

PROTIG-200Di/250Di



Quick Specs



Application:
Metal Fabrication
Maintenance and Repair
Auto Body
Light Industrial

Process:
DC TIG
MMA(Stick)

Input Power: 230V, 1-Phase
Amperage Range:
200Di: 3-200A/250Di: 3-250A
Rated Output at 40 ° C (104°F):
200Di: 200A at 18V @60% Duty Cycle
250Di: 250A at 20V @60% Duty Cycle
Weight: 15KG

For TIG and Stick Welding

Powerful, precise TIG welding

Protig-200Di/250Di is the ideal DC TIG welding solution for installation, repair and maintenance applications. The 250 amp model suits high quality work and the lightweight and compact size is a real bonus for professionals on the move around site. A popular choice for welding professionals, options include 200 and 250 amp power sources with 60% duty cycle at maximum output current.

Easy operation and full functions: From the control panel allowing fast adjustment of all necessary controls for DC Pulse 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:

- **Pulse control:**
Built in pulsing functions help minimize heat input on thin materials, and provide for a faster freezing weld puddle for uphill welding on curved surfaces such as process piping. The TIG pulse also helps moderate filler metal deposition for consistent bead appearance.
- **High-frequency TIG starting:**
Makes it easy to establish an arc under a variety of conditions. Enhances quality by minimizing the potential for weld contamination created by tungsten inclusions in the weld.
- **Refined arc ignition from 5A (optional 3A).**
- **Hot Start Function** reliably ignites the electrode and melts perfectly to ensure the best quality even at the start of the seam.
- **Arc Force** makes it easier to weld large-drop melting electrode types at low current strengths with a short arc in particular.
- **Fast Spot Arc system** simply controls the spot arc parameter and offers a stable arc.
- **4T Trigger Hold** allows to hold the present current by user until press the trigger again.
- **Fast, precise, clean arc ignition and arc ending.**
- **10 channels memory capacity**



Outstanding Quality:

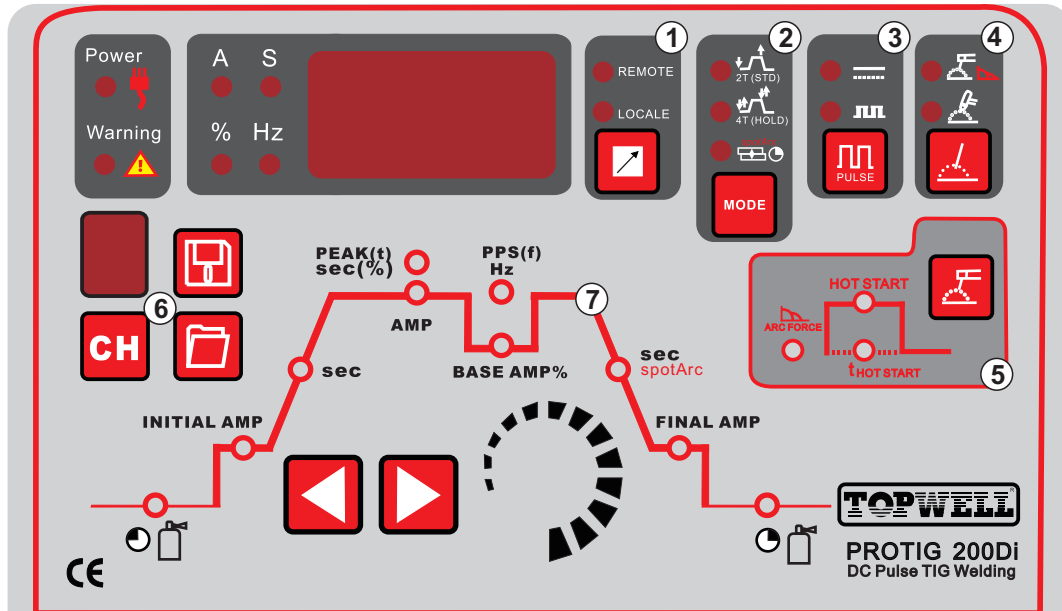
- Newly designed using the latest power electronic technology for improved reliability.
- CE Certified.



Technical specifications

Item No	PROTIG-200Di	PROTIG-250Di
Rated Input Voltage	1PH ~ 230V ±15%	1PH ~ 230V ±15%
Max. Load Power Capacity	TIG: 5.62 KVA MMA:6.60 KVA	TIG: 7.81 KVA MMA: 5.63KVA
Rated Duty Cycle (40oC)	60%	60%
	TIG: 200A/18V MMA: 160A/26.4V	TIG: 250A/20V MMA: 200A/28V
	100%	100%
	TIG: 160A/16.4V MMA: 130A/25.2V	TIG: 200A/18V MMA: 160A/26.4V
Welding Current/Voltage Range	TIG: 3A/10.1V~200A/18V MMA: 20A/20.8V~160A/26.4V	TIG: 3A/10.1V~250A/20V MMA: 20A/20.8V~200A/28V
Open Circuit Voltage	70V~80V	70V~80V
Power Factor	0.8	0.8
Efficiency	80%	80%
TIG Pulse Frequency	0.2Hz~200Hz	0.2Hz~200Hz
Pulse Width (Ratio)	1~100%	1~100%
Arc-starting Current	5A~200A	5A~250A
Crater-filling Current	5A~200A	5A~250A
Current Up-slope Time	0.1S~15S	0.1S~15S
Current Down-slop Time	0.1S~15S	0.1S~15S
Pre-Gas Time	0.1S~15S	0.1S~15S
Flow-Gas Time	0.1S~15S	0.1S~15S
Spot Arc Time	0.1S~10S	0.1S~10S
MMA Arc Force	10A~160A	10A~200A
Hot Start Time	0.1~3S	0.1~3S
Hot Start Current	10A~160A	10A~200A
Dimension (LxWxH)	410x190x305mm	410x190x305mm
Weight (KG)	15KG	15KG

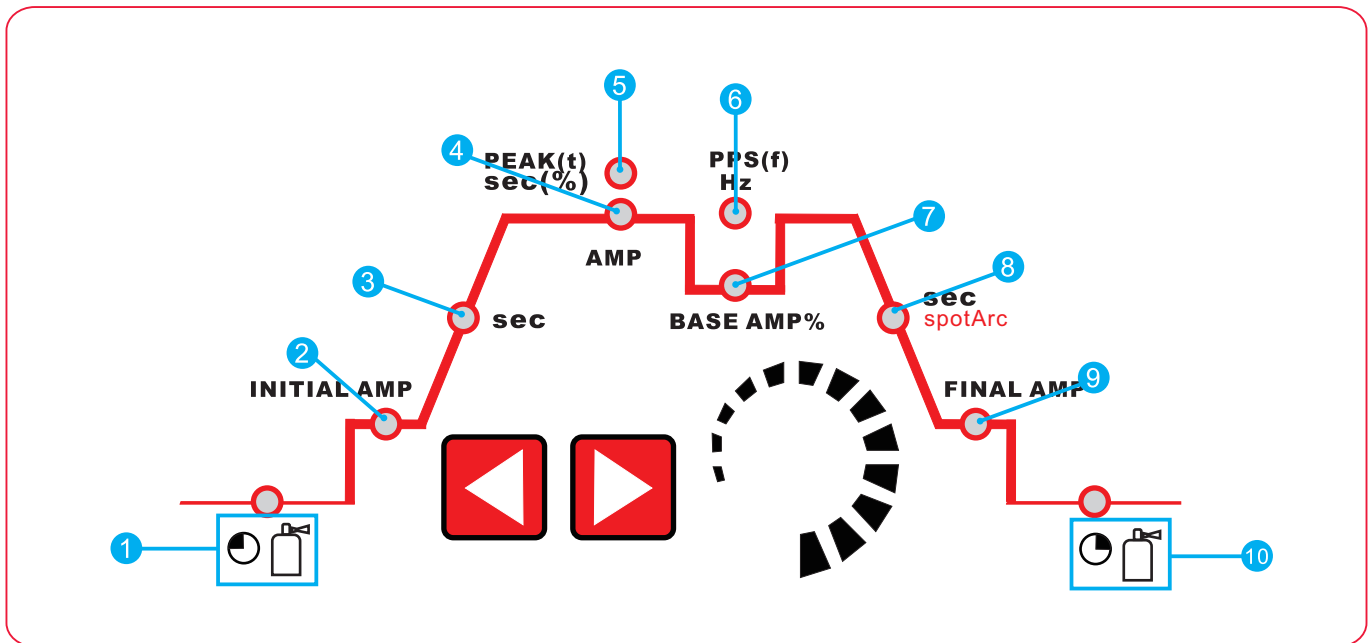
General View of Control Panel



Control Panel Parameter Values

- | | | |
|--|-----------------------------------|---|
| 1. Remote : used for foot pedal or Remote torch. | 3. Pulse ON/OFF selection. | 6. Memory with capacity of 10 sets parameters. |
| Local: adjusted Currents by face panel | 4. Process selection. | 7. Function Sequence (see next chapter) |
| 2. 2T/4T holding mode or Spot Welding mode selection. | 5. ARC FORCE/HOT START | |

General View of Control Panel(Continued)

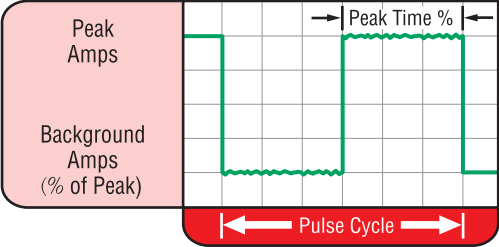
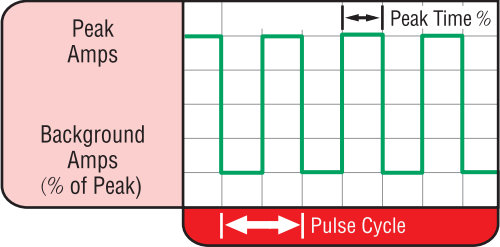


Item	Symbol	Description
1		Gas pre-flow time(TIG) Absolute setting range 0.1s to 5.0s (0.1s increments).
2		Ignition current(TIG) Percentage of the main current. Setting range 1% to 100%(1% increments).
3		Up-slope time(TIG) Setting ranges:0.00s to 20.0s(0.1s increments). The up-slope time can be set separately for non-latched and latched.
4	AMP	Main current(TIG)/pulse current I min to I max(1 A increments) Main current(MMA) I min to I max(1 A increments)
5		Pulse time Pulse time setting range:0.01s to 9.99s(0.01s increments) TIG pulses The pulse time applies to the main current phase(AMP) for pulses.
6		Pulse break time Pulse break setting range:0.01s to 9.99s(0.01s increments). TIG pulses The pulse break time applies to the secondary current phase(AMP%).
7	BASE AMP%	Secondary current(TIG)/pulse pause current Setting range 1% to 100% (1% increments).Percentage of the main current.
8	sec	Down-slope time(TIG) 0.00s to 20.0s (0.1s increments). The down-slope time can be set separately for non-latched and latched
9	FINAL AMP	End-crater current(TIG) Setting range 1% to 100%(1% increments).Percentage of the main current.
10		Gas post-flow time(TIG) Setting ranges:0.1s to 20.0s(0.1s increments).

DC TIG-Pulse

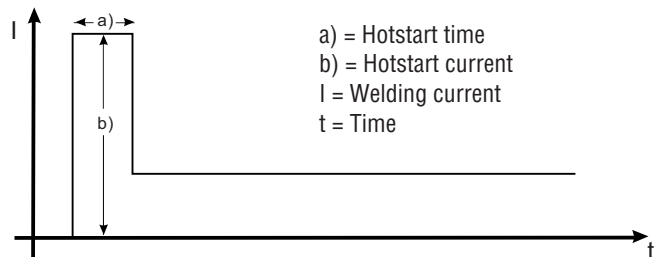
High Speed DC TIG-Pulse Controls

- **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
	
<p>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 can increase overall control of the weld puddle.</p>	<p>In 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 where maximum travel speeds are required.</p>

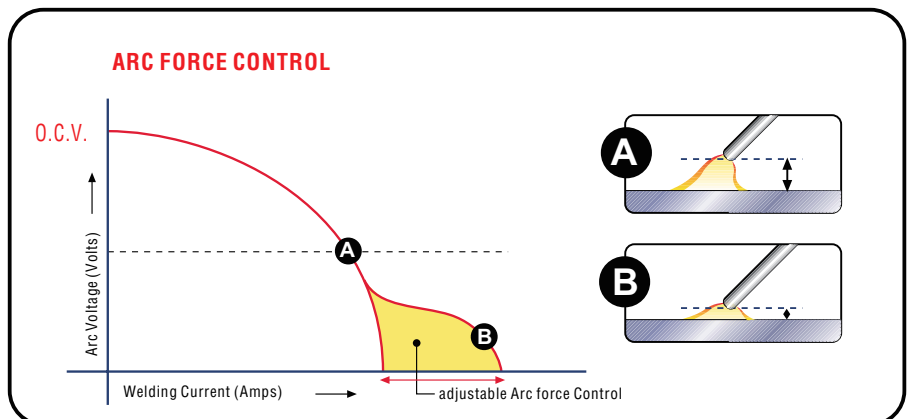
Hot Start

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: TIG-26
Gas connector: M16
Cable length 4M
5-pin control coupler



Electrode holder with cable 2M
Earth clamp with cable 2M

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: TIG-26
Gas connector: M16
Cable length 4M
5-pin control coupler



Foot Pedal
Model No.: FX-390B
Serial No.: 12D36
Input Voltage: + 15V
Output Voltage: 0-13V



Trolley: ST-7



Hand-hold Remote Controller for TIG torch
Dimensions: 110x27x30mm
Material: ABS
Weight: 30g
Resistance: 10K / 0.5W