostics software. This enables technicians to resolve firefly technical issues anywhere in the world.

> Software upgrades
Software upgrades can be downloaded and installed from the customer log in area of the manufacturer’s website.
FOR MORE INFORMATION ABOUT THE SUITABILITY OF FIREFLY FOR YOUR INTENDED APPLICATION, PLEASE CONTACT US.

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>Details</th>
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<tbody>
<tr>
<td>Minimum Weld Diameter</td>
<td>6 inches (150mm)</td>
</tr>
<tr>
<td>Maximum Weld Diameter</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Maximum Wall Thickness</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Maximum Oscillation Width</td>
<td>3.6 inches (92mm) independently adjustable in 0.0001 inch (0.01 mm) increments</td>
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<tr>
<td>Dwell Time</td>
<td>0-8 independently adjustable in 0.01s increments</td>
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<tr>
<td>Travel Speed</td>
<td>0-270 inches (0-6858mm) per minute</td>
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<tr>
<td>Wire Capacity</td>
<td>0.8 – 2.0mm</td>
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<tr>
<td>Machine Weight</td>
<td>10kg Wire off board model</td>
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<tr>
<td></td>
<td>14kg Wire on board model (without 5kg spool)</td>
</tr>
<tr>
<td>Machine Dimensions</td>
<td>Length 30cm</td>
</tr>
<tr>
<td></td>
<td>Width 17cm</td>
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<td></td>
<td>Height 27cm to 33cm</td>
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The firefly welding system is designed and manufactured in the UK by IPWL Limited.