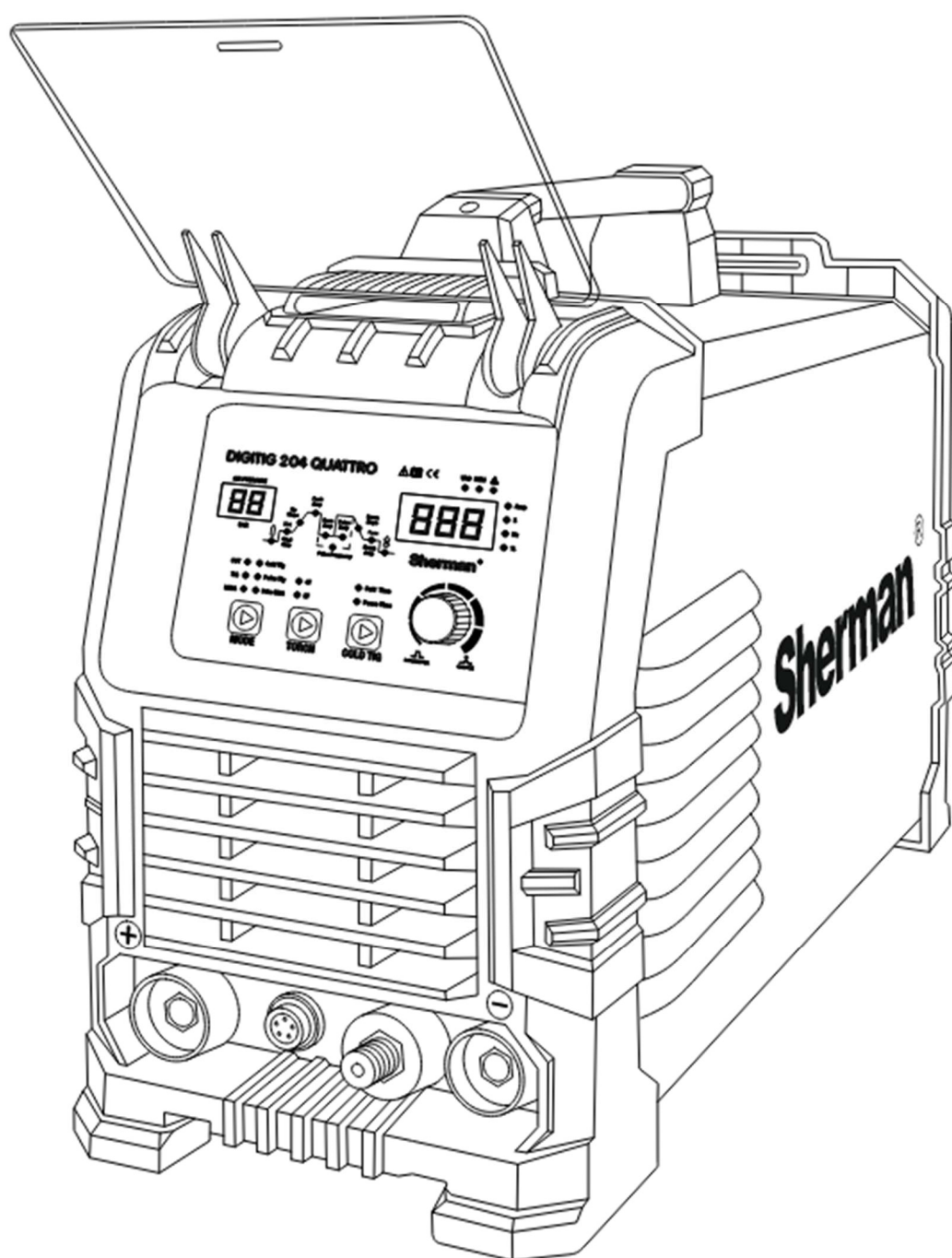


Sherman®

ENG V2.1 14/8/26

USER MANUAL

INVERTER WELDING MACHINE DIGITIG 204 QUATTRO



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. The standard equipment of the device is subject to change.

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

Any modifications to the charger 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 MMA and TIG electric welding:

- **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 holder, electrode and welded object at the same time, including the device housing,
- do not use torch 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 torch and power cords with damaged insulation. Improper insulation of torch 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 charger in a place that allows it to be easily operated.

Welding machine operators should:

- be licensed to weld electrically with coated electrodes and the TIG 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 charger 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 DIGITIG 204 QUATTRO welding machine is a modern digitally controlled IGBT device. It is used for manual welding using the TIG and MMA (coated electrode) process of steel and non-ferrous metals with direct

current with the possibility of using current pulsation. It also enables plasma cutting of steel, aluminum and copper sheets and elements.

The device allows for full digital adjustment and control of welding parameters of arc and pulse characteristics. In addition, it has HF ignition, the ability to control in two-stroke and four-stroke mode, and a variety of spot welding, the so-called cold welding.

4. TECHNICAL PARAMETERS

4.1 Welding Machine

Supply Voltage	AC 230V $\pm$ 10% 50Hz
Rated welding current / duty cycle	MMA: 160 A / 35%; TIG 200 A / 60%
Rated Cutting Current / Duty Cycle	40 A / 35%
Rated no-load voltage	MMA: 70 V; TIG: 75 V; CUT: 310 V
Maximum power consumption	MMA: 37.8 A; TIG 31.4 A; CUT: 32.4 A
Fuse protection	20 A
Weight (without attachments)	7.3 kg
Dimensions	418 x 171 x 307 mm
Degree of protection	IP21S

4.1.1 Parameter control ranges

VRD	On / off
Hot Start	0 – 100 %
Arc Force	0 – 100 %
Shielding gas pre-flow	0.1 – 3 s
Shielding gas post-flow	1 – 15 s
Current build-up	0 – 15 s
Current Drop	0 – 25 s
Starting current	TIG: 10 – 200 A; MMA: 0 – 100 A
Welding/Cutting Current	TIG: 10-200 A; MMA: 20-160 A; CUT: 15 – 40 A
Base Current	5 – 95 % peak current
Final current (of the crater)	TIG: 10 – 200 A; MMA: 0 – 100 A
Pulse Rate	TIG: 0.5 - 200 Hz; MMA: 0.5 - 100 Hz
Pulse width	5 – 95 %
Cold TIG Welding Time	0.1 – 20 s
Cold TIG Break Time	0.1 – 20 s
Pre-flow of air	0.1 – 15 s
Air Flow	0.1 – 30 s

4.2 TIG Torch

Torch Type	T-17
Maximum current carrying capacity	200 A
Gas Flow	10-20 l/min
Ignition of the arc	Non-contact (HF)
Length	4 m

4.3 Plasma Torch

Torch Type	PT31
Maximum current carrying capacity	40 A
Duty cycle	35%
Air Pressure	3.5-5.0 bar (0.35-0.5 MPa)
Airflow	120 l/min
Ignition of the arc	Tactile
Length	4 m

Duty cycle

The duty cycle is based on a 10-minute period. A 35% duty cycle means that a 6.5-minute break is required after 3.5 minutes of operation of the device. 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.

Maximum Cutting Thickness

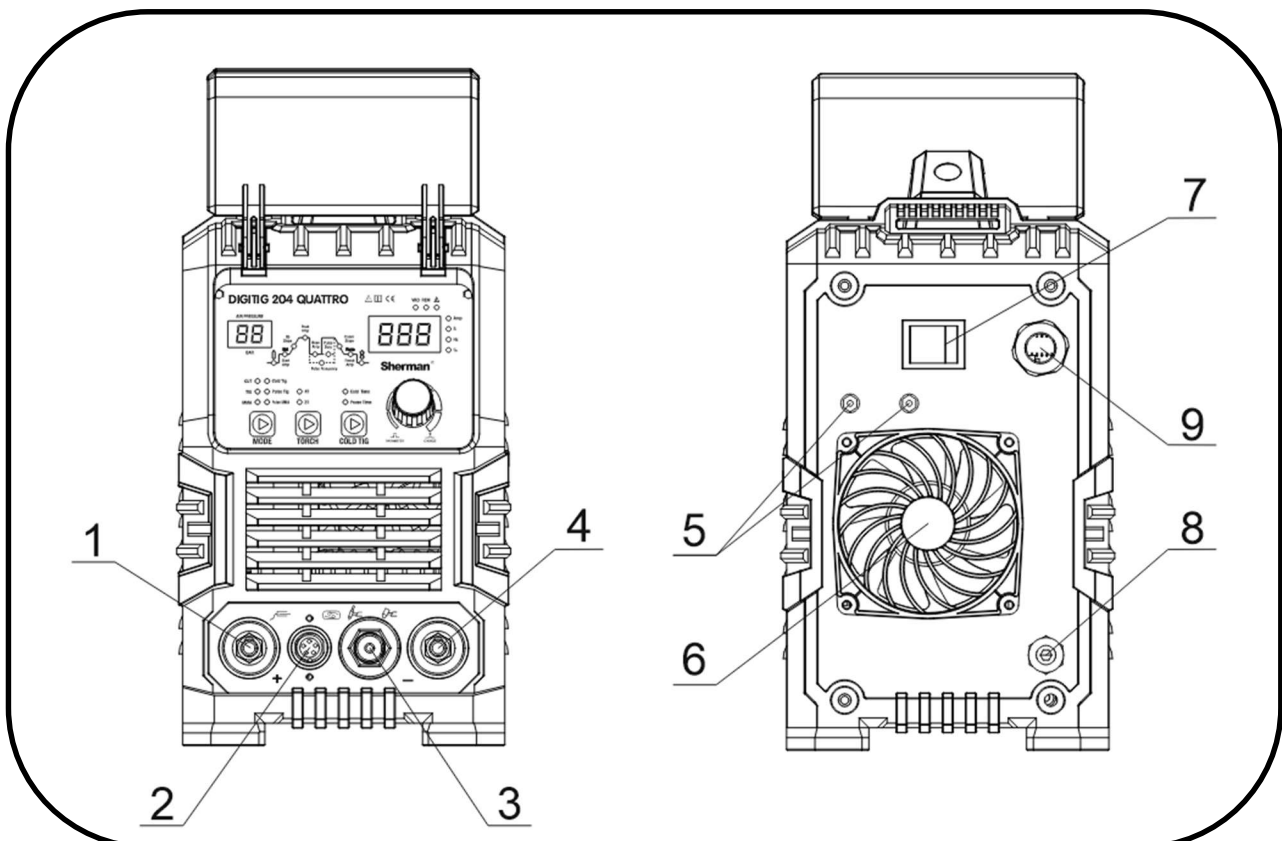
The value of the maximum cutting thickness was determined under optimal cutting conditions of carbon steel of ordinary quality. In order to select the right device, it is recommended to perform technological tests in real operating conditions and on an example material sample.

VRD function

This function lowers the voltage in the no-load state. The correct voltage value is only restored just before the arc is ignited. This minimizes the risk of electric shock, but in some cases it can make it difficult to ignite the arc.

5. PREPARING THE DEVICE FOR OPERATION

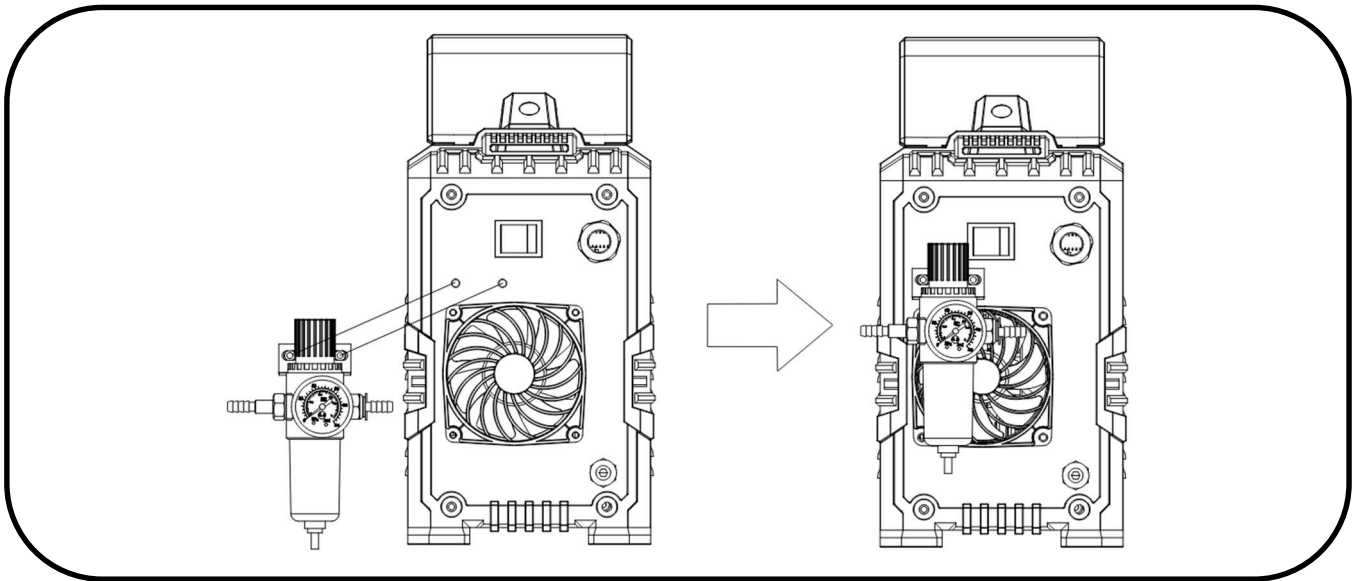
If the device is stored or transported in freezing conditions, bring the device to a temperature above zero before starting work.



- | | |
|---------------------------------------|--|
| 1. Positive polarity socket | 6. Fan |
| 2. TIG and CUT torch control socket | 7. Main switch |
| 3. TIG and CUT torch socket | 8. Shielding gas (TIG) / compressed air (CUT) connection |
| 4. Negative polarity socket | 9. Power cord |
| 5. Attaching the air preparation unit | |

5.1 Assembling the Air Preparation Unit

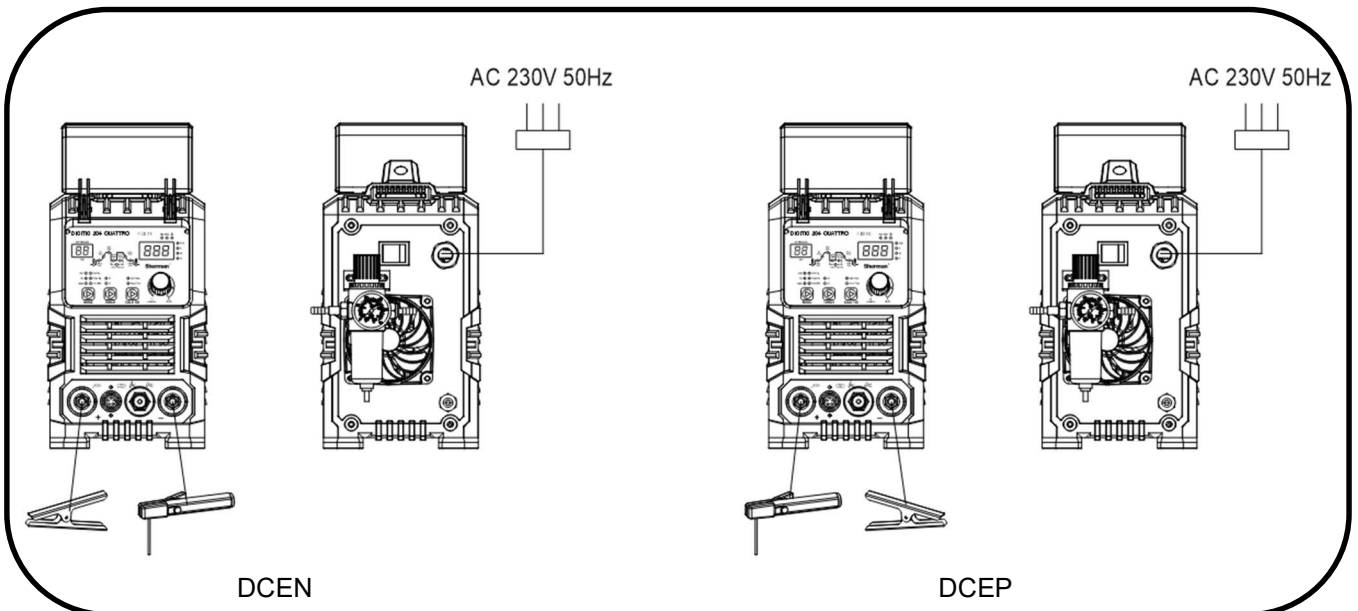
The air preparation unit should be torched on the rear wall of the unit using the fasteners as in the figure:



5.2 Connecting the Wires

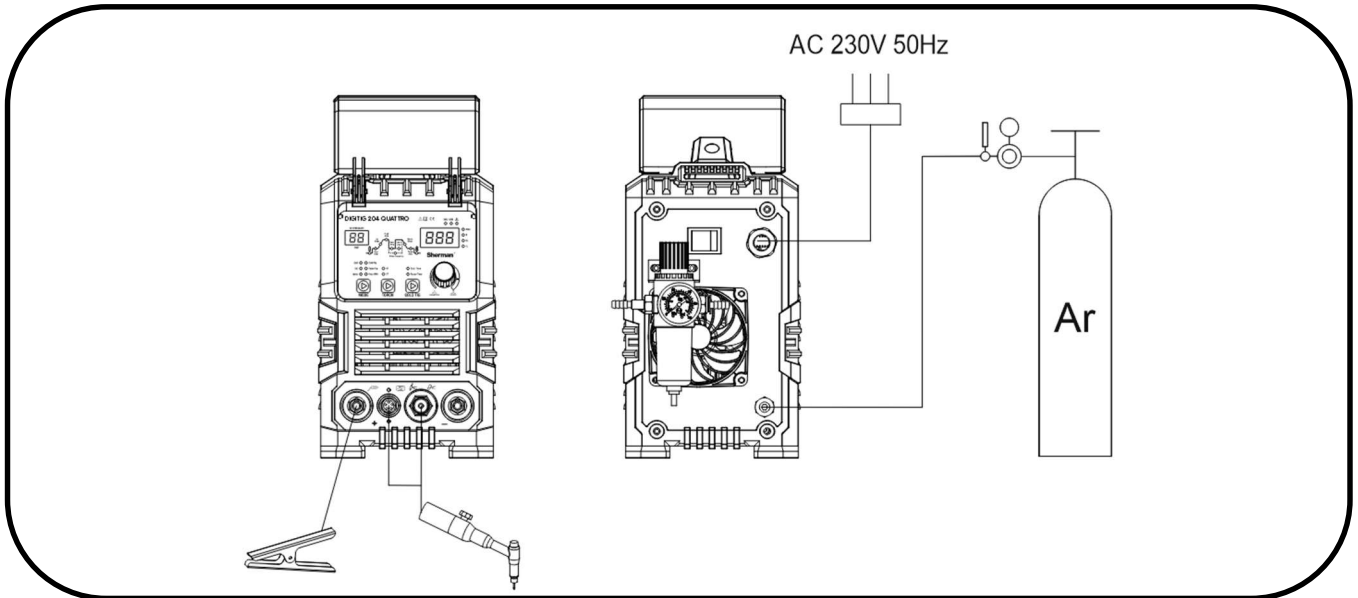
5.2.1 MMA process

Connect the ends of the welding wires to the sockets (1) and (4) on the faceplate so that the electrode holder 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). The ground wire clamp must be carefully fixed to the welded material. Connect the appliance plug to a 230V 50Hz mains socket.

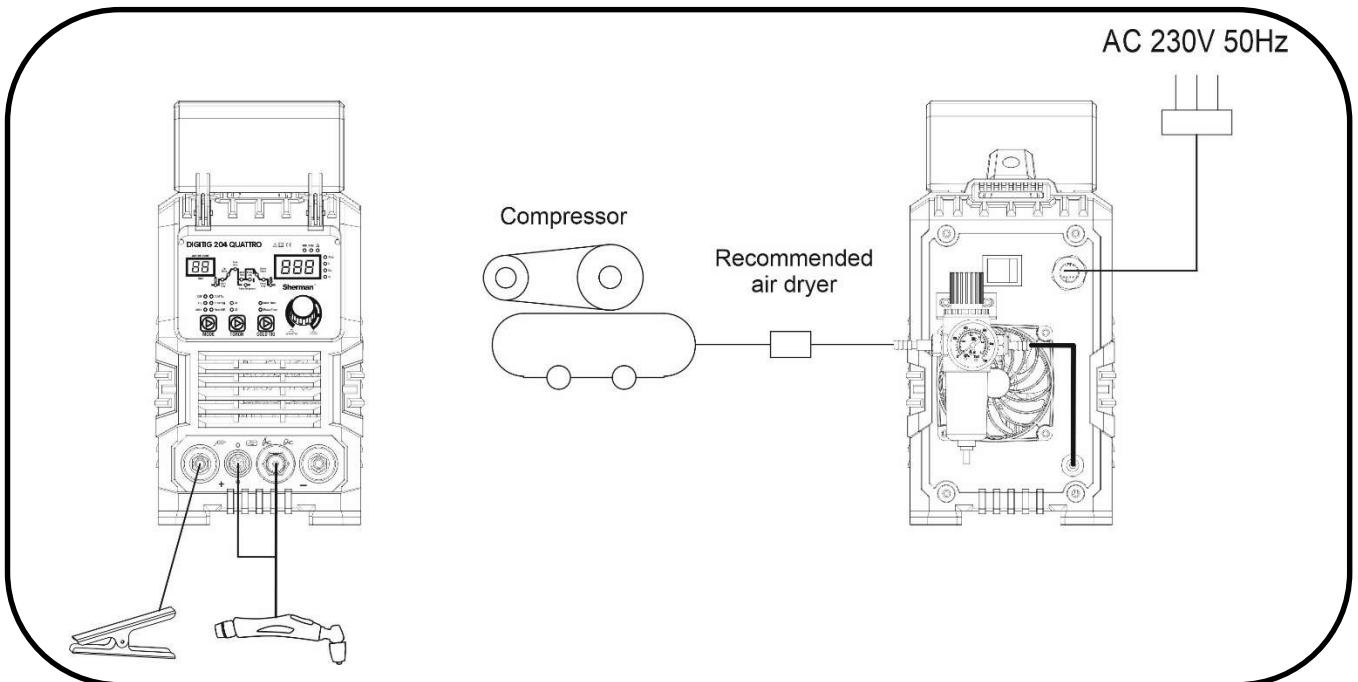


5.2.2. TIG process

Connect the air-to-air clamp of the torch to the negative polarity socket (3) and screw the control plug of the torch carefully onto the socket (2). The gas line from the reducer must be routed and attached to the gas connector (8) located on the back wall of the housing. Connect the positive pole of the source (1) to the welded material using a clamp cable. Connect the appliance plug to a 230V 50Hz mains socket.



5.2.3 Plasma Cutting



Connect the appliance to a compressed air source. The air should be dry and free of oil. (If the air from the compressor contains oil or water, the air system must be equipped with an additional air dryer and filter.) Connect the air preparation unit outlet port with the gas connector (8) located on the back of the housing. Set the correct air pressure.

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The current-air terminal of the plasma torch must be connected to the socket (3) and the control plug of the torch must be carefully screwed onto the socket (2). Connect the positive pole of the source (1) to the welded material using a clamp cable. Connect the appliance plug to a 230V 50Hz mains socket.

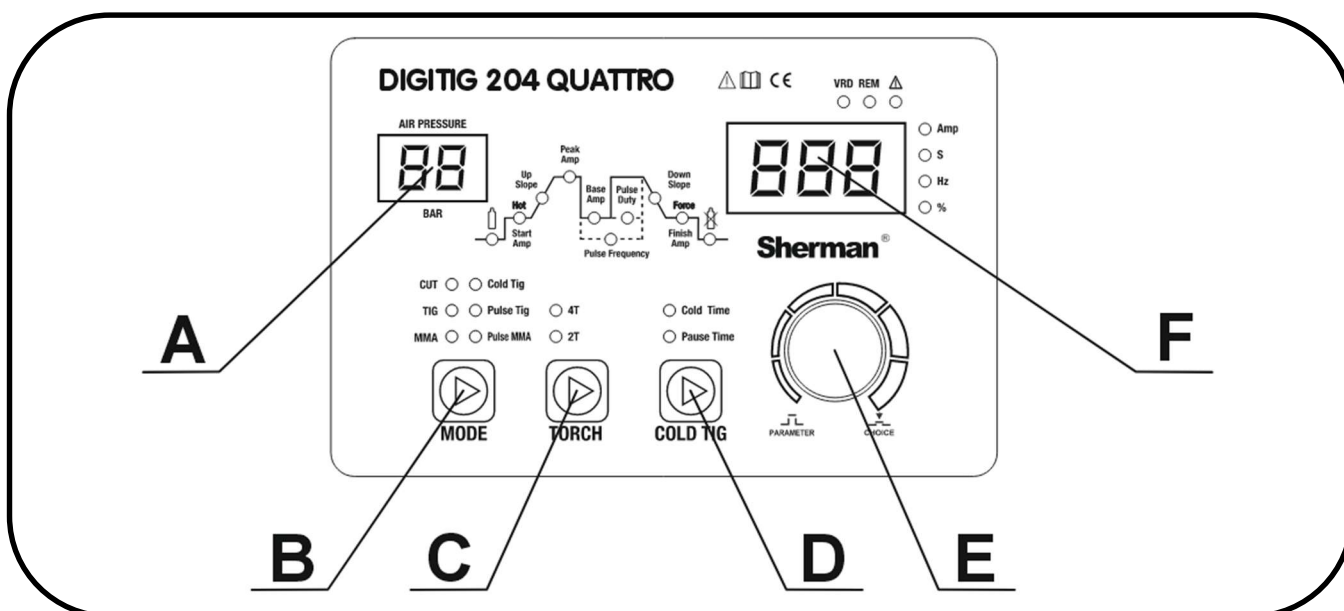
5.3 Control Pedal (Optional)

During TIG welding, the device can be controlled by means of a control pedal. To start pedal control, disconnect the TIG torch control plug from the socket (2) and connect the pedal plug in its place. The welding machine will automatically detect that the pedal is connected and the REM LED will light up on the device panel.

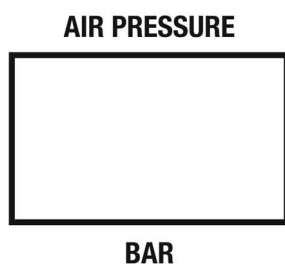
5.4 Connecting to the power supply

1. The appliance should only be used in a single-phase, three-wire, grounded zero point power supply system.
2. The DIGITIG 204 QUATTRO welding machine is designed to work with a 230V 50Hz network protected by 20 A delay-acting fuses. The power supply should be stable, with no voltage drops.
3. Before connecting the power supply, make sure that the power switch (7) is in the OFF (off) position.

FRONT PANEL



A – air pressure display



The display indicates the air pressure during plasma cutting.

B – MODE button

CUT ☐ ☐ Cold Tig

TIG ☐ ☐ Pulse Tig

MMA ☐ ☐ Pulse MMA



The button is used to select the welding process and the working mode of the welding machine:

CUT	Plasma Cutting
TIG	TIG welding (argon-shielded non-melting electrode)
Cold Tig	Spot type of TIG welding – the so-called cold welding, which allows for the joining of thin elements, thanks to very low heat emission in the joining zone. It consists in cyclical, short-term ignition and extinguishing of the arc. Welding is carried out continuously, without releasing the torch trigger.
Pulse Tig	TIG (argon-shielded non-melting electrode) welding with welding current pulsation
MMA	Coated electrode welding
Pulse MMA	Welding with a coated electrode using welding current pulsation

C – Torch trigger

☐ 4T

☐ 2T



The button is used to select the control mode of the welding machine during plasma cutting and welding **TIG** and **Pulse Tig**.

2T	Two-stroke mode. In this mode, pressing a button in the torch of the welding torch ignites the arc. Welding is carried out with the push of a button. Releasing the button completes welding.
4T	Four-stroke mode. In this mode, when you press a button in the torch of the torch and ignite the arc, release the button and weld with the button released. To finish welding, press and release the button in the torch again.

D – COLD TIG button

☐ Cold Time

☐ Pause Time



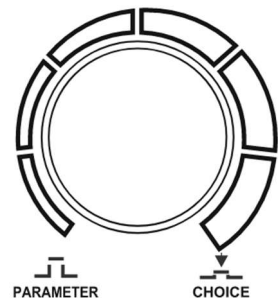
COLD TIG

The button is used to select the adjustable parameter when welding in **Cold Tig**. Once the parameter has been selected, the multi-function knob (E) must be adjusted.

Cold Time	Welding time during spot welding (cold welding).
Pause Time	Break time during spot welding (cold welding).

For example, if you set a welding time of 2 seconds and a break time of 5 seconds, the arc will ignite for 2 seconds and then a 5-second pause.

E – Multi-function knob



The knob is used to change the welding parameters. Turning the knob to the left decreases and turns to the right increases the value of the parameter. Pressing the knob for a short time makes a transition between the set parameters. The currently adjusted parameter is indicated by the illumination of the corresponding LED, and the current value of the parameter appears on the parameter display (A). Pressing the knob again will remember the parameter value and move on to the next parameter.

F – Display: welding/cutting parameters and indicator LEDs

VRD REM 



☐ Amp

☐ S

☐ Hz

☐ %

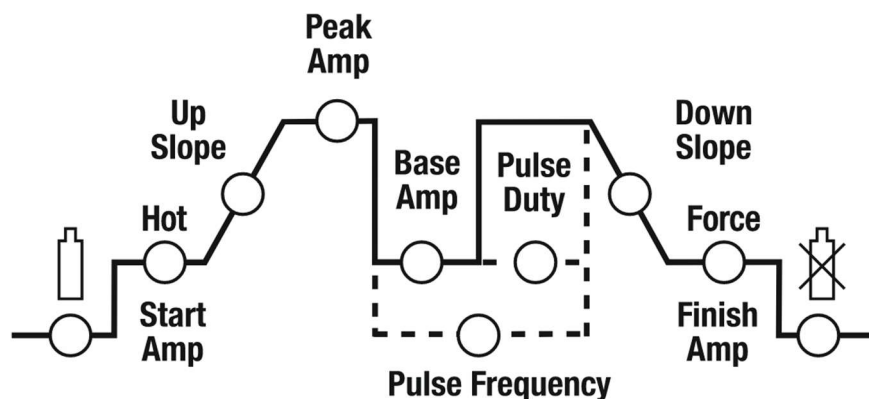
The display indicates the values of the parameters during their adjustment and the welding or cutting current during the operation of the device. The LED on the side of the display lights up indicates the unit of the parameter.

Above the display there are indicator LEDs:

VRD	VRD function. This function lowers the voltage in the no-load state. The correct voltage value is only restored just before the arc is ignited. This minimizes the risk of electric shock, but in some cases it can make it difficult to ignite the arc. To activate or deactivate this function, press and hold the multi-function knob (E) for 3 seconds
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REM	LED to indicate the connection of the control pedal (optional)
	When the LED lights up, it indicates that the device is not working properly. Error code will appear on the display: E02 Thermal protection activated. E04 Temperature Sensor Circuit Error

7. FUNCTION AND PARAMETER SETTINGS



	Gas pre-outflow – the time it takes for the shielding gas to flow before the arc ignites. It should usually be longer than 0.5 s to deliver shielding gas to the torch nozzle outlet to cover the welding start point and the tungsten electrode. In the case of a longer gas supply line from the cylinder, the pre-flow time should be longer.
Start Amp	Initial Current – The current that appears in the circuit when a button is pressed in the torch of the torch. The higher the initial current, the easier it is to ignite the arc. However, when welding thin sheets, too high a value of the initial current can lead to burning.
Hot	Hot Start function it operates when the arc ignites, causing the welding current to temporarily increase above the value set by the welder. Hot Start is designed to prevent the electrode from sticking to the material and is a great convenience when igniting the arc. In the case of welding small components, it is recommended to disable this function, as it may cause the weld material to burn out.
Up Slope	Current build-up – the time it takes for the current to rise from the value of the initial current to the value of the welding current.
Peak Amp	Peak current in Pulse TIG and Pulse MMA modes, or welding current in TIG, Cold TIG and CUT modes.
Base Amp	Base Current – the lower value of the welding current pulse in Pulse TIG mode. The current responsible for maintaining the welding process. It makes it easier to control the torch of heat introduced into the material.
Pulse Duty	Pulse width - the duration of the pulse. It allows you to adjust the depth of embedding. Increasing the width increases the depth of embedding, reducing reduces the torch of heat introduced into the material, reducing the risk of burning through thinner sheets or smaller components. Lower pulse width values should be used for higher currents. A larger pulse width should be used for small currents, for example, a width above 50% should be used for currents below 100A.
Pulse Frequency	Pulse rate. The frequency with which the pulse current value between the welding current and the base current changes.
Down Slope	Current drop – the time it takes for the current to drop at the end of welding from the value of the welding current to the value of the crater current.
Finish Amp	Crater current - the final current when the arc is not extinguished immediately after the descent phase of the welding current. It allows the crater at the end of the weld to be filled.
Force	Arc Force function. This function allows you to adjust the dynamics of the arc. The shortening of the arc length is accompanied by an increase in the welding current, which stabilizes the arc. A decrease in value results in a soft arc and a shallower penetration depth, while an increase in value results in deeper penetration and the possibility of short arc welding. With a high value of the Arc Force function, you can weld while maintaining a minimum arc length and a high electrode melting speed

	Gas outflow – the time it takes for gas to continue to flow after the arc has been extinguished in order to shield the solidifying weld pool from air and to cool the tungsten electrode. Too short a run-out time can result in oxidation of the weld.
Cold Time	Welding time during spot welding (cold welding).
Pause Time	Break time during spot welding (cold welding).

Depending on the selection of the welding process and operating mode, it is possible to adjust the following functions and parameters in the following ranges:

MMA	Peak Amp	Welding Current	20 – 160 A
	VRD	VRD	On / off To activate or deactivate the VRD function, press and hold the multifunction knob (E) simultaneously for 3 seconds
	Hot	Hot Start	0 – 100 %
	Force	Arc Force	0 – 100 %
Pulse MMA	Peak Amp	Peak current	20 – 160 A
	Base Amp	Base Current	5 – 95 % peak current
	VRD	VRD	On / off To enable or deactivate the VRD function, press and hold the multifunction knob (E) at the same time
	Hot	Hot Start	0 – 100 %
	Force	Arc Force	0 – 100 %
	Pulse Frequency	Pulse Rate	0.5 – 100 Hz
Cold Tig	Pulse Duty	Pulse width	5 – 95 %
	Peak Amp	Welding Current	10 – 200 A
		Gas pre-outflow	0.1 – 3 s
		Gas outflow	1 – 15 s
	Cold Time	Welding time	0.1 – 20 s
	Pause Time	Break time	0.1 – 20 s
TIG	Peak Amp	Welding Current	10 – 200 A
	2T/4T	2T/4T	Yes
		Gas pre-outflow	0.1 – 3 s
	Start Amp	Starting current	10 – 200 A
	Up Slope	Current build-up	0 – 15 s
	Down Slope	Current Drop	0 – 25 s
	Finish Amp	Crater current	10 – 200 A
		Gas outflow	1 – 15 s

Pulse Tig	Peak Amp	Peak current	10 – 200 A
	2T/4T	2T/4T	Yes
		Gas pre-outflow	0.1 – 3 s
	Start Amp	Starting current	10 – 200 A
	Up Slope	Current build-up	0 – 15 s
	Down Slope	Current Drop	0 – 25 s
	Finish Amp	Crater current	10 – 200 A
		Gas outflow	1 – 15 s
	Base Amp	Base Current	5 – 95 %
	Pulse Frequency	Pulse Rate	0.5 – 200 Hz
	Pulse Duty	Pulse width	5 – 95 %
CUT	Peak Amp	Cutting Current	15 – 40 A
	2T/4T	2T/4T	Yes
		Pre-flow of air	0.1 – 15 s
		Air Flow	1 – 30 s

8. WELDING AND CUTTING

8.1 Arc Initiation and Guided Welding Process with Coated Electrode (MMA)

Arc initiation in coated electrode welding involves touching the electrode to the welded material, rubbing it briefly and tearing it off. In the case of arc initiation with electrodes, the coating of which forms non-conductive slag after solidification, the tip of the electrode should be pre-cleaned by hitting the hard surface several times until metallic contact with the welded material is achieved. To complete the welding, you need to lift the electrode and break the arc.

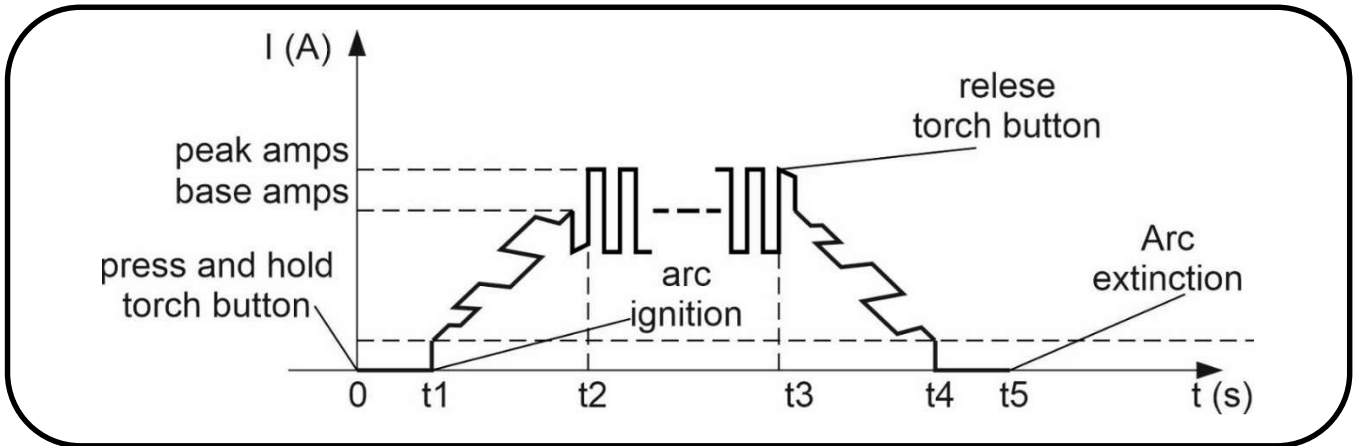
8.2 Arc initiation and TIG welding process

The DIGITIG 204 QUATTRO device is equipped with an ionizer for contactless arc ignition.

To ignite an arc in two-stroke mode, bring the electrode closer to the welded material at a distance of 2 millimeters and press the button in the torch holder to turn on the ionizer. After the correct initiation of the arc, the welding lead with the button pressed. Releasing the button on the torch starts the current drop phase and the welding process ends.

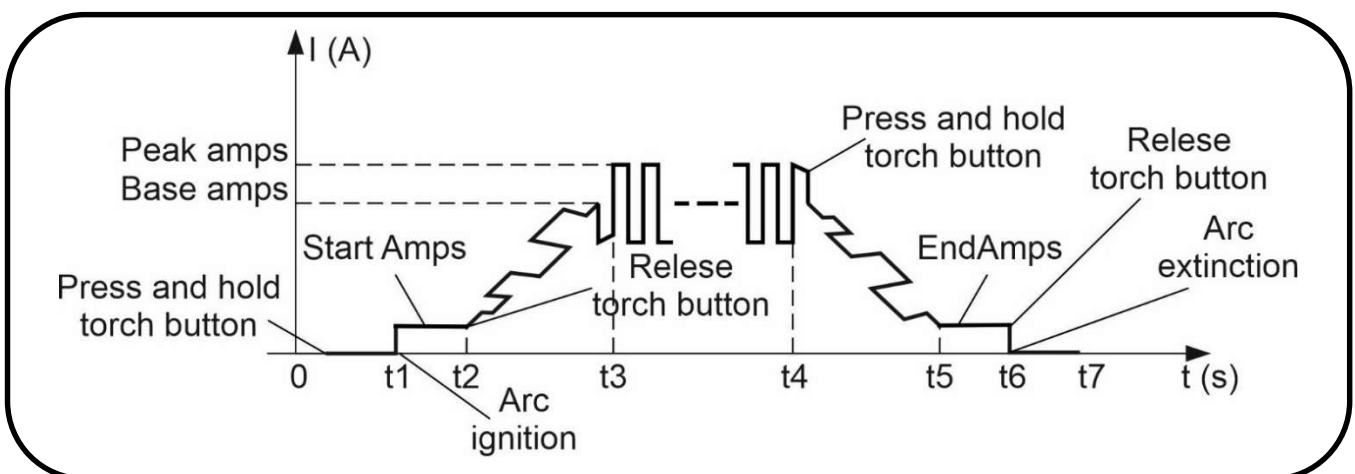
To ignite an arc in four-stroke mode, bring the electrode closer to the welded material at a distance of 2 millimeters and press the button on the torch torch to turn on the ionizer. After the arc is ignited correctly, the button can be released and welding can be carried out with the button released. To finish welding, press and release the button on the holder again.

8.2.1 TIG welding in 2T mode:



- 0 : Press and hold the torch trigger. The outflow of protective gas begins;
- 0~t1: Gas pre-outflow;
- t1~t2: Arc ignition, welding current increases from the minimum value to the set value welding current. If the pulsator is turned on, the current is modulated.
- T2~T3: During welding, the torch trigger should remain pressed; Note: If the pulsator is turned on, the welding current pulses if the pulsator is off, The welding current has a constant value of T3: Release the torch trigger, the welding current starts to drop. If the pulsator is turned on, the falling current is modulated;
- T3~T4: The welding current drops to the minimum value, the arc is extinguished;
- T4~T5: Gas outflow.
- T5: The solenoid valve closes the gas outflow, the end of welding.

8.2.2 TIG welding in 4T mode:



- 0 : Press and hold the torch trigger. The outflow of protective gas begins;
- 0~t1: Gas pre-outflow time. Adjustable in the range of :0~1.0s;
- T1: ignition of the arc, the starting current is determined;
- T2: Release the torch trigger, the current builds up to the set current value welding. When the pulsator is switched on, the current is modulated;
- T2~T3: Current rise time;
- T3~T4: Welding process; Note: If the pulsator is turned on, the welding current pulses, if the pulsator is off, the welding current has a constant value;
- T4: Press the torch trigger. The welding current begins to drop to the value of the crater current. If the pulsator is turned on, the descending current is modulated;
- T4~T5: Current drop time;
- t5~t6: Crater current;
- t6 : Release the torch trigger. The arc is extinguished, shielding gas flows out;
- T7: The solenoid valve closes the gas outflow, the end of welding.

8.3 Arc Initiation and Plasma Cutting Process Guidance

To ignite the arc, bring the torch close to the cut element and lightly touch it to turn on the button in the torch. A spark will jump between the material and the electrode while the air valve is opened, which will ignite the plasma arc and thus begin the cutting process, which will continue until the button in the holder is released.

To avoid interference with the arc glow during cutting, the movement of the torch relative to the material should be uniform and the torch nozzle should be positioned perpendicular to the workpiece to be cut, at a constant distance from it. If the arc glow is interrupted during cutting, release and then press the button on the torch, the pilot arc will be lit again.

The correct assessment of the cutting speed is made on the basis of the assessment of the angle at which the material to be cut is ejected on the lower edge of the cut, as well as on the basis of observations of the material flow and the cut surface. The best cutting results are obtained by using the maximum permissible speeds.

In the event that the cutting speed is too high, the stream is not able to sufficiently melt the metal and throw it outside the cut element, which can cause some of the molten metal to be directed towards the nozzle, and thus lead to a serious failure.

When cutting thin sheets and aluminum, the cut should start slowly to penetrate the material properly. The cutting speed can be increased when the arc penetrates through the bottom edge of the material to be cut.

During normal operation, the distance of the torch should be between 0 and 2 mm.

It is not recommended to turn on the pilot arc without the intention of cutting, as this causes unnecessary wear on the electrode and nozzle.

In the event of arc flares, or if the arc flame is green or makes any abnormal noise, turn off the unit immediately and check the condition of the wear parts.

The cut can be interrupted by releasing the button in the holder or by abruptly detaching the torch from the material. When you release the button on the torch, the arc will be extinguished immediately, and after a dozen or so seconds, the compressed air flow will be turned off. Delay in shutting off the compressed air flow is to cool down the heated torch components

9. BEFORE YOU CALL FOR SERVICE

In the event of malfunction of the device, before sending the welding machine for service, you should 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.

Symptoms	Ways to remove
Control panel does not light up, fan does not work, no output voltage	1. Make sure the switch is in the ON position 2. Check the protection and voltage in the mains 3. Remove the housing and check that all electrical plugs inside the unit are connected
The control panel lights up, the fan does not work, there is no output voltage.	1. Check that the device has not been connected to a higher voltage mains. If so, connect to the 230V mains and turn it back on 2. The supply voltage is unstable and causes the surge protector to be activated. Turn off the appliance for 2-3 min and turn it back on 3. Briefly turning the switch on and off caused the surge protector to be activated. Turn off the appliance for 2-3 min and turn it back on 4. There has been another damage that requires repair by an authorized service center
Control panel lights up, fan running, arc ignition problems	1. Check the TIG torch, replace consumable parts if worn
The control panel lights up, the fan is running, the welding machine does not ignite the arc	1. Check the terminals and the correct electrical conductivity of the electrode and ground wire 2. Check the connection of the TIG torch to the device, pay attention to whether the pins in the socket are not broken or jammed. 3. Unscrew the torch of the TIG torch and check that the switch in the torch is working
The control panel lights up, the fan is running, the message E02 appears on the display	1. The device has overheated. Wait a few minutes. After the LED goes out, continue welding.
Unsatisfactory weld quality in MMA welding, the electrode sticks to the welded material	1. Check the polarity of the connection of the welding wires 2. Check that the electrode is not damp. Replace the electrode. 3. The welding machine is powered by a generator or by a long extension cord with too small a cable cross-section. Connect the device directly to the mains
Unsatisfactory weld quality in TIG welding	1. Replace consumable parts. Change the tungsten electrode or gas cylinder to higher quality materials

	2. Check that the shielding gas flows out with the right intensity 3. Check the gas supply hose, improve the hose connection to the fittings and the condition of the quick connectors 4. Check the cylinder reducer.
Unsatisfactory cutting quality	1. Replace Consumable Parts 2. Check the air supply hose, improve the hose connection to the fittings and the condition of the quick connectors 3. Check the air compressor

List of error codes:

E02	Thermal protection. The device is equipped with an automatic thermal switch that cuts off the welding current when the device reaches too high a temperature. In this case, do not turn off the welding machine or disconnect the power supply. When the correct temperature is reached, the circuit breaker will automatically reset.
E04	Temperature sensor circuit error

10. OPERATING INSTRUCTIONS

The operation of the DIGITIG 204 QUATTRO 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. 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 cool device into a warm room, wait until the dew disappears. It is recommended that the welding machine be placed under a roof in order to protect it from adverse weather conditions.

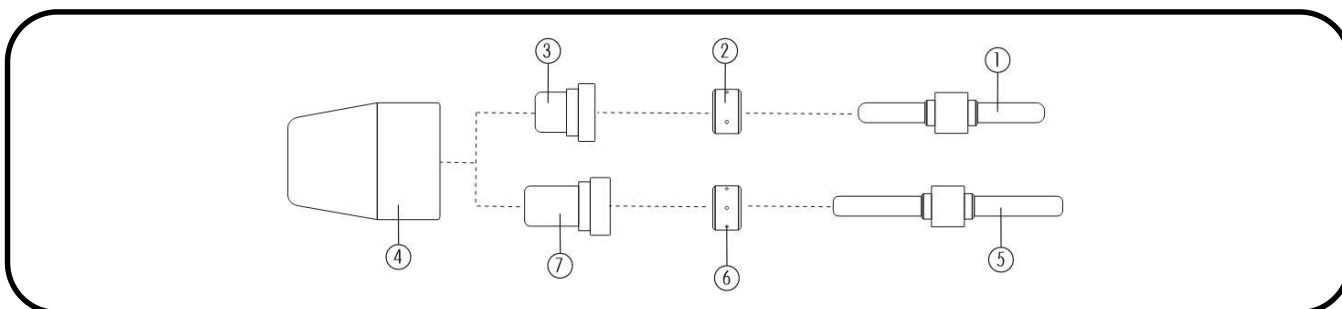
The DIGITIG 204 QUATTRO device should be operated under the following conditions:

- 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

List of consumable parts of the T-17 TIG torch:

Lp.	Name
1	Tungsten electrode
2	T-17 Terminal Sleeve
3	T-17 Current Connector
4	T-17 gas nozzle

PT31 Plasma Torch Consumable Parts List:



Lp.	Name	Part number TECWELD	No Reference
1	Electrode	18205	18205
2	Swirl ring 4 holes	18785	18785
3	Nozzle 1.0	18866	18866
4	Protective sleeve	18204	18204
5	Electrode long	7811603	19683
6	Nozzle 1.0 long	7811602	20860
7	6 Hole Swirl Ring	7812334	20463

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.

11. MAINTENANCE INSTRUCTIONS

As part of daily operation, keep the welding machine clean, check the condition of external connections, and the condition of electrical wires and cables. Regularly remove water from the filter dryer by pressing the drain valve.

Replace consumable parts regularly.

Periodically clean the appliance inside by blowing with compressed air to remove dust and metal filings from the control boards and electrical wiring and connections.

Check the condition of the filter and the water separator cup of the air preparation unit at least once a month. If they are worn, replace them with new ones.

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
- correct operation of the cooling system

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

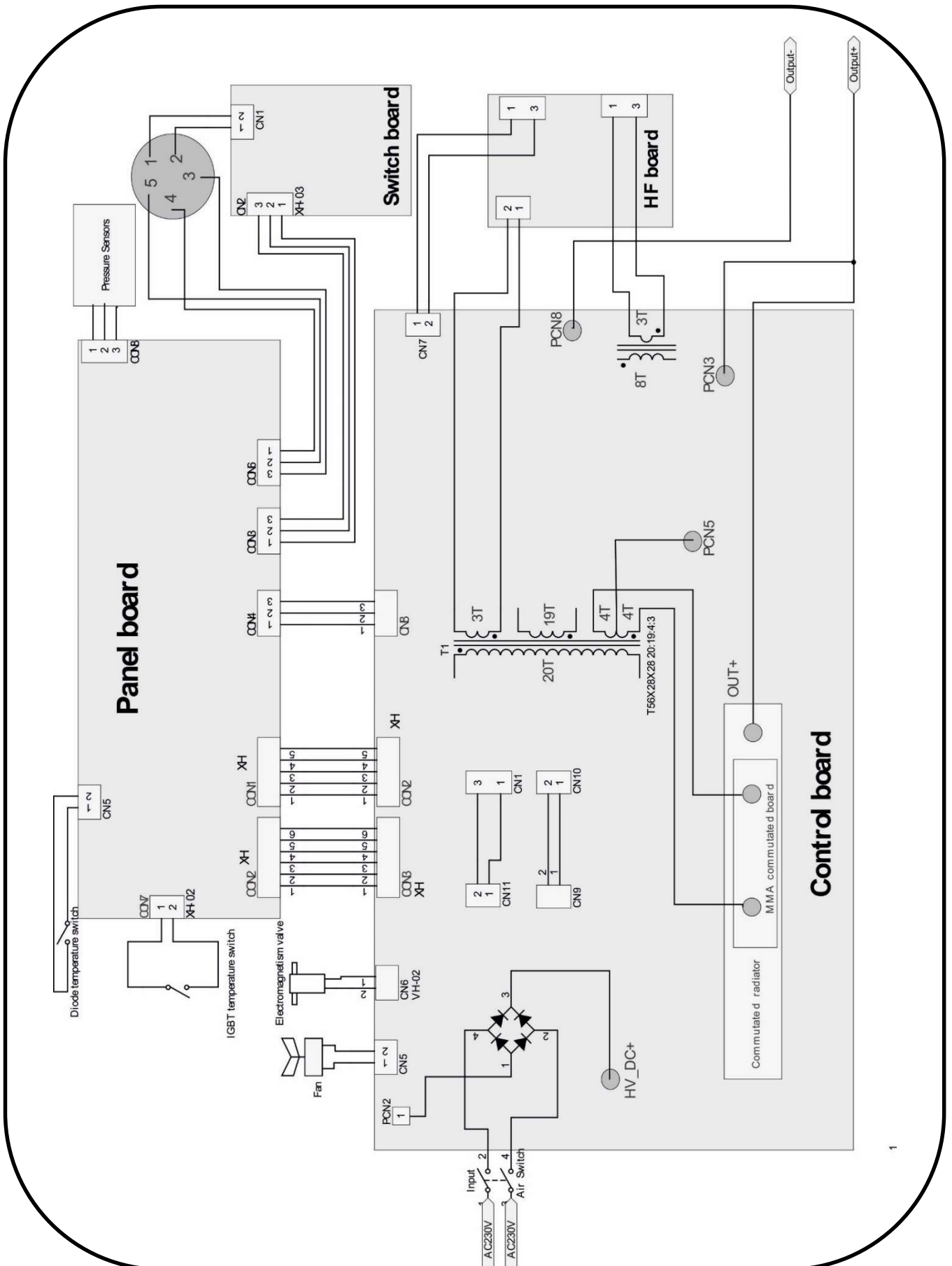
12. STORAGE AND TRANSPORT INSTRUCTIONS

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.

13. SET SPECIFICATION

1. Source: DIGITIG 204 QUATTRO	1 pc.
2. TIG welding torch	1 pc.
3. Plasma cutting torch	1 pc.
4. Air Preparation Unit	1 pc.
5. Electrode wire	1 pc.
6. Ground wire with clamp clamp	1 pc.
7 Gas Hose	1 pc.
8. User Manual	1 pc.
9. Packaging	1 pc.

14. ELECTRICAL DIAGRAM



15. 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 process 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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