ENGLISH
ESPAÑOL

TRUPER®

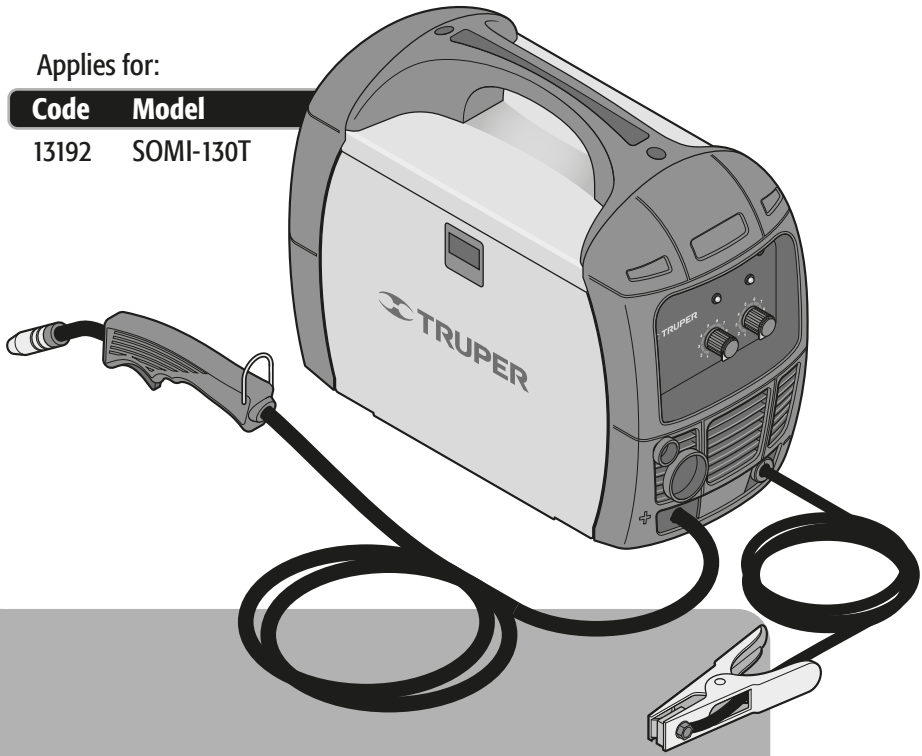
Manual

MIG Welder

130 A

Applies for:

Code	Model
13192	SOMI-130T



SOMI-130T

⚠ CAUTION Read the user's manual thoroughly before operating this tool.

WARRANTY TRUPER® WARRANTY

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Contents

⚠ CAUTION

To gain the best performance of the tool, prolong the duty life, make the Warranty valid if necessary, and to avoid hazards of fatal injuries please read and understand this Manual before using the tool.

Keep this manual for future references.

The illustrations in this manual are for reference only. They might be different from the real tool.

Use and care recommendations

THERMAL PROTECT When the machine overheats, the thermal protector will activate, turning the welder off and turning the LED light ALARM on. Let the welder cool for 15 minutes and turn it back on.

It is recommended to use a **12 AWG** extension cord and connect it to an **INDEPENDENT CHARGING CENTER.**

Perform periodic **MAINTENANCE** to your machine. (Page 16)

Technical specifications

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	SOMI-130T		
Code	13192	Description	MIG Welder
INPUT			
Voltage	127 V ~	Frequency	60 Hz
Current	22.6 A	Rated Input Capacity	2.8 kVA
OUTPUT			
Welding Process	MIG / FCAW		
Open Circuit Voltage	57 V c.c.		
Current Range	30 A - 90 A c.c.		
Duty Cycle	60% - 6 minutes' work per 4 minutes' rest.		
Micro wire Diameter	0.023" - 0.031" MIG | 0.031" - 0.035" FCAW		
Micro wire Speed	59 in/min - 334.6 in/min		
Cooling Type	Fan Forced The specified output values are given at a temperature of 68 °F . Higher temperatures can reduce the duty cycle.		
Insulation	Class I	IP Grade	IP21S
Conductors	12 AWG x 3C with 221 °F insulation temperature		

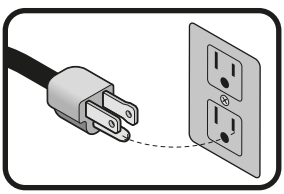
Power cord grips used in this product: Type "Y".
Build quality: Basic insulation
Thermal insulation on motor winding: Class F

⚠ WARNING Avoid the risk of electric shock or severe injury. When the power cable gets damaged it should only be replaced by the manufacturer or at a TRUPER® Authorized Service Center.
The build quality of the electric insulation is altered if spills or liquid gets into the tool while in use.
Do not expose to rain, liquids and/or dampness.

⚠ WARNING Before gaining access to the terminals all power sources should be disconnected.

Power Requirements

⚠ WARNING If faults or breakdowns happen. Ground connection offers a trajectory with minimum resistance for electric power. It reduces the risk of electric shock. This tool is built with a power cable with an earth conductor and a plug with ground connection. The plug shall be connected into a power outlet installed and grounded according to all local codes.



⚠ WARNING Do not modify the plug supplied. If the plug cannot be fitted to the socket, have a qualified electrician to install the suitable socket.

• When using the welder together with more tools using the same ground connect those in parallel, never connect a series.

⚠ CAUTION • The gauge of the ground conductor cable shall not be of a smaller gauge than the power supply cable.

⚠ CAUTION • Connection to the power supply shall only be carried out by a professional electrician.

⚠ CAUTION • Double check the input connection voltage stipulated in the welder nameplate matches the power supply voltage.

⚠ CAUTION • The power supply cord shall meet the following requisites:

Switch	≥30 A
Fuse (Work Rated Current)	30 A (*)
Electric Wire	≥2.5 mm²

* The current for fuse fusion is double of its rated current.

• If extensions between the welder and the work piece are needed, the soldering cable gauge shall be increased to keep the welder energy output with a potential drop not higher than 4 V

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General Power Tools Safety Warnings

⚠WARNING! Read carefully all safety warnings and instructions listed below. Failure to comply with any of these warnings may result in electric shock, fire and / or severe damage. **Save all warnings and instructions for future references.**

Work area

Keep your work area clean, and well lit.
Cluttered and dark areas may cause accidents.

Never use the tool in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.
Sparks generated by power tools may ignite the flammable material.

Keep children and bystanders at a safe distance while operating the tool.
Distractions may cause loosing control.

Electrical Safety

The tool plug must match the power outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools.
Modified plugs and different power outlets increase the risk of electric shock.

Avoid body contact with grounded surfaces, such as pipes, radiators, electric ranges and refrigerators.
The risk of electric shock increases if your body is grounded.

Do not expose the tool to rain or wet conditions.
Water entering into the tool increases the risk of electric shock.

Do not force the cord. Never use the cord to carry, lift or unplug the tool. Keep the cord away from heat, oil, sharp edges or moving parts.
Damaged or entangled cords increase the risk of electric shock.

When operating a tool outdoors, use an extension cord suitable for outdoor use.
Using an adequate outdoor extension cord reduces the risk of electric shock.

If operating the tool in a damp location cannot be avoided, use a ground fault circuit interrupter (GFCI) protected supply.
Using a GFCI reduces the risk of electric shock.

Personal safety

Stay alert, watch what you are doing and use common sense when operating a tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.
A moment of distraction while operating the tool may result in personal injury.

Use personal protective equipment. Always wear eye protection.
Protective equipment such as safety glasses, anti-dust mask, non-skid shoes, hard hats and hearing protection used in the right conditions significantly reduce personal injury.

Prevent unintentional starting up. Ensure the switch is in the "OFF" position before connecting into the power source and / or battery as well as when carrying the tool.
Transporting power tools with the finger on the switch or connecting power tools with the switch in the "ON" position may cause accidents.

Remove any wrench or vice before turning the power tool on.
Wrenches or vices left attached to rotating parts of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times.
This enables a better control on the tool during unexpected situations.

Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothes and gloves away from the moving parts.
Loose clothes or long hair may get caught in moving parts.

If you have dust extraction and recollection devices connected onto the tool, inspect their connections and use them correctly.
Using these devices reduce dust-related risks.

Power Tools Use and Care

Do not force the tool. Use the adequate tool for your application.
The correct tool delivers a better and safer job at the rate for which it was designed.

Do not use the tool if the switch is not working properly.
Any power tool that cannot be turned ON or OFF is dangerous and should be repaired before operating.

Disconnect the tool from the power source and / or battery before making any adjustments, changing accessories or storing.
These measures reduce the risk of accidentally starting the tool.

Store tools out of the reach of children. Do not allow persons that are not familiar with the tool or its instructions to operate the tool.
Power tools are dangerous in the hands of untrained users.

Service the tool. Check the mobile parts are not misaligned or stuck. There should not be broken parts or other conditions that may affect its operation. Repair any damage before using the tool.
Most accidents are caused due to poor maintenance to the tools.

Keep the cutting accessories sharp and clean.
Cutting accessories in good working conditions are less likely to bind and are easier to control.

Use the tool, components and accessories in accordance with these instructions and the projected way to use it for the type of tool when in adequate working conditions.
Using the tool for applications different from those it was designed for, could result in a hazardous situation.

Service

Repair the tool in a TRUPER® Authorized Service Center using only identical spare parts.
This will ensure that the safety of the power tool is maintained.

NOM-ANCE

This tool is in compliance with the Official Mexican Standard (NOM - Norma Oficial Mexicana).

Safety Warnings for Welders

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Protection Equipment for Welding

⚠ WARNING • Wear welding helmet to protect your eyes and face when working with the welder. Double check the shadow lens of the welding helmet is right for the welding process to carry out.

⚠ CAUTION • Use welders' hide gloves. Also hide breastplate and leggings.

• Wear sturdy clothes and long sleeves made of flame resistant materials like wool or leather.

• Use special screens or curtains to insulate the work place and protect passersby from sparks, glare and slag originated in the welding process.

• Benches and work tables where the work pieces' rest shall have orifices or slots that let pass easily residues originated by the soldering process.

To Prevent Electric Shock

⚠ CAUTION • Verify there is a safe connection of the input and output cables. The cables hall be correctly insulated and the connections in good repair (check and eliminate any possibility of short circuit).

⚠ CAUTION • Double check the welder has a trusted ground connection.

⚠ CAUTION • Do not expose the welder to rain or humidity conditions.

⚠ CAUTION • Keep yourself insulated from the work piece and ground stepping dry insulated mats.

⚠ DANGER • For no reason at all touch the two poles in the welder circuit (stick and work piece).

⚠ WARNING • Do not try to adjust the welder voltage when soldering.

⚠ CAUTION • Connect the ground clamp to the work piece as close as possible to the welding zone to prevent the current flow through long distances, thus eliminating the possibility of short circuit.

To Prevent Health Hazards

⚠ WARNING • Vapors and gases produced while doing welding jobs are dangerous to your health. Work in well ventilated places or with adequate ventilation systems.

⚠ WARNING • Do not breath smoke or gas come out from the welding process. Keep your head away from the fumes.

⚠ DANGER • If ventilation is poor use an adequate autonomous breathing device. The protection gases generated during the welding job may displace air and cause fatal accidents.

⚠ CAUTION • Do not operate the welder close to degreasing substances, cleaner or spray cans. Heat and radiation in the welding process may react with the vapors and create toxic gases.

⚠ CAUTION • Avoid welding metals covered with lead, zinc or cadmium. These materials generate toxic gases. Otherwise, remove the covering from the welding are. double check the area is well ventilated or use an adequate autonomous breathing device.

To Prevent Fire

⚠ CAUTION • Always have handy a fire extinguisher in good working conditions.

⚠ WARNING • There shall not be flammable or explosive materials in the work area (not closer than 36 feets). Do not carry out welding jobs in places where sparks may reach or fall onto flammable or explosive materials.

To Prevent Injuries and Accidents

⚠ WARNING • Risk of electric shock: An electric shock coming from the welder electrode may cause death.

Do not weld when raining or snowing. Do not touch the electrode with bare hands. Do not wear wet or damaged gloves. Personal protection against electric shock: insulate from the work piece. Do not open the equipment enclosure. Do not weld drums or any other closed container.

⚠ WARNING • Welding sparks may cause explosions or fire.

⚠ WARNING • Arc generated risks: Arc radiation may burn your eyes and damage the skin. Wear helmet and protection goggles. Use ear protection. Wear protection clothes to protect the skin up to your neck. Always use full body protection.

⚠ WARNING • Risk induced by electro-magnetic fields: When welding, the current produces electro-magnetic fields. Do not use the power source if having medical implants. Never roll soldering cables around the waist. Join and set parallel the two soldering cables so that the fields will counteract in each other.

⚠ WARNING • Do not use the welder power source to de-ice pipes.

⚠ CAUTION • Never allow unexperienced people disassemble or regulate the welder.

⚠ WARNING • Double check that both the operator and the welder are out of the reach of sparks and residue originated by the welding process.

• To operate the welder, it shall be set in a place protected from sun or rain. Away from places where violent vibration is present.

• Store the welder in a place with no humidity with a temperature range of -13 °F to +131 °F

• There shall be a 20" free space around the welder to assure good ventilation.

⚠ CAUTION • Double check there is no foreign metal object inside the welder.

⚠ WARNING • If there are issues with the welder the operator cannot solve making the adjustments needed for a good welding job shall be solved in a TRUPER® Authorized Service Center. For no reason at all try to open the welder carcass to carry out any type of maintenance.

Gas Handling

• Gas used in the welding processes are inert gases that do not react under normal conditions. The gases are colorless, odorless and tasteless.
• Do not ignite or support combustion.
⚠ CAUTION • These gases displace air, so they can cause asphyxia when confined or poorly ventilated atmospheres.
⚠ WARNING • Do not use the welder in enclosed spaces or poorly ventilated. Otherwise the operator may be seasick, faint or could die because of lack of oxygen.

Gas connections

⚠ CAUTION • Make sure all connections, hoses and gaskets are in good condition. Replace any one damaged immediately.
⚠ CAUTION • Make sure all threads and connections are clean and free of oil and grease. Oils and greases in contact with pressurized gases may be explosive.
• When making the connections make sure they are tight.
⚠ CAUTION • Use soapy water to detect any leakage and correct it before turning on the welder.

Use of Compressed Gas Cylinders

⚠ WARNING • Compressed gas cylinders are widely used in many soldering processes. If not stored, handled, inspected and use properly, the compressed gas cylinders may be fatal. They explode or turn into missiles with such force they can even break brick walls.

⚠ CAUTION • Inspect the cylinders for outer corrosion, indentations, lumps, holes or wells. If not sure if some imperfection is acceptable under these guidelines, stop using the cylinder! Read the gas safety sheet before using it.
⚠ CAUTION • Many compressed gas cylinders not only represent physical hazard but are also a health hazard. Be sure you are aware of the health dangers and how to protect yourself. always follow the caution measures about use and handling instructed in the safety sheet.
⚠ CAUTION • Never place the cylinders close to hear sources or open flame that could turn into an electric circuit. Do not use the cylinder to be source of ground while in the electric soldering process.
⚠ WARNING • Wear protective lenses and mask when connecting and disconnecting the gauges and lines to the cylinder.
⚠ CAUTION • Close the cylinder valve to release the pressure before removing the gauge and when the cylinder is not in use. Cylinders shall be stored with a visible identification and the protection cap set on the valve.
⚠ CAUTION • Before using a new cylinder purge the gas. Stand aside the cylinder valve, never in front. Quickly open and close the valve to expel any foreign matter housed in the valve before setting the gas gauge in the cylinder.
• Adjust the pressure correctly not to waste gas. If the gauges show extreme pressure make it right immediately.
⚠ CAUTION • Purge the whole system after each use. DO NOT disconnect the equipment when the cylinder valves are open.
• In case of gas leak move the cylinder to an open zone and report immediately to the supervisor and/ or Civil Protection Crews.

GMAW / FCAW Welder

GMAW Welders

• The GMAW welders work with an electric arc produced between the continuous electrode (micro wire) and the work pieces. The arc stays protected from the surrounding atmosphere by inert gas expelled at the same time than the electrode while the weld is carried out.

FCAW Welders

• FCAW welders also work with an electric arc produced between the continuous electrode (micro wire) and the work pieces. It does not require gas because the arc stays protected from the surrounding atmosphere by the gas produced in the electrode core during the combustion while welding.

Micro wire welding has the following characteristics:
• The arc generates easily. It is stable during the welding process and produces a good welding bead.
• The bead stays protected against oxide and cracking because of its low hydrogen contents.
• The thin electrode lessens the possibility or distort the work piece.
• It saves energy and materials with high efficiency in product, lowering operation costs.
• Highly concentrated heat in the arc with strong flux penetration, few welding layers and high flux index of the electrode.
• It can make high speed soldering with no slag due to not being necessary to remove slag. Multiple layers soldering jobs are finished in less time.
• Soldering can be carried out in any position.
• Adequate to solder sweet steel or steel alloy.
• Perfect protection function against overheating.
• Adequate for automobile manufacture, ship construction, mechanical industry, etc.

Parts

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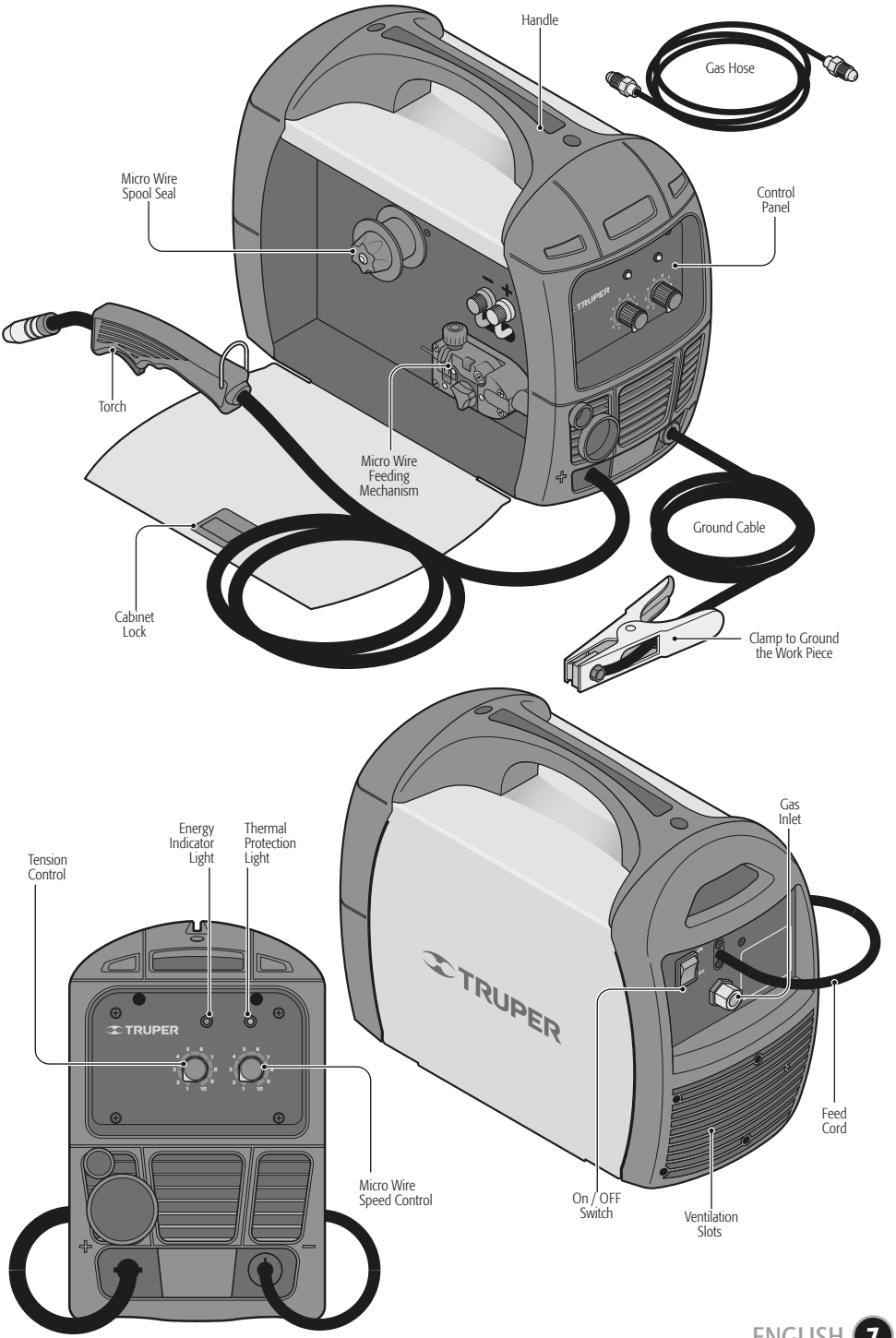
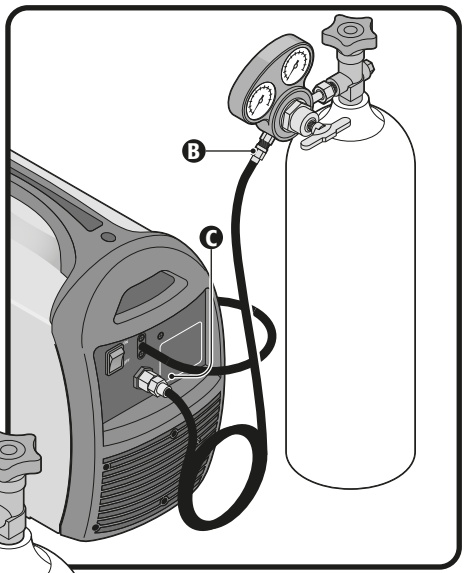
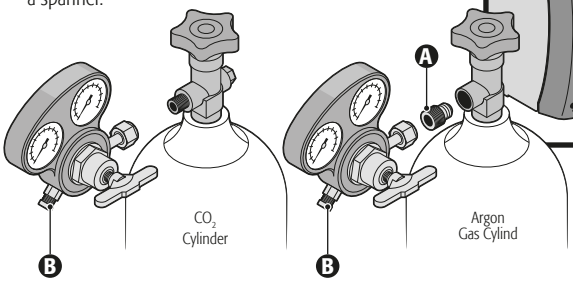


Gas Cylinder (MIG)

⚠ CAUTION • Use care not to damage or put at risk the valve or the gas cylinder. Cylinders may explode if damaged.
• Set the gas cylinder close to the welder and in a safe place to prevent it from falling.
⚠ CAUTION • Pay attention and follow all the indications and warnings in these instructions when making connections.
• Purge the cylinder as indicated in page 6, in "Gas Cylinder Handling".
• Cylinders containing CO_2 are made with valves that can be screwed in directly to the gauges. The cylinders containing Argon gas or Argon gas mix need a rounded tip adapter (**A**) to connect the gauge.
• Tighten the gauge connection to the cylinder valve using a spanner.





Gas Connection (MIG)

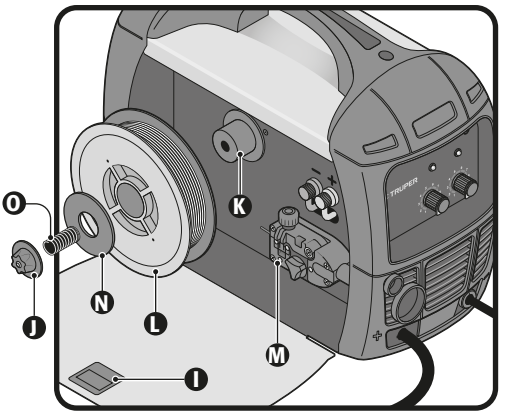
• Connect one end of the hose into the gauge outlet (**B**) and the other end into the gas inlet in the welder (**C**). Tighten both connections to assure the system is perfectly sealed.
• Before opening the cylinder valve, close the regulator valve turning counterclockwise. When opening the cylinder valve, double check the gauge is not pointing towards you.
• Set the gauge flow rate to 1.32 gal/min - 2.11 gal/min The flow rate depends of the material to be soldered and wind rates that could alter the gas flow.
• To solder low carbon steel and most of the jobs, use CO_2 even though it expels a lot of weld spatter.
• CO_2 mixed with Argon reduces the weld spatters while working.
• To weld aluminum, use Argon Gas.

⚠ CAUTION • The micro wire welder can be used with or without gas depending on the job requirements or the type of micro wire used:
• Solid micro wire (GMAW). Gas is needed to protect the electric arc.
• Flux core micro wire (FCAW). No gas is required because the wire core combustion releases the gases necessary to protect the electric arc.

⚠ CAUTION
For best results, it is recommended to use original Truper brand parts and accessories, such as: AN-SOMI-130, BOQ-SOMI-130/210, TOB-SOMI-130/210, P-SOMI

Micro Wire Spool

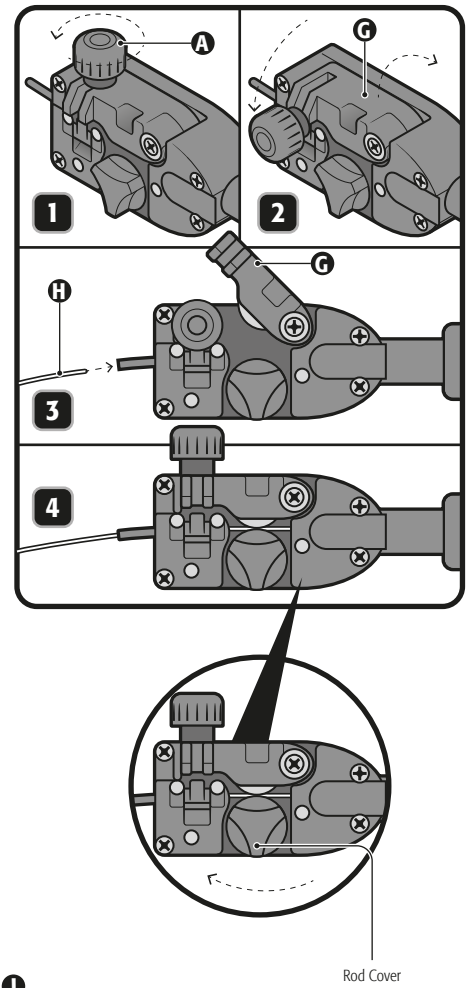
⚠ CAUTION • Turn off and disconnect the welder before opening the cabinet door.
• Push the cabinet locks upwards (**I**) to open and gain access to the micro wire feeding system.
• Loosen the fastener knob (**J**) remove the knob, the spring (**O**) and the fastener (**N**) from its axis (**K**).
• Install the micro wire spool (**L**) into the axis.
• Set back the fastener (**N**), then the spring into the axis (**K**) and tighten with the knob (**J**) enough so that the micro wire spool turns freely.
• Using plyers release the micro wire tip from the spool notch. Double check the micro wire sticks out from the lower part of the spool towards the micro wire feeding mechanism (**M**).
• Check the micro wire tip is not crooked, bent or it has alterations or burrs. Cut if necessary in order to have a straight and flawless tip.



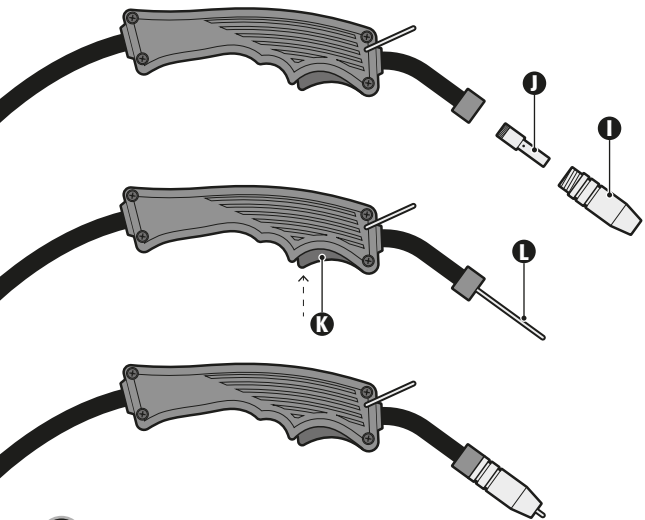
• The micro wire diameter is dependent of the thickness or the material to weld. Small micro wire diameter allows working with low energy range, deliver less material into the weld and are easy to control, whilst larger micro wire diameter require more energy to flux the electrode, deliver more material into the weld and are difficult to control.
• The welder can use wires made of different materials and characteristics, like solid wire for gas welding, core wires for gasless welding or aluminum wire to weld on aluminum. Before installing into the welder, read the manufacturer specifications of the spool to verify the micro wire is adequate for the job.
⚠ CAUTION • Double check the diameter of torch contact nozzle matches the micro wire diameter installed in the welder. Otherwise, the micro wire flow can get blocked.

Micro Wire Feed

1. Loosen the fastening knob (**A**) from the wire feeding mechanism.
2. Lower the adjusting knob to release the rod cover.
3. Lift the rod cover (**G**) and fit at least 12" wire (**H**) into the wire feeding mechanism guide.
4. Lower the rod cover. Close and tighten the feeding adjusting rod of the wire feeding mechanism.
• The feeding rod is built with 2 notches for wire measuring 0.023" and 0.031"
• To select the notch, remove the feeding rod cover turning half-a turn in a clockwise direction.
• Remove the rod and set it back aligning the selected notch with the micro wire path.

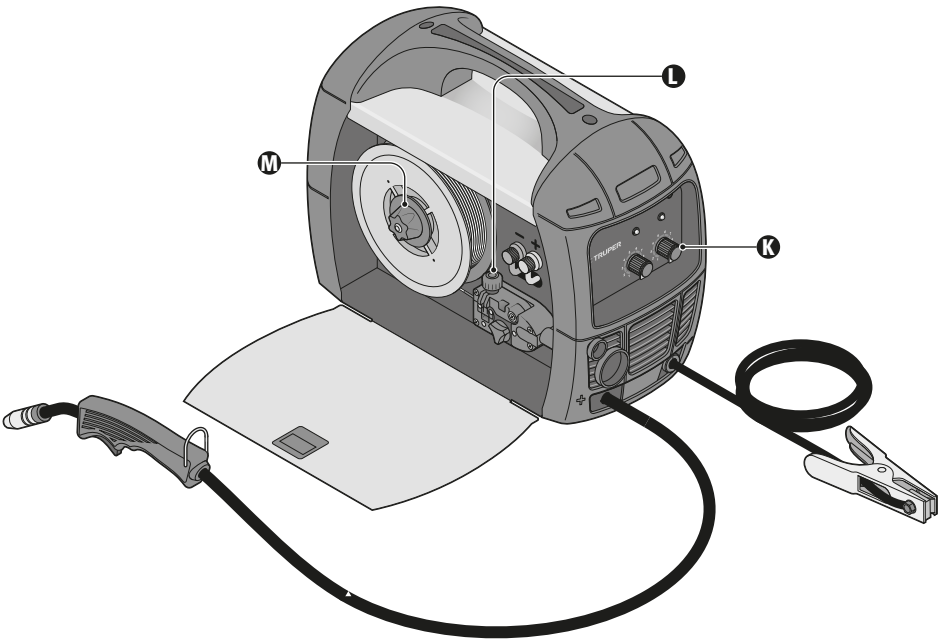


• Hold the torch to remove the nozzle (**I**) unscrewing carefully.
• Then, unscrew the contact nozzle (**J**) to remove and release the torch.
• Verify the welder switch is in the OFF position and the ground clamp is away from the torch tip.
• Connect the welder to the power supply and turn the welder ON.
• Set the micro wire speed knob into position 5 or 6.
• Untangle the entire torch cable to have it as straight as possible and press the torch trigger (**K**). The micro wire (**L**) will be fed through the cable and the torch. Allow the micro wire sticks out approximately 4" through the torch outlet.
• Turn off and disconnect the welder from the power supply.
• Slide the contact nozzle over the micro wire and tighten back in place.
• Slide the nozzle through the micro wire and screw carefully into the torch outlet.



Micro Wire Feeding Rhythm

• Connect the welder to the power supply and turn on the welder switch to verify the micro wire feeding rhythm.
• The micro wire speed towards the torch is controlled from the control panel using the Micro Wire Speed Control (**K**).
• Regardless of the selected speed, the micro wire shall be fed continuously and shall stop immediately upon releasing the torch trigger. If the micro wire shows problems to stick out or it does not stop after releasing the trigger, follow the following adjustments:
• Adjust pressure on the micro wire using the tension knob (**L**). Consider that excessive pressure hinders the micro wire feed, thus insufficient pressure cannot push the micro wire.
• Tighten the spool knob (**M**). If the knob is too loose the spool could keep on rotating after releasing the torch trigger and the micro wire speed would not stop immediately.
• Keep in mind the torch cable shall be completely unrolled so that the micro wire can circulate correctly.
• Depending on the job, cut the remaining micro wire so that it sticks out 0.31" to 0.39" from the contact nozzle.
• Close the cabinet. The welder is ready to work.

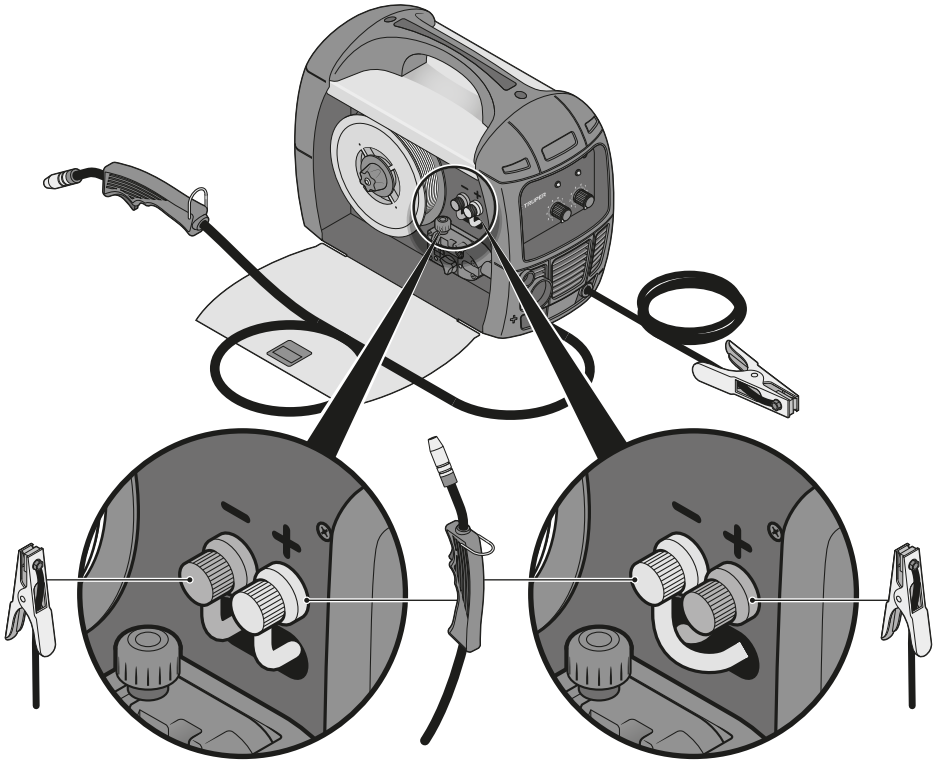


Connection Configurations

⚠ CAUTION • All the connections in the control panel shall be fully tightened in their respective power outlet. Secure the connections turning in a clockwise direction.

• The electrode polarity can be modified depending of the soldering job requirements or needs. Remember making tests in scrap material to define the right configuration before working on the work piece.

MIG/FCAW Welding

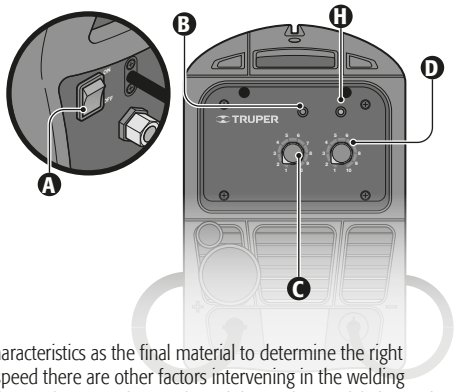


Ground clamp connection into the negative terminal and torch connection (red) into the positive terminal. The electrode receives the highest warming. Recommended for gas welding and solid micro wire.

Torch connection (red) into the negative terminal and ground clamp connection into the positive terminal. The work piece receives the highest warming. Recommended for gasless and core micro wire.

Turning On

• Turn ON the general switch (**A**) located in the back side of the welder.
• When the ON light is on (**B**) the internal fan will start running.

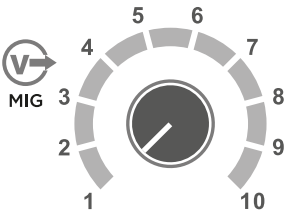


Adjustments

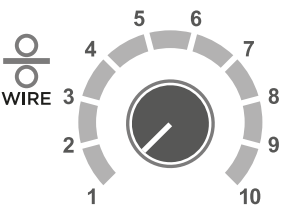
• As a general rule, low current requires feeding the micro wire in low speed. If increasing the work current is necessary, increase the micro wire speed as well.
• To set up the work current use the tension control (**C**).
• To configure the micro wire outlet speed, use the micro wire speed control (**D**).
• Remember to make tests in scrap material with the same characteristics as the final material to determine the right configuration for the job. Aside from current and micro wire speed there are other factors intervening in the welding performance, like the wire diameter and characteristics, the distance between the nozzle and the work material, the torch angle and the amount of gas delivered.

Equivalence table (voltage and current selector)

Use this control to select the appropriate voltage or current for the job to be performed, from a minimum value (position 1) to a maximum value (position 10).



VOLTAGE

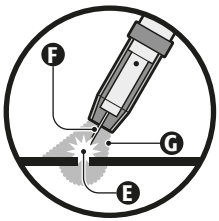


MICRO WIRE SPEED

SOMI-130T		
Knob value	Output voltage (V)	Output Current (A)
1	15.50	30.0
2	15.95	39.0
3	16.05	41.0
4	16.15	43.0
5	16.35	47.0
6	16.85	57.0
7	17.25	65.0
8	17.75	75.0
9	18.25	85.0
10	18.50	90.0

Operation

• To assure the flowing of the electric circuit clean 0.7" to 1.2" around the zone where the grounding clamp will be connected and around the zone to be welded to the work pieces.
• Connect the grounding clamp to the work piece or to the work table where the work piece will be supported.
• Connect the welder to the power supply.
• Once the welder is properly installed, connected and set up and all the safety measures have been taken you may start the welding job.
• Wear the welders' helmet to start welding.
• Hold the torch with your hand and point the contact nozzle towards the slot to be welded. Use a 30° angle approximately to be able to see the contact point between the electrode and the work piece.
• Put the welder's helmet down.
• Make contact with the micro wire tip onto the work piece while pressing the torch trigger. The current will generate the electric arc (**E**) between the work piece and the micro wire (**F**).
• With the FCAW soldering, while the micro wire is fed, the gas (**G**) is released to protect the arc.
• To stop the job, release the torch trigger. The current will stop passing, the micro wire will stop as well as the gas flow.

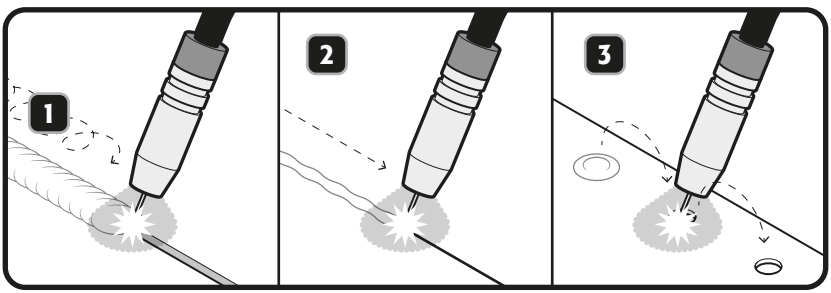


Overload Protection

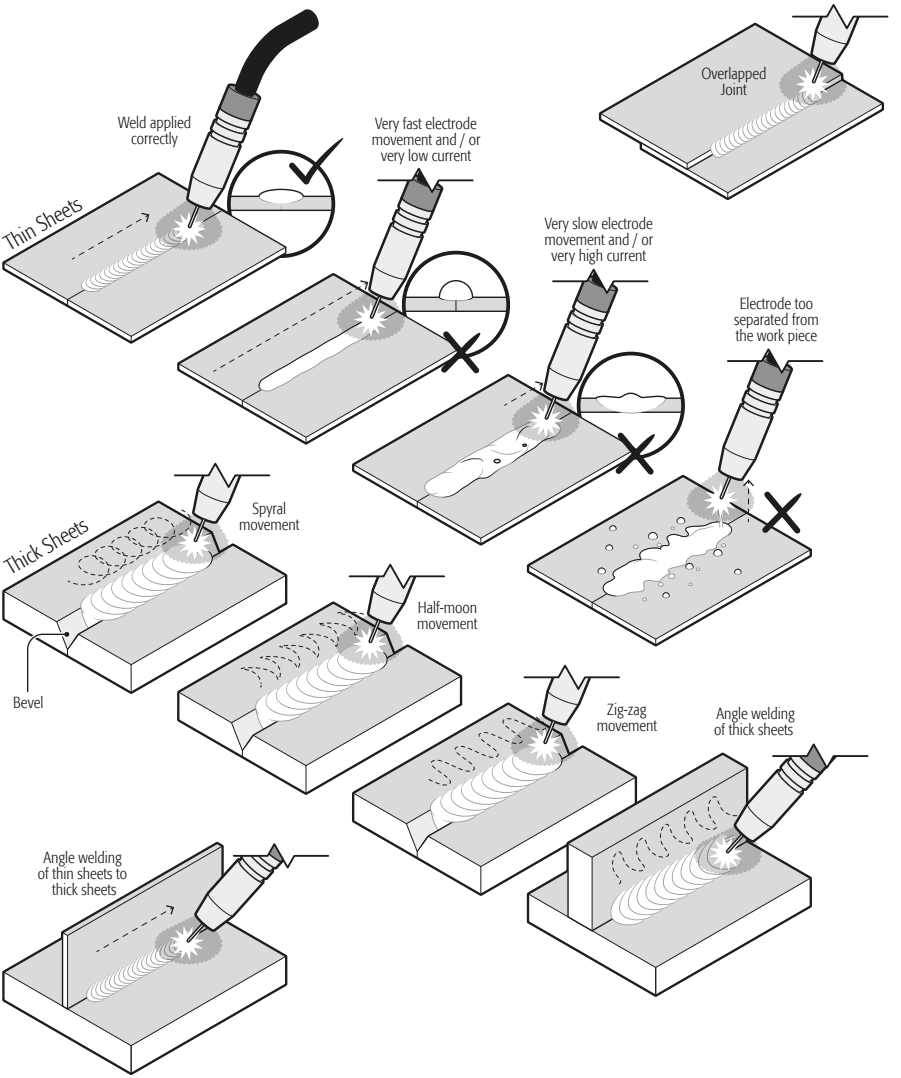
• The welder is built with a thermal protection to guard against overload. When an overload strikes, the welder will automatically turn off and the overload light (**H**) will light up. Allow the unit to cool down. The thermal protector will restart the unit when the temperature is back to safe limits.

Basic Weld Joint Types

1. Between thick sheets with a space between the joint to weld requiring more supply of material into the joint. Making a circular movement with the nozzle is recommended.
2. Between thin sheets with no space between the joint to weld. A lineal and continuous movement with the nozzle is recommended to prevent warping the material.
3. Between thin overlapping sheets with previously drilled orifices.



Welding Examples



• The right use and good maintenance extend the useful life of the welder.

⚠ CAUTION • Only qualified staff shall carry out repairs. Visit a TRUPER® Authorized Service Center to repair the welder and purchase supplies or accessories.

• Before carrying out any type of repairs, cut first the power supply.

• Check regularly the inlet and outlet cables are firmly connected and are not exposed. Any abnormality shall be repaired immediately.

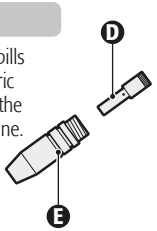
Storage

• If the welder will be stored for long periods of time, it shall be stored in a dry and well ventilated place to prevent entry of humidity, oxide, or toxic gases. The storing temperature can be -13 °F to +131 °F and relative humidity shall not be above 90%.

Nozzle

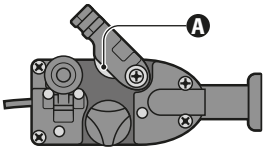
• The nozzle (**D**) shall be clean and free of spills. Spills accumulation inside the nozzle may cause an electric discharge in the contact tip and can blow a fuse in the circuit board or very expensive repairs in the machine. To keep the contact tip free of spills and know how to remove it and replace it.

• Apply anti-adherence ointment to the nozzle before starting welding.



Micro Wire Feeding Mechanism

• Verify regularly the micro wire feeding mechanism. Cleaning the feeding rod notches (**A**) is indispensable to get a good job. Clean the rods once a week, especially the feeding rod notch. Eliminate any dust accumulation found.



Contact Tip

• The contact tip (**E**) is a consumable element and shall be replaced when the orifice enlarges or changes shape. The contact tip shall be free of spills to allow the gas to flow correctly.

Cleansing

⚠ CAUTION Cut the power supply each time you clean the dust.

• To remove dust from the tool, use dry compressed air (use a compressor or a bellow) to remove dust from inside the machine.

• If there is grease adhered clean with a piece of cloth.

• The machine shall be cleaned thoroughly once a year if in good maintenance conditions and each three month if it has important much accumulations.

• Check regularly the welder input and output cables to guarantee they are properly connected and prevent they are exposed. This checkup shall be carried out once a month when fixed and each time they have to be removed.

Symbology

⎓	Direct current
	Manual electric arc welding with coated electrode
	Input circuit, symbol for single-phase alternating current and rated frequency (60 Hz)
×	Duty cycle symbol (service factor)
I_2	Nominal welding current symbol.
U_2	Conventional load voltage symbol.
U_0... V	Rated open circuit voltage.
U_r... V	Reduced open circuit rated voltage in the case of a voltage reduction device.
U_1... V	Rated supply voltage
Mmax... A	Maximum rated power current
Meff... A	Maximum effective power current
Meff... A	
IP	Protection grade (solid objects and water submerssion)
(1)~	Static frequency single-phase transformer-rectifier.
~	Alternate current symbol
	Tungsten inert gas welding
SMAW	Manual electric arc welding with coated electrodes
TIG	Arc welding system with gaseous protection.
	Inert metal – active gas welding, including the use of flux core

Troubleshooting

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Problem	Cause	Solution
The energy source is interrupted.	• The overload protector is activated due to overheating.	• Energy is reestablished automatically when the unit is back to the adequate temperature. After 15 minutes approximately.
There is no soldering current.	• Blown rectifier.	• Go to a TRUPER® Authorized Service Center.
	• Bad connection between the clamp and the work piece.	• Clean and polish the contact surface and the area around the weld.
	• The ground line is broken.	• Replace the ground line.
	• The torch line is broken.	• Replace the torch.
The micro wire feeding mechanism is not working and the indicating light is on.	• Damaged feeding mechanism.	• Go to a TRUPER® Authorized Service Center.
The micro wire is not fed even though the spool turns.	• The pressure rod is not well adjusted.	• Adjust the rod pressure.
	• Residue accumulation in the torch inner cover.	• Clean the covering with compressed air. See page 16.
	• Nozzle and / or contact tip are dirty or defective.	• Clean or replace if necessary.
	• Malformed micro wire.	• Check the spool tension and adjust if necessary.
The micro wire is fed in an uneven way.	• Residue accumulation in the torch inner cover.	• Clean the covering with compressed air. See page 15.
	• Nozzle and / or contact tip are dirty or defective.	• Clean or replace if necessary.
	• The notch in the feeding rod is dirty.	• Clean the feeding rod.
	• The notch in the feeding rod is damaged.	• Replace the feeding rod.
	• The pressure rod is not well adjusted.	• Adjust the rod pressure.
The arc is not stable.	• Control and connections set up in the control panel is incorrect.	• Check and correct set up.
	• Debris in the welding area.	• Clean and polish the work pieces.
	• Worn or defective nozzle.	• Replace the nozzle.
Pores are generated in the weld.	• There is no gas flow.	• Open the gas cylinder, regulate the gas valve.
	• The nozzle is clogged.	• Clean or replace if necessary.
	• Air gusts dissipate gas.	• Place a screen in the work area or increase the gas flow.
	• Debris in the welding area.	• Clean and polish the work pieces.
	• The torch is to far or the working angle is wrong.	• Correct the distance between the nozzle and the work piece (from 0.3" to 0.4").
	• Gas leak.	• Check all the gas connections. Tighten all the joints.
	• Defective electro-valve.	• Go to a TRUPER® Authorized Service Center to clean or replace.
The electrode sticks to the nozzle.	• Worn or defective nozzle.	• Replace the nozzle.
	• The micro wire is warped.	• Adjust the rod tension.
	• The micro wire speed is too slow.	• Increase the micro wire speed.
The welding pearl is irregular.	• The torch is in an incorrect working position.	• Correct the angle and direction of the torch when welding.
	• The micro wire is adhered to the soldering point.	• Adjust the speed set up of micro wire and current.

Troubleshooting

Problem	Cause	Solution
The welding pearl is very narrow and bulky.	• Welding current is too low. • Welding speed is too fast.	• Increase the speed and current to the micro wire. • Move the torch slower and / or make circular movements or zig zag movements with the nozzle.
The welding pearl is too wide.	• Welding current is too high. • Welding speed is to slow. • The arc is too long.	• Diminish the micro wire current and speed . • Move the torch faster and / or make less circular movements or zig zag movements with the nozzle. • Correct the distance between the nozzle and the work piece (from 0.3" to 0.4").
The weld has low penetration.	• Welding speed is too slow. • The arc is too long.	• Increase the speed and current to the micro wire. • Correct the distance between the nozzle and the work piece (from 0.3" to 0.4").
The weld has too penetration.	• Welding current is too high. • Welding speed is to slow. • The arc is too long.	• Decrease the speed and current to the micro wire. • Move the torch faster and / or don't make circular movements or zig zag movements with the nozzle. • Correct the distance between the nozzle and the work piece (from 0.3" to 0.4").

If after all the recommended actions have been carried out the problems persist, contact a TRUPER® Authorized Service Center.

Authorized Service Centers

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In the event of any problem contacting a Truper Authorized Service Center, please see our webpage **www.truper.com** to get an updated list, or call our toll-free numbers **800 690-6990** or **800 018-7873** to get information about the nearest Service Center.

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13192	SOMI-130T	TRUPER®

Warranty. Duration: 1 year. Coverage: parts, components and workmanship against manufacturing or operating defects, except if used under conditions other than normal; when it was not operated in accordance with the instructive; was altered or repaired by personnel not authorized by **Truper®**. To make the warranty valid, present the product, stamped policy or invoice or receipt or voucher, in the establishment where you bought it or in Corregidora 22, Centro, Cuauhtémoc, CDMX, 06060, where you can also purchase parts, components, consumables and accessories. It includes the costs of transportation of the product that derive from its fulfillment of its service network. . Phone number **800-018-7873**. Made in China. Imported by Truper, S.A. de C.V. Parque Industrial 1, Parque Industrial Jilotepec, Jilotepec, Edo. de Méx. C.P. 54257, Phone number 761 782 9100.

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1 YEAR

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