

# BOSSWELD

RELIABLE WELDING GEAR

**30%**  
DUTY CYCLE  
AT 250AMPS

**PFC**  
POWER FACTOR  
CORRECTION



## **POWERPULSE 250PFC**

DUAL PULSE SYNERGIC  
MULTI FUNCTION INVERTER WELDER

## POWERPULSE 250PFC

The POWERPULSE 250PFC machine is a new inverter-based MIG/MMA/TIG Welding machine with Synergic Programs and Dual pulse functions. The MIG function allows you to weld with Gas Shielded wire applications giving excellent, professional welding results. Easy step-less adjustment of voltage and wire feed coupled with integrated digital meters allows easy setting of welding parameters.

POWERPULSE 250PFC features MIG welding with Synergic welding programs designed for ease of use with your selected gas mixture. The operator selects the gas mixture and wire diameter they are using then simply start welding. Once this is done the operator can make fine adjustments to the voltage for even greater control of the weld pool. The added Lift-Arc DC TIG capability delivers perfect arc ignition every time and a remarkably smooth stable arc produces high quality TIG welds. TIG functionality includes adjustable Down Slope & Post Gas as well as being gas solenoid-valve equipped. An additional feature is the Spool Gun ready function that allows the simple connection of Spool Gun for the use of thin or softer wires that don't have the column strength to feed through MIG torches, such as aluminum wire. In the JOB mode, 100 different JOB records can be stored and recalled, The POWERPULSE 250PFC machine has built-in automatic protection function to protect the machines from over-voltage, over-current and over-heat. If any one of the above problems happens, the alarm lamp on the front panel will be lit and output current will be shut off automatically for the machine to protect itself and prolong the equipment using life.

### FEATURES

- New PWM technology and IGBT inverter technology.
- Active PFC technology for increased duty cycle and energy efficiency.
- MIG/MAG with Pulse SYN/Dual pulse SYN/Manual and SYN function
  - Synergic programs for aluminum, mild steel, stainless steel and CuSi
  - JOB mode (Save and call 100 different job records)
  - 2T /4T/S4T/Spot Weld welding mode
  - Function parameter adjustment
- MMA function (Stick electrode)
  - Hot start (improves electrode starting)
  - Adjustable Arc Force
- DC TIG
  - Lift Arc ignition (prevents tungsten sticking during arc ignition)
  - 2T /4T Trigger Control
  - Adjustable Down slope
  - Gas/air cooling mode
- Internal wire feeder, gear driven for up to 300mm Ø spool
- Euro style MIG torch connection
- IP23 rating for environmental/safety protection
- Spool Gun Connection

### PACKAGE INCLUSIONS

- Bossweld 250A MST Double Pulse Mig 240V
- Bossweld Binzel Style BZ36 Complete MIG Torch Ergon 3Mt
- Argon Twin Gauge Regulator
- 3mt Gas Hose with Quick connection
- Arclead Set 230A 6Mt EH/4Mt EC
- 2 x Bossweld Drive Roller 1.0/1.2mm U Groove (Aluminium)
- 2 x Bossweld Drive Roller 0.8/1.0mm V Groove (Mild Steel)
- Bossweld Binzel Style Red Teflon Liner 0.9 - 1.2mm 3Mt

### ORDERING INFO

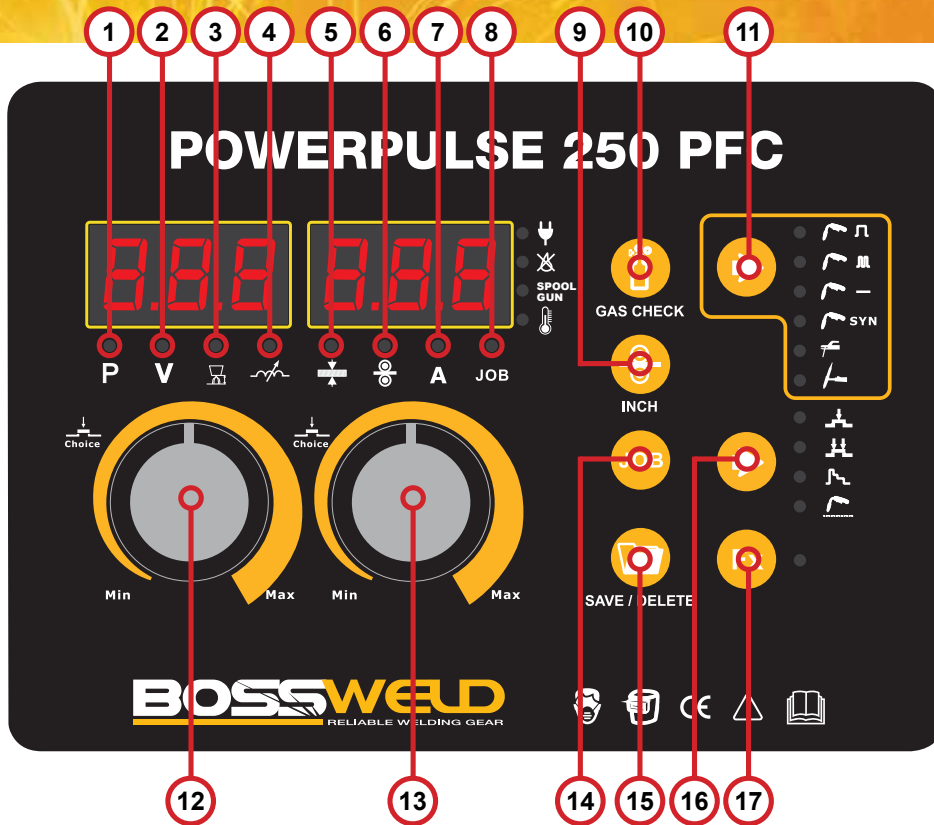
Part Number	Description
660250	Bossweld Powerpulse 250PFC



### TECHNICAL DATA

Technical Data	POWERPULSE 250PFC
Power Supply: 1 Phase 240V 50-60 HZ +/-15%	Yes
Welding Voltage Range MIG	14.8-26.5V
Duty Cycle @ 40°C MIG/TIG/MMA	30% @ 250A
Open Circuit Voltage	55.3V
Output Current Range MIG	15-250Amps
Output Current Range TIG/MMA	10-250Amps
I Max MIG	35Amp
I Max MMA	40Amp
I ieff MIG	19Amp
I ieff MMA	22Amp
Power factor	0.99
Protection Class	IP23
Insulation Class	H
MIG Wire Diameter Range	Mild Steel: 0.6/0.8/0.9/1.0/1.2 Stainless Steel: 0.8/0.9/1.0/1.2 Flux-Cored: 0.6/0.8/0.9/1.0/1.2 Aluminium :1.0/1.2
Electrode Diameter Range	1.6mm - 5.0mm
Thermal overload protected	Yes
Power Source Dimensions	69 x 24 x 45cm
Power Source weight	27Kg
Power Source Warranty	2 Years

## POWERPULSE 250PFC- CONTROL PANEL



- 1** **P**  
**SYNERGIC PROGRAMS INDICATOR**  
 Select from a list of Preset programs, This will set the machine for the correct wire size, wire type and gas being used, Program number will be displayed to the left digital display
- 2** **V**  
**WELDING VOLTS INDICATOR**  
 Value will be displayed on the left digital display.
- 3** **[Arc Length Icon]**  
**ARC LENGTH INDICATOR**  
 Adjustable from -10.0 to +10.0 The higher the value, the longer arc length, The lower the value the shorter the arc length. Value will be displayed on the left digital display.
- 4** **[Inductance Icon]**  
**INDUCTANCE INDICATOR**  
 Adjustable from -10.0% to +10.0% Value will be displayed on the left digital display.
- 5** **[Material Thickness Icon]**  
**MATERIAL THICKNESS INDICATOR**  
 Value will be displayed on the right digital display. This will vary depending on synergic program selection.
- 6** **[Wire Speed Icon]**  
**WIRE SPEED INDICATOR**  
 Value will be displayed on the right digital display.
- 7** **V**  
**WELDING CURRENT INDICATOR**  
 Value will be displayed on the right digital display.
- 8** **JOB**  
**JOB INDICATOR**  
 Saved job numbers will be displayed to the right digital display, Use R parameter dial (13)
- 9** **INCH**  
**WIRE INCH BUTTON**  
 Press and hold to feed wire

- 10** **GAS CHECK**  
**GAS CHECK BUTTON**  
 Press and hold to check gas flow
- 11** **[Process Selection Icon]**  
**WELDING PROCESS BUTTON**  
 - MIG-MAG Pulse Synergic  
 - MIG-MAG Dual Pulse Synergic  
 - MIG-MAG Manual  
 - MIG-MAG Synergic  
 - MMA  
 - TIG
- 12** **[L Knob]**  
**L PARAMETER SELECT / ADJUSTMENT KNOB**  
 Use this knob to select fuctions and adjust parameters
- 13** **[R Knob]**  
**R PARAMETER SELECT / ADJUSTMENT KNOB**  
 Use this knob to select fuctions and adjust parameters
- 14** **JOB**  
**JOB BUTTON**  
 In the JOB mode, 100 different JOB records can be stored and called, Improve the quality of welding process.
- 15** **SAVE / DELETE**  
**PROGRAM SAVE / DELETE**  
 Save current setting you need to press Job button first and then select a job number that is not being used this will be indicated by - - - on the left digital display, job number is displayed on the right digital display, or delete programed job number
- 16** **[Trigger Mode Select Icon]**  
**TRIGGER MODE SELECT BUT-TON**  
 - 2T  
 - 4T  
 - S4T  
 - SPOT WELD

# POWERPULSE 250PFC- WELD CYCLE.

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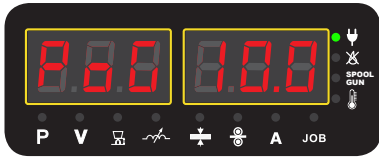
## FUNCTION BUTTON

Press to scroll through weld function settings  
Parameters will be displayed to both digital display  
See below for function settings



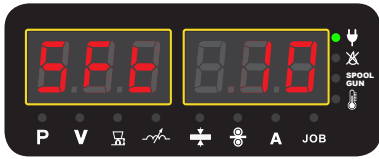
### PRE GAS

Selection for gas flow time prior to the arc starting  
Adjustable from 0 - 5 sec



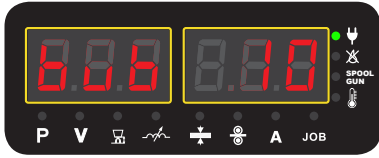
### POST GAS

Selection for gas flow time after the arc finishes.  
Adjustable from 0 - 10 sec



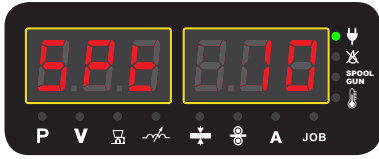
### SLOW FEED TIME

This function is used to regulate the speed of wire feeding increasing.  
Adjustable from 0 - 10 sec



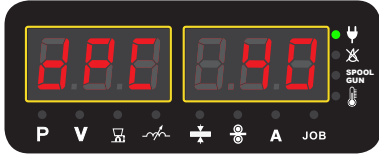
### BURNBACK

Control sets the amount of wire to 'burn back' after you release the trigger of your torch.  
Adjustable from 0 - 10



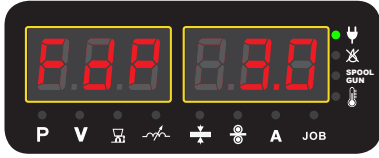
### SPOT WELD TIME

Is the time during which welding current is applied to the metal sheets  
Adjustable from 0 - 10 sec



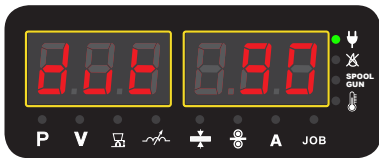
### DELTA PULSE CURRENT

The difference between base current and peak current in pulse welding.  
20-200



### DUAL PULSE FREQUENCY

Set pulse frequency, regulating the value of time T, namely, ripple pattern of density regulation. Higher Hz produces many short ripples with slightly lower penetration.  
Adjustable from 0.5 - 3.0Hz



### DUAL PULSE DUTY

Set strong pulse time (peak) for penetration and low-frequency cycle ratio (cooling), namely the regulation of the proportion of the ripple pattern on weld puddle surface and resulting depth in groove.  
Adjustable from 10 - 90%



### DUAL PULSE BASE CURRENT PERCENT

Sets the current of the low/ base pulse.  
Adjustable from -10 - +10



### START CURRENT PERCENT

Available in 4T trigger mode, sets a welding current 10-200% of the main welding current activated when the trigger is held on to 'latch' the trigger before the main weld current is started. Once the trigger is released, the current will go through the upslope period if it is set, to the main welding current  
Adjustable from 1 - 200%



### START CURRENT ARC LENGTH

In S4T welding mode, excessive arc length will lead to more spatters and unsightly welds, so it is necessary to set reasonable quantity.  
Adjustable from -10 - +10



### END CURRENT PERCENT

4T trigger mode only, sets a welding current 10-200% of the main welding current activated when the trigger is held on to 'unlatch' the trigger before the weld is finished. If downslope is set, the current will go through the downslope period before going to the end current set. When the trigger is released, the arc will stop.  
Adjustable from 10%-200%



### END CURRENT ARC LENGTH

S4T welding mode, excessive arc length will lead to more spatters and unsightly welds, so it is necessary to set reasonable quantity.  
Adjustable from 0 - 10



### HYDROCOOLING

Select water cooling ON or OFF



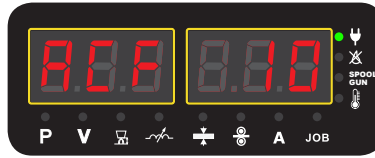
### SPOOL GUN

Spool Gun ON or OFF



### HOT START

Electrode Pre-heating on the weld start. Makes electrode priming easier and prevents it from sticking when cold



### ARC FORCE

Also called Dig and Arc Control. Gives a power source variable additional amperage during low voltage (short arc length) conditions while welding. Helps avoid "sticking" stick electrodes when a short arc length is used.  
Adjustable from 0 - 10



### DOWN SLOPE

Selection for the transition time from Peak Amperage to Finish Amperage.  
Adjustable from 0 - 10



## FUNCTION BUTTON

Press to the function button to exit settings