

# RKM Series



# GeKaMac®

## Redressor Welding Machines Manual Instruction



**Model :**

- **RKM 350**
- **RKM 450**
- **RKM 650**
- **RKM 800**
- **RRM 500**

Please Read and Understand This Manual  
Before Operating The Welding Machine

[www.gedikwelding.com](http://www.gedikwelding.com)



## Attention!

**Our Valued Customer,**

We kindly request that you obey the warnings mentioned below:

- Definitely have the “Warranty Document” approved when you get the machine.
- Use the machine in a way that is in accordance with the fundamentals that are mentioned in the user’s guide of the machine.
- Refer to the nearest GEDIK WELDING authorized service or the service center of GEDIK WELDING when a problem comes up.

Thank you for preferring one of GeKaMac® products.

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## 2. SAFETY RULES

Protect yourself and others against possible serious injury or death risks. Keep children away. People who have pacemakers in their bodies should consult their doctors before operating the welding machine. Be careful when you are doing operations with your hands on the pieces. Use proper equipment that are necessary to protect yourself from burns that can be caused by excessive heating of the piece during welding and / or cutting operation. Be sure that all set up, maintenance and repair related operations are performed only by qualified people.

### 2.1. ELECTRICAL SHOCK



Electrode and the piece that is being worked on or ground circuits are active in terms of electricity while the welding machine is on. Don't touch these active parts with bare hands or wet clothing. Wear dry gloves that have no holes to insulate your hands.

### 2.2. ARC RAYS



Use a protective mask with a proper filter to protect your eyes from the sparks and the rays of the arc while welding or watching such an activity. The head mask and the filtered glasses must meet the ANSI Z87.1 standards.

### 2.3. GASES AND FUMES



Fumes and gases that are harmful to health can form during the welding operation. Do not inhale these gases or fumes. Keep your head out of the fumes while welding. Provide sufficient ventilation in the arc and / or use fume suction machines to keep fumes and gases out of the breathing area.

### 2.4. WELDING SPARKS



Put away elements that are fire hazards from the welding area. If this is not possible, cover these hazards to prevent welding sparks from starting a fire. Do not forget that welding sparks and hot materials coming from welding can go on to neighboring areas easily through small cracks and openings. Don't do welding near hydraulic lines. Always keep a fire extinguisher on hand.

### 2.5. ELECTRIC AND MAGNETISM



Electric flow that passes through a conductor causes Electric and Magnetic Fields (EMF) to be formed. Welding current creates EMF around welding cables and welding machines.

- EMF can ruin the operation of some pacemakers.
- For this reason, welders who have pacemakers in their bodies should consult their doctors before welding.
- Being exposed to EMF during welding, can cause other unknown health problems.
  - Getting exposed to EMF will be minimized by paying attention to the following instructions:
- Guide electrode and chassis cables together.
  - Never wrap electrode and chassis cables around your body.
  - Do not place your body between the electrode and chassis cables.
  - Connect the chassis cable as close to the piece that is being worked on as possible.
  - Stay as far away as you can from the power units.

### 3. ELECTROMAGNETIC COMPATIBILITY (EMC)

This machine has been designed in accordance with all related regulations and norms. Additionally, it can still generate electromagnetic forces that affect other systems such as communications (telephone, radio, television). These affects can cause security problems in the exposed systems. Read carefully and understand this section in order to reduce or get rid of the affects that can be created by this machine.

This machine has been designed to be operated in the industry area. If it is operated in private places (house etc.), it will become necessary to take special precautionary measures in order to prevent possible electromagnetic affects. It is necessary for the user to set up and operate these machines just like the way it is described in the handbook. If an electromagnetic affect is perceived due to the operation of these machines, the user should take corrective measures in order to get rid of these affects. If necessary, the user should contact GEDIK WELDING IND. COM. LTD. CO. No changes should be made in the machine without getting written approval from GEDIK WELDING IND. COM. LTD. CO.

The control of the work area should be made in terms of tools that can work improperly due to the electromagnetic affects before the machine is assembled.

- Inlet and outlet cables, telephone cables and control cables that are found in the work area of the machine.
- Radio and/or television transmitters and receivers,
- Computer or computer controlled tools,
- Safety and control equipment for industrial operations,
- Calibration and measurement appliances,
- Medical appliances such as heart rhtyme appliance and hearing aids,

Control the electromagnetic immunity of the equipments that operate near the work area. The user should be certain that all the equipments that are in the work place are compatible. Otherwise, it can necessitate additional protective measures.

Ideal dimensions of the work place are determined by the construction of the area and other factors that are found there. Take the warnings below into consideration in order to decrease the affects of the electromagnetic waves that the machine generates:

\* Make the connection of the machine with the network electricity in the way it is stated in the user's guide. If an electromagnetic interaction comes into being, such preventive measures as filtering the main electrical inlet may need to be taken.

\* Outlet cables should be as short as possible and should be kept together.

#### 4. GENERAL INFORMATION AND WARNINGS

- Do not set up, operate or repair before reading the user's guide and the security measures that are found in it. Hide this user's guide and always have it on hand.
- Cut off the electrical connection between the welding machine and the network when the work is finished or when you are going to take a long break.
- Do not make any changes in the welding machine. This operation can cause the machine to lose its properties and a change in technical data.
- It is forbidden to do adaptation on the welding machine. Doing adaptation does not only cause the loss of warranty rights, but also can jeopardize the operational safety of the machine and can create the risk of electrocution for the users.
- A damage in the welding machine due to a mistake of the user will cause the loss of warranty rights.
- Acceptable environmental temperature range during work is between -10 °C and +40 °C.
- Manufacturing company reserves the right to change the technical properties without prior notice.

## 5. CONTROL PANELS

### RKM 350 CONTROL PANEL



1. Power Unit Led (Güç Ünitesi Işığı)
2. On/ Off Switch (Açma Kapama Anahtarı)
3. Current Adjustment Button (Akım Ayar Düğmesi)
4. Time Selection for Trigger Modes (Tetik Mod Zaman Seçimi)
5. Choke Coil Outputs (Şok Bobin Çıkışları Şase Bağlantıları)

## RKM 450 CONTROL PANEL



1. MMA & Gouging Selection Button (Elektrot Kaynağı veya Karbon Kesme Modu)
2. Power Unit Led (Güç Ünitesi Işığı)
3. On/Off Switch (Açma Kapama Anahtarı)
4. Digital Display for Ampermeter (Ampermetre Dijital Ekranı)
5. Digital Display for Voltmeter (Voltmetre Dijital Ekranı)
6. Current Adjustment Button (Akım Ayar Düğmesi)
7. Choke Coil Outputs (Şok Bobin Çıkışları, Şase Bağlantıları)

## RKM 650, RKM 800 CONTROL PANEL



1. Power Unit Led (Güç Ünitesi Işığı)
2. MMA & Gouging Selection Button (Elektrot Kaynağı veya Karbon Kesme Modu)
3. On/Off Switch (Açma Kapama Anahtarı)
4. Digital Display for Ampermeter (Ampermetre Dijital Ekranı)
5. Control Socket (Kontrol Soketi)
6. Digital Display for Voltometer (Voltometre Dijital Ekranı)
7. Current Adjustment Button (Akım Ayar Düğmesi)
8. Remote Control Selection Key (Uzaktan Kumandalı Seçim Anahtarı)
9. Choke Coil Outputs (Şok bobin Çıkışları, Şase Bağlantıları)
10. Standart / Electrotect Switch

Standart = Constant- current characteristic

Electrotect = Constant- current characteristic with automatic current cut-out in short circuit  
If the welding voltage drops below 15 V, the welding current is automatically reduced to a minimum. When the electrode sticks to the workpiece (short circuit), it can easily be detached without burning out and without any damage to the electrode coating.

## 6. LABEL INFORMATION

|                              |  |                                                                  |          |          |         |
|------------------------------|--|------------------------------------------------------------------|----------|----------|---------|
| <b>GeKaMac®</b>              |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                            |          |          |         |
| www.gedikwelding.com         |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                        |          |          |         |
| RKM 350                      |  | S.N.: XXXXXXXX-35 R-YYY                                          |          |          |         |
|                              |  | TS EN 60974-1/-10                                                |          |          |         |
|                              |  | 5 A / 20 V - 300 A / 32 V                                        |          |          |         |
|                              |  | X                                                                | 35%      | 60%      | 100%    |
|                              |  | I <sub>2</sub>                                                   | 300 A    | 230 A    | 180 A   |
|                              |  | U <sub>2</sub>                                                   | 32 V     | 30 V     | 27 V    |
| IP 23 U <sub>1</sub> = 380 V |  | I <sub>2</sub>                                                   | 23 A     | 20 A     | 15 A    |
|                              |  | S <sub>1</sub>                                                   | 15,0 kVA | 12,9 kVA | 9,7 kVA |
|                              |  | I <sub>max</sub> = 23 A I <sub>efektif</sub> = 13,4 A Cosφ= 0,80 |          |          |         |
|                              |  |                                                                  |          |          |         |
|                              |  | 8691852009320                                                    |          |          |         |

|                              |  |                                                                  |          |          |          |
|------------------------------|--|------------------------------------------------------------------|----------|----------|----------|
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| RKM 450                      |  | S.N.: XXXXXXXX-45 R-YYY                                          |          |          |          |
|                              |  | TS EN 60974-1/-10                                                |          |          |          |
|                              |  | 5 A / 20 V - 450 A / 38 V                                        |          |          |          |
|                              |  | X                                                                | 35%      | 60%      | 100%     |
|                              |  | I <sub>2</sub>                                                   | 450 A    | 350 A    | 250 A    |
|                              |  | U <sub>2</sub>                                                   | 38 V     | 35 V     | 30 V     |
| IP 23 U <sub>1</sub> = 380 V |  | I <sub>2</sub>                                                   | 50 A     | 37 A     | 33 A     |
|                              |  | S <sub>1</sub>                                                   | 32,0 kVA | 25,0 kVA | 16,5 kVA |
|                              |  | I <sub>max</sub> = 50 A I <sub>efektif</sub> = 35,4 A Cosφ= 0,75 |          |          |          |
|                              |  |                                                                  |          |          |          |
|                              |  | 8691852009320                                                    |          |          |          |

|                              |  |                                                                |          |          |          |
|------------------------------|--|----------------------------------------------------------------|----------|----------|----------|
| <b>GeKaMac®</b>              |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                          |          |          |          |
| www.gedikwelding.com         |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                      |          |          |          |
| RKM 650                      |  | S.N.: XXXXXXXX-65 R-YYY                                        |          |          |          |
|                              |  | TS EN 60974-1/-10                                              |          |          |          |
|                              |  | 50 A / 22 V - 650 A / 46 V                                     |          |          |          |
|                              |  | X                                                              | 35%      | 60%      | 100%     |
|                              |  | I <sub>2</sub>                                                 | 650 A    | 500 A    | 375 A    |
|                              |  | U <sub>2</sub>                                                 | 46 V     | 39 V     | 34 V     |
| IP 23 U <sub>1</sub> = 380 V |  | I <sub>2</sub>                                                 | 60 A     | 35 A     | 40 A     |
|                              |  | S <sub>1</sub>                                                 | 39,0 kVA | 35,0 kVA | 16,5 kVA |
|                              |  | I <sub>max</sub> = 60 A I <sub>efektif</sub> = 46 A Cosφ= 0,76 |          |          |          |
|                              |  |                                                                |          |          |          |
|                              |  | 8691852009320                                                  |          |          |          |

|                      |  |                                                                          |                 |                 |                 |
|----------------------|--|--------------------------------------------------------------------------|-----------------|-----------------|-----------------|
| <b>GeKaMac®</b>      |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                    |                 |                 |                 |
| www.gedikwelding.com |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                |                 |                 |                 |
| <b>RKM 800</b>       |  | <b>S.N.: XXXXXXXX-80 R-YY</b>                                            |                 |                 |                 |
|                      |  | <b>TS EN 60974-1/-10</b>                                                 |                 |                 |                 |
|                      |  | <b>5 A / 20 V - 800 A / 52 V</b>                                         |                 |                 |                 |
|                      |  | <b>X</b>                                                                 | <b>35%</b>      | <b>60%</b>      | <b>100%</b>     |
|                      |  | <b>I<sub>2</sub></b>                                                     | <b>800 A</b>    | <b>600 A</b>    | <b>460 A</b>    |
|                      |  | <b>U<sub>2</sub></b>                                                     | <b>52 V</b>     | <b>50 V</b>     | <b>40 V</b>     |
|                      |  | <b>I<sub>2</sub></b>                                                     | <b>80 A</b>     | <b>67 A</b>     | <b>50 A</b>     |
|                      |  | <b>S<sub>1</sub></b>                                                     | <b>51,0 kVA</b> | <b>42,5 kVA</b> | <b>32,0 kVA</b> |
|                      |  | <b>I<sub>max</sub> = 80 A   I<sub>efektif</sub> = 55 A   Cosφ = 0,90</b> |                 |                 |                 |
|                      |  |                                                                          |                 |                 |                 |

X = Duty Cycle

I<sub>1</sub> = Input Current

I<sub>2</sub> = Welding Current

U<sub>0</sub> = No-Load Voltage

|                      |  |                                                                          |                 |                 |                 |
|----------------------|--|--------------------------------------------------------------------------|-----------------|-----------------|-----------------|
| <b>GeKaMac®</b>      |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                    |                 |                 |                 |
| www.gedikwelding.com |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                |                 |                 |                 |
| <b>RRM 500</b>       |  | <b>S.N.: XXXXXXXX-50 R-YYY</b>                                           |                 |                 |                 |
|                      |  | <b>TS EN 60974-1/-10</b>                                                 |                 |                 |                 |
|                      |  | <b>25 A / 21 V - 500 A / 40 V</b>                                        |                 |                 |                 |
|                      |  | <b>X</b>                                                                 | <b>35%</b>      | <b>60%</b>      | <b>100%</b>     |
|                      |  | <b>I<sub>2</sub></b>                                                     | <b>500 A</b>    | <b>370 A</b>    | <b>290 A</b>    |
|                      |  | <b>U<sub>2</sub></b>                                                     | <b>40 V</b>     | <b>32 V</b>     | <b>28 V</b>     |
|                      |  | <b>I<sub>2</sub></b>                                                     | <b>53 A</b>     | <b>38 A</b>     | <b>34 A</b>     |
|                      |  | <b>S<sub>1</sub></b>                                                     | <b>32,5 kVA</b> | <b>26,0 kVA</b> | <b>20,0 kVA</b> |
|                      |  | <b>I<sub>max</sub> = 53 A   I<sub>efektif</sub> = 32 A   Cosφ = 0,76</b> |                 |                 |                 |
|                      |  |                                                                          |                 |                 |                 |

U<sub>1</sub> = Supply Voltage

U<sub>2</sub> = Welding Voltage

S<sub>1</sub> = Input Power

IP21 = Protection Class



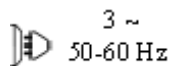
Class 2



Three-Phase Transformer Rectifier



Direct Current



Network Input Three-Phase Alternative Current



Suitable for welding in an environment with increased hazard of electric shock



MMA Welding

## 7. TECHNICAL INFORMATION

|                      | Unit          | RKM 350                   | RKM 450                   | RRM 500                   | RKM 650                   | RKM 800                   |
|----------------------|---------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Main Voltage         | V             | 380                       | 380                       | 380                       | 380                       | 380                       |
| Maximum Power        | kVA           | 15,0                      | 32,0                      | 32,5                      | 39,0                      | 51,0                      |
| Adjustment Range     | A             | 5 - 300                   | 5 - 450                   | 25 - 500                  | 50 - 650                  | 50 - 800                  |
| Power Factor         |               | 0,80                      | 0,75                      | 0,76                      | 0,76                      | 0,90                      |
| Welding Range (%35)  |               | 300                       | 450                       | 500                       | 650                       | 800                       |
| Welding Range (%60)  |               | 230                       | 350                       | 370                       | 500                       | 600                       |
| Welding Range (%100) |               | 180                       | 250                       | 290                       | 375                       | 460                       |
| Open Circuit Voltage | V             | 38                        | 82                        | 75                        | 82                        | 85                        |
| Isolation Class      |               | H                         | H                         | H                         | H                         | H                         |
| Protection Class     |               | IP 23                     | IP 23                     | IP 23                     | IP 23                     | IP 23                     |
| Standard             |               | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 |
| Dimension            | mm<br>(V*W*H) | 680/510/460               | 980/760/660               | 810/610/650               | 980/760/660               | 980/760/660               |
| Weight               | kg            | 101,2                     | 209,4                     | 176,5                     | 265,4                     | 296,5                     |

## 8. MACHINE SET UP INFORMATION

- Read this section carefully before setting up or operating the machine.
- Do not place the machine on a plane that is at more than 15 degrees with the horizontal and do not operate it on such a plane.
- The machine must be operated in an environment where there is a flow of clean air and there must be no factor that inhibits the ventilation or that stops the flow of air. The machine should not be covered with paper, dustcloth or similar objects while working.
- Dust and dirt can enter into the machine. This situation should be minimized as much as possible. Don't work in environments that are extremely dusty and that have water, paint and oil granules and grinding dusts and corrosive gases in their atmosphere.
- This machine has IP 23 class protection. Keep the machine as dry as possible and don't place it on surfaces that are wet or have puddles on them.
- Definitely do not operate the machine under sunlight and at places where there is a possibility of splashing of water.
- Place the machine far from appliances that are radio controlled. The normal operation of the machine can affect the operation of this type of appliances that are nearby in a negative way and in this situation, can cause injury and equipment malfunction. Read the "Electromagnetic Compatibility" section in this user's guide.
- Do not operate the machine at places where the environmental temperature is either below -10°C or above +40°C and humidity is above 70%.
- The opening of the chassis cover and the interventions made by unauthorized people concerning electrical equipment can create life threatening situations. The people who act in a contrary way, are considered to have accepted in advance the negative results that can come up.
- The operational efficiency of the machine, is the percentage of time that the welder can weld for 10 minutes at a given welding current without excessive heating and without taking a break.
- The machine is protected against excessive heating by the help of thermal protection. When this protection comes on-line, the warning light on the front panel will come on. When the safe operating temperature is reached again, the light will turn off and welding will continue.

## 9. MACHINE MAINTENANCE

- The maintenance and service must be done only by qualified personel! The network current of the welding machine should be cut off during maintenance and service. Electric plug of the machine must be removed from the jack.
- Obey the general personal safety and fire safety rules that deal with welding operations.
- Control the insulation state and connections of cable conductors and energy cable.  
  
Remove the connections that have become loose.
- The dust which has accumulated inside the welding machine should be cleaned with compressed air regularly. If the machine is being used in an environment that contains a lot of dust and fume, this operation should be repeated twice a month.
- Need to be careful about the pressure of the air that is being used for cleaning in order to protect small pieces.

- The entry of water and steam into the welding machine should be inhibited. If the machine is affected by the humidity, the inside of the machine should be dried and insulation should be controlled.
- If the welding machine is not going to be used for a long time, it should be stored at a dry place.
- The welding machine should not be thrown at random and must be protected from hits while being put away or transported.

## **10. STORAGE AND TRANSPORTATION**

- The welding machine should be stored in closed rooms that have environmental temperatures between -10°C and +40°C with a humidity of at the most 70%.
- Incendiary, conductive dust or other environmental elements should not be found in the room.
- It is recommended that the welding machines should be preserved in a proper way.
- The welding machine should be packaged in a way that will protect it from mechanical damages during long distance transportation.

## **11. COATED ELECTRODE WELDING METHOD**

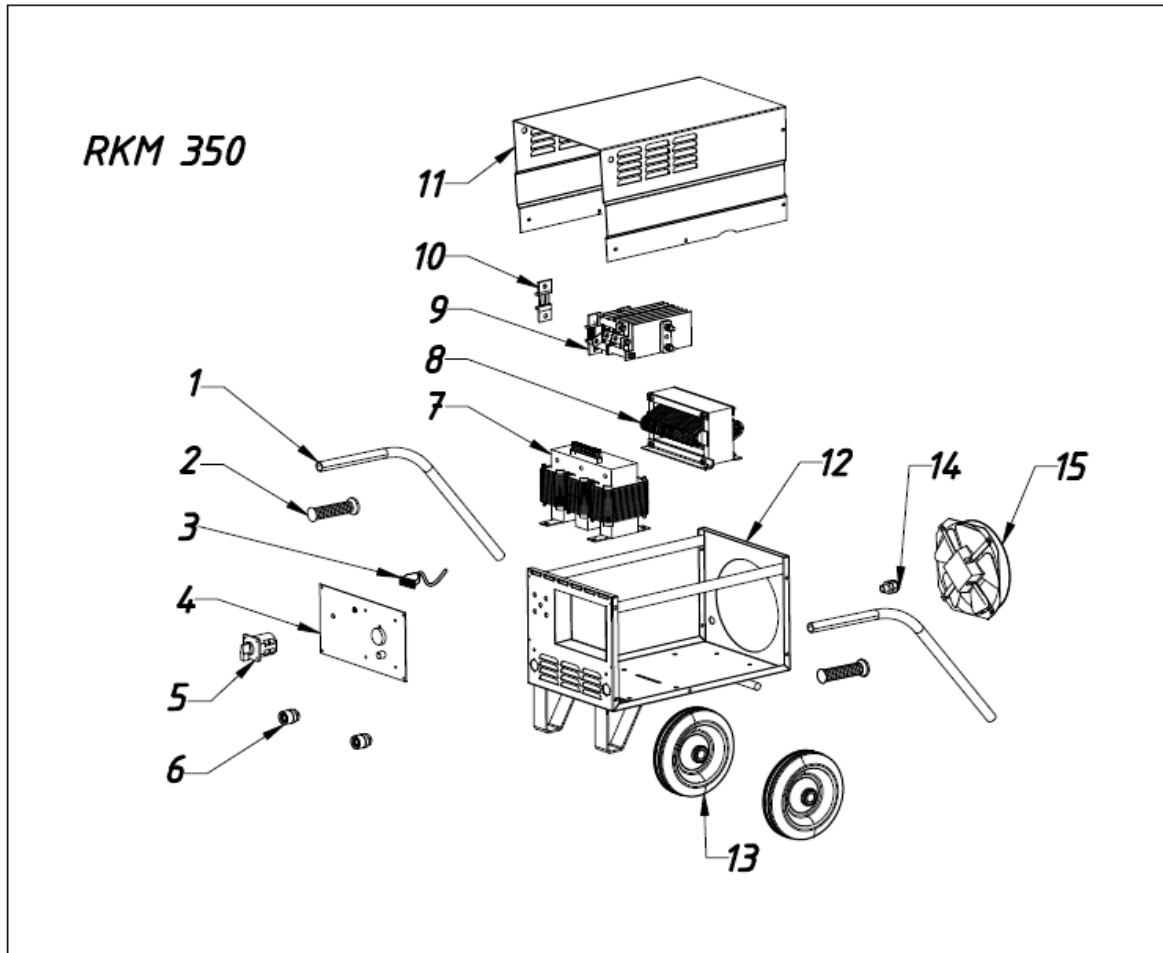
- The operations that are listed below should be performed before starting to weld:
- Affix the welding and grounding cables into the socket that is located in the front part of the machine.
- Turn the socket clockwise a ¼ turn after putting it into the housing in such a way that it is opposite the pin of the guide. Be certain that the socket is firmly in place inside its housing without being pressed down hard. Otherwise, loose sockets can burn due to excessive heat in cases when the machine is used for long periods of time and welding current is high.
- Affix the electrode to the electrode pincher.
- Affix the chassis pincher to the part of the surface of the work piece which is not painted, without rust and clean.
- Affix the network connection plug into the proper jack.
- Turn on the machine with the on-off switch that is in front part of the machine.
- Adjust the proper welding current value which you will determine according to the diameter and type of the electrode, the position of welding and electrode information log with the use of the amper adjustment lever that is on top of the machine. And Start welding by obeying the rules of weldi

## 12. RECTIFIER WELDING MACHINE WELDING PROBLEMS

| FAULT                                                                                           | PROBABLE REASON                                                                                  | SOLUTION                       |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------|
| The machine is not welding.                                                                     | There can be a problem with the supply cable or supply voltage of the machine.                   | Check it.                      |
|                                                                                                 | The electronic card of the machine can be out of order.                                          | Call the technical service     |
|                                                                                                 | The machine could have been deactivated by the thermostat due to excessive heat.                 | Check it.                      |
| The machine is welding at low current.                                                          | One less phase may be coming to the machine.                                                     | Check it.                      |
|                                                                                                 | The rectifier group can be faulty.                                                               | Call the technical service     |
|                                                                                                 | The package type switch of the machine may be faulty.                                            | Check the package type switch. |
|                                                                                                 | The coils of the machine may be faulty.                                                          | Call the technical service     |
|                                                                                                 | The current adjustment potentiometer of the machine may have slipped according to the indicator. | Check it and adjust.           |
|                                                                                                 | There can be a looseness of contact in the internal cable connections of the machine.            | Check it and adjust.           |
| The machine is giving very high welding current. It can not be controlled by the potentiometer. | The electronic card of the machine can be faulty.                                                | Call the technical service     |
|                                                                                                 | The Rectifier group can be faulty.                                                               | Call the technical service     |

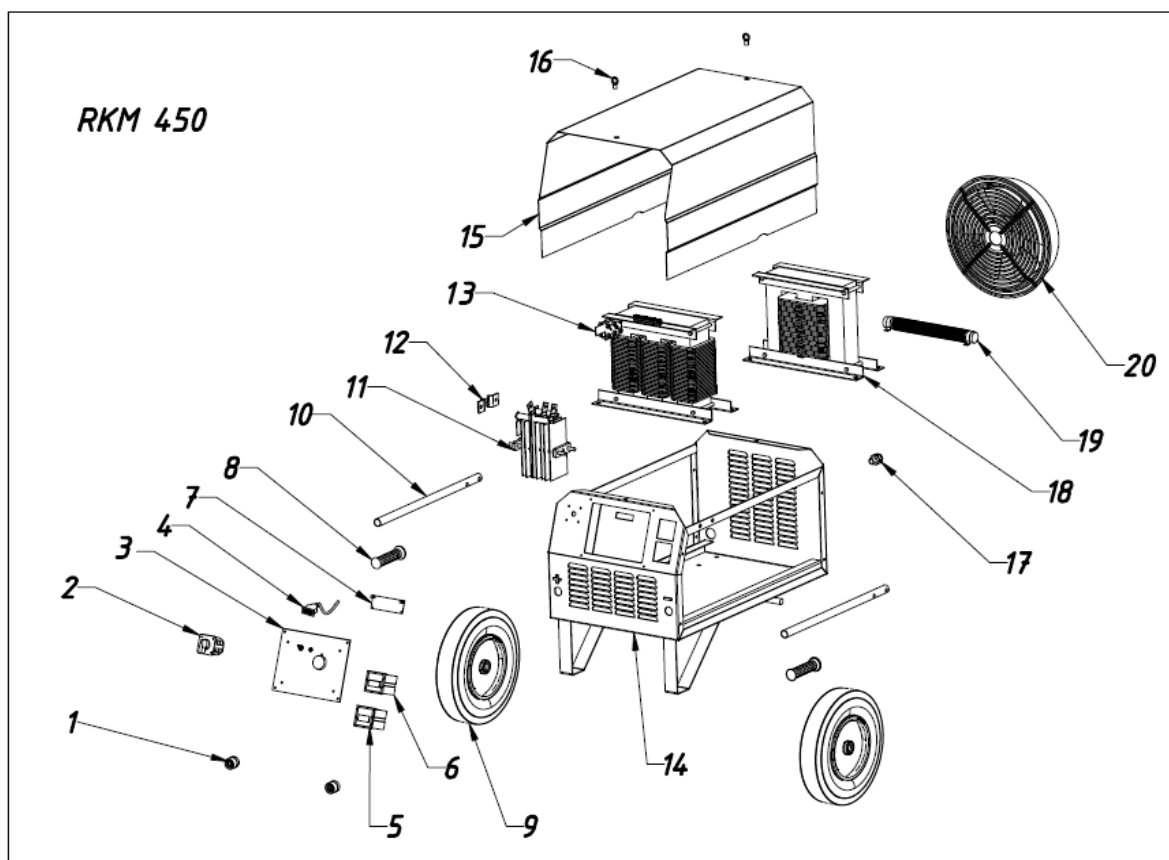
### 13. SPARE PARTS

#### 13.1. Spare Parts of GeKaMac® RKM 350



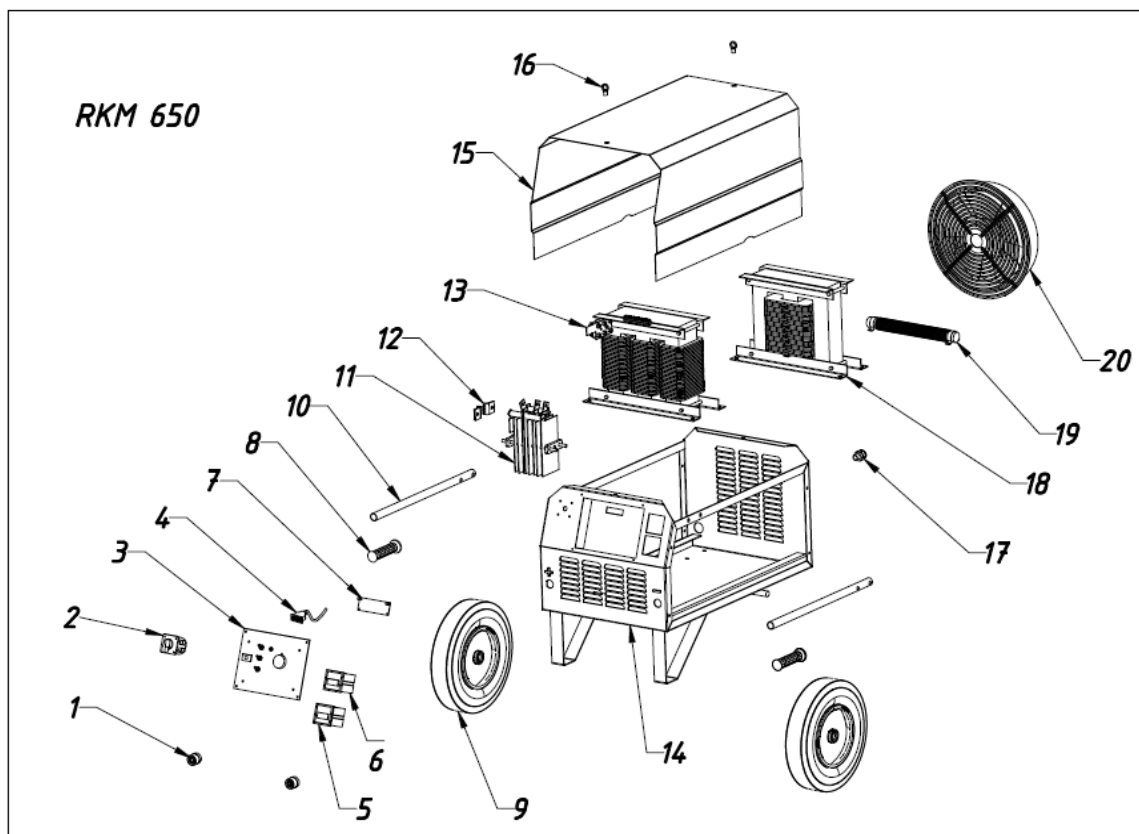
| PICTURES<br>NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                   |
|---------------------|--------------|----------------------------------------|
| 1                   | 201386       | RKM 350 PAINTED LEVER                  |
| 2                   | 101439       | HANDLE                                 |
| 3                   | 201333       | RKM 350 CARD CABLE GROUP               |
| 4                   | 201575       | RKM 350 ELECTRONIC CARD                |
| 5                   | 101367       | RKM 350 PACKAGE TYPE SWITCH (C25-A202) |
| 6                   | 206001       | FEMALE JACK SET 50 / 70                |
| 7                   | 201314       | RKM 350 COMPLETE TRANSFORMER           |
| 8                   | 201340       | RKM 350 COMPLETE CHOKE COIL            |
| 9                   | 100506       | RKM 350 RECTIFIER GROUP                |
| 10                  | 101380       | 300 AMPERS SHUNT                       |
| 11                  | 201376       | RKM 350 LIDS                           |
| 12                  | 201354       | RKM 350 COMPLETELY EMPTY CASING        |
| 13                  | 101468       | RKM 350 WHEEL                          |
| 14                  | 101446       | 13,5 mm PLASTIC UNION STEM             |
| 15                  | 101462       | GAMAK ASPIRATOR RKM 350                |

### 13.2. Spare Parts of GeKaMac® RKM 450



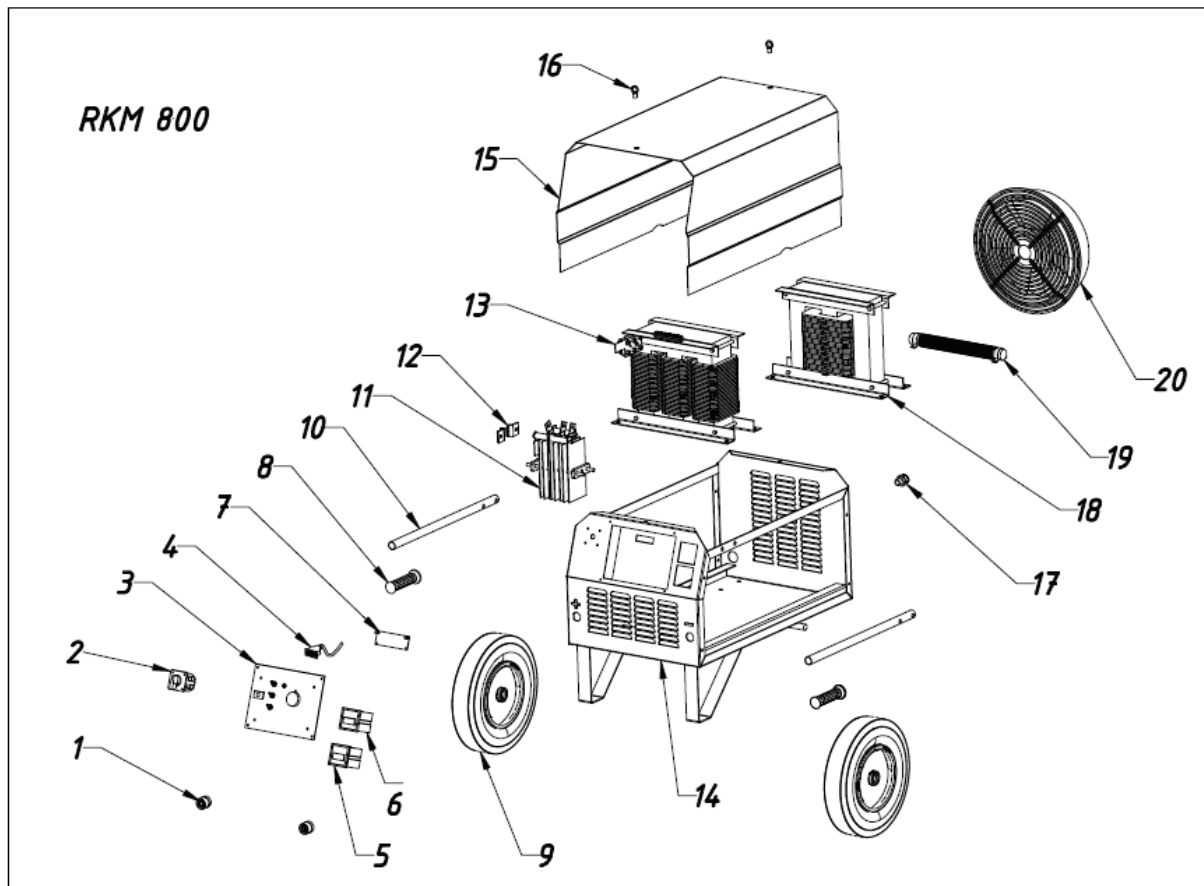
| PICTURES NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                       |
|------------------|--------------|--------------------------------------------|
| 1                | 101438       | 70-95 FEMALE JACK SET                      |
| 2                | 101368       | RKM 450-650 PACKAGE TYPE SWITCH (C42-A202) |
| 3                | 201576       | RKM 450 ELECTRONIC CARD                    |
| 4                | 201568       | RKM 450-RKM 650 CARD CABLE GROUP           |
| 5                | 105770       | VOLTMETER                                  |
| 6                | 105766       | AMPERMETER 400 AMPERS                      |
| 7                | 101529       | FEEDBACK ELECTRONIC CARD                   |
| 8                | 101439       | HANDLE                                     |
| 9                | 101467       | RKM 450-RKM 650 WHEEL                      |
| 10               | 201631       | RKM 450 TWO PROFILE LEVERS                 |
| 11               | 100508       | RKM 450 RECTIFIER GROUP                    |
| 12               | 101381       | 400 AMPERS SHUNT                           |
| 13               | 201548       | RKM 450 TRANSFORMER                        |
| 14               | 201595       | RKM 450 COMPLETELY EMPTY CASING            |
| 15               | 201624       | RKM 450 TOP LID                            |
| 16               | 105960       | EYEBOLT                                    |
| 17               | 101448       | 29 mm. PLASTIC UNION STEM                  |
| 18               | 201574       | RKM 450 COMPLETE CHOKE COIL                |
| 19               | 101526       | RKM 450 WIRE WRAPPED RESISTOR              |
| 20               | 101464       | RKM 450 ASPIRATOR                          |

### 13.3. Spare Parts of GeKaMac® RKM 650



| PICTURES NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                       |
|------------------|--------------|--------------------------------------------|
| 1                | 101438       | 70-95 FEMALE JACK SET                      |
| 2                | 101368       | RKM 450-650 PACKAGE TYPE SWITCH (C42-A202) |
| 3                | 201580       | RKM 650 ELECTRONIC CARD                    |
| 4                | 201568       | RKM 450-RKM 650 CARD CABLE GROUP           |
| 5                | 105770       | VOLTMETER                                  |
| 6                | 105766       | AMPERMETER 400AMPERS                       |
| 7                | 101529       | FEEDBACK ELECTRONIC CARD                   |
| 8                | 101439       | HANDLE                                     |
| 9                | 101467       | RKM 450-RKM 650 WHEEL                      |
| 10               | 201631       | RKM 450 TWO PROFILE LEVERS                 |
| 11               | 100509       | RKM 650 RECTIFIER GROUP                    |
| 12               | 101382       | 600 AMPER SHUNT                            |
| 13               | 201786       | RKM 650 TRANSFORMER                        |
| 14               | 201595       | RKM 450 COMPLETELY EMPTY CASING            |
| 15               | 201624       | RKM 450 TOP LID                            |
| 16               | 105960       | EYEBOLT                                    |
| 17               | 101448       | 29 mm PLASTIC UNION STEM                   |
| 18               | 201803       | RKM 650 COMPLETE CHOKE COIL                |
| 19               | 101526       | RKM 650 WIRE WRAPPED RESISTOR              |
| 20               | 101464       | RKM 650 ASPIRATOR                          |

### 13.4. Spare Parts of GeKaMac® RKM 800



| PICTURES NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                       |
|------------------|--------------|--------------------------------------------|
| 1                | 101438       | 70-95 FEMALE JACK SET                      |
| 2                | 101368       | RKM 450-650 PACKAGE TYPE SWITCH (C42-A202) |
| 3                | 203621       | RKM 800 ELECTRONIC CARD                    |
| 4                | 201568       | RKM 450-RKM 650 CARD CABLE GROUP           |
| 5                | 105770       | VOLTMETER                                  |
| 6                | 107157       | AMPERMETER (1000A)                         |
| 7                | 101529       | FEEDBACK ELECTRONIC CARD                   |
| 8                | 101439       | HANDLE                                     |
| 9                | 101467       | RKM 450-RKM 650 WHEEL                      |
| 10               | 201631       | RKM 450 TWO PROFILE LEVERS                 |
| 11               | 107680       | RKM 650 RECTIFIER GROUP                    |
| 12               | 107156       | 1000 AMPERMETER SHUNT                      |
| 13               | 202537       | RKM 850 TRANSFORMER                        |
| 14               | 201595       | RKM 450 COMPLETELY EMPTY CASING            |
| 15               | 201624       | RKM 450 TOP LID                            |
| 16               | 105960       | EYEBOT                                     |
| 17               | 101448       | 29 mm PLASTIC INION STEM                   |
| 18               | 204188       | RKM 800 COMPLETE CHOKE COIL                |
| 19               | 101526       | RKM 650 WIRE WRAPPED RESISTOR              |
| 20               | 101464       | RKM 650 ASPIRATOR                          |

#### 14. WARRANTY CONDITIONS

1. The length of the warranty starts on the date of delivery and it is for 1 year.
2. The whole merchandise including all its parts are covered by the warranty of our company.
3. If the merchandise breaks down within the length of the warranty, the time spent in the repair shop will be added to the length of the warranty. The length of repair of the merchandise is at the maximum 20 working days. This period of time starts on the date that the merchandise was delivered at one of the following locations: A service station or the seller of the merchandise or dealer or agency or representation office or importer or manufacturer, in this order if there are no service stations.
4. If the merchandise breaks down either due to material and workmanship or assembly lines within the length of the Warranty, it will be repaired without demanding any money under the name of expenditure of workmanship, the cost of the changed piece or under any other name.
5. Replacement operation will be done without charge in cases where the merchandise repeats the same fault more than twice or different faults come up more than four times within the length of the warranty, the length of the repair exceeds maximum necessary time and the determination of the unrepairability of the merchandise by a report that is prepared either by a service station or the seller or a dealer or an agency or a representation office or the importer or the manufacturer, in this order, if there are no service stations.
6. Faults that are results of misuse according to the user's guide of the merchandise are not covered by the warranty.
7. Ministry of Science Industry and Technology, The Protection of the Consumer and Competition General Directorate can be referred to whenever a problem concerning the warranty document comes up.
8. Earth clamp and electrode holder kits are not under warranty.

# GeKaMac®

## Gedik Welding Machines

### Warranty Document

#### MACHINE INFORMATION

Brand : GeKaMac®

Model : .....

Serial Number : .....

#### CUSTOMER INFORMATION

Company Name : .....

Authorized Person : .....

Telephone : .....

Company Address : .....

City/Country.....

E-Mail : ..... @.....

Signature /Cachet :

#### SERVICE INFORMATION

Authorized Service : .....

Service Staff : .....

Installation Date : ...../...../.....

Warranty Starting Date : .....

Warranty Expiration Date : .....

Signature /Cachet

# GeKaMac®

## Gedik Welding Machines

### Warranty Document

#### MACHINE INFORMATION

Brand : GeKaMac®

Model : .....

Serial Number : .....

#### CUSTOMER INFORMATION

Company Name : .....

Authorized Person : .....

Telephone : .....

Company Address : .....

City/Country.....

E-Mail : ..... @.....

Signature /Cachet :

#### SERVICE INFORMATION

Authorized Service : .....

Service Staff : .....

Installation Date : ...../...../.....

Warranty Starting Date : .....

Warranty Expiration Date : .....

Signature /Cachet

# RKM Series



**GeKaMac®**



**Gedik Welding** — Ankara Caddesi  
No : 306 Şeyhli 34906 Pendik, İstanbul / Turkey  
T +90 216 378 50 00 F +90 216 378 20 44  
[gedik@gedik.com.tr](mailto:gedik@gedik.com.tr)



## Attention!

**Our Valued Customer,**

We kindly request that you obey the warnings mentioned below:

- Definitely have the “Warranty Document” approved when you get the machine.
- Use the machine in a way that is in accordance with the fundamentals that are mentioned in the user’s guide of the machine.
- Refer to the nearest GEDIK WELDING authorized service or the service center of GEDIK WELDING when a problem comes up.

Thank you for preferring one of GeKaMac<sup>®</sup> products.

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## 2. SAFETY RULES

Protect yourself and others against possible serious injury or death risks. Keep children away. People who have pacemakers in their bodies should consult their doctors before operating the welding machine. Be careful when you are doing operations with your hands on the pieces. Use proper equipment that are necessary to protect yourself from burns that can be caused by excessive heating of the piece during welding and / or cutting operation. Be sure that all set up, maintenance and repair related operations are performed only by qualified people.

### 2.1. ELECTRICAL SHOCK



Electrode and the piece that is being worked on or ground circuits are active in terms of electricity while the welding machine is on. Don't touch these active parts with bare hands or wet clothing. Wear dry gloves that have no holes to insulate your hands.

### 2.2. ARC RAYS



Use a protective mask with a proper filter to protect your eyes from the sparks and the rays of the arc while welding or watching such an activity. The head mask and the filtered glasses must meet the ANSI Z87.1 standards.

### 2.3. GASES AND FUMES



Fumes and gases that are harmful to health can form during the welding operation. Do not inhale these gases or fumes. Keep your head out of the fumes while welding. Provide sufficient ventilation in the arc and / or use fume suction machines to keep fumes and gases out of the breathing area.

### 2.4. WELDING SPARKS



Put away elements that are fire hazards from the welding area. If this is not possible, cover these hazards to prevent welding sparks from starting a fire. Do not forget that welding sparks and hot materials coming from welding can go on to neighboring areas easily through small cracks and openings. Don't do welding near hydraulic lines. Always keep a fire extinguisher on hand.

### 2.5. ELECTRIC AND MAGNETISM



Electric flow that passes through a conductor causes Electric and Magnetic Fields (EMF) to be formed. Welding current creates EMF around welding cables and welding machines.

- EMF can ruin the operation of some pacemakers.
- For this reason, welders who have pacemakers in their bodies should consult their doctors before welding.
- Being exposed to EMF during welding, can cause other unknown health problems.
  - Getting exposed to EMF will be minimized by paying attention to the following instructions:
- Guide electrode and chassis cables together.
  - Never wrap electrode and chassis cables around your body.
  - Do not place your body between the electrode and chassis cables.
  - Connect the chassis cable as close to the piece that is being worked on as possible.
  - Stay as far away as you can from the power units.

### 3. ELECTROMAGNETIC COMPATIBILITY (EMC)

This machine has been designed in accordance with all related regulations and norms. Additionally, it can still generate electromagnetic forces that affect other systems such as communications (telephone, radio, television). These affects can cause security problems in the exposed systems. Read carefully and understand this section in order to reduce or get rid of the affects that can be created by this machine.

This machine has been designed to be operated in the industry area. If it is operated in private places (house etc.), it will become necessary to take special precautionary measures in order to prevent possible electromagnetic affects. It is necessary for the user to set up and operate these machines just like the way it is described in the handbook. If an electromagnetic affect is perceived due to the operation of these machines, the user should take corrective measures in order to get rid of these affects. If necessary, the user should contact GEDIK WELDING IND. COM. LTD. CO. No changes should be made in the machine without getting written approval from GEDIK WELDING IND. COM. LTD. CO.

The control of the work area should be made in terms of tools that can work improperly due to the electromagnetic affects before the machine is assembled.

- Inlet and outlet cables, telephone cables and control cables that are found in the work area of the machine.
- Radio and/or television transmitters and receivers,
- Computer or computer controlled tools,
- Safety and control equipment for industrial operations,
- Calibration and measurement appliances,
- Medical appliances such as heart rhtyme appliance and hearing aids,

Control the electromagnetic immunity of the equipments that operate near the work area. The user should be certain that all the equipments that are in the work place are compatible. Otherwise, it can necessitate additional protective measures.

Ideal dimensions of the work place are determined by the construction of the area and other factors that are found there. Take the warnings below into consideration in order to decrease the affects of the electromagnetic waves that the machine generates:

\* Make the connection of the machine with the network electricity in the way it is stated in the user's guide. If an electromagnetic interaction comes into being, such preventive measures as filtering the main electrical inlet may need to be taken.

\* Outlet cables should be as short as possible and should be kept together.

#### 4. GENERAL INFORMATION AND WARNINGS

- Do not set up, operate or repair before reading the user's guide and the security measures that are found in it. Hide this user's guide and always have it on hand.
- Cut off the electrical connection between the welding machine and the network when the work is finished or when you are going to take a long break.
- Do not make any changes in the welding machine. This operation can cause the machine to lose its properties and a change in technical data.
- It is forbidden to do adaptation on the welding machine. Doing adaptation does not only cause the loss of warranty rights, but also can jeopardize the operational safety of the machine and can create the risk of electrocution for the users.
- A damage in the welding machine due to a mistake of the user will cause the loss of warranty rights.
- Acceptable environmental temperature range during work is between -10 °C and +40 °C.
- Manufacturing company reserves the right to change the technical properties without prior notice.

## 5. CONTROL PANELS

### RKM 350 CONTROL PANEL



1. Power Unit Led (Güç Ünitesi Işığı)
2. On/ Off Switch (Açma Kapama Anahtarı)
3. Current Adjustment Button (Akım Ayar Düğmesi)
4. Time Selection for Trigger Modes (Tetik Mod Zaman Seçimi)
5. Choke Coil Outputs (Şok Bobin Çıkışları Şase Bağlantıları)

## RKM 450 CONTROL PANEL



1. MMA & Gouging Selection Button (Elektrot Kaynağı veya Karbon Kesme Modu)
2. Power Unit Led (Güç Ünitesi Işığı)
3. On/Off Switch (Açma Kapama Anahtarı)
4. Digital Display for Ampermeter (Ampermetre Dijital Ekranı)
5. Digital Display for Voltmeter (Voltmetre Dijital Ekranı)
6. Current Adjustment Button (Akım Ayar Düğmesi)
7. Choke Coil Outputs (Şok Bobin Çıkışları, Şase Bağlantıları)

## RKM 650, RKM 800 CONTROL PANEL

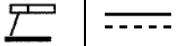
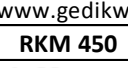
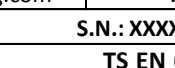
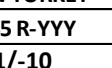


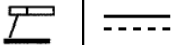
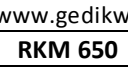
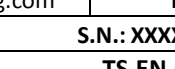
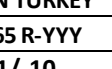
1. Power Unit Led (Güç Ünitesi Işığı)
2. MMA & Gouging Selection Button (Elektrot Kaynağı veya Karbon Kesme Modu)
3. On/Off Switch (Açma Kapama Anahtarı)
4. Digital Display for Ampermeter (Ampermetre Dijital Ekranı)
5. Control Socket (Kontrol Soketi)
6. Digital Display for Voltmeter (Voltmetre Dijital Ekranı)
7. Current Adjustment Button (Akım Ayar Düğmesi)
8. Remote Control Selection Key (Uzaktan Kumandalı Seçim Anahtarı)
9. Choke Coil Outputs (Şok bobin Çıkışları, Şase Bağlantıları)
10. Standart / Electrotect Switch

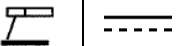
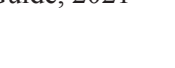
Standart = Constant- current characteristic

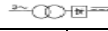
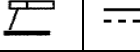
Electrotect = Constant- current characteristic with automatic current cut-out in short circuit  
If the welding voltage drops below 15 V, the welding current is automatically reduced to a minimum. When the electrode sticks to the workpiece (short circuit), it can easily be detached without burning out and without any damage to the electrode coating.

## 6. LABEL INFORMATION

|                                                                                    |  |                                                                                                     |          |                                                                                     |         |
|------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|---------|
| <b>GeKaMac®</b>                                                                    |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                                               |          |                                                                                     |         |
| www.gedikwelding.com                                                               |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                                           |          |                                                                                     |         |
| RKM 350                                                                            |  | S.N.: XXXXXXXX-35 R-YYY                                                                             |          |                                                                                     |         |
|   |  | TS EN 60974-1/-10                                                                                   |          |                                                                                     |         |
|   |  | 5 A / 20 V - 300 A / 32 V                                                                           |          |                                                                                     |         |
|   |  | X                                                                                                   | 35%      | 60%                                                                                 | 100%    |
|   |  | I <sub>2</sub>                                                                                      | 300 A    | 230 A                                                                               | 180 A   |
|   |  | U <sub>2</sub>                                                                                      | 32 V     | 30 V                                                                                | 27 V    |
|   |  | I <sub>2</sub>                                                                                      | 23 A     | 20 A                                                                                | 15 A    |
|   |  | S <sub>1</sub>                                                                                      | 15,0 kVA | 12,9 kVA                                                                            | 9,7 kVA |
|   |  | I <sub>max</sub> = 23 A I <sub>efektif</sub> = 13,4 A Cosφ = 0,80                                   |          |                                                                                     |         |
|  |  | <br>8691852009320 |          |  |         |

|                                                                                     |  |                                                                                                      |          |                                                                                      |          |
|-------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------|----------|
| <b>GeKaMac®</b>                                                                     |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                                                |          |                                                                                      |          |
| www.gedikwelding.com                                                                |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                                            |          |                                                                                      |          |
| RKM 450                                                                             |  | S.N.: XXXXXXXX-45 R-YYY                                                                              |          |                                                                                      |          |
|  |  | TS EN 60974-1/-10                                                                                    |          |                                                                                      |          |
|  |  | 5 A / 20 V - 450 A / 38 V                                                                            |          |                                                                                      |          |
|  |  | X                                                                                                    | 35%      | 60%                                                                                  | 100%     |
|  |  | I <sub>2</sub>                                                                                       | 450 A    | 350 A                                                                                | 250 A    |
|  |  | U <sub>2</sub>                                                                                       | 38 V     | 35 V                                                                                 | 30 V     |
|  |  | I <sub>2</sub>                                                                                       | 50 A     | 37 A                                                                                 | 33 A     |
|  |  | S <sub>1</sub>                                                                                       | 32,0 kVA | 25,0 kVA                                                                             | 16,5 kVA |
|  |  | I <sub>max</sub> = 50 A I <sub>efektif</sub> = 35,4 A Cosφ = 0,75                                    |          |                                                                                      |          |
|  |  | <br>8691852009320 |          |  |          |

|                                                                                     |  |                                                                                                      |          |                                                                                      |          |
|-------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------|----------|
| <b>GeKaMac®</b>                                                                     |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                                                |          |                                                                                      |          |
| www.gedikwelding.com                                                                |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                                            |          |                                                                                      |          |
| RKM 650                                                                             |  | S.N.: XXXXXXXX-65 R-YYY                                                                              |          |                                                                                      |          |
|  |  | TS EN 60974-1/-10                                                                                    |          |                                                                                      |          |
|  |  | 50 A / 22 V - 650 A / 46 V                                                                           |          |                                                                                      |          |
|  |  | X                                                                                                    | 35%      | 60%                                                                                  | 100%     |
|  |  | I <sub>2</sub>                                                                                       | 650 A    | 500 A                                                                                | 375 A    |
|  |  | U <sub>2</sub>                                                                                       | 46 V     | 39 V                                                                                 | 34 V     |
|  |  | I <sub>2</sub>                                                                                       | 60 A     | 35 A                                                                                 | 40 A     |
|  |  | S <sub>1</sub>                                                                                       | 39,0 kVA | 35,0 kVA                                                                             | 16,5 kVA |
|  |  | I <sub>max</sub> = 60 A I <sub>efektif</sub> = 46 A Cosφ = 0,76                                      |          |                                                                                      |          |
|  |  | <br>8691852009320 |          |  |          |

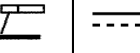
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| <b>GeKaMac®</b>                                                                   |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                                              |                 |                                                                                   |                 |
| www.gedikwelding.com                                                              |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                                          |                 |                                                                                   |                 |
| <b>RKM 800</b>                                                                    |  | <b>S.N.: XXXXXXXX-80 R-YY</b>                                                                      |                 |                                                                                   |                 |
|  |  | <b>TS EN 60974-1/-10</b>                                                                           |                 |                                                                                   |                 |
|  |  | <b>5 A / 20 V - 800 A / 52 V</b>                                                                   |                 |                                                                                   |                 |
|  |  | <b>X</b>                                                                                           | <b>35%</b>      | <b>60%</b>                                                                        | <b>100%</b>     |
| <b>U<sub>0</sub> = 85 V</b>                                                       |  | <b>I<sub>2</sub></b>                                                                               | <b>800 A</b>    | <b>600 A</b>                                                                      | <b>460 A</b>    |
| <b>IP 23</b>                                                                      |  | <b>U<sub>2</sub></b>                                                                               | <b>52 V</b>     | <b>50 V</b>                                                                       | <b>40 V</b>     |
|  |  | <b>I<sub>2</sub></b>                                                                               | <b>80 A</b>     | <b>67 A</b>                                                                       | <b>50 A</b>     |
|  |  | <b>S<sub>1</sub></b>                                                                               | <b>51,0 kVA</b> | <b>42,5 kVA</b>                                                                   | <b>32,0 kVA</b> |
|  |  | <b>I<sub>max</sub> = 80 A   I<sub>efektif</sub> = 55 A   Cosφ = 0,90</b>                           |                 |                                                                                   |                 |
|  |  | <br>8691852009320 |                 |  |                 |

X = Duty Cycle

I<sub>1</sub> = Input Current

I<sub>2</sub> = Welding Current

U<sub>0</sub> = No-Load Voltage

|                                                                                     |  |                                                                                                      |                 |                                                                                     |                 |
|-------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-----------------|
| <b>GeKaMac®</b>                                                                     |  | <b>GEDİK KAYNAK SAN. VE TİC. A.Ş.</b>                                                                |                 |                                                                                     |                 |
| www.gedikwelding.com                                                                |  | Ankara Cad. No:306 Şeyhli İstanbul/TURKEY                                                            |                 |                                                                                     |                 |
| <b>RRM 500</b>                                                                      |  | <b>S.N.: XXXXXXXX-50 R-YYY</b>                                                                       |                 |                                                                                     |                 |
|    |  | <b>TS EN 60974-1/-10</b>                                                                             |                 |                                                                                     |                 |
|    |  | <b>25 A / 21 V - 500 A / 40 V</b>                                                                    |                 |                                                                                     |                 |
|   |  | <b>X</b>                                                                                             | <b>35%</b>      | <b>60%</b>                                                                          | <b>100%</b>     |
| <b>U<sub>0</sub> = 75 V</b>                                                         |  | <b>I<sub>2</sub></b>                                                                                 | <b>500 A</b>    | <b>370 A</b>                                                                        | <b>290 A</b>    |
| <b>IP 23</b>                                                                        |  | <b>U<sub>2</sub></b>                                                                                 | <b>40 V</b>     | <b>32 V</b>                                                                         | <b>28 V</b>     |
|  |  | <b>I<sub>2</sub></b>                                                                                 | <b>53 A</b>     | <b>38 A</b>                                                                         | <b>34 A</b>     |
|  |  | <b>S<sub>1</sub></b>                                                                                 | <b>32,5 kVA</b> | <b>26,0 kVA</b>                                                                     | <b>20,0 kVA</b> |
|  |  | <b>I<sub>max</sub> = 53 A   I<sub>efektif</sub> = 32 A   Cosφ = 0,76</b>                             |                 |                                                                                     |                 |
|  |  | <br>8691852009320 |                 |  |                 |

U<sub>1</sub> = Supply Voltage

U<sub>2</sub> = Welding Voltage

S<sub>1</sub> = Input Power

IP21 = Protection Class



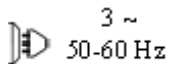
Class 2



Three-Phase Transformer Rectifier



Direct Current



Network Input Three-Phase Alternative Current



Suitable for welding in an environment with increased hazard of electric shock



MMA Welding

## 7. TECHNICAL INFORMATION

|                      | Unit          | RKM 350                   | RKM 450                   | RRM 500                   | RKM 650                   | RKM 800                   |
|----------------------|---------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Main Voltage         | V             | 380                       | 380                       | 380                       | 380                       | 380                       |
| Maximum Power        | kVA           | 15,0                      | 32,0                      | 32,5                      | 39,0                      | 51,0                      |
| Adjustment Range     | A             | 5 - 300                   | 5 - 450                   | 25 - 500                  | 50 - 650                  | 50 - 800                  |
| Power Factor         |               | 0,80                      | 0,75                      | 0,76                      | 0,76                      | 0,90                      |
| Welding Range (%35)  |               | 300                       | 450                       | 500                       | 650                       | 800                       |
| Welding Range (%60)  |               | 230                       | 350                       | 370                       | 500                       | 600                       |
| Welding Range (%100) |               | 180                       | 250                       | 290                       | 375                       | 460                       |
| Open Circuit Voltage | V             | 38                        | 82                        | 75                        | 82                        | 85                        |
| Isolation Class      |               | H                         | H                         | H                         | H                         | H                         |
| Protection Class     |               | IP 23                     | IP 23                     | IP 23                     | IP 23                     | IP 23                     |
| Standard             |               | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 | EN 60974-1/10<br>EN 60529 |
| Dimension            | mm<br>(V*W*H) | 680/510/460               | 980/760/660               | 810/610/650               | 980/760/660               | 980/760/660               |
| Weight               | kg            | 101,2                     | 209,4                     | 176,5                     | 265,4                     | 296,5                     |

## 8. MACHINE SET UP INFORMATION

- Read this section carefully before setting up or operating the machine.
- Do not place the machine on a plane that is at more than 15 degrees with the horizontal and do not operate it on such a plane.
- The machine must be operated in an environment where there is a flow of clean air and there must be no factor that inhibits the ventilation or that stops the flow of air. The machine should not be covered with paper, dustcloth or similar objects while working.
- Dust and dirt can enter into the machine. This situation should be minimized as much as possible. Don't work in environments that are extremely dusty and that have water, paint and oil granules and grinding dusts and corrosive gases in their atmosphere.
- This machine has IP 23 class protection. Keep the machine as dry as possible and don't place it on surfaces that are wet or have puddles on them.
- Definitely do not operate the machine under sunlight and at places where there is a possibility of splashing of water.
- Place the machine far from appliances that are radio controlled. The normal operation of the machine can affect the operation of this type of appliances that are nearby in a negative way and in this situation, can cause injury and equipment malfunction. Read the "Electromagnetic Compatibility" section in this user's guide.
- Do not operate the machine at places where the environmental temperature is either below -10°C or above +40°C and humidity is above 70%.
- The opening of the chassis cover and the interventions made by unauthorized people concerning electrical equipment can create life threatening situations. The people who act in a contrary way, are considered to have accepted in advance the negative results that can come up.
- The operational efficiency of the machine, is the percentage of time that the welder can weld for 10 minutes at a given welding current without excessive heating and without taking a break.
- The machine is protected against excessive heating by the help of thermal protection. When this protection comes on-line, the warning light on the front panel will come on. When the safe operating temperature is reached again, the light will turn off and welding will continue.

## 9. MACHINE MAINTENANCE

- The maintenance and service must be done only by qualified personel! The network current of the welding machine should be cut off during maintenance and service. Electric plug of the machine must be removed from the jack.
- Obey the general personal safety and fire safety rules that deal with welding operations.
- Control the insulation state and connections of cable conductors and energy cable.  
  
Remove the connections that have become loose.
- The dust which has accumulated inside the welding machine should be cleaned with compressed air regularly. If the machine is being used in an environment that contains a lot of dust and fume, this operation should be repeated twice a month.
- Need to be careful about the pressure of the air that is being used for cleaning in order to protect small pieces.

- The entry of water and steam into the welding machine should be inhibited. If the machine is affected by the humidity, the inside of the machine should be dried and insulation should be controlled.
- If the welding machine is not going to be used for a long time, it should be stored at a dry place.
- The welding machine should not be thrown at random and must be protected from hits while being put away or transported.

## **10. STORAGE AND TRANSPORTATION**

- The welding machine should be stored in closed rooms that have environmental temperatures between -10°C and +40°C with a humidity of at the most 70%.
- Incendiary, conductive dust or other environmental elements should not be found in the room.
- It is recommended that the welding machines should be preserved in a proper way.
- The welding machine should be packaged in a way that will protect it from mechanical damages during long distance transportation.

## **11. COATED ELECTRODE WELDING METHOD**

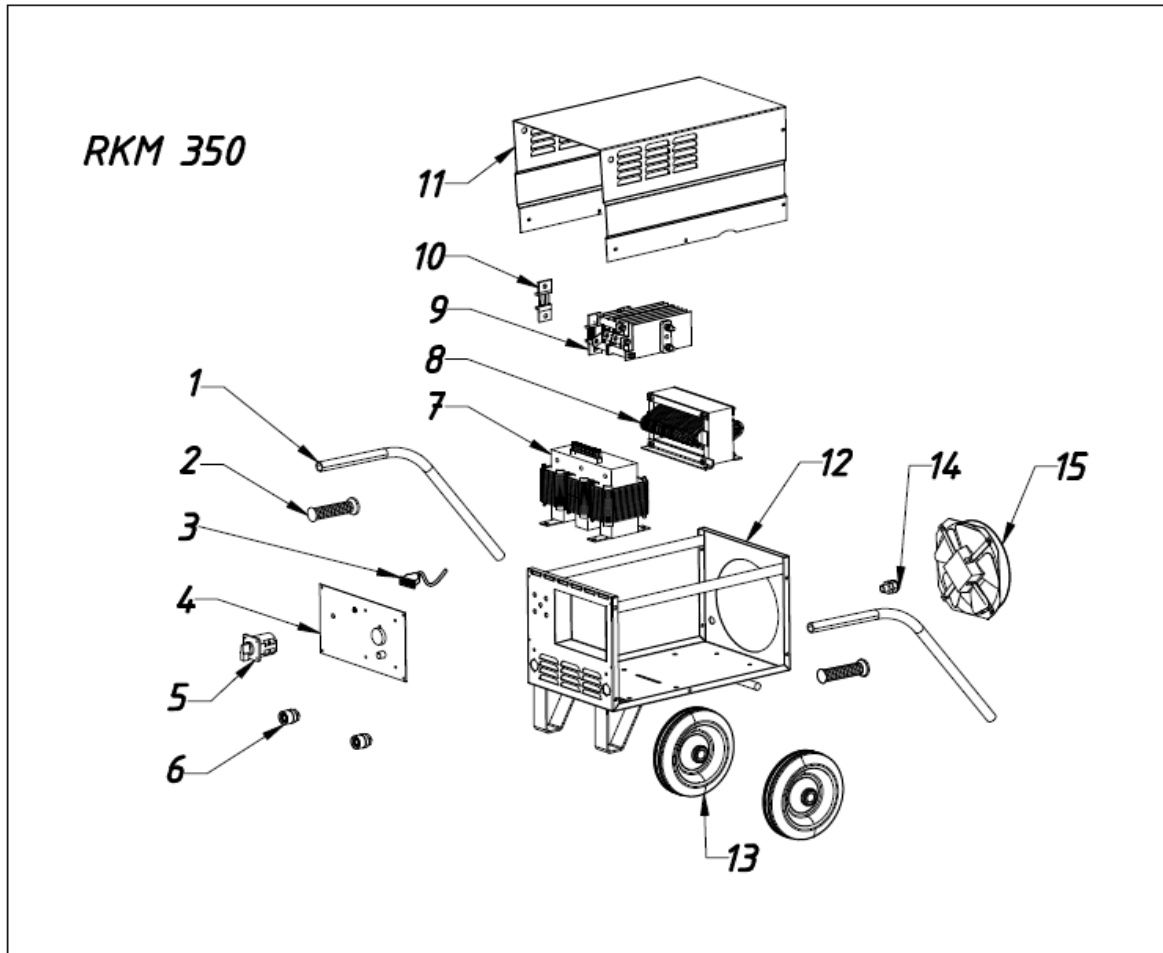
- The operations that are listed below should be performed before starting to weld:
- Affix the welding and grounding cables into the socket that is located in the front part of the machine.
- Turn the socket clockwise a ¼ turn after putting it into the housing in such a way that it is opposite the pin of the guide. Be certain that the socket is firmly in place inside its housing without being pressed down hard. Otherwise, loose sockets can burn due to excessive heat in cases when the machine is used for long periods of time and welding current is high.
- Affix the electrode to the electrode pincher.
- Affix the chassis pincher to the part of the surface of the work piece which is not painted, without rust and clean.
- Affix the network connection plug into the proper jack.
- Turn on the machine with the on-off switch that is in front part of the machine.
- Adjust the proper welding current value which you will determine according to the diameter and type of the electrode, the position of welding and electrode information log with the use of the amper adjustment lever that is on top of the machine. And Start welding by obeying the rules of weldi

## 12. RECTIFIER WELDING MACHINE WELDING PROBLEMS

| FAULT                                                                                           | PROBABLE REASON                                                                                  | SOLUTION                       |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------|
| The machine is not welding.                                                                     | There can be a problem with the supply cable or supply voltage of the machine.                   | Check it.                      |
|                                                                                                 | The electronic card of the machine can be out of order.                                          | Call the technical service     |
|                                                                                                 | The machine could have been deactivated by the thermostat due to excessive heat.                 | Check it.                      |
| The machine is welding at low current.                                                          | One less phase may be coming to the machine.                                                     | Check it.                      |
|                                                                                                 | The rectifier group can be faulty.                                                               | Call the technical service     |
|                                                                                                 | The package type switch of the machine may be faulty.                                            | Check the package type switch. |
|                                                                                                 | The coils of the machine may be faulty.                                                          | Call the technical service     |
|                                                                                                 | The current adjustment potentiometer of the machine may have slipped according to the indicator. | Check it and adjust.           |
|                                                                                                 | There can be a looseness of contact in the internal cable connections of the machine.            | Check it and adjust.           |
| The machine is giving very high welding current. It can not be controlled by the potentiometer. | The electronic card of the machine can be faulty.                                                | Call the technical service     |
|                                                                                                 | The Rectifier group can be faulty.                                                               | Call the technical service     |

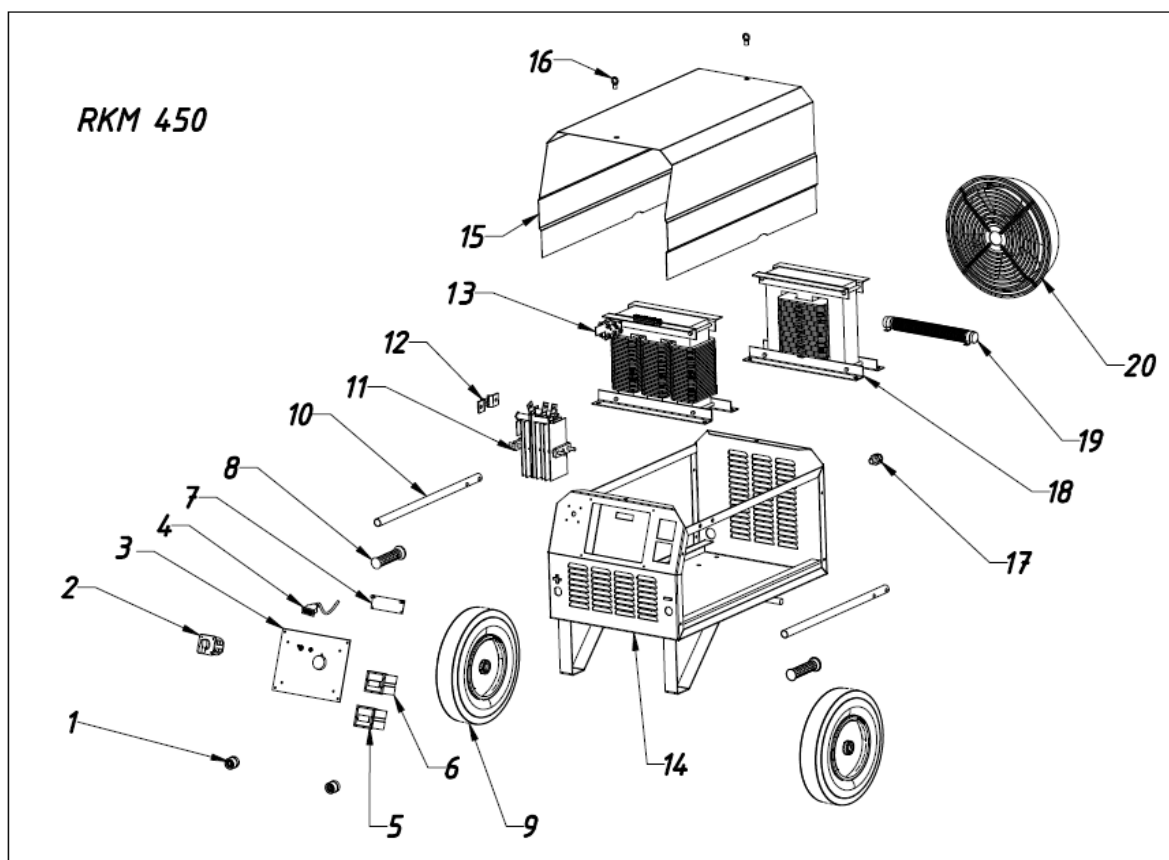
## 13. SPARE PARTS

### 13.1. Spare Parts of GeKaMac® RKM 350



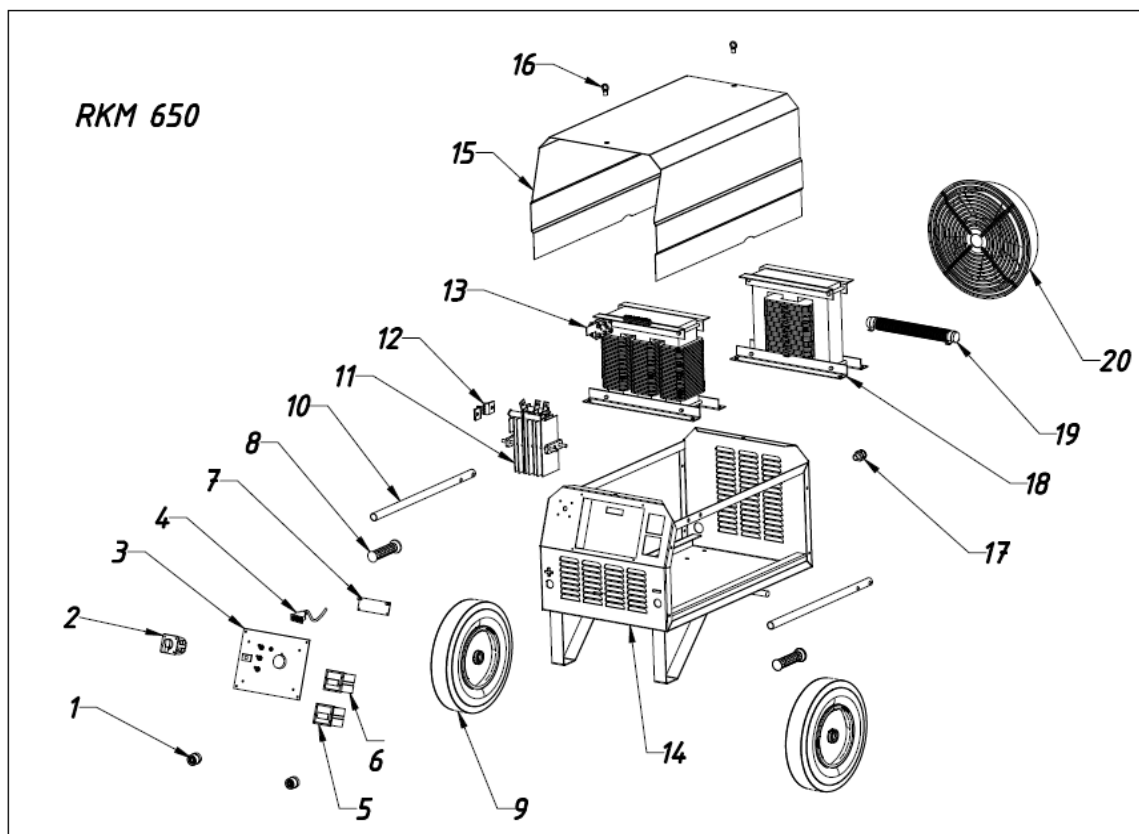
| PICTURES<br>NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                   |
|---------------------|--------------|----------------------------------------|
| 1                   | 201386       | RKM 350 PAINTED LEVER                  |
| 2                   | 101439       | HANDLE                                 |
| 3                   | 201333       | RKM 350 CARD CABLE GROUP               |
| 4                   | 201575       | RKM 350 ELECTRONIC CARD                |
| 5                   | 101367       | RKM 350 PACKAGE TYPE SWITCH (C25-A202) |
| 6                   | 206001       | FEMALE JACK SET 50 / 70                |
| 7                   | 201314       | RKM 350 COMPLETE TRANSFORMER           |
| 8                   | 201340       | RKM 350 COMPLETE CHOKE COIL            |
| 9                   | 100506       | RKM 350 RECTIFIER GROUP                |
| 10                  | 101380       | 300 AMPERS SHUNT                       |
| 11                  | 201376       | RKM 350 LIDS                           |
| 12                  | 201354       | RKM 350 COMPLETELY EMPTY CASING        |
| 13                  | 101468       | RKM 350 WHEEL                          |
| 14                  | 101446       | 13,5 mm PLASTIC UNION STEM             |
| 15                  | 101462       | GAMAK ASPIRATOR RKM 350                |

### 13.2. Spare Parts of GeKaMac® RKM 450



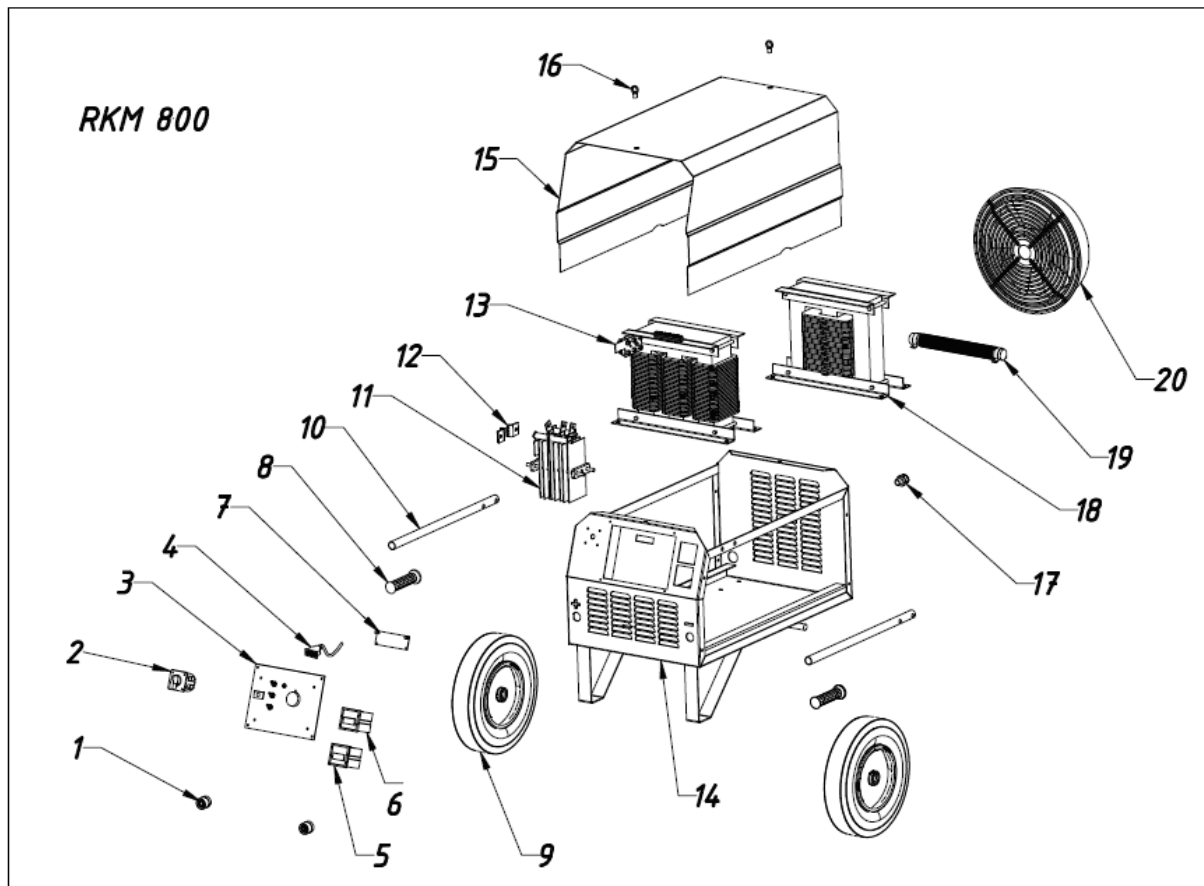
| PICTURES NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                       |
|------------------|--------------|--------------------------------------------|
| 1                | 101438       | 70-95 FEMALE JACK SET                      |
| 2                | 101368       | RKM 450-650 PACKAGE TYPE SWITCH (C42-A202) |
| 3                | 201576       | RKM 450 ELECTRONIC CARD                    |
| 4                | 201568       | RKM 450-RKM 650 CARD CABLE GROUP           |
| 5                | 105770       | VOLTMETER                                  |
| 6                | 105766       | AMPERMETER 400 AMPERS                      |
| 7                | 101529       | FEEDBACK ELECTRONIC CARD                   |
| 8                | 101439       | HANDLE                                     |
| 9                | 101467       | RKM 450-RKM 650 WHEEL                      |
| 10               | 201631       | RKM 450 TWO PROFILE LEVERS                 |
| 11               | 100508       | RKM 450 RECTIFIER GROUP                    |
| 12               | 101381       | 400 AMPERS SHUNT                           |
| 13               | 201548       | RKM 450 TRANSFORMER                        |
| 14               | 201595       | RKM 450 COMPLETELY EMPTY CASING            |
| 15               | 201624       | RKM 450 TOP LID                            |
| 16               | 105960       | EYEBOLT                                    |
| 17               | 101448       | 29 mm. PLASTIC UNION STEM                  |
| 18               | 201574       | RKM 450 COMPLETE CHOKE COIL                |
| 19               | 101526       | RKM 450 WIRE WRAPPED RESISTOR              |
| 20               | 101464       | RKM 450 ASPIRATOR                          |

### 13.3. Spare Parts of GeKaMac® RKM 650



| PICTURES NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                       |
|------------------|--------------|--------------------------------------------|
| 1                | 101438       | 70-95 FEMALE JACK SET                      |
| 2                | 101368       | RKM 450-650 PACKAGE TYPE SWITCH (C42-A202) |
| 3                | 201580       | RKM 650 ELECTRONIC CARD                    |
| 4                | 201568       | RKM 450-RKM 650 CARD CABLE GROUP           |
| 5                | 105770       | VOLTMETER                                  |
| 6                | 105766       | AMPERMETER 400AMPERS                       |
| 7                | 101529       | FEEDBACK ELECTRONIC CARD                   |
| 8                | 101439       | HANDLE                                     |
| 9                | 101467       | RKM 450-RKM 650 WHEEL                      |
| 10               | 201631       | RKM 450 TWO PROFILE LEVERS                 |
| 11               | 100509       | RKM 650 RECTIFIER GROUP                    |
| 12               | 101382       | 600 AMPER SHUNT                            |
| 13               | 201786       | RKM 650 TRANSFORMER                        |
| 14               | 201595       | RKM 450 COMPLETELY EMPTY CASING            |
| 15               | 201624       | RKM 450 TOP LID                            |
| 16               | 105960       | EYEBOLT                                    |
| 17               | 101448       | 29 mm PLASTIC UNION STEM                   |
| 18               | 201803       | RKM 650 COMPLETE CHOKE COIL                |
| 19               | 101526       | RKM 650 WIRE WRAPPED RESISTOR              |
| 20               | 101464       | RKM 650 ASPIRATOR                          |

### 13.4. Spare Parts of GeKaMac® RKM 800



| PICTURES NUMBERS | PRODUCT CODE | MATERIAL DESCRIPTION                       |
|------------------|--------------|--------------------------------------------|
| 1                | 101438       | 70-95 FEMALE JACK SET                      |
| 2                | 101368       | RKM 450-650 PACKAGE TYPE SWITCH (C42-A202) |
| 3                | 203621       | RKM 800 ELECTRONIC CARD                    |
| 4                | 201568       | RKM 450-RKM 650 CARD CABLE GROUP           |
| 5                | 105770       | VOLTMETER                                  |
| 6                | 107157       | AMPERMETER (1000A)                         |
| 7                | 101529       | FEEDBACK ELECTRONIC CARD                   |
| 8                | 101439       | HANDLE                                     |
| 9                | 101467       | RKM 450-RKM 650 WHEEL                      |
| 10               | 201631       | RKM 450 TWO PROFILE LEVERS                 |
| 11               | 107680       | RKM 650 RECTIFIER GROUP                    |
| 12               | 107156       | 1000 AMPERMETER SHUNT                      |
| 13               | 202537       | RKM 850 TRANSFORMER                        |
| 14               | 201595       | RKM 450 COMPLETELY EMPTY CASING            |
| 15               | 201624       | RKM 450 TOP LID                            |
| 16               | 105960       | EYEBOT                                     |
| 17               | 101448       | 29 mm PLASTIC INION STEM                   |
| 18               | 204188       | RKM 800 COMPLETE CHOKE COIL                |
| 19               | 101526       | RKM 650 WIRE WRAPPED RESISTOR              |
| 20               | 101464       | RKM 650 ASPIRATOR                          |

#### 14. WARRANTY CONDITIONS

1. The length of the warranty starts on the date of delivery and it is for 1 year.
2. The whole merchandise including all its parts are covered by the warranty of our company.
3. If the merchandise breaks down within the length of the warranty, the time spent in the repair shop will be added to the length of the warranty. The length of repair of the merchandise is at the maximum 20 working days. This period of time starts on the date that the merchandise was delivered at one of the following locations: A service station or the seller of the merchandise or dealer or agency or representation office or importer or manufacturer, in this order if there are no service stations.
4. If the merchandise breaks down either due to material and workmanship or assembly lines within the length of the Warranty, it will be repaired without demanding any money under the name of expenditure of workmanship, the cost of the changed piece or under any other name.
5. Replacement operation will be done without charge in cases where the merchandise repeats the same fault more than twice or different faults come up more than four times within the length of the warranty, the length of the repair exceeds maximum necessary time and the determination of the unrepairability of the merchandise by a report that is prepared either by a service station or the seller or a dealer or an agency or a representation office or the importer or the manufacturer, in this order, if there are no service stations.
6. Faults that are results of misuse according to the user's guide of the merchandise are not covered by the warranty.
7. Ministry of Science Industry and Technology, The Protection of the Consumer and Competition General Directorate can be referred to whenever a problem concerning the warranty document comes up.
8. Earth clamp and electrode holder kits are not under warranty.

# GeKaMac®

## Gedik Welding Machines

### Warranty Document

#### MACHINE INFORMATION

Brand : GeKaMac®

Model : .....

Serial Number : .....

#### CUSTOMER INFORMATION

Company Name : .....

Authorized Person : .....

Telephone : .....

Company Address : .....

City/Country.....

E-Mail : ..... @.....

Signature /Cachet :

#### SERVICE INFORMATION

Authorized Service : .....

Service Staff : .....

Installation Date : ...../...../.....

Warranty Starting Date : .....

Warranty Expiration Date : .....

Signature /Cachet

# GeKaMac®

## Gedik Welding Machines

### Warranty Document

#### MACHINE INFORMATION

Brand : GeKaMac®

Model : .....

Serial Number : .....

#### CUSTOMER INFORMATION

Company Name : .....

Authorized Person : .....

Telephone : .....

Company Address : .....

City/Country.....

E-Mail : ..... @.....

Signature /Cachet :

#### SERVICE INFORMATION

Authorized Service : .....

Service Staff : .....

Installation Date : ...../...../.....

Warranty Starting Date : .....

Warranty Expiration Date : .....

Signature /Cachet

# RKM Series



**GeKaMac®**



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