



MASTERWELD

The ultimate Welding Machine

Product Spotlight



221 AC/DC



CONTROL PANEL



TECHNICAL DATA

The Masterweld 221 AC/DC offers unrivalled TIG welding characteristics making it undoubtedly a class leader in the field. The user-friendly digital front panel makes it easy for the welder to get the very best from the many advanced features in AC and in DC programs.

- 50 programs can be loaded and saved in memory
- Remote controls are available: for torch (UP&DOWN, potentiometer) foot pedal or remote control unit
- Cooling unit is also available

221AC/DC						
	1x230Vac ± 15% @ 50-60Hz					
	16A			25A		
	TIG - WIG			MMA		
% _{40°C}	35%	60%	100%	40%	60%	100%
I_2	220A	180A	160A	180A	150A	120A
I_2	5A – 220A			10A – 180A		
U_0	79/10V					
P_{MAX}	6,2kVA – 6,1kW					
IP	23S					
	460 x 230 x 325m m					
	19,5Kg					

TECHNOLOGY



PROCESSES



TIG



MMA

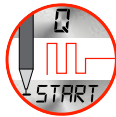
SPECIAL FUNCTIONS



SYN



2,5KHz



START



MULTITACK



Dynamic Arc



Q Spot



MIX AC/DC



Extra Fusion

MATERIALS



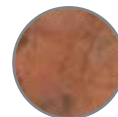
Aluminium



Mild steel



Stainless steel



Copper

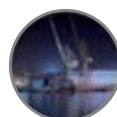
INDUSTRIES



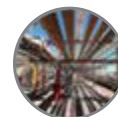
Maintenance



Industry



Shipyard



Pipe welding

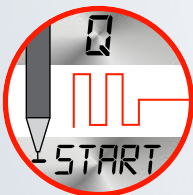
SPECIAL FUNCTIONS



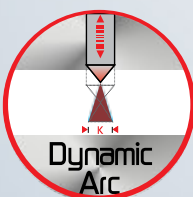
The pulse **TIG** with frequency up to 2500Hz allows the operator to weld very thin materials with easy arc control and very low heat input on workpiece.



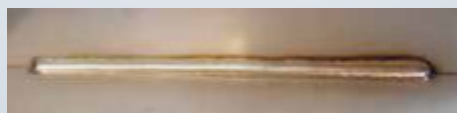
Pre-set balanced parameters, stored in the Synergic Pulse **TIG DC SYN** curve help to simplify the Pulsed welding process. The Pulse is altered automatically when the welding current is adjusted.



The **Q START** (Quick start) function facilitates the joining of the parts in the initial stage of the welding process. On activating this function the machine automatically switches to Synergic pulsed mode for a preset time. The resulting pulses create movement of the molten metal on the two sheet metal edges thereby accelerating formation of the join. This function is invaluable in the case of seams with slight openings or with irregular preparation. The duration of the series of pulses can be adjusted, (from 0.1 to 10 second) depending on the thickness and shape of the sheet to be welded.



The **DYNAMIC ARC** function makes it possible to keep the pre-set Voltage x Current constant. The power source increases the welding current as the arc voltage decreases and reduces the welding current if the arc voltage increases. The DynARC value can be adjusted from a minimum of 10 Ampere to a maximum of 50 Ampere at each 1 Volt variation, whether positive or negative.



Dynamic Arc TIG welding



Standard TIG welding

SPECIAL FUNCTIONS

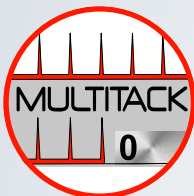


The **Q-SPOT** (Quick Spot) function makes it possible to minimise tacking times for light gauge sheet metal. The operator conveniently places the tungsten electrode on the fixing point, thereby obtaining perfect control of the position of the join. Once the electrode has been lifted the machine emits a very high intensity welding current pulse with a very short preset time (from 0.01 Sec to 1 Sec). The pulse time varies depending on the type of sheet metal to be joined. In this way the welded point closes instantly with minimum heat transfer, leaving the metal white, clean and almost cold.

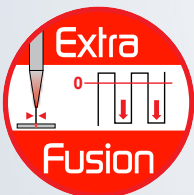
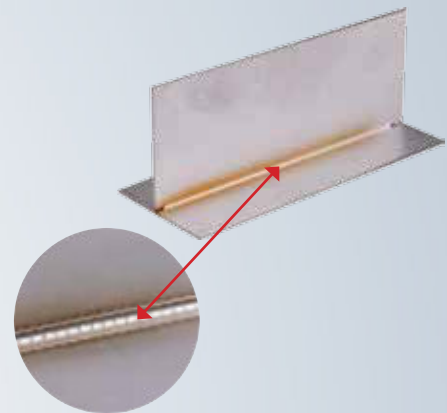
Pipe butt weld
Ø 31.75 x 2 mm



Corner spot welding thickness 0,6 mm

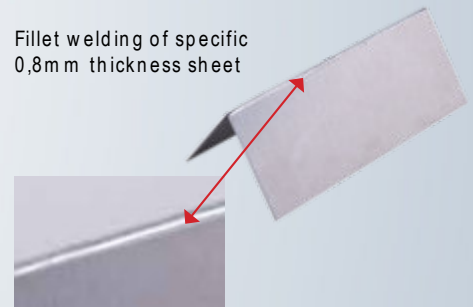


The **MULTITACK** system makes it possible to reduce heat output while joining two light gauge parts (0.6mm – 0.8mm). The series of arc strikes at short time intervals allows the material to cool during the pause between one strike and the other and thus minimizes its deformation. The facility to adjust the frequency of the series of arc strikes in the time unit makes it possible to adapt the electric arc to the welding speed and the joint geometry.

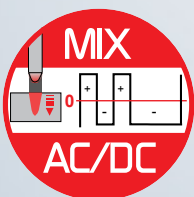


This function makes it possible to shift the waveform towards the negative part with respect to zero. This makes it possible to create a highly penetrative and precise fusion bath so that very light gauge sheets can be welded with an electrode tip comparable to that of an electrode for DC - TIG welding. The adjustable value in our AC/DC TIG power sources ranges from 0% to 80% (with respect to the AC - half-wave percentage). The Extra Fusion function is not recommended when welding heavy gauges because the AC+ component is insufficient to ensure optimal cleaning (pickling) of the part during the welding process.

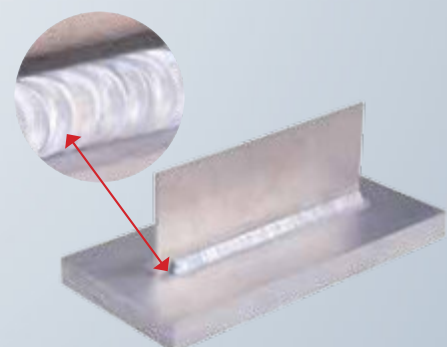
Fillet welding of specific
0,8m thickness sheet



Particular on the fillet welding.
It is possible to notice the remarkable degree
of finishing and the high welding precision



This function **MIX AC/DC** makes it possible to modulate the welding current, alternating a half-period of TIG AC with a half-period of TIG DC-. This means that the efficacy of AC TIG welding can be combined with the high penetration of DC TIG welding, thus obtaining high welding speed and creating the weld puddle rapidly on a cold workpiece. It is also possible to weld heavier gauges with lower amperage, since the DC- portion is far higher than when using an entirely AC waveform. The operator adjustable parameter is the percentage of AC waveform compared to DC-waveform over the entire period, which can be varied from 10% to 80%.



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OPTIONS



WATER COOLED

AIR COOLED



LIGHT



COMPACT



TRANSPORTABLE

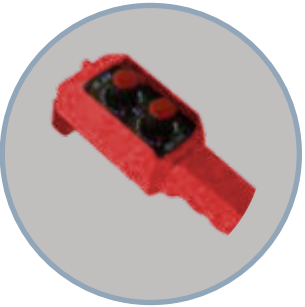
ACCESSORIES



FOOT PEDAL



UP & DOWN TORCH



REMOTE CONTROL



221AC/DC
with Trolley 02 and C.U.12



MASTERWELD

The ultimate Welding Machine

Masterweld Equipment represents a collection of unique technology in Welding Machines and Welding Torches that are strictly manufactured in the EU to EN 60974-1, EN 60974-5 and EN 60974-10, representing the highest quality and technological excellence.

In today's harsh manufacturing environment, productivity is paramount, and investing in the right Welding Plant is key to manufacturing success.

Masterweld TIG Welding Machines, MIG Welding Equipment, and Arc Welding Inverters, over the years have established a reputation for being extremely reliable, easy to use interface, and unbeatable arc characteristic for the most demanding welding environments.

Masterweld - The Welders' Ultimate Choice

Dealer

