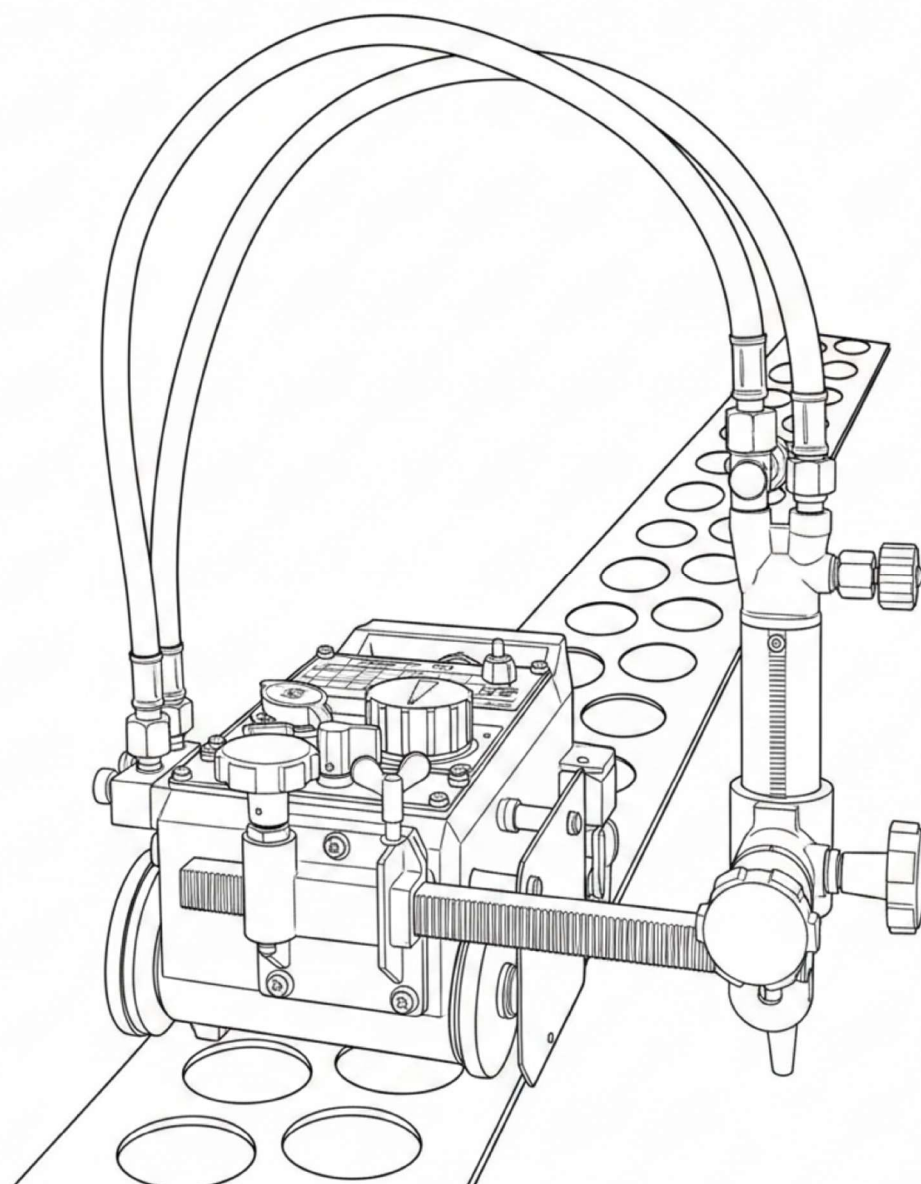


Sherman

EN V1.10 8/25/26

USER MANUAL

SEMI-AUTOMATIC CUTTER SNAIL 1P, SNAIL 2P



CE



WARNING!

Before installing and starting the appliance, please refer to this manual

1. GENERAL COMMENTS

The device can only be commissioned and operated after carefully reading these Operating Instructions. Each time before starting work, you should:

- Check the general technical condition of the cutter, especially the condition of the rubber hoses and cutting nozzles, as well as the tightness of the gas system. It is forbidden to use the cutter with damaged gas hoses. Improper condition of hoses and leakage of the gas system may result in explosion and fire.
- Ensure proper working conditions, i.e. ensure proper temperature, humidity and ventilation in the workplace. Outside closed spaces, protect against precipitation.
- Place the cutter in a place that allows it to be easily operated.

To avoid excessive heating of the cutter, try to place the cutting torch as far away from the trolley as possible and lower the heat shield as close as possible to the sheet to be cut.

Welding machine operators should:

- know and comply with the applicable health and safety regulations.
- use appropriate, specialized protective equipment: gloves, an apron, safety glasses with a properly selected filter.
- Be familiar with the contents of this instruction manual and operate the cutter as intended.

Any repairs to the appliance may only be carried out by unplugging the plug from the power socket.

It is forbidden to remove the external covers when the device is plugged in.

All maintenance and renovation work may only be carried out by authorized persons in compliance with the occupational safety conditions applicable to electrical equipment.

It is forbidden to operate the cutter in rooms with a risk of explosion or fire!

The cutting station should be equipped with fire-extinguishing equipment.

After completing cutting operations, the power cord of the appliance must be unplugged.

Damage to the device caused by improper operation will void your warranty rights.

Any modifications to the device are prohibited and may impair safety conditions and void the warranty.

2. INTENDED USE

The SNAIL 1P and SNAIL 2P semi-automatic cutters are designed for cutting carbon and low-alloy structural steels with a thickness of 6 - 100 mm. They are suitable for cutting in two directions, perpendicular to the base or at an angle of 0° - 45°. The SNAIL 2P cutters allow you to cut with one or two torches at the same time. The devices can be guided directly over the material to be cut, along a rail guide or by means of a compass (optional equipment).

The cutters have an electronic system of stepless adjustment and stabilization of the feed speed with high resistance to changes in load, temperature and supply voltage, as well as a travel direction switch.

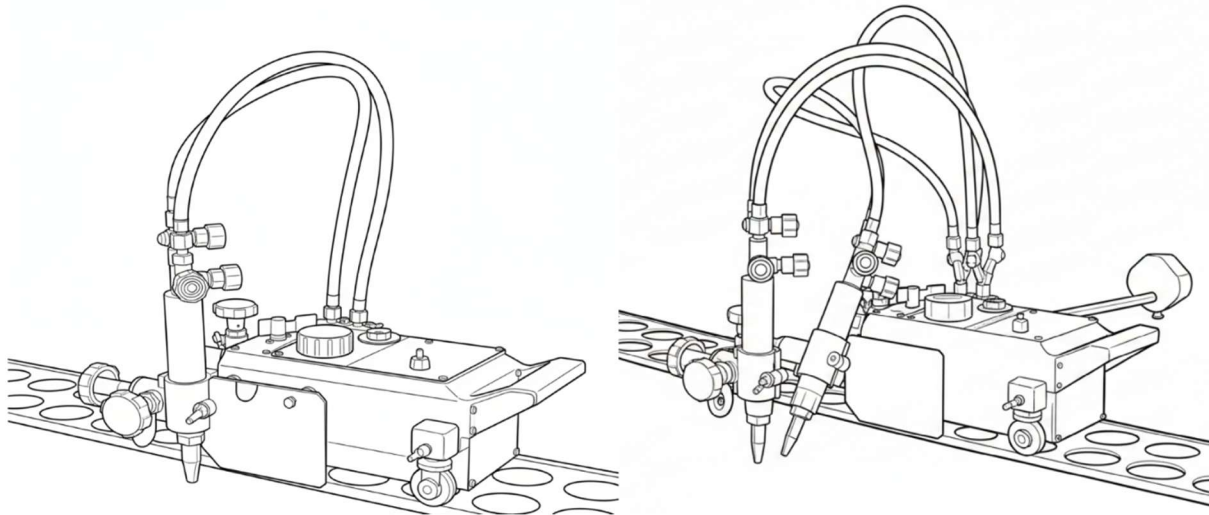
The devices use a non-slip machine torch. Depending on the nozzle used, it is possible to cut with acetylene or propane. The cutting torch works with PNME and ANME block nozzles compatible with BOC nozzles.

3. SPECIFICATIONS

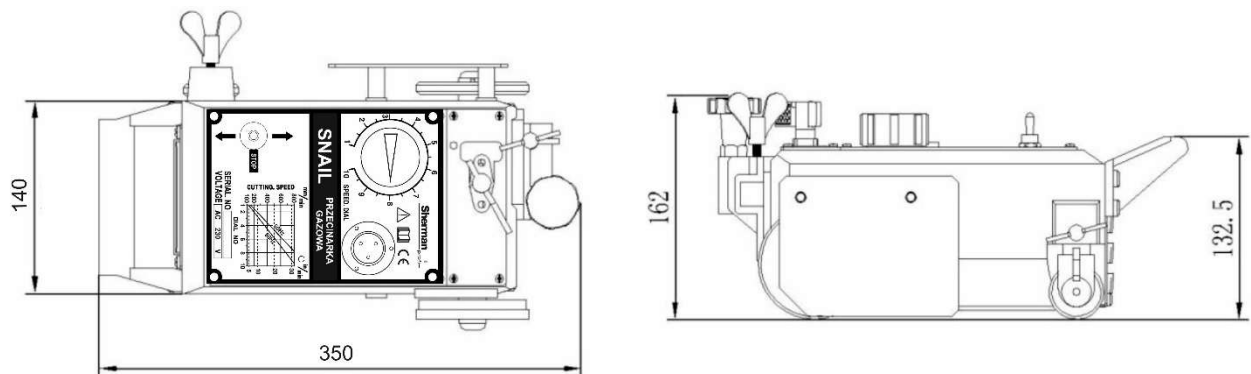
Mass	13 kg
Overall dimensions	350x140x175 mm
Track width	160 mm
Cutting speed	150-800mm/min
Cutting thickness	6-100mm
Degree of protection of live parts	IP2X

No nozzl es	Cutting thickness [mm]	Oxygen pressure [MPa]	Combustible Gas Pressure [MPa]	Cutting speed [mm/min]
1	1 – 5	0.25-0.35	>0.03	400-320
2	5 – 10	0.25-0.35	>0.03	350-280
3	10 – 30	0.30-0.40	>0.04	300-240
4	30 – 60	0.30-0.40	>0.04	260-200
5	60 – 100	0.40-0.60	>0.04	210-170

Tab.1 Basic cutting parameters



4. CONSTRUCTION AND OPERATION

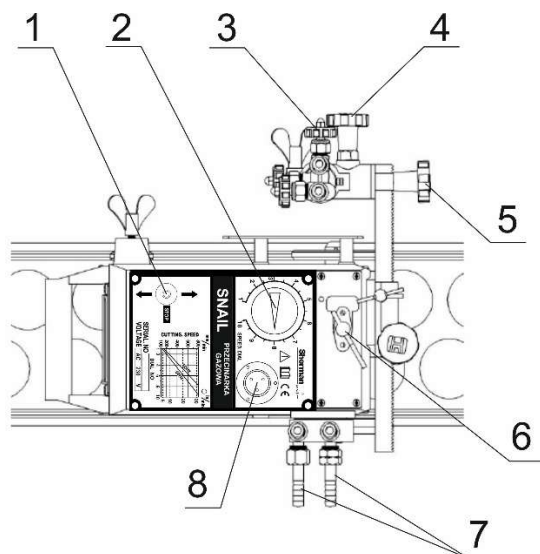


The basic element of the cutter is a trolley with a drive unit and a feed speed control system, to which the side guide, gas distributor, heat shield and torch bottom bracket are attached.

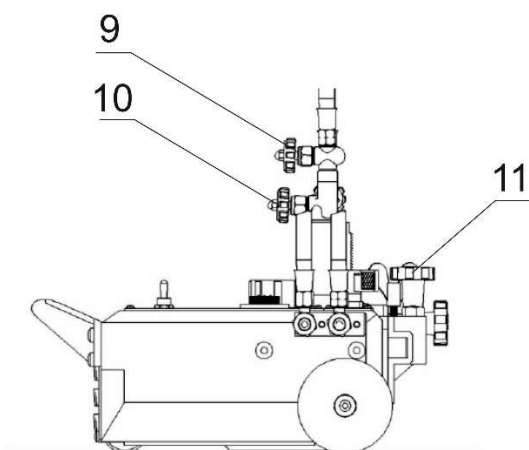
The drive unit consists of an electric motor and a gearbox. The electronic system of infinitely variable adjustment and stabilization of the feed speed ensures high resistance to changes in load, temperature and supply voltage.

The cutter is equipped with an injectorless oxy-fuel torch. The combustible gas, depending on the nozzle used, is acetylene or propane.

In non-slip cutting torch, the mixing of combustible gas with oxygen takes place in a block nozzle. The oxygen flowing into the cutting torch through the heating valve is fed to the block nozzle and flows into the mixing chamber through the openings. Through the second valve, combustible gas is supplied, which also flows into the mixing chamber. When mixed with oxygen, a combustible mixture is formed. The mixture flows to the nozzle outlet, where it burns to produce a high-temperature flame. Through a separate channel to the outlet of the cutting nozzle, the cutting oxygen is supplied, which flows out in the form of a cylindrical co-centric stream with a heating flame.



1. Direction Switch
2. Speed control knob
3. Cutting oxygen adjustment knob
4. Torch height adjustment knob
5. Torch tilt adjustment knob



6. Clutch switch
7. Gas connections
8. Power cord socket
9. Oxygen control knob
10. Combustible Gas Control Knob
11. Torch Ejection Adjustment Knob

5. PREPARING THE DEVICE FOR OPERATION

Before starting the device for the first time, it is necessary to check its completeness and then install all its components.

The toothed guide should be inserted into the guide mechanism located at the rear of the carriage.

Then attach the torch bottom bracket to the guide.

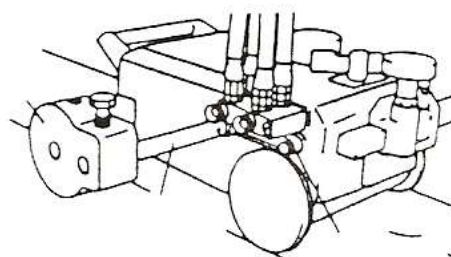
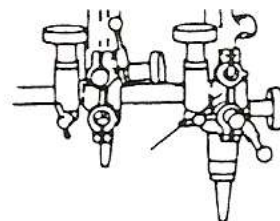
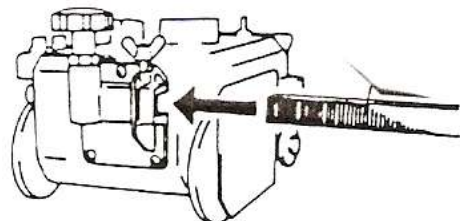
Fix the cutting torch in the bottom brackets.

On the SNAIL 2P, attach the splitters to the gas distributor.

Screw the gas hoses to the cutting torch and the gas distributor.

Attach the gas distributor to the trolley.

In the SNAIL 2P, attach the weight bracket, the weight arm and the balance weight itself.



5.1 Setup and Connection

The cutter should be operated in places protected from precipitation, free of gases and vapours of harmful substances, away from flammable and explosive substances.

5.2 Gas Connection

The gas should be supplied to the inlet ports of the gas distributor with suitable hoses.

5.3 Connecting to the power supply

The cutter should only be used in a single-phase, three-wire, grounded zero point power supply system. The device is adapted to work with an AC 230V 50 Hz network protected by 16A fuses.

5.4 Operation

Each time before starting work, the general technical condition of the cutter should be checked, especially the condition of rubber hoses and cutting nozzles, as well as the tightness of the gas system. To avoid excessive heating of the cutter, try to place the torch as far away from the trolley as possible and lower the heat shield as close as possible to the sheet to be cut.

The sheet metal should be placed on a suitable table or cutting pad. The distance from the floor level should be not less than 100mm.

Clean the cutting area of scale, dirt, paint, rust, etc.

Set the pressure of the supply gases according to Table1.

Set the cutting direction with the switch and then set the appropriate feed speed with the knob. Feed rates are shown in Table1.

Ignition and flame control

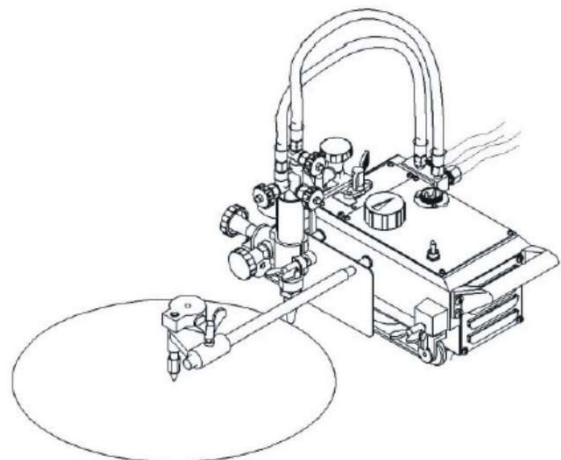
1. Open the combustible gas valve 1/4 - 1/2 turn and light the cutting torch with the igniter
2. Gradually open the heating oxygen valve until a white flame cone is obtained.
3. Open the cutting oxygen valve completely. Adjust the flame. Uneven flow of cutting oxygen adversely affects the quality of the cut surface. In this case, clean the nozzle with a suitable pin during the outflow of cutting oxygen.
4. Set the appropriate distance between the nozzle and the surface to be cut:- for acetylene 8 – 10 mm- for propane 5 – 8 mm

Place the cutting torch over the edge of the sheet metal and heat it. Set the appropriate feed direction and after heating the sheet metal, turn on the feed and cutting oxygen. Control the cutting conditions and adjust the feed speed with the knob if necessary.

When cutting is complete, turn off the cutting oxygen and feed, and then extinguish the flame by closing the acetylene and oxygen valves.

6. CUTTING OUT CIRCLES (OPTIONAL)

The cutter allows you to cut circles with a compass (accessory). To cut out a circle, attach the compass to the cutter as shown in the picture and set the swivel wheels at the right angle depending on the diameter of the circle to be cut.



7. HEALTH AND SAFETY INSTRUCTIONS

The SNAIL cutter must be connected to the 230V + PE 50Hz power supply.

Employees operating the device should have the necessary qualifications to carry out cutting:

- know the rules of health and safety in the operation of electrical equipment
- know the health and safety rules when operating cylinders and systems with compressed gas
- Be familiar with the contents of this manual and operate the appliance for its intended purpose.

When cutting with oxygen with the SNAIL cutter, the following hazards exist:

- Electric shock
- negative effects of flame on human eyes and skin
- vapor and gas poisoning
- burns
- explosion and fire hazards

Electric shock can be prevented:

- connecting the device to a technically efficient electrical system with proper protection and protective efficiency (additional protection against electric shock)
- by replacing the cutting nozzles with the device switched off.

If you notice any irregularities, you should contact competent people to remove them

It is forbidden to operate the device with the covers removed.

The negative effects of flame on human eyes and skin are prevented by:

- Use of protective clothing (gloves, apron, leather shoes)
- Use of safety glasses with the right filter
- Use of protective curtains made of non-flammable materials and properly selected colors of walls that absorb harmful radiation

Poisoning by vapors and gases emitted during cutting can be prevented by:

- Use of ventilation devices and exhausts installed at stations with limited air exchange
- Use of masks and ventilators

Burns are prevented by:

- Use appropriate protective clothing and footwear to protect against burns
- Avoid staining clothing with greases and oils that can lead to ignition

It is forbidden to operate the device and weld in rooms with a risk of explosion or fire.

The cutting station should be equipped with fire-extinguishing equipment.

The cutting station should be located at a safe distance from flammable materials.

The hazards and general health and safety rules presented above do not exhaust the issue of occupational safety, as they do not take into account the specifics of the workplace. An important complement to them are workplace health and safety instructions as well as training and instructions provided by supervision employees.

Cutting torch Fire Prevention

Burning the cutting torch can cause a serious accident or fire. In the event of shooting, the device should be stopped immediately and the causes of shooting should be removed. The most common reasons for backfiring are improper gas pressure, nozzle overheating, slag clogging of the nozzle, or damage to the nozzle.

Flame Flashback Prevention

A flame backfire can cause a dangerous accident. If the flame is retracted, the following actions should be taken immediately:

1. Close the heating oxygen valve
2. Close the combustible gas valve
3. Close the cutting oxygen valve

If flame retardation occurs, stop working and remove the cause of the reversal.

8. OPERATING INSTRUCTIONS

The operation of the SNAIL should take place in an atmosphere free of corrosive components and high dust. Do not place the appliance in dusty areas, near running grinders, etc.

Avoid use in environments with high humidity, especially in situations where dew occurs on metal components. In the event of dew on metal elements, e.g. after introducing a cool device into a warm room, wait until the dew disappears. It is recommended that the cutter be placed under a roof in order to protect it from adverse weather conditions if it is operated outdoors.

The SNAIL cutter should be operated under the following conditions:

- changes in the rms value of the supply voltage not greater than 10%
- ambient temperature from -10°C to $+40^{\circ}\text{C}$
- atmospheric pressure 860 to 1060 hPa
- relative humidity of atmospheric air not exceeding 80%
- altitude up to 1000m above sea level

9. MAINTENANCE INSTRUCTIONS

As part of daily operation, keep the cutter clean and, if necessary, lubricate the guide wheel axles and cutting torch position adjustment guides.

At least once every six months, a general inspection and condition of electrical connections should be carried out, in particular:

- state of protection against electric shock
- isolation status
- security system status

Damage resulting from operating the cutter under improper conditions and failure to follow maintenance recommendations are not covered by warranty repairs.

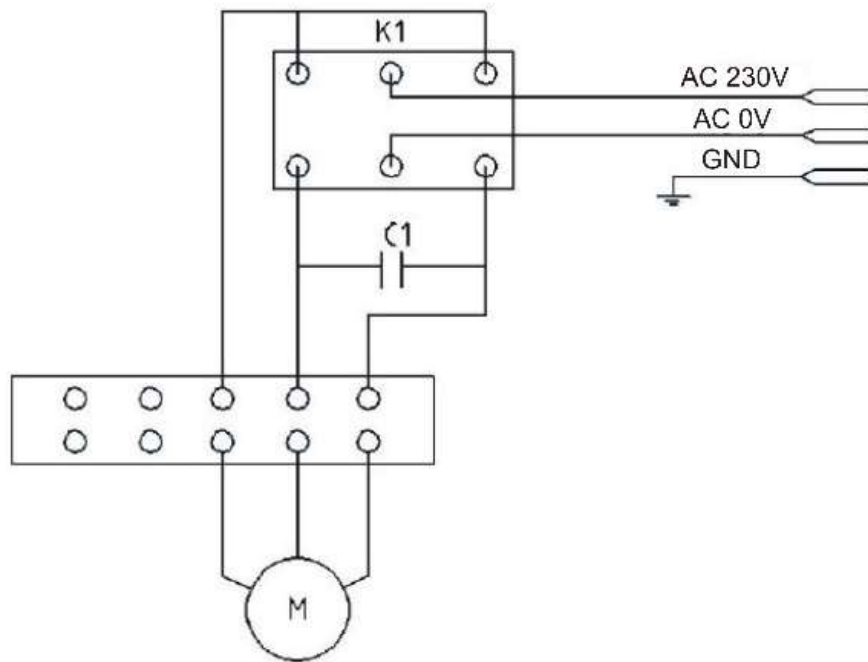
10. STORAGE AND TRANSPORT INSTRUCTIONS

Store the appliance at a temperature of -10°C to $+40^{\circ}\text{C}$ and a relative humidity of up to 80% free of corrosive fumes and dust. Transport of packaged equipment should be carried out by covered means of transport. During transport, the packaged device should be protected against movement and provided with the correct position.

11. COMPOSITION OF THE SET:

SNAIL 1P		SNAIL 2P	
1. Trolley	pcs. 1	1. Trolley	pcs. 1
2. Torch support	pcs. 1	2. Torch support	pcs. 2
3. Toothed guide	pcs. 1	3. Toothed guide	pcs. 1
4. Cutting torch	pcs. 1	4. Cutting torch	pcs. 2
5. Gas distributor	pcs. 1	5. Gas Distributor Bracket	pcs. 1
6. 600mm hose assembly	pcs. 1	6. Gas distributor	pcs. 1
7. Power cord	pcs. 1	7. 600mm hose assembly	pcs. 1
8. Propane Nozzle #1	pcs. 1	8. 800mm hose assembly	pcs. 1
9. Propane Nozzle #2	pcs. 1	9. Balancing weight	pcs. 1
10. Propane Nozzle #3	pcs. 1	10. Power cord	pcs. 1
11. Running rail 1.2m	kpl. 1	11. Acetylene Nozzle #1	pcs. 2
		12. Acetylene Nozzle #2	pcs. 2
		13. Acetylene Nozzle #3	pcs. 2
		14. Running rail 1.2m	kpl. 1

12. ELECTRICAL DIAGRAM



13. WARRANTY

The warranty is granted for a period of 12 months for business entities, but excluding warranty claims, or 24 months for consumers from the date of sale.

The warranty will be respected upon presentation by the complainant of proof of purchase (invoice or receipt) and a warranty card with the product name, serial number, date of sale and stamped point of sale.

To order a warranty repair, you need to fill in the form on the www.tecweld.pl website in the SERVICE tab. On the basis of the notification, the device will be transported to the service by a courier company. Devices sent in any other way at TECWELD's expense will not be accepted!

The device sent for complaint must be packed in the original cardboard box, secured with original polystyrene fittings. TECWELD is not responsible for damage to the welding machine resulting from transport.



If you are going to dispose of this product, do not throw it away with ordinary household waste. According to the WEEE Directive (Directive 2012/19/EU) in force in the European Union, separate disposal methods must be used for used electrical and electronic equipment.

In Poland, in accordance with the provisions of the Act of 11 September 2015 on Waste Electrical and Electronic Equipment, it is prohibited to place waste equipment marked with the crossed-out bin symbol together with other waste.

The user who intends to dispose of this product is obliged to take the waste electrical and electronic equipment to a waste equipment collection point. Collection points are run, m.in., by wholesalers and retailers of this equipment and by municipal organizational units conducting waste collection activities.

The above statutory obligations have been introduced in order to reduce the amount of waste generated from waste electrical and electronic equipment and to ensure an appropriate level of collection, recovery and recycling of waste equipment. The correct implementation of these obligations is especially important when there are hazardous components in used equipment that have a particularly negative impact on the environment and human health.

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