

OPERATING TIPS

For Cutting and Polishing a Crystal Specimen

The CrystalMaster™ 6 Plus machine is simple in design and easy to use - just like all Crystalite machines and products. This machine is excellent for grinding and polishing a variety of lapidary materials.

The CrystalMaster™ 6 Plus machine is designed to accept a variety of Crystalite diamond products with a 1/2" arbor hole or 1/4" - 20 thread screwback mount. The screwback discs/laps allow you to handle larger work pieces and utilize the full face of your disc/lap. **DO NOT USE FLEXODISC™ DISCS ON THE CRYSTALMASTER™ 6 PLUS MACHINE!!**

There are a variety of grinding and polishing methods, and the operating tips below may be altered to suit the touch and preference of an individual. If your method works for you, stay with it! When using diamond there is always room for flexibility.

Grinding your sample crystal (from the CrystalMaster™ 6 Plus package):

1. Use the 180 mesh diamond Standard™ disc for rough grinding and shaping the crystal face. You can either follow the natural face of the crystal or free hand according to your artistic discretion. Be sure you let the water feed directly onto the disc while grinding.
2. Next use the 220 diamond mesh Miracle Lap™ polishing lap to smooth the grinding marks. These laps are backed with a durable adhesive (PSA) and mount directly onto a Master Lap™ disc. Use water while polishing.
3. The 600 diamond mesh Miracle Lap™ polishing lap is used to semi-polish your crystal face. Use the same procedure as in step 2.
4. Use the white Crystalpad™ polishing pad with 50,000 diamond compound or Cerium Oxide for the final polish. To keep a sharp edge on the crystal face, the white Crystalpad™ polishing pad can be mounted onto a Master Lap™ disc. If you are polishing rounded edges, a foam pad will provide a better result. When using diamond compound (which is oil based) always use Crystalube™ extender fluid and **DO NOT USE WATER**. If you choose Cerium Oxide, water is recommended.

Medium heavy pressure is recommended for preliminary polishing and heavy pressure for final polishing. Move the stone back and forth across the polishing surface for the best finish and to avoid uneven wear patterns.



Dot Disc™ disc shown is optional

CrystalMaster
6 PLUS

INSTRUCTION MANUAL

For Models C5505070 (115V) C5505270 (220/230V)

IMPORTANT SAFETY INSTRUCTIONS – READ ALL INSTRUCTIONS

FOR PERSONAL SAFETY THIS MACHINE MUST BE PROPERLY GROUNDED

To minimize the possibility of electrical shock hazard, the power cord of the CrystalMaster™ 6 Plus machine is equipped with a three-prong (grounding) plug which fits a standard three prong (grounding) wall receptacle. When a standard two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to have it replaced with a properly grounded three-prong wall receptacle.

DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE THIRI (GROUND) PRONG FROM THE POWER CORD. INTERNATIONAL VOLTAGE PLUG AND RECEPTACLE WILL VARY.

Always unplug your machine before cleaning or making any repairs. (NOTE: We strongly recommend that you return the unit to the factory for repair.) **USE ONLY IDENTICAL REPLACEMENT PARTS TO REPAIR THIS MACHINE. CALL CRYSTALITE FOR ORDERING INFORMATION.**

1 YEAR NO FAULT WARRANTY

WHAT WE WILL DO

This warranty is extended by the CRYSTALITE CORPORATION to the original purchaser and to any succeeding owner. If your CrystalMaster™ 6 Plus machine fails for any reason (other than abuse or misuse) within 1 year from the date of invoice, we will repair the product without charge for parts or labor.

HOW TO OBTAIN SERVICE

If you have any problem with your CrystalMaster™ 6 Plus machine, call the

CRYSTALITE CORPORATION for a return authorization number. Pack the machine carefully and return it post-paid to CRYSTALITE. We will repair your machine as quickly as possible and return it to you post-paid. To validate your warranty, please complete and return your warranty card.

WHAT IS NOT COVERED

This warranty does not cover wear of diamond discs or laps.



CRYSTALITE CORPORATION

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SAVE THESE INSTRUCTIONS

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CONTENTS

Model No. C5505070 (115v):

1. One CrystalMaster™ 6 Plus machine with removable top.
2. One 6" x 1/32" steel water guard.
3. One 1/4" - 20 thread mounting knob for 1/2" arbor discs.
4. Owner's manual and warranty card.

Model No. C5505270 (220/230v):

This machine includes the same items as the 115V machine, but has been modified for 220/230 voltage requirements. For international orders please specify the country this machine will be used in. We will provide that country's plug for the CrystalMaster™ 6 Plus machine. 220/230V submersible pumps are also available.

OPTIONAL

1. Companion Kit Model No. C5505041 - (1) 180 mesh Standard™ diamond disc, (3) Masterlap™ laps, (1) green Miracle Lap™ lap (220 mesh), (1) blue Miracle Lap™ lap (600 mesh), (1) white Crystalpad™ pad, (1) Polypad™ pad, (1) 2 gram 50,000 mesh diamond compound, (1) 2 dram bottle of Crystalube™ lubricant, and (1) quartz crystal.
2. Submersible pump
Model No. C5510110 (115v)
Model No. C5510130 (220/230v)

ABOUT YOUR MACHINE

1. The CrystalMaster™ 6 Plus machine comes completely assembled. The adjustable water spout should be directed to the center of the wheel. Coolant must drip onto the center so that it flows toward the outside edge by centrifugal force. The speed of the coolant flow can be regulated with the variable water control on the back of the machine.

SPECIAL NOTE: We recommend using Crystalcut™ rust inhibitor in your coolant supply. This will aid in reducing swarf and help your machine and discs run rust free.

2. **Important: the 6" x 1/32" steel disc (copper colored) serves as a water guard. Place it on the spindle BEFORE mounting your lap or disc. If the water guard is not used, the fins of the disc will force coolant into the motor, resulting in electrical damage.**

3. Discs and laps are easily changed by unplugging your machine, removing the top and unscrewing the disc or lap. For wheels without a center hole, the spindle must be locked before the wheel can be tightened or loosened. The spindle can be locked by pressing the disc locking pin which protrudes from the back of the machine. Slowly rotate the spindle until the pin locks in place. The locking device will automatically back out when you are no longer pressing the pin.



Adjustable water spout



Variable water control



Disc Locking Pin

4. The CrystalMaster™ 6 Plus machine will accept discs/laps with a 1/2" arbor or with a 1/4" - 20 thread screwback mount. Always place the 6" x 1/32" steel water guard on your machine before mounting the disc/lap.

5. By changing to the appropriate disc/lap, your machine can serve as a rougher, finisher or polisher. Or, if you choose, you can purchase several machines and set up independent roughing, finishing and polishing stations and never need to change wheels.

6. Clean your machine on a periodic basis to insure its proper working order. Unplug it from the electrical outlet, then remove the top disc/lap and wipe the interior with a damp sponge or paper towel. Be sure the drain hole is open.

7. If you experience vibration as the motor speed is increased, turn the motor off and level the machine. This is done with a screwdriver by moving the feet in or out. Remove the top and lay a carpenter's level on the mounted disc or lap, checking both left/right and front/back directions.

8. Machine Specifications

MODEL NO. C5505070

115 Volt

800-3000 RPM variable speed

50/60 Hz power consumption

2.8 amps

MODEL NO. C5505270

220/230 Volt

800-3000 RPM variable speed

50/60 Hz power consumption

1.4 amps

Your motor has permanently lubricated bearings and requires no maintenance.

Dimensions: 10 3/4"W x 1 3/4"L x 7"H (to top plate)

Shipping weight: 8 lbs. 3 oz.

Companion Kit: 3 lbs. 9 1/2" oz.

9. Variable speed controller



NOTE: Be sure to turn your machine off when you are finished.

Visit our web site at: www.crystalite.com for information on other Crystalite products. You can also download our catalog from our site.