



WELD THE WORLD

# Discovery 220T Evo



# Discovery 220T Evo

TIG DC - MMA



## User interface simple and informative



1 Graphic Display complete with multi-language Menu



2 Encoder with push button navigation permits the setting with one hand



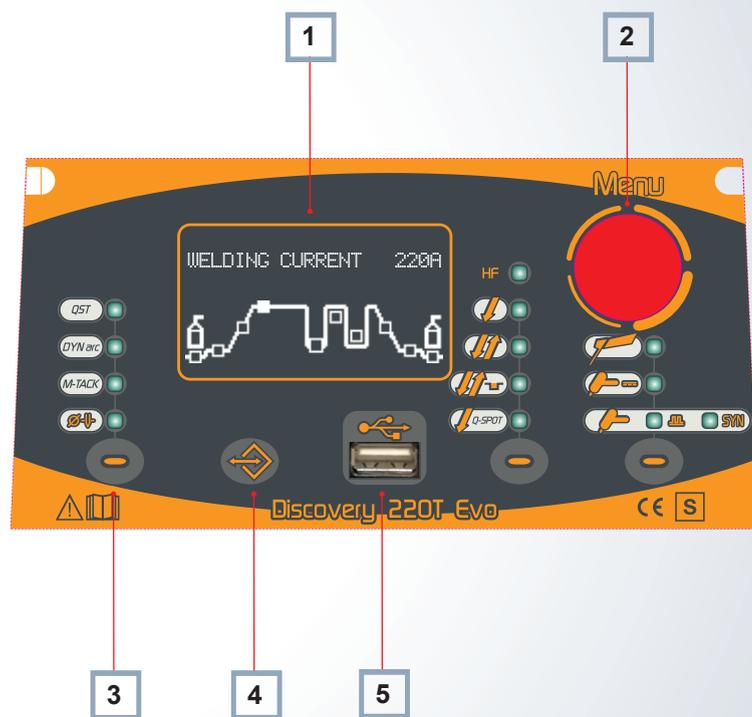
3 Direct access to all special functions



4 Quick Jobs` Management



5 USB Connection for Jobs back up and rapid transmission



# Discovery 220T Evo

## Technical Data



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**Discovery 220T Evo** is a revolutionary state-of-the-art 1Phase portable TIG DC welding Inverter. Ordinary steels, stainless steel and copper can be easily welded in TIG DC.

**Discovery 220T Evo** is specifically designed for extremely precise welding in the construction, petrochemical, food industries and other applications that require very a high welding performance.

The new user interface (Evo) provides fast and effective access to all available functions. 50 programs can be loaded and saved in memory (JOB), All programs can be easily recalled when using an Up/Down torch. It is also possible to create different jobs sequences to be used on specific applications. Simple selection of the MMA mode provides a choice of the electrode-type (basic, rutile, CrNi, Alu) setting, resulting in optimizing the weldability and parameters.

| Discovery 220T Evo           |                          |      |      |            |      |      |
|------------------------------|--------------------------|------|------|------------|------|------|
|                              | 1x230Vac ± 15% @ 50-60Hz |      |      |            |      |      |
|                              | 16A                      |      |      | 25A        |      |      |
|                              | TIG                      |      |      | MMA        |      |      |
| $\%_{0\ 40^{\circ}\text{C}}$ | 40%                      | 60%  | 100% | -          | 60%  | 100% |
| $\cdot I_2$                  | 220A                     | 180A | 160A | -          | 180A | 150A |
| $I_2$                        | 5A - 220A                |      |      | 10A - 180A |      |      |
| $U_0$                        | 81V - 5V                 |      |      |            |      |      |
| $P_{I\ \text{MAX}}$          | 5,9KVA - 5,8KW           |      |      |            |      |      |
| IP                           | 23S                      |      |      |            |      |      |
|                              | 460 x 230 x 325mm        |      |      |            |      |      |
|                              | 18,6Kg                   |      |      |            |      |      |

### TECHNOLOGY



### PROCESSES



### SPECIAL FUNCTIONS



### MATERIALS



Mild steel

Stainless steel

Copper

### INDUSTRIES



Maintenance

Industry

Shipyard

Pipe welding

# Discovery 220T Evo

## Technology and Special Functions



W.ECO PFC reduces harmonic current emissions and 20% input current, increasing the power inverter efficiency.



Function VRD (Volt Reduction Device) reduces automatically the voltage of the welding machine during the Standby mode in order to allow the processing in those building site where low voltages are demanded for safety reasons (Dockyards, petrol platforms and so on).



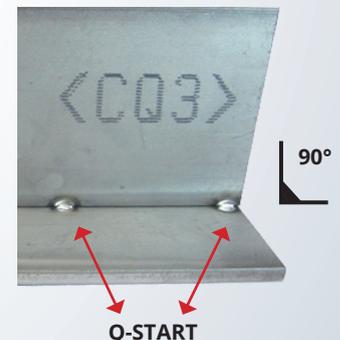
The pulse TIG with frequency until 2500Hz allows to weld very thin materials with easy arc control and very low heat input on workpiece.



Pre-set balanced parameters, stored in the Synergic Pulse TIG DC SYN curve, simplify Pulsed welding by adjusting only welding current.



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 60 second) depending on the thickness and shape of the sheet to be welded.



# Discovery 220T Evo

## Special Functions



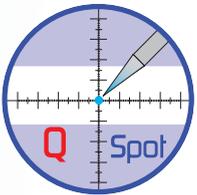
The DYNAMIC ARC function makes it possible to keep the product of Voltage x Current constant. The power source increases the welding current as the arc voltage decreases and reduces the welding current if the arc voltage increases. The DynARC value can be adjusted from a minimum of 1 Ampere to a maximum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



Dynamic Arc TIG welding

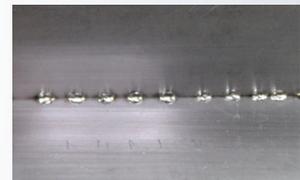


Standard TIG welding



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.

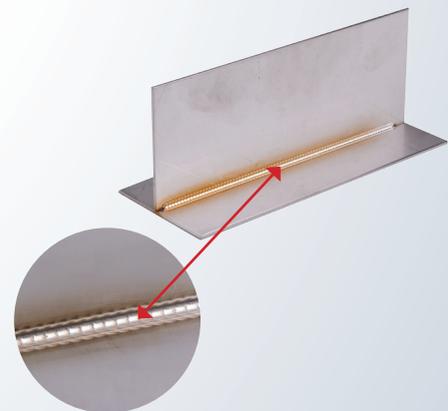
Pipe butt weld  
Ø 31.75 x 2 mm



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.



# Discovery 220T Evo

## User friendly Menu

### User friendly Menu

MENU FOR USE WITH A USB-STICK

```
JOB MENU  
--->> USB EXPORT  
MENU to confirm
```

DIFFERENT REMOTE-CONTROL TYPES CAN BE APPLIED INCLUDING SELECTION OF DIFFERENT TORCH SETTINGS

```
SET-UP (10/15)  
-----  
ENABLE READ I. ON  
TORCH TYPE 1  
PEDAL TYPE 2
```

WELDING HOUR COUNTER

```
SET-UP (13/15)  
-----  
POWER ON : 20.4h  
T. ARC ON : 0.2h  
P. ARC ON : 0.1h
```

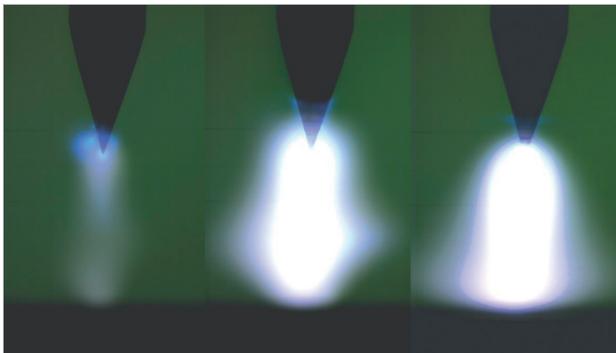
VALIDATION AND CALIBRATION SYSTEM FOR WELDING PARAMETERS READING IN ACCORDANCE WITH EN 60974-14 (EN50504)

```
SET-UP (15/15)  
-----  
SET VAL. CURR. 10A  
MENU --->> OFF  
0 A 9.1 U
```

### TIG DC Ignitions have been optimized

It is possible to regulate the current impulse dynamics in relation to the electrode diameter in order to achieve perfect arc-ignitions and optimum weld conditions every time. This setting avoids inconsistent arc-ignitions and welding defects.

ELECTRODE DIAM. 1.6mm



# Discovery 220T Evo

Available configurations



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**Discovery 220T Evo  
with Trolley P and C.U.12**

**Discovery 220T Evo  
with Trolley 02 and C.U.12**

**AIR Version**

**H<sub>2</sub>O Version**

## PLUS



### LIGHTNESS

The lightness of Discovery 220T Evo makes it particularly suitable for maintenance and mobile welding.



### COMPACTNESS

The compactness of Discovery 220T Evo makes it easy to place it even on a working environment of small size.



### TRANSPORTABILITY

A sturdy strap makes Discovery 220T Evo easily transported from one workplace to another.

## ACCESSORIES



**FOOT PEDAL**



**SOFTWARE UPGRADE  
OF THE WHOLE MACHINE**



**UP & DOWN TORCH**



**REMOTE CONTROL**

**A solid industrial activity, where the production is based on substantial investments for the supporting of research, projection and continuous testing.**

Since 1997 Weco has been producing and selling welding machines Both registered office and production plant are based on the north east of Italy. Our offices, technical/project department, production and warehouse are able to serve both our national and international sales net. A wide range of welding machines together with a huge stock, allow us to encounter and fully satisfy our customers requests in short time. A dynamic management supported by solid experience on the main sales arguments and a deep knowledge on the application issues, allow this company to be ahead in the welding sector. WECO means better solution for improving the production, optimizing the intervention time, minimizing the processes costs, with the highest perform-standards granted.



**WELD THE WORLD**

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Dealer