

# ALUMTIG 200

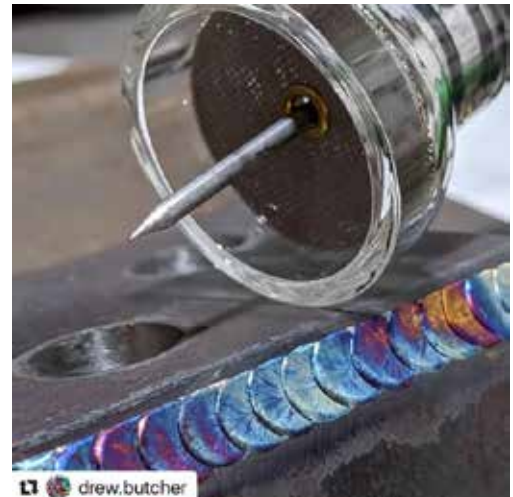
## QUICK START GUIDE



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dsr.performance



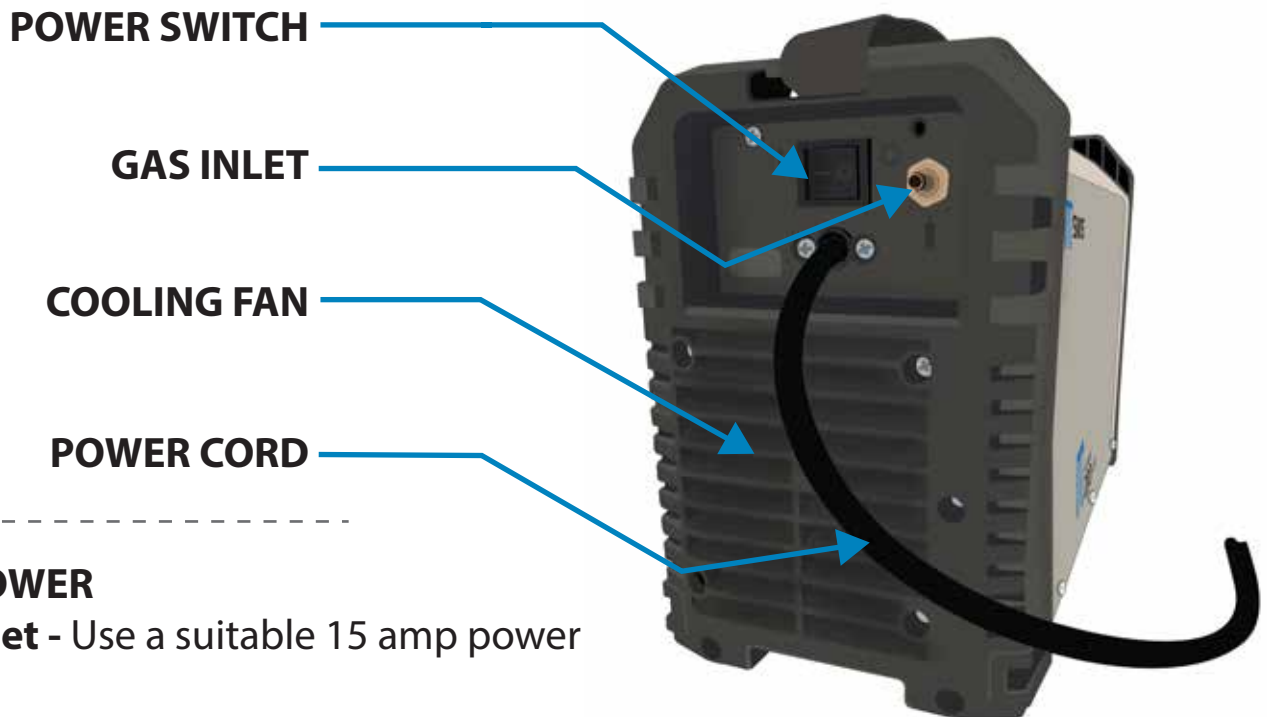
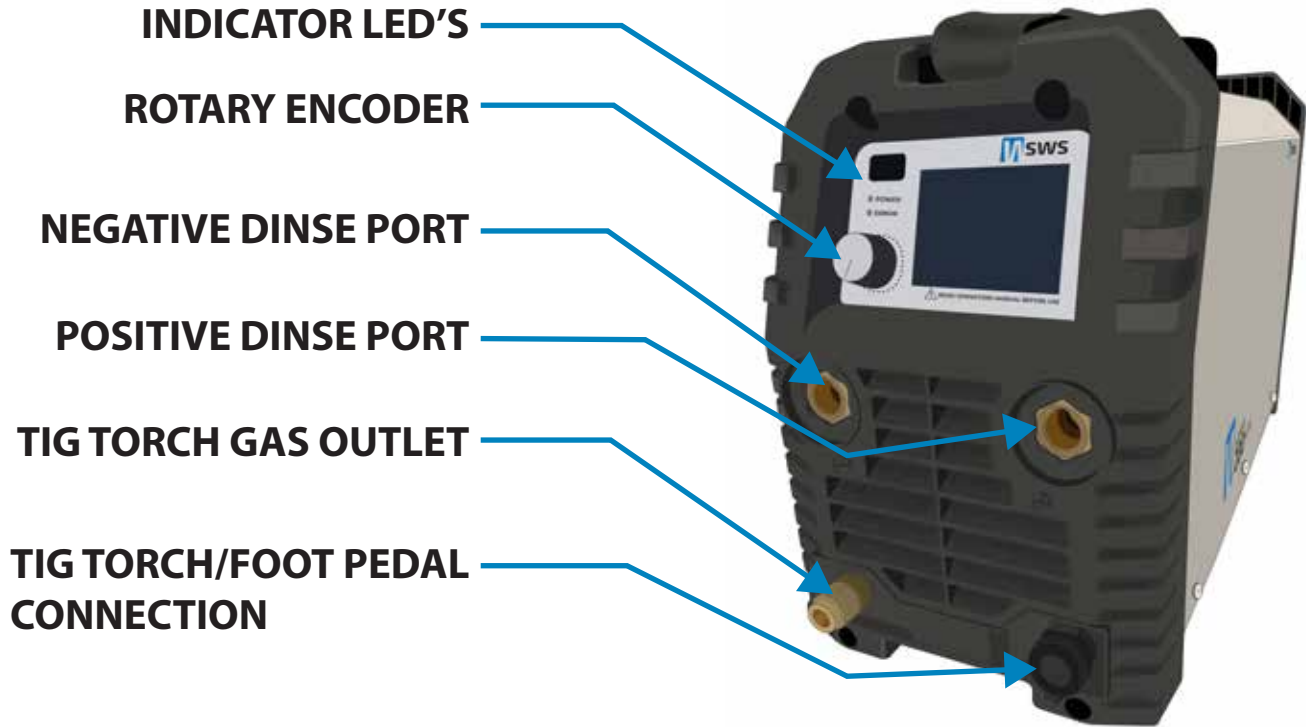
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**PLEASE DOWNLOAD AND READ THE OPERATING MANUAL BEFORE OPERATION FOR IMPORTANT SAFETY INFORMATION!**

# ALUMTIG 200 QUICK START GUIDE

## MACHINE OVERVIEW



### INPUT POWER

**15 A Outlet** - Use a suitable 15 amp power outlet.

**10 A Outlet** - Use a suitable 15 amp to 10 amp converter.

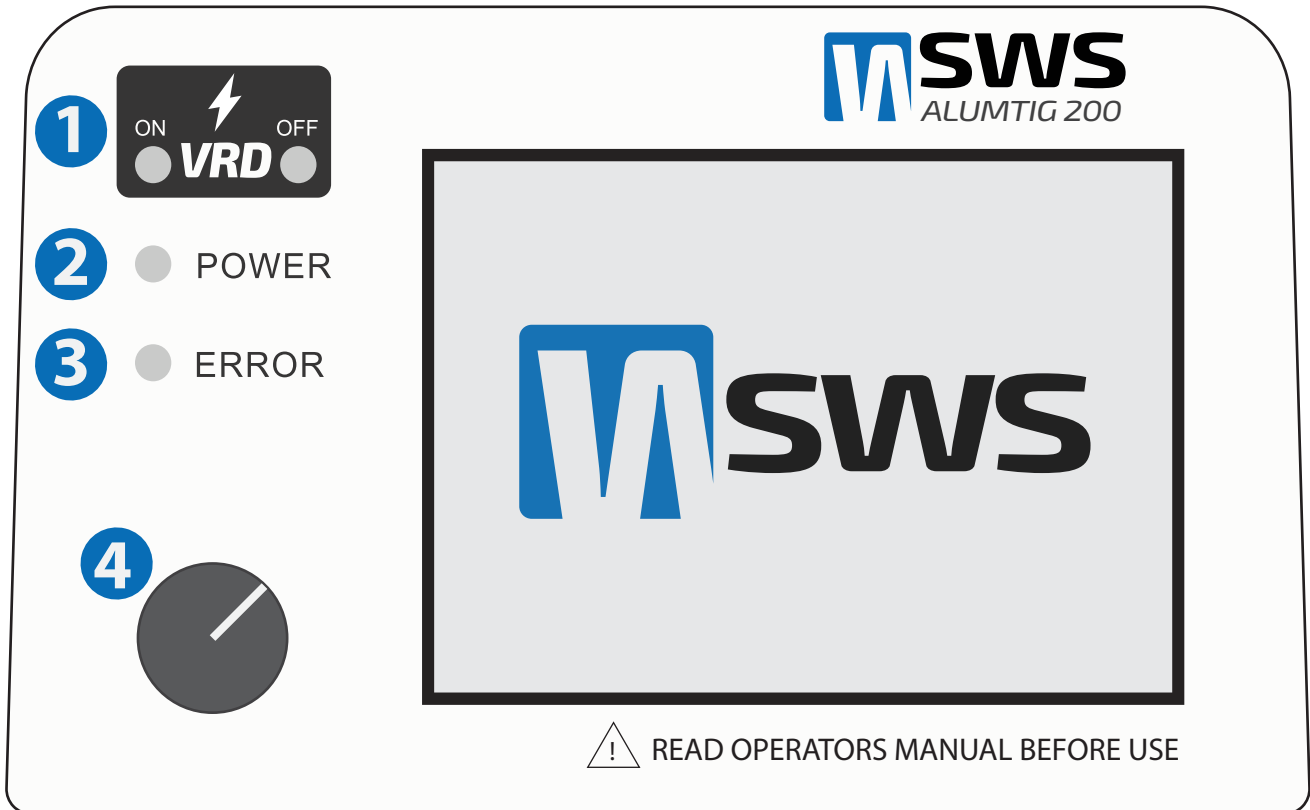
**Generator** - 10 KVA Minimum.

### SHIELDING GAS

100% Argon with horizontal outlet bottle.

# ALUMTIG 200 QUICK START GUIDE

## MACHINE OVERVIEW



**1. VRD - MMA ONLY:** Voltage Reduction Device reduces maximum unloaded voltage of output terminals to safe levels.

**2. POWER LED:** When illuminated the machine is turned on.

**3. ERROR LED:** When illuminated refer to error code on display and resolve.

#### **4. ROTARY ENCODER:**

1. Rotate to choose setting.

2. Press to select setting.

3. Rotate to adjust setting.

4. Press to store setting.

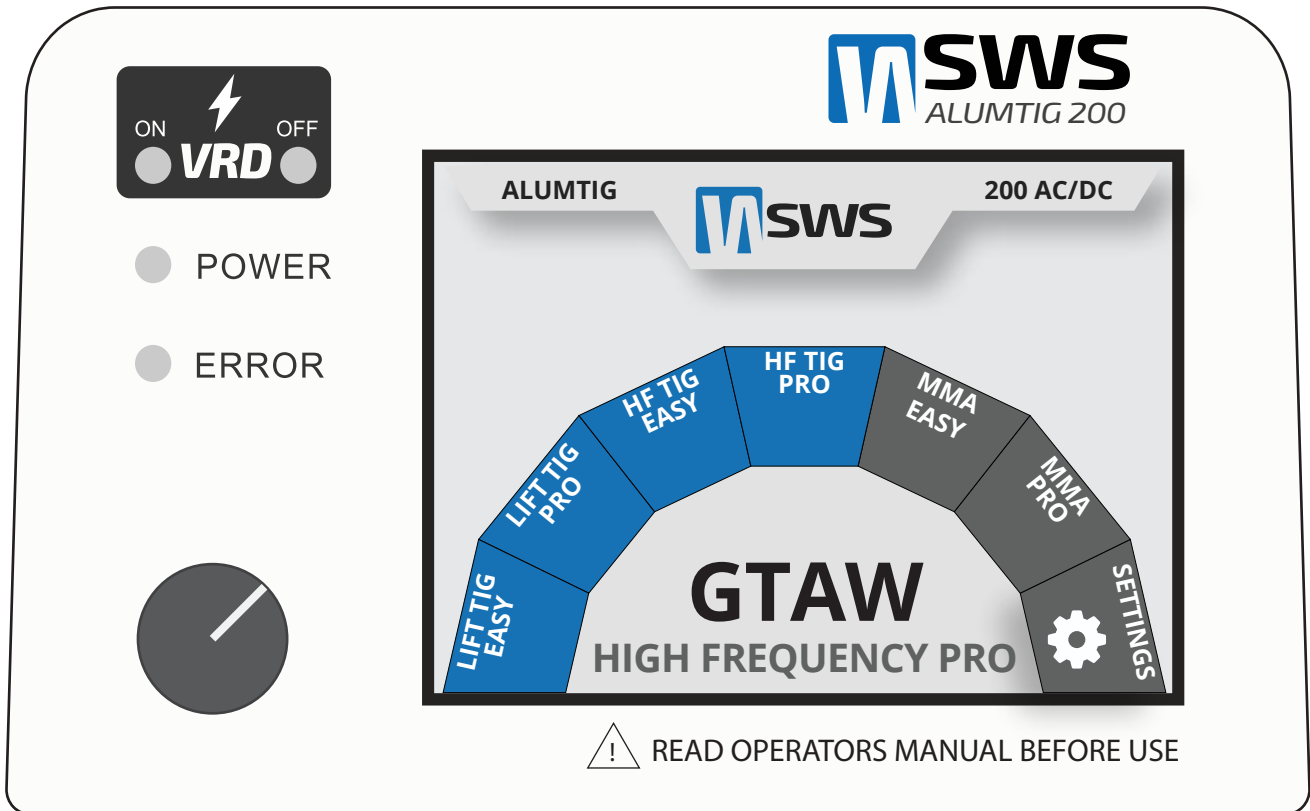
**5. GAS PURGE/CHECK** When in the TIG welding mode screen press and hold to start gas flow press to stop.

**6. Press and hold then switch on for hard reset.**

**(Use hard reset if frozen or for other errors)**

# ALUMTIG 200 QUICK START GUIDE

## MAIN MENU



## TIG WELDING MODES

**HF (High Frequency)** - This mode allows the arc to start without touching the tungsten to the metal being welded. It is also the preferred method when using AC. When using HF the main causes of poor arc starts is a contaminated tungsten, too low of gas flow or a poor ground clamp connection.

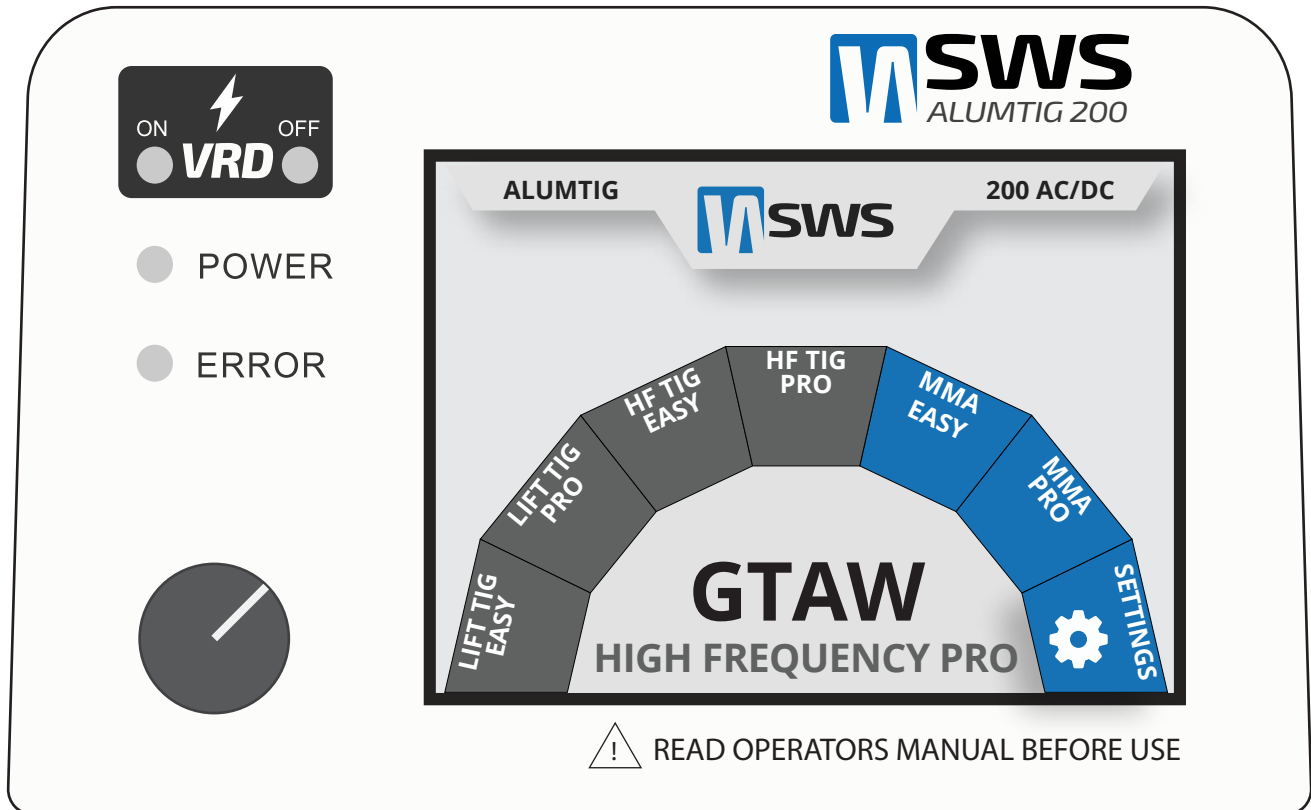
**LIFT (Lift TIG)** - This mode requires the tungsten to touch the metal, then press the button and lift to start the arc. This setting is used where HF may cause problems when used around sensitive electronics.

**HF/LIFT TIG EASY** - Ease of setup with optimum settings and the ability to change the trigger mode (2T, 4T), set pulse up to 2Hz and adjust welding amps.

**HF/LIFT TIG PRO** - Control all TIG AC or DC welding parameters when a setting is modified it saves automatically in the current program selection (PRO AC1, 2, 3, 4, 5)

# ALUMTIG 200 QUICK START GUIDE

## MAIN MENU



## MMA WELDING MODES

**MMA EASY** - Ease of setup with optimum settings and ability to choose the electrode diameter then fine tune with the Amps.

**MMA PRO** - Control all stick welding parameters.

## SETTINGS

**Reset** - Reset all welding parameters to defaults and reset welding timer.

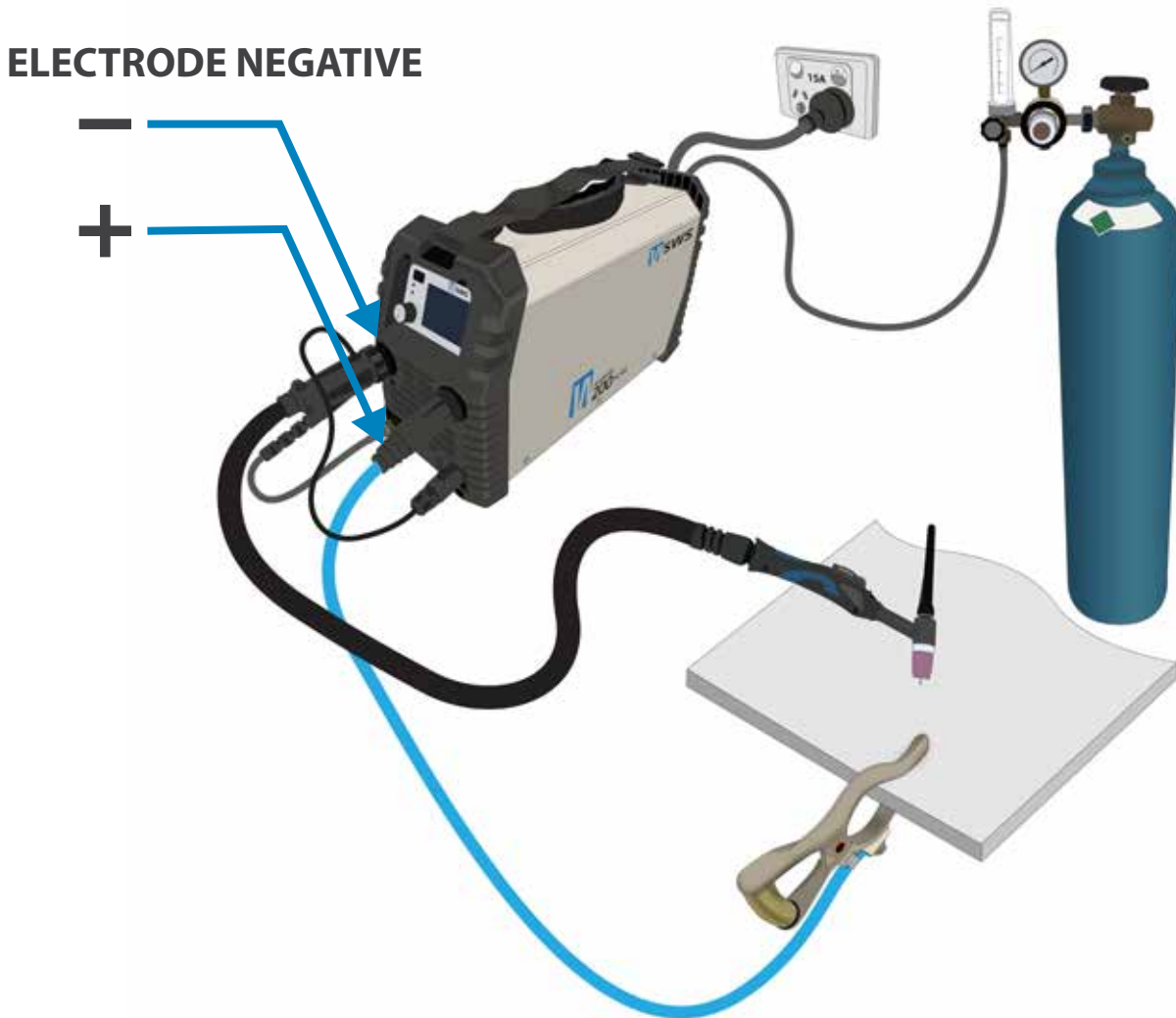
**Timer** - Displays current total welding time for all welding modes.

**Firmware Version** - Displays the software version.



# ALUMTIG 200 QUICK START GUIDE

## TIG WELDING SETUP



## USING THE SWITCHED TIG TORCH

**TIG Torch Switch Mode** - Plug in the TIG torch then turn on machine on to detect. **If you do not detect the torch the amp control will not work.**

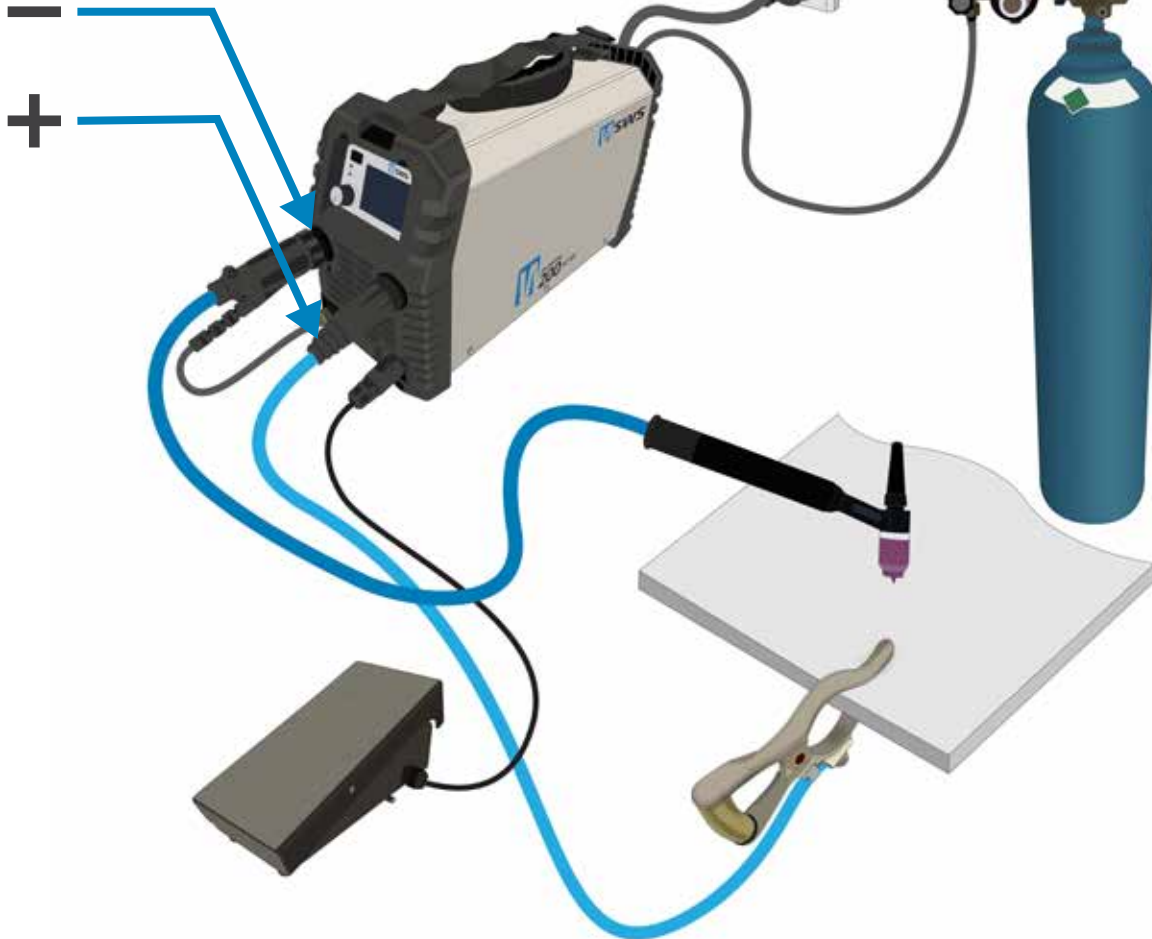
**Torch Push Button Switch** - Starts and stops the TIG welding ark. This button will function differently depending on the trigger mode selected.

**Finger/Thumb Wheel** - Controls the welding amps when welding. 0 is the minimum welding amps (10A), and 10 is whatever the machine is set to. The amp value displays when welding and holds for 5 seconds after the arc finishes.

# ALUMTIG 200 QUICK START GUIDE

## TIG WELDING SETUP

ELECTRODE NEGATIVE



## USING THE FOOT PEDAL

**Foot Pedal Mode** - Plug in the foot pedal then turn on machine on to detect the foot pedal symbol will show in the TIG welding screen. 

The foot pedal can also be used as a momentary switch by not detecting then operating it in 2T or 4T modes.

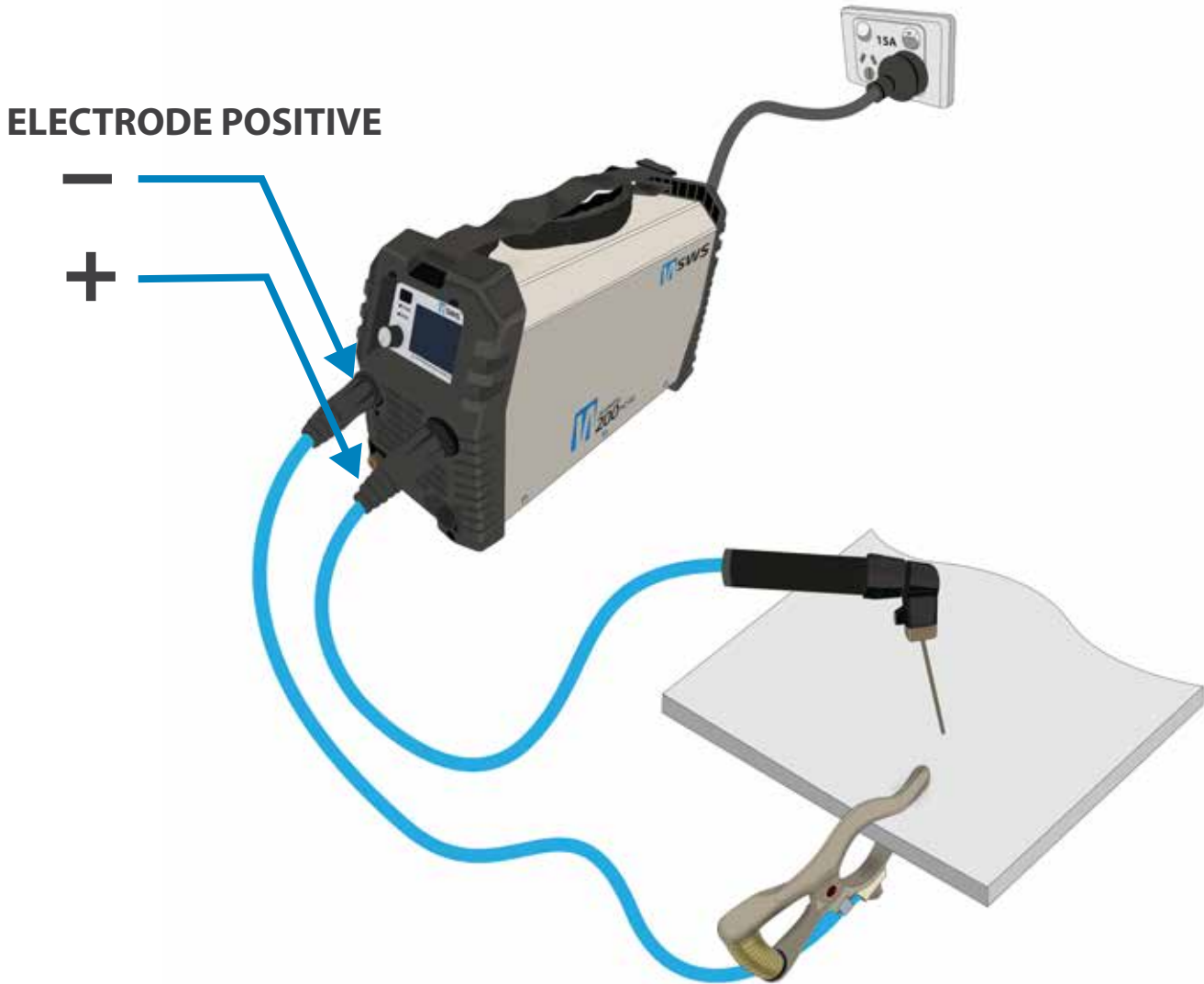
**Torch Selection** - Both the non switched torch and switched torch can be used with the foot pedal. If using the switched torch leave the plug to the side.

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## MMA WELDING SETUP

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## MMA TORCH

**MMA Welding Mode** - In most MMA welding applications DCEP (Direct Current Electrode Positive) is used. In some cases when welding very thin material reversing the polarity to DCEN can be an advantage. **(MMA TORCH NOT INCLUDED.)**



# ALUMTIG 200 QUICK START GUIDE

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## TIG WELDING FUNCTIONS

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### **Function**

PRE FLOW (1-10 Seconds)

### **Purpose**

This parameter operates in 2T and 4T HF TIG mode only and is used to provide gas to the weld zone prior to striking the arc, once the torch trigger switch has been pressed. This control is used to dramatically reduce weld porosity at the start of a weld.

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### **Function**

START AMPS (10-200 Amps N/A EASY MODES N/A FOOT CONTROL)

### **Purpose**

This parameter is used to set the start current for TIG. In 4T mode the Initial Current remains on until the torch trigger switch is released after it has been depressed. In 2T mode this is the Initial Current for the Up Slope current ramp.

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### **Function**

UPSLOPE (0-10 Seconds N/A EASY MODES)

### **Purpose**

This parameter is used to set the time for the weld current to ramp up from INITIAL current to BASE current.

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### **Function**

WELDING AMPS (10-200 Amps)

### **Purpose**

This parameter sets the welding current. In PULSE TIG mode, this parameter sets the PEAK current.

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### **Function**

PULSE BASE AMPS (10-200 Amps)

### **Purpose**

In PULSE TIG mode, this parameter sets the BASE current.

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### **Function**

DOWNSLOPE (0-10 Seconds N/A EASY MODES)

### **Purpose**

Down Slope will ramp amps "down" from the welding amp value to the end amp value to give time to fill the crater left at the end of the weld bead. Can also be used in the 4T mode to help with heat control by briefly tapping the switch to cool off the weld before tapping it again to restart the up slope sequence before the arc reaches the end amp stage.

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## TIG WELDING FUNCTIONS

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### **Function**

PULSE TIME ON (10-90% NA EASY MODES)

### **Purpose**

The pulse consists of two stages: Welding amps (upper /Peak) and Pulse amps (lower/background current). This is represented by a % of total time the pulse spends in the pulse amp stage of the cycle during one full pulse. The feature can be used to increase or decrease pulse amp time relative to the welding amp time of the cycle to help manage heat input.

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### **Function**

PULSE FREQUENCY (1-500Hz NA EASY MODES)

### **Purpose**

Represented by Hertz (Hz), the pulse frequency defines the actual number of times each second the pulse makes one complete cycle between welding amps (peak/high amp value) and pulse amps (background/low amp value).

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### **Function**

HF ON/OFF

### **Purpose**

HF - High Frequency Start which allows non contact starting of the arc or when off (lift tig) requires contact with the metal to initiate the arc (for AC and DC). (HF is selected when symbol is not striked out) The lift start function on the ALUMTIG 200 provides a cold electrode for safety, and prevents accidental starts.

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### **Function**

AC BALANCE (50-98% NA EASY MODES)

### **Purpose**

Controls arc cleaning action when welding on AC. Adjusting the % electrode negative (EN) AC wave controls the width of the cleaning zone surrounding the weld. Lower percentage AC balance more cleaning action but less penetration. Higher percentage AC balance less cleaning action but more penetration. PRO TIP: Typically a range between 65% - 75% is used. 75% for new material 65% for oxidised old material.

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## TIG WELDING FUNCTIONS

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### Function

AC FREQUENCY (50-98% NA EASY MODES)

### Purpose

Governs the number of times per second that the current alternates in AC mode. To achieve greater arc focus (constriction) and increase puddle agitation while welding in AC mode, increase AC frequency. This allows pinpoint use on thin materials, and helps penetration on thicker materials. Ideal adjustment range is usually between 80-120Hertz. For comparison most transformer welders operate on 60 Hz. Greater arc control and stability can be achieved through the higher frequency range offered by this welder. Lower Frequencies will widen and soften the arc and reduce the level of control.

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### Function

AC WAVE FORMS

### Purpose

SQUARE WAVE 

This is the most commonly used wave form and produces great results in all applications.

MODIFIED SQUARE WAVE 

A modified square wave that has a slightly softer arc.

SINE WAVE 

Mimics the wave form that is used on older transformer style machines.

TRIANGLE WAVE 

This produces a fast and sharp wave form and can help improve penetration on thicker Aluminium.

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### Function

2T, 4T, TACK CONTROL (0.1 - 10 Seconds)

### Purpose

**2T MODE:** Press and hold the switch. The program will cycle automatically. When the switch is released, the arc will downslope and terminate with post gas flow.

**4T MODE:** Switch is pressed and held to start the pre-flow then start amps part of the cycle. When released, upslope begins and continues until the amps are raised to the preset welding amps. When pressed and held again, downslope starts and ramps down to the end amp stage. If released before downslope ends program will cycle to main amps if released after downslope ends the arc terminates, and post flow begins.

**TACK CONTROL:** Select this mode to control the arc on time for precision tack welds.

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## MMA WELDING FUNCTIONS

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### Stick (MMA) PRO Functions

**Function**

HOT START (0-60 Amps)

**Purpose**

Sets the starting amps to reduce sticking of the electrode during the arc strike phase.

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**Function**

WELD AMPS (10-200 Amps)

**Purpose**

Welding amps define the top limit of amps at which the machine has been programmed to operate.

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**Function**

ARC FORCE (0-99%)

**Purpose**

Controls the arc response when an arc is held short and voltage begins to drop. Arc force automatically compensates by modifying the volt/amp curve to maintain the energy needed to weld. Represented as a percent of available arc force amperage.

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### Stick (MMA) AUTO Functions

**Function**

ELEC DIA (2-5mm)

**Purpose**

Machine automatically adjusts amps relevant to the diameter of electrode being used.

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**Function**

Amps Fine Tuning (-20-20%)

**Purpose**

Fine tunes the amps for the metal being welded.

# ALUMTIG 200 *QUICK START GUIDE*

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## WELDING RESOURCES

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To get started welding we recommend you check out the abundance of great resources available online. You can learn from some of the best welders across the globe from your shed.

### **Welding Tips & Tricks**

Tons of information on all sorts of welding.

<https://www.weldingtipsandtricks.com/>

<https://www.youtube.com/user/weldingtipsandtricks>

### **Aluminium TIG welding**

Great resource for welding aluminium.

<https://6061.com/>

### **Weld.com**

Welding youtube channel

<https://www.youtube.com/user/Welldotcom>

**Have a great resource and want to let us know? Send us an email  
[support@swwelding.com.au](mailto:support@swwelding.com.au)**