

www.mkdiamond.com



Caution: Read all safety and operating instructions before using this equipment. This owners manual **MUST** accompany the equipment at all times.



We at MK Diamond want to congratulate you on selecting the MK-212 saw. We are certain that you will be pleased with your purchase. MK Diamond takes pride in producing the finest products in the industry.

Operated correctly, your MK-212 saw should provide you with years of quality service. In order to help you, we have included this manual. This owners manual contains information necessary to operate and maintain your MK-212 saw safely and correctly. Please take a few minutes to familiarize yourself with the MK-212 Saw by reading and reviewing this manual.

If you should have questions concerning your MK-212 saw, please feel free to call our friendly customer service department at: 800 421-5830

Regards,

MK Diamond

NOTE THIS INFORMATION FOR FUTURE USE:		
MODEL NUMBER:		
SERIAL NUMBER:		
PURCHASE PLACE:		
PURCHASE DATE:		

NOTE: For your (1) one year warranty to be effective, complete the warranty card (including the Serial Number) and mail it in as soon as possible.

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Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Precaution and Operating Instructions could result in injury to yourself and others. This Operation and Parts Manual has been developed to provide complete instructions for the safe and efficient operation of the MK-212 saw.

Before using this machine, ensure that the person operating the machine has read and understands all instructions in this manual.

SAFETY MESSAGE / ALERT SYMBOLS

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol () and one of three words: **DANGER**, **WARNING**, or **CAUTION**.

You WILL be KILLED or SERIOUSLY INJURED if you do not follow directions.

You CAN be KILLED or SERIOUSLY INJURED if you do not follow directions.

You **CAN** be **INJURED** if you do not follow directions. It may also be used to alert against unsafe practices.

Each message tells you what the hazard is, what can happen, and what you can do to avoid or reduce injury. Other important messages are preceded by the word **NOTICE.**

You can cause **PROPERTY DAMAGE** to your machine if you don't follow directions.

The safety labels should be periodically inspected and cleaned by the user to maintain good legibility at a safe viewing distance. If the label is worn, damaged or illegible, it should be replaced.

Potential hazards associated with the MK-212 saw operation will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message/Alert Symbols.

HAZARD SYMBOLS



ALWAYS read this Owner's Manual before operating the machine.



ALWAYS avoid inhalation of and skin contact with silica dust and/or mist.



ALWAYS place the power ON/OFF switch in the **OFF** position when the machine is not in use.



ALWAYS wear approved eye protection.



ALWAYS wear approved respiratory protection.



NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.



ALWAYS use caution around gears. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.



NEVER touch the power cord with wet hands or while standing in water when it is connected to a power source.



NEVER operate the machine in an explosive atmosphere or near combustible materials.

RULES FOR SAFE OPERATION

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the MK-212 Saw.

GENERAL SAFETY



• **DO NOT** operate or service this equipment before reading this entire manual.

- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steeltoed boots and other protective devices required by the job.
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of drugs or alcohol.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.
- ALWAYS check the machine for loose bolts before starting.



• **ALWAYS** wear proper respiratory (mask) hearing and eye protection equipment when operating this machine.

• **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.



• **NEVER** leave the machine unattended. Turn off electric motor when unattended.

- **CAUTION** must be observed while servicing the machine. Rotating parts can cause injury if contacted.
- Ensure that any electrical extension cord is protected against damage. Always ensure that the electrical extension cord is not trapped underneath the machine. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage that will result in a loss of power and overheating. The Table shown on page 9 shows the correct AWG size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heaviest gage. The smaller the gage number, the heavier the cord.



- DO NOT allow extension cord to come into contact with water or fluids.
- **DO NOT** spray water onto electric motor.
- **NEVER** operate the machine in an explosive atmosphere.
- Before starting the machine, check that all guards are in position and correctly fitted.
- Keep area around the machine clear of obstructions which could cause persons to fall onto moving parts.
- ALWAYS ensure that the machine is on level ground before using.
- **DO NOT** overreach. Keep proper footing and balance at all times.

- **NEVER** stand on the tool. Serious injury could occur if a power tool is tipped, or if a cutting tool is unintentionally contacted.
- Become familiar with the controls of the machine before operating. Know how to stop the machine quickly in case of emergency.
- **ALWAYS** secure work. Clamps or a vise should be used to hold work whenever practical. Keeping your hands free to operate a power tool is safer.
- **ALWAYS** disconnect AC power plug from power source before moving, cleaning or servicing the machine.
- **NEVER** leave a tool running unattended. Do not leave a tool until it comes to a complete stop.
- ALWAYS turn a power tool OFF when leaving the work area, or when a cut is finished.
- Make sure the OFF/ON power switch on the electric motor is always in the **OFF** position before inserting the machine's power plug into an AC receptacle.
- Operate electric motor only at the specified voltage indicated on the nameplate.
- **NEVER** disconnect any "emergency or safety devices". These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death! Disconnection of any of these devices will void all warranties.
- Unauthorized equipment modifications will void all warranties. Manufacturer does not assume responsibility for any accident due to equipment modifications.
- **NEVER** use accessories or attachments, which are not recommended by MK Diamond for this equipment. Damage to the equipment and/or injury to user may result.
- Replace damaged cutting blade before operating.
- **NEVER** try to stop a moving blade with your hand.
- **NEVER** touch electrical wires or components while the motor is running. Exposed, frayed or worn electrical motor wiring can be sources of electrical shock that could cause severe injury or burns.
- Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate a power tool with covers, shrouds, or guards removed.

NEVER use this machine with any cutter designed for wood working.

MAINTENANCE SAFETY

- NEVER lubricate components or attempt service on a running machine.
- Keep the machinery in proper running condition.
- Before using a power tool, check for damaged parts. A guard or any other part that is damaged should be carefully checked to determine if it would operate properly and perform its intended function. Always check moving parts for proper alignment or binding. Check for broken parts and mountings and all other conditions that may affect the operation of the power tool. A guard, or any damaged part, should be properly repaired or replaced.

SAW SAFETY

• Wear eye protection.

- Disconnect saw before servicing, when changing cutting blades and cleaning.
- Use tool only with smooth edge cutting blades free of openings and grooves.
- Replace damaged cutting blade before operation.
- Remove adjusting keys and wrenches.

SILICA DUST WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow respiratory precautions.

CALIFORNIA PROPOSITION 65 MESSAGE

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead, from lead-based paints
- Crystalline silica, from bricks and cement and other masonry products
- Arsenic and chromium, from chemically treated lumber

For further information, consult the following sources: http://www.osha.gov/SLTC/silicacrystalline/index.html http://www.oehha.org/prop65/out_of_date/6022kLstA.html

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

ELECTRICAL REQUIREMENTS AND GROUNDING INSTRUCTIONS

In order to prevent potential electrical shock and injury, the following electrical safety precautions and symbols should be followed at all times!

In case of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Do not modify the plug provided if it will not fit the outlet; have the proper outlet installed by a qualified electrician
- Improper connections of the equipment-grounding conductor can result in a risk of electric shock. The equipment-grounding conductor is the insulated conductor that has an outer surface that is green, with or without yellow stripes. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal
- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded
- Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug
- Repair or replace a damaged or worn cord immediately

This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A of Figure I. The tool has a grounding plug that looks like the plug illustrated in Sketch A of Figure I. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

NOTE: Use of a temporary adapter is not permitted in Canada.



Fig. I Circuit and Adapter Information

To reduce the risk of electrocution, keep all connections dry and off the ground.

A Ground Fault Circuit Interrupter (GFCI) should be provided on the circuit(s) or outlet(s) to be used for this machine. Receptacles are available having built-in GFCI protections and may be used for this measure of safety.

When using an extension cord, the GFCI should be installed closest to the power source, followed by the extension cord and lastly, the machine.

The pump requires a GFCI. To reduce risk of electric shock when operating the machine with the pump plugged into the 3-pole receptacle on the motor, connect the saw to a GFCI outlet. See the pump manual and informational tags enclosed separately for all pump information.

Shock Hazard. For replacement, use only an identical pump, model PE-1 part #151271. NOTE: Do not run pump dry. Also, be sure to disconnect and remove the pump when cutting dry.

To avoid the possibility of the appliance plug or receptacle getting wet, position the machine to one side of a wall mounted receptacle. This will prevent water from dripping onto the receptacle or plug. A "drip loop," shown in Figure 2, should be arranged by the user to properly position the power cord relative to the power source. The "drip loop" is that part of the cord below the level of the receptacle, or the connector, if an extension cord is used. This method of positioning the cord prevents the travel of water along the power cord and coming in contact with the receptacle.

If the plug or receptacle gets wet, **DO NOT** unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the tool. Then unplug and examine for presence of water in the receptacle.



Fig. 2 Drip Loop Information

Use only extensions cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use." Use only extension cords having an electrical rating not less than the rating of the product. Do not use damaged extension cords. Examine extension cords before using and replace if damaged. Do not abuse extension cords and do not yank on any cord to disconnect. Keep cords away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnection the product from the extension cord.

To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch the plug with wet hands.

Use of undersized extension cords result in low voltage to the motor that can result in motor burnout and premature failure. Barranca Diamond warns that equipment returned to us showing signs of being run in a low voltage condition, through the use of undersized extension cords will be repaired or replaced totally at the customers expense. There will be no warranty claim.

To choose the proper extension cord,

- Locate the length of extension cord needed in table provided.
- Once the proper length is found, move down the column to obtain the correct AWG size required for that length of extension cord.

EXTEN	EXTENSION CORD MINIMUM GAGE FOR LENGTH				
VOLTS	TOTAL LENGTH OF CORD IN FEET			D IN FEET	
	25 ft.	50 ft.	100 ft.	150 ft.	
l 20v	AWG	AWG	AWG	AWG	
	18	16	16	14	

LOCK OUT METHOD

Table I

In order to help prevent accidental starting and to help make your work area "kidproof," this machine is provided with a means to deactivate the functioning of the motor switch. The switch is equipped with a lockout tab that can be used with a lock to prevent movement of the switch. With the switch unable to move the motor cannot be turned on. Removing the lock reactivates the switch.



Fig. 3 Lock Out

PRODUCT SPECIFICATIONS

SAFETY LABEL LOCATIONS

Safety labels are located according to the table below and the exploded views at the end of this manual. The labels contain important safety information. Please read the information contained on each safety label. These labels are considered a permanent part of your saw. If a label comes off or becomes hard to read, contact MK Diamond or your dealer for a replacement.



Decal/Label	Location	Description
А	Switch Box	Caution - Receptacle is for Water Pump Only
В	Cutting Head	Caution - Use with GFCI only
С	Cutting Head Arm	Service/ Warranty
D	Motor - Back	Warning - Silica Warning
Е	Motor - Back	Warning - Read Owners Manual
F	Motor - Back	Notice - Voltage/extension cords

TILE SAW SPECIFIC WARNINGS

Wear eye protection.

Use splash guard for every operation for which it can be used.

Disconnect saw before servicing, when changing cutting blades, and cleaning. Replace damaged cutting blade before operating.

PRODUCT SPECIFICATIONS

The MK-212 is a versatile Tile and Stone Saw. Operated and used according to this manual, the MK-212 will provide years of dependable service.

GENERAL DESCRIPTION

The MK-212 Tile Saw is engineered as a stand mounted wet tile and stone saw. The saw includes a powerful 115v direct drive AC motor.

MOTOR SPECIFICATIONS

Motor specifications for the MK-212 are listed in Table 2 below.

	MK-212-4	MK-212-6	
Horse Power	2 hp	2 hp	
Voltage	120v	120v	
Overall Amperage	14.4	14.4 a / 6.7 a	
Frequency	60	60	
RPM	3400	3400	
Weight	226 lbs	270 lbs	

Table 2

THERMAL OVERLOAD PROTECTION

The motor is protected by a thermal overload equipped with a manual reset.

BLADE CAPACITY

The MK-212 uses a ten (10) inch (254 mm) diameter wet cutting continuous rim MK Diamond blade.

TILE TYPES

The MK-212 can cut a variety of tile types including Porcelain, Terra Cotta, Marble, Quarry and Slate, or almost any other non-ferrous material.

NOTE: The MK-212 is not designed to cut plastic or ferrous (metals) material.

UNPACKING

Your MK-212 has been shipped from the factory thoroughly inspected. Only minimal assembly is required.

CAUTION Use proper lifting techniques when lifting the MK-212.

CONTENTS

In your container, you will find one (1) MK-212 Saw, (4) MK-212 support legs, (1) 10-inch wet cutting continuous rim diamond blade, (1) blade wrench, (1) 90° cutting guide alignment plate, (1) 90° cutting guide, 90° cutting guide hareware, (1) 2-piece protractor (1) drain plug, (1) electric water pump, (1) pump discharge fitting, (1) cooling transfer tube, (1) flow regulating clamp, (1) 5/16" allen wrench, (1) 5mm allen wrench, (1) owners manual, (1) pump manual and (1) warranty card.

			C	D	
MK-212 Saw	MK-212 Support Legs	Diamond Blade	Blade Wrench	90° Cutting Guide Alignment Plate	90° Cutting Guide
90° Cutting Guide Hardware	2-Piece Protractor	Drain Plug	Electric Water Pump	Pump Discharge Fitting	Cooling Transfer Tube
Flow Regulation Clamp	5/16" Allen Wrench	5mm Allen Wrench	Owner's Manual	Pump Manual	Warranty Card

TRANSPORT

- 1. The MK-212 weighs approximately two hundred and twenty-six (226) pounds and for that reason should not be transported without a minimum of two persons present.
- 2. Never transport the MK-212 with water in the Water Pan.





NOTE: The Cutting Head end will be heavier than the opposite end.

ASSEMBLY

Follow the assembly instructions to prepare your MK-212 for operation.

SUPPORT LEG INSTALLATION



(A) Loosen the Cutting Head Transverse Knob



(D) Obtain the first Leg



(B) Move the Cutting Head to one end of the saw



(E) Lift the saw; align the Leg with the Retaining Slot on the saw and the install the Leg



(C) Tighten the Cutting Head Transverse Knob



(F) Tighten the Leg Retaining Wingnut



(G) Repeat Steps D through F for the second Leg



(H) Loosen the Cutting Head Transverse Knob



(I) Move the Cutting Head to the end with the two installed Legs



(J) Tighten the Cutting Head Transverse Knob



(K) Install the remaining to Legs on the opposite side of the saw using Steps D through G

DIAMOND BLADE INSTALLATION

NOTE: When installing the Retaining Screw, do not "cross-thread" and DO NOT over tighten the screw.



(A) Loosen the Cutting Head Transverse Knob



(B) Move the Cutting Head to one end of the saw



(C) Tighten the Cutting Head Transverse Knob



(D) Loosen the Blade Guard Pivot Point Retaining Wingnut



(E) Loosen the Blade Guard Retaining Knob



(F) Open the Blade Guard

ASSEMBLY







(H) Remove the Blade Retaining Nut



(I) Remove the Outer Flange

NOTE: The Diamond Blade will have to be installed onto the MK-212 with the Directional Arrow toward the motor side of the Cutting Head for the blade to be seated correctly.



(J) Install Diamond Blade onto Blade Shaft



(K) Verify the Directional Arrow of the Blade matches the Directional Arrow of the Blade Guard



(L) Install the Outer Flange



(M) Install the Blade Retaining Nut



(N) Verify the Blade Retaining Nut is seated in the Outer Flange



(O) Tighten the Blade Retaining Nut

ASSEMBLY



(P) Close the Blade Guard



(Q) Tighten the Blade Guard Retaining Wingnut



(R) Tighten the Blade Guard Retaining Knob

90° CUTTING GUIDE INSTALLATION

NOTE: Saw comes with A-D installed.



(A) Using the supplied Hexwrench, loosen and then remove the two back Cutting Surface Retaining Screws



(D) Install two Alignment Plate Retaining Screws and Flat Washers through Alignment Plate and into Support Extensions and then tighten using the supplied Hex-wrench



(B) Install the two 90° Cutting Guide Support Extension in place of the Retaining Screws and tighten using a wrench



(C) Position the 90° Cutting Guide Alignment Plate over the Support Extensions



(E) Install the 90° Cutting Guide onto the Alignment Plate and tighten the Retaining Knob to hold the 90° Cutting Guide in position

WATER PUMP PREPARATION



- 1. To prevent the possibility electrical shock, the MK-212 MUST be de-energized when preparing the Water Pump for operation.
- 2. To prevent the possibility of electrical shock, use only MK Diamond qualified replacement parts



(A) Install Water Pump Discharge Fitting



(B) Press one end of the Cooling Transfer Tube onto the Water Pump Discharge Fitting



(C) Slide Cooling Flow Adjusting Clamp onto the Cooling Transfer Tube

PRE-START INSPECTION

Prior to beginning work, a pre-start inspection of the saw should be performed.



(A) Ensure the ON/OFF Switch is in the OFF position



(B) Inspect the Pump Assembly for damage – ensure the cord is free of cracks or cuts



(C) Inspect the Diamond Blade for damage – verify the blade is correct for the material being cut



(D) Inspect the MK-212 for damage – ensure the cord is free of cracks or cuts



(E) Verify the Movable Cutting Head moves freely

SETUP

MK-212 SAW

WATER PUMP SETUP FOR OPERATION

The Water Pump can be setup for operation in two ways, External Water Source or Re-circulation.

NOTE: If using a dry blade for operation, DO NOT connect the water pump.

EXTERNAL WATER SOURCE

This is the preferred method of cooling.



(A) Press the free end of the Cooling Transfer Tube onto the Blade Guard Cooling Port



(B) Connect the Water Pump to the MK-212



(C) Remove the Drain Plug



(D) Place the Water Pump in an external container



(E) Fill the external container until water completely covers the Water Pump suction



(F) Place an external catch basin below the Water Basin drain hole

RE-CIRCULATION

NOTE: When using the re-circulation method, the water should be changed often for longer pump life.



(A) Press the free end of the Cooling Transfer Tube onto the Blade Guard Cooling Port



(B) Connect the Water Pump to the MK-212



(C) Ensure the Drain Plug is installed in the Water Basin



(D) Place the Water Pump in the back of the Water Basin



(E) Fill the Water Basin until water completely covers the Water Pump suction

MK-212 ELECTRICAL CORD SETUP



1. Before connecting the MK-212 to a power supply, be sure the voltage, cycle and phase meet the requirements of TABLE 3 below.

VOLTAGE:	115v	
CYCLE:	60hz	
PHASE:	I-phase Single Phase	
Table 3		

- 2. If using an extension cord, make sure the length and wire gauge correspond to the requirements listed in TABLE 1 on page 11. An extension cord that is too small in wire gauge (diameter), or too long in length, will cause the motor to overheat and could cause premature failure.
- 3. Use an approved Ground Fault Circuit Interrupter (GFCI)
- 4. Do not cover the motor vents as this could lead to motor overheating.

NOTE: In order to avoid breaker tripping, a 20 amp circuit breaker should be used.



(A) Plug MK-212 into the GFCI (A GFCI should always be used when operating the MK-212)



(B) Plug the GFCI into the Power source

CUTTING 90° STRAIGHT EDGES



DO NOT FORCE THE TOOL. It will do the job better and safer at the rate for which it was designed.



(A) Position the Adjustable Cutting Guide to desired cut length



(B) Place the tile against the Stop and Cutting Guide



(C) Verify the tile is seated against the Stop and Cutting Guide



(D) Turn the motor ON



(E) Verify proper cooling flow on both sides of the blade



(F) Perform the cut. Turn the motor OFF when work is complete

ANGLE CUTTING

NOTE: To cut at an angle, the MK-212 has been designed with a pivoting cutting head.



DO NOT FORCE THE TOOL. It will do the job better and safer at the rate for which it was designed.



(A) Loosen the two Beam Post Cutting Head Pivot Knobs located on each end of the saw



(B) Pivot the Cutting Head and retighten the two Pivot Knobs



(C) Position the Adjustable Cutting Guide to desired cut length



(D) Place the tile against the Stop and Cutting Guide



(E) Verify the tile is seated against the Stop and Cutting Guide



(F) Turn the motor ON



(G) Verify proper cooling flow on both sides of the blade



(H) Perform the cut



(I) Turn the motor OFF when work is complete

OFF-ANGLE CUTTING

NOTE: To cut angles other than 90°, a Protractor (MK Diamond Part No. - 159572) should be used.



DO NOT FORCETHETOOL. It will do the job better and safer at the rate for which it was designed.



(A) Remove the Adjustable Cutting Guide







(C) Set the desired Cutting Angle and tighten the Retaining Knob



(D) Position the tile against the Protractor and the Stop



(E) Verify the tile is seated against the Stop and Protractor



(F) Turn the motor ON



(G) Verify proper cooling flow on both sides of the blade



(H) Perform the cut



(I) Turn the motor OFF when work is complete

CLEANUP

NOTES: I. If an external water source was used, steps A through C may be skipped.

2. Dispose of wastewater in accordance with applicable Federal, State and Local laws.







(B) Place the Water Pump in an external container



(C) Run the saw until clear water is seen at the blade cooling ports (Approx. I minute)



CAUTION Ensure the saw is disconnected before completing the remainder of the cleanup process.



(D) Ensure the ON/OFF Switch is in the OFF position



(E) Unplug the GFCI from the Power source



(F) Unplug MK-212 from the GFCI



(G) Clean the MK-212 with soap and clean water



(H) Drain the Water Basin and dispose of the water in accordance with all State. Local and Federal laws



(I) Clean the Water Basin

CAUTION Ensure water is not forced into the motor casing when cleaning.



(J) Clean the Guide Rail



(K) Clean the Movable Cutting Head



(L) Clean the remainder of the MK-212

MAINTENANCE FOLLOWING USE

To extend the life of the MK-212, the following procedure should be performed after each use.



(A) Ensure the ON/OFF Switch is in the OFF position



(B) Unplug MK-212



(C) Lubricate the Guide Rail



(D) Lubricate the Cutting Head



(E) Lubricate the Cutting Head springs

MONTHLY MAINTENANCE

The following maintenance should be performed monthly.



(A) Remove the Diamond Blade



(B) Remove the Inner Flange



(C) Clean the Inner Flange



(D) Lubricate the Inner Flange Gasket



(E) Clean the Blade Shaft



(F) Lubricate the Blade Shaft



(G) Reinstall the Inner Flange and Blade

MAINTENANCE

FLOW ADJUSTMENT

NOTE: If flow to the diamond blade requires adjustment, perform the following actions.



(A) Increase cooling flow by releasing the Flow Adjusting Clamp



(B) Reduce cooling flow by pressing down on the Flow Adjusting Clamp

DIAMOND BLADE CHANGE-OUT

NOTE: When installing the Retaining Nut do not "cross-thread" and DO NOT over tighten the screw.



(A) Loosen the Cutting Head Transverse Knob



(B) Move the Cutting Head to one end of the saw



(C) Tighten the Cutting Head Transverse Knob



(D) Loosen the Blade Guard Pivot Point Retaining Wingnut



(E) Loosen the Blade Guard Retaining Knob



(F) Open the Blade Guard

MAINTENANCE

DIAMOND BLADE CHANGE-OUT

NOTE: When installing the Retaining Nut do not "cross-thread" and DO NOT over tighten the screw.



(G) Loosen and remove the Blade Retaining Nut



(H) Remove the Outer Flange



(I) Remove the old Diamond Blade

NOTE: The Diamond Blade will have to be installed onto the MK-212 with the Directional Arrow toward the motor side of the Cutting Head for the blade to be seated correctly.



(J) Install the new Diamond Blade onto the Blade Shaft



(M) Install the Blade Retaining Nut



(K) Verify the Directional Arrow of the Blade matches the Directional Arrow of the Blade Guard



(N) Verify the Blade Retaining Nut is seated in the Outer Flange



(L) Install the Outer Flange



(O) Tighten the Blade Retaining Nut

MAINTENANCE



(P) Close the Blade Guard



(Q) Tighten the Blade Guard Retaining Knob



(R) Tighten the Blade Guard Pivot Point Retaining Wingnut

TABLE REMOVAL

NOTE: The Rubber topped cutting table may be removed to replace the rubberized surface or to clean the Water Basin.



(A) Remove the Adjustable Cutting Guide



(B) Remove the 90° Cutting Guide Alignment Plate



(C) Locate the six table Retaining Screws on both sides of the cutting surface



(D) Remove all Retaining Screws using the Hex Wrench provided with the MK-212



(E) Remove table Cutting Surface pieces



(F) Clean the Water Basin



(G) Reinstall all components removed in steps A through E

CUTTING HEAD ALIGNMENT

NOTE: The alignment of the Cutting Head should be checked periodically to ensure the accuracy of the cut.



(A) Remove the Blade Guard



(B) Using a combination square, check the Blade for vertical alignment



(C) Loosen the two Beam Post Cutting Head Pivot Knobs located on each end of the saw



(D) Pivot the Beam and retighten the two Pivot Knobs



(E) Using a combination square, check the Blade for 45° alignment



(F) Loosen the four Guide Rail Adjusting Screws using a I/2-inch socket

MAINTENANCE



(G) Adjust the Guide Rail until it is aligned both vertically and horizontally



(H) Tighten the four Guide Rail Adjusting Screws using a 1/2-inch socket

TROUBLESHOOTING

Blade will not cut properly



(A) Check for Smoothness or "Glazing" (Dress blade if needed)



(B) Check for proper rotation



(C) Ensure the Blade Core is not bent and Arbor is not out of round



(D) Verify the blade is correct for the material being used.

COOLING FLOW

MAINTENANCE



(A) Verify the cooling flow Adjusting Clamp is open



(D) Remove the Cooling Transfer Tube and check for flow



(B) Remove the Cooling Transfer Tube from the Blade Guard inlet



(E) Remove the Pump Discharge Fitting and check for flow



(C) Place Pump into a bucket of water and check flow



(F) Remove the Pump Intake Screen and check for debris – clean the screen if necessary

NOTE: "Rodding" cooling channels is performed by inserting a small wire rod through the cooling inlet on top of the Blade Guard and directing the rod out through each of the cooling flow tubes located on the underside of the Blade Guard. The cooling channels should be "rodded" until all ports are free of foreign debris.



(G) Rod (clean out) the Cooling Manifold and then recheck flow.

MAINTENANCE

CUTTING HEAD DOES NOT MOVE CORRECTLY



(A) Check that Guide Rail and Cutting Head is clean and clean if dirty



(B) Lubricate the Guide Rail and Cutting Head



(C) Check the Cutting Head alignment.

BLADE STOPS TURNING



(A) Check the ON/OFF Switch is in the ON position



(B) Verify all plugs are fully connected



(C) Check to see if the Ground Fault Circuit Interrupter (GFCI) tripped



(D) Verify the circuit breaker is at least 20 amps – if not, move to 20 amp circuit



(E) Verify circuit breaker not tripped; if it is tripped, reset it once only



(F) Check power source voltage is 115v – if not 115v, move to another circuit.

NOTES



PART LISTS

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
I	NUT, 3/8-6 HEX	101188	4
2	NUT, HEX, 5/16 - 18	101196	2
3	FITTING, PLASTIC, 1/4 FNPT X 1/4 BARB	128397	
4	HOSE, VINYL, 3/8 X 1/4	132951	I
5	SCREW, 5/16 - 18 X 1-3/4 HEX HEAD CAP	150919	4
6	WASHER, 3/8 SAE FLAT	150923	15
7	WASHER, 3/8 SPLIT LOCK	150925	12
8	SCREW, PAN HD SELF TPIO-24 X 3/8	151262	1
9	BOLT, HEX HEAD 1/4 20 X 3/4"	151267	4
10	PUMP, WATER 115V/60HZ UL/CSA	151271	1
11	SCREW, 5/16 - 18 X 1 HEX HEAD MACHINE	151743	4
12	KNOB, 5/16-18 NYLOK	151681	I
13	SCREW, 5/16 - 18 X 1 HEX HEAD MACHINE	151743	4
14	WINGNUT, 5/16 - 18 NYLOK	151746	
15	WASHER, LOCK, SPLIT, 5/16	151747	10
16	WASHER, 5/16 SAE FLAT	151754	8
17	SCREW, WING, 1/4 - 20 X 1/2	151888	1
18	WASHER, 1/4 SAE FLAT	151915	13
19	WASHER, I/4 SPLIT LOCK	152591	4
20	SCREW, 1/4 - 20 X 1/2 HEX HEAD	152608	8
21	CSTUD, 5/16 - 18 X 1-1/2"	153680	1
22	SCREW, PHILP SELF TAP 10 - 24 X 5/8"	153681	1
23	F.H.C.S. 3/8 - 16 X 1"	154019	4
24	LABEL, I-3/4 X 5 MK LOGO	154335	2
25	CLAMP, HOSE 1/2 - 3/4	154394	
26	SCREW, 1/4 - 20 X 3/4 FLAT HEAD PHILLIPS MACHINE	154657	4
27	LEG	155397	4
28	SCREW, THUMB 3/8 - 16 X 3/4"	155398	4
29	BLADE, 10" TILE	155619	1
30	LABEL, SAFETY	155806	
31	SCREW, SHLDR, SOC HD, 1/2 X 3/4	156177	2
32	SCREW, SOCKET HEAD CAP 3/8 - 16 X	156602	
33	KNOB, TRI	156770-02	2
34	TAG, SERIAL #, BLANK	I 57500-RVV	I
35	DRIVE SCREW, #7 X 5/16 ROUND HEAD	57849	2



PART LISTS

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
36	GUARD, BLADE	159416	I
37	POST, PIVOT (COMP)	159418	2
38	FRAME, PAN WELDMENT	159419	4
39	TABLE ASSEMBLY	159420	2
40	GUARD, INNER BLADE (COMP)	159423	I
41	PROTRACTOR ASSEMBLY	159572	
42	BLOCK, RAIL	159622	2
43	RAIL, 2 X 2 X 50	159641	1
44	mount, soga motor	159642	1
45	CUTTING HEAD	159853	I
46	MANIFOLD, WATER	159854	1
47	STOP, RUBBER BUMPER	159855	2
48	SCREW, SET UP 3/8 - 16 × 1/2"	159856	2
49	PLUG, 2-1/2 DIA RUBBER	159858	1
50	KEY, MOTOR MOUNT	159859	2
51	OWNERS MANUAL	159862	1
52	NUT, 3/8 - 16 HEX	159863	1
53	FOOT, RUBBER	159977	4
54	WRENCH, 30MM OPEN END, 30DEG	159978	1
55	WRENCH, 5MM ALLEN	159979	
56	stand off, back stop	160117	2
57	ASSEMBLY, RIP GUIDE	160288	1
58	GUARD, SPLASH	160310	1
59	LABEL, MK-212	160669	2
60	SWITCH BOX	160687	1
61	2 H.P. SOGA 115V MOTOR	162078	1
62	STOP, BACK	165685	1
63	MAT, TABLE	166418	4
64	TAPE,VHB 5952 3M	166487	1
65	PRIMER, 3M 23926	166488	1
66	BRACKET, POST MOUNT	167376	1
67	BRACKET, HEAD MOUNT	167377	1
68	CARRIER, CABLE	167430	
69	WRENCH, 5/16" ALLEN	167679	I



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PART LISTS

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
I	NUT, 3/8 - 16 HEX	101188	4
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4	HOSE, VINYL, 3/8 X 1/4	132951	I
5	SCREW, 5/16 - 18 X 1-3/4 HEX HEAD CAP	150919	4
6	WASHER, 3/8 SAE FLAT	150923	15
7	WASHER, 3/8 SPLIT LOCK	150925	12
8	SCREW, PAN HD SELF TP10-24 X 3/8	151262	I
9	BOLT, HEX HEAD 1/4 - 20 X 3/4"	151267	4
10	PUMP, WATER 115V/60HZ UL/CSA	151271	I
11	SCREW, 5/16 -18 X 3/4 HEX HEAD MACHINE	151369	2
12	KNOB, 5/16 -18 X 1	151681	I
13	SCREW, 5/16 - 18 X 1 HEX HEAD MACHINE	151743	4
14	WINGNUT, 5/16 - 18 NYLOK	151746	1
15	WASHER, LOCK, SPLIT, 5/16	151747	10
16	WASHER, 5/16 SAE FLAT	151754	8
17	SCREW, WING, 1/4 - 20 X 1/2	151888	1
18	WASHER, 1/4 SAE FLAT	151915	14T
19	WASHER, I/4 SPLIT LOCK	152591	4
20	SCREW, 1/4 - 20 X 1/2 HEX HEAD	152608	8
21	STUD, 5/16 - 18 X 1-1/2"	152608	I
22	SCREW, PHILP SELF TAP 10 - 24 X 5/8"	153681	I
23	F.H.C.S. 3/8 - 16 X 1"	154019	4
24	LABEL, I-3/4 X 5 MK LOGO	154335	2
25	CLAMP, HOSE 1/2 - 3/4	154394	I
26	SCREW, I/4 - 20 X 3/4 FLAT HEAD PHILLIPS MACHINE	154657	4
27	LEG	155397	4
28	SCREW, THUMB 3/8 - 16 X 3/4"	155398	4
29	BLADE, 10" TILE	155619	I
30	LABEL, SAFETY	155806	1
31	SCREW, SHLDR, SOC HD, 1/2 X 3/4	156177	2
32	SCREW, SOCKET HEAD CAP 3/8 - 16 X 1	156602	12
33	KNOB, TRI	156770-02	2
34	TAG, SERIAL #, BLANK	I 57500-RVV	I
35	DRIVE SCREW, #7 X 5/16 ROUND HEAD	157849	2



ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
36	GUARD, BLADE	159416	I
37	POST, PIVOT (COMP)	159418	2
38	TABLE ASSEMBLY	159420	3
39	GUARD, INNER BLADE (COMP)	159423	I
40	KNOB, 1/4 - 20 X I - 1/4	159428-2	I
41	PROTACTOR ASSEMBLY	159572	I
42	BLOCK, RAIL	159622	2
43	MOUNT, SOGA MOTOR	159642	I
44	CUTTING HEAD	159853	I
45	MANIFOLD, WATER	159854	I
46	STOP, RUBBER BUMPER	159855	2
47	SCREW, SET UP 3/8 - 16 X 1/2"	159856	2
48	PLUG, 2-1/2 DIA RUBBER	159858	I
49	KEY, MOTOR MOUNT	159859	2
50	OWNER MANUAL	159862	I
51	NUT, 3/8 - 16 HEX	159863	
52	FOOT, RUBBER	159977	4
53	WRENCH, 30MM OPEN END, 30DEG	159978	1
54	WRENCH, 5MM ALLEN	159979	
55	STAND OFF, BACK STOP	160117	2
56	GUIDE, 15 INCH RIP (COMP)	160286	
57	PLATE, PRESSURE	160287	I
58	GUARD, SPLASH	160310	I
59	SWITCH BOX	160687	I
60	MOTOR, 115V, 2HP SOGA	162078	1
61	RAIL, 2 X 2 X 50	165651	
62	STOP, BACK	165685	
63	LABEL, MK212-6	165928	2
64	MAT, TABLE	166418	4
65	TAPE,VHB 5952 3M	166487	I
66	PRIMER, 3M 23926	166488	I
67	PAN WELDMENT	166547	
68	BRACKET, POST MOUNT	167376	I
69	BRACKET, HEAD MOUNT	167377	1
70	CARRIER, CABLE	167431	1
71	WRENCH, 5/16" ALLEN	167679	I

THEORY OF DIAMOND BLADES

Diamond blades do not really cut; they grind the material through friction. Diamond crystals, often visible at the leading edge and sides of the rim/segment, remove material by scratching out particles of hard, dense materials, or by knocking out larger particles of loosely bonded abrasive material. This process eventually cracks or fractures the diamond particle, breaking it down into smaller pieces. As a result, a diamond blade for cutting soft, abrasive material must have a hard metal matrix composition to resist this erosion long enough for the exposed diamonds to be properly utilized. Conversely, a blade for cutting a hard, non-abrasive material must have a soft bond to ensure that it will erode and expose the diamonds embedded in the matrix. These simple principles are the foundation of "controlled bond erosion."



TYPES OF CUTTING

There are two basic types of cutting-Dry or Wet. The choice of which type of blade to use depends on:

- The requirements of the job
- The machine/tool utilizing the diamond blade
- The preference of the operator

In the case of DRY cutting, the overwhelming popularity and quantity of hand-held saws and the flexible nature of MK Diamond blades to professionally handle most ceramic, masonry, stone and concrete materials, make the DRY cutting blade a very attractive tool. When using a DRY blade, the user must be aware of distinct operating practices to ensure optimum performance. DRY cutting blades require sufficient airflow about the blade to prevent overheating of the steel core. This is the best accomplished by shallow, intermittent cuts of the material with periods of "free-spinning" (for several seconds) between each cut, to maximize the cooling process.

For WET cutting applications, MK has the exact blade to compliment both the material to be cut and the wet cutting machine to be used. During cutting operations, liberal amounts of water act as a coolant to support the cutting effectiveness and longevity of the WET blade. Additionally, using water adds to the overall safety of cutting operations by keeping the dust signature down.

Know All You Can About the Material You Wish to Cut

ACCESSORIES

ITEM	NUMBER	DESCRIPTION		
١.	Various	MK-275, Marble Profile Wheel		
2.	155619	MK-415, 10" Diamond Blade		
3.	152792	Dressing Stone		
4.	152610	Ground Fault Circuit Interrupter	A REAL	
5.	See Catalog	Protractor		
6.	165884	Side Table		
7.	166271	Foot Switch		

ORDERING INFORMATION

You may order MK Diamond products through your local MK Diamond distributor or, you may order direct from MK Diamond.

NOTE: There is a \$25.00 minimum order when ordering direct from MK Diamond. All purchases must be made using VISA, MasterCard or American Express.

When ordering direct from MK Diamond, please have the following information ready before calling:

- The Model Number of the saw
- The Serial Number of the saw
- Where the saw was purchased and when
- The Part Number for the part(s) being ordered
- The Part Description for the part(s) being ordered

All parts may be ordered by calling toll free to - 800 421-5830 or 310 539-5221 and asking for Customer Service. For technical questions, call - 800 474-5594.

RETURN MATERIALS POLICY

To expedite the service relative to the return of a product purchased through MK Diamond, please observe the following:

NOTE: When returning all items, they must have been purchased within the previous twelve (12) months.

- Have the Model Number of the saw
- Have the Serial Number of the saw
- Have the location of where the saw was purchased
- Have the date when the saw was purchased
- Contact Customer Service for approval to return the item(s)
- Obtain a Returned Goods Number (RGA) authorizing the return
- Follow the packaging instructions in the following section
- Ensure your item(s) are prepaid to the destination

For returned items, call toll free to – 800 421-5830 or 310 539-5221 and ask for Customer Service. For technical questions, call – 800 474-5594 or 310 257-2845.

PACKAGING INSTRUCTIONS

- Remove the Blade guard and Support Angle Assembly
- Dry the saw before shipping
- When packing, include the following: MK-212 saw, Diamond Blade, Blade guard and Support Angle Assembly and Adjustable Cutting Guide (Other Accessories are not required)
- Package the unit in its original container or one of comparable size (do not ship the unit partially exposed)
- Ensure all parts are secured in the packaging to prevent moving

AUTHORIZED SERVICE CENTERS

For quicker repair time, you may contact MK Diamond Customer Service, toll free, at 800 421-5830 or 310 539-5221 for the Authorized Service Center closest too you or visit our web site at www.mkdiamond.com. For technical questions, call – 800 474-5594.

MK-212 Series Saw OWNERS MANUAL & OPERATING INSTRUCTIONS DOCUMENT NO. 159862



MK Diamond Products, Inc.

MK Diamond Products, Inc. 1315 Storm Parkway Torrance, CA 90501

Toll-Free: (800) 845-3729 Phone: (310) 539-2221 Fax: (310) 539-5158 www.mkdiamond.com