MULTIFUNCTION / O251

Quick specs

Light industrial Application:
Metal fabrication workshops
Shipyards and offshore industry
Maintenance and Repair
Pipe welding outside
Auto Body
Light Industry

Process:
DC TIG (GTAW)
AC TIG (GTAW)
Stick (MMA)
Plasma Cutting

Input Power: 230V, 1-Phase
Amperage Range: 10-200A
Rated Output at40 C (104 F):
MMA:200A at 28V @60% Duty Cycle
TIG: 200A at 18V @60% Duty Cycle
CUT: 40A at 96V @60% Duty Cycle
Weight: 31KG

For TIG and Stick Welding

A total solution of precise AC/DC TIG PLUS welding and plasma cutting machine

O251 built base on the Mastertig System offers precise, expert AC/DC TIG welding process. It's a precise aluminum welding specialist that suits all welded materials. Modular design allows you to build the package that best suits your needs.

O251 also comes with a 50A@60 heavy duty cycle plasma cutting power source. What you need for any metal welding or cutting works, you just get this combo machine and it's all you needs. For TIG and Stick Welding

Easy operation and full functions: From the control panel allowing fast adjustment of all necessary controls for DC, AC TIG welding with either HF or contact ignition. It's also very convenient to store or call out the welding parameters from the memory channels.

Specialist Features

Precision Arc Performance:

♦ DC+/DC-: Improved TIG starting. Now starts DC(-) to maintain a sharp tungsten.
♦ Lift-Arc start provides AC or DC arc starting without the use of high frequency.
♦ Adjustable AC output frequency allows the operator to focus the arc minimizing the heat affected zone
♦ Extended AC Balance Control helps maintain a pointed tungsten to direct the arc in the weld joint.
♦ Independent amplitude/amperage control allows EP and EN amperages to be set independently to precisely control heat input to the work and electrode.
♦ Multiple Waveshapes:
♦ Standard Squarewave for fast travel speeds and excellent puddle control, Sine wave for a traditional softer sounding arc, Triangular wave to reduce the heat input into the weld at low amperage. Soft squarewave for a soft buttery arc with maximum

puddle control and good wetting action,

♦ Pilot Arc for superior arc performance and easy start.

♦ HF or Non-HF Arc ignition: reliable plasma arc initiation without high frequency.

♦ Continuous Output Control: focus the arc for different material thickness.

♦ Rapid Arc Restrike: fast cutting through gaps, even expanded metal.

♦ Powerful with heavy duty: 200A @50%.

♦ 10 channels memory capacity

Outstanding Quality:

♦ Newly designed using the latest power electronic technology for improved reliability.

♦ CE Certified.

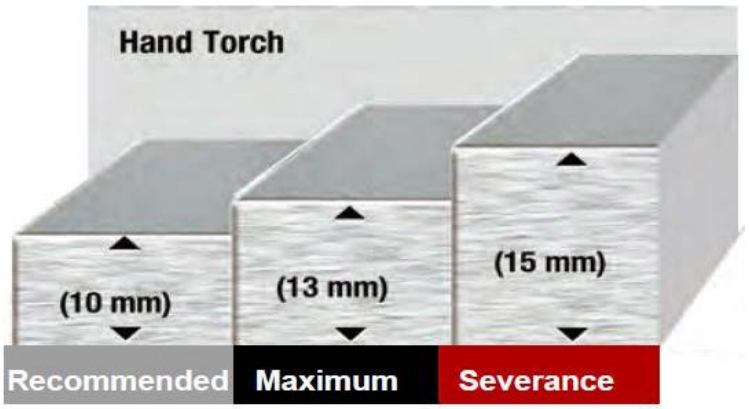
3 Years Warranty on parts , 5 Years Warranty on Transformer

Technical specifications

Description	VECTOR DIGITAL O251 MULTIFUNCTION
Weight	31 kg
Power Source Dimensions	L540mmxW270mmxH450mm
Cooling	Fan Cooled
Welder Type	Inverter Power Source
European Standards	EN 60974-1 / IEC 60974-1
Number of Phases	1
Nominal Supply Voltage	230V +/- 15%
Nominal Supply Frequency	50/60Hz
Welding Current Range (STICK Mode)	10 - 200A
Welding Current Range (TIG Mode)	10 - 200A
Welding Current Range (CUT Mode)	10 - 40A
Effective Input Current /STICK /TIG	20.8A
Maximum Input Current/STICK/ TIG	41.6A
Single Phase Generator Requirement	12.1KVA
STICK (MMA) Welding Output, 40oC, 10 min.	200A @ 25%, 28V 141A @ 50%, 25.6V 110A @ 100%, 24.4V
TIG (GTAW) Welding Output, 40oC, 10 min.	200A @ 25%, 18V 141A @ 50%, 15.6V 110A @ 100%, 14.4V
Welding Output, 40oC, 10 min.	40A @ 60%, 96V 31A @ 100%, 92.4V
Open circuit voltage	70.0-80.0V DC

Protection Class	IP23S

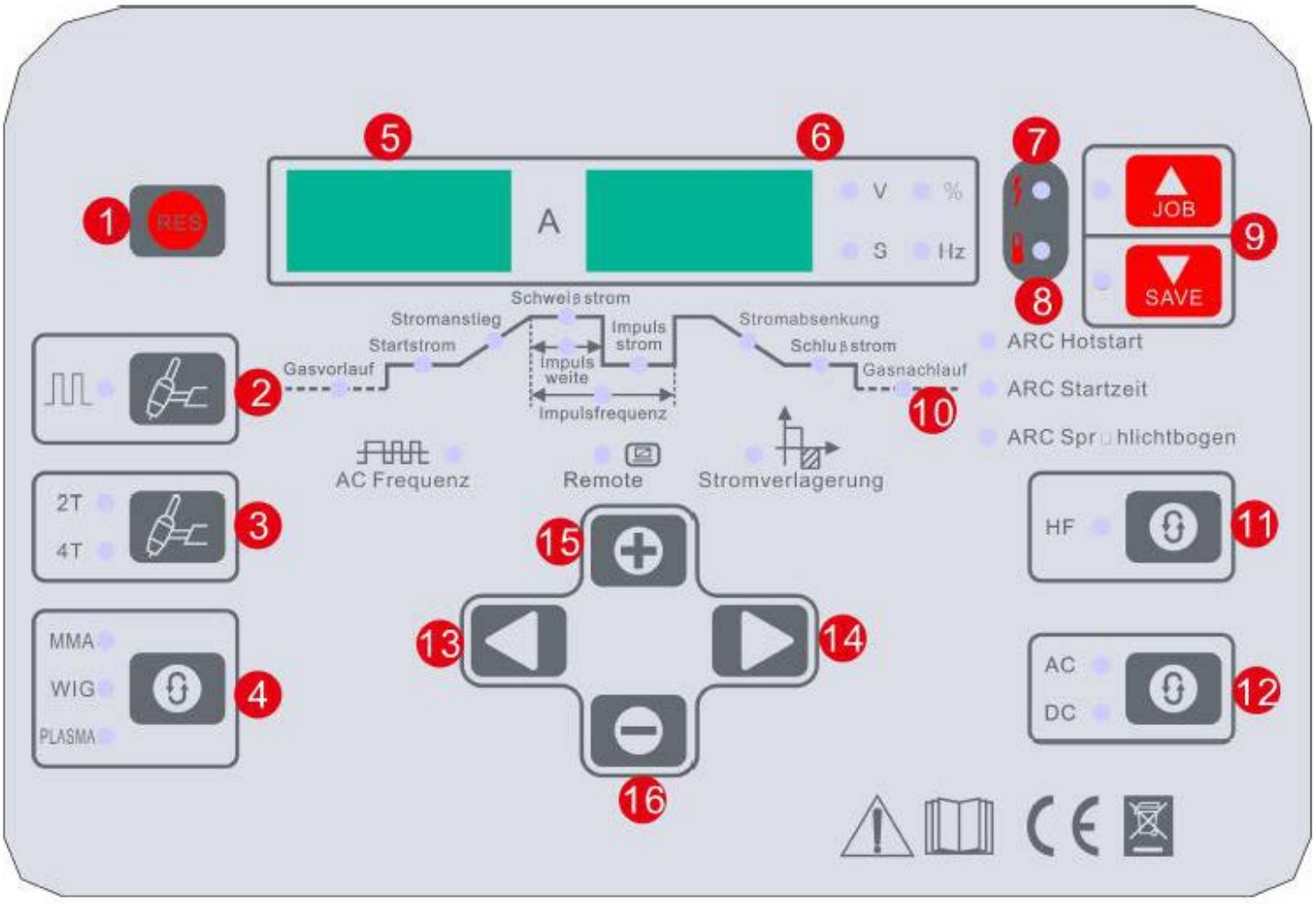
CUT PERFORMANCE - MILD STEEL



Big cutting power in a small package - the industry's most portable and powerful 40-amp plasma cutter offers 10mm. mild steel cutting. The unit offers easy connection to 115V or 230V input with Auto-Line technology and MVP Adapters.

Rated Cut @	Maximum Cut@	Sever Cut @
0.50 m/min	0.25 m/min	0.12 m/min

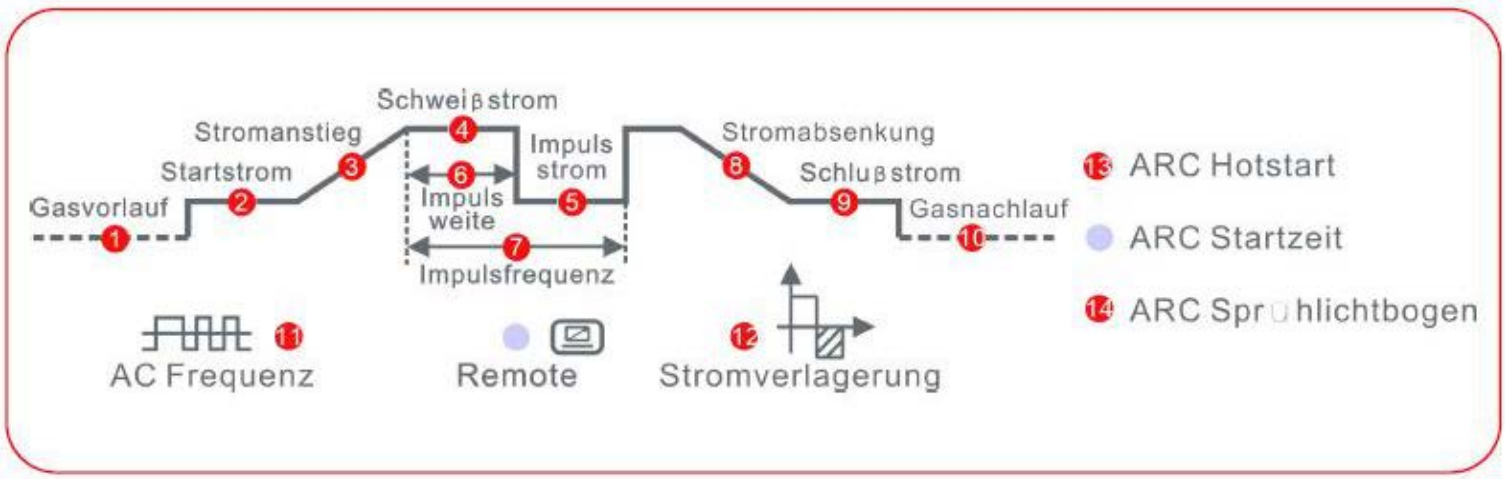
General View of Control Panel



Control Panel Parameter Values

1. RESET buttonr
2. Pulse Button
3. Trigger Mode Control Button
4. Process Selection Button
5. Digital Ammeter
6. Digital Voltmeter / Parameter meter
7. Power ON Indicator
8. Thermal Overload Indicator
9. JOB and SAVE
10. Programming Parameter Indicators
11. Purge Button
12. Mode Button
14. Back Programming Button
15. Positive Control
16. Negative Control

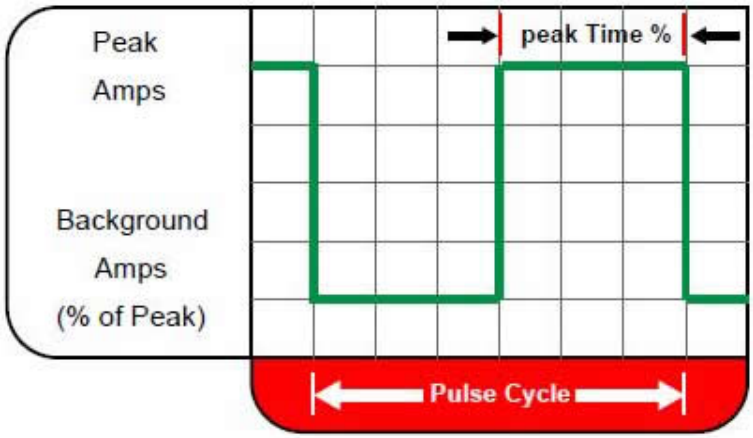
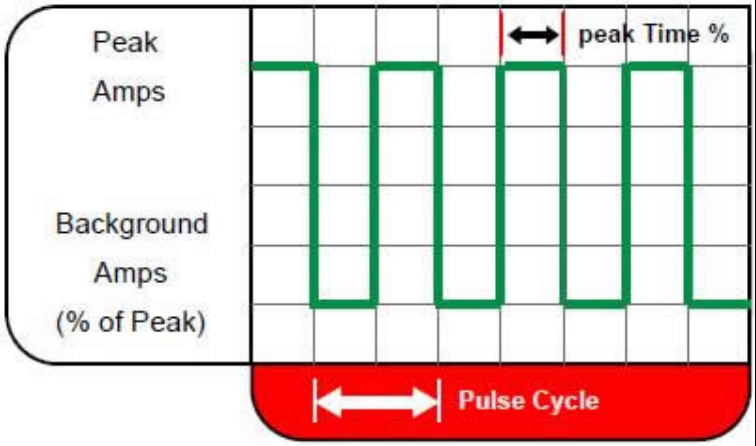
General View of Contrl Panel(Continued)



Item	Symbol	Description
1	Gas Pre-Flow	Absolute setting range 0.1s to 20s (0.1S increments)
2	Initial Current	The main current Setting range 10AMP to 100AMP
3	Up Slope	Setting ranges :0.1S-10S (0.1S increments)
4	Peak Current	Setting ranges 10AMP to 200AMP (DC TIG mode), 10 to 200A (AC HF TIG mode)
5	Base Current	Setting ranges 10AMP to 200AMP (DC TIG mode), 10AMP to 200AMP (AC HF TIG mode)
6	Pulse Width	Setting ranges 10%-90%
7	PulseFrequency	Setting ranges 1HZ -200HZ
8	Down Slope	Setting ranges 0.1-10s
9	End current	Setting ranges 10A-100A
10	Post Flow	Setting ranges 1-20S
11	AC Frequency	Setting ranges 50HZ-200HZ
12	Wave Balance	Setting arranges 10%-50%
13	Hot Start	Hot Start Function reliably ignites the electrode and melts perfectly to ensure the best quality even at the start of the seam.
14	ArcforceCorrection	During the welding process, arcforce prevents the electrode sticking in the weld pool with increases in current.

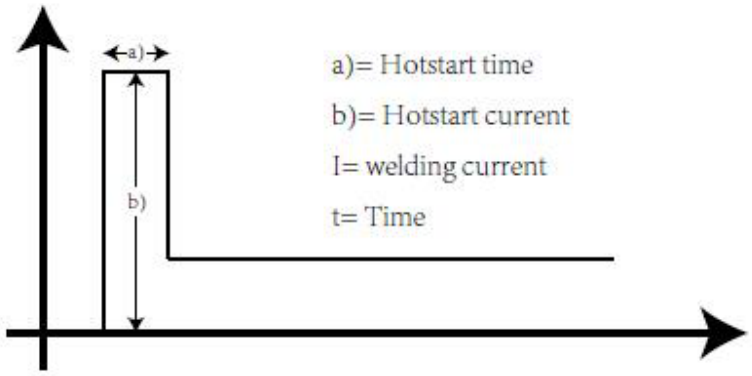
DC TIG-Pulse

- ♦ High Speed DC TIG-Pulse Controls
- ♦ PPS Pulses per second (Hz): DC=0.1- 5,000 PPS
- ♦ % ON-% Peak Time: 5-95% (Controls the amount of time during each pulse cycle at the PEAK amperage.)
- ♦ Background Amps: 5-99% (Sets the low-pulse amperage value as a % of the Peak Amps.)

CONVENTIONAL PULSED TIG	HIGH SPEED PULSED TIG
	
Typically from 1 to 10 PPS. Provides a heating and cooling effect on the weld puddle and can reduce distortion by lowering the average amperage. This heating and cooling effect also produces a distinct ripple pattern in the weld bead. The relationship between pulse frequency and travel speed determines the distance between the ripples. Slow pulsing can also be coordinated with filler metal addition and increase overall control of the weld puddle	IIn excess of 40 PPS, Pulsed TIG becomes more audible than visible-causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds- between a high Peak and a low Background amperage- can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds (Common Range: 100-500 PPS). The Arc-Sharpening effects of high speed pulsing are expanded to new dimensions. The ability to pulse at 5,000 PPS further enhances arc stability and concentration potential-which is extremely beneficial to automation wheremaximum travel tspeeds are required.

Hot Start

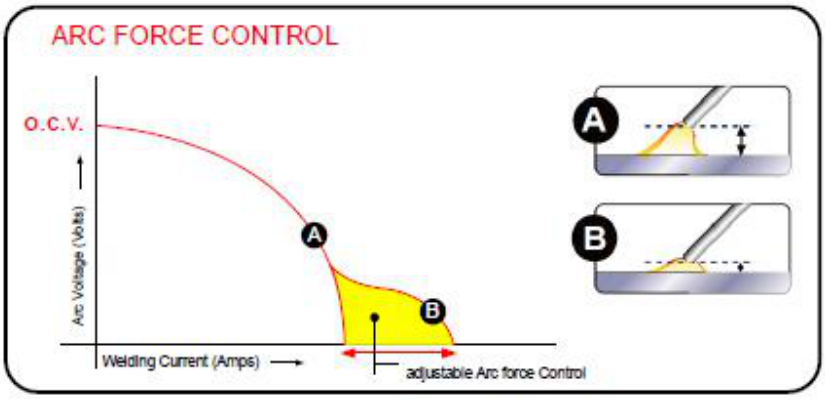
Hot Start Function reliably ignites the electrode and melts perfectly to ensure the best quality even at the start of the seam. this solution makes lack of fusion and cold welds a thing of the past and significantly reduces weld reinforcement. Adjust the hot start current here and the time here.



Arcforce correction (welding characteristics)

During the welding process, arcforce prevents the electrode sticking in the weld pool with

increases in current. this makes it easier to weld large-drop melting electrode types at low current strengths with a short arc in particular.



Accessories

For Standard accessories

TIG torch: WP-26
Gas connector: M16
Cable length 3M
5-pin control coupler

Electrode holder with cable 3M/200A

AG 60-Torch/4.5M

Earth clamp with cable 3m

Reducing valve AW2000

For Optional accessories

Argon gas regular

Water-cooling unit: wc-100
Operating Voltage:230V 50/60Hz
Rated Power:260W
Cooling Power:1.5KW(1L/MIN)
Tank Volume:6.5L

TIG torch: DGT 26
Cooling Method: Air-Cooled
Rating: DC 200A AC 125A
Duty Cycle: 35%
Electrode Size: 1.0-4.0

Trolley

Foot Pedal
Trolley:
5-pin aviation plug