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Product Brochure For W1730

- ENVY OMNI 220 AC/DC Welder

SKU: U11596

TIG Current Range: 5-220A



ORDER CODE:	W1730
Type:	AC/DC WELDER
MODEL:	ENVY OMNI 220 AC/DC
Part Number:	U11596
Voltage / Amperage (V / amp):	240 / 15
Recommended Plug (amp):	15
Input Frequency (Hz) (Hz):	50
Input Current (amp):	~
Imax (A) (amp):	32
Ieff Current (amp):	15
Power Rating (kVA):	10
Rated Output Current (amp / V):	~
Range of Output Current (amp):	25 - 220A (MIG) & 5 - 220A - (TIG) & 10 - 200A - (MMA)
Arc Force (amp):	~
No Load Voltage (V):	~
Pre-Flow (S) (sec):	~
Clean Width (%) (%):	~
Slope-Down Time (S) (sec):	~
Post-Flow Time (sec):	~
Base Current (%):	~
Pulse Frequency (Hz):	~
Pulse Duty Cycle (%):	~
TIG Welding Thickness Range (mm):	~
MMA Welding Thickness Range (mm):	~
MMA Electrode Range (mm):	~
Duty Cycle 40 Deg C - TIG (% @ amp):	35 @ 220 (15A) & 60 @ 168 (15A) & 100 @ 130 (15A)
Duty Cycle 40 Deg C - MMA (% @ amp):	25 @ 200 (15A) & 60 @ 129 (15A) & 100 @ 100 (15A)
Duty Cycle 40 Deg C - Plasma (% @ amp):	40 @ 40
Plasma Severance Cut Capacity Carbon Steel (mm):	25
Plasma Production Cut Capacity Carbon Steel (mm):	20
Plasma Production Cut Capacity Aluminium (mm):	14
Dinse Connector:	~
Protection Class:	IP23S
Insulation Class:	H
Standard:	AS 60974.1
Remote Control (Yes / ~):	~
Recommended Generator (kVA):	10
Efficency (%):	~
Power Factor:	~
Dimensions (mm):	820 x 275 x 520
Nett Weight (kg):	33.5

Description

A true all-in-one machine delivering MIG, AC/DC TIG, MMA and plasma cutting from a single platform
Single and double pulse MIG programs & high-frequency AC & DC TIG
MIG & TIG Smart-Set weld modes for complete synergic setups
Fast, clean cutting with pilot arc start & a 25mm cutting capacity

Not All Pulse Machines Are Equal
Less spatter. Lower heat. Smoother results. Streamline your welds with the single and double pulse functions.

Single Pulse
A single pulse weld alternates between a peak and base current, which works to minimise the amount of heat input without compromising on

any of the penetration. The addition of a base current and reduction in heat means it's perfect for softer materials like aluminium. Pulse welding is also done by spray transfer, eliminating spatter and cutting your post-weld clean-up time.

Double Pulse
A double pulse weld alternates between a peak current and two base currents, reducing the heat input of the weld even further than single pulse, while still maintaining all of the benefits. Because of the faster freezing puddle, your double pulse welds come out looking just like a stack of dimes. You get the aesthetics of a TIG weld with all the speed of spray MIG.

MIG Smart-Set
Ready to weld with the press of a few buttons. Simply select your joint type, filler wire, gas mixture, and wire diameter, and the machine will choose the ideal settings. If it’s a little off, you can make manual adjustments to finetune every weld.

Ultimate TIG Welding
Weld every kind of metal. With the ability to run on an Alternating Current (AC) you’re able to weld aluminium as effortlessly as mild and stainless steels on a Direct Current (DC).

TIG Smart-Set
Starting a weld has never been faster with the class-leading synergic TIG. Choose your material, joint type, tungsten diameter, plate thickness, and gas mixture, and you’re off and running. If it’s not quite right, you can tweak the parameters to perfection.

Advanced TIG Programs
Independent Amplitude Control The independent amplitude lets you adjust the amperage in both the EP and EN parts of the AC cycle, letting you completely customise the amount of heat directed to the workpiece and the tungsten.
Steady Arc Steady Arc adjusts the welding current based on the arc voltage. When the voltage goes down, the amperage will go up, and vice versa, to give a consistent weld puddle, a sharper arc and a constant heat input. Weld speeds can be increased with no fluctuations in the weld current.
Speed Start Speed up the formation of the weld puddle by applying a synergic pulse program to the beginning of the weld. The initial pulse works to melt the joint edges faster, for quicker puddle formation compared to a standard arc start.
TackPlus TackPlus is a tack welding program used to create evenly spaced and sized fusion tack welds along a joint with minimal heat input.
Cap Shaping Get the perfect tungsten shape for your aluminium welds every time with just the click of the trigger. Turn the cap shaping feature on, press the torch trigger, and the machine will prep the optimal tungsten shape for your aluminium welds.

AC and DC Waveform Control
With 12 waveform options available, including AC and DC combinations, you can tailor arc characteristics for different materials, joint types and performance needs.

Cutting Capacity
Mild Steel Get a 20mm clean cut and a severance cut of 25mm on mild steel.
Stainless Steel Get up to a 18mm clean cut on stainless steel.
Aluminium Get up to a 14mm clean cut on aluminium.

Automatic Polarity Switching
Change weld modes without manual cable swapping. Press the torch trigger and the machine switches to the required polarity automatically, making setup faster and reducing downtime between processes.

Line Resistance Detection
The machine measures and compensates for resistance in your welding cables, ensuring consistent voltage at the arc regardless of cable length or setup changes. This delivers a steadier arc, cleaner bead formation and reduced spatter, especially when working with long extension leads.

Full Size Spool Compatibility
The machine accepts both D200 and D300 spools, giving you the flexibility to run larger 15 kg mild steel reels or 7 kg aluminium reels. Fewer spool changes and longer uninterrupted weld time.

Accessories
Ready for any kind of welding you've got planned, connect a complete range of MIG, TIG or MMA accessories to your welder.
T40 Welding Trolley Maximise your flexibility, portability, manoeuvrability with the T40 Welding Trolley.
W50 Water Cooler Maximise your TIG welding performance, especially at high amperages. When combined with the T3W Water-Cooled TIG Torch, which uses Bi-Flow™ Technology, you get greater performance from the TIG torch.
Foot Pedal Enjoy greater control and precision with our optional foot control accessory. This handy feature allows you to easily adjust your TIG amperage on the fly, without interrupting your torch movement. Wireless and wired options available.
Push-Pull Gun Achieve smooth and steady wire feeding, especially when using softer wires such as aluminium. With a 'Pull' motor built into the torch, the wire can be fed over a greater distance, granting you the freedom to move and manoeuvre with ease while MIG welding.

Digital 4 Geared Wire Feed System
The digital controlled four geared drive delivers strong, even pressure to the wire for smooth and reliable feeding. It handles soft wires like aluminium with ease, reducing birdnesting and removing the need for a spool gun. This gives you cleaner feeding and a steadier arc across all torch lengths.

Power Factor Correction (PFC)
Get the most out of your machine. The PFC maximises the electrical efficiency of the machine and automatically compensates for any voltage fluctuations, so you get more output power and the internal components last longer.

Smart Fan Technology
The fan runs only when needed, reducing noise, cutting power use and limiting the dust drawn into the machine. This keeps internal components cleaner and helps extend the overall life of the unit.

Advanced MMA Features
Advanced MMA features are designed for improving weld quality and ease of use.
Arc Force The Arc Force feature helps to keep the arc stabilised throughout the weld, by increasing or decreasing the peak current to compensate for your arc length, preventing the arc from cutting out or the electrode from sticking.
Pulse MMA Revolutionary pulse stick reduces spatter, improves heat control and makes for easier slag removal, as well as improves the

speed and efficiency of vertical up welds without sacrificing any root fusion.
Hot Start The adjustable hot start is designed to help with striking an arc. The hot start temporarily boosts the output current at the start, making striking an arc, even with difficult electrodes, much easier. You get smoother arc starts, improving the quality of your weld.
Anti-Stick The Anti Stick feature, which is always on, prevents your electrode from sticking to your workpiece. When the machine detects sticking, the current will drop significantly, so the electrode can be removed.

Additional Features
Job Memory The job memory function allows you to enter and store weld parameter settings. Weld parameters can be further adjusted and stored as required. A total of 100 jobs can be memorised and stored for recall.
Inductance Control Take complete control of your arc with the inductance settings. By changing the frequency of your short circuit MIG welds with the Inductance controls, you can choose your preferred arc characteristics on every weld.
Dual Gas Inputs Set up for MIG and TIG at the same time. With dual gas inputs for both weld types, you won't need to swap your gas when you swap torches. The quick connect inputs also make replacing your gas bottle as simple as unplugging and plugging in.
Pilot Arc Start Strike the arc without touching the workpiece. Pilot arc start lets you cut through paint, rust or scale with ease and gives you better control on uneven surfaces. Because the tip does not need to drag, your consumables last longer and your starts stay consistent.
Mixed AC/DC Experience the best of both worlds. Mixed AC/DC combines the efficiency of AC and the penetration of DC- TIG in one weld. With it, you get faster welding speeds, better penetration, a faster weld puddle on cold workpieces, and you can weld on thicker materials.
Burnback Adjustment Stop your wire from ever fusing with your weld or your contact tips again. Tune your burnback control to suit how much wire you want to remain sticking out from your torch when you finish a weld.
Generator Compatible Take it anywhere. Connect the machine to a generator and use it wherever, whenever you need it. We recommend 10kVA for this machine.
Smart-Set Cut Programs The easiest way to set up for a plasma cut, simply select your cutting type, material type and thickness, and you're good to go!

Includes

- ENVY OMNI 220 AC/DC Welder
- 3m M26 Digital MIG Torch
- 4m T2 TIG Torch
- 6m SC80 Plasma Torch
- 4m Twist Lock Electrode Holder
- 4m 300 Amp Earth Clamp & Lead
- 2 x Dual Stage Argon Flowmeters
- 2 x 1.8m Quick-Connect Gas Hoses
- Operating Manual
- 4 x 0.8-0.9mm V Groove Roller
- 4 x 0.8-0.9mm F Groove Roller
- 4 x 1.0-1.2mm U Groove Roller

Specific Features



Front View



Right View



Included Accessories

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Recommended Accessories

W2415
TRI-CART Multi-Machine Welding Trolley



W498
Binzel Style Digital 26 MIG Torch Consumables Starter Kit



W5518
0.8mm Binzel Style M8 Contact Tips - Steel



W5519
0.9mm Binzel Style M8 Contact Tips - Steel



W5520
1.0mm Binzel Style M8 Contact Tips - Steel



W5520A
1.0mm Binzel Style M8 Contact Tips - Aluminium



W5521A
1.2mm Binzel Style M8 Contact Tips - Aluminium



W5522
Binzel Style 38 Conical Gas Nozzles



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W5523
Binzel Style DM26 Tip Holders M8



W5524
Binzel Style DM26 Gas Diffusers M8



W1140FA
Elbor 5356 Aluminium Mig Wire 2kg



W504A
T2 Tig Torch Consumable Pack



W5996
Head Gasket



W5993
1.6mm Collet Body



W5994
2.4mm Collet Body



W5998
Long Black Cap



C559
SC80 Plasma Torch Consumables Starter Kit



C624
Plasma Torch 0.9mm Cutting Tips



C625
Plasma Torch 1.0mm Cutting Tips



C620
Plasma Torch Electrodes



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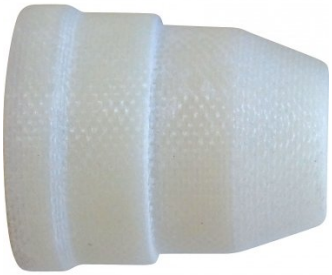
Product Brochure For W1730

C622
Plasma Torch Swirl Ring



C626
Plasma Torch Retaining Cup



W100
ROGUE™ Heavy Duty Welding Gloves - 400mm



W10362
Magnetic MIG Torch Rest



W10361
Magnetic TIG Torch Rest



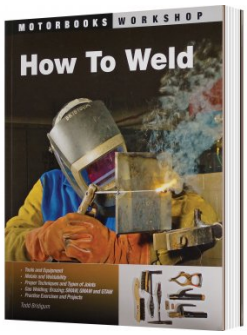
W1140D
Argon Gas Regulator-Twin Gauge



W001
Auto Darken Welding Helmet - 9~13 Shade



L3456
How to Weld Book



W149
Magswitch Welding Ground Clamps



W08450
FIXTURE TABLE



W08500
40pc Square & Round Welding Table Clamp Kit



W08510
Weld Clamps with Locking Nuts (2 Piece Pack)



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C103
228mm Muliti-Purpose Locking Clamp



W08512
Weld Clamps with Locking Nuts (2 Piece Pack)



W08515
38mm x M12 Multi-Purpose Riser/Stops (Spigot Type) - 4pc Pack



V099
90 degree Angle Vice Clamp



V100
90 degree Angle Vice Clamp

