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Polymak[®]

MARBLE CUTTER

PMCM4 Pro

INSTRUCTION MANUAL



Read and follow all safety precautions in instruction manual.

Safety Notes

General Power Tool Safety Warnings

⚠ WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

Work area safety

- ▶ **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- ▶ **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- ▶ **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

- ▶ **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- ▶ **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- ▶ **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- ▶ **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges and moving parts.** Damaged or entangled cords increase the risk of electric shock.
- ▶ **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- ▶ **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

Personal safety

- ▶ **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- ▶ **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

- ▶ **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- ▶ **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- ▶ **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- ▶ **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- ▶ **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

- ▶ **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- ▶ **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- ▶ **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- ▶ **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- ▶ **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- ▶ **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- ▶ **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

- ▶ **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Cut-off machine safety warnings

- ▶ **The guard provided with the tool must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed to wards the operator. Position yourself and bystanders away from the plane of the rotating wheel.** The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.
- ▶ **Use only diamond cut-off wheels for your power tool.** Just because an accessory can be attached to your power tool, it does not assure safe operation.
- ▶ **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their rated speed can break and fly apart.
- ▶ **Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel.** Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- ▶ **Always use undamaged wheel flanges that are of correct diameter for your selected wheel.** Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.
- ▶ **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately guarded or controlled.
- ▶ **The arbour size of wheels and flanges must properly fit the spindle of the power tool.** Wheels and flanges with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- ▶ **Do not use damaged wheels. Before each use, inspect the wheels for chips and cracks. If power tool or wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the wheel, position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no load speed for one minute.** Damaged wheels will normally break apart during this test time.
- ▶ **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.** The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- ▶ **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.

- ▶ **Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- ▶ **Position the cord clear of the spinning accessory.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning wheel.
- ▶ **Never lay the power tool down until the accessory has come to a complete stop.** The spinning wheel may grab the surface and pull the power tool out of your control.
- ▶ **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- ▶ **Regularly clean the power tool's air vents.** The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- ▶ **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- ▶ **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

Kickback and related warnings

- ▶ **Kickback is a sudden reaction to a pinched or snagged rotating wheel. Pinching or snagging causes rapid stalling of the rotating wheel which in turn causes the uncontrolled power tool to be forced in the direction opposite of the wheel's rotation at the point of the binding.** For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.
- ▶ **Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.**
- ▶ **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** The operator can control torque reactions or kickback forces, if proper precautions are taken.
- ▶ **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- ▶ **Do not position your body in line with the rotating wheel.** Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- ▶ **Use special care when working corners, sharp edges, etc. Avoid bouncing and snagging the accessory.** Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.

- ▶ **Do not attach a saw chain, woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade.** Such blades create frequent kickback and loss of control.
- ▶ **Do not "jam" the wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** Over-stressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- ▶ **When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the wheel from the cut while the wheel is in motion otherwise kickback may occur.** Investigate and take corrective action to eliminate the cause of wheel binding.
- ▶ **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut.** The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- ▶ **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback.** Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- ▶ **Use extra caution when making a "pocket cut" into existing walls or other blind areas.** The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

Additional safety warnings

- ▶ **Wear safety goggles.**
- ▶ **Wear a dust respirator.**

- ▶ **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.
- ▶ **Wear hearing protection, safety goggles, dust mask and gloves. As dust mask, use at least a particle filtering half mask of filter class FFP 2.**
- ▶ **Use suitable detectors to determine if utility lines are hidden in the work area or call the local utility company for assistance.** Contact with electric lines can lead to fire and electric shock. Damaging a gas line can lead to explosion. Penetrating a water line causes property damage or may cause an electric shock.
- ▶ **Do not touch the cutting disc after working before it has cooled.** The cutting disc becomes very hot while working.

- ▶ **When working with the machine, always hold it firmly with both hands and provide for a secure stance.** The power tool is guided more secure with both hands.
- If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.
- The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.

Product Description and Specifications



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

Intended Use

With firm support of the base plate and using the blade guard, the machine is intended for horizontal cutting or slotting of mainly mineral materials such as marble without the use of water. The machine is not intended for cutting in wood, plastic or metal.

Product specifications

Model	PMCM4 Pro
Voltage	220V~
Frequency	50/60Hz
Power	1100W
Blade Dia	110–125mm
No Load Speed	13000rpm

- Manufacturer reserves the right to change specifications without notice
- Specifications may differ from country to country

Assembly

Before any work on the machine itself, pull the mains plug.

Dust Extraction

Dust from materials such as lead-containing coatings, some wood types, minerals and metal can be harmful to one's health. Touching or breathing in the dust can cause allergic reactions and/or lead to respiratory infections of the user or bystanders.

Certain dust, such as oak or beech dust, is considered carcinogenic, especially in connection with wood-treatment additives (chromate, wood preservative). Materials containing asbestos may only be worked by specialists.

— Provide for good ventilation of the working place.

— It is recommended to wear a P2 filter-class respirator. Observe the relevant regulations in your country for the materials to be worked.

Prevent dust accumulation at the workplace. Dust can easily ignite.

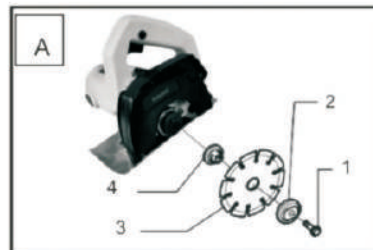
Mounting/Replacing the Diamond Cutting Disc (see figure A)

When mounting and replacing diamond cutting discs, it is recommended to wear protective gloves.

Diamond cutting discs become very hot during operation; do not touch them until they have cooled down.

Always use a correctly sized diamond cutting disc with the fitting mounting hole that corresponds with the information listed in the technical data.

Use only diamond-tipped cutting discs. Segmented diamond wheels may only have negative cutting angles and slots between the segments to a maximum of 10 mm.



1. Bolt M8x18 -Left
2. Outer Flange
3. Saw
4. Inner Flange

Mounting the Diamond Cutting Disc

— Clean the diamond cutting disc and all clamping parts to be mounted.

Fit the mounting flange with the O-ring to the drive spindle.

— Place the diamond cutting disc 6 onto the mounting flange. The direction arrow on the diamond cutting disc and the direction-of-rotation arrow on the blade guard must correspond.

- Mount the clamping flange and screw in the clamping bolt.
- Hold the clamping flange with the ring spanner and tighten the clamping bolt with the hex key.

Removal of the Diamond Cutting Disc

- Hold the clamping flange with the ring spanner and loosen the clamping bolt with the hex key.
- Remove the clamping flange and diamond cutting disc from the drive spindle.

Operation

Operating Modes

Before any work on the machine itself, pull the mains plug.

Pre-selecting the Cutting Depth (see figure B)



31. Adjust screw
17. Base

The cutting depth may only be pre-selected when the machine is switched off.

Adapt the cutting depth to the thickness of the workpiece. For optimum results, the diamond cutting disc must protrude approx. mm out of the material.

- Loosen wing bolt. For a smaller cutting depth, pull the machine from the base plate; for a larger cutting depth, push the machine toward the base plate. Adjust the desired cutting depth at the cutting-depth scale. Tighten wing bolt again.

Starting Operation

Observe correct mains voltage! The voltage of the power source must agree with the voltage specified on the nameplate of the machine.

Switching On and Off

To save energy, only switch the power tool on when using it.

- To start the machine, press the On/Off switch and keep it pressed.
- To lock the pressed On/Off switch, press the lock-on button.
- To switch off the machine, release the On/Off switch or when it is locked with the lock-on button, briefly press the On/Off switch and then release it.

Check the diamond cutting discs before use. The diamond cutting disc(s) must be mounted properly and be able to rotate freely. Carry out a test run for at least one minute without any load. Do not use diamond cutting discs that are damaged, out-of-balance, or vibrate. Damaged diamond cutting discs can rupture and lead to injuries.

Working Advice

- Exercise caution when cutting slots in structural walls; see Section "Information on Structures".
- Do not strain the machine so heavily that it comes to a standstill.
- After heavily straining the power tool, continue to run it at no-load for several minutes to cool down the accessory.
- For cutting depths greater than 20 mm in hard materials, e.g., concrete, apply several worksteps so that the motor is not overloaded.
- Clamp the workpiece if it does not remain stationary due to its own weight.
- The machine may only be used for dry cutting.
- Diamond cutting discs become very hot during operation; do not touch them until they have cooled down.

Protect the cutting disc against impact, shock and grease. Do not subject the cutting disc to lateral pressure.

Do not brake coasting diamond cutting discs by applying side-ward pressure.

For cutting especially hard material, e.g., concrete with high pebble content, the diamond cutting disc can overheat and become damaged as a result.

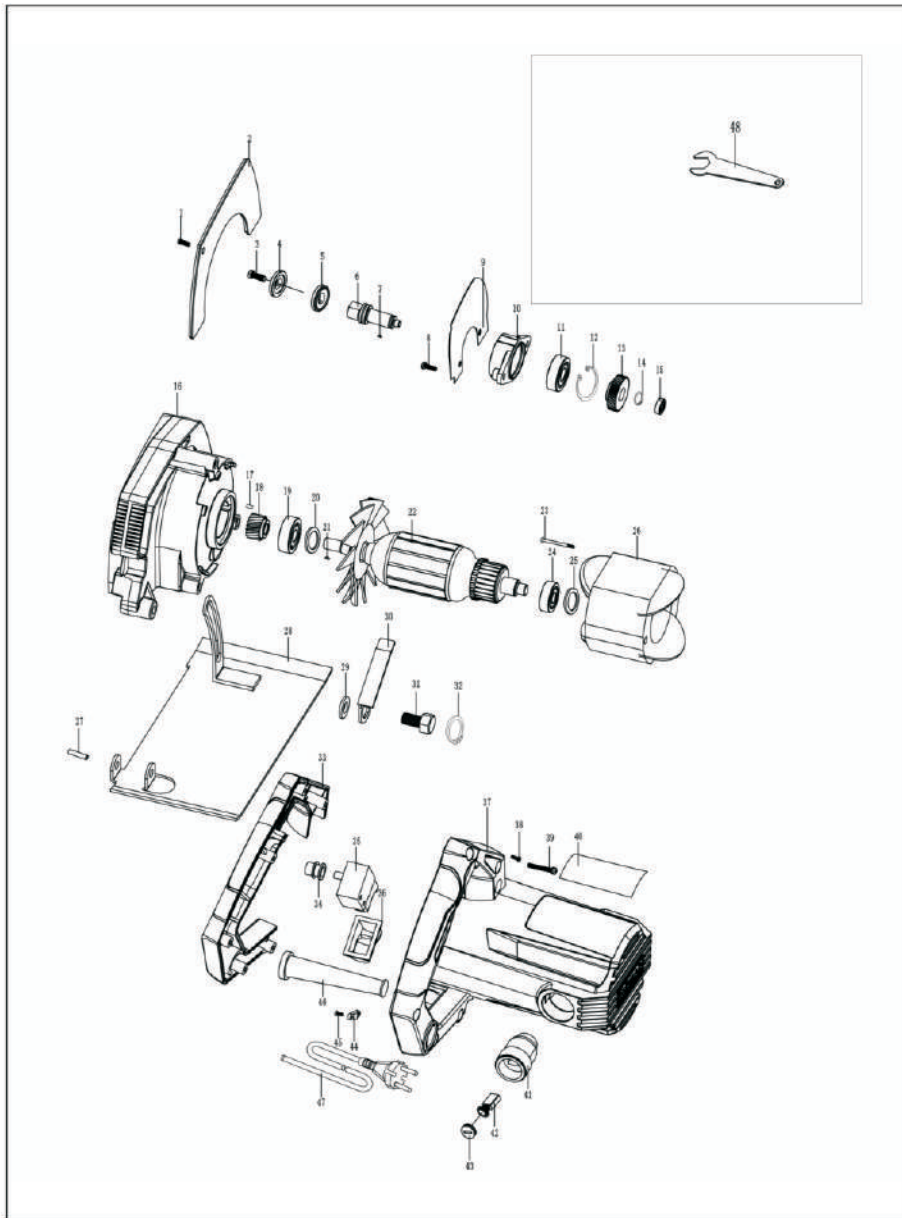
This is clearly indicated by circular sparking, rotating with the diamond cutting disc.

In this case, interrupt the cutting process and allow the diamond cutting disc to cool by running the machine for a short time at maximum speed with no load.

Noticeably decreasing work progress and circular sparking are indications of a diamond cutting disc that has become dull. Briefly cutting into abrasive material (e.g., lime-sand brick) can sharpen the disc again.

The machine must always work in an up-grinding motion. Otherwise, the danger exists of it being pushed uncontrolled out of the cut.

PMCM4 Pro Exploded view



PMCM4 Pro Parts List

No	Parts Name	Pcs	Seri No	INR	No	Parts Name	Pcs	Seri No	INR
1	Screw M4×10	1			38	Screw ST4×14	3		
2	Gear Box Cover	1			39	Screw M5×40	3		
3	Screw M7×18	1			40	Nameplate	1		
4	Out Flange	1			41	Brush Holder	2		
5	Inner Flange	1			42	Carbon Brush	2		
6	Spindle	1			43	Brush Holder Cover	2		
7	Key 3×10	1			44	Cable Clamp	1		
8	Screw M5×25	2			45	Screw ST4×14	2		
9	Dust Protect Cover White	2			46	Cable Sleeve	1		
10	Bearing Seat	1			47	Cable	1		
11	Bearing 6201	1			48	Wrench	2		
12	Washer 32				49				
13	Big Gear	1			50				
14	Washer 12	1			51				
15	Bearing 626				52				
16	Gear Box	1			53				
17	Rubber Parts 5*8	1			54				
18	Pinion	1			55				
19	Bearing 629	1			56				
20	Washer 19*9*0.5	1			57				
21	Key 2.5×10	1			58				
22	Armature	1			59				
23	Screw ST5×60	2			60				
24	Bearing 608	1			61				
25	Washer 22*0.3	1							
26	Filled Coil	1							
27	Pin 6*32	1							
28	Base	1							
29	Washer 8.5*18*1.8	1							
30	Base Adjustment	1							
31	Screw 5/16"-14	1							
32	Washer 14	1							
33	Handle Cover	1							
34	Switch Lock Cap	1							
35	Switch	1							
36	Switch Cover	1							
37	Housing	1							