



# *TECHNICAL INSTRUCTIONS*

## *GRAVITY FILLER SHREDDER RZ75, RZ11*

*Manufacturer:*

***M-ROL***

**Limited Liability Company**

**10 Trzy Mosty Street, 63-430 Odolanów**



release: february 2023

Gravity filler shredder, series: RZ75, RZ11

## Notes to the manual

The following symbols indicate important information for the user and draw special attention when reading the manual.



### **TIP**

*This symbol denotes application tips and information particularly useful for the operator to make optimal use of the machine's functions.*



### **NOTE**

*This symbol indicates important instructions for proper handling of the machine, product and material. Failure to follow these indications may cause malfunctions of the machine or its environment.*



### **WARNING**

*This symbol indicates important instructions for proper handling of the machine, product and material. Failure to follow these indications may cause malfunctions of the machine or its environment.*



### **DANGER**

*The slogan DANGER means according to this manual that death or serious injury will occur if these GUIDELINES are not followed.*



### **CAUTION**

*The slogan Caution means, according to this manual, the possibility of suffering slight injury if these GUIDELINES are not followed.*

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## 1. Subject matter and purpose

### 1.1. Device data

Name: batching shredder

Series: RZ75, RZ11

Manufacturer:

# M-ROL

Limited liability company

Trzy Mosty St. 10, 63-430 Odolanów

### 1.2. Scope of application-purpose

The flail shredder is designed for shredding grain, corn and legumes into middlings. It is designed for use in individual households. Examples of applications can be found on the website:

<https://mrol.com.pl/przykladyzastosowan>

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## 2. Pictograms



Hearing protection mandated.

The use of respiratory protection is mandated.

Warning against electric shock.

### **Nameplate**

The data on the nameplate is appropriate to the type of shredder.

The design of the nameplates is attached as **Attachment 2**.

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### 3. Technical data and construction

#### 3.1. Characteristic quantities

TYPE	RZ75	RZ11
Dimensions in plan [mm]	850x770	850x770
Dump height from the floor(mm)	560-360	560-360
Power supply [V].	400	400
Motor power [kW].	7,5	11
Transport height(mm)	1340	1220
Weight in kg	158	189
Capacity [kg/h]	1000-3000	1000-3500
Sieve type/size	Mesh Ø3, Ø4, Ø5, Ø6, Ø8.	Mesh Ø3, Ø4, Ø5, Ø6, Ø8.
Service-persons	1	1

#### 3.2. Construction

The hopper blaster has a compact design, so it takes up little space.

An electric motor, electrical accessories, an inlet spigot and a grain outlet are mounted on the housing. A separator is mounted on the inlet of the unit, which is connected to the lid of the shot blaster. Inside the body there is a screen with a fastening system, and a flail system. The legs make it possible to adjust the height of the device.

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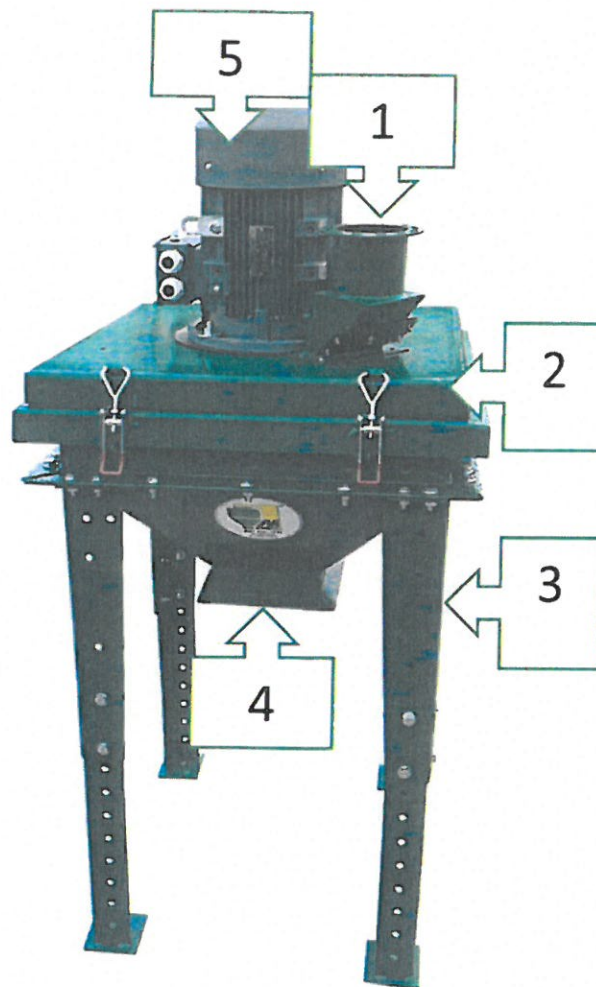


Figure 1 Construction of the gravity filler shredder

CONSTRUCTION OF GRAVITY FILLER SHREDDER RZ75, RZ11

- 1-Grain inlet
- 2-Cover
- 3-Legs
- 4-Middlings outlet
- 5- Motor


**Action:**

The feed shredder has a vertical drive, which gives it a big advantage. Through the combination of the operation of the motor rotating around the vertical axis and the construction of the shredder with the feed from above, the grain falls by gravity through the chamber of the shredder, which prevents excessive turbulence and, as a result, the emission of dust and dust is reduced to a minimum, so the use of a filter is not necessary. This results in increased efficiency compared to horizontal shredders. Grain falling vertically is crushed by the flail head assembly. The large surface area of the screens means that there is a lower temperature, so condensation is



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reduced. In addition, the lower temperature has a salutary effect on the retention of minerals and vitamins in the middling. The gravity shredder can work together with a T401 screw conveyor feeding the grain, and a T401 screw conveyor receiving the middling, or it can be directly applied to a horizontal mixer of our production.

	<p style="text-align: center;"><i>Tip</i></p> <p>If the shredder is turned off by the thermal (overload) switch or a power outage, restarting can take place when the following conditions are met. Disconnect the shredder from the power supply by removing the plug from the socket, clean the working chamber from the accumulated grain and sharps. Only after cleaning the system a machine is ready to work.</p>
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## 4. Instructions for transportation, storage and installation.

### 4.1. Preparing machines for transport

The shredder is transported as a whole - it does not need to be disassembled into components or assemblies.

When transporting over longer distances, it is recommended to transport on a transport pallet. When transporting on a transport pallet, ensure that the belts are securely fastened to the pallet. When suspending the machine assemblies on a lifting device, use transport points.



### **NOTE**

**Be sure to observe health and safety conditions when transporting and working with lifting equipment.**

### 4.2. Storage

Store the machine in a covered and properly ventilated room. The designated storage place should protect the above-mentioned structure from accidental damage. As standard, the steel structure of the machine is protected against corrosion with a multi-layer varnish coating. Mating areas without a varnish coating should be protected with a suitable preservative. Purchase and electrical components should be protected in accordance with the instructions belonging to them.


### 4.3. Assembly



The shredder must be fixed to a dry and hard floor. The gravity shredder must be set up in a place that allows proper access for its operation. After setting up, connected to device to the electric power supply. Before starting the machine, check the condition of the insulation resistance of the wires. Switch on the electrical system and check the correct operation of the unloaded machine. Observe the level of vibration and noise. Swaying on the floor should be eliminated. Check the operation of health and safety components. Check the correct operation of the machine under load. Re-check the state of insulation resistance of electrical wires and the effectiveness of electric shock protection. Carry out any adjustments. After the above activities, the final acceptance of the machine and handover to the user can be carried out.



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	<p><b>WARNING</b></p> <p>Carrying out installation not in accordance with this manual may lead to poor operation of the machine as well as accelerate the failure of the machine. The manufacturer of the machine is not responsible for failures if improper assembly of the machine occurs.</p>
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#### 4.4. Environmental conditions

Use the machine in a covered room providing space for safe operation. In situations of low humidity during shredding operations, dust is generated which poses a fire hazard. It is forbidden to use an open flame. The room should be equipped with protective equipment such as fire extinguisher, fire blankets, etc.

#### Noise test results

Measurement of sound power levels was performed in accordance with PN-EN ISO 3746:2011 Acoustics- Determination of sound power levels and sound energy levels of noise sources from sound pressure measurements-An approximate method using a surrounding measurement surface over a reflecting plane. The table shows the sound power values for the models produced:

Type of shredder	Sound power level L <sub>WA</sub> [dB].
RZ 75- 7,5 kW	107,2
RZ 75- 11 kW	107,2

Radius of hemispherical measuring surface r=4 m

Mean values for the measurement area(dB):

$$\overline{L_{pA(B)}} = 43,4 ; \overline{L'_{pA(ST)}} = 87,2$$

Time-averaged surface sound pressure level (dB):

$$\overline{L_{pA}} = \overline{L'_{pA(ST)}} - K_{1A} - K_{2A} = 87,2$$

Sound power level (dB):

$$L_{WA} = \overline{L_{pA}} + 10 \lg \frac{S}{S_0} = 107,2$$

Measured sound power level 107.2Db

After the shredder is installed on the bench, it is necessary to carry out noise measurements or calculate what equivalent sound level A will occur under the given conditions. This level will depend on the condition of the shredder, the acoustic absorption of the room (the size of the room, the type of walls, floors, etc.) and the distance of the shredder operating station.

The study performed by:

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## 5. User Manual

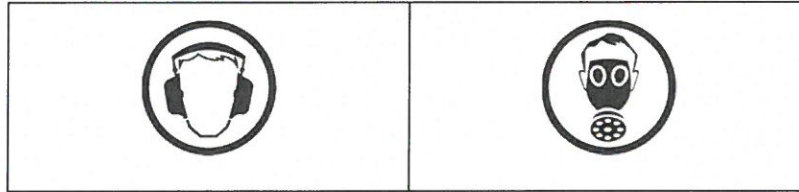
## 5.1. General requirements

**Not applicable when the operator is the owner of the machine.**

Only trained employees called machine operators may be allowed to operate the machine, who have mastered the knowledge and experience in the following areas: ability to operate, recognition of faults and malfunctions of the machine and safe operation, whose instructions and warnings are contained in the instructions. Understanding of the instructions, mastering knowledge and experience the employee confirms with his own signature.

**The training is carried out by the employer.**

	<b>CAUTION</b> Hearing and respiratory protection is mandated at the entrance to the site.
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**JOB DESCRIPTION**

The workstation at a backfill shredder is the space needed to operate the device. The shredder itself during operation does not require constant supervision

**Use of the shredder**

The batch shredder is designed for grinding cereal grains, corn and legumes into middlings. The use of the shredder for other materials is prohibited.

It is intended for use on individual farms.

	<b>NOTE - REMEMBER!</b> In the event of an accident or other hazard while operating the shredder, it is imperative that the shredder power be turned off using the power switch.
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**When the operator is not the owner of the machine:**


Only employees in work clothes and personal protection (ear muffs, masks) assigned to the workstation are allowed to start work. Absolutely observe the orders, instructions, warnings contained in the instructions. At the workplace in a conspicuous and generally accessible place must be job instructions for operation and safety, developed by the employer in accordance with the regulations, standards and formulas in force at the employer. These instructions must also include detailed guidelines resulting from the organization of work and the competence of operators.

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## 5.2. Preparing the machine for operation

List of inspection and verification activities to be performed before commissioning:

- Check the general technical condition of the shredder.
- Note the state of wear and possible looseness of the shredder components, if any irregularities are noted, report to the supervisor. Particular attention should be paid to the technical condition of the guard, tightening of screws.

	<p><b>DANGER:</b></p> <p><b>If you find any malfunctions or irregularities in the operation of the shredder, immediately stop using it and notify your supervisor.</b></p>
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## 5.3. Work

To start the shredder, you need to:

Move the 0 - Y - Δ switch from the "0" position to the "Y" position and wait until the rotor rotation is established. After hearing a steady hum, flip the 0 - Y - Δ from the "Y" position to the "Δ" position.

## 5.4. Completion of work

### **Attention !**

To turn off the shredder is to translate, with a decisive movement, the 0 - Y - Δ switch from the "Δ" position to the "0" position.

- Before finishing work, stop the grain supply for grinding and turn off the shredder.  
It is not recommended to finish the work and leave the shredder with the grain inside especially for longer stops.
- Turn off the electrical supply.
- Perform a visual inspection of the mechanisms noting whether there are any presumptions of malfunction or damage.
- Leave the shredder ready for use.

## 6. Maintenance manual

### 6.1. General Guidelines

Tools necessary for machine maintenance:

- Screwdriver set,
- Set of flat wrenches,
- Set of adjustable wrenches (pipe wrenches),
- A plastic hammer or other soft hammer.


During maintenance work, use protective gloves.

Only an authorized and trained employee may inspect and maintain the machine.



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In particular, the inspection of electrical equipment, - no one but a trained electrician should do it.

	<p style="text-align: center;"><b><u>Security</u></b></p> <p style="text-align: center;"><b>When inspecting and maintaining the machine, make sure the main power switch is in the "Off" position.</b></p>
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## 6.2. Periodic inspection

The purpose of the periodic inspection is to determine the degree of wear or damage to individual components and parts, and to rectify the recorded defects, which may possibly be linked to the performance of overhaul repairs. The periodic inspection should be carried out every 3 months. The scope of the periodic inspection includes the following activities:

- Cleaning, washing and lubricating the mechanisms under review,
- review of the condition of equipment components especially the wear and tear of the screen, beaters and body. As a result of the movement of grains, the individual components of the shredder are wiped out.

Particular attention should be paid to the degree of abrasion of the screen and body. The acceptable minimum thickness must not be less than 50% of the thickness of the new body.

- checking the rubbing of the beaters. The permissible wiping radius of the beater edge is up to 5mm. After the beater is wiped out, the beater should be removed and installed in an inverted position. This operation can be performed 1 time. **(Condition - each beater in the same place where it was before)** In the case of wear of all edges or the appearance of vibration after reversing, beater should be replaced with a new one. Tupers with spacers are a set.

- Checking the operation of the mechanisms,
- checking the operation of security features,
- Checking the condition of the electrical system.

## 6.3. Emergency Repair - Disaster Recovery.

6.3.1. All unforeseen damage resulting from improper operation and maintenance, or improperly performed work on the machine, which caused an interruption of use, should be considered a failure.

6.3.2. In each case of failure, it is necessary to determine the cause of the failure, determine the mode of removal, and after removal, take appropriate steps to prevent such accidents in the future. In order to minimize the consequences of failures, reduce the time for their removal, it is recommended to have basic spare parts in stock.



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## 6.4. Emergency Repair - Disaster Recovery.

When the owner of a shredder ends its operation or changes in regulations and standards force him to adjust or decommission the machine, he may face the need to dispose of it and scrap it. This also applies to parts or assemblies of the machine being replaced or repaired.

The buyer is obliged to perform these activities in accordance with the legal status in force at that time and place. All parts of the machine are recyclable.

## 7. Safety and accident protection rules.

### 7.1. Safety regulations.

The design, workmanship and operation of the shredder meet the relevant provision of the directives:

- 2006/42/EC                    -Machinery            (MD)
- 2006/95/EC                -Low Voltage Device    (LVD)

The following harmonized standards were used:

- PN-EN ISO 12100:2012 - Safety of machinery. General principles of design. Risk assessment and risk reduction
- PN-EN ISO 13849-1:2016-02 - Safety of machinery. Safety-related components of control systems. Part 1 : General design principles.
- PN-60204-1:2018-12 - Safety of machinery. Electrical equipment of machines Part 1 : General requirements.

### 7.2. Definition of terms.

The study adopts terms and definitions according to section 1.1.1. of Annex I of Directive 2006/42/EC and adopts terms:

- **Hazard:** means a potential source of injury or harm;
- **Danger zone:** means a zone within or around a machine where there is a risk to the health or safety of a person there;
- **Exposed person:** means any person who is partially or completely in the hazardous area;
- **Risk:** means a combination of the probability and degree of injury or damage to health that can occur in hazardous situations;
- **Guard:** means a part of the machine specifically designed to provide protection in the form of a material barrier;
- **Protective devices:** means a device (other than a guard) that reduces risk, either independently or in combination with a guard;
- **Intended uses:** means using the machine in accordance with the information provided in the operating instructions;

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- **threatening event**: an event that could cause harm;
- **Safety measure**: a measure used to eliminate hazards or reduce risks;
- **Residual risk**: the risk remaining after safety measures are applied;
- **start-up** (commissioning of a machine, station): a change from a state of rest to movement of a machine or some part of it;
- **Professional personnel**, competent person: person(s) who, on the basis of: their knowledge of the subject matter, acquired through professional training and experience, their familiarity with the relevant state regulations on occupational safety, accident prevention, and guidelines and generally recognized technical principles (e.g., standards), can assess the condition of the machine from the perspective of occupational safety;
- **Professional electrician**: a person who, on the basis of: his professional training, knowledge and experience, knowledge of relevant standards, can assess the work delegated to him and recognize possible risks;
- **Operator**: the person, or persons, charged with the task of installing, using adjusting, maintaining, cleaning, repairing or transporting the machine;
- **machine operator**: a person who is so far familiar with a machine that he can work on it independently;
- **Conformity assessment**: demonstrating that the specified requirements (regulations, standards, technical specifications) have been met.

### 7.3. Use the machine as intended

The machine is constructed in accordance with the state of the art according to generally recognized technical safety principles. Misuse and improper use may cause:

- danger to the health and life of its user or third parties,
- damage to machinery and other property values.

The machine may be used only:

- In its impeccable technical condition,
- As intended, with an awareness of safety and risks,
- With compliant installation of protective devices,
- With covers in place,
- When following the operating instructions.

The following projects are not allowed:


- arbitrary changes to the machine,
- incorporation of foreign parts,
- altering, bridging, or disabling the equipment of a machine that is used for:
  - bypassing reliable operation,
  - omission of use restrictions,
  - bypassing active or passive security.

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If the machine is not used as intended, the user alone bears the risk .

The intended use is to be observed:

- All data and regulations given in the machine's operating instructions,
- all generally applicable, statutory and other applicable safety and accident prevention regulations,
- environmental regulations.

	<p style="text-align: center;"><b><u>WARNING</u></b></p> <p><b>The supplier shall not be liable in any way with respect to injured persons and damage to property that arises from failure to comply with: -</b></p> <p><b>instructions issued</b></p> <p><b>- general and specific safety provisions and regulations.</b></p>
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### 7.4. Machine location

Environmental conditions.

The machine is designed for indoor use.

The foundation of the machine does not require a technological design.

### 7.5. Users' responsibilities

- Each user, who in some way deals with the machine, should familiarize himself with the safe method of work and operation and strictly adhere to it. Familiarization with the dangers and safe methods of work and operation if the operator is not the owner after each periodic training shall confirm with his own signature.
- Comply with and pass on supplementary operating instructions general statutory or other applicable rules for accident prevention and environmental protection. These duties may also apply, for example, to the handling of hazardous substances or the disposal and wearing of personal protective equipment. ( If employees are employed).
- Supplement the operating instructions with guidance on supervision and reporting duties to take into account company specific factors, such as:
  - work organization,
  - workflows,
  - employed personnel,
  - others,
- Observe all safety and hazard instructions
- Know the location and operation of fire extinguishers and follow the safety correct procedure during fires.
- Check all safety devices regularly.
- Operate the machine only with protective devices installed and in working order.
- Protective devices must not be removed or disabled!



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- At least once per work shift, inspect the machine for externally recognizable damage and deficiencies. Report noticed defects immediately to the supervisor. If necessary, shut down and secure the machine!
- Replacement parts must meet the technical requirements set by the manufacturer! This is always guaranteed by the original parts.
- If required or by regulation, use personal protective equipment, such as appropriate eye and hearing protection.
- Do not wear loose hair, loose clothing, jewelry including rings. There is a danger of injury or being pulled in.
- Wear only work shoes at the workplace in no case sports shoes and sandals.
- Never work on a machine under the influence of alcohol or drugs. Also, some medications can prolong the response time.
- There must be sufficient space on the machine to load it and pick up parts. When working in small spaces, if necessary, pay attention to the relevant regulations related to working in such conditions
- Keep the machine and the safety range around it clean at all times. There must be good visibility at the workstation. Dirt and other obstructions impair safety.
- Cleaning the machine.
  - Turn off the machine completely.
  - Clean the machine only with a vacuum cleaner or a dry rag.
  - Do not blow off with compressed air. Dust emissions have a negative effect on your health.
- During operation, follow the operating instructions for all on/off runs and maintenance instructions.

This is valid for:

- operation (exploitation),
- rearming,
- Setting safety conditioning devices,
- Maintenance.
- Do not clean, maintain or adjust the machine while it is running!
- Before turning on the machine and starting, make sure that no danger can arise for someone.
- Before leaving the workstation, turn off the machine.



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	<b>SAFETY!</b> <b>Never leave the machine unprotected and unattended during operation or power on.</b>
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- When functions are disturbed, you should:
  - Turn off the machine immediately.
  - secure against reactivation,
  - remove the disturbance.

## 7.6. Maintenance


- Maintenance work on the machine must be carried out only by professional personnel, in accordance with applicable regulations.
- Comply with the deadlines and data specified by regulations or specified in the operating instructions to:
  - reviews,
  - parts replacement,
  - maintenance work.
- Before maintenance and repair work:
  - Turn off the machine completely,
  - protect the machine from unexpected restart,
  - Turn off the main switch.
  - Place a warning sign on the main switch.
- Do not use parts (assemblies) of the machine as elevation aids.
- Use only suitable, technically reliable equipment with sufficient lifting capacity for installation and maintenance.
- Attach individual parts (components) and larger assemblies carefully and securely to equipment.
- All persons involved in the transportation of large assemblies or the entire machine must have the appropriate credentials.

## 7.7. Work on the electrical system

Work on electrical equipment must be undertaken only by an expert electrician, according to the rules of electrical engineering.

- Use only insulated tools.
- Check electrical equipment at least every quarter of the year for visible defects. Repair these defects or loose connections immediately!
- Use only protective measures (safeguards, motor contactors, automatic fuses, etc.) according to the specified technical data. In the event of a power disturbance, turn off the machine immediately.
- Open and close the control box only when the machine is turned off.


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	<p><b><u>SECURITY - DANGER!</u></b></p> <p><b>Input terminals are also live when the main switch is turned off! Which endangers the life and health of the operator.</b></p>
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- Parts (assemblies) of the machine at which maintenance or repair work is carried out:
  - must be in a de-energized state,
  - Parts that are de-energized must first be checked to make sure the voltage is off, grounded and shorted,
  - live adjacent parts must be insulated.

**Threat!**

With live parts, it is created:

	<b>THREAT TO LIFE</b>
---	-----------------------

- If it is necessary to work on live parts pull a second professional electrician, who in an emergency can turn off the machine with the main switch,
- Secure the work area with a red-and-white chain and a warning sign.
- When working on high-voltage assemblies, use protective equipment and maintain clearances at each stage of work.
- After de-energizing, connect the power cable to ground and short the respective assemblies, such as capacitors with the ground rod,
- After each installation or repair of electrical assemblies, test the protective measures used (e.g., grounding resistance, etc.) before the machine is put back into operation.

## 7.8. Threats

### Mechanical hazards posed by:

- fall as a result of slipping - tripping,
- inadequate lighting,
- noise,
- dust.

### Electrical hazards:

- touching live parts by a worker (direct contact),
- touching live parts by a worker due to damage.

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## 7.9. Hazard protection measures

### Mechanical

- Workstations must be equipped with operating instructions and job instructions ( in case the user is not the owner ).
- Absolutely adhere to job instructions.
- Observe the information provided by labels warning of danger.
- The meaning of the warning labels is as follows:
  - DANGER (DANGER) - neglecting the described safety rules risks a fatal accident.
  - WARNING-Neglecting this warning can lead to serious injury.
- Use the machine only as intended.
- Observe all instructions, safety warnings and hazards on the machine.
- Check safety devices regularly.
- Operate the machine only with functioning protective devices.
- Stop work if there are materials on the floor that can cause slipping.
- Access to emergency switches and escape routes must never be blocked.

In order to eliminate the identified risks to an acceptable level, they were applied:

- Protection against electrocution - quick disconnection of power supply by means of protections verified by measurements of the effectiveness of electric shock protection in accordance with PN-IEC 60364-4-41:2000 and PN-IEC 60364-6-61:2000,
- blocking access to the ladder and platform on the main gate while the station is in operation,
- identification of work as intended,
- health and safety guidelines, compliance with which eliminates hazards to an acceptable level,
  - Identification of the hazard through the use of the measures described above and described in the Safety Manual, in the INSTRUCTIONS is estimated as very unlikely.
  - Frequency analysis shows a negligible probability of an adverse event identified in the hazard identification phase.
- Types and meanings of safety markings: Measures of electrical hazards:

### Electrical hazard measures:



Electric shock - Turn off electricity before opening.





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### 7.10. Residual risk

The residual risk as well as the residual hazard after the application of protection measures and the realization of all safety functions can occur after:

- Failure to follow operating and health and safety instructions.
- Different operator behavior than specified in the manual.
- Human-machine interactions that can occur for reasons related to inappropriate human behavior:
  - Predictable misbehavior due to normal inattention.
  - Reflexive behavior in the event of a function error, sudden jamming, machine failure during its use.
  - Behavior associated with choosing action through the path of least resistance.
  - Distraction by bystanders.
- Human-machine interactions that can occur for reasons related to faulty machine behavior:
  - Machine failure.
  - Damage to power supply components.
  - Loss of control of the machine by the operator.

In order to eliminate to a minimum the above-mentioned risks - residual risks in the **case of employment of an employee by the Owner to operate the shredder, the** following rules should be observed by the **Employer**:

- The machine must have operating and safety instructions for their use. These instructions must be in a visible and publicly accessible place.
- Only trained operators who have mastered the relevant knowledge and experience in the following are allowed to operate: the ability to operate, to recognize faults and malfunctions in the operation of the machine and the safety of operation, whose instructions and warnings are contained in the instructions. Understanding of the instructions and mastery of knowledge and experience the employee confirms with his own signature.
- Only an employee in work clothes and personal protection assigned to the position is allowed to start work.
- Absolutely observe the orders, instructions, warnings and prohibitions contained in the manual.
- The employee must have a current periodic examination.

The defined risks of residual risks with adherence to the above-mentioned principles are estimated as negligible - very unlikely.

Residual risks remaining after the application of measures to protect from hazards, implementation of all safety functions and adherence to the above rules have an acceptable level of safety.



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## 8. Warranty.

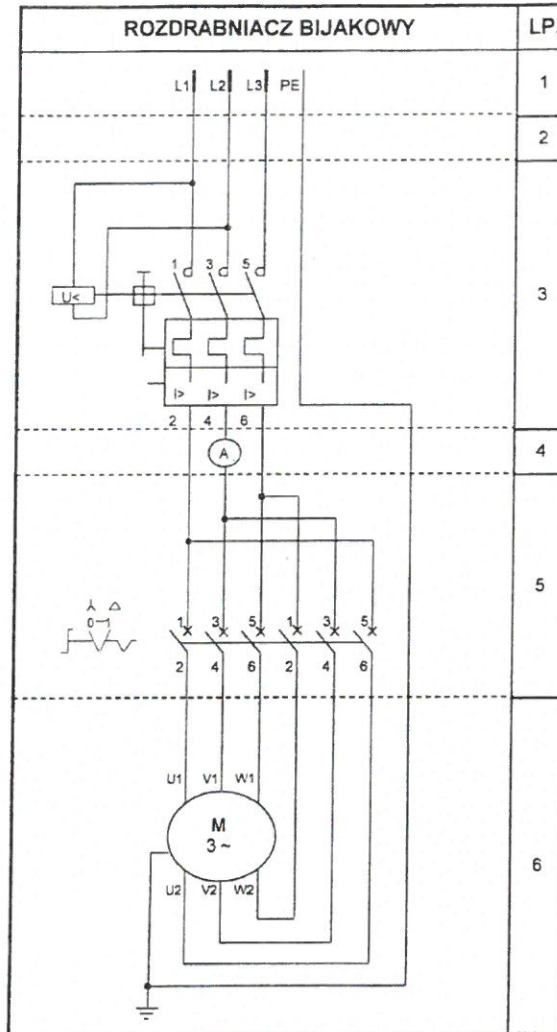
- 1) The warranty covers defects and damage caused by the fault of the manufacturer due to a defect in material, poor processing or installation.
- 2) By granting the warranty, the manufacturer undertakes to:
  - (a) repair the claimed equipment free of charge,
  - b) provide the user free of charge with new, properly made parts,
  - c) cover the cost of repair including labor costs and reimbursement of transportation costs incurred after agreement with the manufacturer.
- 3) The warranty does not cover parts and assemblies whose failure is due to normal wear and tear.
- 4) The user's equipment complaint shall report directly to the manufacturer.
- 5) The user should submit a claim in writing, i.e. on the claim coupons found in the technical manual immediately and at the latest within 14 working days from the date of damage.
- 6) The manufacturer should handle the complaint promptly no longer than 14 working days from the date of receipt of the complaint coupon.
- 7) The manufacturer will not recognize a warranty claim if any technical changes or repairs have been made to the equipment without its knowledge, not properly stored, maintained and used improperly, and non-original spare parts have been used.
- 8) The user has the right to reconsider a rejected complaint with the participation of an expert.
- 9) The manufacturer provides a warranty for a period of 1 year from the date of sale.
- 10) In matters not covered by these rules, the Civil Code shall apply.

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9. Attachments.

ATTACHMENT NO. 1


WIRING DIAGRAM




BACKFILL SHREDDER			
N.	Symbol	RZ75	RZ11
	Power supply	400 V	400 V
1	Plugin	32A	32A
2	Wire	OWY 4x4mm <sup>2</sup>	OWY 4x4mm <sup>2</sup>
3	Switch	SM1P 13-18A	SM1P 20-25A
4	Ammeter	ACAM 72 0 - 100A	ACAM 72 0 - 100A
5	Switch	0 - Y - Δ ARC 25-23	0 - Y - Δ ARC 63-23
6	Electric Motor	7.5kW	11kW

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## ATTACHMENT NO. 2

M-ROL 1 Spółka z ograniczoną odpowiedzialnością			
ul. Trzy Mosty 10, 63-430 Odolanów			
tel.: +48 62 735 90 10, www.mrol.com.pl			
			
<b>ROZDRABNIACZ ZASYPOWY</b>			
Typ	RZ 75	V	3x400V~PE+N
Rok prod.	20..	W	7,5kW
Nr fabr.		A	13,9
Masa	158kg	IP	IP 55
Obroty/min.	2930		S2

M-ROL 1 Spółka z ograniczoną odpowiedzialnością			
ul. Trzy Mosty 10, 63-430 Odolanów			
tel.: +48 62 735 90 10, www.mrol.com.pl			
			
<b>ROZDRABNIACZ ZASYPOWY</b>			
Typ	RZ11	V	3x400V~PE+N
Rok prod.	20..	W	11kW
Nr fabr.		A	20,3
Masa	189kg	IP	IP 55
Obroty/min.	2930		S2



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## Gravity filler shredder, series: RZ75, RZ11

**WARRANTY CARD**

1. The company M-ROL Spółka z ograniczoną odpowiedzialnością ul. Trzy Mosty 10, 63-430 Odolanów provides 12-month product warranty period, but not more than 18 months from the date of shipment for sale, for which this warranty card is issued.
2. Product defects revealed during the warranty period will be repaired free of charge within 14 working days, counting from the date of delivery of the complaint coupon to M-ROL headquarters. This does not apply to defects listed in item 6.
3. Warranty repair does not include the activities provided for in the instruction manual, which the user is required to perform on his own.
4. The warranty does not cover any normals used in the device, such as bearings, V-belts.
5. The warranty does not cover deterioration of the product due to normal wear and tear and the following cases:
  - a. Mechanical damage to the product and defects caused by it.
  - b. Damage and defects caused by:
    - improper, or not in accordance with the instructions for use, storage and maintenance,
    - use or leaving the product in unsuitable conditions (excessive humidity, dust, etc.),
    - arbitrary (made by the user or other unauthorized persons) repairs, alterations or structural changes,
    - connecting additional equipment, other than that recommended by the product manufacturer,
    - abnormal supply voltage.
  - c. Using the device for the wrong materials.
6. Any changes to the entries in the warranty card and traces of alterations or attempts to make structural changes to the product, and independent repairs outside of M-ROL service, as well as the use of the product, especially careless handling, exposure to liquids, mechanical damage, revealed during the warranty service will cause the warranty to become null and void.
7. The customer is responsible for filing a claim immediately after the damage occurs.
8. The claim should be accompanied by a claim coupon with information about the damage, provide contact information, provide the address where the advertised product is located.
9. The condition for the repair is that the product is made available with a signed warranty card and proof of purchase of the product (receipt or photocopy of the invoice).
10. If any of the conditions of this warranty are not met, the goods, in unaltered condition, will be returned to the purchaser.
11. If the manufacturer determines that the machine is not under warranty, the cost of transportation or travel of the service technician will be charged to the customer.
12. All correspondence, returns, complaints should be addressed to the address:  
**M-ROL Limited Liability Company 10 Trzy Mosty Street, 63-430 Odolanów.**

Serial number.....

Year of manufacture.....

Date of shipment for sale.....

Date of sale.....

(Stamp and signature of the manufacturer)

(Stamp and signature of the seller)

Gravity filler shredder, series: RZ75, RZ11



## Gravity filler shredder, series: RZ75, RZ11

If necessary, fill out, cut off and deliver or send by registered mail to the manufacturer.

RECOMMENDATION CUP No. 2 Gravity filler shredder RZ...	
User name:	Date of purchase:
The exact address:	Description of the repair performed:
Phone:	
Description of the revealed defect (add on the back)	Date of repair:
To be completed by the manufacturer's representative date of receipt of the coupon:	User signature:

RECOMMENDATION BOX No. 1 Gravity filler shredder RZ..	
User name:	Date of purchase:
The exact address:	Description of the repair performed:
Phone:	
Description of the revealed defect (add on the back)	Date of repair:
To be filled out by the manufacturer's representative date of receipt of the coupon:	User signature:

Gravity filler shredder, series: RZ75, RZ11

Gravity filler shredder, series: RZ75, RZ11

## EC Declaration of Conformity

1. **Manufacturer:** M-ROL Limited Liability Company

**Address:** 10 Trzy Mosty St., 63-430 Odolanów

**Declares with full responsibility that the machine:**

**Name:** GRAVITY FILLER SHREDDER

**Series:** RZ75, RZ11



The machine described above meets all the relevant provisions of this Directive:

- DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of May 17, 2006 on machinery, amending Directive 95/16/EC (recast)

And meets the requirements of the following harmonized standards or other standards:

- EN ISO 12100:2012-	Safety of machinery - General principles for design. - Risk assessment and risk reduction.
- PN-EN ISO 13849-1:2016-02-	Safety of machinery. Safety-related components of control systems . Part 1: General design principles.
- PN-EN 60204-1:2018-12-	Safety of machinery. Electrical equipment of machines. Part 1: General requirements.

The following is authorized to prepare the technical documentation:

To sign the EC Declaration of Conformity the President of the Company M-ROL Paweł Zawadzki zam. 63-430 Odolanów, ul. Trzy Mosty 10, tel: +48 62 735 90 10 is authorized.

**PREZES**

*Paweł Zawadzki*

.....  
Place and date of issue

.....  
Name, position, signature

Type.....

Year of manufacture.....

Factory number.....

**M-ROL 1**

Sp. z ograniczoną odpowiedzialnością  
63-430 Odolanów, ul. Trzy Mosty 10  
tel.+48 62 735 90 10 | mrol@mrol.com.pl  
NIP 6221818363 | REGON 250652542

**Translation made from the original instructions in Polish.**



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RZ75, RZ11

W 4000 7500