



Original instructions in English.

# OPERATING INSTRUCTIONS BMG-780RS

VERSION 2.4





## EC DECLARATION OF CONFORMITY

in accordance with Appendix II sub A of Directive 2006/42/EC

We,

**BLASTRAC B.V.**  
 Utrechthaven 12  
 NL - 3433 PN NIEUWEGEIN  
 The Netherlands

Declare under our sole responsibility that the grinding machine as described below,

**Model: BMG-780RS**

**Serial number: xxxxxxxxxx**

satisfies the conditions set out in the:

Machine Directive  
 Low voltage directive  
 EMC directive  
 R&TTE directive

(2006/42/EC);  
 (2006/95/EC);  
 (2004/108/EC);  
 (1995/5/EC);

Where appropriate, are in conformity with the following harmonized standards:

NEN-EN-ISO 12100:2010  
 NEN-EN-IEC 60204-1:2006/C11:2010

In case of changes to the machine without our written authorization this declaration loses its validity.

Nieuwegein 17-11-2015

Michiel Kalisvaart  
 Operational Manager



## Table of contents

<b>EC Declaration of Conformity</b>	<b>2</b>
<b>1. Introduction</b>	<b>4</b>
<b>2. Machine description</b>	<b>4</b>
Control box	5
Accessories	5
<b>3. Safety</b>	<b>6</b>
3.1 Work area safety	6
3.2 Electrical safety	6
3.3 Personal safety	7
3.4 Machine safety	7
3.5 Maintenance safety	7
3.6 Dust collector safety	8
3.7 Grinding safety	8
3.8 Transport safety	9
3.9 Signs on the machine	10
<b>4. Initial operation</b>	<b>11</b>
4.1 Checkpoints of electrical safety	11
4.2 Checkpoints of machine safety	11
4.3 Manual moving of the machine	11
4.4 Adjustable weights	12
4.5 Changing the wings	12
Diamag	14
4.6 Before start-up	14
<b>5. Operating</b>	<b>15</b>
5.1 Switching the machine on	15
5.2 Turning the machine off	15
5.3 Operating during grinding	15
5.4 Working with the remote system	16
5.5 Wet grinding	17
<b>6. Maintenance</b>	<b>17</b>
<b>7. Troubleshooting</b>	<b>19</b>
<b>8. Technical data</b>	<b>20</b>
<b>Contact</b>	

## 1. Introduction

Before use, operators must be provided with information, instruction and training for the use of the machine and the substances for which it is to be used, including the safe method of removal and disposal of the material collected. All persons who are working with or maintaining this machine must read the manual carefully and understand it fully. In case you sell the unit, hand it on to the next owner. Keep this manual always with the machine, to enable it to be referred to at any time. Any other work not covered by this operating manual must not be carried out.

This machine is designed for industrial use by professionals. **Only authorized and trained personnel may operate this machine.** This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. **Blastrac BV** offers a course on the use of the machine in order to make the operating and maintenance personnel familiar with all elements of the machine.

## 2. Machine description

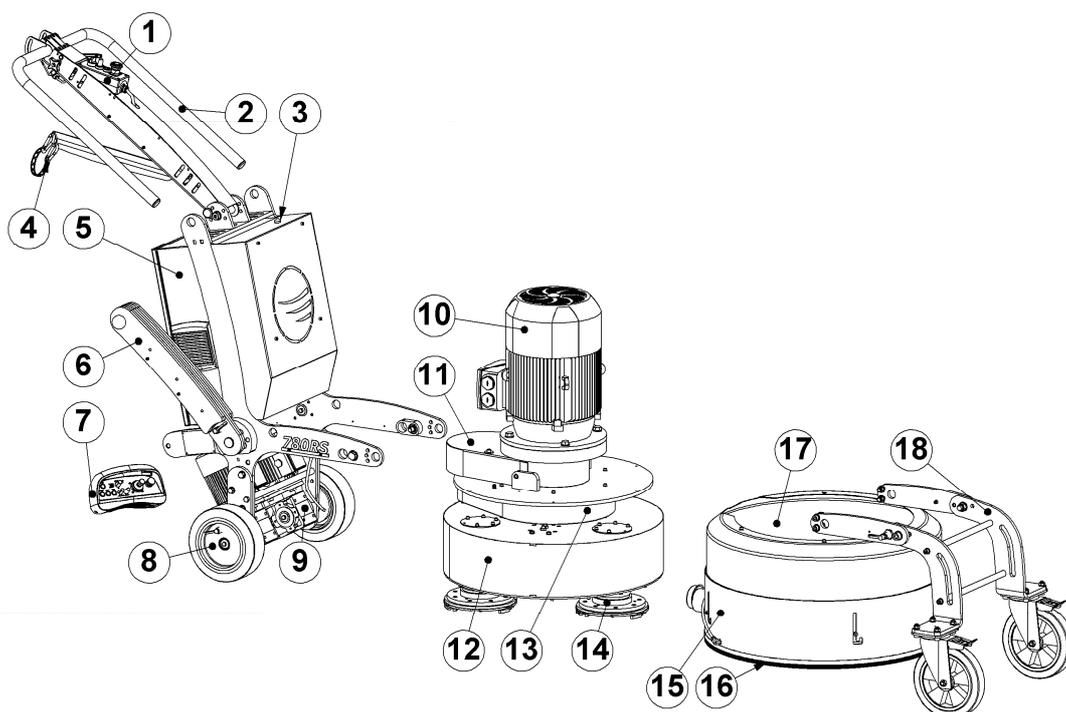
The BMG-780RS is an electrical driven planetary grinding machine. This is a three headed machine for levelling and polishing of indoor floors. The 3 planetary rotating discs are  $\varnothing$  240 mm.

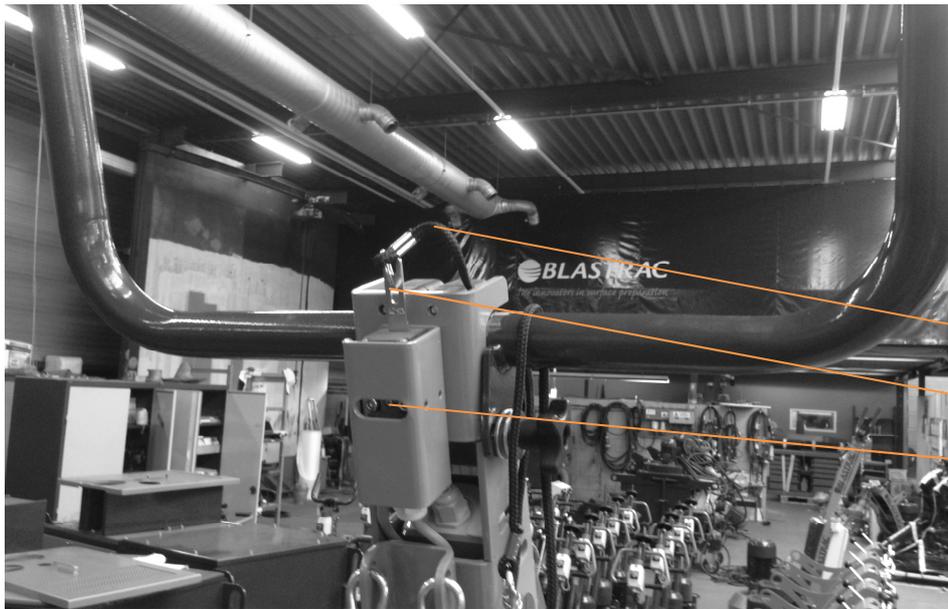
Due to the drive motors and the wireless Bluetooth control unit this machine is very effective and ergonomic to operate.

### Application

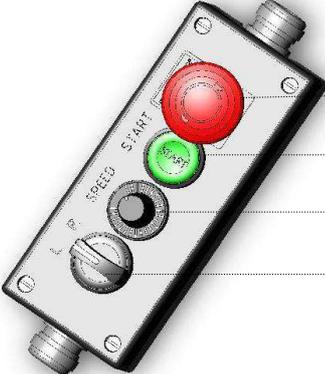
The BMG-780RS can be used on almost any floor to plane, to make ready for coatings, or to remove coatings or glue residues. The machine may not be used without an adequate dust extraction system. A specially designed Blastrac dust collection system ensures dust-free operation of the machine and clean air at the workspace. This machine may not be used on wood.

1	Operating panel	7	Remote control	13	Upper drive
2	Steer handle	8	Drive wheel	14	Grinding buffer
3	Antenna Bluetooth connection	9	Drive wheel motor	15	Floating shroud
4	Swing arm for dust hose	10	Grinding head motor	16	Brush for shroud
5	Electric control box	11	Protection cap	17	Dust cover
6	Weight set	12	Lower drive	18	Front wheel





Cord for dead man's switch
Key for dead man's switch
Dead man's switch



**Control box**

- Stop button (Red)
- Start button (Green)
- Speed regulator
- Selection switch for left-hand or right-hand turning of the motor.

**Accessories**

There are several types of wings that may be used on this machine.

BG707341-2	Wing Black, box 9 pieces 30/40
BG707301	Wing Red, box 9 pieces 18/20
BG707302	Wing Red, box 9 pieces 30/40
BG707303	Wing Red, box 9 pieces 60/80
BG707304	Wing Red, box 9 pieces 120/150
BG707311	Wing Green, box 9 pieces 18/20
BG707312	Wing Green, box 9 pieces 30/40
BG707313	Wing Green, box 9 pieces 60/80
BG707314	Wing Green, box 9 pieces 120/150
BG707321	Wing Blue, box 9 pieces 18/20
BG707322	Wing Blue, box 9 pieces 30/40
BG200995-1/SET	Wing PCD 1 x 1, box 9 pieces
BG200997-1/SET	Wing PCD split, box 9 pieces
E07240-2	DIAMAG adapter plate Ø240mm
E10692	DIAMAG adapter plate for PCD-wings Ø240mm
E09580	Cutter plate Ø240mm
E09368	Velcro plate Ø240mm (Fine or Coarse)

See the service manual for the complete list with all the wings, pads, dots and spare parts.

### 3. Safety



#### Warning!

**Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire, explosions and / or serious injuries.

Only authorized and trained personnel may operate this machine. This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

It is the responsibility of the user to analyse the surface to be treated. The surface may not contain any substances which could pose a fire-, explosion- or health risk when treated. The user should make a risk assessment on the basis of the information obtained about the surface to be treated and take proper precautions for the work to be performed.

In case of any inappropriate usage, improper operation or repair, the producer shall be exempt from liability.

#### 3.1 Work area safety

- a) Do not use the machine in rain, damp or wet locations.
- b) Avoid dangerous environments: do not work in the presence of explosive atmospheres, in the presence of flammable liquids, gases or dust. Remove materials or debris that may be ignited by sparks.
- c) In some cases sparks could be created by grinding.
- d) The surface to be treated must be clean, make sure to remove all stones, screws etc..**  
Any stones, screws, bolts, pieces of wire etc. could cause serious damage if it gets inside the machine!
- e) Do not use on wood.
- f) Make sure there is enough ambient light on the work area. Cluttered or dark areas invite accidents.
- g) Keep children and bystanders away while operating the machine. They are likely not to foresee the potential dangers of the machine. Distractions could cause you to lose control of the machine.
- h) Persons who are not operating the machine must not be permitted to stay in the surrounding area of at least 5 meter from the machine.
- i) Never use the machine when the surface is not clear and if there is a risk of stumbling or tripping.
- j) Make sure that there are no cables or hoses in the driving direction of the machine.
- k) Make sure that there is nothing standing or situated on the surface to be treated.
- l) Make sure the machine can travel over all inequalities on the surface, small inequalities like weld seams or floor joints are no barriers for the machine.
- m) Never stay in the rain with the machine.**
- n) Check if there are any obstacles that can snag the cables when the machine is moving.
- o) Remove reinforcing steel or other objects protruding from the surface in order to prevent damage to the compounds or diamond discs.
- p) Warning!**  
**Make sure that the surface to be treated does not contain dangerous materials such as:**
  - combustible or explosive dusts or substances.
  - carcinogenic or pathogenic substances.
- q) Secure the work area around the machine in public areas providing an adequate safety distance from the machine. Use a red and white safety chain and danger sign to enclose the work area.

#### 3.2 Electrical safety

- a) Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine. Do not use damaged extension cables.
- b) Electrical cables must be rolled entirely off of the reels.
- c) Any damage to the electric cables and/or electrical components is not permitted.
- d) The voltage on the identification plate must comply with the power supply.
- e) Use an electrical power supply connection with earth connection and earth leakage circuit breaker.
- f) The circuit breaker of the power supply must have a "D" characteristic. Circuit breakers with a "C" or "B" characteristic can give problems when switching the motor on.
- g) **Keep the machine original; The machine is always equipped with an earthed connection, do not change this** and always use earthed cables with an earthed plug.
- h) Inspect and test the electrical components regularly. The electrical components have to satisfy with the requirements set out in the harmonised norm EN60204-1.
- i) Always call a skilled electrician or your distributor when you have questions about the safety of the electrical components.



- j) Work on electrical equipment or operating materials may only be undertaken by a skilled electrician or by trained persons under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations. Always use tools that are insulated against voltages.
- k) Do not abuse the cables. Never use the cables for carrying, pulling or unplugging the machine. Keep cables away from heat, oil, sharp edges or moving parts. Damaged or entangled cables increase the risk of electric shock.
- l) Be careful with water on the treated surface. Electrical cables must not come into contact with water.
- m) The main power switch on the machine must be in the "Off" position before connecting to the power supply. (Only if there is a main switch present on the electrobox.)
- n) During a long standstill of the machine, pull out the main plug and cover it with plastic foil.
- o) If the machine is to be operated using power from a generator, the generator must be operated in accordance with the current legal regulations and directives in force. (this applies to the protective earth conductor in particular) in order to ensure that all safety devices are functioning and to eliminate possible damage to electrical components.

### 3.3 Personal safety

#### a) Always wear Personal Protective Equipment while working with the machine.

- Dust mask class FFP3 or higher
- Ear protection
- Safety glasses with lateral protection
- Protecting gloves
- Safety shoes
- b) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.
- c) Stay alert, watch what you are doing and use common sense when operating the machine.
- d) The cord of the deadman switch key should always be fastened on your arm or on to your clothing.
- e) Pull out the key of the deadman switch before any inspections, adjustments and/or maintenance work is started.
- f) All persons in the proximity of the machine, must wear ear protectors and safety shoes.
- g) Always seek professional medical attention immediately in case of injury.

### 3.4 Machine safety general

- a) Safety functions and operating functions must work correct.
- b) No loose bolts and nuts permitted.
- c) Never operate machine without the guards and/or safety devices in place.
- d) Never change anything on the safety devices on the machine!
- e) The machine, specially the handle grips must be free of fats/oils and have to be dry.
- f) If the length of the brushes is, due to wear, less than 5mm or they are extremely deformed, the brushes have to be replaced. Check the Service Manual for the order numbers.
- g) All repair work has to be done by qualified Blastrac personnel, this guarantees a safe and reliable machine.
- h) **Always use original Blastrac spare parts, grinding disks, grinding wings and polishing pads.** This will ensure the best performance. Only original Blastrac parts meet the factory specifications and quality. Otherwise Blastrac BV cannot guarantee the safety or performance of the machine. The part numbers can be found in the Service Manual.
- i) Check the rotating direction of the motor. The correct direction is given with an arrow on the housing of the motor.
- j) If **safety-critical changes** occur to the machine or its working method, the machine must be **shut down immediately!** The cause of the fault must be established, and rectified.
- k) In the event of **operational malfunctions** the machine must be **shut down immediately** and secured!
- l) Do not use the unit when it is damaged.
- m) Do not **open** or **remove protective guards** while driving gears are running.

### 3.5 Maintenance safety

- a) Pull out the main plug before starting inspections and repairing on the machine.
- b) Wait for standstill of all drives before any inspections, adjustments and/or maintenance work is started.
- c) Block the machine in a stable position before doing any maintenance work.
- d) Failures due to inadequate or incorrect maintenance may generate very **high repair costs** and long standstill periods of the machine. **Regular** maintenance therefore is imperative.
- e) Operational safety and service life of the machine depends, among other things, on proper maintenance.
- f) Prevent premature wear by keeping the machine as dust free as possible. Clean the machine for this reason regularly with a dust collector and non-aggressive materials, especially the upper drive. Never use a high pressure water cleaner to clean the machine.



- g) It is advisable to stock all spare parts or wear parts that cannot be supplied quickly. As a rule, production standstill periods are more expensive than the cost for the corresponding spare part.
- h) Do not use any **aggressive** cleaning materials!
- i) Use lint-free **cleaning cloths!**
- j) For the electrical parts, use a tool that is insulated against voltages.

### 3.6 Safety regarding dust collectors

- a) Always use a Blastrac dust cleaner (when working dry) to ensure a dust-free operation of the machine and clean air at the workspace. Also the airflow helps to cool the machine and prevents overheating.
- b) Read the operating instructions of the dust collector before using it.
- c) The dust container/bag of the dust collector must be emptied regularly. Comply with the local waste treatment regulations considering the removed material.
- d) The dust hose must be connected properly with a hose clamp and industrial tape.
- e) The dust hose must be undamaged and free of obstructions.
- f) Always switch on the dust collector first!

### 3.7 Grinding safety

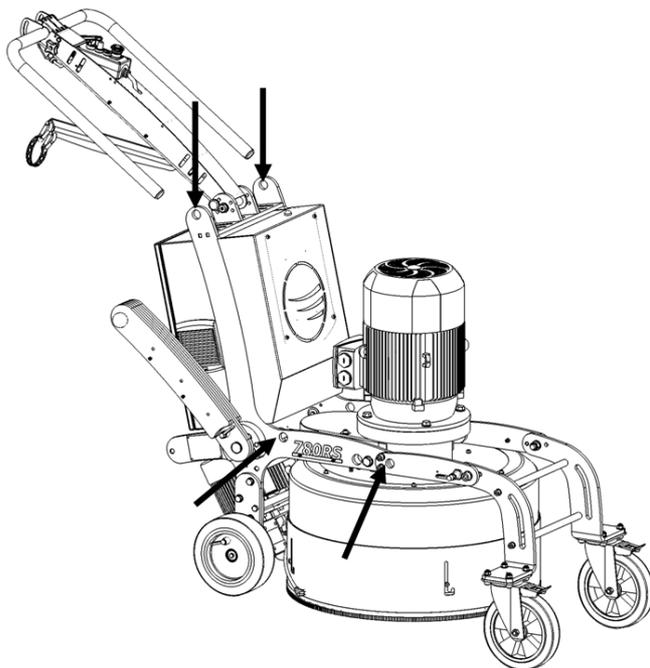
- a) The machine contains rotating parts, which are protected with a sliding cover. Always leave the diamond disc on the floor while the motor is turning.
- b) The flexible coupling can become worn out with use, because of this there can be higher vibrations than normal. Check for this reason the flexible coupling for deformation and damage before every use.
- c) Do not let the machine rest on the diamond disc or coupling when it is not in use, this will cause deformation to the flexible coupling.
- d) Make sure the brush seals are in good condition, this to avoid dust.
- e) Make sure the diamond disc is not damaged or worn out.
- f) Always pull out the main plug before u start changing the wings or disks.
- g) When mounting or removing a diamond disc; lay down the machine so it is lying on the handle. Make sure the machine will not fall back down. A second person can hold the handle down to make sure it will not fall back down.
- h) For changing the disks/wings u should wear Personal Protective Equipment like a dust mask, safety goggles, gloves, protective shoes, and close fitting protective clothing. Use the vacuum cleaner to prevent excessive dust.
- i) **Caution!** The grinding disks / wings will heat up during grinding, don't risk getting burned, always wear protective gloves when handling them.
- j) The machine contains rotating parts; because of this never pull the machine backwards with a turning motor.
- k) Be careful with the machine and pull or let down the machine slowly, big shocks can damage the electrical parts.
- l) Make sure the floating shroud is in transport mode when you transport the machine.
- m) Clean the brush-sealing directly after wet grinding. It will be very hard to clean the brush-sealing when the dust-water mixture has dried up and hardened.
- n) **Be careful!**, the workfloor can get slippery when grinding wet.
- o) Keep all electrical cables and connections away from water.

### 3.8 Transport safety

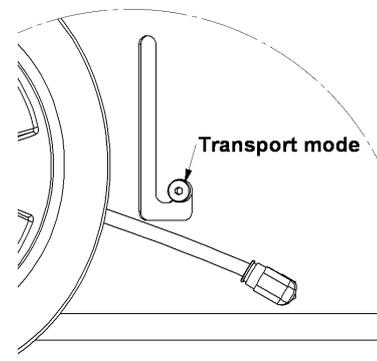
- a) Be aware of your surroundings and machine operating level. Do not side hill, do not run on steep incline, this could cause machine to tip over.
- b) The net weight of the BMG-780RS is 565 kg. Use a crane or lift when transporting the machine, use the lifting eyes of the machine.
- c) Before every use check the lifting eyes and welds for: deformation, damages, cracks, corrosion and wear.
- d) Only lift the machine as shown in the picture below.
- e) When lifting the machine from the ground, always use the lowest lifting speed. The cables must first be tensioned at this speed; they must not be slack when the machine is lifted from the ground.
- f) During hoisting make sure to be at a safe distance from the machine with the most optimal view on the machine and working environment.
- g) Never stand directly below the machine.
- h) When transporting the machine do so in such a manner that damage due to the effects of the use of force or incorrect loading and unloading is avoided.



- i) The lifting eyes can also be used to fasten the machine on a pallet or during transport.
- j) Always drive backwards when driving up to a ramp or grade, and forwards when driving of the ramp.
- k) Chock wheels for transport and keep control handle in neutral position.
- l) Don't leave the machine unsecured on jobsites.
- m) Park the machine always on a flat horizontal and levelled surface.
- n) Make sure the floating shroud is in transport mode when you transport the machine.**
- o) Make sure the electrical cable and dust hose are disconnected.
- p) Store the cleaned and dry machine in a humid free room. Protect the electrical motor from moisture, heat dust and shocks.
- q) Never use the machine for lifting persons or items.
  - It is not allowed to lift the machine without appropriate appliances as a lift or crane, lift the machine with a rope on the lifting eyes as showed in imagine mentioned below.
  - Make sure the floating shroud is in transport mode when you transport the machine.



Lifting points for crane or lift





### 3.9 Signs on the machine

The following stickers are placed on the machine. Meanings of these symbols are:

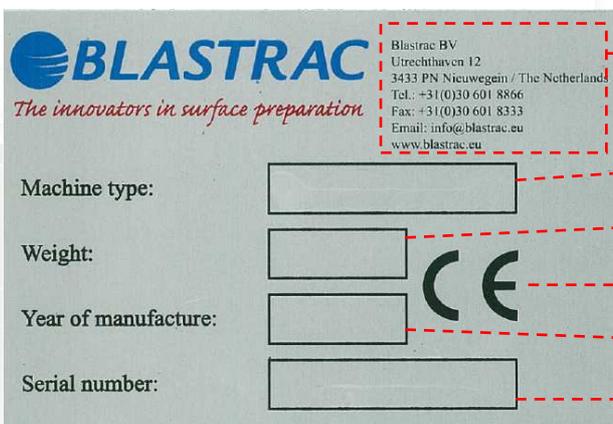


- Wear a dust mask class FFP3 or higher
- Ear protection is obliged
- Safety glasses with lateral protection are obliged
- CE-mark on this machine
- Wear protecting gloves
- Safety shoes obliged
- Consult the manual before operating the machine



- Danger, disconnect electrical supply before working on this equipment

Personnel must tie back long hair and not wear loose clothing or jewellery including rings.



Name, address, telephone & fax number, Email address and website.

The machine type.

The net weight of the machine in kilogram.

CE mark.

The year of manufacture.

The serial number of the machine.



## 4. Initial Operation

Before using the machine it is important to inspect the machine.

It is not permitted to use the machine if the safety is not checked according to the checkpoints described below.

Before switching on the machine make sure that no-one can be endangered when the machine starts up!

### 4.1 Checkpoints of electrical safety

- Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine.
- Electrical cables must be fully unwind of them reels.
- No damage is permitted for electrical cables.
- Use an electrical power supply connection with earth connecting.
- The main switch of the machine should be put to 'Off' before connecting to the power supply. (Only if there is a main switch present on the electrobox.)
- Make sure the power supply is in accordance with the machine specifications.
- If the machine is to be operated using power from a generator, the generator must be operated in accordance with the current legal regulations and directives in force. (this applies to the protective earth conductor in particular) in order to ensure that all safety devices are functioning and to eliminate possible damage to electrical components.

### 4.2 Checkpoints of machine safety

- Safety functions and operating functions must work correct.
- Check the diamond wings for damages and/or wear.
- Check all screws and other fasteners for tightness. No loose bolts and/or nuts are permitted.
- Check the electrical components, cables and connections for wear and/or damages.
- Dust hose connection must be reliable: use hose clamps and industrial tape.
- Dust hoses must be undamaged and free of obstructions
- Make sure that the dust bin / bigbag is empty and connected properly.

### 4.3 Manual moving of the machine

The machine can be moved around manually on 4 wheels. Flip the bracket with the 2 castor front wheels down and make sure the 2 locking pins are locked into place (1 on the left and 1 on the right side of the bracket).

**Be careful!** Make sure your hands can't get caught between the bracket and machine!

The traction wheels must be disconnected from the drive motors: pull out the locking pin of each rear wheel.

The machine should only be moved around manually when the dust hose and power supply cable are disconnected.

**WARNING!** Always make sure all rotating parts have come to a complete standstill before moving the machine around.

**Be careful!** Make sure nobodies feet can get under the wheels. Wear appropriate safety shoes when you drive the machine to or from the work area.



Locking pins



#### 4.4 Adjustable weights

The machine has adjustable weights mounted at the sides, they can be set for high, medium or low grinding pressure.

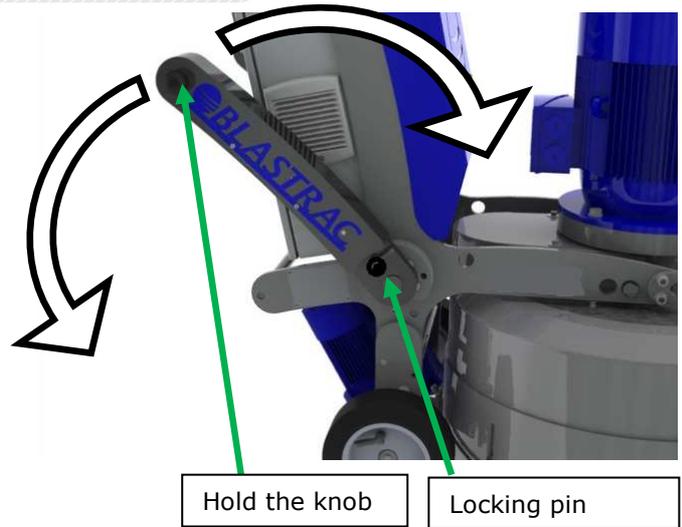
Hold the knob of the weight firmly in your hand.

**Be careful!** The adjustable weight is heavy!

With your other hand pull out the locking pin and adjust the weight forward or backward to the desired position. Lock the locking pin back in position.

Repeat on the other side of the machine.

The position of the adjustable weight shown in this picture is also the correct position for changing the grinding tools.

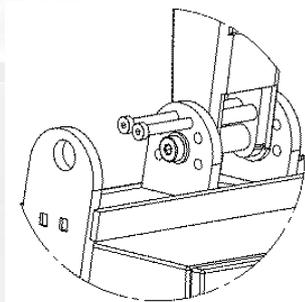


#### 4.5 Changing the wings

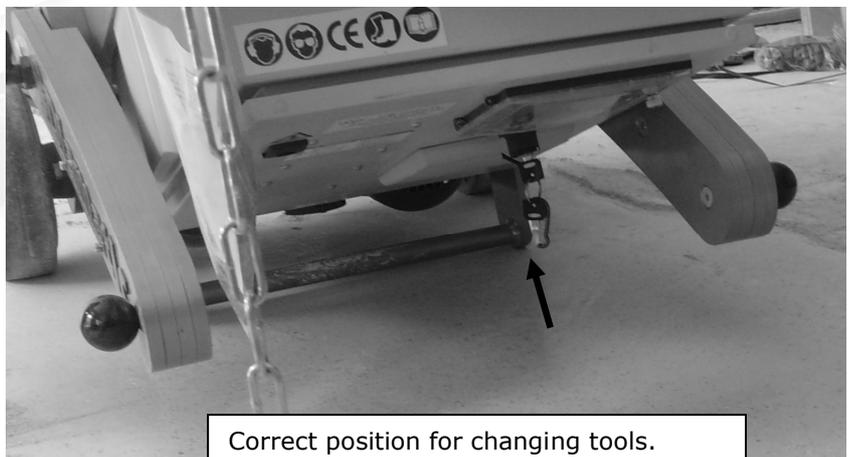
**Warning!** Always wear Personal Protective Equipment!  
 The dust can be hazardous to the health! Wear a dustmask!  
 The wings can get hot! Don't risk burning your hands! Wear protective gloves!

- Pull out the mains plug before you start
- Always wear gloves and a **dust mask** of at least **class FFP2**
- Use the vacuum cleaner in order to work as dust free as possible

Make sure all moving parts of the machine have come to a complete standstill before changing the wings.



Use two pins when you tilt the machine back



Correct position for changing tools.



Remove the key of the dead man's switch, press the red stop button, and unplug the machine from the power supply.  
This is to prevent unintentional start-up of the machine.



Before you tilt the machine back, make sure the electrical cable and dust hose cannot get damaged when you tilt the machine back.

Take the locking pin out.  
Put the steering handle in its most upright position.  
Put the locking pin back in.



**WARNING!**  
This is an unstable position of the machine.  
Danger of tipping if the handle is not raised.



Tilt the machine back and lay down the machine so it is laying on the metal support underneath the electrical box. Make sure the machine will not fall back down. A second person can hold the handle down, to make sure the machine will not fall back down.



If there is a risk of damaging the floor-coating when tilting the machine back, you can place a piece of cloth, a sheet, a thin wooden board or something similar underneath the metal supports.  
**WARNING! Danger of injury.**  
Do not let the machine rest on thick wedges or thick wooden beams. This can cause the machine to fall back down!



Use the vacuum cleaner to remove excessive dust.  
A tool (spatula, screwdriver) makes it easier to release the plate off the velcro.



## DIAMAG

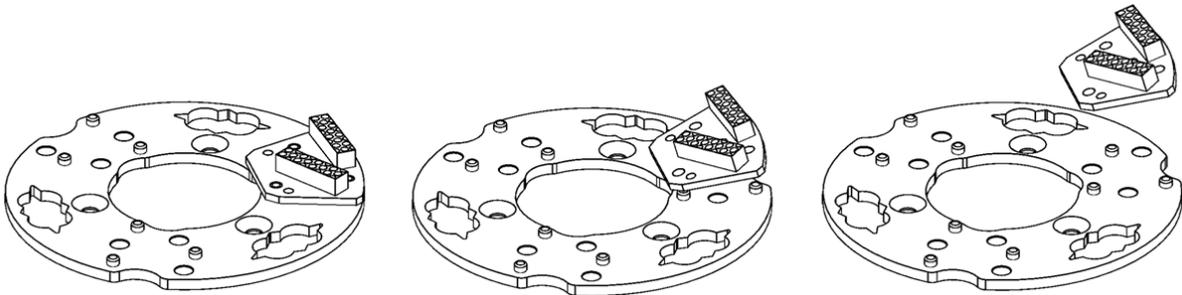
When using DIAMAG adapter plates, you can replace the diamond wings without using any tools! Because of the specially designed heat resistant magnets and fixation pins, the diamond tools are fixed onto the plate, but can still very simply be replaced by hand.



Contact your Blastrac distributor for more information or check [WWW.DIAMAG.EU](http://WWW.DIAMAG.EU)

### Removing the diamond wings

- Read chapter 3 Safety first, and wear personal protective equipment.
- Lay down the machine so it is laying on the metal support underneath the electrical box. Make sure the machine will not fall back down. A second person can hold the handle down, to make sure the machine will not fall back down.
- Remove all the dust using the vacuum cleaner.
- Grab the diamond wings at the place where the gap in the Diamag plate is and roll the wing over so the wing can be taken off of the plate. (See picture below)



### Mounting the diamond wings

- Read chapter 3 Safety first, and wear personal protective equipment.
- Lay down the machine so it is laying on the metal support underneath the electrical box. Make sure the machine will not fall back down. A second person can hold the handle down, to make sure the machine will not fall back down.
- Clean the Diamag plates using the vacuum cleaner so the diamond wings will connect well to the plate. Dirt between the plates and wings can be the cause of uneven grinding results.
- Place the diamond wings one by one on the Diamag plates.

## 4.6 Before start-up

Before start-up the operating personnel must be familiar with the safety regulations given in this manual.

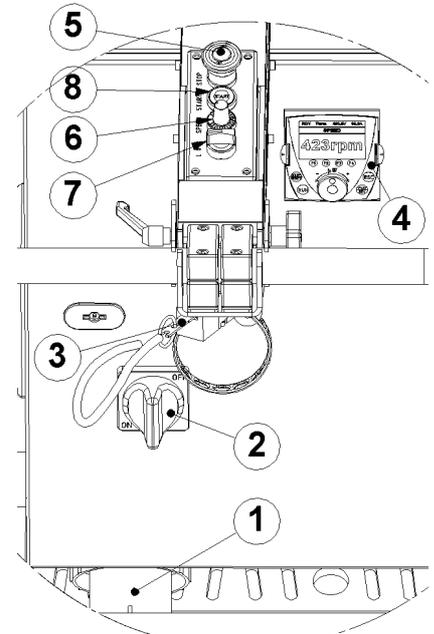
- Put the grinding machine and the dust collector on to the surface to be processed.
- Fit the appropriate diamond grinding wings that are required for this particular process. Please read **chapter 4.5** of this manual.
- Connect the machine and the dust collector to the electricity supply point, these electric supply points should be protected and equipped with an earth connection and earth leakage circuit breaker. In case of doubt ask the local safety officer.
- Check the dust hose for damages and obstructions. Make sure the dust bin of the dust collector unit is empty. Observe the local regulations regarding waste disposal.
- Connect the grinding machine and the dust collector unit with the flexible dust hose. Use hose clamps at the connections.
- Before grinding, clean the surface to be treated. There should not be any trash, stones, cloths, or oil on the surface.
- Remove all objects from the surface that can damage the machine. Remove reinforcing steel or other objects protruding from the surface in order to prevent damage to the machine, the seals or diamond wings.

## 5. Operating

When operating the BMG-780RS, the following additional safety instructions must be followed closely.

### 5.1 Switch on the machine when operating the machine manually

- Turn on the dust collector before switching on the machine and connect the dust hose to the machine.
- Make sure the electric component box is closed
- Turn the contact on the electrical box with the key to the left "Remote OFF"
- Connect the power supply to the connector (1)
- Turn the main switch (2) to the right. (European machines don't have a main switch)
- Stand behind the machine and hold the handle tight.
- Put the cord of the deadman switch (3) on to your arm or put it on to your clothing.
- Check the display (4) to make sure there are no faults or warnings.
- Be sure that the emergency switch (5) is turned up.
- Turn the speed regulation button (6) counter clockwise so the machine will turn as slow as possible.
- Turn the Left/Right button (7) to one of the positions.
- To start the machine, push the green Start button (8).
- Raise if necessary the speed of the machine with the speed regulation button (6)



### 5.2 Switch off the machine when operating the machine manually

- Push the red (emergency) button (5) on the electrical box.
- Wait until the machine stops rotating.
- Pull out the cord of the deadman switch (3)
- Turn the main switch (2) to the left. (European machines don't have a main switch)
- Pull the power supply out of the connector (1)
- Shut down the dust collector.

### 5.3 Operating during grinding

This machine will always have an even grinding result because of the planetary system. However it is advised to keep the machine constantly in movement for an optimum grinding result.

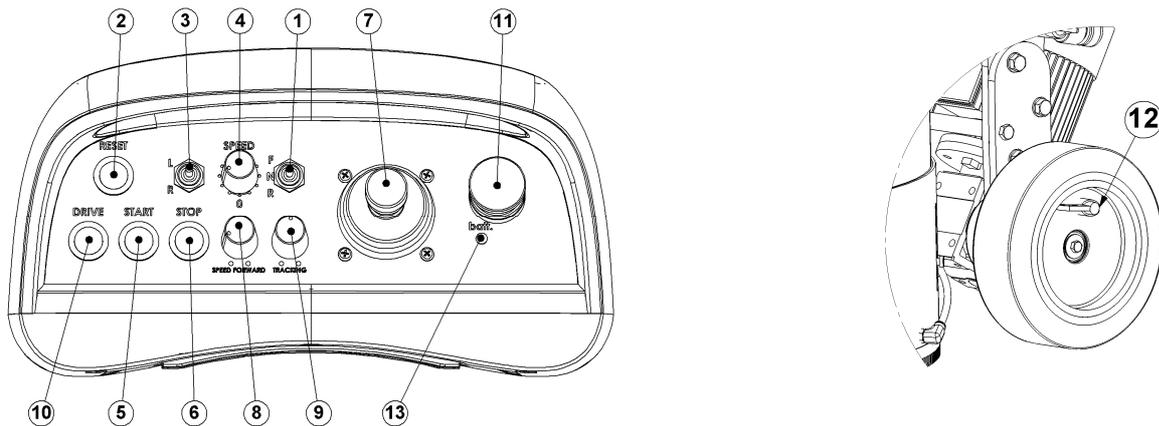
For soft floors it is recommended to work on high disc speed, with the weights tilted backwards. For hard floors and the first steps of polishing it is recommended to grind with low speed of the tools. On hard floors and during polishing it is recommended to have a low grinding pressure.

**Contact our experts at Blastrac for the correct application of the different tools and their corresponding working speeds.**



## 5.4 Working with the Remote System

1	FORWARD/REVERSE drive	5	START button grinding motor	9	TRACKING button drive motors
2	RESET button	6	STOP button grinding motor	10	DRIVE FORWARD button drive motors
3	LEFT / RIGHT switch grinding motor	7	Joystick drive motors	11	EMERGENCY STOP button
4	SPEED button grinding motor	8	SPEED FORWARD button drive motors	13	Battery warning light



- Always test the machine manually before switching over to Remote System.
- Make sure the key is in the deadman switch and the emergency stop button on top of the steer is turned up.
- Turn the contact on the electrical box with the key to the right "Remote ON"
- Secure the belt with the remote control around the middle of the body.
- Make sure the wheel system is locked by turning both quick release pins into the wheels (12)
- Make sure the EMERGENCY button (11) on the control unit is turned up.
- Push the RESET button (2) for 2 seconds and switch the LEFT/RIGHT switch (3) up and down.
- Turn the SPEED button (4) till 0, so the grinding motor will turn as slow as possible.
- To start grinding, push the START button (5)
- Raise the speed of the grinding tools if necessary, with the speed regulation button (4)
- Push the joystick (7) in the desirable direction to the drive the machine. The further the joystick (7) is pushed into the desirable position, the faster the machine moves.
- The SPEED FORWARD button (8) & the TRACKING button (9) don't work in combination with the joystick (7).
- To drive the machine automatically, push the DRIVE button (10). Check the FORWARD/REVERSE button (1) to check in which direction you drive.
- Changing the speed and the tracking of the machine could be done with the buttons SPEED (8) and TRACKING (9)
- The automatic drive (10) and the joystick won't work together. So push the DRIVE button (10) again before working with the joystick.
- You can turn the machine around the axle by using the joystick, this can be done by pushing the joystick totally to the right or totally to the left.
- The machine can also turn around one wheel, this can be done by pushing the joystick to the left or right upper corner.
- To stop grinding, push the STOP button (6)
- After pushing the EMERGENCY button (11), reset the control unit by pushing the RESET button (2) for 2 seconds and switch the LEFT/RIGHT switch (3) up and down.
- **Always stop driving first before stop grinding!**





### 5.5 Wet grinding

The BMG-780 can also be used for wet grinding.

- Connect the machine to the water supply(1).
- Always use a clean water supply, dirty water could clog the system.
- Make sure the water supply is turned off before connecting or disconnecting to the machine.
- Be careful, the workfloor can get slippery when grinding wet.

**IMPORTANT NOTE:**

Do not use the vacuum cleaner when grinding wet!



Clean the brush-sealing directly after wet grinding. It will be very hard to clean the brush-sealing when the dust-water mixture has dried up and hardened.

## 6. Maintenance

Pay attention to Chapter 3 "**Safety**" during maintenance and repair works.

Failures due to inadequate or incorrect maintenance may generate very **high repair costs** and long standstill periods of the machine. **Regular** maintenance therefore is imperative.

Operational safety and service life of the blast machine depends, among other things, on proper maintenance.

The following table shows recommendations about time, inspection and maintenance for the normal use of the machine.

Operating hours/ time period	Inspection points, maintenance instructions
12 h after repairing	Check all accessible screw connections for tight seat.
Daily and prior to starting work	Check if all safety devices are working adequate. Check the brush sealing for damages and/or wear. Check the hose to the dust collector for damage and obstructions. Clean the electrical box inside and outside. Check the electric connections for sediments of dirt or foreign bodies. Check the electric motors for dirt and other contaminants. Check the conditions of the wings /discs.
Weekly	Check the buffers of the diamond plates.
Every 3 months	Clean the complete machine with a damp cloth.
Annually	Full overhaul and cleaning of the complete machine.

Pay attention to unusual noises or strong vibrations. Check for the cause of every big change. Call a technician if you have doubts about the cause or when a repair without a technician seems not possible without damages. Only use genuine Blastrac spare parts.

Due to different working conditions it can't be foreseen how frequently inspections for wear check's, inspection, maintenance and repair works ought to be carried out. Prepare a suitable inspection schedule considering your own working conditions and experience. However a full overhaul must be carried out at least once a year.



Our specialists will be happy to assist you with more advice.

**Prior to any repair works on the machine and its drives, secure the machine against unintentional switching on. Disconnect the power supply.**

**Follow additional operating and maintenance instructions of Original Equipment Manufacturers if included during your service and maintenance work.**

**(For example the remote control system)**

**Further is advised:**

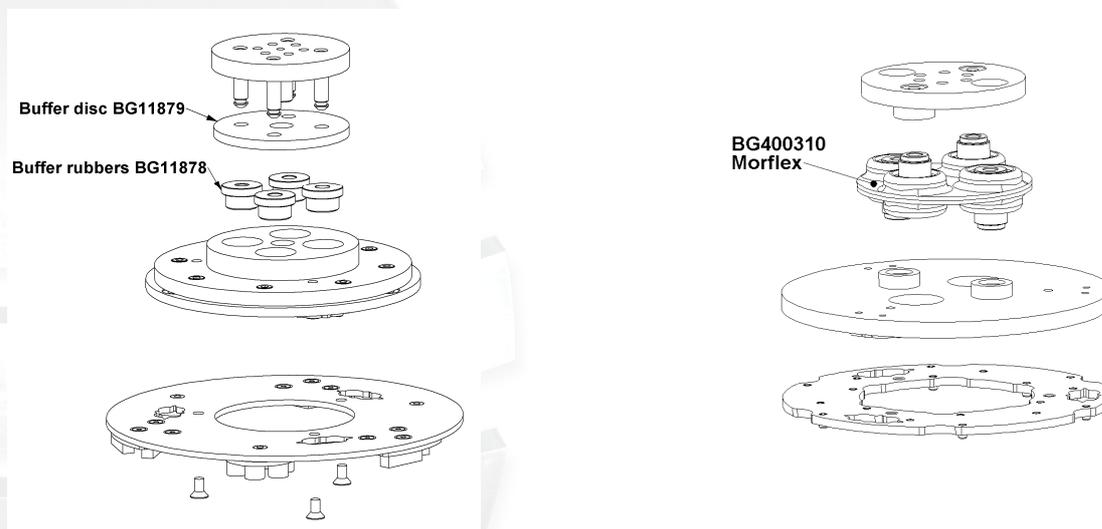
Store the cleaned and dry machine in a dry and humid free room. Protect the electrical motor from moisture, heat, dust and shocks.

Work only with original Blastrac parts.

Dust in the electrical box can damage the frequency inverter; due to this the electrical box has to be cleaned every day from inside and outside. Clean the fans and filters from the box with compressed air and a vacuum cleaner.

Check regularly to see if the diamond wings are in good condition. Replace immediately when these are damaged or worn out.

Check weekly if the diamond plates doesn't have too much space in the buffers. If the diamond plate has too much space, replace the buffers.



Prevent premature wear by keeping the machine as dust free as possible, for these reasons clean the machine regularly with a vacuum cleaner.

Clean the machine every day with air and non-aggressive materials.  
Never use a high pressure water cleaner to clean the machine.

Store the cleaned and dry machine in a dry and humid free room. Protect the electrical motor from moisture, heat, dust and shocks.

All repair work must be done by qualified Blastrac personnel, this to guarantee a safe and reliable machine.



Any guarantee on the machine is automatically void when:

- Non original Blastrac parts and or diamond discs have been used
- Repair work is not done by qualified Blastrac personnel
- Changes, add items, or conversions are undertaken without the written permission from Blastrac BV.

Old equipment contains valuable materials which are valuable for re-processing. **The machine parts must not be thrown away in the normal household waste**, but should be disposed of at a suitable proper collection system, e. g. via your communal disposal location. This way the materials can be re-used in an environmentally responsible manner.

Despite the fact that this guide is made with care, Blastrac takes no liability for errors in the manual and the possible consequences. We are naturally very interested in your findings and additions.

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## 7. Troubleshooting

Fault	Possible cause	Remedy
Excessive vibration or/and Unusual noises	Imbalance due to worn or broken grinding tools.  worn out buffer rubbers  Defective bearing.	Replace all worn or broken parts.  Replace all worn or broken parts.  Check the bearing on the axle drive shaft and replace if necessary.
Reduced or no grinding performance	Grinding tools have reached the maximum permissible wear.  Inappropriate grinding tool for the application.	Replace the worn parts.  Replace the grinding tools with appropriate grinding tools for the surface to be treated.
Motor does not switch on	Missed phase  Defective Component.	Check the mains power supply and try to switch on again.  Find fault and replace defective component.
Motor triggers while running	Motor protections switch triggered because of overload .  Motor has a defect.	Reduce additional load .  Check the motor.

## 8. Technical data

	<b>BMG-780RS 3x 230 volt</b>	<b>BMG-780RS 3x 400 volt</b>	<b>BMG-780RS 3x 480 volt</b>
Power consumption	17,8 kW max.	17,8 kW max.	17,8 kW max.
Electrical connection	3x 230 Volt	3x 400 Volt	3x 480 Volt
Frequency	60 Hz	50 Hz	60 Hz
Amperage connection	5 pole / 63 Ampere	5 pole / 63 Ampere	5 pole / 63 Ampere
Amperage consumption	55 Ampere Max.	32,9 Ampere Max.	32,9 Ampere Max.
Length	2110 mm	2110 mm	2110 mm
<i>Folded in</i>	1150 mm	1150 mm	1150 mm
Width	780 mm	780 mm	780 mm
Height	1250 mm	1250 mm	1250 mm
<i>Folded in</i>	1320 mm	1320 mm	1320 mm
Weight machine	565 kg	565 kg	565 kg
Weight grinding head	260 - 410 kg	260 - 410 kg	260 - 410 kg
Diamond discs	3x Ø240 mm	3x Ø240 mm	3x Ø240 mm
Work width	750 mm	750 mm	750 mm
Rotation speed discs	400 - 1200 min <sup>-1</sup>	400 - 1200 min <sup>-1</sup>	400 - 1200 min <sup>-1</sup>
Sound emission pressure level	78dB(A)	78dB(A)	78dB(A)
Hand-arm vibration emission level	Less than 2,5m/s <sup>2</sup>	Less than 2,5m/s <sup>2</sup>	Less than 2,5m/s <sup>2</sup>
Dust hose connection	75 mm Ø	75 mm Ø	75 mm Ø
Suitable filter unit	Contact Blastrac, we will assist you with a good advice		

The electrical diagrams of the electrical system are placed inside of the control panel.  
Design and specifications are subject to change without notice by Blastrac BV.

### IMPORTANT NOTES:

The indicated values are measured on new machines. Sound and vibration levels will vary in different circumstances. Area influences like open outside or closed inside space, ambient temperature, the surface to be treated, etc. will give different values at all time.

The declared vibration and sound emission levels represent the main applications of the machine. However if the machine is used with different accessories or poor maintenance, the vibration and sound emissions may differ. The values may be used for a preliminary assessment of exposure.

For a precise estimate of the vibration and sound load, the times should also be considered during which the machine is switched off or even running, but not actually in use. This may significantly decrease the exposure level over the total working period. Ear protection is recommended with the use of this equipment.



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