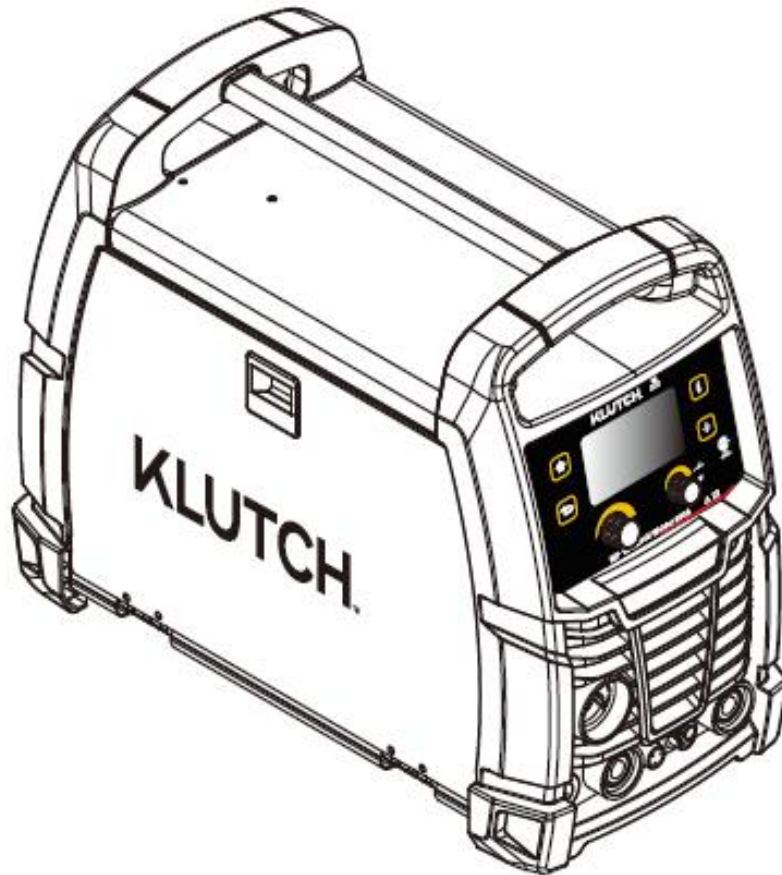


# KLUTCH.

**MP 120/230V Welder 240A**



**WARNING:** Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

**Item #5875877**

**READ & SAVE THESE INSTRUCTIONS**

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# Operating Instructions and Parts Manual

*Please read and save these instructions. Read through this owner's manual carefully before using product. Protect yourself and others by observing all safety information, warnings, and cautions. Failure to comply with instructions could result in personal injury and/or damage to product or property. Please retain instructions for future reference.*

## **GENERAL SAFETY INSTRUCTION**

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- **Your Welding Environment**

- Keep the environment you will be welding in free from flammable materials.
- Always keep a fire extinguisher accessible to your welding environment.
- Always have a qualified person install and operate this equipment.
- Make sure the area is clean, dry and ventilated. Do not operate the welder in humid, wet or poorly ventilated areas.
- Always have your welder maintained by a qualified technician in accordance with local, state and national codes.
- Always be aware of your work environment. Be sure to keep other people, especially children, away from you while welding.
- Keep harmful arc rays shielded from the view of others.
- Mount the welder on a secure bench or cart that will keep the welder secure and prevent it from tipping over or falling.

- **Your Welder's Condition**

- Check ground cable, power cord and welding cable to be sure the insulation is not damaged. Always replace or repair damaged components before using the welder.
- Check all components to ensure they are clean and in good operating condition before use.

- **Use of Your Welder**

**⚠ CAUTION**

Do not operate the welder if the output cable, electrode, MIG gun, wire or wire feed system is wet. Do not immerse them in water. These components and the welder must be completely dry before attempting to use them.

- Follow the instructions in this manual.
  - Keep welder in the off position when not in use.
  - Connect ground lead as close to the area being welded as possible to ensure a good ground.
  - Do not allow any body part to come in contact with the welding wire if you are in contact with the material being welded, ground or electrode from another welder.
  - Do not weld if you are in an awkward position. Always have a secure stance while welding to prevent accidents. Wear a safety harness if working above ground.
  - Do not drape cables over or around your body.
  - Wear a full coverage helmet with appropriate shade (see ANSI Z87.1 safety standard) and safety glasses while welding.
-

- Do not overuse or overheat your welder. Allow proper cooling time between duty cycles.
  - Keep hands and fingers away from moving parts and stay away from the drive rolls.
  - Do not point MIG gun at any body part of yourself or anyone else.
  - Always use this welder in the rated duty cycle to prevent excessive heat and failure.
- 

- **Specific Areas of Danger, Caution or Warning**



#### **Electrical Shock**

##### **▲ WARNING**

Electric arc welders can produce a shock that can cause injury or death. Touching electrically live parts can cause fatal shocks and severe burns. While welding, all metal components connected to the wire are electrically hot. Poor ground connections are a hazard, so secure the ground lead before welding.

- Wear dry protective apparel: coat, shirt, gloves and insulated footwear.
- Insulate yourself from the work piece. Avoid contacting the work piece or ground.
- 1. Do not attempt to repair or maintain the welder while the power is on.
- Inspect all cables and cords for any exposed wire and replace immediately if found.
- Use only recommended replacement cables and cords.
- Always attach ground clamp to the work piece or work table as close to the weld area as possible.
- Do not touch the welding wire and the ground or grounded work piece at the same time.
- Do not use a welder to thaw frozen pipes.



#### **Fumes and Gases**

##### **▲ WARNING**

- Fumes emitted from the welding process displace clean air and can result in injury or death.
  - Do not breathe in fumes emitted by the welding process. Make sure your breathing air is clean and safe.
  - Work only in a well-ventilated area or use a ventilation device to remove welding fumes from the environment where you will be working.
  - Do not weld on coated materials (galvanized, cadmium plated or containing zinc, mercury or barium). They will emit harmful fumes that are dangerous to breathe. If necessary use a ventilator, respirator with air supply or remove the coating from the material in the weld area.
  - The fumes emitted from some metals when heated are extremely toxic. Refer to the material safety data sheet for the manufacturer's instructions.
-

# GENERAL SAFETY INSTRUCTION

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-Do not weld near materials that will emit toxic fumes when heated. Vapors from cleaners, sprays and degreasers can be highly toxic when heated.

## UV and IR Arc Rays



### **⚠ DANGER**

The welding arc produces ultraviolet (UV) and infrared (IR) rays that can cause injury to your eyes and skin. Do not look at the welding arc without proper eye protection.

- Always use a helmet that covers your full face from the neck to top of head and to the back of each ear.
- Use a lens that meets ANSI standards and safety glasses. For welders under 160 Amps output, use a shade 10 lens; for above 160 Amps, use a shade 12. Refer to the ANSI standard Z87.1 for more information.
- Cover all bare skin areas exposed to the arc with protective clothing and shoes. Flame-retardant cloth or leather shirts, coats, pants or coveralls are available for protection.
- Use screens or other barriers to protect other people from the arc rays emitted from your welding.
- Warn people in your welding area when you are going to strike an arc so they can protect themselves.

## Fire Hazards



### **⚠ WARNING**

Do not weld on containers or pipes that contain or have had flammable, gaseous or liquid combustibles in them. Welding creates sparks and heat that can ignite flammable and explosive materials.

- Do not operate any electric arc welder in areas where flammable or explosive materials are present.
- Remove all flammable materials within 35 feet of the welding arc. If removal is not possible, tightly cover them with fireproof covers.
- Take precautions to ensure that flying sparks do not cause fires or explosions in hidden areas, cracks or areas you cannot see.
- Keep a fire extinguisher close in the case of fire.
- Wear garments that are oil-free with no pockets or cuffs that will collect sparks.
- Do not have on your person any items that are combustible, such as lighters or matches.
- Keep work lead connected as close to the weld area as possible to prevent any unknown, unintended paths of electrical current from causing electrical shock and fire hazards.
- To prevent any unintended arcs, cut wire back to ¼" stick out after welding.

## Hot Materials



### **⚠ CAUTION**

Welded materials are hot and can cause severe burns if handled improperly.

- Do not touch welded materials with bare hands.
  - Do not touch MIG gun nozzle after welding until it has had time to cool down.
-

# GENERAL SAFETY INSTRUCTION

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## Sparks/Flying Debris

### ▲ CAUTION

Welding creates hot sparks that can cause injury. Chipping slag off welds creates flying debris.

-Wear protective apparel at all times: ANSI-approved safety glasses or shield, welder's hat and ear plugs to keep sparks out of ears and hair.



## Electromagnetic Field

### ▲ CAUTION

-Electromagnetic fields can interfere with various electrical and electronic devices such as pacemakers.

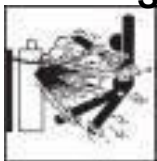
-Consult your doctor before using any electric arc welder or cutting device

-Keep people with pacemakers away from your welding area when welding.

-Do not wrap cable around your body while welding.

-Wrap MIG gun and ground cable together whenever possible.

-Keep MIG gun and ground cables on the same side of your body.



## Shielding Gas Cylinders Can Explode

### ▲ WARNING

High pressure cylinders can explode if damaged, so treat them carefully.

-Never expose cylinders to high heat, sparks, open flames, mechanical shocks or arcs.

-Do not touch cylinder with MIG gun.

-Do not weld on the cylinder

-Always secure cylinder upright to a cart or stationary object.

-Keep cylinders away from welding or electrical circuits.

-Use the proper regulators, gas hose and fittings for the specific application.

-Do not look into the valve when opening it.

-Use protective cylinder cap whenever possible

## • Proper Care, Maintenance and Repair

### ▲ DANGER

-Always have power disconnected when working on internal components.

2. Do not touch or handle PC board without being properly grounded with a wriststrap. Put PC board in static proof bag to move or ship.

-Dor moving parts suc not put hands or fingers neah as drive rolls of fan

# Know Your Welder

## Intended Use

The Klutch MIG/Stick/TIG MP240SiDV LCD is an inverter-powered, dual voltage, wire feed welder for flux core and MIG welding plus a DC stick welder. It uses a state-of-the-art LCD control screen for easy set-up. It comes complete with a regulator and gas hose for easy connection for MIG welding plus a weld cable and electrode holder for DC stick welding. Directly connect this unit to a 240V NEMA 6-50R receptacle or attach the supplied 120V adapter cord to operate off 120V power. It is designed to weld materials as thin as 24 gauge up to 5/16" in a single pass. This package also comes with our exclusive Quick Draw Spool Gun for welding aluminum with 4" spools of aluminum wire. This unit can also perform lift start DC TIG welding on steel and stainless-steel materials. Argon shielding gas and a TIG filler rod would also be required for TIG welding.

Welding with a flux core wire gives the operator the flexibility to use this wire feed welder for mobile applications, including outdoor applications. The flux core wire does not require the use of a separate shielding gas which can be blown away by the wind in outdoor applications. Since flux core wire does not use shielding gas, the operator will not have to have shielding gas bottles or use the regulator and gas hose.

Welding with a MIG wire does require the use of cylinder shielding gas. See the Set-Up guide inside the wire compartment door for recommendations on shielding gas based on the material you are welding. MIG welding is limited to indoor applications or applications where the influence of wind can be controlled to prevent the shielding gas from blowing away. MIG welding allows you to weld thinner materials without burn-through. It also creates a much cleaner weld with less spatter and no slag. The result is little post-weld cleaning of the weld joint.

Like flux core welding, stick welding gives the operator the flexibility to use this welder for mobile applications, including outdoor applications. Stick electrodes contain a flux, making welding easy and does not require the use of a separate shielding gas which can be blown away by the wind in outdoor applications.

TIG welding does require the use of Argon shielding gas. The shielding gas replaces the flux that is used in stick welding, providing a more controlled and cosmetic weld. However, TIG welding is limited to areas inside or where wind can be controlled, preventing the shielding gas from blowing away.

This unit is intended to be used on a 50-amp 240V AC circuit or 120V, 25A AC circuit, without the use of an extension cord. If an extension cord is necessary for your application, use the appropriate size and length of extension cord that will handle 50 amps the entire length of the extension. We highly recommend talking with a qualified electrician for cord size recommendations. This unit is supplied with a NEMA Class 6-50P plug and will require a NEMA Class 6-50R receptacle. **Do not remove the power plug.** Use the supplied 120V adapter when running off 120V power.

High frequency, inverter-based welding is more efficient and provides better control than non-inverter welding machines.

## Packaging Contents

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"><li>• MP230SiLCD (1)</li><li>• 10ft. Electrode Cable/Clamp (1)</li><li>• Dual Gauge Regulator (1)</li><li>• Extra Collets #5 #6 #7 (3)</li><li>• Sample Tungsten (1)</li><li>• Owner's Manual</li></ul> | <ul style="list-style-type: none"><li>• MIG Torch (1)-10ft</li><li>• 10 ft. Ground Cable/Clamp (1)</li><li>• 2 ft. 120V Adapter Cord (1)</li><li>• Foot Pedal- 25ft (1)</li><li>• MIG Nozzle (1)</li></ul> | <ul style="list-style-type: none"><li>• 10 ft. Removable Spool Gun (1)</li><li>• 10 ft. Gas Hose (1)</li><li>• TIG Torch- 13ft (1)</li><li>• 0.030 in. Contact Tips (2)</li><li>• Flux Core Nozzle (1)</li></ul> |
|---|--|--|

# Technical Specifications

- **Environmental condition**

- The surrounding temperature range
- when working: -10~+40°C; During transport or in storage:-20~+55°C
- Relative humidity: when at 40°C: 50%; when at 20°C: 90%。
- Dust, acid , corrosive gas or matter in the air less than normal content  
Besides matter is produced in welding process. Place is not drastic motion.
- Altitude less than 1000m
- Keep from raining when it is used outdoor.

- **Power supply requirement**

1. Service voltage wave form should be actual sine wave, frequency jitter is less than±1% of rated value.
2. Fluctuation of input voltage is less than±10% of rated value.
3. Unbalance rate of 3ph service voltage 5%

- **Accepted standard**

MP 120/230 Welder 240A---ANSI/NEMA/IEC 60974-1-2019

- **Main principle**

MP 120/230 Welder 240A use single IGBT to convert 50/60Hz to high frequency (43KHz) reductionreducing weight and volume of main transformer, improving efficiency over 30%。

- **Welding torch**

Torch, consists of torch head, cables, neck.

Caution: maks sure the machine power is off when assembling the torch

Note: Change the related consumables and cables when they weared too much.

- **Welding torch indicator**

Leds meaning: Green light on means machine is ready to work; yellow light means thermal protection, need to wait until unit cools down;

- **Low-speed-wire-feeding**

at the beginning of arc striking, before the wire touches the work piece, the WFS is set at a low speed, this helps make the arc striking easier.

- **Burn-back function**

after welding, the wire keeps feeding for a while, this is because of inertia, this makes the wire easy to stick onto the work piece, making it difficult to strike arc when welding. burn back funciton means the output Volts stay on for a period so as to make sure the wire fully burnt.

- **Easy Arc Start**

Under normal circumstances, the end of the welding wire forms a ball when arc stops. This product keeps the ball from forming. Creating easier arc start.

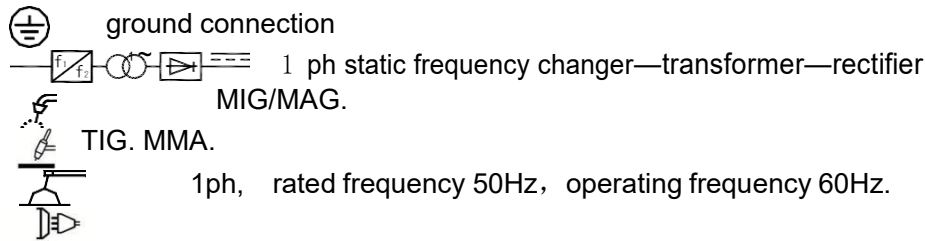
- **Post-gas function**

For protecting fiery welding area, there is 3s post-gas at the end of welding.

- **Stick welding function**

Adjusting function switch to Stick welding on the front panel.

- **Remark & Sign of Illustration**



1~50/60Hz

X: duty cycle.

$I_{1max}$ .A: rated max input current.  $I_{1eff}$ ...A:

max effective input current.  $I_2$ : rated welding current.

$U_0$ : rated no loading voltage

$U_1$ : rated input voltage.

$U_2$ : loading voltage

...V: unit of voltage

...A: unit of current

...%: unit of duty cycle

...A/...V to ...A/...V: output range. Min or max rated welding current and relevant loading voltage.

UL 551 international standard.

IP21S: enclosure protection class. IP is code letter (International Protection) 。 2 refer to prevent someone's finger to approach risk part; prevent no less than 12.5mm solid to into the shell. 1 refer to prevent to drip from vertical direction; Vertical drop of water should be no harmful effects. S refer to when movable part of equipment is static, the waterproof test can be processed.

F: F Insulation grade.

## Technical Data

### 4.1 Main technical data

project	unit	MP 120/230 Welder 240A	
voltage	V	120	230
frequency	Hz	50/60	50/60
Max rated input current	A	20	36
Rated capacity	kVA	2.4	8.2
No Loading voltage	V	69	69
Welding voltage	V	16~18.5	16~24
Rated duty cycle	%	40	20
Welding Wire diameter	inch	0.25", 0.030", 0.035"	
Wire feed speed	inch/min	100~500	
Rated welding current(MIG)	A	90	200
Current adjustment(MIG)	A	40~90	40~200
Rated welding current(Stick)	A	10~70	10~180
Current adjustment(Stick)	A	10~90	10~180
Insulation grade		F	
IP		IP21S	
cooling		Air	
weight	LB	37.4	
Dimension L*W*H	inch	17.99 x 9.44 x 11.45	

#### Welding types and specs:

You can choose between solid core welding wire and flux core welding wire for welding.

Suitable for various materials including carbon steel, stainless steel, copper silicon, and aluminum.

#### Selection:

Solid Core ("V"): 0.025"/0.030"/0.035" Flux Core("K"): 0.030"/0.035"

"V": Solid core

"K": Flux core

# Operational Approach

- **Workpiece before welding cleanup**

Before test welding , wire, bevel and bevel around 10 ~ 20mm must be maintained within the range of clean , shall not affect the quality of welding rust, oil, water and paint and other foreign matter.

- **Before welding commissioning**

connect various connection cables , torch , pipe, installed wire, close the power switch, then the machine fan rotation .

unscrew the carbon dioxide cylinder valve, pressure indication on the gauge should be at this time .

unscrew the meter valve ( counter-clockwise ) , loosen wire wheels [ ] , press the torch switch , adjust the gas flow to the process requirements, and then pressing [ ] feed rolls .

Press the torch switch wire to the torch mouth .

When the torch cable wire straightening best to avoid wire blocked.

When test wire , to prevent the wire head welding head is blocked , the nozzle can be [ ] and [ ] Remove the torch tip end portion of the wire to be sent before you put it on .

When the wire , please observe the wire is in the groove feed rolls by , if outside the tank wire should be adjusted to the trench ( note wire and wire groove match). Second, we must observe the wire feed speed is uniform , such as non-uniform pressing wheel may be too tight or too loose , it should be appropriate to relax or pressed , in order to ensure a uniform wire .

- **Welding**

Test welding welder observed voltage , current meter value Meets Process Specification . Please adjust the appropriate knob until it meets the parameters only after welding .

- **Manual welding**

The function switch on the front panel of the welder from MIG to manual welding, connect the earth clamp and welding clamp, welding current manual knob to the need for welding current for welding.

Manual welding with a current preset function

- **Care and Maintenance**

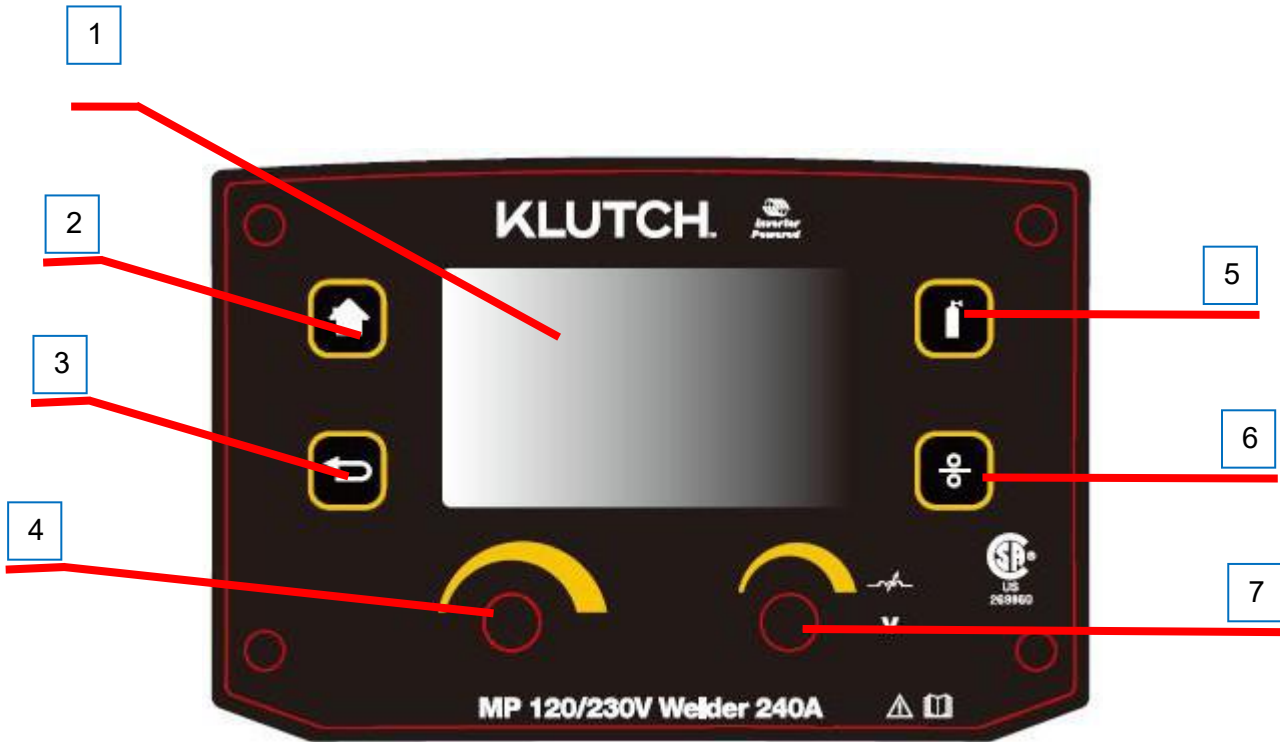
Proper use and maintenance, to ensure good welding performance and prolong the life of the welder. Maintenance welder by professionals responsible, when the user encounters a failure can not be excluded or do not have the maintenance capability, should get in touch with our company or our agents, access to technology, repair, and service parts supply and on stand by.

Welder maintenance must be performed by professionals, and to prohibit live working. Newly installed welder or in case of prolonged unused, in use before the application megger on the chassis of the windings and the winding insulation resistance between the windings, the insulation resistance value should not be less than .5 .

Welder when used outdoors should avoid rain, snow immersion or prolonged exposure.

No long-term or temporary welder when not in use, the welder should be stored in dry and ventilated warehouse, non-corrosive gas or hazardous gas. Treasury temperature should be between -20 ~ + 55 °C , relative humidity less than 90%.

## Front Ctrl panel



Reference	Description
1	<b>LCD DISPLAY</b>
2	<b>Home/Start Button</b>
3	<b>Previous Screen Button</b>
4	<b>Multi-Function Adjustment/Select Knob</b>
5	<b>Gas Purge Button</b>
6	<b>Wire Jog Button</b>
7	<b>Voltage Control Knob</b>

## OPERATING INSTRUCTIONS

### ⚠ WARNING

- High voltage danger from power source! Consult a qualified electrician for proper installation of receptacle, This welder must be grounded while in use to protect the operator from electrical shock.
- Do not remove grounding prong or alter the plug in any way. Use only the supplied adapter between the plasma cutter's power cord and the power source receptacle. Make sure the POWER switch is OFF when connecting your welder's power cord directly to a properly grounded 230/120 VAC, 60 HZ, Single Phase, 50/20 Amp input power supply.

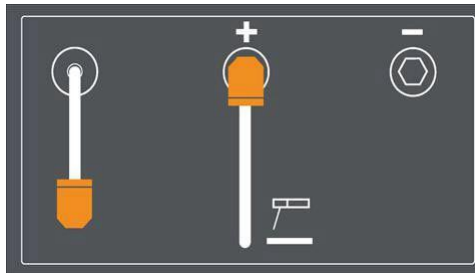
- 1 **LCD:** Shows all process from function selection to welding.
- 2 **Gas-check button:** press the button to check gas is working.
- 3 **Wire-check button:**press the button to test wire supply system.
- 4 **Multi-function adjusting knob:** For function selection; Press for confirming. Allows user to adjust the current and wire feeding speed accurately.
- 5 **Home Key:** Keep pressing home key, return to home page.
- 6 **Return:**Return to the previous step.
- 7 **Auxiliary knob:** Allows user to adjust the voltage accurately.

- **Interface description**

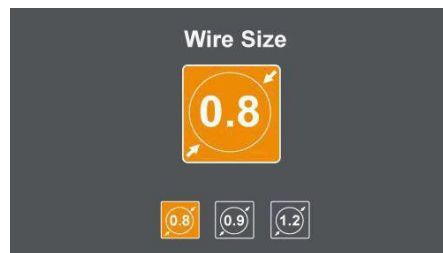
**Multi-functions selection:** Total 9 functions, 8 welding functions and 1 setting.



**Output setup:** Shows output connection under different welding mode, press multi-function knob for confirming.



**Electrode/ Wire diameter selection:** Adjusting multi-function knob to select different electrode/wire diameter, press for confirming.



**Material thickness:** Adjusting multi-function knob to select different material thickness, press for confirming.



**Welding display:** Shows all selected parameters.

\* Under MIG welding, user can set wire feeding speed and voltage. Adjusting Multi-function knob to set electro-inductance, press the knob to progress basic parameter setting.

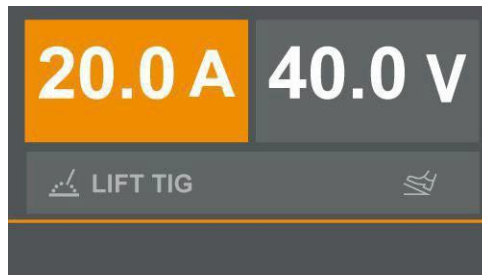


**Note:**

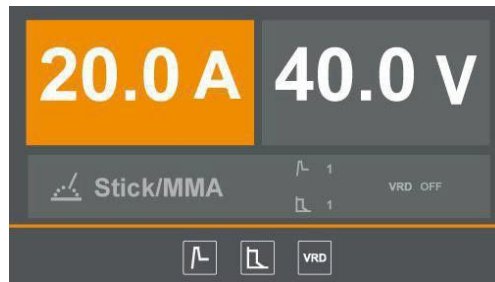
**Note1:**Basic parameter setting including: gas pre flow, slow wire feeding, gas post flow, operating, load and save function. there is also spool gun function under ALLwelding.

**Note2:** In the green range of current and voltage, it means recommended parameter.

\* Under TIG welding, user can set current parameter.



\* Under Stick welding, user can set current, arc force parameter and hot start.



**(6).Setting interface:** It shows language setting, units setting, light setting, information and more.



**Alarm interface:**It shows the machine is overloaded and the internal temperature is too high. Weld output will turn off automatically but the fan will still be working. When the internal temperature is decreased, the alarm interface will turn off and the machine will be ready to weld.



## Installation

lutch MP 120/230 Welder 240A emi-automatic gas welding enclosure protection class IP21S. When welding work must not be less than 12.5mm diameter of a finger or rod (especially metal rod ) is inserted into the welder , welder not pressure.

Caveat! Must be well grounded , grounding wire must not be removed before the end of the welding work does not use welder . Otherwise , electric shock may occur , resulting in personal injury. When the number of welding machines and other electrical equipment or share a grounding device must be used in parallel , prohibiting the use of a series .

### (7) Place cutter

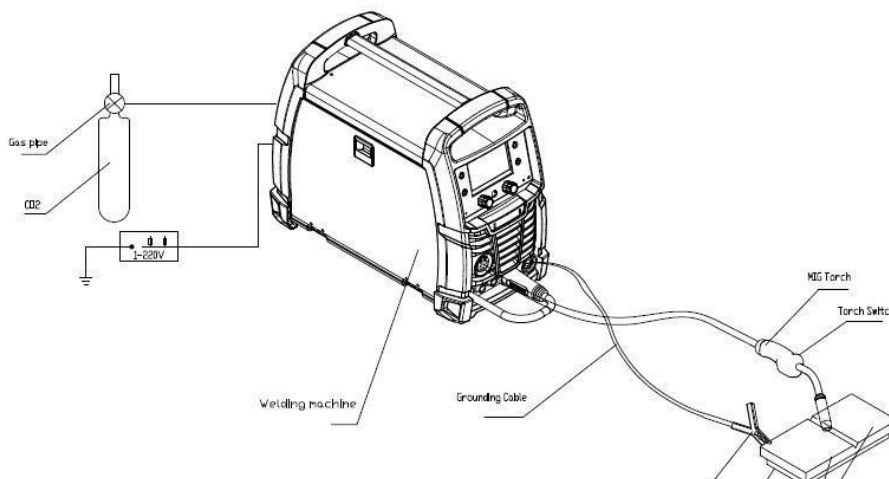
1 Device should be placed in a dry little dust around the non-corrosive , and place flammable, explosive gas and goods ;

2 Avoid direct sunlight and rain , keep the ambient temperature within the range of  $-10 \sim +40 \text{ }^{\circ}\text{C}$  ;

3 Around the unit should be left at least 1 inches of space ;

4 Poor indoor ventilation , smoke ventilation system should be installed ;

5 Place the inclination angle of the machine at work should not exceed  $10^{\circ}$  , otherwise it should be secured to prevent its fall.



## SPOOL GUN ASSEMBLY

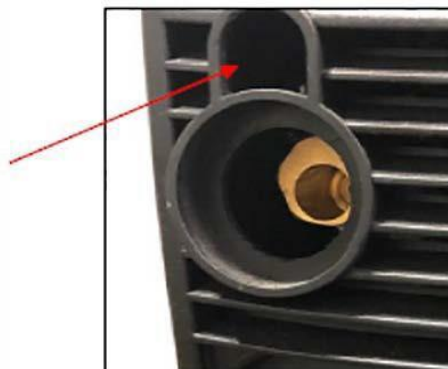
- \* This unit is set-up to accept the Quick Draw Spool gun only.
- \* The Quick Draw Spool Gun has three connection points at the back of the spool gun (Figure 9).
  - The gas connection is a slide-on quick connector.
  - The weld power connection has a round ring connection.
  - The trigger connection is the 5-Pin snap-on connector.



**Figure 9**

- We recommend removing the MIG torch when the Spool Gun is connected to avoid accidental arcing. Loosen the wing nut retaining bolt and slide the MIG torch out of the front of the machine. Disconnect the 5-Pin trigger connection on the front of the machine.
- Carefully slide the gas connector and the weld power connection through the weld cable access opening in the front of the machine (Figure 10).

Weld Cable  
Access  
Opening



**Figure 10**

- \* open the wire compartment door. (Figure 11)



Figure 11

6. Connect the gas connection quick connector to the gas connector (1) on the back panel of the wire compartment.
7. Connect the weld power connection to the bolt on the top of the MIG connector (2).
8. Connect the 5-Pin trigger connector to the 5-Pin receptacle on the front of the machine (3).

#### DC STICK WELDING ASSEMBLY

##### **⚠CAUTION**

Be aware that the ELECTRODE HOLDER will be electrically HOT when the Input Power Switch on the welder is turned ON.

1. Install the ground cable quick connector to the Negative (-) Weld Output Connector (Figure 3).
2. Secure the ground clamp to the work piece.
3. Install the electrode cable quick connector to the Positive (+) Weld Output Connector.
4. Follow the STICK WELDING SET-UP instructions in the Operating Instructions section.

#### TIG TORCH ASSEMBLY

##### **⚠CAUTION**

Be aware that the TIG TORCH will be electrically HOT when the Input Power Switch on the welder is turned ON.

1. Remove the ground cable and the electrode holder from the weld output connections. Install the ground cable to the Positive (+) weld output connection (Figure 8).
2. Secure the ground clamp to the work piece.
3. Connect a regulator to a bottle of ARGON gas. Then connect the gas connection from the TIG torch to the regulator.
4. Connect the TIG torch weld cable to the Negative (-) weld output connection.
5. Set the desired amperage on the amperage control knob on the front panel of the welder.
6. Turn on the input power switch on the welder.
7. Turn on the regulator on the bottle of shielding gas and adjust the regulator to approximately 20 CFH. Open the shielding gas valve on the torch to start the flow of shielding gas.

## Before Each Use

### ⚠WARNING

#### ELECTRIC SHOCK CAN KILL!

- Touching live electrical parts can cause fatal shocks or severe burns. Do not touch live electrical parts.
- Wear dry, hole-free insulating gloves and body protection.
- Disconnect input power before installing, maintaining or servicing this equipment. Lockout/tag out input power according to OSHA 29 CFR 1910.147.

1. Review the contents of this manual and follow all safety warnings and cautions.
2. Inspect all cords and power cables. Replace any cords or power cables that are damaged or cracked.
3. Make certain your equipment is in good working order.
4. Make sure the area is clean, dry, and ventilated. Do not operate the welder in humid, wet, or poorly ventilated areas.
5. Always be aware of your work environment. Be sure to keep other people, especially children, away from you while welding.

## Operating Instructions

### ⚠WARNING

#### High voltage danger from power source!

- Consult a qualified electrician for proper installation of receptacle at the power source. This welder must be grounded while in use to protect the operator from electrical shock. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician. Do not cut off the grounding prong or alter the plug in any way and do not use any adapter, other than the supplied adapter, between the welder's power cord and the power source receptacle. Make sure the power switch is OFF, then connect your welder's power cord to a properly grounded 230 VAC (220V - 240V), 60 HZ, single phase, 50-amp power source. If operating on 120V, attach the 120V Adapter cord to the unit power cord and then connect the assembly to a properly grounded 120 VAC (110V-130V), 60 Hz, single phase, 25-amp power source.

Welding connection diagram

\* **Connection with power**

- user must connect the 4-pin power cable in the back of welding machine to the power outlet with breaker.
- Must confirm the power supply voltage is consistent with the voltage in the nameplate on the welding machine.
- the earth cable of the power outlet must grounding.

\* power supply configuration of single welding machine

ITEM	MP 120/230 Welder 240A
switch A	40
Power cable mm2	2.5

Note: The current value of the fuse is blown twice its rated operating current value

\* **Wire system is installed in the connection**

5 After suitable wire diameter , wire diameter is selected according to the welding process selection ,please note wire wheels wire diameter and wire feeder , the guide wire tube , hose wire torch tip specifications match.

\*Unscrew the wire feeder wire feed sleeve shaft cover plate , the plate ] [ wire into the wire feeder wire axis [ disk ] . Note : Wire spools are to succeed in [ ] downward direction against the wire feeder .

6 [ Disk ] wire within the sleeve is provided with damping tightening mechanism ( unscrew the hexagonalscrew shaft cover visible ) , while pulling the wire by hand Coarse disc, such as the resistance is too large , adjustable damping bolt clockwise to increase , decrease and vice versa small . Please completethe adjustment shaft cover tightened.

7 Import wire feed welding wire guide wire tube ] [ by ] [ wire wheel and wire wheel wire on the positive groove , reintroduction [ outlet guide mouth ] , pressing [ ] wire wheel . ( Such as re- sent to further feedthe wire after the required power for themselves .

\* **Connection welding wire feed system**

8 Connect the cable to plug into the current output Continental welder front panel below the " +" a very European socket , and tighten the European plug the other end of the wire feeder and the rear end of the European socket tighten to secure the connection .

9 The 6 -core control cables were connected to both ends of the plug at the bottom of the front panel 6-pin socket welding wire feeder and the rear end of the 7 -pin socket and tighten.

\* **Connection with the torch**

10 The torch wire feeder connector into the front panel of the interface [ gun ] and tighten .

\* **The connection of the workpiece**

The quick connector accessories supplied grounding cable into the right side of the front panel with the bottom welder "-" the socket identity and clockwise to tighten , not loose , the other end clamped workpiece.

**Note** :welding work is completed or temporarily leave the scene , should turn off the power switch and gas valve.

welder should wear canvas overalls and welding masks to prevent the arc light and heat radiation.

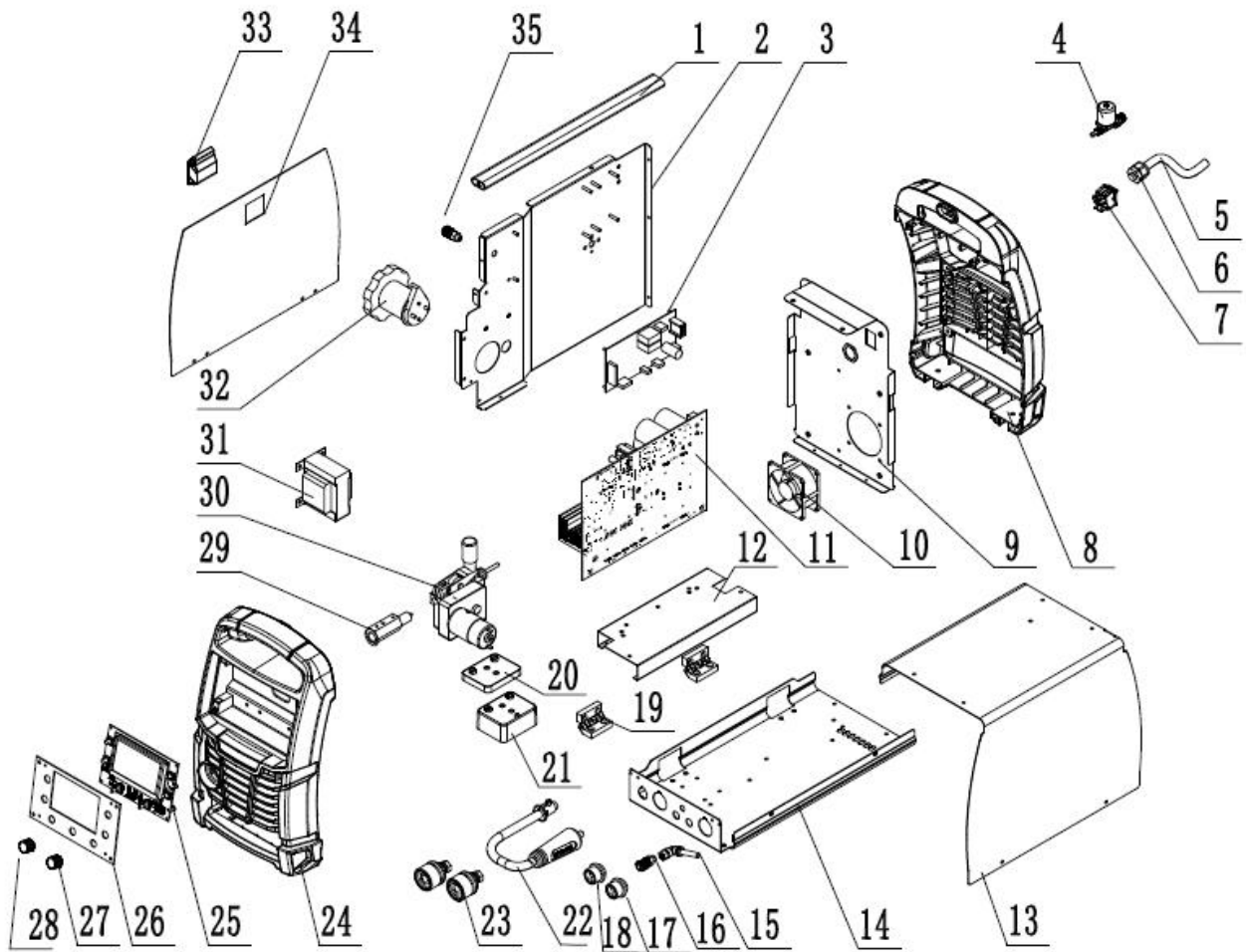
job separator should be placed around the venue Guangping , to prevent others from influence by the arc .

job site shall be placed near flammable items .

the interfaces must be correct , reliable connection.

Work placement angle of inclination of the machine should not exceed 10 ° , otherwise it should be secured to prevent its dumpi

## Spare Part List



## Quick-wear part list

Exploded view NO	Material name	Quantity	Remark
1	HANDLE	1	155200093
2	MIDDLE PLATE	1	125200083
3	PCB BOARD	1	125200084

4	GAS VALVE	1	1005200047
5	POWER CORD	1	1005200211
6	CABLE CONNECTOR	1	125200085
7	SWITCH	1	105700072
8	REAR PLASTIC PANEL	1	125200086
9	REAR PANEL	1	125200087
10	FAN	1	105200314
11	MIAN PCB	1	125200088
12	PCB SUPPORT PLATE	1	105200234
13	ENCLOSURE	1	125200089
14	BOTTOM PANEL	1	125200090
15	BEND	1	125300123
16	AIR VALVE JOINT SEAT	1	125200093
17	PEDAL SWITCH HARNESS	1	125200095
18	TRIGGER SWITCH HARNESS	1	105200059
19	HINGE	2	125200091
20	WIRE FEEDER ASSEMBLYING 1	1	125200092
21	WIRE FEEDER ASSEMBLYING 2	1	125200093
22	POLARITY CONVERSION CABLE	1	125200094
23	QUICK CONNECTOR	2	105200136
24	FRONT PANEL	1	125200096
25	PANEL PCB BOARD	1	125200097
26	PANEL SUPPORT PLATE	1	125200098
27	KNOB 1	1	125200099
28	KNOB 2	1	125200100
29	TORCH INTERFACE	1	105800019
30	WIRE FEEDER	1	10580020
31	RESISTANTE	1	105200317
32	WIRE SPOOL	1	125200101
33	DOOR LOCK	1	105200080
34	FLIP BOARD	1	125200102
35	AIR VALVE JOINT SEAT	1	125300130
Other	Please do not hesitate to contact the manufacturer / supplier		

Remark: The parts list as above is just for reference

## Trouble Shooting And Elimination Methods

- failure analysis and troubleshooting (see Table 4)

N O	Failure Cause	Failure Analysis	troubleshooting
1	Press the gun switch ,nowire 1	No power	Investigate the reasons ofconnectingpower.
		Torch switch is broken	Change the torch switch
2	There are no-load voltage ,aspirated , nowire 2	Wire feeder current regulatorpotentiome terbad	Change potentiometer
		Wire feeder cable break	ON wire feeder power line
		Wire driver board bad	Change driver board
3	There are wire , aspirated ,no - loadvoltage 3	The main control board bad	Change the main control board
		Internal connector poor contact	Replace the bad contact connector
4	Welding current imbalance	Current adjustment potentiometer bad	Change potentiometer
		Control circuit board has a problem	Change control board
5	No-load voltage is low	Power supply voltage is too low	Increase power supply capacity
6	Arc of instability , and thebig splash 4	Inappropriate choice of welding specifications , current and voltage donot match	Tune welding specifications
		Contact tip or wire wheel and wiremodels do not match	In other conductive tip or wire wheels
		Wire resistance is too large	Clean or replace the wire feed hose , guncable try straight
7	Load voltage , wire feedwerenormal , but not arc	Cable break ground	Turning the earth cable
		Excessive oil or rust weldment	Remove grease or rust
8	No protective gas	Disconnect the gas line hose	Turned on the gas path and pitched
		Trachea is pressed or blocked	Check gas line
		Electromagnetic valve bad	Electromagnetic valve bad
9	Bend in the wire feed rollsand wire guides	Stick tip and wire	Replace tip
		Tip ID is too small , too muchresistance wire	Replace the appropriate tip

	at the entrance , and evenbend	Guidewire tube imports from wirewheel too far , the guide is not good	Shorten the distance between the two
		Wire wheel groove horizontal section , the guide wire die not in a straight line	Adjusted so that in a straight line
		Wire hose ID is too small or too large , too much resistance wire	Replace the appropriate wire feedingtube
		Wire feeding tube blockage	Garbage wire tube

- **Common weld defects ( see Table 5 )**

<b>NO.</b>	<b>Weld defects</b>	<b>Cause Analysis and Troubleshooting</b>
1	Vent Excess	Wire and workpiece have excess oil, rust and water.
		CO2 gas shielded bad. (Low flow, lack of silico-manganese content in the wire, gas impurities, nozzle clogging, leakage, wind over speed)
2	Crack	Wire and workpiece have excess oil, rust and water.
		Current and voltage mismatch.
		Penetration is too large, the base metal weld high carbon content.Current and voltage mismatch.
		The first multi-layer welding seam is too small, improper welding sequence, excessive moisture gas.
3	Undercut	Arc too small, welding speed too fast.
		Gun position does not fit, welding current is too small, too deep plate recess.
4	Slag	Front layer weld slag removal is not clean.
		When a small current low speed deposition rate too much, welding swing is too large.
5	Spatter	Welding current and voltage mismatch.
		Wire and workpiece not clean.
		Contact tip aperture is too large or too small, wire too long.
6	Insufficient penetration	Welding current is too small, wire out too long, bevel inappropriate angle is too small, the gap is too small



## Complete Set Specification

* Welder	1 pc
* Product certification	1 pc
* Warranty Card	1 pc
* Product Manual	1 pc
Optional accessories	
* Torch	1 pc
* Control cables, welding cables	1 pc
* Ground cable (with ground clamp )	1 pc
* Small accessories ( hose clamps, tip , etc.)	1 pc

## Transport & Storage

The welding for the box structure can be used to move the bail or handle when moving and to be underpinning handling. Welder should be fully fixed when in transportation.

1 This machine is a common indoor use equipment, transport and storage should be avoided during rain , snow, invasion , loading and unloading should perform the words of warning on the box . Storage warehouse should be kept dry , ventilated , non-corrosive gases or dust. The temperature should be -20 ~ + 55 °C, relative humidity less than 90%.

2 When the product after unpacking continued storage shall be repackaged original packaging requirements ( storage must be kept in clean and dry before storing to do the work and keep sealed plastic bags in boxes ) .

3 The user should keep the carton and shockproof block good purchased, in order to take proper packing in long-distance transport . For long-distance transport , wooden boxes should be installed , and make "up" , " rain " and other identification .

## Quality Guarantee

User in accordance with the provisions of the product manual , and in compliance with the welder installation , storage, use, maintenance, storage conditions of the rule , from the date of purchase within 12 months (purchase date ) , welder due to manufacturing quality problems, thus the occurrence of local damage or does not work , the manufacturer will provide free service for the users

# KLUTCH™

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