



ADVANCEMIG 200

MULTI-PROCESS MIG WELDER

OPERATING INSTRUCTIONS



230V 50HZ
SINGLE
PHASE



IGBT
INVERTER
TECHNOLOGY



DIRECT
CURRENT
OUTPUT



CONSTANT
CURRENT/
VOLTAGE



LIFT TIG
(OPTIONAL
TORCH)



SPOOL GUN
CAPABLE



POWER FACTOR
CORRECTION



SPIKE/
GENERATOR
SAFE



INTELLIGENT
PROTECTION
SYSTEM



LCD
SCREEN



IP23 CORROSION
& SALT SPRAY
RESISTANT



VOLTAGE
REDUCTION
DEVICE



MULTI-VOLTAGE
INPUT POWER



SYNERGIC
OPERATION



ADVANCEMIG 200

Congratulations on your new Strata product!

The Strata range from Euroquip uses latest technology design and engineering to produce welding products that combine market leading value and features with durability. Designed for discerning operators who seek professional results and product quality without the price tag of a full professional setup. Design emphasis is placed on simple, functional design and operation. Strata product is subject to stringent quality control and designed and manufactured to NZ & Australian standards.

Common use of Strata products include:

- Light Engineering
- Automotive
- Home/ hobby Engineering
- Farming
- Industrial Maintenance & Repairs

For industrial welding solutions, check out the Strata range from Euroquip:

www.strata.co.nz

Euroquip is a market leading provider of innovative power equipment solutions to a wide range of industries across New Zealand and Australia. Key product categories are; welding equipment, air compressors, power generators and cleaning equipment.

Euroquip's slogan is 'empowering industries', find out more about the advantage Euroquip brings at **www.euroquip.co.nz**.

Providing exceptional product support is a key component of Euroquip's market leading customer advantage focus. As part of this program, it is required for all products to be registered with Euroquip to qualify for product support. Products not registered with Euroquip are supported by a base 12 month warranty only. Spare parts and technical support will not be available for an unregistered product outside of this base warranty period. If a Euroquip dealer has not already registered your product, please register it online at www.euroquip.co.nz. To request a physical registration form, please download one at www.euroquip.co.nz under the 'Contact Us' tab.



ADVANCEMIG 200

Contents

Know Your Machine.....	5
Quick Start Guide.....	9
Accessories & Spare Parts.....	13
Wiring Diagram.....	15
Care & Maintenance.....	16
Safety.....	17
Warranty.....	23



MULTI-PROCESS MIG WELDER

• ADVANCEMIG 200 •

The ultimate single phase synergic MIG welder with full LCD colour screen. Easy set up and operation on an incredible wide range of materials. Lift TIG, spool gun ready and multi voltage capable (operates on an extension cord) are just some of the features the ADVANCEMIG 200 boasts. A must have for todays industrial professional.



- Professional aluminium chassis wire feeder for smooth and consistent wire feed
- Active PFC technology for increased duty cycle and energy efficiency
- Multi voltage input, can even be used with long extension lead
- Synergic MIG operation for optimum welding results every time
- Remote control spool gun connection for effective results welding with soft wires such as aluminium. Suitable for mig brazing with bronze wires
- Lift TIG operation with down slope, post gas and remote current control ability (torch optional)
- Reversible polarity MIG welding operation suitable for gas & gasless MIG welding
- Mig waveform (inductance) control for great arc control and smooth welding results
- Wire inching and gas purge control for a safe & simple to set up
- Adjustable arc force, hot start & automatic anti stick control
- Full Colour LCD Display
- Temperature, voltage and current sensors for increased reliability & safety
- Compact size, capable of 5kg wire spool (D200). Ideal for onsite work.

DIMENSIONS:	WEIGHT:	INPUT POWER SUPPLY:	MAX. INPUT CURRENT:	GENERATOR CAPACITY:	OUTPUT CURRENT:	MMA O/C VOLTAGE:	DUTY CYCLE:	STANDARDS:	MMA ROD SIZE:	MAX WELD THICKNESS:	MIG WIRE SPOOL SIZE:	MIG WIRE SIZE:
511 x 213 x 400mm	12kg	230V AC 15A 50Hz	28A	6.6KVA	MIG 25-200A MMA 10-200A	63V	MIG 60%@165A MMA 60%@165A	EN60974-1:2012	1.6 - 4.0mm	10mm	D100/D200 0.5kg/5kg	0.6 - 1.2



230V 50HZ
SINGLE
PHASE



IGBT
INVERTER
TECHNOLOGY



DIRECT
CURRENT
OUTPUT



CONSTANT
CURRENT/
VOLTAGE



LIFT TIG
(OPTIONAL
TORCH)



SPOOL GUN
CAPABLE



POWER
FACTOR
CORRECTION



SPIKE/
GENERATOR
SAFE



INTELLIGENT
PROTECTION
SYSTEM



LCD
SCREEN



IP23 CORROSION
& SALT SPRAY
RESISTANT



VOLTAGE
REDUCTION
DEVICE



MULTI-VOLTAGE
INPUT POWER



SYNERGIC
OPERATION

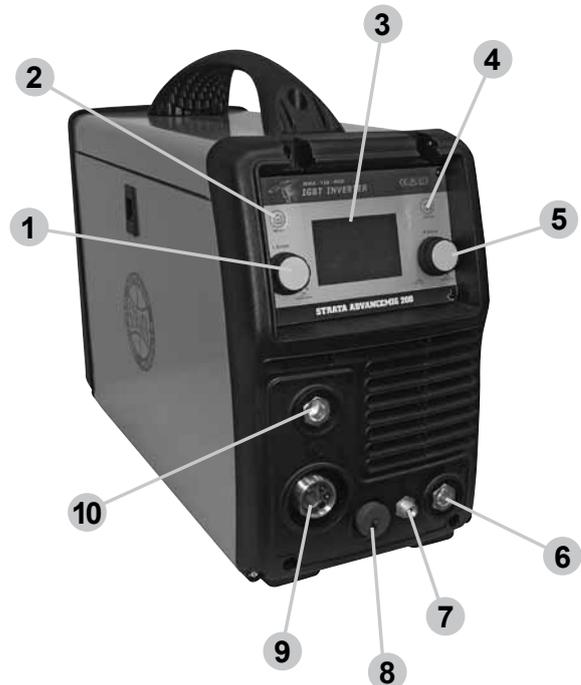


ADVANCEMIG 200

Know Your Machine

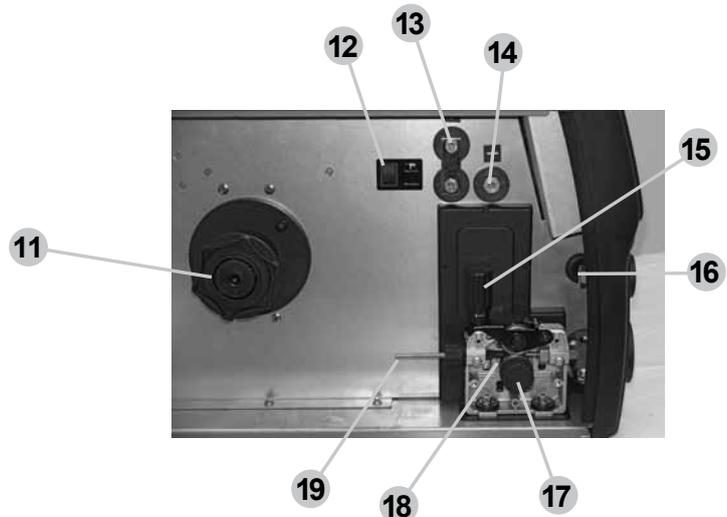
More detailed explanations of function on following pages.

1. Left Selection Knob
2. Menu Button
3. LCD Display Screen
4. Enter Button
5. Right Selection Knob
6. Negative (-) Welding Power Output Connection Socket
7. Tig Torch Gas Connector
8. Remote Connection Plug
9. Mig Torch Euro Connector
10. Positive (+) Welding Power Output Connection Socket



Wire Feeder

11. Spool Holder
12. Spool Gun/ Internal Wire Feeder Switch
13. Positive (+) MIG Torch Power Connection
14. Negative (-) MIG Torch Power Connection
15. Wire Feed Tension Arm
16. Wire Feed Tension Adjustment
17. Drive Roller Retainer
18. Wire Drive Roller
19. Wire Feeder Inlet Guide



LCD Screen Navigation & Controls Home Screen

1. Welding Mode Selection Menu.
2. Synergic program selection menu (Only available in MIG/MAG Synergic mode)
3. Welding parameters menu
4. System settings menu. Use 'Menu' button to move between each menu.
5. Current welding mode icon
6. 2T/4T trigger mode icon
7. Current synergic welding program (MIG/MAG Synergic Mode Only)
8. Current menu selection display. (Shows the value of the parameter selected on the menu screen for adjustment)





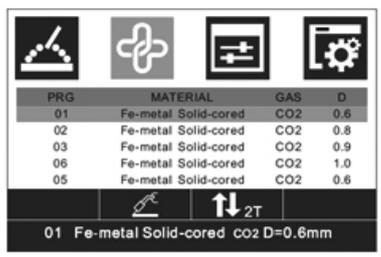
ADVANCEMIG 200

Controls Explained

Synergic Program Selection Screen

(Only available in MIG/MAG Synergic Mode)

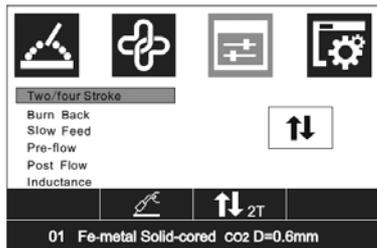
Use the left knob to select the relevant synergic program (Welding material, wire type, shielding gas and wire diameter). Press the L knob to confirm the selection. The current program loaded will be displayed at the bottom of the screen. Press 'Menu' button to change to another menu, press 'Enter' button to change to welding mode home screen.



Welding Parameters Menu

(Only available in MIG/MAG Synergic Mode)

This menu sets secondary parameters relevant to the welding process selected. Select the parameter using the left knob, adjust the selected parameter using the right knob. Confirm the selection by pressing either knob. Press 'Menu' button to change to another menu, press 'enter' button to change to welding mode home screen.



MIG Mode Parameters

(MIG/MAG Synergic and Manual Modes)

Two / Four Touch (2T/4T-2T) In this mode the trigger is pulled and held on to activate the welding circuit, when the trigger is released, the welding circuit stops. 4T is known as 'Latching' mode. The trigger is pulled once and released to activate the welding circuit, pulled and released again stops the welding circuit. This function is useful for longer welds as the trigger is not required to be held on continuously.

Burn Back (0-10) Burnback adjustment controls the short period of time that the wire feed will continue to run for after the main welding current stops. If the wire feed and current is stopped at exactly the same time, the wire will still be hot and will 'burn' back and stick to the welding tip. If this problem is happening, increasing the burnback adjustment will cause the wire feeder to run for longer after the arc has stopped. If the burnback adjustment is excessive, after a weld has stopped, the operator will be left with excess 'stickout' wire length from the torch tip that will require correcting before starting the next weld.

Slow Feed (0-10) Sometimes known as 'hot start'. When a weld is started, the workpiece and the wire will be 'cold' compared to welding temperature. This can cause an uneven and poor start to the weld using the voltage and wirefeed speed selected as optimal once the arc is established. This setting slows the wire speed down at the start of the weld which improves the weld starting performance.

Pre Flow (0-2S) This controls the period shielding gas will flow for when the torch is triggered before the arc starts. This purges the work area of atmospheric gas which could contaminate the weld before the weld starts.

Post Flow (0-10S) This controls the period of time the shielding gas continues to flow after the arc has stopped. This protects the weld area from contamination while it is still hot enough to react with atmospheric gases, after the weld is finished.

Inductance (0-10) This setting changes the MIG waveform to simulate changing the inductance of the welding circuit. Inductance controls the rate of the current rise and fall as the welding wire contacts the workpiece (known as a short circuit). More inductance increases the short circuit time and decreases the short circuit frequency rate. This causes a wider and more penetrating arc, useful for thicker weld joints. Less inductance will create a narrow more focused arc.

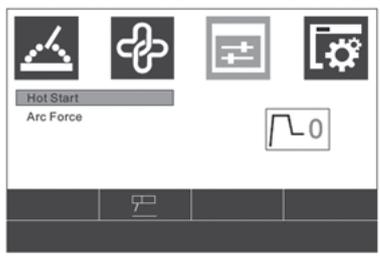
This effect can also be used to fine tune the arc to produce less splatter. Wire speed, wire size and type, shielding gas will all change the effect that the inductance setting has on the welding arc. Inductance change will have no practical effect on MIG spray transfer process (as opposed to short circuit process).



ADVANCEMIG 200

MMA Mode Parameters

Hot Start (0-10) Hot start provides extra power when the weld starts to counteract the high resistance of the electrode and workpiece as the arc is started.

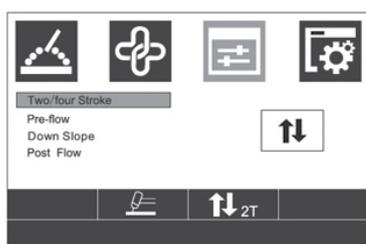


Arc Force (0-10) An MMA welding power source is designed to produce constant output current (CC). This means with different types of electrode and arc length; the welding voltage varies to keep the current constant. This can cause instability in some welding conditions as MMA welding electrodes will have a minimum voltage they can operate with and still have a stable arc.

Arc Force control boosts the welding power if its senses the welding voltage is getting too low. The higher the arc force adjustment, the higher the minimum voltage that the power source will allow. This effect will also cause the welding current to increase. 0 is Arc Force off, 10 is maximum Arc Force. This is practically useful for electrode types that have a higher operating voltage requirement or joint types that require a short arc length such as out of position welds.

TIG Mode Parameters

Two / Four Touch (2T/4T - 2T) In this mode the trigger is pulled and held on to activate the welding circuit, when the trigger is released, the welding circuit stops. 4T is known as 'latching' mode. The trigger is pulled once and released to activate the welding circuit,



pulled and released again to stop the welding circuit. This function is useful to longer welds as the trigger is not required to be held on continuously.

Pre Flow (0-2S) This controls the period shielding gas will flow for when the torch is triggered before the arc starts. This purges the work area of atmospheric gas which could contaminate the weld before the weld starts.

Down Slope (0-10S) When the trigger is released, the welding current will reduce gradually over the time selected down to 0. This allows the operator to complete the weld without leaving a 'crater' at the end of the weld pool.

Post Flow (0-10S) This controls the period of time the shielding gas continues to flow after the arc is stopped. This protects the weld area and torch tungsten from contamination while it is still hot enough to react with atmospheric gases, after the weld is finished.

Welding Mode Screen

This is the display screen for setting and displaying the main welding parameters in each welding mode. Press the 'enter' button to access this screen from any other menu. This display has the following function in each welding process mode:

MIG/MAG Synergic - Before welding left knob adjusts target current and right knob adjusts voltage +/- from the standard synergic program. During welding, displays output voltage and current.



MIG/MAG Manual - Before welding left knob adjusts wire feeding speed and right knob adjusts voltage. During welding, displays output voltage and current.

Stick/ MMA & TIG Modes - Before welding, left knob adjusts welding current. During welding, displays output voltage and current.



ADVANCEMIG 200

System Settings Menu - This menu adjusts internal system settings. Select the parameter using the left knob, adjust the selected parameter using the right knob. Confirm the selection by pressing either knob. Press 'Menu' button to change to another menu, press 'enter' button to change to welding mode home screen.

Tips & Tricks

Duty Cycle Rating

Welding duty cycle is the percentage of actual welding time that can occur in a ten minute cycle. E.g. 20% at 160 amps - this means the welder can weld at 160 amps for 2 minutes and then the unit will need to be rested for 8 minutes. All duty cycle ratings are based on an ambient air temperature of 40°C with 50% humidity, which is the international standard for such a rating. In an environment with temperatures exceeding 40°C, the duty cycle will be less than stated. In ambient temperature less than 40°C, duty cycle performance will be higher.

MIG Voltage & Wire Speed Settings

Voltage is essentially the power in the welding arc that sets the heat. The wire speed feed simply controls the rate at which the welding wire is fed into the weld pool. For any voltage position setting, there will be a specific corresponding 'sweet spot' in the wire feeding speed that will give the smoothest and most stable welding arc. The correct wire feeding speed for a given voltage setting is affected by welding wire type and size, shielding gas, welding material and joint type. It is recommended to set the welding voltage as desired and then slowly adjust the wire speed

until the arc is smooth and stable. When reaching this point, if the penetration/ heat input is too much/ not enough, adjust the voltage setting and repeat the process. If the operator is not able to achieve a smooth and stable arc with the desired heat input for the weld, it is likely that a change in wire size and/or shielding gas type is required (assuming all other factors are correct).

Synergic function makes the setup of MIG welding more simple, the operator simply sets the welding current like MMA or TIG welding and the machine calculates the optimal voltage and wire speed for the material type, wire type and size and shielding gas used. Obviously other variables such as welding joint type and thickness, air temperature affect the optimal voltage and wire feed setting, so the program provides a voltage fine tuning function for the synergic program selected.

The AdvanceMig 200 has an extra level of intelligence in the synergic programs that will not permit settings outside of those that will provide good welding results for the material, wire size and shielding gas used.

VRD Function

VRD stands for Voltage Reduction Device. This is a safety system that reduces the output voltage from the welding terminals in MMA mode while the welding output is not in use, to reduce the risk of electric shock from the live output voltage. The disadvantage of this system is that it makes the striking of the arc more difficult, especially on restarts and with some types of electrode such as low hydrogen electrodes. VRD protection is enabled standard for the AdvanceMig 200. If it is not required, the feature can be disabled by a Strata service dealer.



Quick Start Guide - Welder Installation

Electrical Connection

The AdvanceMIG 200 is designed to operate on a 15A 230V AC power supply. AdvanceMig Multivoltage technology allows the machine to operate on a very wide range input voltages down as low as 90V. This means that limited capacity power supplies and long extension leads may be used without damaging the welder. However, as the supply voltage decreases, the maximum output current and duty cycle will also decrease. To utilise the full output capacity of the machine using an extension cord, it should be a heavy duty version with a minimum cable core size of 2.5mm². It is recommended to use the Euroquip industrial duty 15A extension lead, part number; 16895.

Operating Environment

Adequate ventilation is required to provide proper cooling for the ADVANCEMIG 200. Ensure that the machine is placed on a stable level surface where clean cool air can easily flow through the unit. The

ADVANCEMIG 200 has electrical components and control circuit boards which may be damaged by excessive dust and dirt, so a clean operating environment is important for reliable product life.

Basic Operation

1. Fitting Wire Spool & Loading Wire Feeder

- 1.1 Open the wire compartment cover. Unthread the wire spool retainer. Fit the wire spool to spool holder shaft, ensuring that the wire exits the spool towards the bottom of the spool.
- 1.2 Set the spool brake tension by adjusting the spool tension adjustment screw before replacing the wire spool retainer. The spool brake tension should be set so that the spool can rotate freely, but does not continue to rotate once the wire feed stops. This may need to be adjusted as the wire is used up and the spool weight decreases.



WARNING! Excessive spool brake tension will cause wire feeding issues and affect welding performance as well as premature failure/ wear of wire feed components.

- 1.3 Feed the wire from the spool through the wire drive inlet guide (19) into the wire feeder.
- 1.4 Release the wire feed tension arm (15) by pivoting the wire feed tension adjustment lever (16) from the vertical to the horizontal position.
- 1.5 Check the wire drive roller (18) grooves match the selected MIG wire type and size. The drive roller will have two different sized grooves; the size of the groove in use is stamped on the side of the drive roller. For flux cored 'soft' wire, such as that used in gasless MIG welding, the drive roller groove has a serrated profile (known as knurled). For solid core 'hard' MIG wire, the drive roller groove used has a 'V' shaped profile. For Aluminium solid core 'soft' MIG wire, the drive roller required has a 'u' shaped groove. If necessary, remove and change the drive roller by unthreading the drive roller retainer (17).
- 1.6 Once the correct drive roller (18) is selected and fitted, manually feed the wire through the wire drive inlet guide (19) through the drive roller grooves and into the brass outlet wire guide tube. Ensuring that the wire is correctly seated in the drive roller grooves, replace the wire feed tension arm (15) and lock into place by rotating the wire feed tension adjustment lever (16) back to the vertical position.

Adjusting wire feed tension: This is accomplished by winding the knob on the tension adjustment lever (16). Clockwise will increase tension, anti-clockwise will decrease drive tension. Ideal tension is as little as possible, while maintaining a consistent wire feed with no drive roller slippage.

Check all other causes of excess wire feeding friction causing slippage first, such as; incorrect/ worn drive roller, worn/ damaged torch consumables, blocked/ damaged torch wire guide liner, before increasing wire feed tension. There is a number scale on the tension ad-



ADVANCEMIG 200

justment lever (16) to indicate the adjustment position. The higher the number indicated, the higher the tension that is set.



WARNING! Before changing the feed roller or wire spool, ensure that the mains power is switched off.



WARNING! The use of excessive feed tension will cause rapid and premature wear of the drive roller, the support bearing and the drive motor/gearbox.

- 1.7 Connect the MIG Torch Euro Connector to the MIG torch Euro connection socket (9) on the front of the machine. Secure by firmly hand tightening the threaded collar on the MIG Torch connector clockwise.
- 1.8 Check that the correct matching MIG wire, drive rollers (18) and MIG torch tip are fitted.
- 1.9 Connect the machine to suitable mains power using the mains input power lead. Switch the mains power switch to 'on' to power up the machine. Select MIG/MAG mode from the main menu screen.
- 1.10 Set the spool gun switch (12) to 'wire feeder' position.
- 1.11 You are now ready to feed the wire through the torch. With the wire feeder cover open, pull the trigger of the MIG torch to check that the wire is feeding smoothly through the feeder and into the torch.
- 1.12 With the tip removed from the torch and the torch laid out as straight as possible, activate the torch trigger until the wire feeds out through the end of the MIG torch. The AdvanceMig 200 has an intelligent wire feeding system, when the torch is triggered for more than 2 seconds without an arc starting, the wire feeder will go into torch feeding mode and operate at full speed. Replace the tip on the MIG torch and trim off any excess wire.

2. Gasless Welding Operation

- 2.1 Connect the earth cable quick connector to the positive welding power output socket (10). Connect the earth clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint or scale at the contact point.
- 2.2 Connect the MIG power torch polarity connection (14) to negative (-). Note if this connection is not made, there will be no electrical connection to the welding torch!
- 2.3 Set the welding parameters using the control knobs and LCD screen, following the instructions in the previous section. You are now ready to weld!

3. Gas Shielded Welding Operation

- 3.1 Connect the earth cable quick connector to the negative welding power output socket (6). Connect the earth clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint or scale at the contact point.
- 3.2 Connect the MIG power torch polarity connection (13) to positive (+). Note if this connection is not made, there will be no electrical connection to the welding torch!
- 3.3 Assemble the female gas quick connector to the gas line and to the regulator outlet fitting. Connect the gas regulator to a gas cylinder (not included with machine) and connect the female quick connector to the male gas inlet on the rear of the machine. Ensure all connections are tight. Open gas cylinder valve and adjust regulator, flow should be between 10-25 l/min depending on application. Re-check regulator flow pressure with the torch triggered as static gas flow setting may drop once gas is flowing.
- 3.4 Set the welding parameters using the control knobs and LCD screen, following the instructions in the previous section. You are now ready to weld!



ADVANCEMIG 200

Note to welding with Aluminium and other soft wires. MIG welding with aluminium provides a unique challenge, due to the low column strength of the wire. This causes the wire to deform more as it is pushed through the feed mechanism and the torch wire delivery liner, greatly increasing friction. Because good MIG welding results are dependent on a smooth wire feed, certain changes must be made to the wire feed system to minimise friction caused issues.

For a standard 'push' fed torch, a length of no longer than 3m cable may be used, as well as the torch feed liner must be changed to a special Teflon/ PVC liner, rather than the conventional steel liner. Also the correct style drive roller must be used and specific Aluminium rated torch contact tip (or a standard tip in one size over-size, e.g 0.8mm aluminium wire, use standard 1.0mm contact tip). For this reason, it is quite common for operators to have an extra MIG torch specifically set up for aluminium use, if the machine is used for welding steel as well.

Another option to overcome the friction issues is using a spool gun, which will give better results than a 3m push torch when welding aluminium. The ADVANCEMIG 200 is spool gun capable, refer following section for use with a spool gun on the ADVANCEMIG 200.

4. Spool Gun Operation

Note: The Spool Gun is an optional extra for the ADVANCEMIG 200

The spool gun is a very useful addition to a MIG welder. It can be used for all types of MIG welding, but it has two primary advantages over a conventional 'push' wire feeder.

The main advantage is that distance that the wire has to travel from the spool to the welding tip is very short, compared with a conventional torch. This greatly reduces the wire feeding friction and improves the wire feed speed smoothness and consistency, thus the welding quality is greatly improved. This is especially so with 'soft' wires such as Aluminium. It is difficult to get Aluminium to feed smoothly in welding machines equipped with standard design wire feeders, even with special torch liners and short torch lengths.

The second advantage is that the gun can allow the use of the small D100 wire spools at a distance from the power source (This distance is only limited by the length of the spool gun lead). This is advantageous for high cost wire, that is not used commonly such as Stainless Steel or MIG brazing wire. It saves the outlay cost for a much more expensive, larger D200 spool. When used with the correct OEM spool gun, the welding voltage/current may be controlled directly from the spool gun for the ADVANCEMIG 200. This is especially useful in synergic mode, as the primary MIG settings can be controlled 'one touch' with the single knob on the spool gun.

- 4.1 Connect the earth cable quick connector to the negative welding power output socket (6) Connect the earth clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint or scale at the contact point.
- 4.2 Connect the MIG power torch polarity connection (13) to positive (+). Note if this connection is not made, there will be no electrical connection to the welding torch!
- 4.3 Connect the spool gun interface plug to the remote socket (8). Connect the spool gun Euro plug to the machine Euro connector (9). Set the spool gun switch (12) to 'spool gun' position.
- 4.4 Assemble the female gas quick connector to the gas line and to the regulator outlet fitting. Connect the gas regulator to a gas cylinder (not included with machine) and connect the female quick connector to the male gas inlet on the rear of the machine. Ensure all connections are tight. Open gas cylinder valve and adjust regulator, flow should be between 10-25 l/min depending on application. Re-check regulator flow pressure with the torch triggered as static gas flow setting may drop once gas is flowing.
- 4.5 Set the welding parameters using the control knobs and LCD screen, following the instructions in the previous section. You are now ready to weld!



ADVANCEMIG 200

5. ARC/ MMA Welding Operation

- 5.1 Connect the earth cable quick connector to the negative welding power output socket (6) Connect the earth clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint or scale at the contact point.
- 5.2 Insert an electrode into the electrode holder and connect the electrode holder and work lead to the positive welding power output socket (10).

Note: This polarity connection configuration is valid for most GP (General Purpose) MMA electrodes. There are variances to this. If in doubt, check the electrode specifications or consult the electrode manufacturer.

- 5.3 Connect the machine to suitable mains power using the mains input power lead. Switch the mains power switch to 'on' to power up the machine. Select 'Stick' mode from the main menu screen.
- 5.4 Set the welding parameters using the control knobs and LCD screen, following the instructions in the previous section. You are now ready to weld!

6. Lift TIG Operation

Note: TIG operation requires an optional TIG torch and argon gas supply.

- 6.1 Connect the machine to suitable mains power using the mains input power lead. Switch the mains power switch to 'on' to power up the machine.
- 6.2 Connect the earth cable quick connector to the positive welding power output socket (10). Connect the earth clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint or scale at the contact point.
- 6.3 Insert TIG torch power connection into the negative welding power output socket (6). Connect TIG torch remote plug to remote socket (8) and torch gas connection to the TIG gas outlet (7).

- 6.4 Connect the machine to suitable mains power using the mains input power lead. Switch the mains power switch to 'on' to power up the machine. Select 'TIG lift' mode from the main menu screen.
- 6.5 Assemble the female gas quick connector to the gas line and to the regulator outlet fitting. Connect the gas regulator to a gas cylinder (not included with machine) and connect the female quick connector to the male gas inlet on the rear of the machine. Ensure all connections are tight. Open gas cylinder valve and adjust regulator, flow should be between 5-10 l/min depending on application. Re-check regulator flow pressure with the torch triggered as static gas flow setting may drop once gas is flowing.
- 6.6 Set the welding parameters using the control knobs and LCD screen, following the instructions in the previous section. You are now ready to weld!

The ADVANCEMIG200 has TIG remote current control function when fitted with a suitable torch with remote control potentiometer.

Please note, the ADVANCEMIG 200 is a DC (Direct Current) output welder only, this means that it is unable to TIG weld reactive metals such as Aluminium alloys and Brass (which require AC output). DC TIG output is suitable for steel, stainless steel and copper. The AdvanceTig ACDC models in the Strata range are designed for TIG welding Aluminium and its alloys.



ADVANCEMIG 200

Accessories & Spare Parts

ADVANCEMIG 200 Consumables:			
7384	Strata Compact Welding Machine Trolley	MSL2432	Steel Liner 1.0 - 1.2mm x 3m
17374	Pro-Grip 26 Torch X 25Ft, Tgc End (Large Dinse) M12 and 9 Pin Hizone Plug	MSL2442	Steel Liner 1.0 - 1.2mm x 4m
		MSL2452	Steel Liner 1.0 - 1.2mm x 5m
AAL3550	Arc Lead 16mm ² cable, 35-70mm Plug, 4m	MTL2432T	Teflon Liner 1.0 - 1.2mm x 3m
AEL3550	Earth Lead 16mm ² cable, 35-70mm Plug, 3m	MW5KG06	Mig Wire 5 kg Spool - 0.6mm
17512	15kg - 5kg Spool Spacer	MW5KG08	Mig Wire 5kg Spool - 0.8mm
16895	15m H/D 15A Extension Lead (3x2.5mm ² wiring)	MW5KG09	Mig Wire 5KG - 0.9mm
DW3000	Auto Darkening Helmet, Shade 9-13	MW5KG08FC	Fluxcored Mig Wire - 0.8mm, 4.5kg
DW4000	Auto Darkening Helmet, Shade 9-13 with Grinding Visor	MW5KG09FC	Fluxcored Mig Wire - 0.9mm, 4.5kg
		MW2KG08AL	2.2kg Spool 5356 - 0.8mm Alum
DW7000	Auto Darkening Helmet, Shade 9-13 with Grinding Visor And PRSL Filtration System	MW2KG10AL	2.2kg Spool 5356 - 1.0mm Alum
		ALS3550	MMA Lead Set 300A 3+3m 1/2" Dinse Connectors
GR101AR	Argon Twin Gauge Regulator	S400EH	400A Screw Type Elect.Holder
GR101CO2	CO ₂ Twin Gauge Regulator	S500EC	Strata 500a Earth Clamp
GADAR	Argon Cylinder to CO ₂ Regulator Adaptor M/M	CP3550	Cable Plug - 35-50mm ³ - Male
GADC02	CO ₂ Cylinder to Argon Regulator Adaptor, F/M to F/M, inc. nylon washer.	ETCPH4825	Overcord R92 2.5mm Electrodes (350mm)
		ETCPH4832	Overcord R92 3.2mm Electrodes (350mm)
GR119	CO ₂ Gas Regulator Heated 220 volt	ETCPH4840	Overcord R92 4.0mm Electrodes (350mm)
MT250-4E	MB25 Mig Torch 4m (Euro)	ETCPH6825	Overcord 2.5mm Electrodes (350mm)
MT250-3E	MB25 Mig Torch 3m (Euro)	ETCPH6832	Overcord 3.2mm Electrodes (350mm)
MT250-5E	MB25 Mig Torch 5m (Euro)	ETCPH6840	Overcord 4.0mm Electrodes (350mm)
MMT2406	Mig Tip 0.6mm (5 pk)	ETCPH6850	Overcord 5.0mm Electrodes (350mm)
MMT2408	Mig Tip 0.8mm (5 pk)	ETCPH7725	Supercito 2.5mm Electrodes (350mm)
MMT2409	Mig Tip 0.9mm (5 pk)	ETCPH7732	Supercito 3.2mm Electrodes (450mm)
MMT2410	Mig Tip 1.0/0.8mm Alum (5 pk)	ETCPH7740	Supercito 4.0mm Electrodes (450mm)
MMT2412	Mig Tip 1.2/1.0mm Alum (5 pk)	ETCPH56S25	Tenax 56S 2.5mm Electrodes (350mm)
MTA2581	Tip Adaptor M6 Tips (2 pk)	ETCPH56S32	Tenax 56S 3.2mm Electrodes (350mm)
MCN2570	Nozzle Conical (2 pk)	ETCPH56S40	Tenax 56S 4.0mm Electrodes (450mm)
MSS2557	Shroud Spring (2 pk)	PDL15	Plug, 3 Pin 15A 250V straight
MSN2554	Swan Neck	17831	2 Roll Wire Feeder Drive Roller 0.6/0.8mm 'v' groove
MB25KIT	MIG Consumables Starter Kit - MB25.	17832	2 Roll Wire Feeder Drive Roller 0.9/1.0mm 'v' groove
MSL1539	Steel Liner 0.6 - 0.9mm 3m	17833	2 Roll Wire Feeder Drive Roller 0.8/0.9mm flux cored
MSL1549	Steel Liner 0.6 - 0.9mm 4m	17834	2 Roll Wire Feeder Drive Roller 0.8/1.0mm 'u' groove
MSL1559	Steel Liner 0.6 x 0.9mm x 5m	17844	Gas Inlet QC
MTL1538T	Teflon Liner 0.6 - 0.8mm x 3m	17846	9 Pin Strata MIG Remote Connection Plug

These accessories listed are available from your Strata Supplier. Refer to the Strata Catalogue, your Strata Supplier or look online at www.strata.co.nz for other accessories and consumables available.



ADVANCEMIG 200

Binzel MT250 MIG Torch Range Parts

1.	MSS2557	Shroud Spring
2.	MSN2554	Swan Neck Assembly
5.	UG8015	Handle Cable Support C/W Ball Joint
9.	B2514	Ergo Handle Kit C/W Lock Nut
10.	UG2516	Medium / Large Ergo Trigger
19.	MOR1596	Gun Plug 'O' Ring
20.	MLN1597	Liner Nut

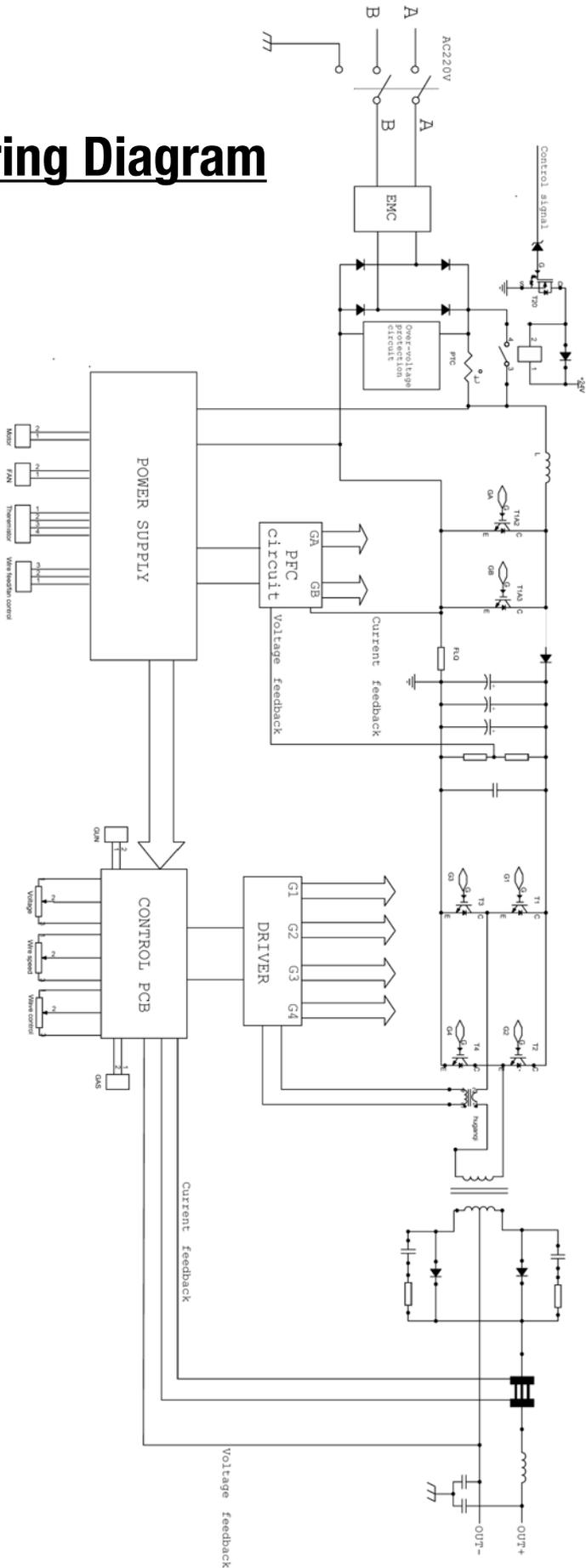
All products conform to EN60974-7 and are RoHS, REACH and WEEE compliant



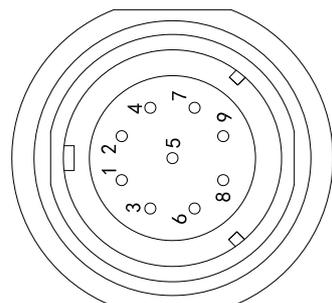
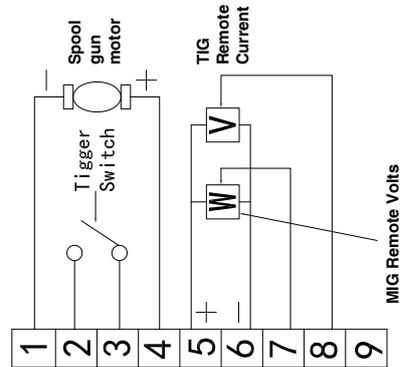


ADVANCEMIG 200

Wiring Diagram



9 Pin Socket Diagram





ADVANCEMIG 200

Care & Maintenance

Keep your Welding Machine in Top Condition

The ADVANCEMIG 200 does not require any special maintenance, however the user should take care of the machine as follows:

- Regularly clean the ventilation slots.
- Keep the casing clean.
- Check all cables before use.
- Check electrode holders, work lead/clamps and welding torches before use.
- Replace worn electrode holders and earth clamps, which do not provide a good connection.
- Replace worn consumable parts in a timely manner.
- Use a soft cloth or brush to clean electrical components.
- Do not use liquid cleaning products, water or especially solvents.
- Do not use compressed air to clean electrical components as this can force dirt and dust further into components, causing electrical short circuits.
- Check for damaged parts. Do not use the welder with damaged parts.
- A damaged welder must be carefully checked by a qualified person to determine that it will operate properly. Check for breakage of parts, mountings and other conditions that may affect its operation. An authorised service centre should properly repair a damaged part. Have your welder repaired by an expert.

This appliance is manufactured in accordance with relevant safety standards. Only experts must carry out repairing of electrical appliances, otherwise considerable danger for the user may result. Use only genuine replacement parts. Do not use modified or non-genuine parts.

Storing the Welder

When not in use the welder should be stored in the dry and frost-free environment.



WARNING! Before performing cleaning/maintenance, replacing cables / connections, make sure the welding machine is switched off and disconnected from the power supply.



Safety

Store and Retain this Manual

Retain this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number into the NOTES section at the rear, and keep this manual and the receipt in a safe and dry place for future reference.

Important Safety Information

Failure to follow the warnings and instructions may result in electric shock, fire, serious injury and/or death. Save all warnings and instructions for future reference.



This is the safety alert symbol to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER! indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING! indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTE, used to address practices not related to personal injury.

General Safety Warnings

1. Maintain labels and nameplates on the welder. These carry important information. If unreadable or missing, contact Euroquip for a replacement.

2. Avoid unintentional starting. Make sure the welder is setup correctly and you are prepared to begin work before turning on the welder.

3. Unplug before performing maintenance.

Always unplug the welder from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

4. Never leave the welder unattended while energised. Turn power off before leaving the welder unattended.

5. Do not touch live electrical parts. Wear dry, insulating gloves. Do not touch the electrode or the conductor tong with bare hands. Do not wear wet or damaged gloves.

6. Protect yourself from electric shock. Do not use the welder outdoors. Insulate yourself from the work piece and the ground. Use non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material large enough to cover the area of contact with the work or the ground.

7. Avoid inhaling dust. Some dust created by power sanding, sawing, grinding, drilling, cutting, welding and other construction activities, contain chemicals known to cause cancer, birth defects or other harm. Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

8. People with pacemakers should consult their physician(s) before using this machine.



WARNING!

Electromagnetic fields in close proximity to a heart pacemaker could cause interference, or failure of the pacemaker. The use of a Welder is NOT RECOMMENDED for pacemaker wearers. Consult your doctor.

9. Ensure that the unit is placed on a stable location before use.



WARNING!

If this unit falls while plugged in, severe injury, electric shock, or fire may result.

10. Transportation Methods Lift unit with the handles provided, or use a handcart or similar device of adequate capacity. If using a fork lift vehicle, secure the unit to a skid before transporting.



CAUTION!

Disconnect input power conductors from de-energized supply line before moving the welding power source.

11. Exercise good work practices. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be considered by the operator.



ADVANCEMIG 200

Welding Safety Instructions & Warnings



WARNING!

Protect yourself and others from possible serious injury or death. Keep children away. Read the operating/Instruction manual before installing, operating or servicing this equipment. Have all installation, operation, maintenance, and repair work performed by qualified people.

If an operator does not strictly observe all safety rules and take precautionary actions, welding products and welding processes can cause serious injury or death, or damage to other equipment or property. Safe practices have developed from past experience in the use of welding and cutting.

These practices must be learned through study and training before using this equipment. Some of these practices apply to equipment connected to power lines; other practices apply to engine driven equipment. Anyone not having extensive training in welding and cutting practices should not attempt to weld.

Safe practices are outlined in the European Standard EN60974-1 entitled: Safety in welding and allied processes.



WARNING!

Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye and breathing protection must be AS/NZS compliant for the specific hazards in the work area.



DANGER!

Always wear AS/NZS compliant safety glasses and full face shield fitted with appropriate filter shade number (Refer Filter Table on page 17.)



CAUTION!

Heavy-duty work gloves, non-skid safety shoes and hearing protection used for appropriate conditions will reduce personal injuries.



CAUTION!

Have the equipment serviced by a qualified repair person using identical replacement parts. This will ensure that the safety of the power tool is maintained.

Personal Safety



CAUTION!

Keep the work area well lit. Make sure there is adequate space surrounding the work area. Always keep the work area free of obstructions, grease, oil,

trash, and other debris. Do not use equipment in areas near flammable chemicals, dust, and vapours. Do not use this product in a damp or wet location.

1. **Stay alert**, watch what you are doing and use common sense when operating equipment. Do not use a tool while you are tired or under the influence of drugs, alcohol or medication. A moment of distraction when operating equipment may result in serious personal injury.
2. **Do not over-reach**. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

Arc Rays can Burn Eyes and Skin



DANGER!

Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin.

1. **Use a Welding Helmet or Welding Face Shield fitted with a proper shade filter** (refer AS 60974-1, AS/NZS 1337.1 and AS/NZS 1338.1 Safety Standards) to protect your face and eyes when welding or watching. (See Filter Table on Page 20)
2. Wear approved safety glasses. Side shields are recommended.
3. Use protective screens or barriers to protect others from flash and glare; warn others not to watch the arc.
4. Wear protective clothing made from durable, flame-resistant material (wool and leather) and foot safety protection.
5. Never wear contact lenses while welding.

Noise Can Damage Hearing



CAUTION!

Noise from some processes can damage hearing. Use AS/NZS compliant ear plugs or ear muffs if the noise level is high.

Work Environment Safety



DANGER!

Remove any combustible material from the work area.



ADVANCEMIG 200

1. When possible, move the work to a location well away from combustible materials. If relocation is not possible, protect the combustibles with a cover made of fire resistant material.
 2. Remove or make safe all combustible materials for a radius of 10 metres around the work area. Use a fire resistant material to cover or block all doorways, windows, cracks, and other openings.
 3. Enclose the work area with portable fire resistant screens. Protect combustible walls, ceilings, floors, etc., from sparks and heat with fire resistant covers.
 4. If working on a metal wall, ceiling, etc., prevent ignition of combustibles on the other side by moving the combustibles to a safe location. If relocation of combustibles is not possible, designate someone to serve as a fire watch, equipped with a fire extinguisher, during the welding process and well after the welding is completed.
 5. Do not weld or cut on materials having a combustible coating or combustible internal structure, as in walls or ceilings, without an approved method for eliminating the hazard.
 6. After welding, make a thorough examination for evidence of fire. Be aware that visible smoke or flame may not be present for some time after the fire has started. Do not weld or cut in atmospheres containing dangerously reactive or flammable gases, vapours, liquids, and dust. Provide adequate ventilation in work areas to prevent accumulation of flammable gases, vapours, and dust.
 7. Do not apply heat to a container that has held an unknown substance or a combustible material whose contents, when heated, can produce flammable or explosive vapours. Clean and purge containers before applying heat. Vent closed containers, including castings, before preheating, welding, or cutting.
1. Do not touch live electrical parts.
 2. Wear dry, hole-free insulating gloves and body protection.
 3. Insulate yourself from the work and the ground using dry insulating mats or covers.
 4. Disconnect input power before installing or servicing this equipment. Lock input power, disconnect switch open, or remove line fuses so power cannot be turned on accidentally.
 5. Properly install and ground this equipment according to national, state, and local codes.
 6. Turn off all equipment when not in use. Disconnect power to equipment if it will be left unattended or out of service.
 7. Use fully insulated electrode holders. Never dip the holder in water to cool it or lay it down on the ground or the work surface. Do not touch holders connected to two welding machines at the same time or touch other people with the holder or electrode.
 8. Do not use worn, damaged, undersized, or poorly spliced cables.
 9. Do not wrap cables around your body.
 10. Connect work piece to a good electrical ground.
 11. Do not touch the electrode while in contact with the work (ground) circuit.
 12. Use only well-maintained equipment. Repair or replace damaged parts as soon as practical.
 13. In confined spaces or damp locations, do not use a welder with AC output unless equipped with a voltage reducer.

Electricity Can Kill



DANGER!

Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on.

The input power circuit and machine internal circuits are also live when power is on. In semi-automatic or automatic

wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard.

Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin. Use the following table to select the appropriate shade number for a Welding Helmet or Welding Face Shield.



ADVANCEMIG 200

Recommended Protective Filters for Electric Welding		
Description of Process	Approximate Range of Welding Current in Amps	Minimum Shade Number of Filter(s)
Manual Metal Arc Welding - Covered Electrodes (MMA)	Less than or equal to 100	8
	100 to 200	10
	200 to 300	11
	300 to 400	12
	Greater than 400	13
Gas Metal Arc Welding (GWAW) (MIG) other than Aluminium And Stainless Steel	Less than or equal to 150	10
	150 to 250	11
	250 to 300	12
	300 to 400	13
	Greater than 400	14
Gas Metal Arc Welding (GWAW) (MIG) Aluminium and Stainless Steel	Less than or equal to 250	12
	250 to 350	13
Gas Tungsten Arc Welding (GTAW) (TIG)	Less than or equal to 100	10
	100 to 200	11
	200 to 250	12
	250 to 350	13
	Greater than 350	14
Flux-Cored Arc Welding (FCAW) - with or without Shielding Gas	Less than or equal to 300	11
	300 to 400	12
	400 to 500	13
	Greater than 500	14
Air - Arc Gouging	Less than or equal to 400	12
Plasma - Arc Cutting	50 to 100	10
	100 to 400	12
	400 to 800	14
Plasma - Arc Spraying	—	15
Plasma - Arc Welding	Less than or equal to 20	8
	20 to 100	10
	100 to 400	12
	400 to 800	14
Submerged - Arc Welding	—	2 (5)
Resistance Welding	—	Safety Spectacles or Eye Shield

Refer to standard AS/NZS 1338.1 for comprehensive information regarding the above table.

Fumes And Gases



WARNING!

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

1. Keep your head out of the fumes. Do not breathe the fumes.
2. If inside, ventilate the area and/or use an exhaust at the arc to remove welding fumes and gases.
3. If ventilation is poor, use an approved air-supplied respirator.
4. Read the Safety Data Sheets (SDS) and the manufacturer's instruction for the metals, consumables, coatings, and cleaners.
5. Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Shielding gases used for welding can displace air causing injury or death. Be sure the breathing air is safe.
6. Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapours to form highly toxic and irritating gases.



ADVANCEMIG 200

7. Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and if necessary, while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.

Fire & Explosive Risks

WARNING! Sparks and spatter fly off from the welding arc. The flying sparks and hot metal, weld spatter, work piece, and hot equipment can cause fires and burns.

Accidental contact of electrode or welding wire to metal objects can cause sparks, overheating, or fire.

1. Protect yourself and others from flying sparks and hot metal.
2. Do not weld where flying sparks can strike flammable material.
3. Remove all flammables within 10m of the welding site.
4. Be alert that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas.
5. Watch for fire, and keep a fire extinguisher nearby.
6. Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
7. Do not weld on closed containers such as tanks or drums.
8. Connect the work lead/clamp to the job as close to the welding area as practical to prevent welding current from travelling long, possibly unknown paths and causing electric shock and fire hazards.
9. Do not use a welder to thaw frozen pipes.
10. Remove the stick electrode from the holder or cut off the welding wire at the contact tip when not in use.

Sparks & Hot Metal

WARNING! Chipping and grinding causes flying metal, and as welds cool they can throw off slag.

1. Wear an AS/NZS approved face shield or safety goggles. Side shields are recommended.
2. Wear appropriate safety equipment to protect the skin and body.

Cylinders

WARNING! Gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Since gas cylinders are normally part of the welding process, be sure to treat them carefully.

1. Protect compressed gas cylinders from excessive heat, mechanical shocks, and arcs.
2. Install and secure cylinders in an upright position by chaining them to a stationary support or equipment cylinder rack to prevent falling or tipping.
3. Keep cylinders away from any welding or other electrical circuits.
4. Never allow a welding electrode to touch any cylinder.
5. Use appropriate shielding gas, regulators, hoses, and fittings designed for the specific application; maintain them and their associated parts in good condition.
6. Turn your face away from the valve outlet when opening the cylinder valve.





ADVANCEMIG 200



ADVANCEMIG 200

Warranty

As part of an on-going commitment to excellence in product support, Euroquip offers a comprehensive product warranty program.

In order to qualify for full warranty support, your product must be registered. Product not registered with Euroquip is supported by a base 12 month warranty only. Spare parts and technical support will not be available for an unregistered product outside of this base warranty period. If a Euroquip dealer has not already registered your product, please register it online or download a physical registration form at www.euroquip.co.nz.

Registered warranty period for the ADVANCEMIG 200:

Commercial Use: 36 Months

Domestic Use: 36 Months

Warranty covers failure caused by manufacturing and material defects in the product, during the warranty period specified. The warranty period begins when the product is purchased by the end user. Warranty is not transferrable and is only claimable by the original purchaser.

Warranty does not cover parts that are subject to wear and tear from usage.

Warranty covers failure of a product caused by defective materials and/or manufacturing for the period given and the usage specified by Euroquip. The warranty period begins when the product is purchased by the end user. Warranty is not transferrable and is only claimable by the original purchaser.

Warranty also does not cover failure caused by the untimely replacement or service of the above wearing parts. Evidence must be provided that the product has been maintained and serviced suitably for a claim to be considered under warranty.

Failure caused by incorrect operation of the product, lack of proper care and maintenance of the product, external damage, external circumstances such as contaminated fuel or poor water supply, modifications to the product, attempted repair/ service by a party other than an Approved Service Agent, is not covered under warranty.

Warranty does not cover pre delivery service and adjustment, or failure that may occur as a result of lack of/ incorrect pre delivery service and adjustment.

Warranty does not cover any incidental, indirect or consequential loss, damage or expense that may result from any defect, failure or malfunction of a product.

Should any issue be found to be a combination of a warranty failure and a non-warranty issue, the repair cost component to rectify and repair the non-warranty failure is the customers' full responsibility.

The decision that an issue with a product qualifies as a warranty claim is made at the sole jurisdiction of Euroquip.

No costs incurred will be considered under warranty if repairs are carried out by a party other than a Euroquip Approved Service Agent, unless with prior consent in writing from Euroquip.

It is the responsibility of the purchaser to deliver a product under warranty to the nearest relevant service agent or product reseller. Warranty does not cover call outs, mileage and freight costs.

If a product is repaired under warranty, parts and labour required for the repair will be supplied at no charge. Warranty assessment and repair will be scheduled and executed according to the normal work flow at the service location and depending on the availability of suitable replacement parts.

This warranty policy is an additional benefit and does not affect the legal rights of any end user, reseller or service agent.



Scan here to register your product

<http://www.euroquip.co.nz/Contact+Us/Product+Registration+Form.html>



Congratulations on your new STRATA product. We are proud to have you as our customer and will strive to provide you with the best service and reliability in the industry. This product is backed by our extensive warranty and world-wide service network. To locate your nearest distributor or service agency visit www.strata.co.nz, or email us at info@euroquip.co.nz.

www.strata.co.nz