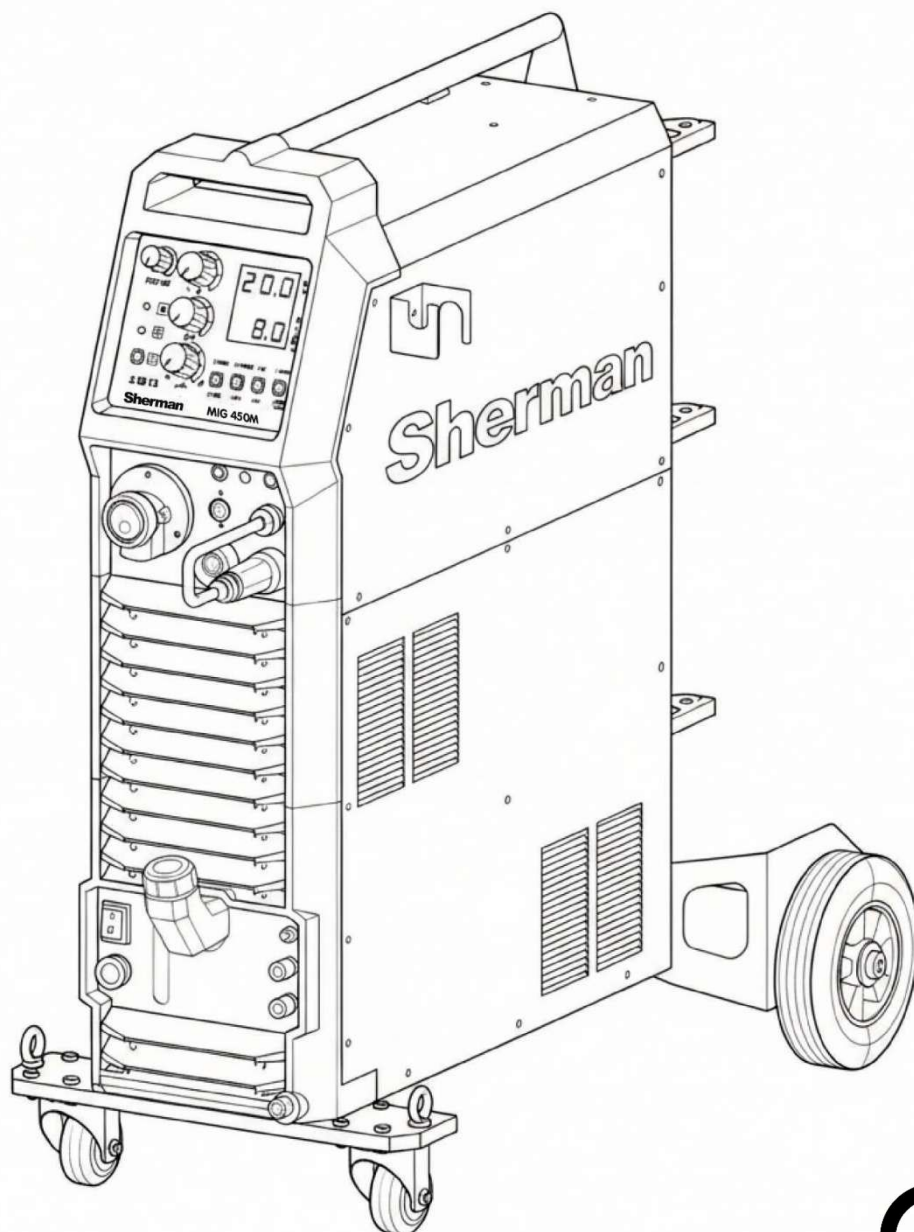


Sherman

ENG/V3.3 7/23/26

USER MANUAL

INVERTER SEMI-AUTOMATIC WELDING MACHINE MIG 450M



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.

Due to the continuous technical development of the device, some of its functions may be modified and their operation may differ in detail from the descriptions in the manual. This is not a fault of the device, but the result of progress and continuous modification work of the device.

Damage to the device caused by improper operation will void your warranty rights.
Any modifications to the welder are prohibited and will void the warranty.

2. SAFETY

Employees operating the device should have the necessary qualifications to perform welding work:

- they should have an electric welder license in the field of welding with coated electrodes and in gas shields,
- know the health and safety rules in the operation of electric power equipment, such as welding equipment and auxiliary equipment powered by electricity,
- know the rules of health and safety when operating cylinders and installations with compressed gas (argon),
- Be familiar with the contents of this manual and operate the appliance for its intended purpose.



WARNING



Welding may endanger the safety of the operator and other people in the vicinity. Therefore, special precautions must be taken when welding. Before starting welding, you should familiarize yourself with the health and safety regulations applicable at the workplace.

The following hazards exist during electric welding with coated electrodes and the MIG/MAG process:

- **ELECTRIC SHOCK**
- **NEGATIVE EFFECTS OF THE ARC ON HUMAN EYES AND SKIN**
- **VAPOR AND GAS POISONING**
- **BURNS**
- **EXPLOSION AND FIRE HAZARDS**
- **NOISE**

Electric shock prevention:

- connect the device to a technically efficient electrical system with proper protection and zeroing efficiency (additional protection against electric shock); other devices at the welder's workplace should also be checked and correctly connected to the network,
- install power cables when the device is switched off,
- Do not touch the non-insulated parts of the electrode torch, electrode and welded object at the same time, including the device housing,
- do not use torches and power cords with damaged insulation,
- in conditions of particular risk of electric shock (work in environments with high humidity and closed tanks), work with an assistant supporting the welder's work and watching over safety, use clothing and gloves with good insulating properties,
- if you notice any irregularities, you should contact competent people to remove them,
- It is forbidden to operate the device with the covers removed.

Preventing the negative effects of the electric arc on the eyes and skin of a person:

- Wear protective clothing (gloves, apron, leather shoes),
- Use protective shields or visors with a properly selected filter,
- Use protective curtains made of non-flammable materials and properly choose the colors of the walls that absorb harmful radiation.

Prevention of poisoning by vapours and gases emitted during welding from the electrode coating and metal evaporation:

- Use ventilation devices and exhausts installed in positions with limited air exchange,

- Blow fresh air when working in confined spaces (tanks),
- Use masks and ventilators.

Burn prevention:

- Wear appropriate protective clothing and footwear to protect against burns caused by arc radiation and spatter,
- Avoid staining the garment with greases and oils that may lead to its inflammation.

Explosion and fire prevention:

- It is forbidden to operate the device and weld in rooms at risk of explosion or fire,
- The welding station should be equipped with fire-fighting equipment,
- The welding station should be located at a safe distance from flammable materials.

Preventing the negative effects of noise:

- Use earplugs or other noise protection equipment,
- Warn of danger to people nearby.

**WARNING!**

Do not use a power source to defrost frozen pipes.

Before starting the device, you should:

- Check the condition of electrical and mechanical connections. It is forbidden to use torches and power cords with damaged insulation. Improper insulation of torches and power wires may result in electric shock,
- Ensure proper working conditions, i.e. ensure proper temperature, humidity and ventilation in the workplace. Outside closed rooms, protect against precipitation,
- Place the welder in a place that allows it to be easily operated.

Welding machine operators should:

- be licensed for electric welding with coated electrodes and the MIG/MAG process,
- know and comply with health and safety regulations applicable when performing welding work,
- use appropriate, specialized protective equipment: gloves, apron, rubber shoes, welding shield or visor with a properly selected filter,
- Know the contents of this instruction manual and operate the welding machine as intended.

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

When the appliance is connected to the mains, it is not allowed to touch any components that make up the welding current circuit with your bare hand or through damp clothing.

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

Any modifications to the welder on your own are prohibited and may impair safety conditions.

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 welding machine in rooms with a risk of explosion or fire!

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

When you have finished working, the power cord of the appliance must be unplugged.

The hazards and general health and safety rules presented above do not exhaust the issue of welder's work 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.

3. GENERAL DESCRIPTION

The MIG 450M semi-automatic welding machine is an inverter device designed for manual welding of steel and non-ferrous metals with a coated electrode (MMA process) as well as the MIG/MAG process using a standard MIG/MAG welding torch cooled with liquid up to 500A (standard included) or gas up to 360A (optional) and a Spool Gun (optional). It enables MIG/MAG welding using both standard shielded gas wires and self-shielding powder wires.

The device is used in closed or covered rooms, not exposed to direct weather influences.

The MIG 450M welding machine is powered by a 3x400V three-phase network and works with D200 (5 kg) and D300 (15 kg) wire spools. The device is equipped with an integrated cooler and a liquid-cooled MIG/MAG welding torch.

The MIG/MAG option of the Spool Gun (SG) allows a second SG torch to be connected in parallel with a mini wire feeder and a D100 spool of steel or colored wire, so you can weld with two different wires without having to retool. The torch is selected via the operating mode switch. A time-saving solution when you need to weld different materials or occasionally use different wire thicknesses.

4. TECHNICAL PARAMETERS

4.1 Welding Machine

Supply Voltage:	AC 3x400 V
Maximum power consumption:	24.7 kVA
Rated Welding Current:/ Duty Cycle	450A / 60%
Welding Current Regulation Range (MIG):	50 – 450 A
Welding Current (MMA) Control Range:	60 – 450 A
Max welding current for Spool Gun chuck:	150 A
Rated No-Load Voltage (MMA)	79 V
Wire spool diameters:	200mm, 300mm
Wire feeding speed adjustment range:	3 – 24 m/min
Wire feeding speed adjustment:	Liquid
Time control range for POST GAS function:	1 – 10 s
Maximum power consumption:	32 A (MIG) 31 A (MMA)
Network Security:	25 A
Weight:	72 kg
Dimensions [mm]:	995 x 505 x 1000
Degree of protection:	IP21S

4.2 Cooler

Coolant Flow	8.0 l/min
Coolant pressure	0.3 MPa
Tank capacity	6 l

4.3 MIG Torch

	MIG 450M
Torch Type	TW-501
Maximum current carrying capacity	500A (mixture); 450A (CO ₂)
Cooling Type	liquid
Refrigerant Gas Flow	10-18 l/min
Length	5 m

Duty cycle

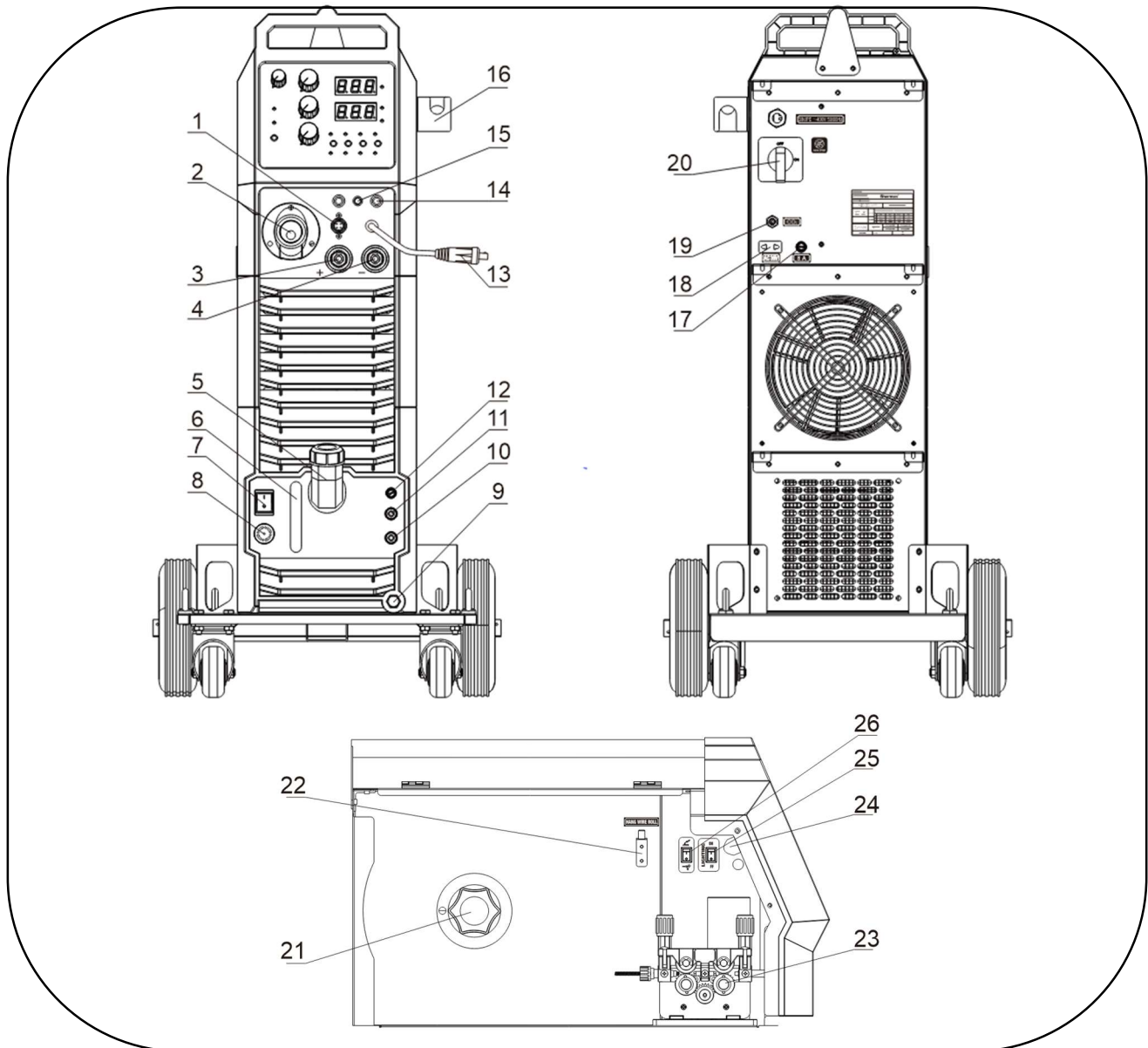
The duty cycle is based on a 10-minute period. A 60% duty cycle means that a 4-minute break is required after 6 minutes of operation of the device. A 100% duty cycle means that the device can operate continuously, without interruptions.

Attention! Heating tests were carried out at the temperature of the surrounding air. The duty cycle at 40°C was determined by simulation.

Degree of protection

IP determines the extent to which the device is resistant to the ingress of solid and water contaminants. IP21S means that the device is suitable for indoor use and is not suitable for use in the rain.

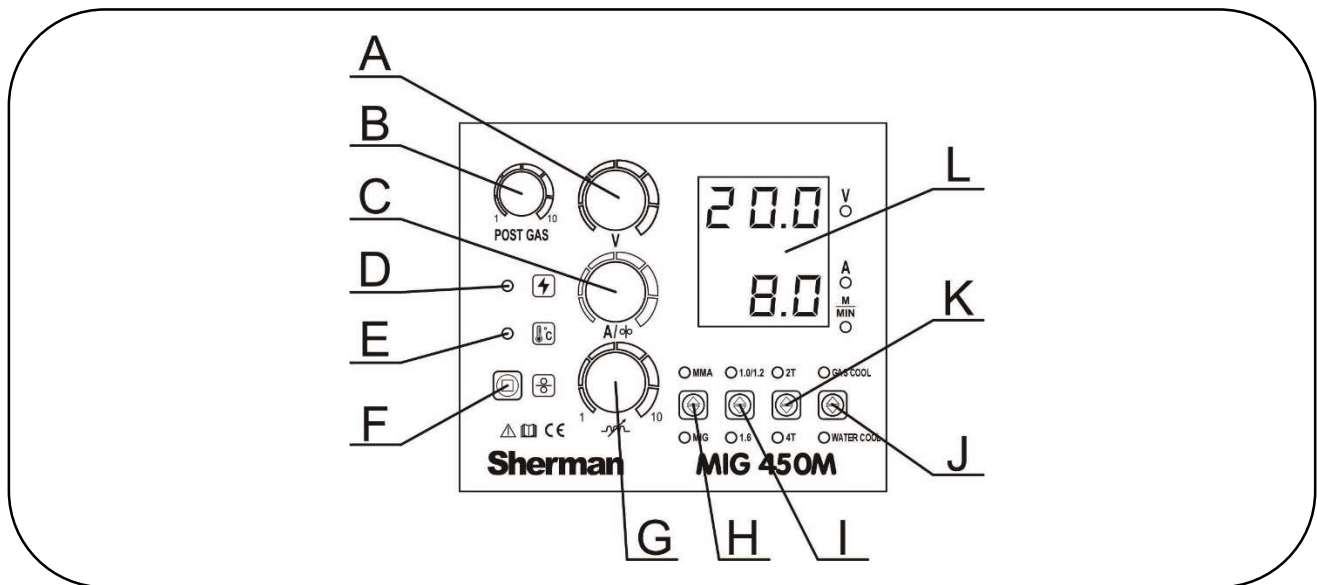
5. DESCRIPTION OF SWITCH AND KNOB FUNCTIONS



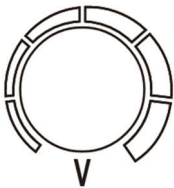
- | | |
|---|-------------------------------------|
| 1. Spool Gun control socket | 20. Main switch |
| 2. MIG/MAG welding torch socket | 21. Wire spool shank |
| 3. "+" socket | 22. Roller hanger |
| 4. Socket "-" | 23. Wire feeder |
| 5. Coolant tank filler | 24. Feeder chamber lighting |
| 6. Coolant level indicator | 25. Feeder compartment light switch |
| 7. Cooler power switch | 26. Welding Torch Type Switch |
| 8. LED indicating incorrect operation of the cooler "ALARM" | |
| 9. Coolant tank drain plug | |
| 10. Coolant outlet connection | |
| 11. Coolant inlet connection | |
| 12. Cooler fuse | |
| 13. Polarity change plug | |
| 14. LED lighting | |
| 15. LED Lighting Switch | |
| 16. MIG Torch Hanger | |
| 17. Welding Machine Fuse | |
| 18. AC36V Heater Power Socket | |
| 19. Shielding gas connection | |

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5.1 CONTROL PANEL



A – Welding Voltage Adjustment Knob



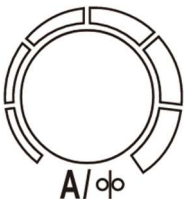
Knob active only during MIG/MAG welding. It is used to adjust the welding voltage.

B – Gas flow control knob



Knob active only during MIG/MAG welding. It is used to regulate the gas flow time. Adjustment range: 1 – 10 s.

C – Wire Feed Speed (MIG) / Welding Current (MMA) Control Knob



The knob is used to adjust the welding current (MMA process) or the wire feed speed (MIG/MAG process).

D – Device Operation Indicator LED

- ☐  The LED indicates that the device is plugged in.

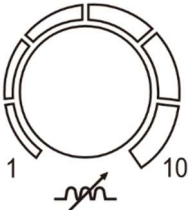
E – Overheat indicator LED

- ☐  The welding machine is equipped with a thermal, self-acting overload switch. When the temperature of the welding machine is too high, the protection will disconnect the welding current and the LED will light up to indicate overheating. Wait until the device has cooled down. Do not turn off the appliance to allow the cooling fans to operate. When the temperature drops, the circuit breaker will automatically reset.

F – Quick Wire Ejection Button

-   Pressing the button activates the feeder, allowing the electrode wire to be inserted into the welding torch.

G – Inductance control knob

-  The inductance control allows the arc characteristics to be optimized depending on the thickness of the component to be welded and the welding process and conditions. The function is useful when welding thin components using the MIG/MAG process, preventing them from burning through, and when welding galvanized components. The thinner the MIG/MAG welded element, the higher the inductance should be (soft arc - less embedding), for thick elements vice versa (hard arc - higher embedding). The standard, neutral inductance setting is in the middle of the scale. Changing the inductance value also reduces the amount of welding spatter during welding in a CO2 shield. The optimal setting of the inductance value depends on several factors and may differ from the standard recommendations, it should be selected during welding tests by manipulating the potentiometer knob.

H – Welding process selection button

- ☐ MMA The button is used to select the welding process:
MMA – coated electrode welding
-  MIG – MIG/MAG welding with electrode wire shielded with shielding gases
- ☐ MIG

I – Wire diameter selection button

- ☐ 1.0/1.2 Depending on the wire diameter used, you should choose the appropriate value. The welding machine will adjust the parameters to the appropriate wire diameter.
- 
- ☐ 1.6

J – Cooling type selection button

- ☐ GAS COOL **Gas cool** – shielding gas cooling
Water cool – coolant cooling



- ☐ WATER COOL

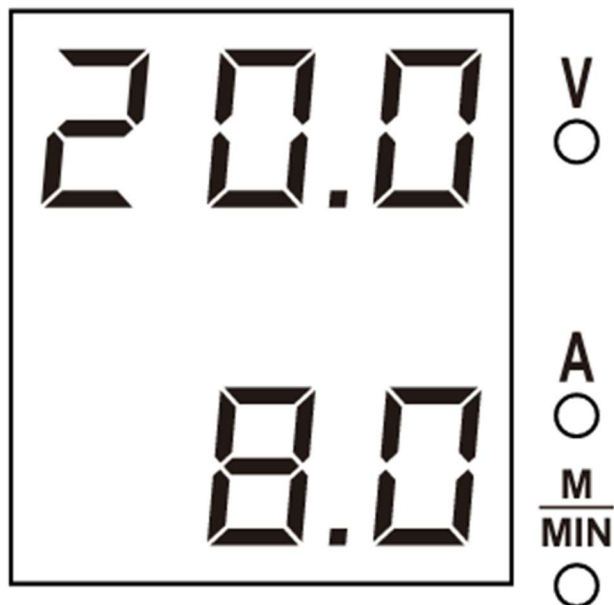
K – Control mode selection button

- ☐ 2T **2T** – two-stroke welding
4T – four-stroke welding



- ☐ 4T

L – Welding Parameter Display



During MMA welding, the display indicates the welding current. In MIG/MAG mode, the display indicates the welding voltage and wire feed speed. The LEDs indicate the unit of the parameter being displayed.

6. COOLER

The MIG 450M welding machine is equipped with a semi-automatic cooler with an alarm system that protects the liquid-cooled torch from damage due to a lack of liquid flow in its circuit. The cooler tank is pre-filled with coolant and vented. Before starting work, make up the fluid level in the tank to the MAX position.

6.1 MIG/MAG Grip Gas Operation and Cooling Mode

If you select a gas-cooled MIG/MAG torch for welding, select the "GAS COOL" setting with the (J) button. This will completely disconnect the power supply and control of the cooler, also preventing it from being switched on with the switch (7) in a manual cycle. In this mode, the cooler is a completely passive element. Selecting the "WATER COOL" mode with the walking gas torch used will prevent welding from starting and the cooler alarm will sound.

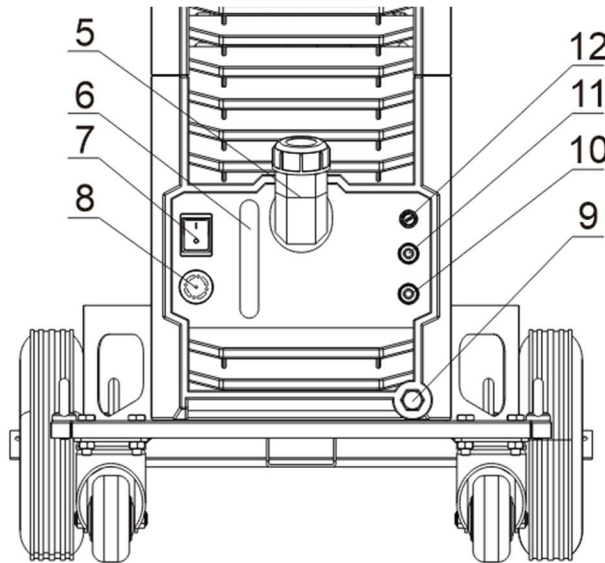
6.2 MIG/MAG Grip Liquid Cooling Mode

If you select the standard TW-501 liquid-cooled torch, select the "WATER COOL" setting with the (J) button. This will activate the cooler power and control system. The liquid circulation system in the cooler is equipped with a fluid flow sensor, which reacts to irregularities, disturbances and failures of the cooling circuit.

In the event of the following irregularities in the functioning of the cooling system:

1. no coolant in the tank or its level below the minimum,
2. damage or bending of the torch or cooler water pipes causing obstruction and lack of liquid flow,
3. plugs of the torch water connections not connected to the sockets (10 and 11),
4. damage to the water pump or pump motor,
5. Liquid Flow Sensor Damage
6. cooler is not switched on (7)

the welding process will be prevented from starting by locking the button activation in the MIG welding torch. MAG or welding interruption. In addition, the signal LED (8) "ALARM" will be switched on and a beep will sound. Once the cause of the fault has been resolved, the cooler control system will automatically activate the cooler and allow you to start or continue welding.



WARNING!

When using a liquid-cooled torch, make sure that the cooling mode is set to the "WATER COOL" position. Setting it to the "GAS COOL" position will result in no liquid circulation in the torch and the knives will overheat.

7. MIG/MAG SOURCE CONTROL MODES

The MIG 450M can be controlled in two-stroke and four-stroke mode during MIG welding. In two-stroke mode, after pressing the button in the torch and igniting the arc, welding must be carried out with the button pressed. Releasing the button on the chuck will complete the welding process.

In four-stroke mode, press the button on the torch torch and ignite the arc. After the arc is ignited correctly, the button can be released and welding can be carried out with the button released. To finish welding, press and release the button on the torch.

8. OVERHEATING PROTECTION

The power source is equipped with a thermal, self-acting overload switch. When the temperature of the welding machine is too high, the welding output will be disabled and the overheating indicator LED (E) will light up. Then wait for the device to cool down without turning it off. When the temperature drops, the circuit breaker will automatically reset.

9. PREPARING THE DEVICE FOR OPERATION

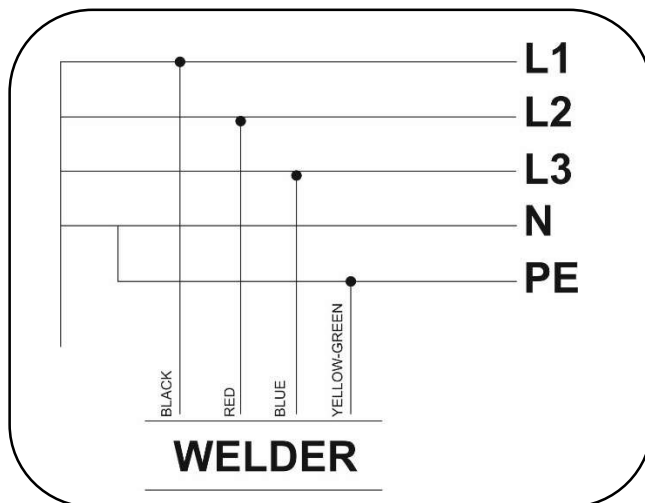
9.1 SHIELDING GAS CONNECTION

1. Fix the cylinder and secure it from tipping over.
2. Unscrew the cylinder valve for a moment to remove any debris.
3. Install the reducer on the cylinder.
4. Connect the reducer to the welding machine with a hose.
5. Unscrew the cylinder and reducer valve.

9.2 CONNECTING TO THE MAINS

1. The MIG 450M should only be used in a three-phase, four-wire, grounded zero point power supply system.
2. The device is adapted to work with a 3x400V 50Hz network protected by 25A delay-acting fuses
3. Before connecting the power supply, make sure that the power switch (20) is in the OFF position.

9.2.1 Connecting the power cords to the three-phase mains plug



The yellow-green cable (protective wire) must be connected to the mains plug in the place marked with the symbol "PE" or "N".

The black, red, blue wires are the cables that supply power to the device (phase) and must be connected to the mains plug in the places marked with the symbols L1, L2, L3 or R1, S2, T3. The order in which the phase wires are connected to the plug in the marked places is arbitrary and does not cause any changes in the operation of the device.

9.3 INSTALLING THE ELECTRODE WIRE SPOOL

1. Open the side cover of the case
2. Check that the drive rollers are suitable for the type and diameter of the wire
3. Attach the electrode wire spool to the stem
4. Protect the spool from falling
5. Release the pressure of the feed rollers
6. Blunt the end of the electrode wire
7. Feed the wire through the feeder drive roller into the torch
8. Press the wire into the grooves of the drive roller
9. Remove the current tip from the torch, turn on the power to the welding machine and press the feeder control button (F) or the torch control button
10. When the electrode wire appears in the outlet of the torch, release the button and screw on the current tip
11. Adjust the pressure force of the feeder roller by turning the pressure knob. Too little clamping force will result in the drive roller slipping, too much clamping force will cause the feeding resistance to increase, which may lead to wire deformation and damage to the feeder.

9.4 PREPARING THE COOLER FOR OPERATION

The cooler tank is pre-filled with coolant and vented. Before starting work, make up the fluid level in the tank to the MAX position.

9.5 PREPARING THE MIG/MAG MOUNT FOR OPERATION

For welding, you can use the liquid-cooled MIG/MAG TW-501 torch, which is included with the welder, or the shielding gas-cooled torch, as an option, for welding with lower currents. Depending on the type of material to be welded and the diameter of the electrode wire, fit a suitable current tip and wire guide insert to the MIG/MAG torch.

For welding steel, use standard current tips and a steel cartridge. In the case of welding aluminium, use current tips designed for welding this material and a Teflon cartridge.

Electrode wire diameter	Current Tip Diameter	Wire guide insert
0,8	0,8	Blue
1,0	1,0	Blue / Red
1,2	1,2	Red
1,6	1,6	Yellow

9.5.1 Quick wire extension

The device has a quick wire extension function. Pressing the button (F) quickly ejects the wire for easy insertion into the torch.

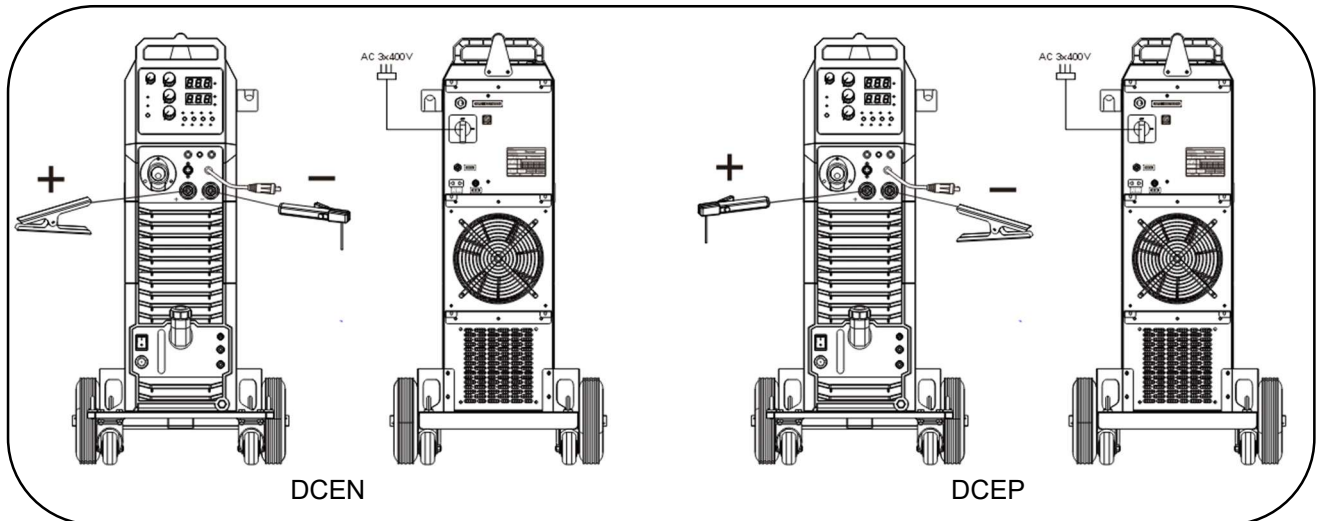
9.6 CONNECTING THE REDUCER WITH THE HEATER (optional)

Install the reducer on the cylinder. Connect the reducer to the welding machine with a hose by installing one end of the gas hose on the reducer connector and the other on the gas connector (19) located on the back of the welding machine. Place the heater plug in the 36V AC socket (18) located on the back of the appliance.

10. CONNECTING THE TORCHES AND WIRES

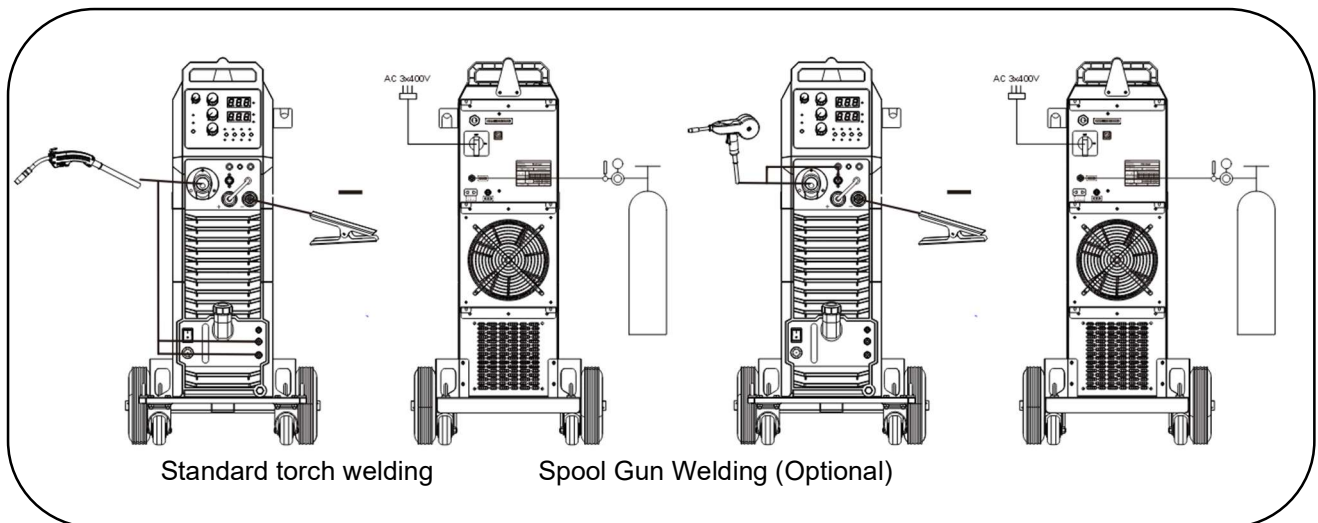
10.1 MMA PROCESS

Connect the ends of the welding wires to the (+) and (-) sockets on the faceplate so that the electrode torch has the correct pole for the electrode. The polarity of the connection of the welding wires depends on the type of electrode used and is indicated on the electrode packaging (DCEN negative polarity or DCEP positive polarity).

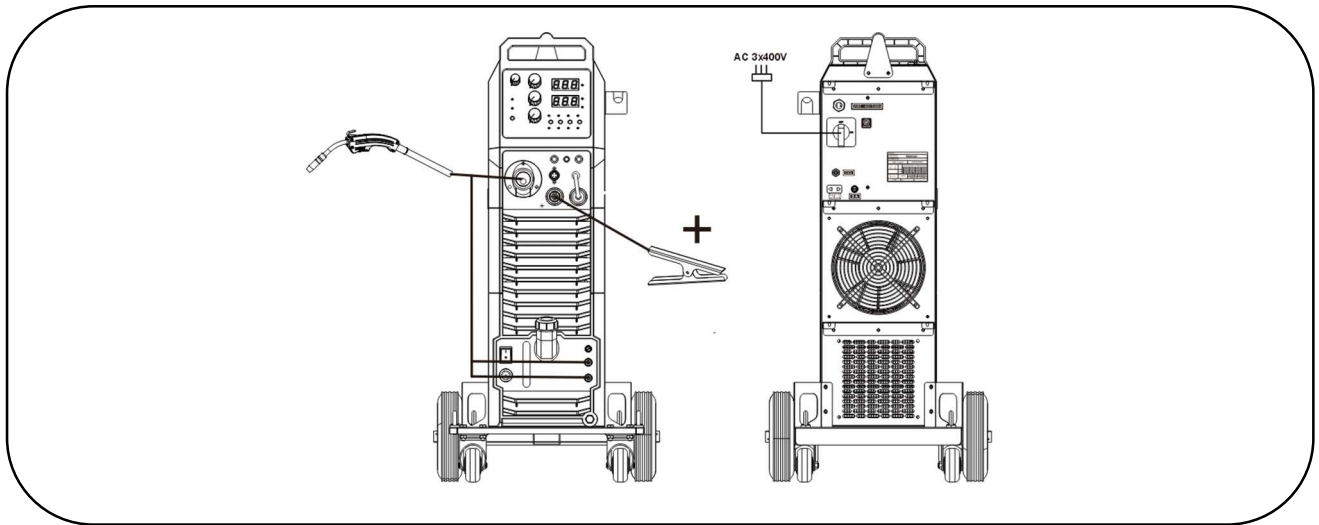


10.2 MIG/MAG PROCESS

10.2.1 Shielded Gas Welding



10.2.2 Welding with steel self-shielding wire



11. COOLER SYSTEM VENTING

1. Pour coolant into the tank slightly above the MAX level.
2. Press the (J) button to select the "WATER COOL" mode.
3. Place the coolant drain hose in the cooler outlet seat (10).
4. Place a low container under the hose outlet. Care should be taken to ensure that the hose is pointing downwards and allows the fluid to flow out freely.
5. Start the cooler pump with the switch (7) for 10-15 seconds. Turn off the pump, wait 10-15 seconds, and turn it back on. Repeat the cycle several times, replenishing the fluid in the tank on an ongoing basis and keeping it at a level close to MAX. Obtaining a uniform stream of fluid, without air bubbles, means venting the system.
6. If you have difficulty obtaining a uniform laminar flow, plug one torch hose into the cooler seat, and inject compressed air into the other or unscrew the coolant tank cap and create overpressure in the tank.
7. After venting, top up the coolant to the MAX level.

If you have problems with venting, contact the service at 32 3869428.

12. BEFORE YOU CALL FOR SERVICE

In the event of malfunction, open the housing and remove dust and metallic deposits from the inside of the welder with dry, compressed low-pressure air before sending the welder for service. Then check the list of basic failures and try to fix them yourself.

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

ATTENTION! The device is not sealed and the user can remove the welding machine housing to remove minor malfunctions.

ATTENTION! The welding machine is equipped with a Fan Stop function that turns off the fan a few minutes after welding is finished and the device has cooled down. The fan restarts under load.

List of basic failures

Symptoms	Cause	Procedure
Lack of power, malfunction signal, or malfunction of the device	No connection or loose plug inside the device	Check and correct the connections of all electrical plugs inside the unit.)
No electrode wire feeding (feeder motor running)	Too little roller pressure	Set the correct pressure
	Incorrect diameter of guide roller groove	Fit the correct guide roller
	Contaminated liner in the torch	Clean the electrode wire guide
	Blocked electrode wire in the current tip	Replace the current tip
Irregular electrode wire feed	Damaged current tip	Replace the current tip
	The groove of the feed roller is dirty or damaged	Clean the roller groove or replace the roller
	The wire spool rubs against the walls of the welding machine cover	Fix the wire spool correctly
	Lack of proper contact of the ground cable terminal	Improve the contact of the ground terminal
The arc does not ignite	Damaged MIG/MAG torch switch	Replace the switch
	Improper connection of the MIG/MAG mount to the device, wrong selection of the cooling mode of the MIG/MAG mount	Check the condition of the electrical connections of the torch, check that the pins in the socket are not broken or jammed. Check the position of the switch (J)
Arc too long and irregular	Welding Voltage Too High	Reduce welding tension
	Wire feed speed too low	Increase wire feed speed
Arc too short	Welding Voltage Too Low	Increase welding tension
	Wire feed speed too high	Reduce wire feed speed
When the power is turned on, the power on indicator light does not light up	No supply voltage	Check the fuses on the mains connection
The superheat LED is on	The device has overheated.	Wait a few minutes for the LED to turn off and continue welding.
Fan not working	The fan has been blocked by a bent cover	Straighten the fan cover
Unsatisfactory weld quality	Inappropriate or poor-quality materials or consumables used,	Replace consumable parts. Change the welding wire or gas cylinder to suitable or higher quality materials
	Shielding gas flows out with inappropriate intensity	Check the gas supply hose, improve the hose connection to the fittings and the condition of the quick connectors Check Cylinder Reducer

Cooling issues

The engine does not work at the first start	Seared motor shaft	Move the motor shaft vigorously clockwise, spray the motor stem with penetrating lubricating fluid.
Switching on the ALARM LED (8)	Lack of fluid or too low in the tank	Top up the coolant
	Water system leaks	Check the condition of the hoses and the tightness of the connections, refill the fluid in the j/w
	Bent hoses	Check the condition of the hoses, remove bends
	Unconnected torch water lines	Plug the plugs into the sockets (10 and 11)
	The cooler is off	Switch on the cooler with the switch (7)
Too little performance	System aeration	Bleed the cooler system
	Too little fluid in circulation	Top up the coolant
Fluid leakage	Water system leakage	Check the condition of the hoses and the tightness of the connections

13. OPERATING INSTRUCTIONS

The MIG 450M semi-automatic welding machine should be operated in an atmosphere free of corrosive components and high dust. Do not place the appliance in dusty areas, near running grinders, etc. Dust and metallic swarf contamination of control boards, cables and connections inside the device can lead to an electrical short circuit and, as a consequence, damage to the welding machine.

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 cold device into a warm room, wait until it is completely dry and the device warms up to ambient temperature. Running a cold welding machine under these conditions may cause damage to the welder. It is recommended that the welding machine be placed under a roof in order to protect it from adverse weather conditions.

MIG 450M devices 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

Non-aggressive ethylene glycol-based fluids from recognized welding equipment suppliers should be used as a refrigerant. The liquid should not be diluted.

NOTE

Water must not be used as a refrigerant, as this may damage the liquid pump and the entire cooler may fail. The terms "WATER" used in this manual are for circulation purposes only, they do not refer to the type of coolant used.

List of consumable parts:

Lp.	For steel wires	For aluminum wires
1	Feeder roller 4Rn 30x11x12mm	Feeder Roller 4Rn Al 30x11x12mm
2	Current Connector TW-401/501 M8x30	Al TW-401/501 M8x30 Terminal
3	Current Connector TW-401/501	
4	Insulation sleeve TW-401/501	
5	Gas nozzle TW-401/501	
6	5m steel insert	5m Teflon Cartridge

A full list of consumables and spare parts is available on the www.tecweld.pl website and at TECWELD. It is possible to purchase these parts directly.

14. MAINTENANCE SCHEDULE

To ensure safe and reliable operation of the device, inspections and maintenance must be performed according to the following schedule.

Daily	Weekly (once a week)
• check the tightness of the cooling system, • check the coolant level in the cooler tank, • check the correct operation of cooling fans, • remove external dirt on the device, • Check that the control panel and security features are working properly.	• check the condition of the wire feeder rollers, • check the wear of the welding torch current tips and gas nozzles, • clean the wire feeder from dust and shavings, • check the condition of welding cable connections, • Check the operation of the wire spool brake (if any).

Quarterly (every three months)	Periodically (once a year)
• carry out a general technical inspection of the device, • check the effectiveness of the electric shock protection, • check the condition of insulation of wires and electrical components, • check the operation of thermal and overcurrent protection, • Check the condition of the fans and the efficiency of the cooling system, • check the tightness of all connections of the cooling system, • Clean the heat exchanger (cooler) of dust and debris.	• replace the coolant according to the manufacturer's recommendations, • Conduct a full review of the wire feeding system • Check the condition of contactors, connectors, screw connections and internal wires, • perform electrical measurements in accordance with applicable regulations and company procedures, • check the condition of the travel wheels and fasteners of the device.

Additional operating recommendations

-  **Maintaining the optimum operating temperature** – especially important for multi-hour cycles.
-  **Use the right coolant** – preferably original fluids or glycolates intended for welding coolers.
-  **Quick replacement of worn tips, nozzles and feeder rollers** to avoid damage to the torch.
-  **Regularly check the regulator and gas lines** – especially for leaks.

15. STORAGE AND TRANSPORT INSTRUCTIONS

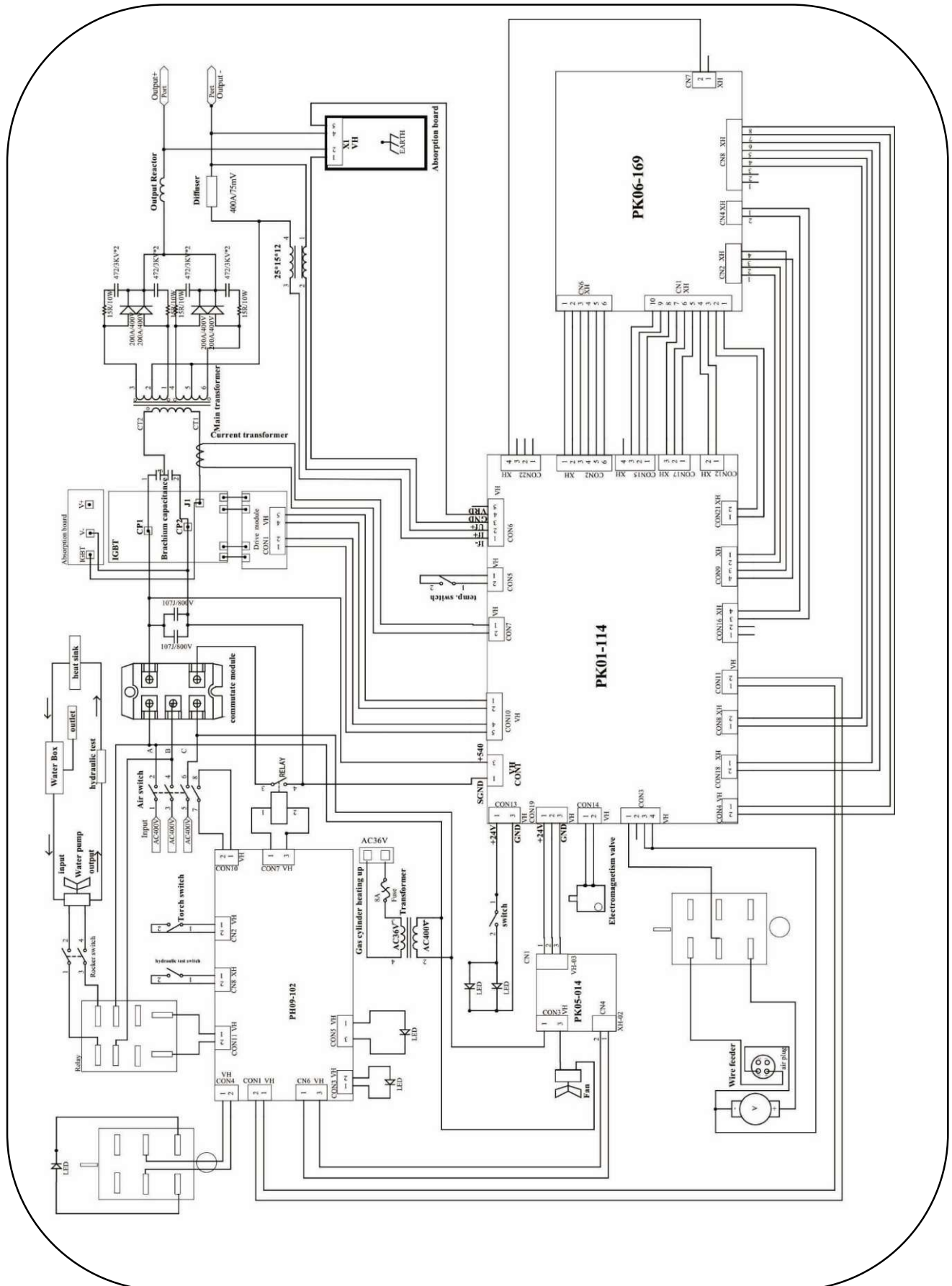
Store the appliance at a temperature of -10°C to $+40^{\circ}\text{C}$ and a relative humidity of up to 80% free of corrosive fumes and dust. Transport of packaged equipment should be carried out by covered means of transport. Due to the considerable weight of the device, appropriate material handling equipment such as forklifts, pallet trucks, cranes or other means with an appropriate lifting capacity must be used to lift it. Lifting should only be carried out at the transport points provided for this purpose or in accordance with the markings on the device. It is forbidden to lift the appliance manually by one person.

During transport, the device must be protected against movement, tipping over and mechanical damage.

16. SET SPECIFICATION

1. Inverter source with integrated cooler	1 pc.
2. MIG/MAG liquid-cooled welding torch	1 pc.
3. Clamp Clamp Ground Cable	1 pc.
4. Cylinder safety liner	3 pcs.
5. User Manual	1 pc.
6. Packaging	1 pc.

17. ELECTRICAL DIAGRAM



18. 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 welding machine must be supplied with the welding torch. Complaints about a device without a welding torch will not be considered.

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 processes 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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