



INVERTER WELDING MACHINE
MIG-160&MIG-200D3&MIG-250&MIG-270
INSTRUCTION MANUAL



INVERTER WELDING MACHINE

Instruction Manual



NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:

CustomerService@vevor.com

This is the original instructions, please read all manual instructions carefully before operating. VEVOR reserves clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there is any technology or software updates on our product.

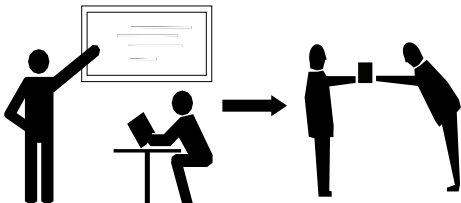
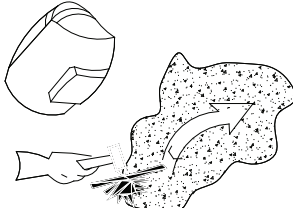
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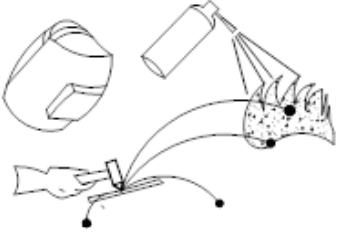
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1. SAFETY WARNINGS

1.1 ARC WELDER SAFETY WARNINGS AND PRECAUTIONS

Welding is dangerous and may cause damage to you and others, so take good protection during welding is necessary. For details, please refer to the operator safety guidelines in conformity with the accident prevention requirements of the manufacturer.

	Professional training is needed before operating the machine. · Use labor protection welding supplies authorized by national security supervision department. · The operator must be special personnel with a valid "metal welding (OFC) operations" operation certificate. · Cut off power before maintenance or repair.
	Electric shock—may lead to serious injury or even death. · Install earthing device according to the application criteria. · Never touch the live parts when skin bared or wearing wet gloves/clothes. · Make sure that you are insulated from the ground and workpiece. · Make sure that your working position is safe.
	Smoke & gas—may be harmful to health. · Keep the head away smoke and gas to avoid inhalation of exhaust gas from welding. · Keep the working environment in good ventilation with exhaust or ventilation equipment when welding.
	Arc radiation—may damage eyes or burn skin. · Wear Suitable welding masks and protective clothing to protect your eyes and body · Use suitable masks or screens to protect spectators from harm.

	Improper operation may cause fire or explosion. · Welding sparks may result in a fire, so please make sure no combustible materials nearby and pay attention to fire safety. · Have a fire extinguisher nearby, and have a trained person to use it. · Airtight container welding is forbidden. · Pipe thaw with this machine is forbidden.
	Hot workpiece may cause severe scalding. · Don't contact hot workpiece with bare hands. · Cooling is needed during continuous use of the welding torch.
	Magnetic fields affect cardiac pacemaker. · Pacemaker users should be away from the welding spot before medical consultation.
	Moving parts may lead to personal injury. · Keep yourself away from moving parts such as fan. · All doors, panels, covers and other protective devices should be closed and in place.
	Seek professional help when encountering any difficulties. · Consult the relevant contents of this manual If you encounter any difficulties in installation and operation. · Contact the service center of your supplier or our company to seek professional help If you still can not fully understand after reading the manual or still can not solve the problem according to the manual.

1.2 READ ALL INSTRUCTIONS BEFORE USING THIS WELDER

- **Keep work area clean.** Messy places tend to hurt people.
- **Observe work area conditions.** Do not use machines or power tools in damp or wet places. Do not expose the machine to rain. Keep work area well-lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
- **Keep children away.** Children must be never allowed in the work area. Do not let them handle machines, tools or extension cords.
- **Store your equipment.** When not in use, tools must be stored in a dry location to avoid rust.
- **Always lock up tools and keep them out of the reach of children.**
- **Do not force tool.** It will do the job better and safer at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.
- **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this welder was designed. Do not modify this welder and do not use this welder for any other purposes for which it was not intended.
- **Use eye and ear protection.** Always wear ANSI approved, arc shaded, impact safety face shield (welding helmet). Always use a full-face shield when welding. Always wear ANSI approved eyewear under face shield while in the workplace. Wear a NIOSH approved dust mask or respirator when working around metal, chemical dusts, fumes and mists.
- **Do not over reach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
- **Maintain tools .** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
- **Disconnect power.** Unplug tool when not in use.
- **Remove adjusting keys and wrenches.** Check that keys and adjustment wrenches are removed from the welder and work area before plugging in the power supply.
- **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, flame retardant, electrically non-conductive clothing and non-skid footwear are recommended when working. Wear restrictive hair covering to protect your long hair.

1.3 IMPORTANT SAFETY INSTRUCTIONS

(WARNING: To reduce the risk of burns, electrocution, fire or injury to persons!)

- a) Do not disassemble the unit except for the authorized serviceman.
- b) Unplug the unit before filling. Do not exceed the MAX mark.
- c) Do not touch the socket with wet hand to reduce the risk of electrocution.

2. SPECIFICATIONS

The welding machine is adopting the most advanced inverter technology, which is suitable for gas welding (solid wire) and gasless welding (Flux-cored wire).

The development of inverter welding equipment profits from the development of the inverter power supply theory and components. Inverter welding power source utilizes high-power component IGBT to transfer 50/ 60HZ frequency up to 100KHZ, then reduce the voltage and commutate, and output high-power voltage via PWM technology. Because of the great reduction of the main transformer's weight and volume, the efficiency increased by 30%. The appearance of inverter welding equipment is considered to be a revolution for welding industry.

Inside of the machine is equipped with electronic reactor circuit which can accurately control the process of the electric short transition and blending transition and result excellent welding characteristic. Comparing with synergic welding machine and other machine, it has the following advantages: stable wire speed, compact body power saving, no electromagnetic noise, continuous and stable operation with small current. It is especially suitable for welding sheet of low-carbon steel, alloyed steel and stainless steel. It has some features, like automatic voltage pulsation compensation capability, small spatter, good arcing, uniform welding pool, high duty cycle and so on.

Thanks for purchasing product and hope for your precious advice. We will dedicate to produce the best products and offer the best service.

2.1 MACHINE INTRODUCTION

MIG-160/200D3/250/270 Single voltage series panel introduction MMA/LIFT-TIG/MIG



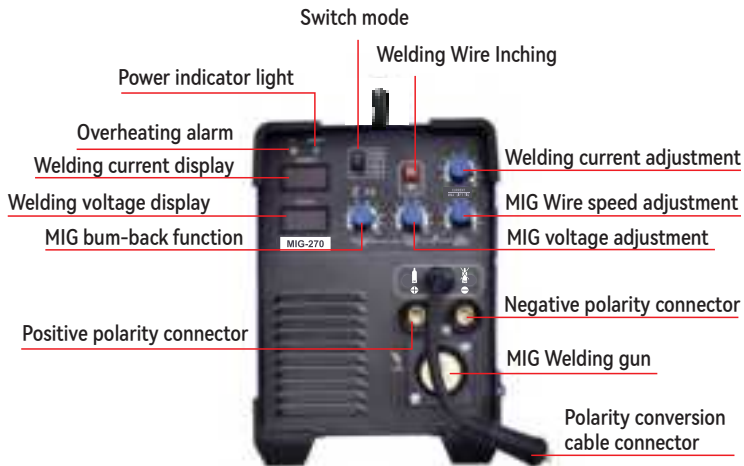
Note: Very important!

1. Connect the polarity conversion cable connector to the positive polarity connector when solid carbon steel welding wire is used. Ground wire clamp negative polarity connector!
2. Connect the polarity conversion cable connector to the negative polarity connection when using the airless self-protective wire. Connector, Ground wire clamp positive polarity connector !!

MIG-250/270

Dual voltage series panel introduction

MMA/LIFT-TIG/MIG



Description for various functions

Item	Note
Over-Heat Aam	When temperature of the machine is too high, this indicator will light and machine stop working.
Power Indicator	/
Welding Current Display	While arc is struck (welding) displays actual welding current.
MIG Welding Voltage DisplayMIG	While MIG mode display actual welding voltage.
Switch for mode of mma/ift-tig/mig	Three kinds of welding models can be choose when tum to diferent positon.
Welding Wire Inching	It can let welding wire reach contact tps in fast speed.
MMA Welding Current Adjustrnt MMA	While MMA mode can adjust welding current from small to big.
MIG Bumback Function MIG	It can remove small ball after stopping welding .
MIG Voltage Adjustent MIG	While MIG mode can adjust voltage from low to high.
MIG Wire Speed Adjustment MIG	Stepless adjusment from slow to fast.
Polarity Conversion Cable Connector	When gas welding (solid wire) , install this into Positive Polarity Connector When gasless welding Flux wire) , install this into Negative Polarity Connector.
Positive Polarity Connector	/
Negative Polarity Connector	/
MIG Welding Torch	Integrated MIG TORCH or Binzel MIG Torch.
Power switch for onOff	/
Gas hose Inlet Connector	When use gas welding solid welding wire) , install gas hose into this connector.
Power Cable with Plug	/
Ground wire	/
Ground Nut	/
built-in cooling fan and ventilaton	/

2.2 WHAT'S INCLUDED

No.	Picture	Item	Qty	Remarks
1		MIG-160 MIG-200D3 MIG-250 MIG-270	1	Please check the outside of the machine to ensure no scratches or breaks, then turn it on.
2		MIG Welding Torch	1	3M MIG welding torch
3		Ground Clamp	1	L=2m CCA 16mm ²
4		Welding Holder	1	L=2m CCA 16mm ²
5		Transparent hose	1	3m Transparent hose
6		Hose Clamp	4	Used to fix the trachea to prevent air leakage
7		Glasses	1	Eye protection
8		Welding Slag Hammer and Bush	1	slag removal in electric welding
9		Flux cored wire	1	1KG diameter 0.8mm
10		Manual	1	Normally provide in english

Simple test for powering on the machine

VEVOR Welding machines will be subjected to strict various tests when they leave the factory to ensure that each welding machine that reaches the user is of high quality, because our machine has to go through tens of thousands of kilometers of long-distance transportation from the factory to the delivery to you. It's inevitable that some uncontrollable factors will cause some internal components of the machine to become loose or even damaged in the process. We recommend that you check the external device as soon as you get the welder, and turn on the power to check to ensure that you receive It is a qualified product.

2.3 SIMPLE TEST FOR THE POWERING MACHINE

1. Please make sure your power supply voltage is AC220V,110V/220V $\pm$ 10%.IT supports 220V or 110V/220V input voltage and if you have a generator power supply, please ensure that the genera tor is not less than 4000w.
2. It is recommended to choose 50A circuit breaker protection when input voltage is AC110V.
3. Please choose the power plug that suits your local electrical law requirements.

Note:

- 1) The digital display shows irregular changes at the beginning, and then returns to the digital display after 3 seconds, which is normal.
- 2) In order to reduce the working temperature of the machine, it is normal for the fan to continue to rotate for a few seconds after the power is turned off.
- 3) During high-strength continuous welding, machine protection may occur. After continuous heat dissipation, the machine will return to normal, which is normal.

Attached table: Self-examination of abnormal conditions without response when turning on the machine:

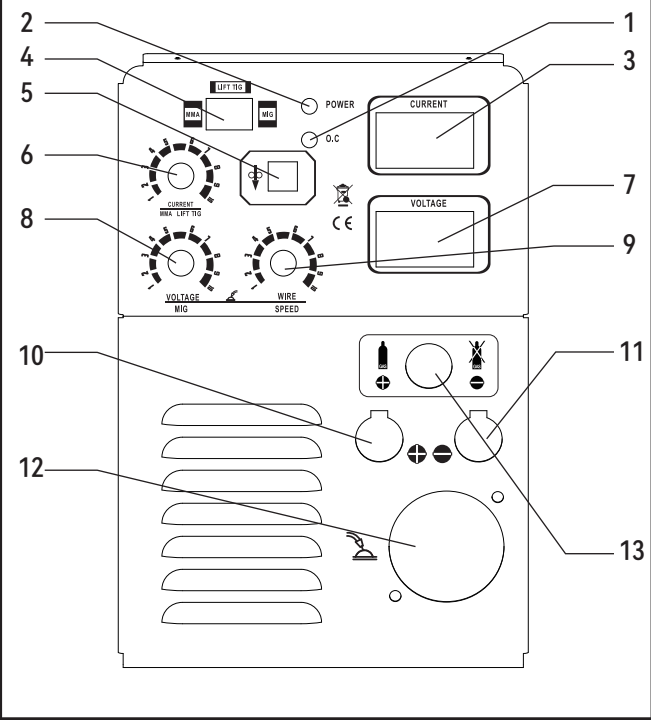
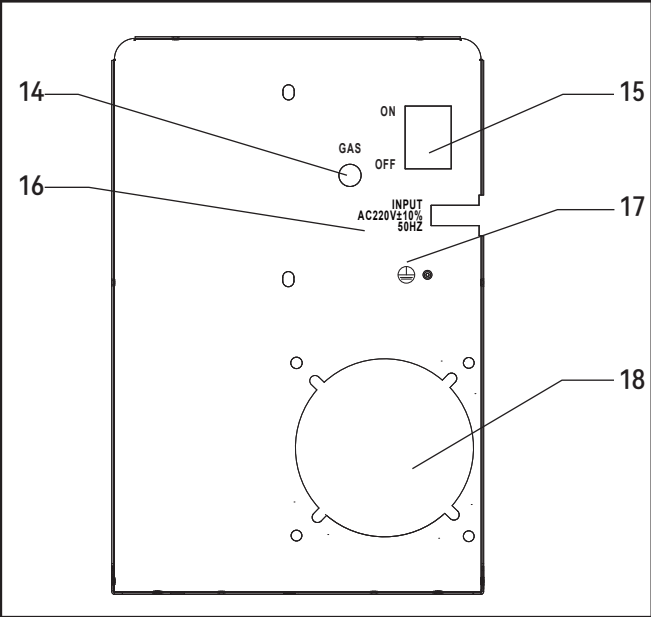
1. The machine's power switch is not turned on.
2. The power input voltage is wrong.
3. The power plug is loose.
4. The internal circuit is loose (due to long-distance transportation, bumps), you need to open the cover and check the internal connection line.

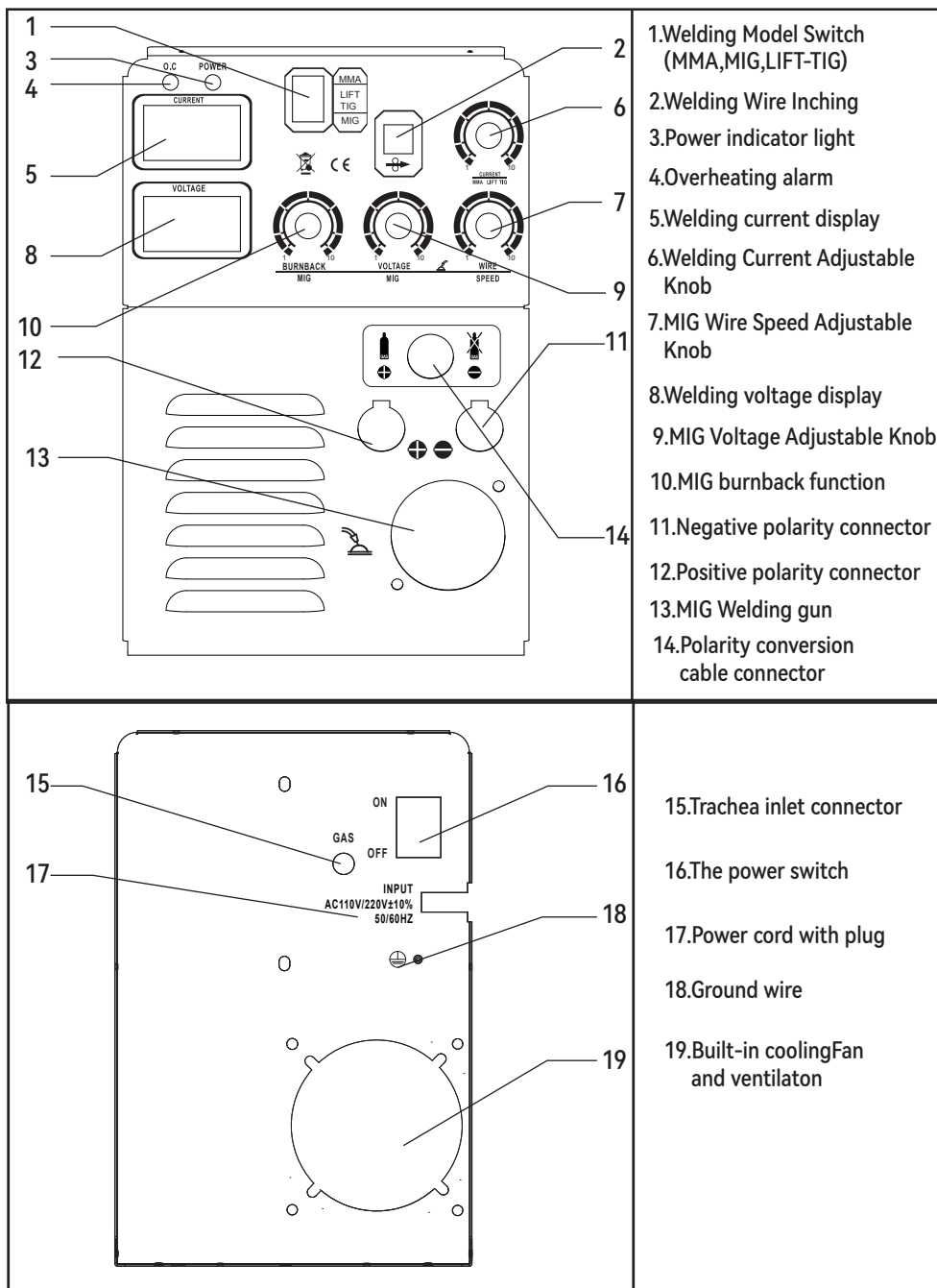
2.4 TECHNICAL SPECIFICATIONS

TYPE	MIG-160	MIG-200D3	MIG-250	MIG-270
Input power voltage (V)	220V±10%	220V±10%	220V±10%	220V±10%
Rated input current (A)	MMA:30±5A MIG :25±5A	MMA:30±5A MIG :25±5A	MMA:30±5A MIG :25±5A	MMA:30±5A MIG :25±5A
Current adjustment range (A)	30-160A	30-200A	30-250A	30-270A
Voltage adjustment range (V)	12-26V(±5V)	12-26V(±5V)	12-26V(±5V)	12-26V(±5V)
No-load voltage (V)	60±5V	60±5V	60±5V	60±5V
Feeding speed adjustment range (m/min)	2.5~14	2.5~14	2.5~14	2.5~14
Flux-cored wire diameter (mm)	0.8/1.0	0.8/1.0	0.8/1.0	0.8/1.0
Rated duty cycle	30%40°C	30%40°C	30%40°C	30%40°C
Power factor	0.7	0.7	0.7	0.7
Protection class	IP21S	IP21S	IP21S	IP21S
Insulation class	F	F	F	F
Size (mm)	460x185x300	460x185x300	460x185x300	460x185x300
Weight (Kg)	7.8	7.8	7.8	7.8

TYPE	MIG-250	MIG-270
Input power voltage (V)	110V/220V±10%	110V/220V±10%
Rated input 110V current (A) 220V	MMA/MIG:50±5A;TIG:35±5A MMA/MIG:30±5A;TIG:25±5A	MMA/MIG:50±5A;TIG:35±5A MMA/MIG:30±5A;TIG:25±5A
Current adjustment range (A)	30-250A	30-270A
Voltage adjustment range (V)	12-26V(±5V)	12-26V(±5V)
No-load voltage (V)	60±5V	60±5V
Feeding speed adjustment range (m/min)	2.5~14	2.5~14
Flux-cored wire diameter (mm)	0.8/1.0	0.8/1.0
Rated duty cycle	30%40°C	30%40°C
Power factor	0.7	0.7
Protection class	IP21S	IP21S
Insulation class	F	F
Size (mm)	440x190x300	440x190x300
Weight (Kg)	7.9	7.9

2.5 FOR CONTROL PANEL

	1.Overheating alarm 2.Power indicator light 3.Welding current display 4.Welding Model Switch (MMA,MIG,LIFT-TIG) 5.Welding Wire Inching 6.Current Adjustable Knob (MMA,MIG,LIFT-TIG) 7.Welding voltage display 8.MIG welding Voltage Adjustable Knob 9.MIG Wire Speed Adjustable Knob 10.Positive polarity connector 11.Negative polarity connector 12.MIG Welding gun 13.Polarity conversion cable connector
	14.Trachea inlet connector 15.The power switch 16.Power cord with plug 17.Ground wire 18.Built-in coolingFan and ventilaton



3. THE INSTALLATION

3.1 MMA MODE

If you want to repair some broken fences or fix brackets, you can use traditional welding rods for operation. And you can use MMA mode for welding.

1. Select “MMA” MODE.



2. Connect welding holder and ground clamp.



3. To adjust the current, and only the current can be adjusted.



Note:

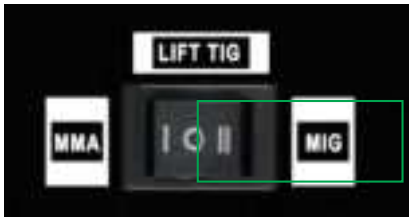
- (1) The welding rod specification supported by VEVOR is below 3.2 mm (1/8 in), usually 2.5 mm(3/32 in) and 3.2 mm(1/8 in). European style generally uses E6013, American style generally uses E7018, and stainless steel generally uses ER308.
- (2) It supports welding of 1-5 mm (1/64-7/32 in) carbon steel and 1-3.2 mm (1/64-1/8 in) stainless steel. Aluminum can not be welded. For carbon steel, please use carbon steel electrode. For stainless steel, please use stainless steel electrode.
- (3) Connect the ground clamp to clean bare metal. The metal without rust, paint or other coatings can ensure good electrical conductivity.
- (4) The ideal distance between the welding rods and the welding object is 1-2 mm (1/64-5/65 in). It ensures the continuous and stable contact between the welding rod and the work-piece. The welding rod should not be too high or pressed too low to avoid arc breaking and adhesion.
- (5) It is normal for novices to have adhesion during the welding process, and you can try to friction arc to avoid adhesion.

Possible problems

- 1) There is no arc, check the ground wire to connect the workpiece to ensure that there is no rust, paint or other coatings on the workpiece.
- 2) There is no arc, check the direct distance between the welding rod and the welding object, the ideal distance is 1-2 mm; check whether the welding object has rust or oil stains, it is recommended to polish with sandpaper or a grinder.
- 3) When welding, the spatter is very big, and it feels very difficult to weld. Please try to change the polarity connection of the ground wire clamp and the welding clamp with the machine.
- 4) During the welding process, if the time exceeds 3 minutes, overcurrent protection may occur. You need to stop working for a few minutes, let the machine cool down for a period of time, and automatically recover. If the air cools for more than 10 minutes, and the machine will automatically recover, please shut down and restart the machine.
- 5) If you have any problems that cannot be solved, please contact us.

3.2 MIG MODE

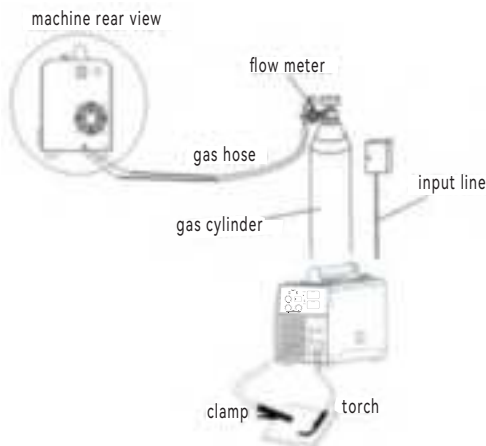
1. Select “MIG” MODE.



2.Installment when use gas welding (solid wire):

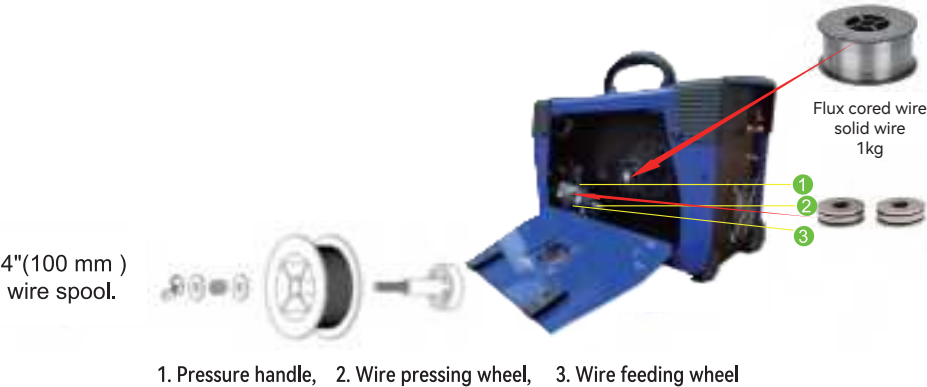
- 1) Connect the gas bottle with co2 regulator flow meter and the Input Gas Connector behind the machine via gas hose.
- 2) Insert the cable connector of earth cable into the socket in the front panel.
- 3) Set the welding wire spool on the wheel axis, the wheel hole should be matched with the wheel fixer.
- 4) Choose wire slot according to wire size
- 5) Loosen the screw of wire-pressing wheel, put the wire into slot via wire-lead tube, and tune the wire distorts and affects wire sending wire is usually set to the fixed hole on the wheel side. To prevent the bent wire from getting stuck, please cut off this part of the wire.
- 6) The MIG torch has been setted inside of the machine and you just need put the wire into the Wire-pressing wheel to fix wire from gliding, but pressure should be suitable in case the
- 7) Wire roller should tum clockwise rotation to let out wire, to prevent wire from gliding; the the torch by hand.

3.Connect welding gun and ground clamp.



4. Install wire spool.

0.030"(0.8 mm)/0.040"(1.0 mm) diameter, 4"(100mm 1kg) wire spool.



5. Set drive roll.

Face the side marked 0.030" away from the machine.

REMARKS: 1. There are two grooves on one wire feed wheel, one side is 0.030" (0.8 mm) and the other side is 0.040" (1.0 mm) to match the corresponding wire diameter.



2. Gear wire feed wheel is suitable for flux-cored welding wire. Our standard configuration has 1 piece of 1kg flux-cored welding wire, which can be directly installed and used.

6. Feed wire and set pressure.



7. Connect to Input Power.

Please refer to the digital sign on the rear panel of the machine for the input voltage, the wrong voltage will damage the machine.

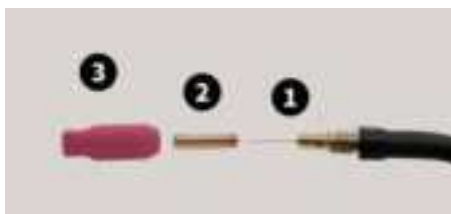


8. Remove consumables and depress trigger until wire comes out. Replace consumables.

Press and hold the torch switch wrench for more than 3 seconds to not weld. This is fast wire feeding. Let the welding wire be quickly delivered to the gun head.



9. Be sure to use porcelain nozzles.



10. Adjust wire feed speed, current and voltage.



1. Choose MIG, MMA, LIFTTIG working mode.
2. The machine has aunified function, just adjust the current and voltage knob, the wire feeding can be adjusted.

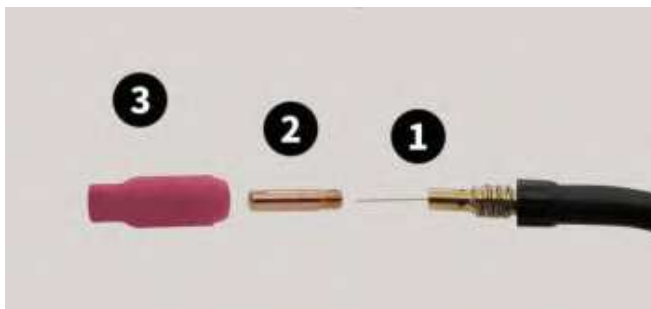
11. With the welding torch 1/4 inch away from the metal, press the trigger completely to initiate the arc.

12. To replace the welding wire.

Use the cutting pliers to cut off the front section of the contact tip that is more than the welding wire, loosen the wire feed mechanism pinch wheel, rotate the welding wire reel clockwise, turn the welding wire back to the wire feed reel, pay attention to pinch the welding wire with your right hand to avoid the wire bounce.



13. Wearing paets of welding gun.



Note: 1. Gas diffuser, 2. Conductive nozzle, 3. Be sure to use porcelain nozzles.

Note:

- 1) Please strictly follow the picture instructions to connect, otherwise it will not be possible to solder.
- 2) The flux-cored welding wire supports 0.8mm, 1.0mm in diameter.
- 3) The machine can install 1kg(2.2lb) welding wire reels.
- 4) The machine is equipped with a 1kg(2.2lb) flux cored wire, which can be directly installed and used.
- 5) Support welding material, carbon steel, aluminum and stainless steel cannot be welded.
- 6) The diameter of the welding wire, the groove of the wire feed wheel and the aperture of the contact tip must be matched.
- 7) The pressure roller of the wire feeding structure should not be too tight or too loose, which will cause the wire feeding to be unstable. 8) The installation of the wire feed reel should not be too loose or too tight, which will cause the loose of the wire and the slow feeding speed.

Possible problems

- 1) There is no response when turning on the power, please check the plug connection.
- 2) There is no response when turning on the power, please open the cover and check whether the internal connecting wires are loose.
- 3) The wire feeding is unstable. Please check the wire feeding reel and the wire feeding pressure roller, and the welding gun should not be wound. Pay attention that the diameter of the welding wire matches the wire feeding wheel groove and contact tip.
- 4) No wire feeding, please confirm that the working mode is MIG state, please confirm that the welding gun is connected well, press the gun switch or no wire feeding, please contact us.
- 5) During the welding process, if the time exceeds 3 minutes, over-current protection may occur. You need to stop working for a few minutes, let the machine cool for a period of time, and automatically recover. If the air cools for more than 10 minutes, the machine does not automatically recover, please shut down and restart. 6) If you have any questions, please contact us.

3.3 LIFT TIG MODE

VEVOR MIG for thin plates with higher welding process requirements or welding with higher process requirements, especially for stainless steel welding, you can use the LIFT TIG mode, which requires the use of pure argon.

1. Select “Lift TIG” MODE.

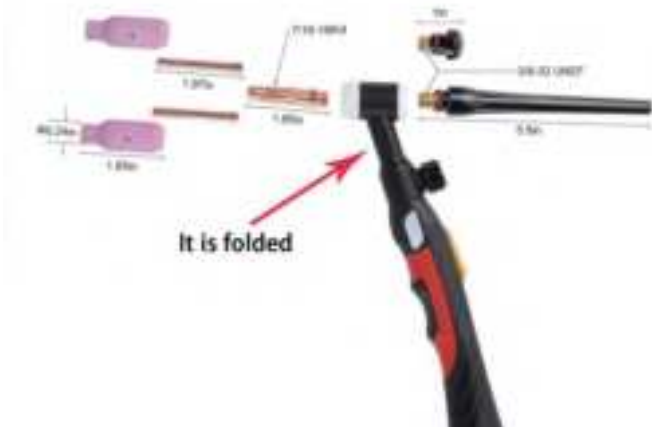


2. Adjust the current, only the current can be adjusted.



3. WP17V Structure of welding torch

Note: Standard accessories package kit not included this torch.



Remark: 1. Ceramic nozzle 2. Tungsten collet 3. Tungsten collet body 4. Short back cap 5. Long back cap.
Please keep the above wearing parts in stock.

Note:

- 1) Please connect according to the picture, otherwise it cannot be welded.
- 2) This machine is not a professional high-frequency arc starting argon arc welding machine, it is only a LIFT TIG contact arc starting or friction starting.
- 3) Need to use TIG, wp17v torch, this torch is not included, you need to buy it yourself.
- 4) Support welding material, carbon steel, stainless steel, alloy steel, aluminum can not be welded.
- 5) This welding mode requires the use of tungsten needles, which need to be purchased separately, and the size of the tungsten needle must match the collet and collet body of the welding gun, otherwise it cannot be installed.
- 6) In this mode, argon welding must be used.

possible problems

- 1) There is no response when starting up, please check the plug connection.
- 2) There is no response when booting up, please open the cover and check whether the internal connection wires are loose.
- 3) During the welding process, if the time exceeds 3 minutes, over-current protection may occur. You need to stop working for a few minutes, let the machine cool for a period of time, and automatically recover. If the air cools for more than 10 minutes, the machine does not automatically recover, please shut down and restart.
- 4) If you have any questions, please contact us.
- 5) Lift tig is different from professional high-frequency tig. Lift tig needs to be welded after contact with arcing. High-frequency tig does not require contact with arcing. Lift tig is not suitable for spot welding.

4. TROUBLESHOOTING

Observe all Safety Guidelines detailed throughout this manual

PROBLEMS (SYMPTOMS)	POSSIBLE CAUSE
OUTPUT PROBLEMS	
Major physical or electrical damage is evident.	“Do not Plug in machine or turn it on”. Contact your local Authorized Field Service Facility.
No wire feed, weld output or gas flow when gun trigger is pulled. Fan does NOT operate.	1. Make sure correct voltage is applied to the machine.
	2. Make certain that power switch is in the ON position.
	3. Make sure circuit breaker is reset.
No wire feed, weld output or gas flow when gun trigger is pulled. Fan operates normally.	1. The thermostat may be tripped due to overheating. Let machine cool. Weld at lower duty cycle.
	2. Check for obstructions in air flow. Check Gun Trigger connections. See Installation section.
	3. Gun trigger may be faulty.
FEEDING PROBLEMS	
No wire feed when gun trigger is pulled. Fan runs, gas flows and machine has correct open circuit voltage – weld output.	1. If the wire drive motor is running make sure that the correct drive rolls are installed in the machine.
	2. Check for clogged cable liner or contact tip.
	3. Check for proper size cable liner and contact tip.
	4. Check if the spool gun switch, located in the wire drive compartment, is set to the desired location.



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Importer: WAITCHX

Address: 250 bis boulevard Saint-Germain 75007 Paris

Manufacturer: Zhongshan Tensun Welding Equipment Co.,Ltd

Add: 2nd Floor, Building D2, Tianzhou Zhigu Innovation Park, No.66 Hesui, Industrial Avenue, Dongfeng Town, Zhongshan City, Guangdong, China.

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