

THANKS FOR PURCHASING OUR PRODUCT



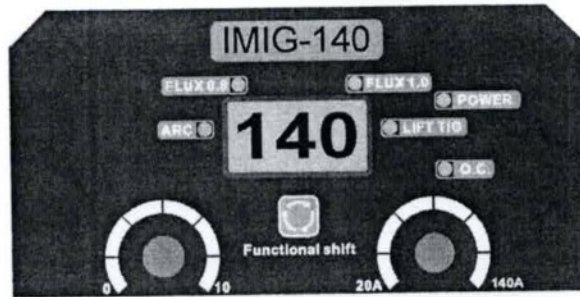
IMIG-140

Inverter ARC/FLUX MIG/LIFT TIG Semi-auto ARC Welding Machine

Operation Manual

(Read the manual carefully before installation ,operation and maintenance)

(BE SUITABLE FOR 1x230V)



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 overreach 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 part.
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.

1. Main characteristic and suitable range

This kind of welding power Model IMIG-140 is taken foreign advanced technology to develop and manufacture the new generation inverter integrated controlling Semi-auto Arc welding machine. It makes use of the import key parts such as Siemens IGBT module of Germany, alloy magnetic core and the resume diode module of America. It has the perfect performance of high quality ,good reliability, quick speed of welding current, steady welding process, low splash and good welding form . Anyway, It becomes the welding very easy.

1.1 Structure of the IMIG-140 semi-auto Arc welding machine

a. The name of the model



b. Composing of the product

This product is composed by three parts as following

- ★ Power source(IMIG-140)
- ★ welding gun

1.2 Suitable range of the IMIG-140

- ★ Suitable material: low-carbon steel, stainless steel
- ★ Thickness of the material: low-carbon steel and stainless: more than 0.5mm
- ★ Suitable wire : ϕ 0.8, 1.0 flux cord wire.

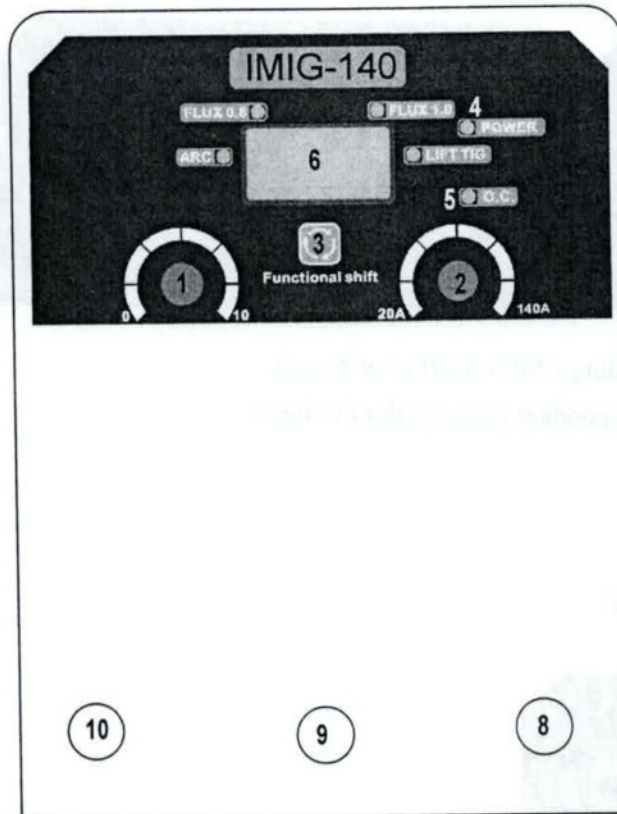
1.3 Characteristic of IMIG-140

- ★ Wide output current 30-140A: ϕ 0.8 -----30-100A
 ϕ 1.0 -----40-140A
- ★ Steady welding process, low splash, easy control, good welding form.
- ★ High efficiency: 140A/21V the duty cycle is 60%
115A/19.8V the duty cycle is 100%

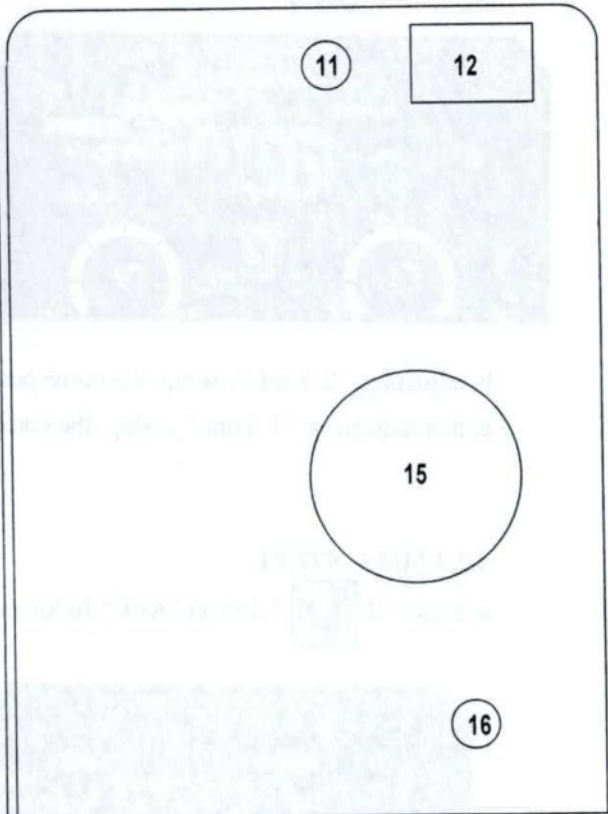
4. Indicating and warning on the IMIG-140 control panel

4.1 Indicating and adjusting

FRONT PANEL



BACK PANEL



4.1.1 MIG Voltage regulator

4.1.2 LEFT KNOB: wire speed / amps regulator

4.1.3 Functional shift switch

ARC/FLUX 0.8/FLUX 1.0/LIFT TIG switch

4.1.4 Power indicating

If the indicating light is on the control circuit connects the power already.

4.1.5 over heat or over current indicating


4.1.6 indication of welding current

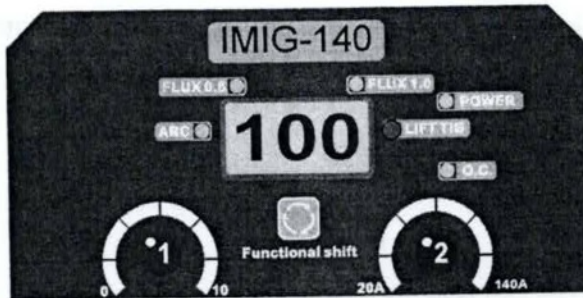
4.1.8 MIG torch connector 4.1.9 output "-" 4.1.10 output "+"

4.1.11 incoming line of the power 4.1.12 power switch

4.1.14 nameplate 4.1.15 FAN 4.1.16 grounding column

4.2.3 TIG STEEL

a, Press "2" , Select "LIFT TIG", following:



b, then adjusting "2 knob", setup the corresponding value(AMP)

5.Safe and installation caution

Read the safe caution before installation and operation .It come down to the high voltage electricity,electric Arc and high temperature splash.So keep the safe regulation ,operate the machine properly,avoid the danger of electricity and high temperature arc.

- ★ Check if any damage or out looking of the welder.
- ★ Confirm the capacity:more than 40A.
- ★ Power source is grounded,diagram 6
- ★ Prohibit the combustible goods in the welding locale.
- ★ There is fire proof measure in the welding locale with favorable ventilated condition.
- ★ There is smoke discharge system if the welding is operated inside the house in order to keep the safety of workers.
- ★The welding operator must be professional workers.
- ★The operator must be fitted with safe accessories .Such as safe shoes,gloves,cover, welding make and welding dress etc.

6. Explanation of installation

6.1 FLUE MIG welding

- ★ Check the products according to the packing list when open the package.
- ★Grounded protection.Attached the diagram 6

The power source is 230Vac/(50~60Hz) .The yellow/green double cable is grounding

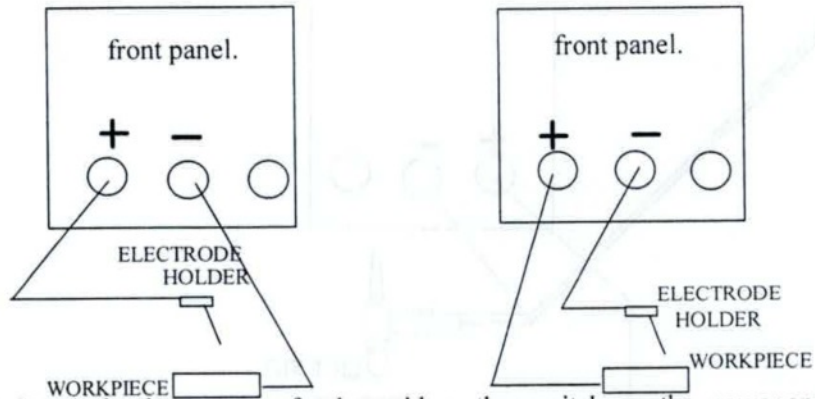
6.2 MMA welding

- ★ Select the desired welding mode
- ★ Selecting empiric formula: $I=40*d$, d is dia. of the electrode.

Notice positive and negative connection during welding.

A negative connection

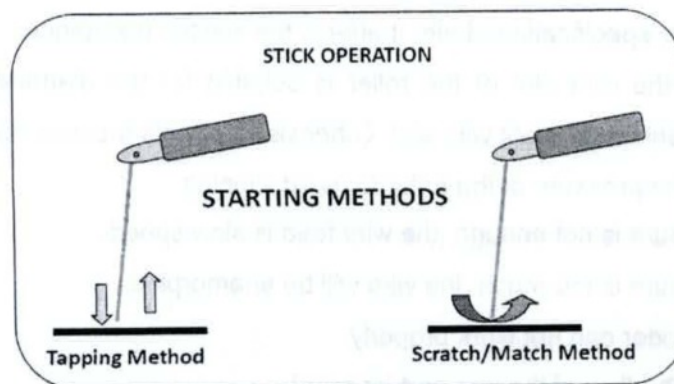
B positive connection



- ★ Connecting input power for the welder, then switch on the power and display panel is on .
- ★ Pay attention to rated welding current and rated duty cycle of the welder. Overload is not allowed.

RECOMMENDED ELECTRODE AMPERAGE RANGES

SMAW Process				
ELECTRODE TYPE	POLARITY	Welding Amp Range for Stick Electrode Size		
		2.5mm(3/32")	3.2mm(1/8")	
E6010	DC+	40 - 70	75 - 130	
E6011	DC+	40 - 80	55 - 110	
E6013	DC+	70 - 95	100 - 135	
E7014	DC-	75 - 95	100 - 145	
E7018	DC+	85 - 110	110 - 160	
Stainless(E308/E309)	DC+	40 - 80	75 - 110	



We suggest the gas flow to be "L" more than $10D$ (D -diameter of wire).If the selection is not proper,it also affects the welding quality.When using the CO_2 gas,please confirm if the heating power works properly or not .

★ Straight the hose of welding gun as much as possible .The bending radius can not be less than 160mm.Otherwise it affects the wire feeder.

7.1 working process

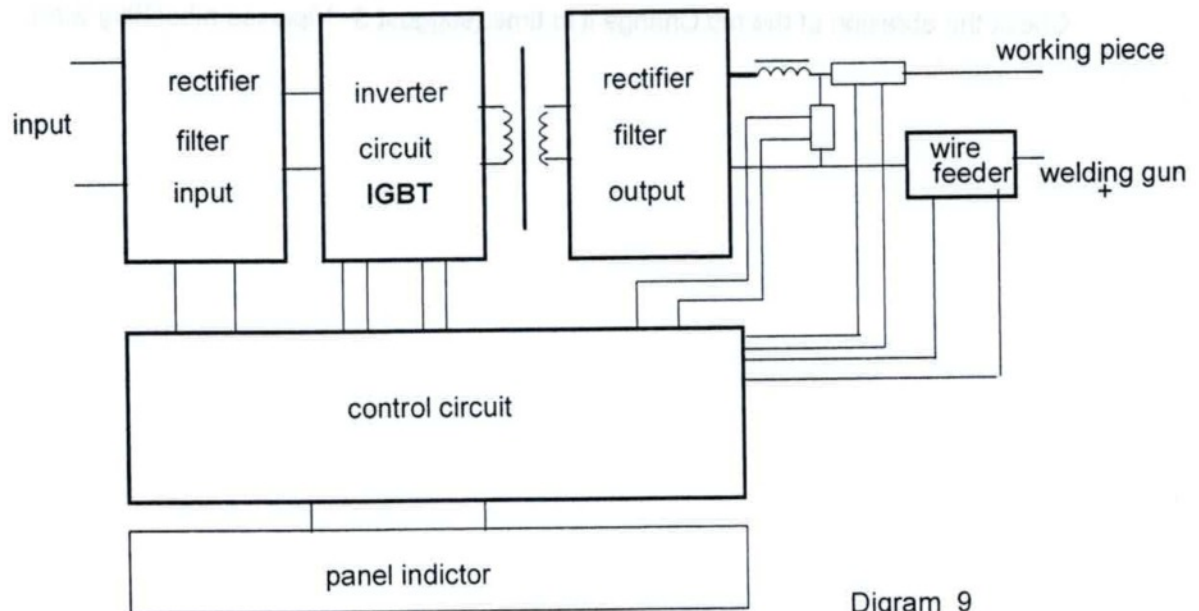
press the switch of the gun ,the normal welding begins.Relax the switch,the arc stops.

7.2 Rip into the wire

Select the specification of the wire ,materials according to the craft requirements.Firm the bolt and press the button on the front panel.The speed of ripping wire can be controlled by the welding current knob.Unload the nib if necessary and load it again after the wire is out.

8. working elements

Diagram for the IMIG-140 working elements.Digram9



Digram 9

Input AC 230V,rectifier and filter it into 300VDC.

Control the IGBT by PWM+PFM,inverter the 300VDC to 55KHZ AC.

High frequency transformer pass the power by insulation and voltage reducing with high efficiency.

Output the second rectifier and the second filter.Output the required welding current and voltage.

10. Troubles and Remedy

Troubles and remedy and remedy are as the form 10 as following

Phenomena	Solution
1. The overheating LED flashes.	<ol style="list-style-type: none"> 1. Check the working current and the working time, and use the machine according to the parameters in this manual. 2. Check the running situation of the fan. If the fan doesn't work, check if there is power supply 230V: If the power supply is ok, check the fan; if the power supply is abnormal, check the power cable. 3 Replace the thermal switch if it is damaged.
2. The power LED is off, and there is no current output.	<ol style="list-style-type: none"> 1. Check if the fan works If not, the power cable is not in good connection 2. if the fan works ,control PCB board inside the machine fails.
3 No response when pressing welding torch switch; the protection LED is off.	<ol style="list-style-type: none"> 1. Check if the welding torch switch is in good connection. 2. Check the connection condition of the welding torch and the Euro socket and check the control jack of the Euro socket. 3. Control PCB board inside the machine fails.
4 Press the welding torch switch to input gas, but no current output, and the protection LED is off.	<ol style="list-style-type: none"> 1. Check if the power cable connecting the workpiece is in good connection. 2. Check if the position where the fast socket inserting the fast plug is correct. 3. Check if the wire feeder is in good connection. 4. Check if the welding torch is damaged. 5. Control PCB board inside the machine fails.
5. Press the welding torch switch to input gas, there is current output, but the wire feeder doesn't work	<ol style="list-style-type: none"> 1. Check if the wire feeder is blocked or damaged. 2. Check if the contact tip of the welding torch is damaged or blocked 3. Control PCB board inside the machine fails
6 Press the welding torch switch welding can be carried out, but the voltage cannot be adjusted	<ol style="list-style-type: none"> 1. Check if the voltage feedback cable inside the machine is ok 2. Control PCB board inside the machine fails
7. Welding current is unstable.	<ol style="list-style-type: none"> 1. Check the pressure of the wire feeder pole is appropriate 2. Check if the wire feed wheel matches the welding wire. 3. Check if the contact tip is badly abraded. If it is, replace it and tighten it. 4. Check if the welding torch cable is too winding. 6. Check if the metal connection part of the fast plug is loose.

NOTE: This machine is in continuous improvement, so other parts may be different except the function and operation. Your understanding would be greatly appreciated.

			
WARNING	<ul style="list-style-type: none"> Do not touch electrically live parts or electrode with skin or wet clothing. Insulate yourself from work and ground. 	<ul style="list-style-type: none"> Keep flammable materials away. 	<ul style="list-style-type: none"> Wear eye, ear and body protection.
Spanish AVISO DE PRECAUCION	<ul style="list-style-type: none"> No toque las partes o los electrodos bajo carga con la piel o ropa mojada. Aíselese del trabajo y de la tierra. 	<ul style="list-style-type: none"> Mantenga el material combustible fuera del área de trabajo. 	<ul style="list-style-type: none"> Protéjase los ojos, los oídos y el cuerpo.
French ATTENTION	<ul style="list-style-type: none"> Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension. Isolez-vous du travail et de la terre. 	<ul style="list-style-type: none"> Gardez à l'écart de tout matériel inflammable. 	<ul style="list-style-type: none"> Protégez vos yeux, vos oreilles et votre corps.
German WARNUNG	<ul style="list-style-type: none"> Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung! Isolieren Sie sich von den Elektroden und dem Erdboden! 	<ul style="list-style-type: none"> Entfernen Sie brennbares Material! 	<ul style="list-style-type: none"> Tragen Sie Augen-, Ohren- und Körperschutz!
Portuguese ATENÇÃO	<ul style="list-style-type: none"> Não toque partes elétricas e electrodos com a pele ou roupa molhada. Isolare-se da peça e terra. 	<ul style="list-style-type: none"> Mantenha inflamáveis bem guardados. 	<ul style="list-style-type: none"> Use proteção para a vista, ouvido e corpo.
Japanese 注意事項	<ul style="list-style-type: none"> 通電中の電気部品、又は溶材にヒフやぬれた布で触れないこと。 竣工物やアースから身体が絶縁されている様にして下さい。 	<ul style="list-style-type: none"> 燃えやすいものの側での溶接作業は絶対にしてはなりません。 	<ul style="list-style-type: none"> 目、耳及び身体に保護具をして下さい。
Chinese 警告	<ul style="list-style-type: none"> 皮肤或湿衣物切勿接觸帶電部件及鐳條。 使你自己與地面和工件絕緣。 	<ul style="list-style-type: none"> 把一切易燃物品移離工作場所。 	<ul style="list-style-type: none"> 佩戴眼、耳及身體勞動保護用具。
Korean 위험	<ul style="list-style-type: none"> 전도체나 울점봉을 젖은 황집 또는 피부로 절대 접촉치 마십시오. 모재와 접지를 접촉치 마십시오. 	<ul style="list-style-type: none"> 인화성 물질을 접근 시키지 마십시오. 	<ul style="list-style-type: none"> 눈, 귀와 몸에 보호장구를 착용하십시오.
Arabic تحذير	<ul style="list-style-type: none"> لا تلمس الأجزاء التي يسري فيها التيار الكهربائي أو الإلكترود بجلد الجسم أو بالملابس المبللة بالماء. ضع عازلا على جسمك خلال العمل. 	<ul style="list-style-type: none"> ضع المواد القابلة للاشتعال في مكان بعيد. 	<ul style="list-style-type: none"> ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.

13.ACCESSORIES:SEE PACKING LIST,PLEASE

PACKING LIST



IMIG-140 Welding machine	1		PACKING I
cable+Ground pliers	1		PACKING I
MIG welding torch	1	optional accessory	PACKING I
LIFT torch	1	optional accessory	
Welding holder	1		PACKING I
Operation instructions	1		PACKING I
Certificate of quality	1		PACKING I

No. _____

Certificate of quality

Name of product:MIG/MAG /MMA Semi-auto ARC Welding Machine

Type of product : IMIG-140

Packing No: _____

Test results of this welder fulfils _____

_____ **technical requirements and its release**
from the works is granted.

Inspector INSF.1 **Date** 02 21 2024

