

THANKS FOR PURCHASING OUR PRODUCT

# MIX183

INVERTER  
DC TIG/MMA/CUT  
3 IN 1 MACHINE

## ASSEMBLY AND OPERATING INSTRUCTIONS

**BE SUITABLE FOR AC220/230/240V**

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# SAFETY PRECAUTIONS

**Follow these precautions carefully. Improper use of any welder can result in injury or death.**

1. ONLY CONNECT WELDER TO A POWER SOURCE FOR WHICH IT WAS DESIGNED. The specification plate on the welder lists this information. When welding outdoors only use an extension cord intended for such use.
2. ONLY OPERATE WELDER IN DRY LOCATIONS and on cement or masonry floor. Keep area clean and uncluttered.
3. KEEP ALL COMBUSTIBLES AWAY FROM WORK SITE.
4. DO NOT WEAR CLOTHING THAT HAS BEEN CONTAMINATED with grease or oil.
5. KEEP CABLES DRY AND FREE FROM OIL AND GREASE and never coil around shoulders.
6. SECURE WORK WITH CLAMPS or other means; don't over reach when working.
7. NEVER STRIKE AN ARC ON A COMPRESSED GAS CYLINDER
8. DON'T ALLOW THE INSULATED PORTION OF THE ELECTRODE HOLDER TO TOUCH THE WELDING GROUND WHILE CURRENT IS FLOWING.
9. SHUT OFF POWER AND UNPLUG MACHINE WHEN REPAIRING OR ADJUSTING. Inspect before every use. Only use identical replacement parts.
10. FOLLOW ALL MANUFACTURER'S RULES on operating switches and making adjustments.
11. ALWAYS WEAR PROTECTIVE CLOTHING when welding. This includes: long sleeved shirt(leather sleeves), protective apron without pockets, long protective pants and boots. When handling hot materials, wear asbestos gloves.
12. ALWAYS WEAR A WELDER'S HELMET WITH PROTECTIVE EYE PIECE when welding. Arcs may cause blindness. Wear a protective cap underneath the helmet.
13. WHEN WELDING OVERHEAD, BEWARE OF HOT METAL DROPPINGS. Always protect the head, hand, feet and body.
14. KEEP A FIRE EXTINGUISHER CLOSE BY AT ALL TIMES.
15. DO NOT EXCEED THE DUTY CYCLE OF THE MACHINE. The rated cycle of a welding machine is the percentage of a ten minute period that the machine can operate safely at a given output setting.
16. KEEP ALL CHILDREN AWAY FROM WORK AREA. When storing equipment, make sure it is out of reach of children.
17. GUARD AGAINST ELECTRIC SHOCK. DO not work when tired. Do not let body come in contact with grounded surfaces.

Model	MIX183
Power Supply Voltage	AC 220/230/240V 50/60Hz
No-load Voltage	60-80V
Rated Output Current	160A
Rated Duty Cycle	60%
Current. Adjusting Range	10-160A(TIG) 10-150A(MMA) 10-40A(CUT)
TIG Arc starting mode	high frequency arc striking
Post Flow Time	1S~25S
Mass	13kg
Protection Class of enclosure	IP21S
outline Dimensions (mm <sup>3</sup> )	425 × 195 × 310

#### 4. DESCRIPTION OF THE ERECTION

- a. Before welding , the operator should read the operation instructions and uses the welder correctly according to the process specification.
- b. Checking the welder appearance for deformation and damage.
- c. For the safety of the equipment and the persons, the customer must correctly make grounding or protecting according to the power supply system: using 4 mm<sup>2</sup> lead to connect the protection grounding of the welder.
- d. Welding operation should be carried out in dry and good ventilating area. The surrounding objects should be not less than 0.5m away from the welder.
- e. Checking the welder output connector for tightness.
- f. The welder can not be moved or the cover can not be opened during the power is on and welding operation is carried out.
- g. The welder should be cared,used and managed by specialized person.
- h. Confirming that the power source is 220/230/240V

**It can not be connected with 380V power absolutely.**

#### 5. SKETCH OF THE PANEL FUNCTION

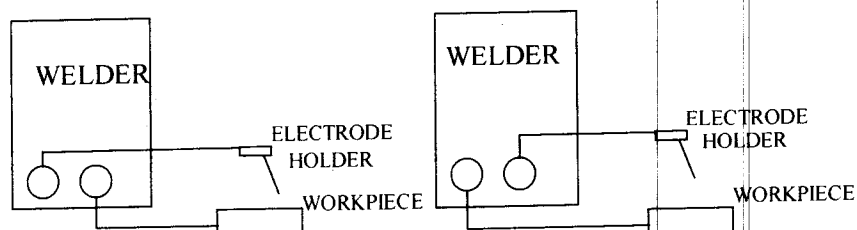
- (2) Connecting gas inlet pipe of the welding torch to argon outlet "11" of the welder.
- (3) Connecting connector (KJO-10) of the welding torch to output of negative pole(-)"14" OR "11", connecting the workpiece to be welded to output (+)"13" of the welder.
- (4) Putting the aerial plug of the welding torch in the argon arc control socket"12".
- (5) Testing gas: get the power of the welder ready and switch on the power "1", open the argon bottle switch and switch on the flow meter, press the torch switch, select suitable argon flow, release the torch switch and automatically shutting off the gas in about 1 - 25 seconds.
- (6) When high frequency arc striking is used, Tungsten electrode end is 2-3 mm away from the welding workpiece. Press the torch switch, arc striking will occur.
- (7) Releasing the switch of the torch, welding current will reduce and arc extinguishes. The welding torch can not be removed as soon as the arc extinguishing. Let the protection gas cooling down for the welding seam not to be oxidized.
- (8) When the welding operation is finished, turn off argon bottle switch and cut off input power of the welder. Don't pull off the power plug when the switch "1" is on.

## 6.2. Hand welding with electrode

- ①. Put switch "8" (MMA/TIG/CUT switch) onto the position "MMA".
- ②. Regulating Current Knob "3" to select right welding current select empiric formula:  $I = 40d$ ,  $d$  is dia. of the electrode.
- ③. Notice positive and negative connection during welding.

A. POSITIVE CONNECTION

B. NEGATIVE CONNECTION





- ④. Connecting input power for the welder, then switch on the power and current indicating light "4" is on.
- ⑤. Pay attention to rated welding current and rated duty cycle of the welder. Overload is not allowed.
- ⑥. After the welding operation is finished, let the welder be ventilated for a few minutes and then cut off the power switch.

## 6.3. Hand welding with electrode

Put switch "8" (MMA/TIG/CUT switch) onto the position "CUT"

dia. of tungsten electrode (mm)	DC positive connecting			DC negative connecting
	pure tungsten	thorium tungsten	cerium tungsten	pure tungsten
1.0	20 - 60	15 - 80	20 - 80	
1.6	40 - 100	70 - 150	50 - 160	10 - 30
2.0	60 - 150	100 - 200	100 - 200	10 - 30

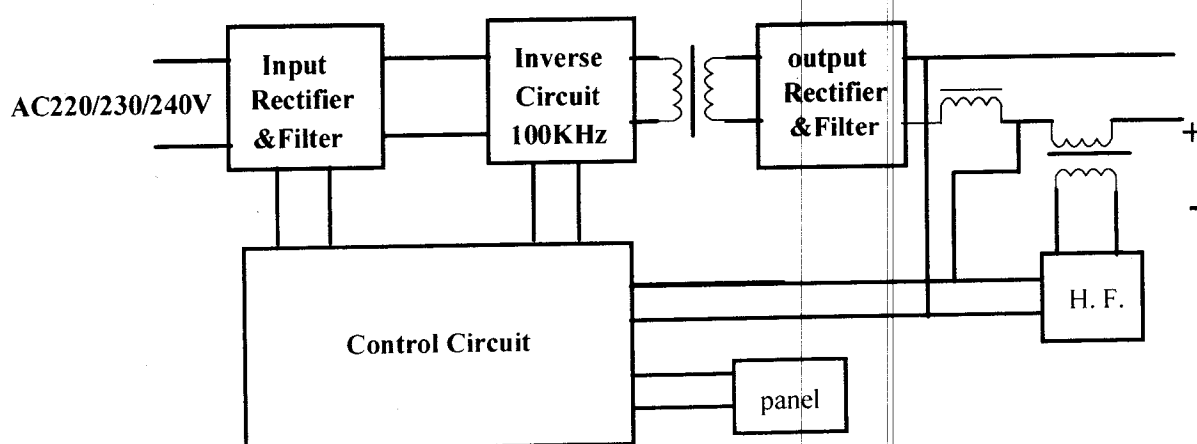
### 7.2 Relation between end form of tungsten electrode and arc stability

form	variety	current	application range	electrical arc
	cerium or thorium tungsten electrode	DC positive	narrow gap welding and sheet welding	stable
	tungsten cerium or thorium electrode	DC positive	dia. <1mm tungsten electrode continuous welding	good

### 7.3 hand argon tungsten electrode welding specification for stainless steel

power polarity	thickness of sheet (mm)	curling butt connection		butt connection and filling welding wire		dia. of welding wire (mm)
		welding current(A)	Argon flow (L/min)	welding current	argon flow (L/min)	
DC positive connection	0.5	10 - 30	4	15 - 35	4	1.0
	0.8	15 - 40	4	35 - 40	4	1.0
	1.0	35 - 60	4	40 - 70	4	1.6
	1.5	45 - 80	4 - 5	50 - 85	4 - 5	1.6
	2.0	75 - 120	5 - 6	80 - 130	5 - 6	2.0
	3.0	110 - 140	6 - 7	120 - 150	6 - 7	2.0

## 9. SYSTEMATIC BLOCK DIAGRAM



**11.ACCESSORIES:SEE PACKING LIST,PLEASE****PACKING LIST**

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MIX183 TIG/MMA/CUT 3 IN 1 MACHINE	1	PACKING 1
Ground pliers	1	PACKING 1
TIG welding torch	1	PACKING 1
Welding clamp	1	optional accessory
gas inlet pipe	1	PACKING 1
Air pressure Regulator	1	PACKING 1
Cutting torch	1	PACKING 1
Electrode	5	PACKING 1
Tip 1.0	5	PACKING 1
Ceramic shield	3	PACKING 1
Operation instructions	1	PACKING 1
Certificate of quality	1	PACKING 1

No.

**28460266**

Name of product:TIG/MMA/CUT 3 IN 1 MACHINE

Type of product: MIX183Packing No: 28460266

Test results of this welder fulfils \_\_\_\_\_

\_\_\_\_\_ technical requirements and its release  
from the works is granted.

Inspector \_\_\_\_\_

Date

**6 12 2010****INSP. 1**