



INVERTER FUSION LTD

DIGITAL INVERTER WELDING TECHNOLOGY

FUSION RANGE

DC TIG, AC/DC TIG & MMA Welding Machines



Made in
Britain

www.inverterfusion.co.uk

Fusion DC Inverters

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3 YEAR
WARRANTY

The Fusion professional range is powered by planar technology for superior performance and reliability and are now covered by a comprehensive 3 year parts and labour warranty



Ask The TIG

All the know how - tips, advice and much more. Ask The TIG, at:

www.inverterfusion.co.uk/askthetig










We manufacture our Fusion range of high quality, lightweight, portable welding machines at our factory in Honiton, Devon.





The range comprises models for both professional and DIY/hobby use and includes 110v machines for use in 110v applications.

Our Fusion welding machines are available through a network of distributors situated throughout the UK – please visit our website for details of your nearest stockist.

All Fusion welding machines:

-  Have very high duty cycles – 100% for some models – to reduce “downtime”
-  Are enclosed in a robust, durable toughened nylon case, with a protection class of IP23, to stand up to harsh industrial environments
-  Have 35-50mm dix output sockets for fast fitting of standard welding cables
-  Work at temperatures from -10 <> +40° Centigrade to handle most climatic conditions
-  Include a comprehensive 2 or 3 year parts and labour warranty, depending on model, with all repairs being carried out by our expert engineers at our factory in Devon
-  Are supplied with a detailed user manual but should you have any questions regarding the use or maintenance of your machine our experienced engineers are available to answer them on our UK hotline – 01404 549791 – or you can visit our Ask The TIG pages on our website.
-  Are generator friendly for use anywhere – best results are achieved using a generator fitted with an AVR

The professional welders in the range are also:

-  Powered by planar technology transformers which are much smaller and lighter than other transformers and give superior performance and unequalled reliability compared to traditional wound technology
-  Fitted with a forced fan wind tunnel cooling system to prevent contamination from dust and dirt leading to high reliability and longevity
-  Equipped with a digitally controlled automatic arc force which makes welding with all types of electrodes exceptional
-  Controlled by a digital processor to ensure a future proof design with software updates easily installed

160MA**£440RRP**

Fusion 160MA Inverter

- Operator friendly, easy to use machines for light duty welding and maintenance
- Ideal for hobby/DIY and semi-professional use
- Up to 100% duty cycle for continuous welding
- Welds electrodes up to 4.0mm
- Single control knob for quick and easy adjustment of the welding current
- Electronically controlled automatic arc force, hot start and anti-stick down circuits ensure smooth uninterrupted welding
- Comprehensive 2 year parts and labour warranty


2 YEAR
WARRANTY

Technical Specifications

160MA
160 AMP

Input Voltage AC 50/60Hz +/- 15%	230
Typical Input Fuse Rating Amps	16 SB
Recommended Generator Rating	5KVA
MMA Power Output Amps	20 – 160
TIG Power Output Amps	20 – 160
100% Duty Cycle @ 20°C (MMA)	100 Amps
100% Duty Cycle @ 20°C (TIG)	120 Amps
Max Open Circuit Volts	56
Power Factor @ 100%	0.71
Efficiency @ 100%	0.94
Weight	6 kg

175MA

£495RRP



Fusion 175MA Inverter

- Easy to use, operator friendly 175 Amp MMA welding machine for general stick welding & maintenance operations
- Up to 100% duty cycle for continuous welding
- Single control knob for quick & easy adjustment of the welding current
- Electronically controlled automatic arc force, hot start & anti-stick down circuits ensure smooth, uninterrupted welding
- Welds electrodes up to 4mm
- Comprehensive 2 year parts & labour warranty



2 YEAR WARRANTY

Technical Specifications

175 MA
175 AMP

Input Voltage AC 50/60Hz +/- 15%	230
Typical Input Fuse Rating Amps	16 SB
Recommended Generator Rating	6.5KVA
MMA Power Output Amps	20 - 175
TIG Power Output Amps	20 - 175
100% Duty Cycle @ 20°C (MMA)	140 Amps
100% Duty Cycle @ 20°C (TIG)	160 Amps
Max Open Circuit Volts	75
Power Factor @ 100%	0.71
Efficiency @ 100%	0.94
Weight	8 kg



180MA

£730RRP

Fusion 180MA Inverter

- The perfect choice for heavy duty welding
- 100% duty cycle for continuous welding
- Welds all types of electrode up to 4mm
- Powered by planar technology for superior performance and unrivalled reliability
- Specially developed MSD automatic arc force and digitally controlled anti-stick down and hot start programmes
- Precise controls allow easy electrode ignition even with difficult materials
- Clear digital LED display panel allows quick and easy selection of MMA or TIG welding mode
- Very tough encoders, without end stops, for all control functions.
- Comprehensive 3 year parts and labour warranty



3 YEAR WARRANTY



151MA**£790RRP**

Fusion 151MA Inverter

- High quality, portable 110V, 150 Amp MMA welder for heavy duty welding on sites where higher voltage machines are not permitted
- 100% duty cycle for continuous welding
- Welds all types of electrode, including cellulosic, up to 4mm
- Powered by planar technology for superior performance and unrivalled reliability
- All features as the Fusion 180MA opposite
- Comprehensive 3 year parts and labour warranty


3 YEAR
WARRANTY

Technical Specifications

	180MA 180 AMP	151MA 150 AMP
Input Voltage AC 50/60Hz +/- 15%	230	110
Typical Input Fuse Rating Amps	22 SB	40 SB
Power Transformer Rating KVA	7	5
Recommended Generator Rating KVA	7	7
MMA Power Output Amps	20 – 180	20 – 150
TIG Power Output Amps	10 – 180	10 – 150
100% Duty Cycle @ 20 °C (MMA)	180 Amps	150 Amps
100% Duty Cycle @ 20 °C (TIG)	180 Amps	150 Amps
Max Open Circuit Volts	97	92
Power Factor @ 100%	0.71	0.71
Efficiency @ 100%	0.94	0.94
Weight	8 kg	8 kg

Product Features

	180MA	151MA
Start Current Control	Pre Set	Pre Set
Digital Power Output Meter	Yes	Yes

200HF & 200PHF



Fusion 200HF & 200PHF DC Inverters

- Practical portable solutions for high quality TIG welding both in the workshop and on site – ideal for professional TIG welding engineers
- 100% duty cycle for continuous welding in TIG mode
- Powered by planar technology for superior performance and unrivalled reliability
- Digitally controlled machines with LCD window & LED function display
- Full MMA welding for all types of electrode, including cellulosic, up to 4mm
- Remote current control device for easy adjustment of the welding current in difficult to access areas
- Automatic sensor to ensure spontaneous shut down if the TIG arc fails to start or is accidentally broken
- Very tough encoders, without end stops, for all control functions
- Comprehensive 3 year parts and labour warranty



Fusion 200PHF DC Inverter - also includes:

- Full pulse TIG welding capability
- Complete adjustment of both high & low level welding currents & high & low level pulse times
- Individual adjustment of the arc start, current level, up slope time, final current level and crater current time to allow complete welding sequence programmes to be established
- SPOT mode to allow repeat tack welding functions and TIG spot welding applications



Technical Specifications

	<i>200HF</i>	<i>200PHF</i>
	<i>200 AMP</i>	<i>200 AMP</i>
Input Voltage AC 50/60Hz +/- 15%	230	230
Typical Input Fuse Rating Amps	22 SB	22 SB
Recommended Generator Rating KVA	7	7
MMA Power Output Amps	20 – 180	20 – 180
TIG Power Output Amps	5 – 200	5 – 200
100% Duty Cycle @ 20 °C (MMA)	180 Amps	180 Amps
100% Duty Cycle @ 20 °C (TIG)	200 Amps	200 Amps
Max Open Circuit Volts	97	97
Power Factor @ 100%	0.71	0.71
Efficiency @ 100%	0.94	0.94
Weight	9 kg	9 kg

Product Features

	<i>200HF</i>	<i>200PHF</i>
High Frequency Start	Yes	Yes
Pre-Gas Timer	-	0 – 25 sec
Start Current Control	Pre Set	5 – 70 Amp
Up-Slope Timer	-	0 – 15 sec
Pulse Current Control	-	5 – 200 Amp
High Pulse Timer	-	0 – 5 sec
Base Pulse Timer	-	0 – 5 sec
Down-Slope Timer	0 – 15 sec	0 – 15 sec
Final Current Control	-	5 – 75 Amp
Final Current Timer	-	0 – 5 sec
Post Gas Timer	0 – 25 sec	0 – 25 sec
Torch 2T & 4T Switch Control	Yes	Yes
Spot Welding Timer	-	0 – 10 sec

200HF FREERANGER

£4,200RRP



Fusion 200HF FreeRanger Welder Generator

- Combines a Fusion 200HF TIG welding machine (see opposite) with a Honda GX390 OHV petrol-powered engine, together with a UK manufactured Harrington generator on a handy, easy to transport trolley
- Offers the ultimate in flexibility and portability
- Can also be plugged into a mains input socket for workshop use



Technical Specifications

	FREERANGER
Engine	Honda GX390 OHV
Fuel	Unleaded Petrol
Running Time	2.6 hrs @ V* Load
Noise Level	74dB (A) @ 7 m
Power Generator	Sincro ET-R Voltage Regulated
Auxiliary Power Output	7.5 KVA – 6 KW
Auxiliary Output Sockets	1 x 240V & 1 x 110V **
Safety Fuse Breaker	3 Pole 32 Amp SB
Output Voltage AC 50/60Hz +/-1.5%	230V
Dimensions (inc. trolley)	940 x 700 x 620mm
Weight	84 kg

** Optional variants available on export models



- Ideal for high quality TIG welding both in the workshop and on site
- 100% duty cycle for continuous welding in TIG mode
- Powered by planar technology for superior performance and unrivalled reliability
- Digitally controlled machines with LCD window & LED function display
- Full MMA welding for all types of electrode, including cellulosic, up to 4mm
- Remote current control device for easy adjustment of the welding current in difficult to access areas
- Automatic sensor to ensure spontaneous shut down if the TIG arc fails to start or is accidentally broken
- Very tough encoders, without end stops, for all control functions
- Comprehensive 3 year parts and labour warranty*



Technical Specifications

200HF
200 AMP

Input Voltage AC 50/60Hz +/- 15%	230
Typical Input Fuse Rating Amps	22 SB
Recommended Generator Rating KVA	7
MMA Power Output Amps	20 – 180
TIG Power Output Amps	5 – 200
100% Duty Cycle @ 20 °C (MMA)	180 Amps
100% Duty Cycle @ 20 °C (TIG)	200 Amps
Max Open Circuit Volts	97
Power Factor @ 100%	0.71
Efficiency @ 100%	0.94

* 3 year warranty applies to the welder only.
The generator is covered by the manufacturer's 1 year warranty.

Product Features

200HF

High Frequency Start	Yes
Start Current Control	Pre Set
Down-Slope Timer	0 – 15 sec
Post Gas Timer	0 – 25 sec
Torch 2T & 4T Switch Control	Yes

210 AC/DC

£3,000RRP



Fusion 210 AC/DC Inverter

- Powerful AC/DC inverter welder – dual wave technology for welding specialist aluminium alloys
- Power Factor Correction increases the power factor to 0.99, reducing the power draw and allowing a high output to be achieved with only a 16A fuse
- Up to 100% duty cycle for continuous welding
- Powered by planar technology for superior performance and unrivalled reliability
- Electronic ignition control automatically adjusts the initial ignition settings to ensure the optimum start for both TIG and MMA welding
- Noise reduction system to significantly reduce noise during the welding of aluminium
- 99 pre-settable programmes
- Comprehensive 3 year parts and labour warranty





Technical Specifications

	<i>210 AC/DC</i>
Input Voltage AC 50/60Hz +/- 15%	230
Typical Input Fuse Rating Amps	16 SB
Recommended Generator Rating	6KVA
TIG Power Output	5 – 210 Amps
MMA Power Output	5 – 170 Amps
100% Duty Cycle @ 20 °C (TIG)	160 Amps
100% Duty Cycle @ 20 °C (MMA)	175 Amps
Power Consumption TIG	4.8 kVA
Power Consumption MMA	5.5 kVA
Power Factor @ 100%	0.99
Insulation Class	H
Torch Cooling	Gas*
Weight	9 kg

210 AC/DC



Fully adjustable features include:

HF Start
AC Balance Control
AC Frequency Control
Pulse Time & Current Control
Pre Gas Time, Post Gas Time
Ignition Energy
Start Current
Up Slope Time, Down Slope Time
Crater Fill Current
Hot Start
Arc Force
Remote Current Control
Two or Four Touch



*Optional water cooler & water cooled torch available

151HF & 151PHF

£950RRP

£990RRP

Fusion 151HF & Fusion 151PHF DC Inverters

- Designed specifically for use on sites where higher voltage machines are not permitted - ideal for professional TIG welding engineers
- 100% duty cycle for continuous welding in TIG mode
- Powered by planar technology for superior performance and unrivalled reliability
- Digitally controlled machines with LCD window & LED function display
- Full MMA welding capability for all types of electrode, including cellulosic, up to 3mm
- Remote current control device for easy adjustment of the welding current in difficult to access areas
- Automatic sensor to ensure spontaneous shut down if the TIG arc fails to start or is accidentally broken
- Very tough encoders, without end stops, for all control functions
- Comprehensive 3 year parts and labour warranty



3 YEAR WARRANTY

The Fusion 151PHF also includes:

- Full pulse TIG welding capability
- Complete adjustment of both high & low level welding currents & high & low level pulse times
- Individual adjustment of the arc start, current level, up slope time, final current level and crater current time to allow complete welding sequence programmes to be established
- SPOT mode to allow repeat tack welding functions and TIG spot welding applications



Technical Specifications

	151HF 150 AMP	151PHF 150 AMP
Input Voltage AC 50/60Hz +/- 15%	110	110
Typical Input Fuse Rating Amps	40 SB	40 SB
Power Transformer Rating KVA	5	5
Recommended Generator Rating KVA	7	7
MMA Power Output Amps	20 – 120	20 – 120
TIG Power Output Amps	5 – 150	5 – 150
100% Duty Cycle @ 20 °C (MMA)	120 Amps	120 Amps
100% Duty Cycle @ 20 °C (TIG)	150 Amps	150 Amps
Max Open Circuit Volts	92	92
Power Factor @ 100%	0.71	0.71
Efficiency @ 100%	0.94	0.94
Weight	9 kg	9 kg

Product Features

	151HF	151PHF
High Frequency Start	Yes	Yes
Pre-Gas Timer	-	0 – 25 sec
Start Current Control	Pre Set	5 – 70 Amp
Up-Slope Timer	-	0 – 15 sec
Pulse Current Control	-	5 – 150 Amp
High Pulse Timer	-	0 – 5 sec
Base Pulse Timer	-	0 – 5 sec
Down-Slope Timer	0 – 15 sec	0 – 15 sec
Final Current Control	-	5 – 75 Amp
Final Current Timer	-	0 – 5 sec
Post Gas Timer	0 – 15 sec	0 – 25 sec
Torch 2T & 4T Switch Control	Yes	Yes
Remote Current Control	Yes	Yes
Spot Welding Timer	-	0 – 10 sec

ELECTROLYTIC WELD CLEANING MACHINES



£1,790RRP

Fusion Clean

- Portable electrolytic cleaner for the fast, safe and environmentally friendly cleaning of weld discolouration on stainless steel and other metals
- Saves time and therefore money
- Available in both 240v and 110v versions.
- Polish mode for producing a shiny finish including the weld joint
- Works on both MIG and TIG welds
- Avoids the use of harsh chemicals such as pickling paste
- Housed in our distinctive, robust toughened nylon case
- Control guards protect the switches from accidental knocks
- Operator friendly with 4 settings and high density LED displays to indicate which function is in use
- Achieves duty cycles of up to 100%
- Comes ready to use, complete with a lead set, a brush with carbon fibre bristles and a toughened nylon handle, a replacement brush head, 1 litre of cleaning fluid and 1 litre of polishing fluid
- Comprehensive 3 year parts and labour warranty
- Replacement brush heads and handles and fluids available as consumables



3 YEAR
WARRANTY



Technical Specifications

	<i>Fusion Clean 110</i>	<i>Fusion Clean 240</i>
Input Voltage AC 50/60Hz +/- 15%	110	230
Duty Cycle @ 20 °C	100%	100%
Weight	13Kg	13Kg
Dimensions	365mm x 360mm x 220mm	365mm x 360mm x 220mm



£2,590RRP

Fusion MultiClean

- Higher powered to enable the use of multi brush heads
- Saves even more time on larger fabrications
- Comes complete with a lead set, two toughened nylon brush handles (one with a 2 brush head and one with a 4 brush head), 10 carbon fibre bristle brush heads, 1 litre of cleaning fluid and 1 litre of polishing fluid



3 YEAR WARRANTY

Technical Specifications

	<i>Fusion MultiClean 110</i>	<i>Fusion MultiClean 240</i>
Input Voltage AC 50/60Hz +/- 15%	110	230
Duty Cycle @ 20 °C	100%	100%
Weight	13Kg	13Kg
Dimensions	365mm x 360mm x 220mm	365mm x 360mm x 220mm



NEW
WH8515
**EXTERNAL SWITCHABLE
GRINDING FUNCTION**

Solar Powered Welding Helmets

- Auto darkening
- Variable delay from dark to light states
- Ideal for Arc, MIG & TIG welding
- High strength mask material
- High clear view filter
- Lens sensitivity controls
- Full conformity with ANSI & CE regulations
- Available in a variety of metallic colours

Technical Specifications

WH8515

Power Supply	Solar & Lithium combination
Filter Size	110mm x 90mm x 8mm
UV/IR Protection	Up to shade DIN 15 at all times
Operating Temperature	-5 °C - 55 °C
Light State	Shade DIN 4 (3)
Variable Dark Shade	Shade DIN 9 - 13 (5 - 9)
Switching Time (from light to dark)	1/25000 second
Delay Time (from dark to light)	Adjustable 0.15 - 0.8 sec
Sensitivity Adjustable	Yes
Shade Adjustable Knob	Yes
Grinding Function	Yes



IFL Holdall

- Tough, durable holdall designed to fit all models in the Fusion range

All Fusion machines can be supplied with an accessory pack:

Light Duty Stick Welding Accessory Package

- 200 Amp MMA Electrode Holder & Crocodile Earth Clamp, fitted with 2m Cable & 35mm Dix Plug

Heavy Duty Stick Welding Accessory Package

- 400 Amp MMA Electrode Holder & Crocodile Earth Clamp, fitted with 3m Cables & 35mm Dix Plug

Scratch Start TIG Welding Accessory Package

WP17 Torch Accessory Kit including:

- 150 Amp WP17V 4m TIG Torch, fitted with Plugs & Handle Mounted Gas Valve
- Back Cap 1.6 & 2.4mm Collets, Bodies & Tungstens
- 400 Amp MMA Electrode Holder, fitted with 3m Cables & 35mm Dix Plugs

HF TIG Welding Accessory Package

WP17 Torch Accessory Kit including:

- 150 Amp WP17 4m switched TIG Torch fitted with plugs
- Back Cap 1.6 & 2.4mm Collets, Bodies & Tungstens
- Argon Gas Supply Hose 3m, fitted with 1/4" - 3/8" BSP nuts
- 400 Amp MMA Electrode Holder, 400 Amp Earth Return fitted with 3m Cables & 35mm Dix Plugs

HF TIG Remote Welding Accessory Package

WP17 Torch Accessory Kit including:

- 150 Amp WP17 4m remote switched TIG Torch fitted with plugs
- Back Cap 1.6 & 2.4mm Collets, Bodies & Tungstens
- Argon Gas Supply Hose 3m, fitted with 1/4" - 3/8" BSP nuts
- 400 Amp MMA Electrode Holder & 400 Amp Earth Return fitted with 3m Cables & 35mm Dix Plugs

Also available:

- Foot pedal
- Regulator & flow meter



Your local IFL distributor:



DIGITAL INVERTER WELDING TECHNOLOGY