FACHOWIEC®

Instrukcja oryginalna
2019

INSTRUKCJA OBSŁUGI SPAWARKI

KRAMER 200

BI-PULSE MIG/MAG



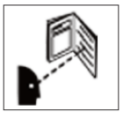
Before using this product, read all instructions

with understanding and keep it for future use

TABLE OF CONTENTS

1. SAFETY PRECAUTIONS SYMBOLS

It is essential to read these signs and safety precautions to protect the health and life of their own and other people.



Read instructions before starting the machine. Use only original accessories supplied by the manufacturer.

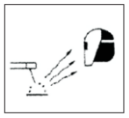
Some components may explode. Always use face shields and protective clothing with long sleeves.

Static electricity can damage electronic components.

Use approved face shields and welding shields. Always use protective clothing designed for welders. Metal splinters can injure your eyes. Always use safety glasses.

Electrical shock can result in death. Do not touch electrical components when the device is connected to the power supply. Use dry and complete protective gloves and protective clothing.

Gases and vapors can be hazardous to health. During the process of extracting welding gases and welding fumes. Inhalation of these substances can be dangerous to your health.



Eye protection welding filters. Depending on the current intensity, use shields with appropriate filters.

Moving parts can cause injuries unit.

Too long continuous operation may cause overheating. Wait until the device cool down.

Damaged cylinders with technical gases can explode. The bottled gas is accumulated under high pressure. Make sure the bottles are handled and stored in accordance with the requirements of safety and fire.

Welded components could burn.

Wire protruding from the burner is sharp and can cause skin puncture.

Risk of fire and explosion. During welding work may lead to a fire. Welding station must be separated and protected from flammable materials and explosives.

The magnetic field can disrupt the functioning of pacemakers. Before starting work, consult your physician.

Do not weld at height without adequate protection.

Overturning or falling unit can cause serious injury.

* It is prohibited to the misuse

Welding may be carried out by qualified personnel with current training and authorization for the selected method of welding.

ATTENTION!

Heating test was carried out at ambient temperature and the duty cycle (ratio Load) at 40 ₀ C has been appointed by the simulations.

The device is designed to carry out welding work in professional conditions

industrial personnel holding a valid certificate of qualification compatible

with the applicable standards.

WARNING: This Class A equipment - is not intended for use

in residential locations where electricity is supplied by

system of public low-voltage network. There may be potential difficulties

in ensuring electromagnetic compatibility in those locations, due to

conducted and radiated disturbances.

The device should be used in accordance with the Regulation of the Minister of Economy of

27.04.2000r. on health and safety at work welding (Dz. U. No. 40 item.

470).

The behavior of this manual and following the guidelines set out in the

will enable proper maintenance of equipment in the future. These warnings are intended to

ensure user safety and operation in an environmentally friendly manner.

Before installation and use of the device, read carefully the contents of the entire

instructions.

- **After opening the package, make sure the device has not been damaged during transport.**

  If in doubt, please contact our service department.
- Equipment should only use trained employee or consumer.
- During installation all activities related to electricity should

  a qualified electrician.

2. DESTINY

Kramer BI-pulse MIG / MAG 200 for manual arc welding GMAW (Gas Metal Arc Welding) - MIG / MAG and MMA (Metal Manual Arc Welding).

3. DESCRIPTION OF THE DEVICE

Suitable for single-phase mains 230V, 50 / 60Hz. The device has, continuous adjustment of the welding current and is equipped with thermal overload protection system to prevent overheating.

KRAMER BI-Pulse MIG / MAG 200 is equipped with functions synergic welding, the welding current of a single pulse, welding and double pulse and the option electrode welding MMA.

4. TECHNICAL DATA

Parameter		KRAMER MIG / MAG PULSE BI-200
Voltage [V]		1 ~ 230
Current frequency [Hz]		50/60
Tolerance variations in the power [%]		± 10
Protection [A]		20A / 230V
Power consumption [KVA]		7.7
Load voltage [V]		58
MIG Welding current range [A]		20 - 200
Welding current range MMA [A]		20 - 150
Output voltage regulation		smooth
MIG / MAG		
Duty cycle MIG / MAG	60%	200A
	100%	155A
The diameter of the welding wire [mm]		0.8 - 1.2
type of feeder		2R PROF.
Inductance [%]		- 90 - 50
Burnback Time [%]		- 90 - 90
SPOT sealing time [sec.]		0.1 - 9.9
Slow start wire [m / min]		1 - 25.5
Time intervals spot welding SPOT [s]		0.1 - 25.5
The time of gas flow before the arc ignition [s]		0 - 10
Gas flow time after the expiry of the arc [s]		0.1 - 50
Pulse frequency [Hz]		0.5 - 5.0
Pulse cycle [%]		20 - 80
Pulse modulation [%]		5 - 50

Parameter		KRAMER MIG / MAG PULSE BI-200 MMA
Duty cycle MMA	60%	150A
	100%	112A
The strength of the arch (Arc Force)		0-205A
Hot start (HOT START)		Welding current: 0-160 Duration: 0-99ms
OTHER PARAMETERS		
insulation class		F
Level of security		IP21S
Mass [kg]		13
Dimensions wys./szer./dł. [Mm]		360/210/470

The accessories supplied with the device:

1. Source of electricity
2. Torch MIG / MAG 3 m Euro
3. Cable to the common terminal
4. Cable with electrode holder
5. Operating instructions in j. Polish

5. OPERATION

AND. BEFORE WORK:

- Before starting work, you must specify the place where the device is to be operated.
- Check voltage value, phase and frequency of the supply current before switching the machine to the mains.
- Parameters supply voltage are given in the section of the technical data and on the nameplate.
- Check the grounding wire connection device from the mains.
- Remove all flammable material from the welding area.
- Do not use the device on a surface, which may cause it to tip over
- Welding use suitable protective clothing: gloves, lab coat, shoes, helmet or mask having a corresponding certificate.

B. COIL ASSEMBLY WITH welding wire

Before mounting a spool of welding wire, please refer to the data contained in the table below:

The diameter of the welding wire	The maximum size of the reel welding wire	The maximum recommended length welding torch
0.8 - 1.2 mm	≤D200 - 5kg	AL: STEEL 3 m 3 m

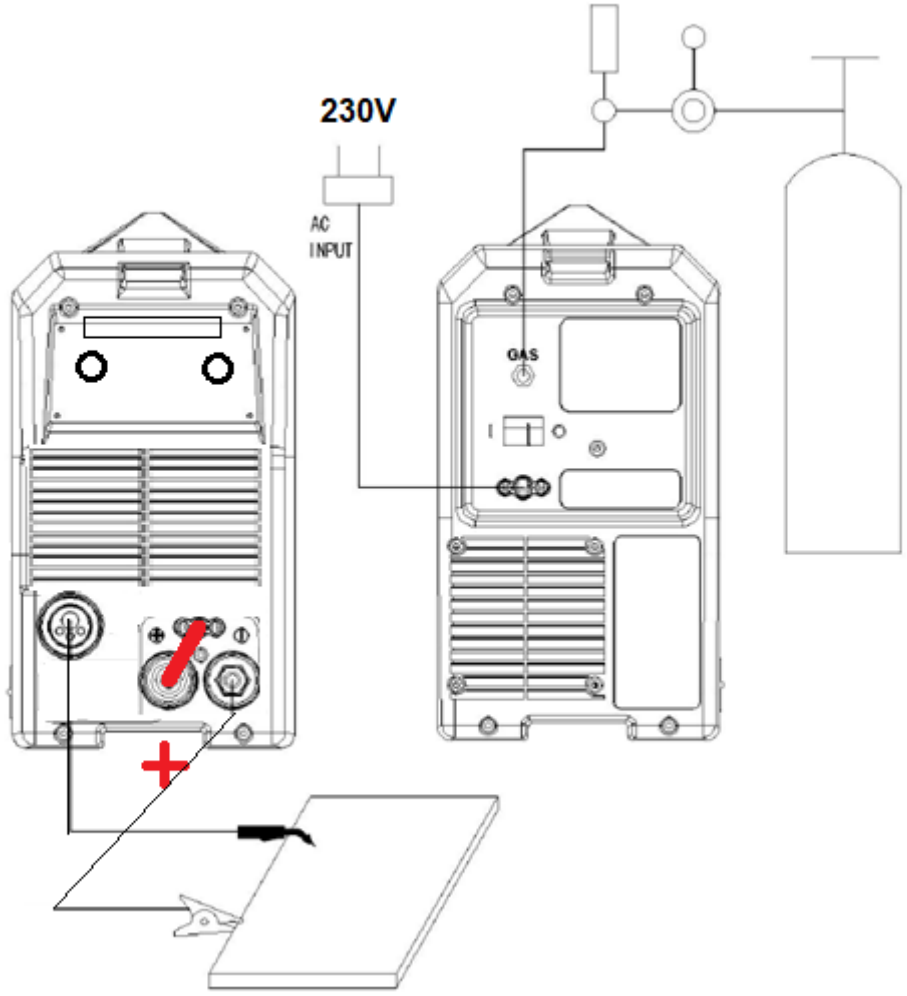
- Raise the housing cover side welding machine.
- Make sure that the roller mounted in the drive train and appropriate to the nature wire diameter used. For steel wire, use of rolls with grooves in the shape of a "V", whereas for aluminum wires grooved "U".
- Place the spool of welding wire spool mounting mechanism, paying attention to the direction of unwinding the wire was in line with the direction of the entrance to the wire drive unit Lock reels from slipping by tightening the nut on the body mounting a reel.
- End of the wire should be flat or cut off the bent section.
- In order to introduce the wire into the feeder release the pressure feed rollers.
- End of the wire inserted into the guide at the back of the tray and carry it over the driving roller introducing nozzle of the welding gun.
- Push the wire in the groove drive roll and tighten.
- Remove the gas burner nozzles, and unscrew the contact tip.
- Switch on the device.
- Open wire welding torch so that it is simple. ATTENTION! Do not direct the tip of the welding torch in the direction of the face or other people.
- If the gas is connected to - close the gas valve. Press the button in the handle MIG / MAG, which will result in the development of welding wire in the holder.
- When the end of the welding wire passes through a connector in the burner, a distance of approx. 5 cm and release the torch.
- Screw the tip and replace the current gas burner nozzles.
- Adjust the contact pressure roller by rotating the knob to the right - increase the biasing force to the left - decrease the pressing force. Too little downforce, will cause slippage of the drive roller. Too high pressure causes an increase in resistance of administration and the deformation of the wire.

Figure 1. The direction of rotation of the reel of welding wire (illustrative photo)

c. INSTALLATION shielding gas bottle

- Connect with semiautomatic bottle with a suitable cable.
- Unscrew the regulator valve prior to welding.
- **After completion of welding, always turn off the valve on the cylinder.**

Scheme connect the device in the MIG / MAG welding.



ATTENTION !

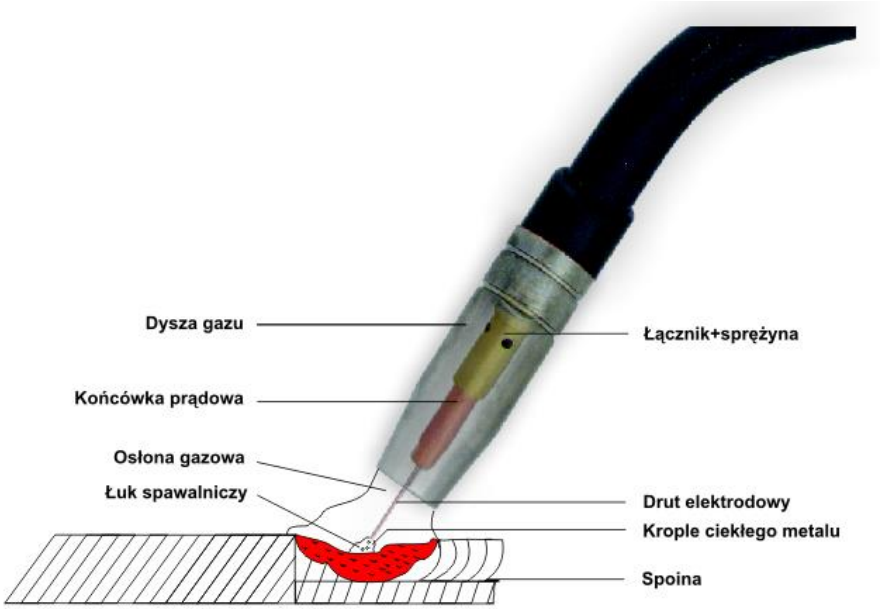
In operating mode MIG / MAG welding wire closing circuit located on the front of the device must always be connected to the positive polarity "+".

6. WELDING PROCESS MIG / MAG

Arc welding shielding gases (indicated by MIG / MAG) is one of the most widely used process for producing weldments. Abbreviation MAG (metal active gas) includes in its description of the active shielding gases. Abbreviation MIG (Metal Inert Gas), refers to inert gas shroud. Semi-automatic welding process involves melting the edge of the work piece and the material of the consumable electrode arc heat glowing between the electrode in the form of a solid wire and the welded workpiece, in inert gas or active. Primary shielding gases for welding MIG inert gases such as argon, helium, and gases

active in the MAG CO_2 H_2 ABOUT $_2$ N_2 and NO, for the addition to argon or helium. The consumable electrode is in the form of the solid wire, typically having a diameter of 0.6 to 1.2 mm and is fed continuously by a special supply system, a speed of 2.5 m / min and above. The welding may be water-cooled or gas shielding. Welding is carried out mainly constant current of positive polarity as a semi-automatic welding, mechanized, automated or robotic using specialized equipment. Glowing shield arc between the consumable electrode and the weld material for forming the weld in a very favorable thermal and chemical conditions. Welding of this type can be used to make high quality of the connections of all the metals which may be joined by arc welding. Belong to them: carbon steels and low alloy steels and corrosion resistant. Welding can be carried out in the workshop and field in all positions.

Figure 2. MIG / MAG - scheme



Brazing MIG / MAG

Braze welding method of joining materials, a combination of two processes: brazing and MIG / MAG welding. Similarly as during the soldering process braze there is no building-up edges of the metal. The preparation of the material, the method of wire feed gas to protect the weld pool (usually pure argon) - are the hallmarks of which are characteristic of the MIG / MAG welding. As additional material is most commonly used wire CuSi (CuSi3) elements galvanized steel wire or SG-CuAl elements of aluzinc or aluminum.

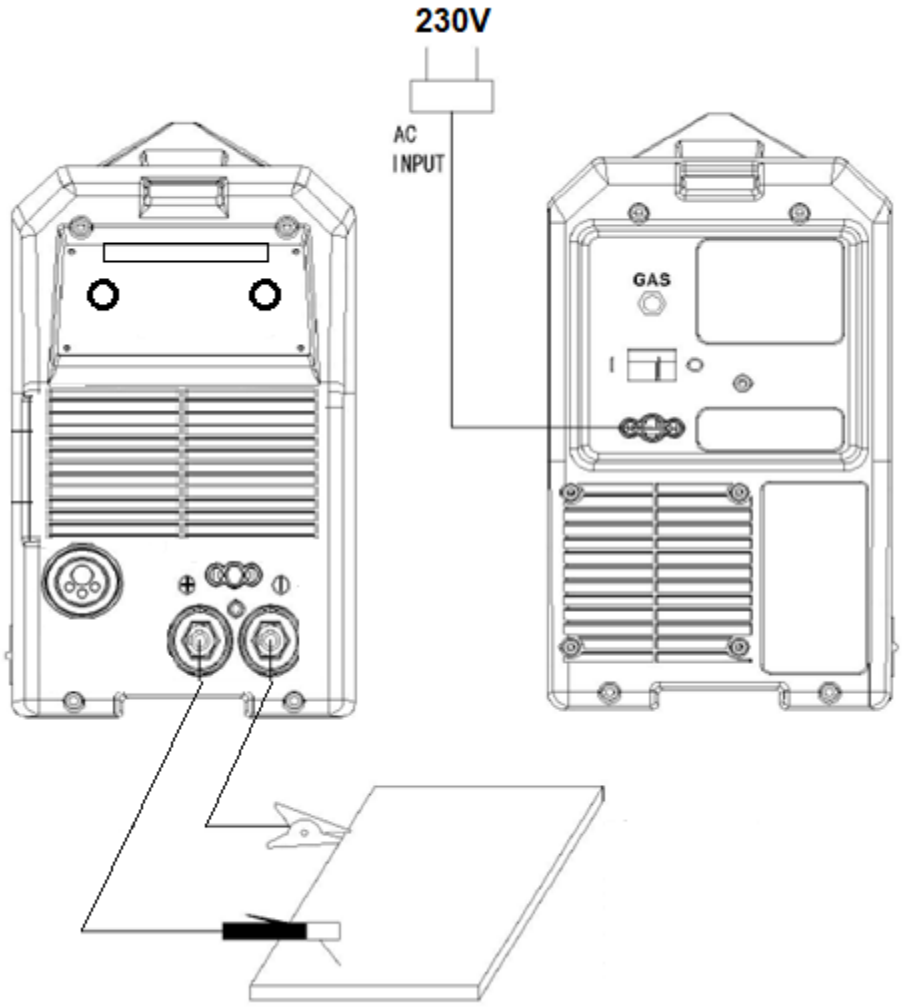
7. CONNECTION METHODS FOR MMA

Welding MMA

Welding cables and connect the mass to the corresponding output jacks welders, according to the manufacturer's recommended polarity of the electrodes, which intend to weld. information

It is located on the packaging of the electrodes.

Connection diagram for MMA.



MMA welding with covered electrode:

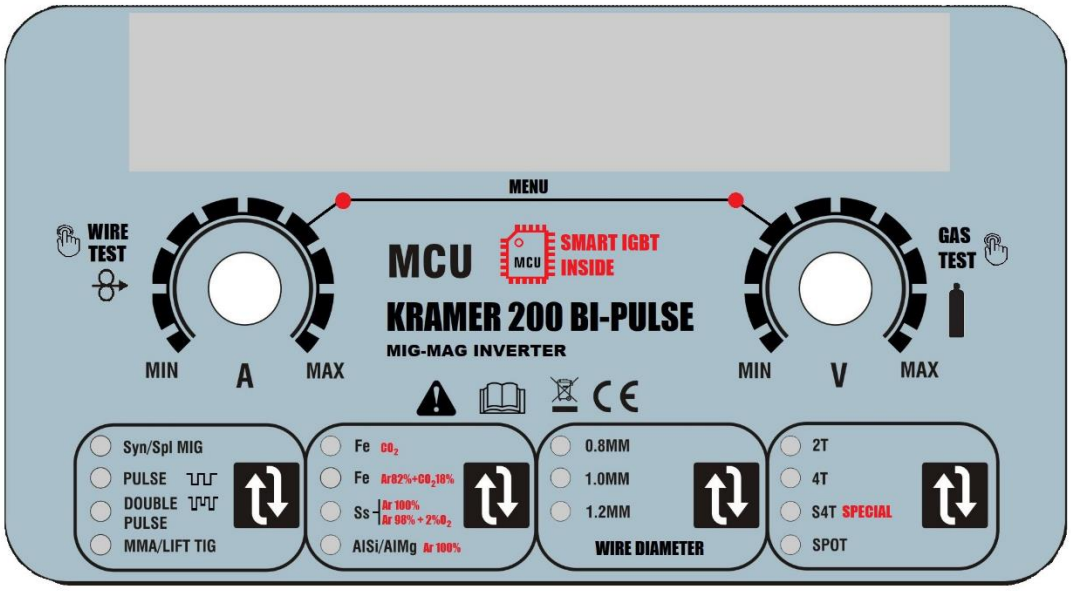
To obtain a high quality weld, the weld edges must first remove the rust and other contaminants. In preparing the edges to take into account both the thickness of the parts to be welded and the type of bonding, welding position and design requirements. Most apply the edging in the form of a "V", but with thicker parts is better suited to "X" (for welding with penetration), or "U" (without melting).

Manufacturer of electrodes are usually given the optimum welding current for their products. Selection of the type of electrodes depends on the thickness of the parts to be welded and the welding position.

Before starting the welding electrode attach the clamp holder. Arc ignition, rubbing the tip of the welding electrode, and then slightly raise the height of the holder usually used in welding.

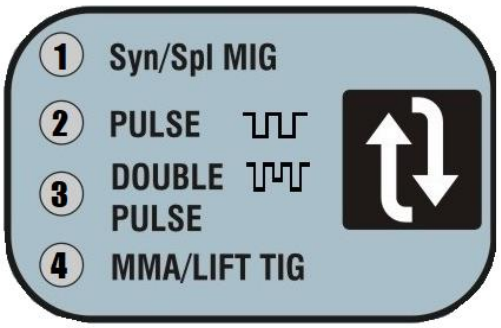
To facilitate arc ignition, welding machine equipped with factory hot start function (hot-start), which is to increase the current at the beginning of welding. During welding, the electrode metal core is gradually melted and deposited at the welded component in the form of droplets, and evaporating the sheath into a gas shielding. In order to increase liquidity of the welding arc, during the detachment of the metal droplet, when it can cause short circuits between the electrode and puddle, followed by a temporary increase in the welding current (ARC-force), which prevents extinction of the arc. When welding with coated electrodes at each pass should be removed from weld slag.

8. Control Description:

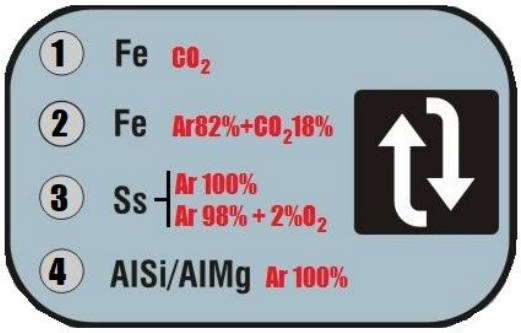
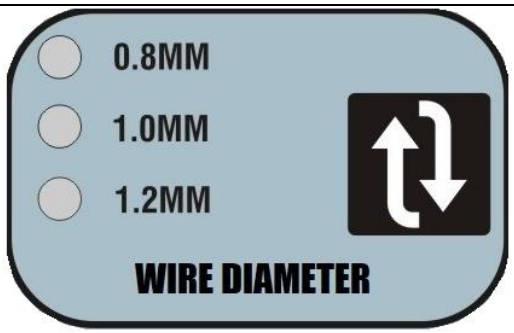
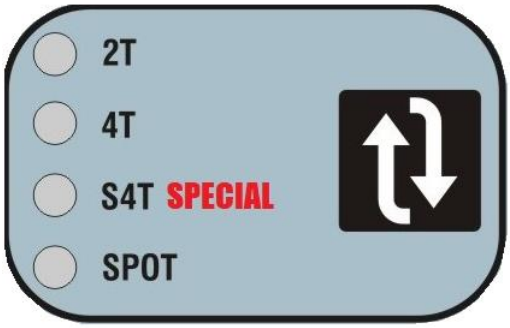


AND - knob welding current [Amps], a test wire (after pressing) and the choice of the welding parameters in the MENU mode (see Table menu of welding parameters).

V - knob welding voltage [volt], the test gas (after pressing) and the choice of the welding parameters in the MENU mode (see Table menu of welding parameters).



1. Mode synergic MIG / MAG (increase welding current results in an automatic increase voltage, and wire feed speed).
2. MIG / MAG welding with a single pulse
3. MIG / MAG double pulse
4. MMA electrode welding or TIG-LIFT tungsten electrode.

	1. Welding of stainless steel - carbon dioxide shielding gas Carbon 100% 2. Welding of steel - shielding gas mixture of carbon dioxide, argon + 3. Welding of stainless steel - shielding gas 100% argon, or argon containing oxygen of 2% 4. Welding of aluminum alloys with magnesium, silicon and - a shielding gas argon 100%, due to the physical properties of the Al wires suggests welding wire having a diameter of 1.0 and 1.2 mm in order to avoid blocking issues tray.
	The choice of the diameter of welding wire.
	Control Mode Selection button torch. **ATTENTION !** **For welding with a single and double pulse suggests a selection of special S4T to adjustable important welding parameters, see chapter "MODES CONTROL KEY RING WELDING point 3 - S4T".** SPOT - spot welding.

INTERNAL WELDING PARAMETERS MENU

To set welding parameters MENU an inside first select the operating mode (synergistic, single pulse or double pulse), and then simultaneously press the knob "A" and "V" for about 5 seconds. Below are all the parameters of the menu descriptions - their range is limited by the chosen mode of operation:

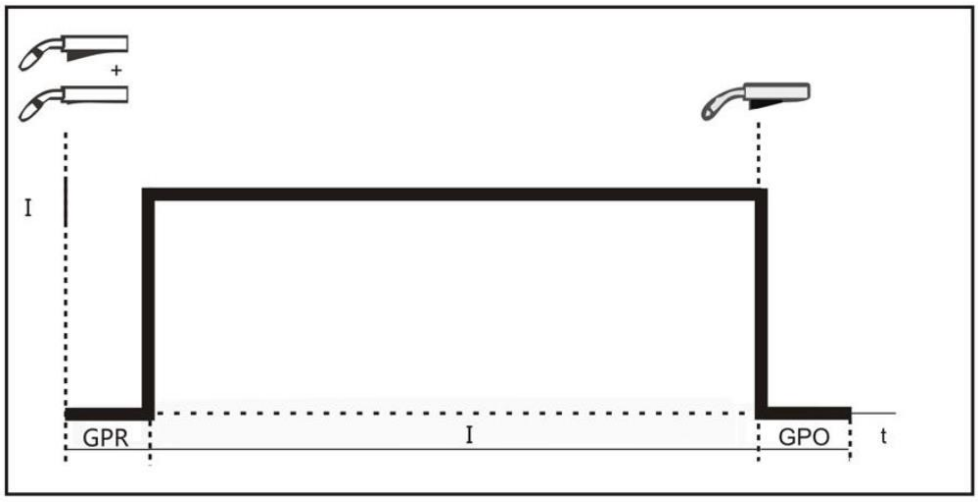
CODE	IMPORTANCE	DESCRIPTION
size	Diameter wire welding	The display pojazuje the selected diameter of the welding wire, in order to change the thumbwheel "V".
Mode	Mode control key	The display shows the selected operating mode button on the torch. In order to use the change knob "V".
Endi	Intensity current final	Filling the crater - only mode S4T Special.

CODE	IMPORTANCE	DESCRIPTION
Hoti	Intensity current the initial	Increase welding current during arc ignition - mode only 4ST Special.
Burn	Time Burnback	Zmienjszenie or you increase the length of wire protruding from the nozzle after welding. **NOTE - Particular mentioning important function during spwania aluminum alloys.**
slop	rise time	The time of transition from the initial value of the welding current Hoti to basic welding current - mode only 4ST Special.
Sptt	time SPOT	The duration of the weld spot
freq	pulse rate	The frequency of the pulse mode with a double pulse. **NOTE - recommended value of 1.5 to 2.0 Hz**
Duty	The cycle pulse	The cycle duration pulse mode with a double pulse welding.
P-p	pulse modulation	The placement of the peak welding current mode pulse podrójnego
Hotu	Tension current take off	The arc voltage ignition pdczas
PU	Power base	Base voltage arc mode, a double pulse
BU	peak voltage	Peak voltage arc in double pulse mode
StFd	slow start	Slow start mode wire MIG / MAG welding
VDR	Reduction of current	The device has a system VRD (Voltage Reduction Device) which mode MMA Rutile and basic electrodes lowers the load voltage, which greatly enhances user safety. In special cases, the use of electrodes with high current arc ignition problems can occur at his initiation.
Stop	The time intervals between welds	The time interval between welds during continuous spot welding CPOT.
preg	gas before	The time of gas flow before the arc ignition
fast	gas at	Gas flow time after the expiry of the arc
End	Voltage end of the arc voltage during the blanking - only mode 4ST Special.	
FORCE	The stabilization of the arc	Increasing or decreasing length arc welding depending on the distance from the electrode base material.

9. MODES OF CONTROL BUTTON torch.

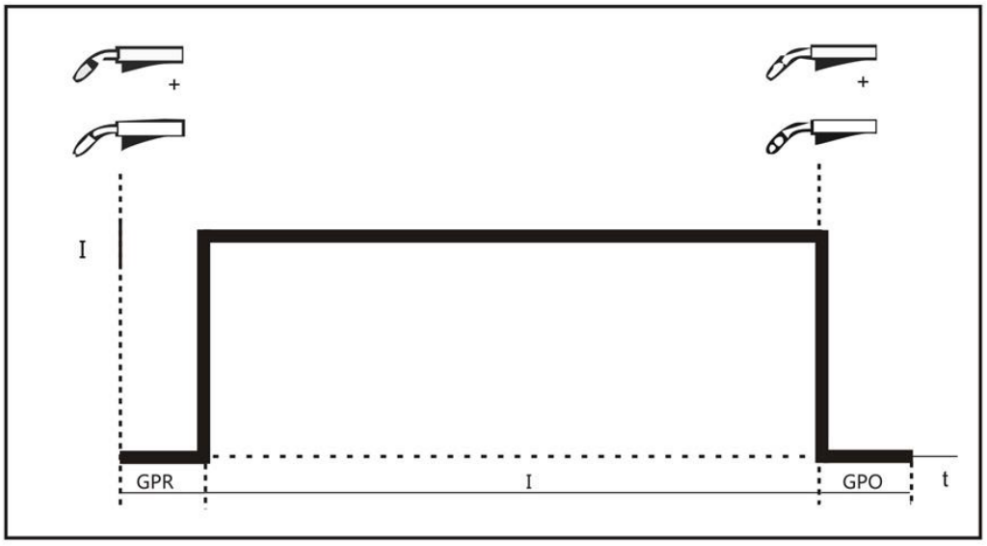
1. 2T

Mode two-stroke engine - **pressing the button** on the torch gas flow is developed within the set time (Preg), and TIG arc welding. Arch will be maintained as long as the button is held down. After his release will extinguish the arc and spits gas at the set time (Post).



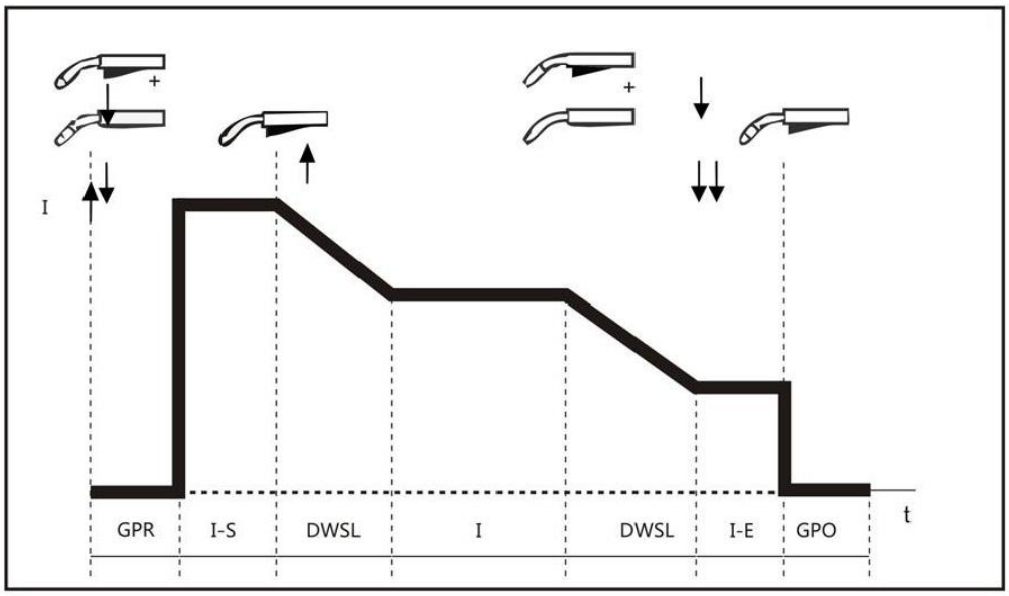
2. 4T

Czterotakt mode - **when you press and release the button** on the torch gas flow is developed within the set time (Preg), and TIG arc welding. Arc will be maintained until the next time you press and release the button. After his release will extinguish the arc and gas flow at the set time (Post).



3. S4T

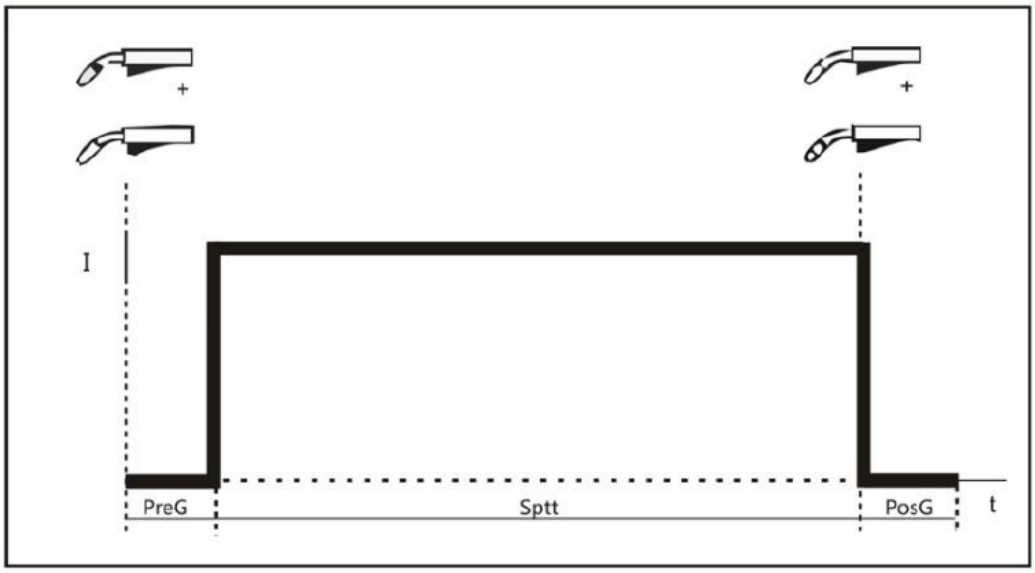
Czterotakt Special Mode - **when you press and release the button** on the torch gas flow is developed within the set time (Preg), and TIG arc welding. The arc voltage on the grid will be increased by a value set by the user (HoTI) and drops to a value substantially the welding current set time (slope). Arc will be maintained until the next time you press and release the button. After his release will drop current (Slop) to the final current (Endi) - filling the crater. Then terminate the arc and set time (Post) shielding gas will flow.



WELDING POINT - SPOT

In order to start spot welding SPOT select this option on the control panel, set the time before the shielding gas flow (Preg), the duration of the weld (Sptt), the welding current and the gas flow after the expiry of the arc (Post). After pressing device zajarzy and maintain the arc during the time set by the user, and then hang up automatically - without releasing the button on the handle spawlaniczym.

If you use the CPOT (continuous spot welding) must also set the time intervals between the welds (Stop). After pressing the button on the handle of the welding device will automatically control the duration of the gap between the seal and the welds until the button is released. In this way, a series of welds can be made without the need to constantly pressing and releasing a button on the torch.



10. STORING AND PLAYING PROGRAMS WITH YOUR DEVICE

To save or restore user settings from the cache unit, press the buttons (knobs) "A" and "V" to enter the MENU mode. After setting all welding parameters at the end of the menu will show an option **SAVE** - Save or **LOAD** - open. Using the knob "V" must be selected kórmym channel to be stored. Approval of the selection nastąpuję after re-pressing the "V". To exit the menu at any time by pressing the "V".

11. SYSTEM ERROR CODES

over temp - The machine is equipped with protection against overheating. Where the installed sensors too high temperature (eg. Fan failure or blocking), the device switches off automatically and the display will show the message.

over time - The device is operated in amounts exceeding its rated performance. The message can also occur if you use an extension cord with the wrong diameter. After this message appears, turn off the unit for 15 minutes. If after restarting the still see this message, please contact the service.

12. CURRENT OPERATING UNIT

AND. WORKING CONDITIONS

Optimum ambient temperature range from -10 ° C to 40 ° C.
Avoid welding in conditions of sunlight and the rain, do not allow the water to penetrate into the interior of the device. Avoid working in the environment of flammable gas, dust and aggressive. Avoid strong winds, which can cause loss of protection gas.

B. WORK SAFETY

Actually the installed device with overvoltage protection, overcurrent protection and overtemperature switches off automatically under the conditions beyond the defined as the standard. However, long-term use (eg. Surges) can cause damage to the welder. Therefore, you should follow the instructions listed below:

C. PRECAUTIONS:

- **Provide good ventilation**

Welding is a device through which a large current is flowing, and the natural ventilation does not provide the necessary cooling. Therefore, to maintain stability, welder equipped with an internal cooling system. The operator should check if the vent is not blocked. The distance between the welder and the welded object should not be less than
0,3m. The operator should always pay attention to ventilation devices, since they depend on it not only achieved welding quality and performance, but also the life of the device.

- **Avoiding overload**

The operators should follow (load designated as the maximum permissible load for a given current) or the welding current exceeds the maximum permissible electric current to the load. Electrical overload can significantly shorten the life of welders, and even lead to the burning of its elements.

- **Preventing surges**

Keep values in the line supply voltage in the Table "Technical specifications". In normal operation, the automatic alignment circuit voltage ensures the maintenance of tension in the acceptable range. The supply voltage higher than the permissible value can damage the welding machine. Operators should be fully aware of this risk and be able to take appropriate steps.

If a standard load is exceeded, the welder can enter a protective mode and suddenly stop working. This means that the standard load is exceeded, the heat has launched a thermal switch, which caused the machine to stop. Lamp lights up on the operating panel welding machine. In such a situation, do not remove the power plug to allow

fan to cool the welding machine. Exclusion of the lamp indicates the temperature drop to a normal level. You can take further work.

ATTENTION !

When welding components which form an integral part of the vehicle it is essential to disconnect the battery or use special protection. Otherwise, the electronic parts of the vehicle can be permanently damaged. When welding to connect the handle mass close as possible to the weld site.

D. MAINTENANCE

Regularly remove dust with clean compressed air. If the unit is in working conditions in the smoke, in the heavily polluted air every day remove accumulated dust.

Air pressure should be maintained at a level not to damage the small components inside the machine max. 2-4 bar.

Inspect the internal welder circuits, check the accuracy and reliability of connections (in particular equipment and parts). In the case of notice of rust and loosening of the connection remove rust and oxide coating with abrasive paper, and re-connect securely. Avoid situations where water or steam could get into the device. In the case of welding moisture should dry it, and then check the insulation of the device (also between calls and contacts). After checking that everything is in order, you can continue working.

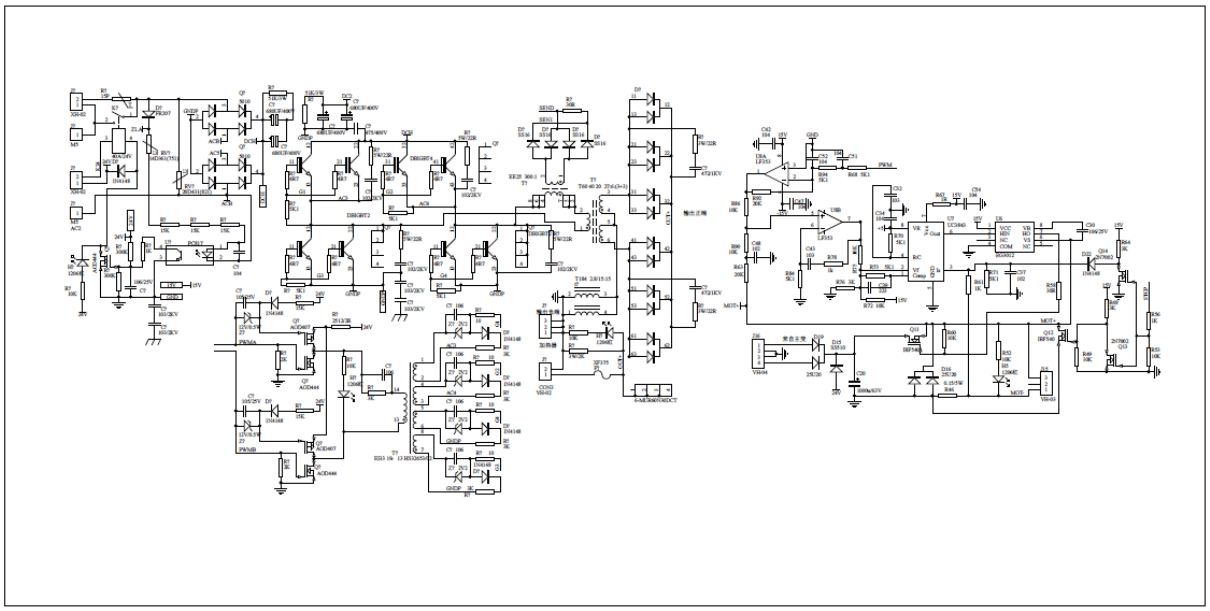
13. TROUBLESHOOTING

Problem	Possible cause	Solution
The device does not turn on	The device is not connected to the mains, device does not receive input voltage, faulty switch	• Check whether the device is connected to the mains • Check the voltage in the socket with the help of specialized meter • Check the condition of the fuses
Uneven wire feeding or wire will not move	The problem with the work feed roller, damage to the cartridge guide wire or contact tip	• Check the pressing force feed roller • Check whether the feed roll groove is not damaged - if so, replace the roll with a new one • Check that the contribution of the wire is not broken / blocked • Check that the end of the current contribution and the guide wire is selected according to the diameter and type of welding wire
The device has stopped welding, lit the lamp thermal protection	attached himself system protective device	• Check for excessive voltage drops in the socket, check if the machine is not overheated, if so - wait until the welder has cooled
weld quality is unsatisfactory	The problem with the proper conduct of the welding process	• Check that the wire feed speed is adjusted accordingly (non-uniform wire feeding) • Check the shielding gas, check the gas flow is adequate • Check the settings on the type of wire welding (Material, diameter) • Make sure, that the material is properly cleaned • Check that the ground terminal is properly attached to the workpiece

* If the fault is not eliminated after the application of the in / in tips, contact an authorized service center. Contact information and operating instructions are on the warranty card.

14. ELECTRICAL DIAGRAM

Figure 3. electrical scheme



15. ECOLOGY

Do not dispose of electrical equipment together with normal waste!

According to a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 2012/19 / EU of 4 July 2012. On waste electrical and electronic equipment (WEEE) and its implementation in accordance with national regulations, subject to the Waste Electrical and separate collection should hit the recycling facilities, providing processing in an environmentally friendly manner. As the owner of the equipment should obtain information on approved collection systems from our local representative. By following these guidelines protect environment and human health!

Accordingly, the company PROFESSIONAL FHW Zenon Świętek adapted to the requirements / regulations in and registered in the register of the Chief Inspector of Environmental Protection under the number: E0007441WZ and signed a contract with CCR REWEEE Recovery Organization Electrical and Electronic Equipment SA with its seat in Warsaw, ul. Transfer 4/49 (now RELECTRA CCR). Company entrusted with the duties incumbent on FACHOWIEC FHW Zenon Świętek to the collection of waste equipment electrical and electronic equipment.

Waste equipment can also be delivered directly to the company PROFESSIONAL.

Clause:

Despite making every effort to ensure that the information contained in this manual was complete and in accordance with the actual situation, the company PROFESSIONAL FHW Zenon Świętek shall not be liable for any errors or omissions. We reserve the right to change the specifications of the products described at any time without prior notice.

MADE FOR:
FHW FACHOWIEC Zenon Świętek Street.
Stefanski 29, 61-415 Poznan

www.fachowiec.com
Made in PRC

16. DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

KRA-19 / FC / 01

The last 2 digits of the year in which the CE mark is applied: 17

Name and address
PROFESSIONAL FHW Zenon Świętek Street. Stefanski 29, 61-415 Poznan

declares that the product:

Name	Device MIG / MAG
Type / model:	KRAMER MIG PULSE BI-200 Voltage: 230V Welding current: 20- 200A dimensions: 360/210 / 470mm Weight: 13kg

conforms with the following standards and standards harmonized

1. EN 60974-1: 2012, EN 50445: 2008
2. EN 60974-10: 2014 EN 61000-3-11: 2000
3. EN 61000-3-12: 2011

and meets the essential requirements of the following directives:

1. 2014/35 / EC Low Voltage Directive (LVD)
2. 2014/30 / EC Electromagnetic compatibility (EMC)

This declaration of conformity is the basis for marking the product trademark CE

This declaration relates exclusively to the machine in the state in which it was introduced to the market, and excludes components which are added by the end user or carried out by his subsequent actions.

A person authorized to prepare and store technical documentation Zenon Świętek.

Zenon Świętek

Poznan, 16/07/2015

Place and date of issue:

WARRANTY CARD

(Issued for sale after December 25, 2014)

IMPORTANT!

We offer you a professional product designed for use only by trained personnel and appropriate qualifications.

Each device, product distribution machine before it passes the initial quality control in our company. Before operating the device, please carefully read the attached instructions for proper start-up and read the requirements for the equipment!

WARNING - FAILURE!

Before sending equipment use our **SERVICE CENTER** **http://pomoc.fachowiec.com** That allows technical support, contact our service to you and automated assistance in the receipt of the consignment !!!

NAME OF EQUIPMENT	**WELDING MACHINE KRAMER**
TYPE / MODEL	**BI-200 Pulse MIG / MAG**
Serial number / HOLOGRAM	
SALE DATE	
NOTES / STAMP AND SIGNATURE	

1. The guarantee of the quality of the machine as **manufacturer, importer and distributor is:**
   PROFESSIONAL Trading Company Wielobranżowa Świętek based Zenon Poland Poznan ul. Stefanski 29 tel: + 48/61 66-18-151
   Guarantor declares that covered by this guarantee card subject of the guarantee has been issued free of defects and is made in accordance with applicable standards.

2. **Warranty covers the territory of the Polish Republic. Our products purchased abroad must be delivered to the site in Poland.**
3. The company has skilled person is liable for physical defects in materials and workmanship inherent in the device for a period of: 12 months
4. In the case of purchase by individuals for use not related to operations apply the current provisions of the Act: Official set *Dz. Laws poz.827 2014 (as at 25 June 2014).* effective from 25.12.2014r.

5. The warranty on goods sold **does not exclude, limit or suspend the**
the buyer's rights resulting from the provisions of the warranty for defects in the goods sold.
6. disclosed defects during the warranty period will be removed in no more than 14 days from the date of delivery of the faulty device to the Service Importer.
7. The advertised within the warranty of the machine should be delivered to the Seller with a full standard equipment, clean and - if the device has - with a clear plate.

8. advertised device must be returned in the box properly packed protected against damage in transit needs to be determined if required "up - down" or "caution glass"

9. The company skilled in the art does not accept complaints and returns sent to the address of the Company for downloading!
10. The guarantee document is valid if you have correctly completed entries regarding: the date of sale, the name of the device sold, stamp and signature of the seller and the customer acknowledges his signature.

11. The warranty does not cover the activities foreseen in the manual, the execution of which the user is obliged to own and at their own expense, for example. Start-up, maintenance, replacement batteries, and other supplies.

12. Said faulty equipment and parts become the property of the Guarantor.

REFUSAL OF COMPLAINTS:

The guarantor may refuse to accept the complaint if:

- statement using the unit misused and instruction operation,
- delivery device dirty, no standard equipment, without the nameplate and seal or hologram
- determine the cause of the fault other than manufacturing or material defect inherent in the device,
- formal defects associated with the sales documents, as unfilled card Warranty, lack of proof of purchase.

ARE NOT COVERED BY WARRANTY:

1. The parts which, when aligned with the recommendations of operation are subject to wear and tear within the warranty period, such as welding torches, the mass handles, nozzles, burners, batteries, belts, filters, oil, electrodes, gaskets, o-rings, and other elements related to directly to the operation.

2. Disadvantages caused by mechanical damage, thermal or chemical plant and equipment.

3. Damage due to improper transport and storage,
4. Damage related to work at too low or too high a temperature,
5. Damage caused by faulty electrical installation, liquid or moisture electrical components water,

6. Wrong connection to a power source (eg. Poor polarity, poor connection 230 or 400 V, there are no phases or too loosely clamped connection cables)
7. Damage caused by overloading equipment overheating,
8. Incorrect setting of the welding parameters, the interference in the control panel screw compressors.

9. The problem with selecting the parameters of supply pressure for operating the device,
10. Damage due to lack of recommended maintenance procedures contained in this manual,

11. Cleaning with high pressure or too aggressive chemicals
12. Damage caused by too strong a tightening or causing damage to the components niedokręcaniem connections or over capacity (spray guns).
13. Improper use.

LOSS OF WARRANTY AS FOLLOWS

Loss of warranty in the event;

1. non-compliance with the operating instructions
2. misuse,
3. overloading the machinery
4. operation without lubricants
5. dismantling unauthorized
6. breaking holograms

WEBSITE ADDRESS

One skilled FHW Zenon Świętek 60-169 Poznań ul Grunwaldzka 390 phone; + 48/61 66-18-152

e-mail: ***serwis@fachowiec.com***

important:

In the case of unjustified complaint the applicant must bear the costs of transport and a review in accordance with the service price list.

REPAIR WARRANTY:

Date of adoption	release date	The scope of repairs	Stamp and signature service

Date of adoption	release date	The scope of repairs	Stamp and signature service

17. NOTES