SIP Industrial Products Limited
Gelders Hall Road
Shepshed
Loughborough
Leicestershire
LE12 9NH
United Kingdom

SIP Weldmate Pro 80A Inverter Plasma Cutter

SIP Code 05689

For help or advice please contact your distributor, or sip directly on:

Tel.: 01509 500400

Email:

sales@sip-group.com

or

customerservice@sip-group.com

www.sip-group.com

Please read and fully understand the instructions in this manual before operation. Keep this manual safe for future reference.

Images contained in this manual are for illustration and reference purposes and may not match actual product.

INDEX

SAFETY SYMBOLS USED THROUGHOUT THIS MANUAL

Danger / Caution: Indicates risk of personal injury and / or the possibility of damage

Warning: Risk of electrical injury or damage

Note: Supplementary Information

Important: Please read the following instructions carefully, failure to do so could lead to injury and/or damage to the product.

SAFETY INSTRUCTIONS

When using your inverter plasma, basic safety precautions should always be followed to reduce the risk of personal injury and / or damage to the product.
Read all of these instructions before operating the product and save this user manual for future reference.
The product should not be modified or used for any application other than that for which it was designed.
This product was designed to supply electric current for Plasma Cutting.
If you are unsure of its relative applications do not hesitate to contact us and we will be more than happy to advise you.
Before each use of the product always check no parts are broken and that no parts are missing.
Always operate the product safely and correctly.
KNOW YOUR PLASMA CUTTER: Read and understand the owner's manual and labels affixed to the product. Learn its applications and limitations, as well as the potential hazards specific to it.
KEEP WORK AREA CLEAN AND WELL LIT: Cluttered work benches and dark areas

invite accidents. Floors must not be slippery due to oil, water or sawdust etc.
DO NOT USE THE PLASMA IN DANGEROUS ENVIRONMENTS: Do not use the product in damp or wet locations, or expose it to rain. Provide adequate space surrounding the work area. Do not use in environments with a potentially explosive atmosphere.
KEEP CHILDREN AND UNTRAINED PERSONNEL AWAY FROM THE WORK AREA: All visitors should be kept at a safe distance from the work area.
STORE THE PRODUCT SAFELY WHEN NOT IN USE: The product should be stored in a dry location and disconnected from the mains supply, and out of the reach of children.
USE SAFETY CLOTHING / EQUIPMENT: Use a CE approved welding mask at all times with the correct shade of filter lens. A fume extractor should be used particularly where there is little or no ventilation.
PROTECT YOURSELF FROM ELECTRIC SHOCK: When working with the plasma, avoid contact with any earthed items (e.g. pipes, radiators, hobs and refrigerators, etc.). It is advisable wherever possible to use an RCD (residual current device) at the mains socket. STAY ALERT: Always watch what you are doing and use common sense. Do not operate the product when you are tired or under the influence of alcohol or drugs.
DISCONNECT THE PRODUCT FROM THE MAINS SUPPLY: When not in use and before servicing.
AVOID UNINTENTIONAL STRIKING: Make sure the switch is in the OFF position before connecting the product to the mains supply.
NEVER LEAVE THE PRODUCT CONNECTED WHILST UNATTENDED: Turn the product off and disconnect it from the mains supply between jobs. Do not leave the product connected to the mains supply if no more cutting is to be done.
DO NOT ABUSE THE MAINS LEAD: Never attempt to move the product by the mains lead or pull it to remove the plug from the mains socket. Keep the mains lead away from heat, oil and sharp edges. If the mains lead is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid un- wanted hazards. All extension cables must be checked at regular intervals and replaced if damaged.
CHECK FOR DAMAGED PARTS: Before every use of the product, any damage found should be carefully checked to determine that it will operate correctly, safely

and perform its intended function. Any damaged, split or missing parts that may affect its operation should be correctly repaired or replaced by an authorised service centre unless otherwise indicated in this instruction manual.

KEEP ALL PANELS IN PLACE: Never operate the product with the panels removed, this is extremely dangerous.

MAINTAIN THE PRODUCT WITH CARE: Keep the earth clamp and Plasma torch consumables clean for the best and safest performance.

USE ONLY RECOMMENDED ACCESSORIES: Consult this user manual, your distributor or SIP directly for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards and will invalidate any warranty you may have.

SECURE THE WORK-PIECE: Always use welding clamps to secure the work piece. This frees up both hands to operate the plasma cutter correctly.

DO NOT OVERREACH: Keep proper footing and balance at all times.

USE THE RIGHT TOOL: Do not use the product to do a job for which it was not designed.

DO NOT OPERATE THE PLASMA IN EXPLOSIVE ATMOSPHERES: Do not use the product in the presence of flammable liquids, gases, dust or other combustible sources. Plasma cutting will create sparks which can ignite the dust or fumes.

DO NOT EXPOSE THE PRODUCT TO RAIN OR USE IT IN WET CONDITIONS: Water entering the product will greatly increase the risk of electric shock and equipment damage.

HAVE YOUR PLASMA REPAIRED BY A QUALIFIED PERSON: The product is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

- Stop operation immediately if you notice anything abnormal.
- Always disconnect the plug from the mains supply before cleaning or servicing etc. Be alert at all times, especially during repetitive, monotonous operations; Don't be lulled into a false sense of security.
- Use of improper accessories may cause damage to the inverter plasma and surrounding area as well as increasing the risk of injury.
- Do not modify the inverter plasma to do tasks other than those intended.

- To avoid injury, the work-piece should never be held with bare hands; The work- piece will become hot during normal cutting operations, and stay hot for a period after the weld is complete.
- Appropriate personal protective equipment must be worn and must be designed to protect against all hazards created. Severe permanent injury can result from using inappropriate or insufficient protective equipment - Eyes in particular are at risk.
- The work should be clamped firmly whilst cutting, If its loose it could result in personal injury or damage to the machine or item that is being welded.
- Do not attempt any repairs to the product unless you are a qualified electrician or competent service engineer.
- Ensure that the machine is connected to the correct supply voltage and protected by a fuse or circuit breaker of the recommend rating.
- Never allow the earth clamp and electrode to come into contact with each other.
- Understand the operating environment; Before each use the operator should assess, understand and where possible reduce the specific risks and dangers associated with the operating environment. Bystanders should also be made aware of any risks associated with the operating environment.
- Electromagnetic fields can interfere with various electrical and electronic devices such as pacemakers; Consult your doctor before using any electric welder or cutting device.
- Keep people with pacemakers away from your work area when cutting. Do not wrap cable around your body while welding.
- If the product is to be used on business premises - ensure that all local and national regulations are followed concerning the use of portable electrical appliances at work.

ELECTRIC SHOCK

- Electric inverter plasmas have the potential to cause a shock that could lead to injury or death. Touching electrically 'hot' parts can cause fatal shocks and severe burns; While plasma cutting, all metal components connected to the product are electrically 'hot'.
- Keep your body and clothing dry. Never work in a damp area without adequate insulation against electrical shock, stay on a dry duck board, or rubber mat when dampness or sweat can not be avoided. Sweat, sea water or moisture between the body and an electrically 'hot' part or grounded metal reduces the body surfaces electrical resistance enabling dangerous and possibly lethal currents to flow through the body.
- Never allow live metal parts to touch bare skin or any wet clothing, be sure welding gloves are dry.
- Before welding, check for continuity; Be sure the earth clamp is connected to the work-piece as close to the welding areas as possible. Grounds connected to building frame work or other remote locations from the welding area reduce efficiency and increase the potential electric shock hazard. Avoid the possibility of the welding current passing through lifting chains, crane cables or other electric paths.
- Frequently inspect leads for wear, splits, cracks and any other damage. Immediately replace those with worn or damaged insulation to avoid a possibly lethal shock from bare leads.

FIRE

- During normal operation, the heat and sparks created during the cutting process have the potential to ignite flammable liquids, gases or other combustible material least 10 metres away and out of the reach of sparks and heat or protect against ignition with suitable and snug fitting, fire resistant covers or shields.
- Walls touching combustibles on opposite sides should not be plasma cut, walls, ceilings and the floor near the work area should be protected by heat

resistant covers or shields.

- Openings (concealed or visible) in floors or walls within 10 metres may expose combustibles to sparks.
- Combustibles adjacent to walls, ceilings, roofs or metal partitions can be ignited by radiant or conducted heat.
- After the work is done, check that the area is free of sparks, glowing embers and flames.
- An empty container that has held combustibles, or that can produce flammable or toxic vapours when heated, must never be plasma cut, unless the container has first been cleaned. Consult HSE INDG214, HSG250 and CS15. HSE document CS15 includes information on cleaning by thorough steam or solvent/ caustic cleaning followed by purging and inserting with nitrogen, carbon dioxide or water filling just below working level.
- A container with unknown contents should be treated as if it contained combustibles (see previous paragraph), Do not depend on sense of smell or sight to determine if it is safe to weld.
- Hollow items must be vented before welding as they can explode.
- Explosive atmosphere; Never weld when the air may contain flammable dust, gas or liquid vapours (such as petrol).

GLARES & BURNS

- The cutting arc produces ultraviolet (UV) and infrared (IR) rays as well as extreme temperatures that can cause injury to your eyes and skin. Do not look at the cutting arc without proper eye protection.
- The electric cutting arc must not be observed with the naked eye. Always use a welding mask; Ensure the welding mask is fitted with the correct shade of filter lens for the welding current level, and covers the entire face from neck to the top of the head.
- Welding gauntlet gloves should be worn to protect the hands from burns, non- synthetic overalls with buttons at the neck and wrist, or similar clothing

should be worn. Greasy overalls should not be worn. Wear suitable protective footwear.

- Always wear correctly rated protective clothing which covers all areas of the body; The operator should not weld with any bare skin showing to reduce the chance of burns etc.
- Avoid oily or greasy clothing, a spark may ignite them.
- Hot metal such as electrode stubs and work-pieces should never be handled without gloves.
- First aid facilities and a qualified first aid person should be available for each shift unless medical facilities are close by for immediate treatment of flash burns to the eyes and skin.
- Flammable hair products should not be used by persons intending to plasma cut . Warn bystanders not to watch the arc and not to expose themselves to the welding arc rays or to hot metal.
- Keep children away whilst welding, they may not be aware that looking at an arc can cause serious eye damage.
- Protect other nearby personnel from arc rays and hot sparks with a suitable non- flammable partition.

VENTILATION

- Ventilation is now regulation and must be adequate to remove the smoke and fumes during welding (see the relevant safety regulation for acceptable levels).
- Toxic gases may be given off when plasma cutting, especially if zinc or cadmium coated materials are involved, plasma cutting should be carried out in a well ventilated area and the operator should always be alert to fume build-up.
- Areas with little or no ventilation should always use a fume extractor.
- Vapours of chlorinated solvents can form the toxic gas phosgene when exposed to UV radiation from an electric arc. All solvents, degreasers and potential sources of these vapours must be removed from the arc area.

- Severe discomfort, illness or death can result from fumes, vapours, heat, oxygen enrichment or depletion that welding (or cutting) may produce. This will be prevented by adequate ventilation or using a fume extractor. NEVER ventilate with oxygen.
- Lead, cadmium, zinc, mercury, beryllium bearing and similar materials when welded may produce harmful concentrations of toxic fumes. Adequate ventilation must be provided for every person in the area. The operator should also wear an air supplied respirator, for beryllium both must be used.
- Metals coated with or containing materials that emit toxic fumes should not be heated unless coating is removed from the work surface. The area should be well ventilated or the operator should wear an air supplied respirator.
- Work in a confined space only while it is being ventilated and if necessary whilst wearing an air supplied respirator.
- Gas leaks in a confined space should be avoided, leaking gas in large quanti-ties can change oxygen concentration dangerously. DO NOT bring gas cylin ders into a confined space.
- Leaving a confined space you must shut off the gas supply at the source to prevent possible accumulation of gases in the space if down stream valves are left open. Check to be sure that the space is safe before re-entering it.
- Vapours from chlorinated solvents can be decomposed by the heat of the arc (or flame) to form phosgene a highly toxic gas and other lung and eye-irritating products. The ultra violet (radiant) energy of the arc can also de compose tri- chloroethylene and perchlorethylene vapours to form phos gene. DO NOT WELD or cut where solvent vapours can be drawn into the welding atmosphere, or where the radiant energy can penetrate to at mospheres containing even minute amounts of trichloroethylene or per

When using the product always ensure the operator as well as those in the area use a welding mask with the correct shade filter lens.

SAFETY INSTRUCTIONS Cont...

Some metals and metal composites have the potential to be highly toxic; always wear a face mask .

CAUTION: The warnings and cautions mentioned in this user manual can not cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be applied.

ELECTRICAL CONNECTION

Note: Always make sure the electrical supply is of the correct voltage and the correct protection is used

Note: If an extension lead is required in order to reach the mains supply; ensure that this too is rated for the correct voltage and fuse rating.

Warning: Never connect phase wires to the earth terminal. Only fit an approved plug and the correct rated fuse. If in doubt consult a qualified electrician.

FITTING & WIRING A PLUG

WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:

You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage.
You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices; A residual current circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a residual current device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician.

Connecting to the power supply:

The 05689 Weldmate Pro 80A inverter plasma cutter is supplied without a plug fitted, it must ***NOT*** be connected to a 230V single phase supply; It requires a 400v 50hz 3 phase supply. Before using the plasma cutter, inspect the mains lead and plug (where applicable) to ensure that neither are damaged. If any damage is visible have the cutter inspected / repaired by a suitably qualified person.
The wires for the plug / connection are coloured in the following way:

The wires for the plug / terminal box are coloured in the following way:

- Yellow / Green Earth
- Brown Phase
- Black Phase
- Grey Phase

Always secure the wires in the terminal carefully and tightly. Secure the outer cable of the mains lead with the cable grip inside the plug.

Warning Read these electrical safety instructions thoroughly before connecting the product to the mains supply.

ELECTRICAL CONNECTION Cont...

Warning: Never connect live or neutral wires to the earth terminal of the plug. Only fit an approved plug with the correct rated fuse. If in doubt consult a qualified electrician.

Note: Always make sure the mains supply is of the correct voltage and amperage and the correct fuse protection is used. In the event of replacing the fuse always replace the fuse with the same value as the original.

Note: If an extension lead is required in order to reach the mains supply; ensure that this too is rated for the correct voltage and fuse rating.

Note: The cross section of the extension lead should be checked so that it is of sufficient size so as to reduce the chances of voltage drops.

GUARANTEE

This item is covered by a 24 month parts and labour warranty covering failure due to manufacturers defects.

Please register your product online at www.sip-group.com, within 28 days to qualify for the full 24 month warranty. Failure to register will result to a limited 12 month warranty period.

This does not cover failure due to misuse or operating the item outside the scope of this manual - any claims deemed to be outside the scope of the warranty may be subject to charges Including, but not limited to parts, labour and carriage costs.

Failure to regularly clean your product will shorten its working life and reduce performance. The warranty does not cover consumable items such as the plasma torch, leads, consumables, tips, electrodes, ceramic shields etc.

Note: Proof of purchase will be required before any warranty can be honoured

TECHNICAL SPECIFICATION

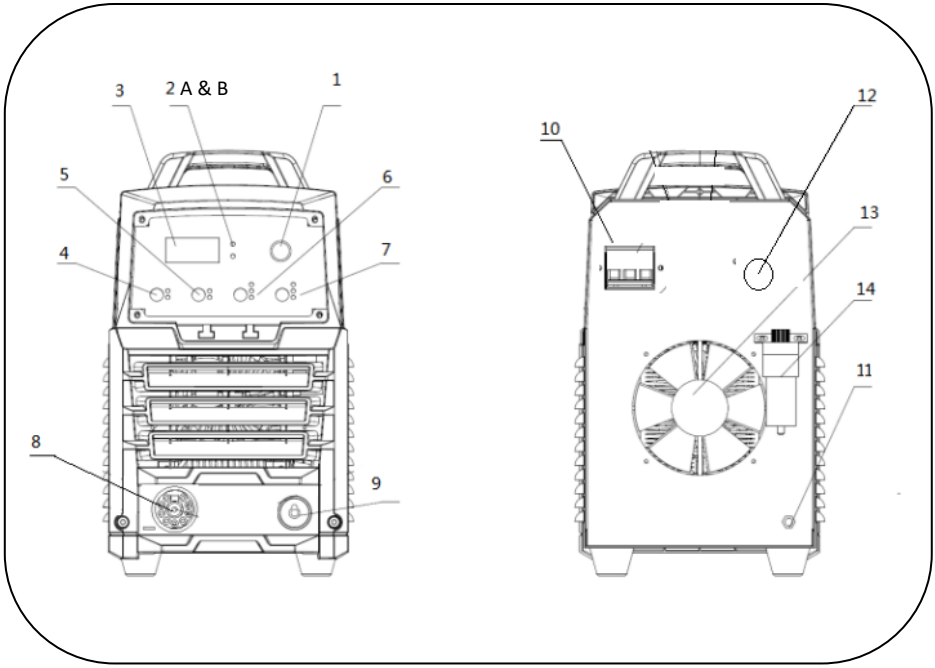
Model	**05689**
Input Voltage	400v 3phase 50/60Hz
Input Current / Power	I_{max} 17.5A : I_{eff} 13.5A
Output Current	30A - 80A
Output Voltage	92V - 112V : 320V DC Open Circuit Volts
Duty Cycle 40°C (10 Minutes)	80A @ 60%
	65A @ 100%
Cutting Thickness - Max	35mm
Cutting Thickness - Quality	20mm
Air Pressure	4 - 6Bar
Protection / Insulation	IP21S / H
Product Dimensions	525L x 225D x 395Hmm
Packaged Dimensions	610L x 330D x 440Hmm
Weight	GW: 21.7kG NW: 19.5kG

CONTENTS & ACCESSORIES

1	P80 Torch x 5mtrs	1	User Manual
1	Earth clamp with lead	1	Air Regulator & Connection Hose
1	Consumable Kit	1	Straight Line Guide
1	Mult-Use Spanner	1	Safety Specs

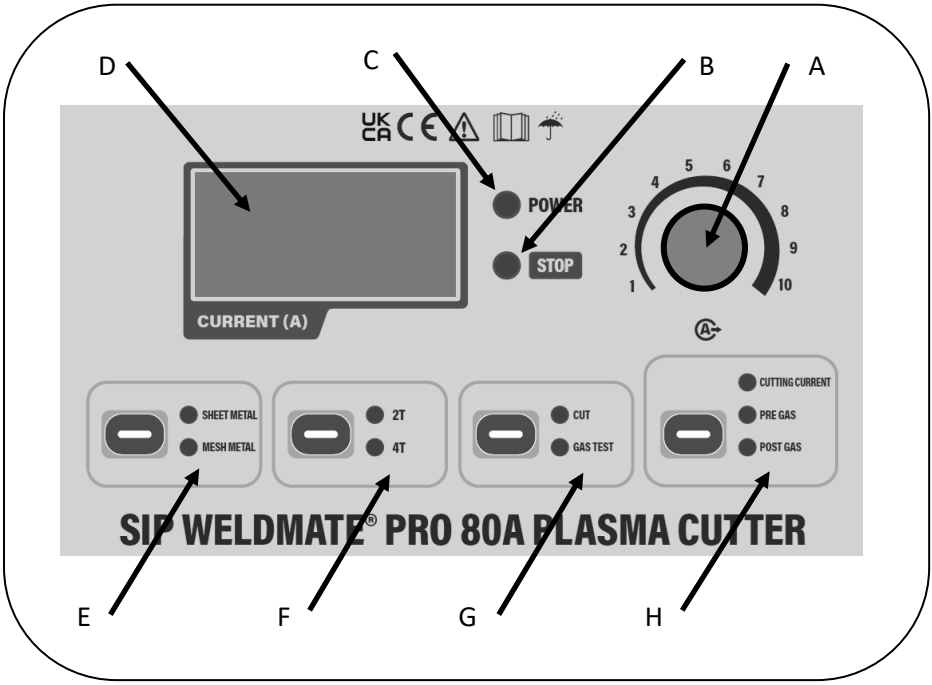
Note: If any of the above are missing or damaged, contact your distributor immediately.

GETTING TO KNOW YOUR PLASMA CUTTER



Item	*Description*	*Item*	*Description*
1	Current Control Knob	**8**	Torch Central Connector
2A	Mains Power LED	**9**	Earth Lead Socket
2B	Thermal Overload LED	**10**	On / Off Switch
3	Display	**11**	Air Connector
4	Mesh / Sheet Metal Selector	**12**	Mains Input Cable
5	2T / 4T Trigger Function	**13**	Cooling Fan / Air Inlet
6	Output / Air Check	**14**	Air Regulator
7	Current / Pre & Post Flow		

CONTROL PANEL



Item	*Description*	
A	Cutting Current / Parameter Knob	Used to adjust cutting current & also used to change parameters
B	Thermal Overload LED	LED Illuminates should machine overheat
C	Mains Power LED	LED Illuminates when machine is powered up and switched on
D	LED Display	Shows cutting current; pre-flow air; post-flow air; error codes
E	Material Selector	Select sheet & mesh type materials
F	2T / 4T Mode	Trigger selection
G	Test Button	Test Air Flow / Cutting Arc
H	Parameter Adjustment	Press to adjust pre & post flow air use Knob A to change time,

FITTING THE AIR REGULATOR

- Fix the air regulator bracket to the back of the plasma.
- Use the 2 screws circled below. Fig.2*.
- Use the hose supplied to connect the air regulator to the push fit connector on the rear of the plasma cutter. It will need to be cut to length. Fig.3*.

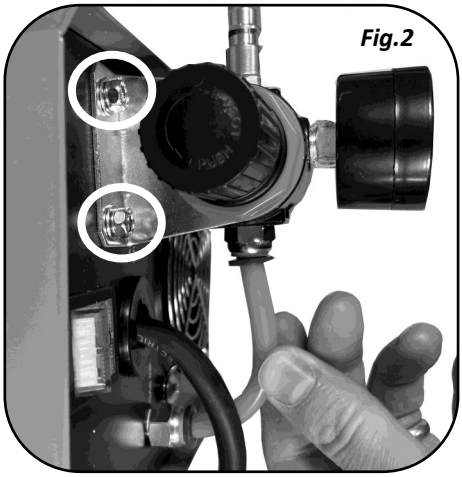


Fig.2

Fig.3

*****Some images contained in this manual are for illustration and reference purposes and may not match actual product.***

1. Connect the air supply to the regulator and adjust the air pressure to 5 bar.
2. Check the cutting tip is the correct size for the current setting and all of the torch consumables are in good condition; Replace if not.
3. Connect the earth lead to the workpiece, using an area free of rust and paint, for a good contact.
4. Connect to mains supply and switch the plasma cutter on.
5. Set the cutting current via the current control, an indication of the setting will be shown on the output display.
6. Place the torch at the edge of the workpiece with the centre of the tip slightly beyond the edge. Lift the safety flap (Fig.4) and press the torch trigger; The air will flow and after a short delay the arc will ignite. The torch should be moved steadily along the workpiece at a rate slow enough for the metal to be cut right through in one pass.
7. 8. When the cut is complete, release the torch trigger button. The arc will immediately extinguish, but air will continue to flow for a short time. DO NOT turn the machine off until this cooling air has stopped flowing as this is necessary to prevent damage to the torch.
8. The plasma cutter will cut up to 35mm on maximum power.

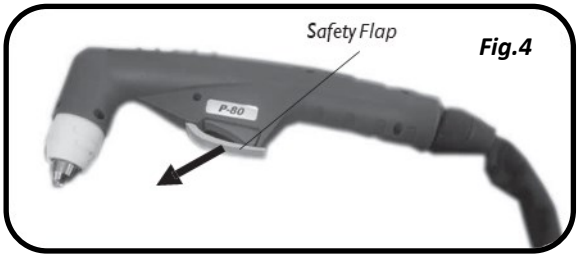


Fig.4

MAINTENANCE

DAILY

- Visually inspect earth leads, the plasma torch and mains input cable.

MONTHLY

- Clear dust from the machine, especially if used in a dirty environment. The machine should be cleaned at least once a month.
- Check all connections are clean and tight, if there is any oxidization clean the connection with a mild abrasive or wire brush.
- Check all cables for damage or degradation to the insulation, replace if any is found.
- Check earth clamp condition ensure they clamp tightly, replace if damaged or loose.
- All consumables in the torch must be checked and cleaned / replaced frequently.

ANNUALLY

- Have your cutting equipment serviced by a Welding Equipment Specialist.
- This is not included in the warranty and you will have to pay for the service.
- Having a regular service schedule will ensure that the performance will remain consistent and ensure that the equipment is in a safe working condition.
- If the machine is not to be used for a long time, store it in the original packing in a dry place.

TORCH CONSUMABLES

Under no circumstances should the plasma nozzle be removed or any other work be carried out on the torch with the machine switched on; Ignoring this warning could lead to serious burns or contact with high DC voltages.

If the machine has just been used for cutting, allow the cooling air to stop before switching the machine off to service the torch.

The torch should be kept free of slag at all times to ensure the free passage of air.

To assemble / dismantle the torch:

- Invert the torch so the tip points upwards.
- Unscrew and remove the ceramic shield (A*), this item is brittle do not drop it.
- Unscrew and remove the cutting tip (B*).
- Unscrew and remove the electrode (C*).
- Screw the new electrode onto torch.
- Screw the new cutting tip onto the torch, ensure it is the correct size for the current to be used.
- Check the metal coating on the ceramic shield is clean and undamaged; replace as required.
- Screw the ceramic shield on to the torch.

**** See Torch Parts Page 23.***

Note: When inspecting the consumables, look-out for excessive wear to the electrode. If in poor condition this will affect the performance and capacity of the plasma cutter.

TORCH PARTS

Item No	*Description*	*SIP Part No.*
A	Ceramic Shield	05007
B	1.1mm Nozzle (up to 40A)	05001
	1.3mm Nozzle (Up to 63A)	05002
	1.5mm Nozzle (Up to 80A)	05003
C	Electrode	05000

TROUBLESHOOTING

Warning: Repairs should only be carried out by suitably qualified engineers

Note: Should none of the solutions below and on page 25 work, then contact your local SIP repair agent or SIP Customer Services.

Symptom	*Possible Cause*	*Corrective Action*
⇒ *Cut quality declining.*	● Nozzle or electrode is burnt. ● Nozzle or electrode poorly fitted to the torch. ● Cutting angle incorrect.	● Check and replace as necessary. ● Check and refit where necessary. ● Adjust the angle of the torch during cut.
⇒ *Power indication light does not illuminate when the cutter is turned on.*	● The LED is faulty. ● Input Fuse is blown. ● No input voltage. ● On/Off switch is faulty.	● Check / replace. ● Check / replace. ● Check supply and connections. ● Check / replace.
⇒ *The low pressure / thermal over-load light is illuminated.*	● The plasma cutter has exceeded its duty cycle. ● No compressed air input. ● Air regulator is set too low. ● Air regulator is faulty. ● Air circuit is blocked. ● Gas valve is faulty.	● Leave the plasma cutter to cool. ● Connect an adequate compressed air supply. ● Adjust the air regulator. ● Check / replace. ● Check and clear the air circuit. ● Check / replace.
⇒ *Main display blank.*	● Display faulty. ● Cable damaged / fallen off. ● Main PCB faulty.	● Replace main display. ● Check cable and repair or replace. ● Check and replace the PCB.
⇒ *No response after turning on the plasma cutter.*	● Input fuse is blown. ● No input voltage. ● On/Off switch is faulty ● Main control PCB is faulty. ● Transformer is faulty.	● Check / replace. ● Check supply and connections. ● Check / replace. ● Check and repair / replace. ● Check and repair / replace.

Symptom	*Possible Cause*	*Corrective Action*
⇒ *Workpiece is not cut thoroughly.*	• The output current is too low. • Cutting speed is too fast. • Torch electrode or nozzle is burnt out. • Workpiece too thick.	• Adjust current accordingly. • Reduce the cutting speed. • Check and replace as necessary. • Reduce workpiece thickness, or purchase a more powerful cutter.
⇒ *Arc is not stable during operation.*	• Compressed air pressure is too high or too low. • Torch electrode or nozzle is burnt out. • Cutting speed is too slow. • Earth connection is poor.	• Check and adjust the air pressure. • Check and replace as necessary. • Accelerate the cutting speed. • Check the earth connection is well connected.
⇒ *Cut is too wide, processing quality is poor.*	• Nozzle or electrode is burnt. • Nozzle or electrode poorly fitted to the torch. • Cutting speed too slow. • Incorrect nozzle fitted.	• Check and replace as necessary. • Check and refit where necessary. • Accelerate the cutting speed. • Check and replace where necessary.

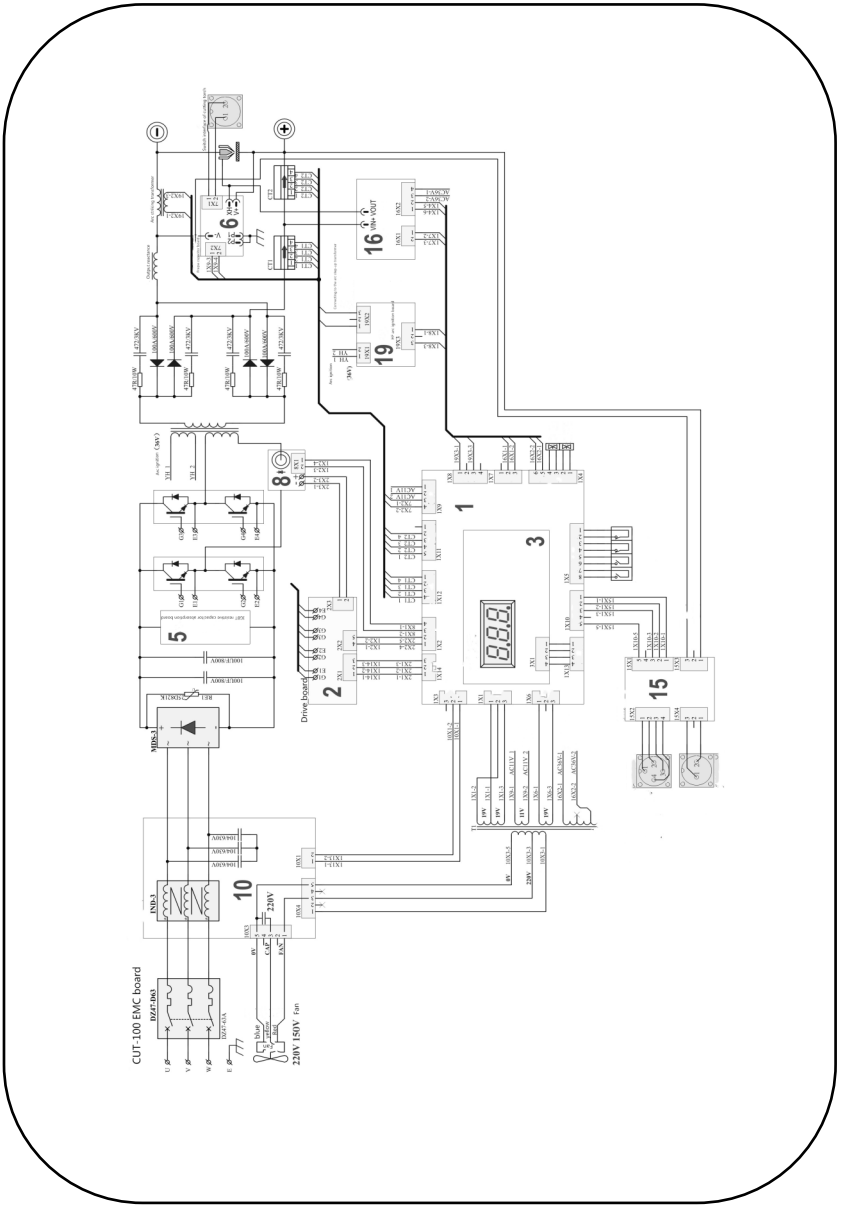
ERROR CODES

E Code	*Status*	*Reason*	*Remedy*
E.01	Overheat	Internals Overheated; duty cycle exceeded. Temp relay Fault Line Signal Fault. Main PCB Failure	Check if fan is working; allow to cool. Replace Relay. Check Relay Wiring. Replace PCB.
E.02	Phase Protection	Mains Supply issue. Internal Wiring. Main PCB Failure	Check Supply. Inspect Wiring / EMC PCB. Replace PCB.
E.03	Air Starvation	Air not connected or pressure too low Sensor / PCB Failure,	Check Air Supply. Replace Sensor / Main PCB.

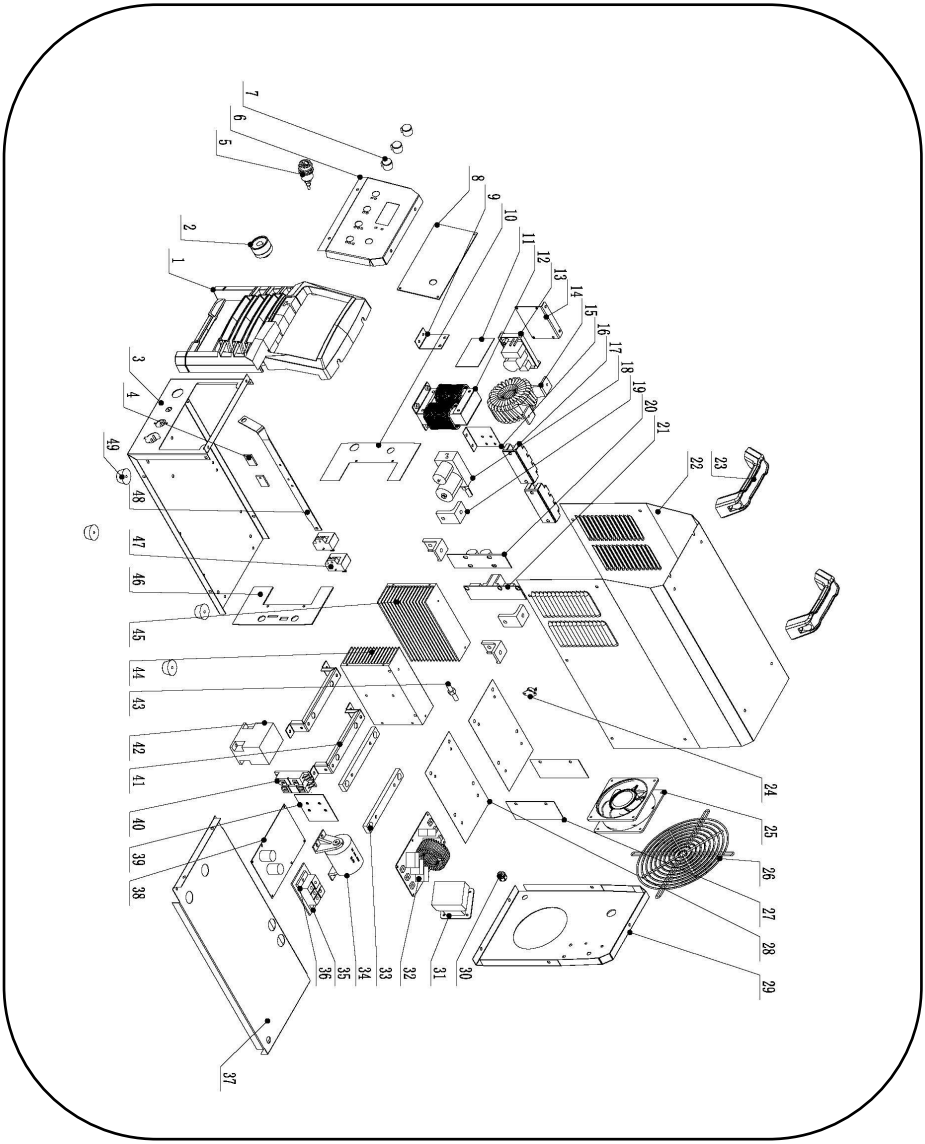
ERROR CODES Cont...

E Code	*Status*	*Reason*	*Remedy*
E.04	N/A	N/A	N/A
E.05	Hall Sensor Failure	Wiring Issue. Sensor Failure Main PCB Failure	Check Wiring Connections. Replace Sensor. Replace PCB.
E.06	Arc Issue	Inductor Coil Failure Hall Sensor Failure Main PCB Failure	Check / Replace Inductor. Replace Sensor. Replace Main PCB.
E.42	Comm Failure	Comm harness is loose. Main PCB Failure. Display PCB Failure.	Check Comm Cable. Replace PCB. Replace Display PCB.

WIRING DIAGRAM



EXPLODED DRAWING



PARTS LIST

Item	*Description*	*Item*	*Description*
1	Plastic front panel	27	L / R Airflow Plates
2	Electrical socket	28	Heatshields Plates
3	Chassis	29	Rear Panel
4	Sensor Pad	30	Cable Clamp
5	Central Connector	31	Mains On/Of Switch
6	Control Panel	32	EMC filter
7	Knob	33	Insulators
8	Front Panel PCB	34	Capacitor
9	Bracket	35	Rectifier Plate
10	IGBT Heatshield	36	Three Phase Rectifier
11	Capacitor Board Assy	37	Middle Panel
12	Output Choke	38	Aux Power Board Assy
13	High Frequency Module	39	Diode Plate
14	High Frequency Plate	40	Diode Module
15	Main Transformer	41	Support
16	Solenoid Valve Bracket	42	Relay
17	IGBT Modules	43	Air Connector
18	Solenoid Sensor Assy	44	Diode Heatsink
19	Bracket	45	IGBT Heatsink
20	IGBT RC Assy	46	Insulator
21	Driver Board Assy	47	Hall sensor
22	Enclosure	48	Positive Buss Bar
23	Handle	49	Rubber foot
24	Temperature Controller	N/A	Torch Central Connector
25	Fan Harness		
26	Fan Grille		

UK DECLARATION OF CONFORMITY

We

SIP (Industrial Products) Ltd
Gelders Hall Road
Shepshed Loughborough
Leicestershire
LE12 9NH
England

As the manufacturer within England, Scotland and Wales, we declare that the

SIP Weldmate Pro 80A Plasma Cutter SIP Item Number 05689

Conforms to the requirements of the following regulation(s), as indicated:

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment Regulations 2012

And the following harmonised standard(s):

BS EN60974-10:2014+A1:2015
BS EN IEC 60974-1:2018/AI:2019

Signed.
Mr. Paul Ippaso
Managing Director
SIP (Industrial Products) Ltd
Date: 20 June 2024

UK CA

EU DECLARATION OF CONFORMITY

We

SIP Machinery Europe Ltd
Quayside Business Park
Dundalk
County Louth

As the manufacturer within England, Scotland and Wales, we declare that the

SIP Weldmate Pro 80A Plasma Cutter SIP Item Number 05689

Conforms to the requirements of the following directive(s), as indicated:

EMC 2014/30/EU

Low Voltage Directive 2014/35/EU

RoHS 2011/65/EU & 2015/863/EU

And the following harmonised standard(s):

EN60974-10:2014+A1:2015
EN IEC 60974-1:2018/AI:2019

Signed.
Mr. Paul Ippaso
Managing Director
SIP (Machinery Europe) Ltd
Date: 20 June 2024

CE

Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.

Never dispose of electrical equipment or batteries in with your domestic waste. If your supplier offers a disposal facility please use it or alternatively use a recognised recycling agent. This will allow the recycling of raw materials and help protect the environment.

FOR HELP OR ADVICE ON THIS PRODUCT PLEASE CONTACT YOUR DISTRIBUTOR, OR SIP

DIRECTLY ON:
TEL: 01509 500400
EMAIL:
sales@sip-group.com
or
customerservice@sip-group.com
www.sip-group.com