



## Newarc WFU12A-ILS



## Operational Manual

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NA9910630

## DECLARATION OF CONFORMITY

The Low voltage Directive 2014/35/EU  
The EMC Directive 2004/108/EC, entering into force 20 July 2007  
The RoHS Directive 2011/65/EU, entering into force 2 January 2013

**Type of Equipment**

Wire feeder

**Brand name or trade mark**

Newarc

**Type designation etc.**

WFU12A-ILS

**Manufacturer or his authorised representative established within the EEA  
Name, address, telephone no**

Newarc  
Newcastle upon Tyne  
Phone: +44 (0)191 295 0111

**The product has been designed to comply with the following harmonised standards:**

IEC 60974-1 - Arc welding Equipment Arc striking and stabilizing devices  
EN 60974-10 - Arc Welding Equipment Electromagnetic compatibility

Additional information: restrictive use, Class A equipment, intended for use in locations other than residential

**We declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with applicable essential requirements of the directives.**

**Place and Date**

Newcastle upon Tyne, UK  
14/06/2016

**WEEE Directive & Product Disposal**

*At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.*



# Safety Guidelines

These general safety guides cover both arc welding machines and plasma cutting machines unless otherwise noted. The equipment must only be used for the purpose it was designed for. Using it in any other way could result in damage or injury and in breach of the safety rules. Only suitably trained and competent persons should use the equipment. Operators should respect the safety of other persons.

## Prevention against electric shock

The equipment should be installed by a qualified person and in accordance with current standards in operation. It is the user's responsibility to ensure that the equipment is connected to a suitable power supply. Consult with your utility supplier if required. If earth grounding of the work piece is required, ground it directly with a separate cable. Do not use the equipment with the covers removed. Do not touch live electrical parts or parts which are electrically charged. Turn off all equipment when not in use. Cables (both primary supply and welding) should be regularly checked for damage and overheating. Do not use worn, damaged, under sized or poorly jointed cables. Ensure that you wear the correct protective clothing, gloves, head and eye protection. Insulate yourself from work and ground using dry insulating mats or covers big enough to prevent any physical contact with the work ground. Never touch the electrode if you are in contact with the work ground, or another electrode from a different machine.

Do not wrap cables over your body. Ensure that you take additional safety precautions when you are welding in electrically hazardous conditions such as damp environments, wearing wet clothing, and metal structures. Try to avoid welding in cramped or restricted positions. Ensure that the equipment is well maintained. Repair or replace damaged or defective parts immediately. Carry out any regular maintenance in accordance with the manufacturer's instructions.

## Safety against fumes and welding gases

Locate the equipment in a well-ventilated position. Keep your head out of the fumes. Do not breathe the fumes. Ensure the welding zone is in a well-ventilated area. If this is not possible, provision should be made for suitable fume extraction. If ventilation is poor, wear an approved respirator. Read and understand the Material Safety Data Sheets (MSDS's) and the manufacturer's instructions for metals, consumable, coatings, cleaners, and de-greasers. Do not weld in locations near any de-greasing, cleaning, or spraying operations. Be aware that heat and rays of the arc can react with vapours to form highly toxic and irritating gases. Do not weld on coated metals, unless the coating is removed from the weld area, the area is well ventilated, and while wearing an air-supplied respirator. The coatings on many metals can give off toxic fumes if welded.

## Prevention against burns and radiation

Arc rays from the welding process produce intense, visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Wear an approved welding helmet fitted with a proper shade of filter lens to protect your face and eyes when welding or watching. Wear approved safety glasses with side shields under your helmet. Never use broken or faulty welding helmets. Always ensure there are adequate protective screens or barriers to protect others from flash, glare and sparks from the welding area. Ensure that there are adequate warnings that welding or cutting is taking place.

Wear suitable protective flame resistant clothing. The sparks and spatter from welding, hot work pieces, and hot equipment can cause fires and burns. Welding on closed containers, such as tanks, drums, or pipes, can cause them to explode. Accidental contact of electrode to metal objects can cause arcs, explosion, overheating, or fire. Check and be sure the area is safe and clear of inflammable material before carrying out any welding.

### **Protection against noise**

Some welding and cutting operations may produce noise. Wear safety ear protection to protect your hearing.

### **Protection from moving parts**

When the machine is in operation, keep away from moving parts such as motors and fans. Moving parts, such as the fan, may cut fingers and hands and snag garments. Protections and coverings may be removed for maintenance and controls only by qualified personnel, after first disconnecting the power supply cable. Replace the coverings and protections and close all doors when the intervention is finished, and before starting the equipment. Take care to avoid getting fingers trapped when loading and feeding wire during set up and operation. When feeding wire be careful to avoid pointing it at other people or toward your body. Always ensure machine covers and protective devices are in operation.

### **Precautions against fire and explosion**

Avoid causing fires due to sparks and hot waste or molten metal. Ensure that appropriate fire safety devices are available near the cutting / welding area. Remove all flammable and combustible materials from the cutting / welding zone and surrounding areas. Do not cut/weld fuel and lubricant containers, even if empty. These must be carefully cleaned before they can be cut/welded. Always allow the cut/welded material to cool before touching it or placing it in contact with combustible or flammable material. Do not work in atmospheres with high concentrations of combustible fumes, flammable gases and dust. Always check the work area half an hour after cutting to make sure that no fires have begun.

### **Risks due to magnetic fields**

The magnetic fields created by high currents may affect the operation of pacemakers or electronically controlled medical equipment. Wearers of vital electronic equipment should consult their physician before beginning any arc welding, cutting, gouging or spot welding operations. Do not go near welding equipment with any sensitive electronic equipment as the magnetic fields may cause damage.

### **RF Declaration**

Equipment that complies with directive 2004/108/EC concerning electromagnetic compatibility (EMC) and the technical requirements of EN60974-10 is designed for use in industrial buildings and not those for domestic use where electricity is provided via the low voltage public distribution system. Difficulties may arise in assuring class A electromagnetic compatibility for systems installed in domestic locations due to conducted and radiated emissions. In the case of electromagnetic problems, it is the responsibility of the user to resolve the situation. It may be necessary to shield the equipment and fit suitable filters on the mains supply.

## LF Declaration

Consult the data plate on the equipment for the power supply requirements. Due to the elevated absorbency of the primary current from the power supply network, high power systems affect the quality of power provided by the network. Consequently, connection restrictions or maximum impedance requirements permitted by the network at the public network connection point must be applied to these systems. In this case the installer or the user is responsible for ensuring the equipment can be connected, consulting the electricity provider if necessary.

## Materials and their disposal

The equipment is manufactured with materials, which do not contain any toxic or poisonous materials dangerous to the operator. When the equipment is scrapped, it should be dismantled separating components according to the type of materials. Do not dispose of the equipment with normal waste. The European Directive 2002/96/EC on Waste Electrical and Electronic Equipment states the electrical equipment that has reached its end of life must be collected separately and returned to an environmentally compatible recycling facility.

## Handling of compressed gas cylinders and regulators

All cylinders and pressure regulators used in welding operations should be handled with care. Never allow the electrode, electrode holder or any other electrically "hot" parts to touch a cylinder. Keep your head and face away from the cylinder valve outlet when opening the cylinder valve. Always secure the cylinder safely. Never deface or alter any cylinder.



**The following signs and explanations are to remind the user of the potential risks involved and the dangers of misuse or mistreatment of the welding machine.**



### **RUNNING PARTS MAY BE DANGEROUS!**

Keep away from running components, including the fan.



### **ELECTRIC SHOCKS CAN KILL!**

Never touch electrical parts. Keep the equipment in good condition, replace damaged parts, undertake regular maintenance according to the instructions.



### **BE AWARE OF SPARKS AND SPATTER**

Wear protective clothing, such as leather gloves, Flame retardant overalls, boots and eyewear.



### **DO NOT TOUCH THERMAL COMPONENTS!**

Thermal components may cause severe burns when in contact with unprotected skin.

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# 1. Preface

## 1.1 General

### **Congratulations on choosing your Newarc WFU 12-4C wire feeder.**

Used correctly, our products can significantly increase the productivity of your welding, and provide years of economical service. This operating manual contains important information on the use, maintenance and safety of your Newarc product. Please read the manual carefully before using the equipment for the first time. For your own safety and that of your working environment, pay particular attention to the safety instructions in the manual.

For more information on Newarc products, contact an authorised Newarc dealer, or visit the Newarc website at [www.newarc.co.uk](http://www.newarc.co.uk). The specifications presented in this manual are subject to change without prior notice.

### **Important notes**

Items in the manual that require particular attention in order to minimise damage and personal harm are indicated with the '**NOTE!**' notation. Read these sections carefully and follow the instructions.

### **Disclaimer**

While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. We reserve the right to change the specification of the product described at any time without prior notice. Do not copy, record, reproduce or transmit the contents of this guide without prior permission.

## 1.2 Introduction

The Newarc WFU12A-ILS wire-feeders have been designed with increased environmental protection. They are built into a strong, durable plastic case using Zinc coated chassis components to give both great strength and protection when used in damp conditions.

Our in-line MIG feed unit operates from the OCV of any DC welding power source, without the need for control cables.

The simple front panel layout allows for ease of set up on CC or CV mode, and all functions are directly accessible by the multi function control knob and water proof push buttons.

The WFU12A-ILS wire feed unit is designed to work with any welding power source working in constant current or constant voltage mode.

### Features

- Powerful 4 roll wire drive system with electronic feed-back to provide accurate and stable wire feed
- Digital display of wire feed speed and voltage, wire speed maybe set in either inches or meters per minute.
- Set burn back time.
- Set slow start time.
- Set initial start voltage.
- Set pre-gas and post-gas time.
- 2T or 4T gun switch latching.
- Wire inch and gas purge buttons.
- Activity counter, (displays how many hours the wire feeder has been in use).



## 1.3 Technical Specifications

### Newarc WFU 12ILS

Current Rating	400 amps @ 60%
	300 amps @ 100%
Wire Diameter	0.8mm - 2.4mm
Max Wire Spool Size	20cm / 12"
Wire Speed Range	0 - 23m/min
Voltage Control	CC (constant current) - Yes
	CC (constant voltage mode) - Yes
	Remote voltage control - optional
Digital Display	Yes
Voltage Sensing	Yes
Current Sensing	Optional
Supply Voltage Range	10V — 100V with power backup for 2 seconds
Dimensions (L x W x H) (mm)	525 x 215 x 430
Weight (kg)	15
Construction	Suitcase

## 1.4 Overview of Panel MF36



### Front View

Panel layout

1. Mode
2. Adjustment Control
3. Wire Inch
4. Gas Test

## 1. Mode

Toggles between the 3 modes

- constant voltage (CV)
- constant current mode (CC)
- 2 modes CC1 & CC2 (CC diode flashes)

## 2. Adjustment Control

CV mode:

Press the control knob once to select each function.

(Turn the knob to adjust).

- Wire Speed
- Burn Back
- Slow Start
- Pre Gas
- Post Gas

CC modes:

CC1 - CC <1.2 Dedicated for wire sizes of 1.2mm or below

CC2 - CC 1.6+ Dedicated for wire sizes of 1.6mm or greater.

Press the control knob once to select each function. (Turn the knob to adjust).

- Burn Back
- Pre Gas
- Post Gas
- Wire Speed

**Note!** The wire speed setting is the maximum wire speed. The wire speed will change to help keep the welding condition. Press and hold the control knob to access the advanced menu. (Turn the knob to adjust).

- Meters/Inches (Turn knob to select).
- Activity Counter - this is a log, in hours, of how long the unit has been in operation. Turn the knob to view the total hours.
- Version - Indicates the program version.
- Temperature - Indicates the operating temperature :  
TS - Supply Circuit Temp.  
TD - Drive Circuit Temp.

**3. Wire Inch** - Initiates wire-feed without having to press the MIG torch switch, Used when feeding the wire through the torch when changing spools.

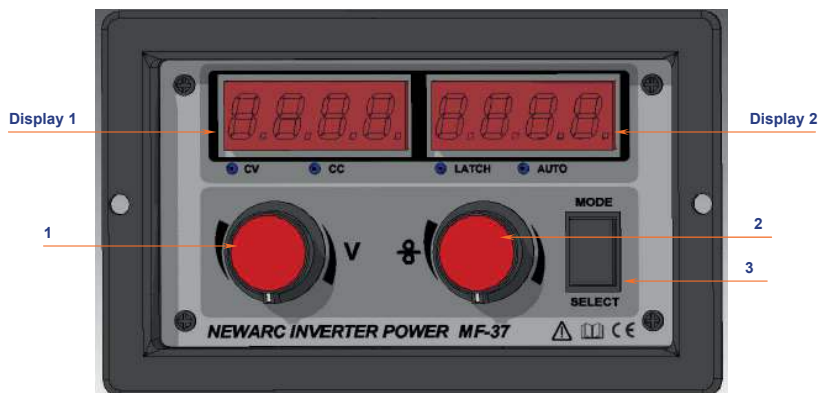
## 4. Gas Test

Press to test gas flow.

Torch - Changes the mode of operation of the MIG torch switch between 2T, 4T & 4D. In 2T, the MIG torch switch is pressed to start welding and released to stop. In 4T, the torch switch is pressed and released to start welding and pressed and released again to stop welding. 4D is similar to 4T but with a delay time of 1 seconds before it latches on, this allows a quick tack weld feature in latch mode.

**Note!** During welding the MF36 displays the voltage (U) of the welding arc. If the optional current transducer LEM circuit is fitted

## 1.5 Overview of Panel MF37



### Front View

Panel layout

1. Adjustment Control for left display
2. Adjustment Control for right display
3. Mode select push button/wire inch (long press)

After initial power up.

**Note!** The last digit of the display indicates a letter to show the option mode selected. The following options are shown and can be adjusted with the corresponding knob.

**Mode select (3):** Toggles between the 3 modes

- constant voltage (**CV**)
- constant current (**CC**)
- 2 modes **CC1** & **CC2** (CC diode flashes)

**CV Mode:**

**Display1/knob1**  
(Not active)

**Display2/knob2**  
Set Wire-speed (o)

### Additional options

Pressing the mode button (3) allows other options to be displayed on the two displays and changed using the knob below the corresponding display.

### Display1/knob1

Burn-back (b)

Slow-Start (S)

Mode select (CC1 CC2 CV)

Last welding results display: voltage (U) and current (A) (if available)

### Display2/knob2

Latch (L)

Post Gas (P)

Latch (L) 2T, 4T & 4D. In 2T, the MIG torch switch is pressed to start welding and released to stop. In 4T, the torch switch is pressed and released to start welding and pressed and released again to stop welding. 4D is similar to 4T but with a delay time of 1 seconds before it latches on, this allows a quick tack weld feature in latch mode.

### CC Mode:

**CC1** Dedicated for wire sizes of 1.2mm or below

**CC2** Dedicated for wire sizes of 1.6mm or greater.

### Display1/knob1

(Not active)

### Display2/knob2

Maximum Wire-speed (o)

### Additional options

Pressing the mode button (3) allows other options to be displayed on the two displays and changed using the knob below the corresponding display.

### Display1/knob1

Burn-back (b)

(Not active)

Mode select (CC 1, CC 2, CV)

Last welding results display: voltage (U) and current (A) (if available)

### Display2/knob2

Latch (L)

Post Gas (P)

### Note 1

Any settings that are changed are saved after a 3 second period

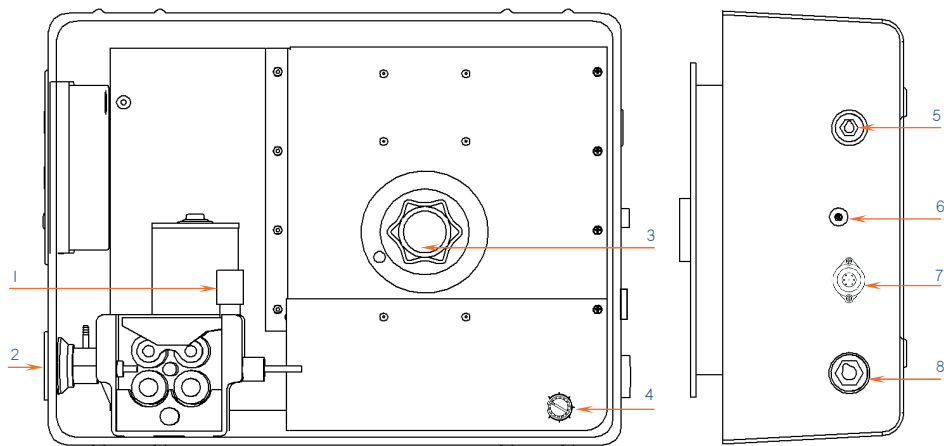
### Note 2

During welding the MF36 displays the voltage (U) of the welding arc. If the optional current transducer LEM circuit is fitted the displays also displays the current (A) of the welding arc

### Note 3

If the MF37 is left idling for more than 4 minutes the panel goes into standby mode. This is indicated by a small red LED in display2 pulsing on and off. To reactivate the panel press or turn anything on the MF37 panel or press the MIG torch switch.

## 1.6 Overview of Machine



### 1. Wire tension screw

Adjusts the pressure on the wire feed rollers.

### 2. MIG torch Euro connector

### 3. Spool holder retaining nut

Remove to replace wire spool and to adjust brake adjustment screws.

### 4. Remote control adjustment knob

### 5. Earth signal return socket

Connected to work-piece using signal lead supplied with machine. Supplies operating voltage and earth reference to the feed unit.

### 6. Gas inlet

A 1/4 BSP threaded inlet for connecting the shielding gas.

### 7. Remote control socket

7 pin socket for connecting the remote control adjust feature to the inverter.

### 8. Welding power in connector

To provide welding power and voltage to the feed unit

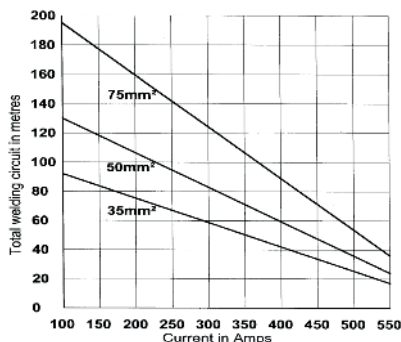
**MIG Welding**

- It is assumed that the wire and welding torch have been fitted as per the installation part of this manual.
- Set the Voltage control and wire speed controls proportional to the thickness of metal to be welded.
- Select the welding torch mode required.
- Ensure the gas cylinder is turned on and the flow-meter or regulator is set to give approximately 15 to 20 Litres per minute. (30 to 40 cubic feet per hour).
- Until you are familiar with the machine it is preferable to start welding on a piece of waste material the same type and thickness as the work-piece, adjust the voltage control (if fitted), wire feed and gas flow until the required welding condition is achieved.

When used with the Newarc power sources all the controls can be adjusted whilst welding without damaging the machine.

## 2. Installation

### Connection to Power Source

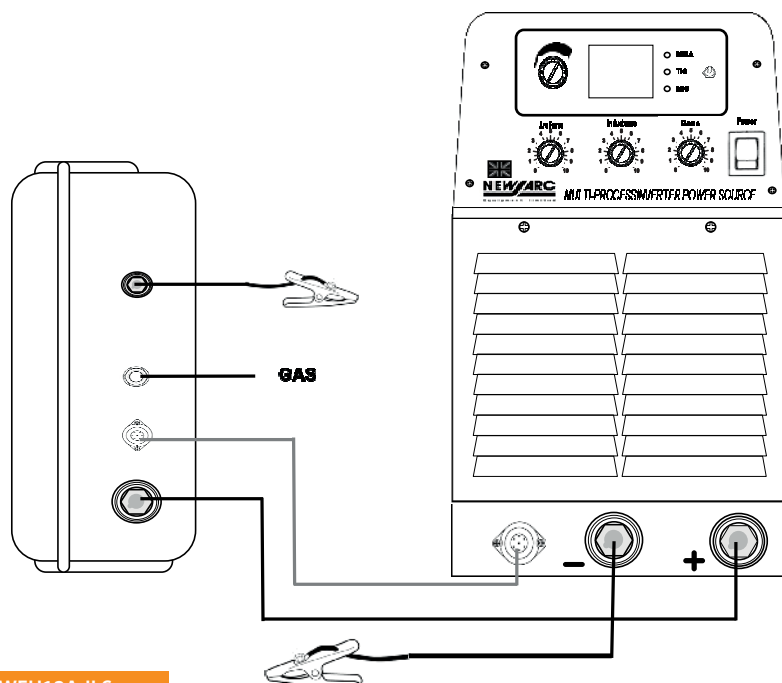


Only use copper welding cables with a cross sectional area of 35mm<sup>2</sup> or more. Use the graph below to calculate the cable size suitable for the required welding distance.

**NOTE!** The figures on the graph are for a duty cycle rating of 60%. The total welding circuit includes the power and the earth leads.

- For straight polarity welding, connect the power in connector on the rear of the wire-feeder to the +ve connector on the power source.
- Connect the welding earth lead to the -ve connector on the power source and attach the earth clamp to the workpiece.

- When using gasless wire, the polarity at the power source should be switched to positive earth.
- When using the remote cable, the change in voltage will only be reflected on the display of the power source and not on the display of the feed unit.





### **Fitting wire spool**

The feed rollers must always be selected to match the size of the electrode wire being used. The feed rollers fitted to the wire-feeders normally have two different sized grooves.

- Make sure that the outlet wire guide located inside the torch adapter is of the correct size for the wire being used.
- Open the pressure lever on the wire drive assembly.
- Remove the retaining nut on the spool holder and fit wire spool so that the locating pin on the spool holder fits into corresponding hole in the wire reel.
- Replace the retaining nut on the spool holder.
- Release the end of the wire from the spool and cut off the bent length, take care that the wire does not spill off the spool
- Insert the wire through the rear wire guide, over the drive rollers and through the outlet wire guide so that approximately 5cm of wire is protruding from the torch adapter.
- Close the pressure roller ensuring that the wire lays in the drive roll groove.

### **Adjusting Brake Tension**

- Remove the spool-retaining nut WFU-12.
- The head of the brake adjusting screw is now visible in the centre of the spool holder.
- Turn the screw clockwise to tighten the brake and anti-clockwise to slacken it.
- It is advisable to check the tension every time a new spool of wire is fitted as it is the extra weight of a full spool that generally causes problems with the spool over-running and wire spilling off the spool.

### **Connecting the Welding Torch**

- Make sure that the liner and contact tip fitted to the torch are of the correct size for the wire being used.
- Attach the welding torch to the torch adapter on the wire feed, making sure that the torch liner retaining nut goes over the wire protruding from the torch adapter.
- Line all the connections on the torch up with their relevant sockets in the torch adapter and screw the torch onto the wire feeder. Note the torch should screw easily onto the wire feeder, if any resistance is felt - do not force the torch onto the wire feeder.

### **3.5 Feeding the Wire through the torch**

- Set the wire feed speed control to about half way.
- Keeping the welding torch as straight as possible press the wire inch button until the wire is fed through the torch and out through the contact tip.
- The wire pressure lever adjuster should be set so that when the wire is restricted at the welding torch the drive rollers will slip. Setting the tension too high may cause the wire to build up inside the wire drive assembly as well as cause excessive loading of the motor which will result in a reduced duty cycle.

### **Connecting the Gas Hose**

A Gas hose suitable for use with Argon or CO<sub>2</sub> up to a pressure of 10 bar (150 psi) should be connected between the pressure regulator on the gas cylinder and the gas connection on the rear of the wire feed unit. Do not over-tighten this connection.

**Note!** The pressure regulator should be set between approximately 3 and 5 bar for normal use.

# 3. Operation

## Setup Procedure

1. Set the wire speed to be displayed in either Inches or Metres. (MF-36 Front Panel Only)
2. Set the latch mode to either Normal (2T) or Latch (4T)/(4D) mode. NB In 4D Latch mode the torch switch must be pressed for a minimum of 1 second for the torch to latch. This delay allows for a quick tack welding function.
3. Use the Wire Inch function to initially feed the wire electrode through the welding torch.
4. Set the mode to either Constant Current (CC) or Constant Voltage (CV) mode.

## Constant Current Mode

1. Adjust the wire speed setting to an appropriate maximum wire speed. The table below shows a couple of example setups for 1.2mm wire. NOTE: These examples are suggestions only, others can be used as required.

Current (A) Max	Wire Speed (m/min)
180	6
200	8

## Constant Voltage Mode

1. Adjust the wire speed setting to an appropriate maximum wire speed. The table below shows some example setups for 1.2mm wire. NOTE: These examples are suggestions only, others can be used as required.

Voltage (V) Max	Wire Speed (m/min)
19	4
21	5
24	8

## Additional Settings

1. Adjust the additional settings of Burn Back, Post Gas, Pre Gas and Slow Start as required.

**NOTE!** Some features are available only in certain modes or with certain Front Panels.

## 4. Fault finding

### **MIG Welding Problems**

**Porosity (holes) in weld** - Has two common causes:-

1. Lack of shielding gas caused by the flow-meter not being set correctly, damage to any of the gas hoses or MIG torch, a build up of spatter inside the MIG torch nozzle or dispersal of the gas shield by the wind or fume extraction system.
2. Poor surface condition of the weld metal caused by inadequate surface preparation or contamination by oil, grease or paint.

### **Wire burns back to contact tip**

Caused by voltage being too high for wire feed speed, wire feed restricted by blocked tip or liner, insufficient tension on pressure roller or excessive brake tension on spool holder.

### **Cold arc with excessive spatter and weld bead too high (convex)**

Caused by the voltage being too low for the wire feed speed or metal thickness, inductance control on power source set too high, the power cables between the power source and wire-feed are either too long or of inadequate cross section and are causing a volt drop or the MIG torch or earth lead are damaged.

### **Hot arc with large irregular spatter and weld bead too flat, or even concave**

Wire feed too slow or voltage set too high.

### **Wire glows red hot and reluctant to arc**

Power source set to MMA (constant current), either change power source to MIG (constant voltage) or set wire-feeder to constant current setting. When using the Wire-feeder in constant current mode, especially with flux-cored wires, it improves the welding characteristic if reverse polarity is used (torch -ve)

## 4.1 MF36 Fault codes

Text on Display Panel	Description	Corrective Action
No display	Beeps every second	LCD fault. Call service
Torch	Torch is pressed during startup	Release button, Reset machine
		Short on torch switch socket
OverTemp	Motor Driver over temperature	Check wire tension
Error 0	Motor driver temperature sensor fault	Call service
Error 2	PSU Temperature sensor fault.	Call service
Error 4	Motor driver Fault.	Call service
Error 5	Motor unit not detected	Check wiring to motor.
Error 6	Motor unit not working	Call service
Error 8	Motor jammed	Check wire tension and gearbox
Error 9	Gas valve issue	Call service
Error 10	Contactor issue	Call service

## Warning codes

Text on Display Panel	Description	Corrective Action
Batt LOW	Reserve power supply low	Leave connected to power source to charge up
Batt Err	Reserve power supply error	Check connections to internal power supply. Call service.
Warning 4	Gas valve not detected	Check connections to gas valve
Warning 5	Contactor not detected.	Check connections to contactor
Warning 6	Driver brake fault	Call service
Warning 7	Gas valve voltage.	Check connection to gas valve.

## 4.3 MF37 Fault codes

Text on Display Panel	Description	Corrective Action
<b>No display</b>	Beeps every second	Display Fault. Call service
<b>Torch</b>	Torch is pressed during startup	Release button, reset machine. Short on torch switch socket.
<b>Hot drv</b>	Motor Driver over temperature.	Check wire tension
<b>Hot PS</b>	PSU over temperature	Call service
<b>OUERLOAD</b>	Motor jammed	Check wire tension and gearbox
<b>Err 1</b>	Motor driver temperature sensor fault	Call service.
<b>Err 3</b>	PSU Temperature sensor fault	Call service
<b>Err 5</b>	Motor driver Fault.	Call service
<b>Err 6</b>	Motor unit not detected	Check wiring to motor
<b>Err 7</b>	Motor unit not working	Call service
<b>Err 10</b>	Gas valve issue.	Call service
<b>Err 11</b>	Contactors issue	Call service

## Warning codes

Text on Display Panel	Description	Corrective Action
<b>bAtt LO</b>	Reserve power supply low.	Leave connected to power source to charge up
<b>bAtt Err</b>	Reserve power supply error	Check connections to internal power supply. Call service.
<b>Prob. 4</b>	Gas valve not detected.	Check connections to gas valve
<b>Prob. 5</b>	Contactors not detected.	Check connections to contactors
<b>Prob. 6</b>	Driver brake fault	Call service
<b>Prob. 7</b>	Gas valve voltage.	Check connection to gas valve.

## 5. Maintenance

### **Note!**

All Electric shocks are potentially fatal, switch off the machine and unplug from the mains supply before carrying out any maintenance work.

It is very important that the Wire feed unit is regularly maintained. The amount of use and the working environment must be taken into account when scheduling the maintenance periods. Careful use and regular preventative maintenance will prolong the life of the machine and ensure trouble free operation.

### **Weekly**

- Clean the exterior of the machine and remove any dirt and pieces of MIG wire that may have collected inside the wire spool compartment.
- Remove any build up of dirt from the wire feed rollers.
- The wire tension adjuster should be set so that when the wire is restricted at the welding torch the drive rollers slip. Remember if the pressure is set too high the wire may pile up behind the front wire guide and undue strain will be put on the wire feed system leading to a reduced duty cycle and lifespan.
- If necessary, adjust the brake tension on the spool holder so that the wire spool stops at the same time as the feed rollers.
- Inspect the machines exterior for obvious signs of damage.
- Check the condition of the welding cable, earth clamp and welding connectors for damage and any sign of over-heating.
- Check the gas hose and regulator for leaks, remember that air leaks can result in weld porosity.
- Check the condition of the MIG welding gun, check for cuts in the cable sheath, condition of the liner and condition of the contact tip. Remove any build up of spatter from inside the gas nozzle.

## 6. Warranty

### **Guarantee**

Newarc Ltd warrants that its goods and services are guaranteed to meet the specific performance under the stated conditions of use. Newarc cannot be held responsible for general wear and tear or for failure occurring due to misuse or abuse arising out of circumstances outside the stated conditions of use. The stated conditions of use are that considered normal industrial practice and are not exhaustive. Each machine is identified with a unique serial number and accompanied with the guarantee. Newarc reserve the right to a) Repair. b) Replace. c) Authorise the reasonable cost of repair or replacement at an approved Newarc service agent. d) Credit for any purchased equipment (less reasonable depreciation for actual use and condition) at its entire discretion. This in no way affects your rights as a consumer. The guarantee is enclosed with each machine.

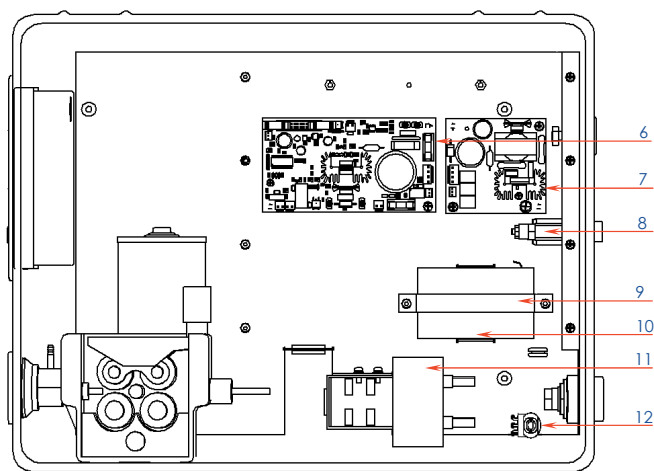
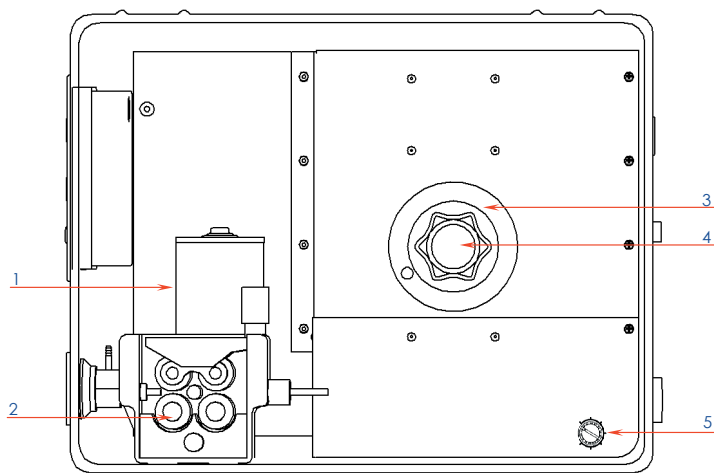
### **PLEASE NOTE**

The manufacturer reserves the right to change and alter the equipment without prior notice. This includes but is not limited to: operating procedures, technical specifications, technical schematics and manuals

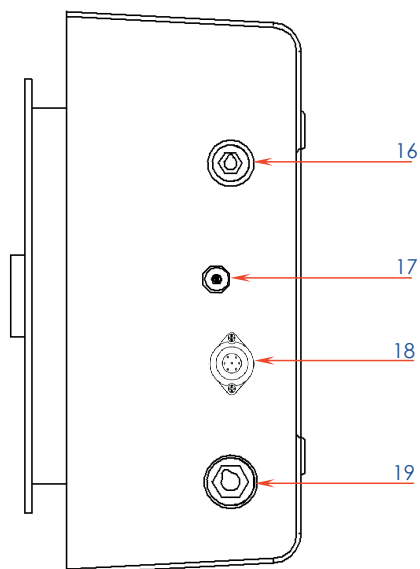
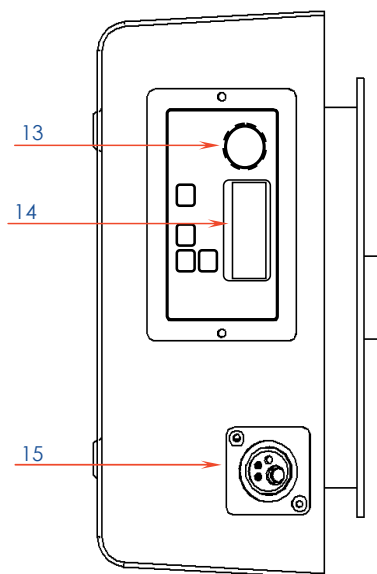
### **CAUTION**

- There are no user serviceable parts/modules inside this equipment.
- Removing lids or covers will/may expose hazardous voltages
- Removal of lids or covers WILL invalidate the warranty on this equipment.

# 7. Parts







## Ordering information

Item	Description	Part number
<b>1</b>	Wire feed motor	<b>NAM83001</b>
<b>2</b>	Feed rollers	
	0.6 - 0.8 V'	<b>NAM00381N</b>
	0.8 - 1.0 V'	<b>NAM00380N</b>
	1.0 - 1.2 V'	<b>NAM00382N</b>
	1.2 - 1.6 V'	<b>NAM00391N</b>
	0.6 - 0.8 knurled	<b>NAM00924</b>
	1.0 - 1.2 knurled	<b>NAM00382NK</b>
	1.2 - 1.6 knurled	<b>NAM00392</b>
	1.6 - 2.0 knurled	<b>NAM00877</b>
	0.8 - 1.0 Aluminium	<b>NAM00427N</b>
	1.0 - 1.2 Aluminium	<b>NAM00393N</b>
<b>3</b>	Spool Holder	<b>NAM00369</b>
<b>4</b>	Spool holder cap	<b>NAM01724</b>
<b>5</b>	Remote control knob	<b>NAM00033A</b>
<b>6</b>	Control PCB	<b>NAM90876</b>
<b>7</b>	Power Supply PCB	<b>NAM90877</b>
<b>8</b>	Gas solenoid assembly	<b>NAM90199</b>
<b>9</b>	Battery Clamp	<b>NAM01244</b>
<b>10</b>	Battery	<b>NAM01259</b>
<b>11</b>	Contactor	<b>NAM00534</b>
<b>12</b>	Remote control pot	<b>NAM20105</b>
<b>13</b>	Control knob MF36	<b>NAM70048</b>
	Control knob MF37	<b>NAM01609</b>
<b>14</b>	MF36 Front panel	<b>NAM90878</b>
	MF37 Front panel	<b>NAM91147</b>
<b>15</b>	Torch Adaptor	<b>NAM01404-ILS</b>
<b>16</b>	Panel mounted dix socket	<b>NA5110004</b>
<b>17</b>	Gas inlet stem	<b>NAM00022A</b>
<b>18</b>	Panel mounted remote socket harness	<b>NAM90992</b>
<b>19</b>	Panel mounted dix plug	<b>EW3550PPW</b>
	Earth Reference Lead	<b>NAM91103</b>
	6.3A Glass fuse (PCB Mounted)	<b>NAM00379</b>
	2A Glass fuse (PCB Mounted)	<b>NAM00274</b>
	Ribbon Cable Assembly	<b>NAM90991</b>
	PCB Wiring Harness	<b>NAM90990</b>

## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**NEWARC**

Unit 1, Whitehouse Industrial Estate, Whitehouse Road  
Newcastle upon Tyne NE15 6LN  
Tel: +44 (0)191 295 0111 | Email: [sales@newarc.co.uk](mailto:sales@newarc.co.uk) | [www.newarc.co.uk](http://www.newarc.co.uk)