ONE YEAR LIMITED WARRANTY

The CABKING-8V1 is warranted by the manufacturer to be free from defect for the period of one year from the date of purchase.

What does this warranty cover?

This warranty covers all parts of the CABKING-8V1, including the motor and pump, excluding the light bulb and wheels.

What this warranty does not cover?

Your warranty does not cover problems resulting from any abuse, misuse, intentional damage, incorrect usage, failure to adequately take care of the machine, or improperly following the instructions.

Who is covered under this warranty?

The warranty covers the original purchaser of the equipment. This warranty is non-transferrable.

What is the warranty period?

The warranty is in force for one year from the date of purchase. Please retain this book for your records.

What to do if you need warranty service?

Contact your dealer. They will determine how best to deal with your problem. Shipping to your dealer or us will be at your expense. If your problem is determined to be under warranty, we will pay for return shipping. You can also send an email to:

warranty@cabking.us

Manufactured by:

REENTEL International Inc., 808 Burr Oak Dr., Westmont, IL 60559, USA

REV 4-29-11

CAB KING

INSTRUCTION MANUAL

CABKING-8V1

READ FIRST

SAFETY GUIDLINES

The following guidelines must be observed to ensure proper usage and safety.

⇒ **READ ALL THE INSTRUCTIONS**

⇒ **Make sure that the electrical outlet you plug the machine into is securely grounded and away from the machine. Do not use any extension cord without a ground. Connect the motor power cord to a surge protected outlet or preferably a GFCI (Ground Fault Circuit Interrupter) outlet. While not necessary, a GFCI is recommended to prevent electric shock and can be purchased at your local hardware store. Though the motor is sealed, you must make sure to keep all electrical connections dry. Never disconnect the motor or pump with wet hands and avoid touching the pump when connected to the power.**

⇒ **Wear the enclosed safety goggles to protect from any debris that may fly out while grinding. Do not wear loose clothing or clothing that can become entangled with the wheels.**

⇒ **Some rocks contain poisonous elements such as uranium, mercury, lead, arsenic, etc. Be certain you are not grinding material that exhibits this trait.**

⇒ **Make sure there is adequate water used while grinding so that rock dust is not formed. This dust can be hazardous to your lungs if inhaled.**

⇒ **Avoid contact with the motor housing when in use. The motor is totally enclosed and lubricated which results in a high temperature.**

⇒ **You must be focused and alert when grinding. It is possible for stones to catch on the wheels and be ejected out of the grinding area.**

TROUBLESHOOTING

PROBLEM	RECOMMENDED SOLUTION
PARTS MISSING OR DAMAGED	CONTACT YOUR DEALER IMMEDIATELY FOR REPLACEMENTS
MOTOR MAKES A RATTLING SOUND	THIS NOISE CAN BE COMMON AND WILL EVENTUALLY WORK ITSELF OUT WITH PROLONGED MACHINE USAGE. IT IS NORMALLY NOT A SERIOUS PROBLEM UNLESS THERE IS VIBRATION ASSOCIATED WITH IT. JUST KEEP USING THE MACHINE NORMALLY.
MOTOR VIBRATES OR SHAKES	MAKE SURE THE WHEELS ARE PROPERLY BALANCED. THIS CAN BE FIXED BY TAKING THE WHEELS OFF AND REALIGNING THEM. MAKE SURE TO TIGHTEN THE SHAFT PROPERLY.
SPRAY NOZZLES COME OFF	THEY ARE DESIGNED TO COME OFF FOR CLEANING, IF THEY COME OFF WITH NORMAL USE, YOU CAN USE SOME TEFLON OR SOFT, THIN TAPE AND WRAP THE PART OF THE NOZZLE THAT INSERTED INTO THE Y-SPLIT.
WATER CONTROL KNOBS KEEP SPINNING	MAKE SURE TO TIGHTEN THE SET SCREW ON THE KNOB USING A FLAT HEAD SCREWDRIVER.
WHEELS DON'T TURN	MAKE SURE POWER IS CONNECTED AND MACHINE IS TURNED TO THE ON POSITION.
	MAKE SURE THE WHEELS ARE NOT OBSTRUCTED. IF THE WHEELS ARE CAUGHT ON SOMETHING BEFORE YOU TURN ON THE MOTOR, THERE WILL NOT BE ENOUGH MOMENTUM TO START SPINNING.
WATER FLOW IS WEAK OR DOESN'T FLOW AT ALL	TURN WATER CONTROL KNOB SO IT WON'T TURN ANYMORE
	CHECK IF THERE IS WATER IN THE BUCKET WITH PUMP
	CHECK IF PUMP IS CONNECTED TO POWER SUPPLY
	CHECK ALL TUBING IS CONNECTED PROPERLY
	CLEAN NOZZLES AND Y--SPLITS WITH PIPE CLEANER OR SMALL BRUSH.
DRIP PANS DO NOT DRAIN	SHAKE THE DRIP PAN TUBING. WATER SHOULD BE FLOWING OUT OF THE DRIP PAN TUBES, IF NOT THEN SHAKE THE TUBES TO START THE FLOW WHILE TILTING THE PANS UPWARD.
	MAKE SURE CLEAR TUBING ATTACHED TO DRIP PAN IS ANGLED DOWNWARD. THE TUBING SHOULD ALSO BE CUT TO LENGTH AFTER SETTING UP THE UNIT.
	CLEAN THE DRIP PAN OUTSPOUT
RESIN WHEELS BLEED COLOR	THIS IS NOT A PROBLEM. IT IS NORMAL FOR THE PIGMENT ON THE WHEELS TO COME OFF WITH USAGE. IT WILL NOT DAMAGE YOUR STONES.

Stems—The stems are located behind the motor used for attaching optional accessories like a light or magnifier (FIG. X).

Stone Trays—These are the two clear trays on the hoods for you to place stones as you are grinding (FIG. Y).

Resin Diamond Wheels—Our resin wheels are formulated to be used exclusively together. When ordering replacement wheels, make sure not to mix and match with other brands of wheels. Doing so will most likely result in scratching and improper grinding/polishing. If you plan on using other types of resin wheels, make sure to replace all the wheels.

Diamond Laps— The CABKING-8V1 is configured to accept a standard 1/2" arbor hole lap with base to be used on the brass adapter located on the left shaft or a 8" lap (FIG. Z) with 1/4"-20 thread to be used on the end of the right shaft. The CABKING-8V1 comes standard with a 360# diamond 8" lap with a plastic backing plate for use on the left shaft only. You can also use laps with metal backing plates. 8" laps are useful for putting flats on larger cabs.

Light Bulbs—40W, 110V miniature halogen bulbs can be purchased through your dealer or from an electronics store.

Replacement Parts— All the wheels, polishing pads, diamond laps, diamond compound , spacers and other CABKING-8V1 accessories can be purchased directly from your dealer.

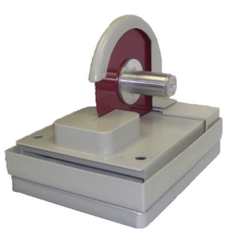
Trim Saw Attachment— This attachment will convert your grinder/polisher into a trim saw capable of cutting large pieces of stone.

Optional Accessories— The CABKING-8V1 can be fitted with many optional accessories. Some of them are: expandable drums, carving wheels, sintered grinding wheels, concave grinding wheels, polishing buffs and polishing wheels. Please contact your dealer for more information or visit www.CABKING.us

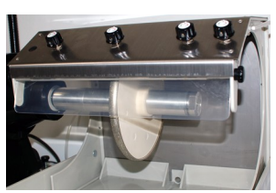
FIG. X

FIG. Y

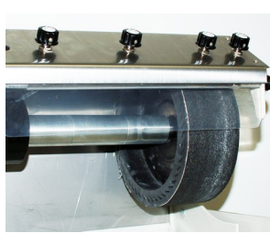
FIG. Z



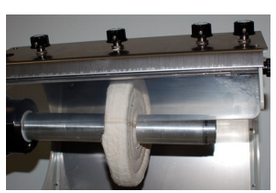
TRIM SAW ATTACHMENT



CARVING WHEEL



EXPANDABLE DRUM WITH BELT



BUFFING WHEEL

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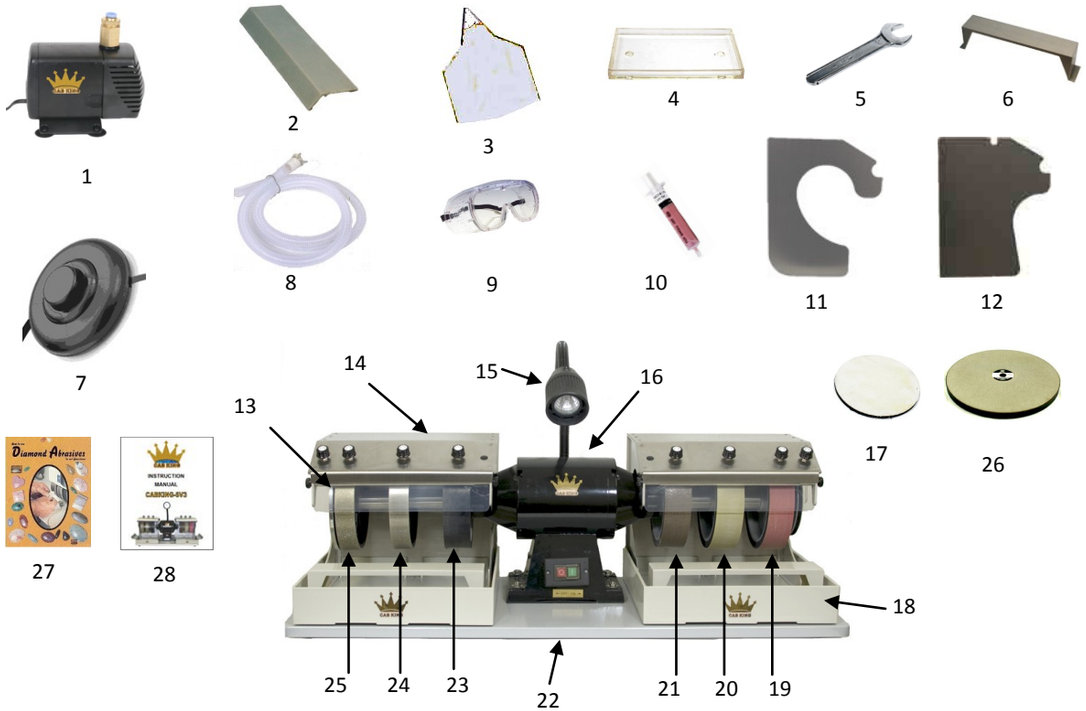
PARTS LIST



Part #	Description	QTY	Part #	Description	QTY
1	PUMP	1	15	LAMP	1
2	PAN SPLASH GUARD	4	16	MOTOR	1
3	APRON	2	17	POLISHING PAD	1
4	STONE TRAY	2	18	DRIP PAN	2
5	SHAFT WRENCH	1	19	3000# RESIN WHEEL	1
6	HAND REST	2	20	1200# RESIN WHEEL	1
7	FOOTSWITCH FOR PUMP	1	21	600# RESIN WHEEL	1
8	DRIP PAN TUBE	2	22	BASEBOARD	1
9	GOGGLES	1	23	280# RESIN WHEEL	1
10	DIAMOND PASTE	1	24	220# DIAMOND WHEEL	1
11	INNER SIDE PANEL	2	25	80# DIAMOND WHEEL	1
12	OUTER SIDE PANEL	2	26	8" LAP - 360#	1
13	WHEEL SPLASH GUARD	2	27	BOOK	1
14	HOOD	2	28	INSTRUCTIONS	1

PARTS & ACCESSORIES

Motor—The CABKING-8V1 comes with a 3/4 HP, single phase, 1800RPM, 110/115Volt, 60 HZ, ball bearing, AC motor. The motor is totally enclosed and non ventilated, which means it is sealed to protect itself from dust, water and other particulates. However, since it is enclosed it will become very hot, so follow the safety guidelines and avoid touching the motor. The motor warranty is 1 year free of material defects from the date of purchase.


FIG. S

Drip Pans—They are not dishwasher safe. It is best to drain all the water from the pans after usage. The drip pan also comes with four clip-on splash guards to reduce the amount of splash. It is best to drain the pans fully after using the machine. If you notice standing water in the pans check to make sure the drainage tubing is sufficiently angled downward and the pan drainage hole is clear.


FIG. T

Hoods—These are made from stainless steel to offer better protection from stones that may catch on the wheels. The hoods can be taken off by removing the side panels and then disconnecting the intake tubes from the T-Junction. Make sure to reconnect the intake tube after putting the hoods back on.

Guards—The CABKING-8V1 comes with two clear, adjustable splash guards attached to the hoods. These splash guards can be tightened using the side knob on the hood (FIG. S). You can also remove the splash guards for manual cleaning by loosening the knobs and removing the rod that goes through the guard.


FIG. U

Polishing Pad—The canvas polishing pad (FIG. T) is attached to the end of the right shaft. It can be removed by turning counter-clockwise. This pad should only be used for one grit of diamond compound. The pad can only be used on the end of the right shaft.

Lap Adapter—This is the slotted screw located at the end of the left shaft adapter. You can use this to add a 1/2” arbor diamond lap to the end of the left adapter. To remove the slotted screw (FIG. U), use a flat head screwdriver (not included) and twist counter-clockwise.

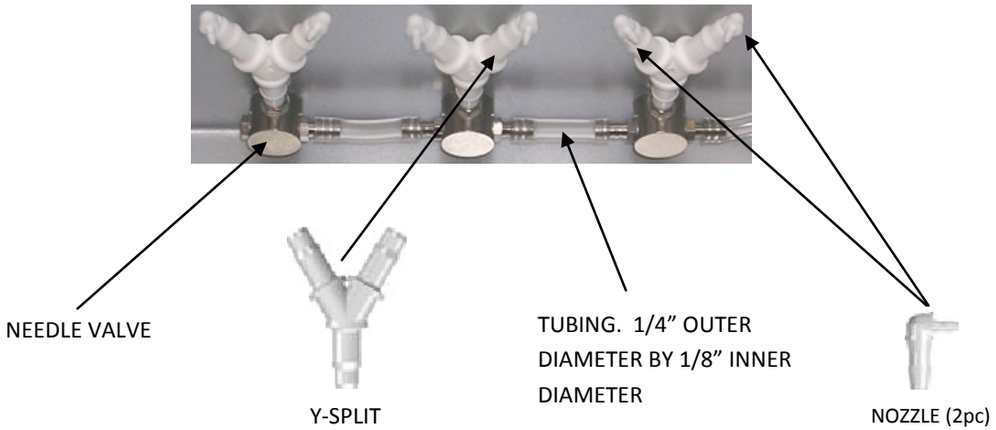

FIG. V

Knobs—These knobs can be removed by unscrewing the brass set screw located on the side (FIG. V). If you notice that the knobs keep spinning then using a small flat head screwdriver, tighten the set screw by twisting clockwise.

Spacers—These are aluminum tubes supplied on the motor shaft to create proper distance between wheels (FIG. W). The left side has a 85mm and 75mm spacer, while the right side has two 61mm spacers. Additional spacers are available in 1/2”, 3/4”, 1”.


FIG. W

CABKING WATER SYSTEM PARTS



PARTS AND TUBING CAN BE REMOVED BY EITHER PULLING APART OR UNSCREWING.

Water System—One of the key features to the CABKING-8V1 is the single pass, contamination free water system. All parts of the water system will remain trouble free as long as you use a fresh, clean supply of water. Do this by using a separate intake water bucket from the drainage bucket. Most importantly, a fresh supply of water will protect you from cross-contamination of grit which can occur in re-circulating systems that use a bubbler or geyser. With fresh water the pump and intake tubes will stay clean and unobstructed so there will be enough water pressure. The pump is rated at 30watts, 605GPH, 8.2ftHmax. We recommend using a minimum 5 gallon bucket for both the pump and drainage. You will typically go through an average of 1-2 gallons of water per hour, with the water control knob on a light to medium drip. You want to monitor the water level in the bucket to make sure the pump is always submerged. The pump is not designed to run dry, so be vigilant.

By design, all parts of the water system can be easily disassembled by pulling off or unscrewing, then cleaned with soapy water. For routine maintenance it is a good idea to clean the nozzles, Y-SPLIT, and tubing with a small wire brush or pipe cleaner, like the one supplied. If you find the nozzles are too loose or coming off, we suggest using some Teflon tape and wrapping the portion of the nozzle that is inserted into the Y-SPLIT with enough tape to tighten the fit.

DO NOT SET UP AS A RE-CIRCULATING SYSTEM, meaning putting the drip pan tubes into the same bucket of water as your pump. Doing so will void your warranty. Setting up this way will also mean you will risk cross contamination of grit, resulting in scratches on your stone. Grit will eventually build up in the pump, water control valves, nozzles, and tubing to restrict water flow.

ASSEMBLY INSTRUCTIONS

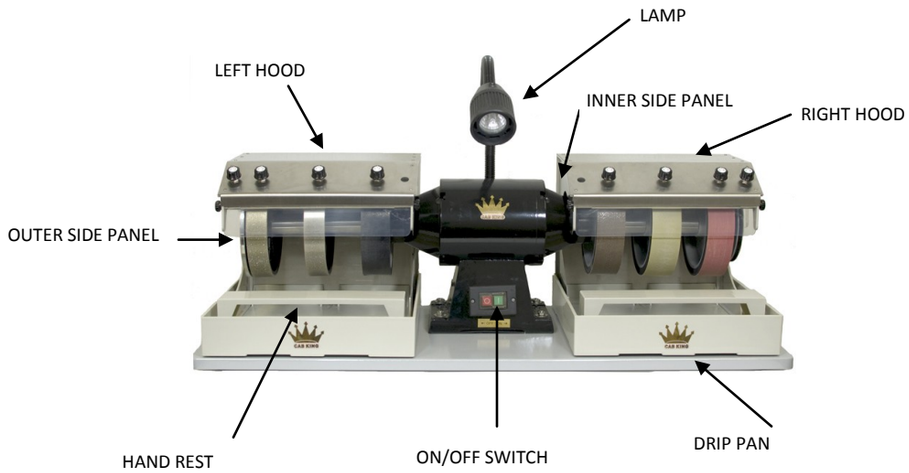


FIG. A

Refer to picture above for assembly.

1. The CABKING-8V1 is a heavy duty machine that weights approximately 150lb assembled. So it is best and easiest to assemble the machine with two people. It can be put together by one person but make sure you can lift at least 65lbs by yourself. In either case it should take less than half an hour to get the machine set-up and looking like the picture above.
2. There are three boxes that contain components of your machine. The motor box, the baseboard, hood, pan, light, and accessory box, and lastly the box that contains the wheels. Do not throw away any packaging until you are completely set-up.
3. Determine a suitable location to place the CABKING-8V1. As stated before the machine is heavy so you will need a sturdy table or stable surface that has approximately 4 feet width by 2 feet depth of clear space. Try to find a well lit area so you can clearly see what you are grinding.
4. Next open the box with the baseboard and accessories. Remove all loose foam and accessories and inspect for damage. It's good at this point to make sure you have all the parts that are listed on the opposite page. If you find any missing or damaged parts please contact your dealer immediately or email warranty@cabking.us
5. Once you have done that you can place the baseboard on your predetermined location. Make sure the board lays flat and that there is a few inches of clearance in the back for power cords and tubing.

6. Remove the top nut and washer that are located on the four bolts that are sticking up through the baseboard (FIG. B). Keep these aside as you will need them for the motor. You can also remove the plastic protector on the baseboard (FIG. C). The board is made of compressed wood that has been laminated with a waterproof coating.
7. Now open the motor box and remove the motor. Make sure to always hold the motor by the housing and not the shaft. The motor will be on its own board for shipping purposes. There is a wrench that is attached to the motor board which you can use to remove the nuts that hold the motor on the board (FIG. D).
8. Next take the motor off its board and place it onto the four bolts on the machine baseboard. At this point make sure to align the motor so it is parallel to the board, then take the washer and nuts you placed aside earlier and tighten them onto the bolts using the same wrench used to take the motor off the board.
9. Attach the lamp to the baseboard. The lamp is held in place by the four screws with black knobs located in the brackets behind the motor. Simply unscrew the knobs to the point that the lamp can slide in the brackets (FIG. E). Make sure that the power cord is facing away from the motor and re-tighten the screws. On either side of the brackets are metal stems that can be used to attach optional accessories.
10. Now you can put the wheels on the motor using the spacers that are already on the shafts. It's a good idea to lubricate the shafts with oil, grease, or WD-40 whenever you change wheels. Begin by unscrewing the adapter at the and of the shaft, then put the wheels on in the order seen in (FIG. F) When putting on the last wheel, it is easiest to put the wheel on the shaft then screwing on the adapter (FIG. G) and tightening with the large wrench. You will notice the adapter provides the support needed to keep the end wheel on the shaft. When removing the last wheel, sometimes the adapter can get stuck in the wheel hub. Simply spin the wheel towards you which will remove both the wheel and the adapter then tap out the adapter using a cylindrical object.

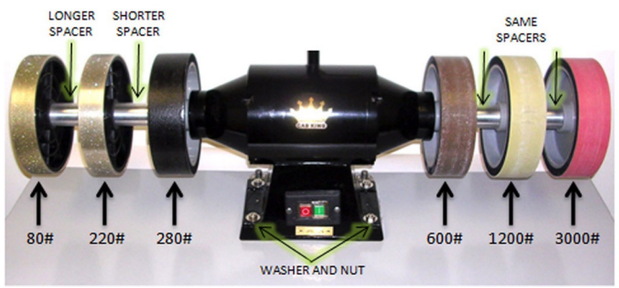


FIG. F

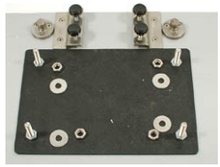


FIG. B

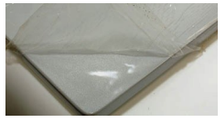


FIG. C


FIG. D


FIG. E


FIG. G

Note: The supplied resin wheels are designed to work exclusively together in sequence To avoid scratching or other problems, you should change all the resin wheels if you plan on using different brands.


FIG. Q

Using diamond paste for polishing will finish the process for most stones, resulting in a bright shiny cabochon, however there are many other polishing powders and pastes available. To polish your stone, attach the enclosed polishing pad by screwing it into the end of the right wheel adapter while the machine is turned off. Then use the enclosed 14,000 mesh diamond paste syringe and apply to the canvas polishing pad, by spreading small drops randomly over the surface. Then using circular motions with your finger rub the diamond compound thoroughly across the surface of the pad. Now its ready for use. Most polishing compounds do not require water so you can turn the machine back on and begin use. If you want to use with water then make sure to aim the spray tube to center of the disc (FIG. Q). Aiming at the center will allow the spinning motion of the disc to spread the water evenly over the surface. The spray can be aimed by appropriately twisting and turning the tube as well as the nozzle. This will allow the water to spread over the disc when spinning. Make sure to use a separate polishing pad for each different kind of polishing compound.


FIG. R

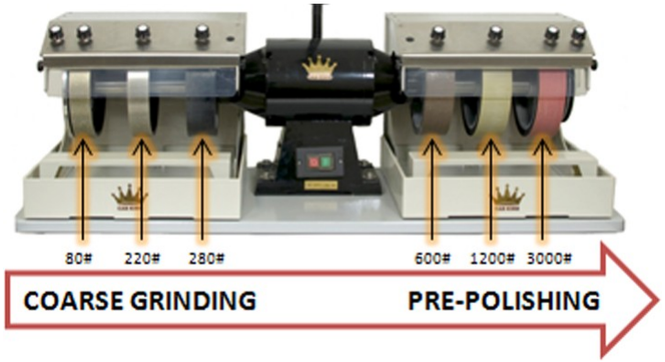
Now that you have domed and polished your stone you can put a flat on the backside using the 8" diamond flat lap (FIG. R) Attach the lap by unscrewing the lap adapter on the left end of the motor shaft and sliding it over the arbor. The included lap has a plastic backing plate, but you can use other types with metal backing plates. Again, make sure the water spray is aimed to the center of the disc. Simply hold the back of your cab on the surface of the diamond lap until the back flattens evenly. Both the canvas and 8" lap can only be used on the right shaft.

THE ART OF CABBING

The art of cabbing involves experimentation since every stone is different. As you progress in your cabbing ability, you may find that different grits are necessary depending on your stone and application. Ask your dealer about the other available grits for both electroplated and resin wheels.

Again, this is a very brief and simple introduction to the cabbing process. The enclosed "How to Use Diamond Abrasives" book should help you out in your basic understanding as well as searching the internet and talking with your dealer. We also recommend trying to find a local lapidary club to further your knowledge. As with all stone cutting and cab making, practice and experimentation are the keys to success.

MACHINE USAGE



The CABKING-8V1 is an universal grinder/polisher for gemstones. It is configured with two 8" X 1.5" hard diamond electroplated wheels, four 8" X 2" soft resin diamond wheels, 1 8" diamond flat lap, and 1 canvas polishing disc for use with the included diamond compound. The motor on the CABKING-8V1 is direct drive which means there are no belts or other parts to maintain or replace. The water system on the CABKING-8V1 is unique and allows you to independently control water spray on the wheels. Make sure you use adequate water when grinding and monitor the pump bucket to avoid running dry. If the wheels become covered with stone residue you should increase the water flow. Another advantage to our water system is that you can adjust the spray angle on the wheels. This will allow you to use wheels of various widths. You can adjust the nozzles located at the end of the Y-SPLIT under the hood see (FIG. P.) While you can use the CABKING-8V1 to grind all kinds of shapes and designs, the general process of making a cabochon is described below.

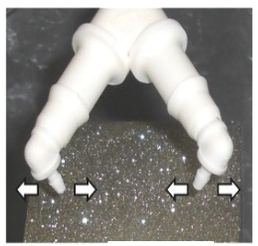


FIG. P

To make the cabochon start with the hard diamond wheels on the left which will allow you to create a domed shape from your rough stone. You can choose to hold your stone free hand or on a dop stick. Begin with the 80 grit diamond wheel and be sure to completely grind the surface of the stone using adequate water coolant. If the stone is not ground thoroughly scratching will occur. Making sure that all scratches are removed is the most important part of grinding the cabochon. Repeat this process for the 220 grit wheel. Next move onto the resin wheel sequence, which will sand and smooth the stone resulting in a pre-polished cab. Note: New resin wheels may bleed some of their pigment. This is entirely normal and will not affect your stones.

Start with the 280 grit and grind thoroughly, moving onto the next wheel when finished. After you finish the sequence of 600, 1200, to 3000 grit, the stone will be ready for polishing. Make sure you are adjusting the lamp as you are grinding to provide additional light. This light will be adequate for most situations, but you may require a separate light source for additional brightness.

11. After the wheels are on, you can place the drip pans on the baseboard and insert the left and right stainless steel hoods with the clear tubing coming out the back of the hood closest to the motor. The hoods slip into grooves made by the supports and the inside of the pan. You can set-up the pans for forward or rear drainage. The pans are not fixed in place, which allows you to move them as needed.

FIG. H

FIG. I

12. Place the clear stone trays on top of the hoods, insert the hand rests into the drip pans, and slide the splash guards onto both sides of the drip pans. You can adjust their position according to the splash.
13. Next, you can attach the stainless steel inner (FIG. I) and outer side panels (FIG. H) to the hoods. They are magnetically attached to the hoods to make it easy to remove them. To attach and remove the outer side panel, twist the side spray tubing upwards.

FIG. J

14. Now slide on the drip pan tubing to the pans and secure the connection with the spring clip (FIG. J). Tug on the tubing to make sure it is a tight connection. Then place the unconnected ends of the tubes in a large (5gal) empty bucket (FIG. K) (not included) or wherever you would like the dirty water from the pans to drain out. It is important that you have the drainage tube pointing downward to allow gravity to drain the water from the drip pans. If you notice the pans filling up with water, most likely the tubes are not sufficiently angled down. You can tilt the drip pans up and shake the tubing to drain. Again you can set-up the pans for forward or rear drainage.

FIG. K

15. Make sure the pump is not connected to power supply. Connect the water intake system by pushing the clear tubing from the hoods onto the black T-Junction found on the end of the clear tubing coming from the pump (FIG. L). Tug on this tubing to verify a secure connection. Place the pump in a separate large (5gal) bucket (not included) filled fully with clean water (FIG. M). To ensure enough water pressure, the length from the bucket to the unit should not be more than 6 feet. The assembled tubing will dangle which allows you flexibility when removing hoods.

FIG. L

16. Make sure the power switch on the motor is in the off position. Connect the motor power cord to a surge protected outlet or preferably a GFCI (Ground Fault Circuit Interrupter) outlet. While not necessary, a GFCI is recommended to prevent electric shock and can be purchased at your local hardware store. Though the motor is sealed, you must make sure to keep all electrical connections dry and be certain never to unplug any power cord with wet hands.

FIG. M

17. Twist the water flow knobs on the right and left hoods to the off position according to the directions on the knobs (FIG. N). Also, swing out the clear splash guards on the hoods so they are not in contact with the wheels. You can readjust the guards to reduce the splash after turning on the machine. The splash guards have a soft strip at the bottom to protect from damage if they accidentally touch the wheels.

18. Next attach the water pump cord to the footswitch cord. The footswitch will be the way to turn the pump on and off. Connect the footswitch to a surge protected power outlet. After following the next step you can adjust the water flow rate using the control knobs to the desired level. Avoid touching the pump in the water bucket with the power on. **NEVER UNPLUG OR TOUCH THE POWER CORDS WITH WET HANDS.**

19. You can turn the power on the machine. The wheels spin at 1800RPM, so do not wear loose clothing or anything that may accidentally get entangled with the wheels. It is typical for the motor to produce a winding sound when starting up and a mild humming sound after.

20. Now you can start the water drip by pressing the footswitch and then adjusting the water knobs. Our unique system allows you to drip water on each wheel individually. When grinding you want to make sure there is enough water dripping so that the wheels do not become dry. The amount of water necessary for grinding typically comes down to personal preference, just make sure the wheels are never run dry. In order to use the side spray for the canvas pad or diamond disc, you will need to turn the outermost knob.

21. **Congratulations!** You are now ready to begin using the CABKING-8V1. We recommend reading the rest of this manual, especially the safety instructions.

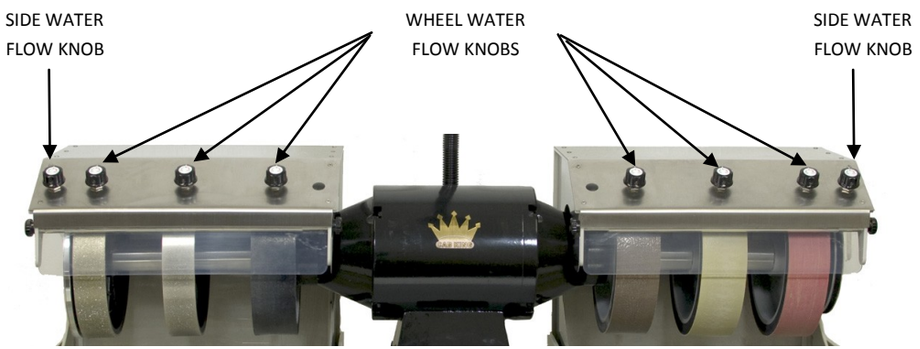


FIG. N

MAINTENANCE

The CABKING-8V1 is designed as a maintenance free unit. There are no belts, pulleys, gears, or other parts to actively maintain. All parts should be cleaned manually and periodically with household soap and water. Do not put any parts in the dishwasher.

CHANGING WHEELS— Using the large wrench remove the adapters located at the end of the shaft, slide off the wheels and replace with new ones. It is best before putting the wheels on to lubricate the shaft with oil, lithium grease or WD-40. This will help prevent the shaft from rusting and ease in future wheel removal. Should you have difficulty removing the wheels the best method to do so would be to use the large wrench and tighten on the adapter. Then hold the wrench on the adapter and spin the wheel in the opposite direction. The opposing force should loosen the wheel. When removing the last wheel, sometimes the adapter can get stuck in the wheel hub. Simply spin the wheel towards you which will remove both the wheel and the adapter then tap out the adapter using a cylindrical object.

CHANGING THE LIGHT— The flex stem lamp (FIG. O) must be unplugged before attempting to switch the bulb (40W, 110V). The bulb is replaced by twisting counterclockwise the plastic housing that surrounds the light and pulling out the bulb. Then, take the new bulb (hold with a cloth to prevent passing on any bodily oil) and insert it into the empty sockets, it doesn't matter which position the prongs are inserted. Press firmly making sure the light bulb prongs are not exposed. Finally, screw the lamp cover back on.

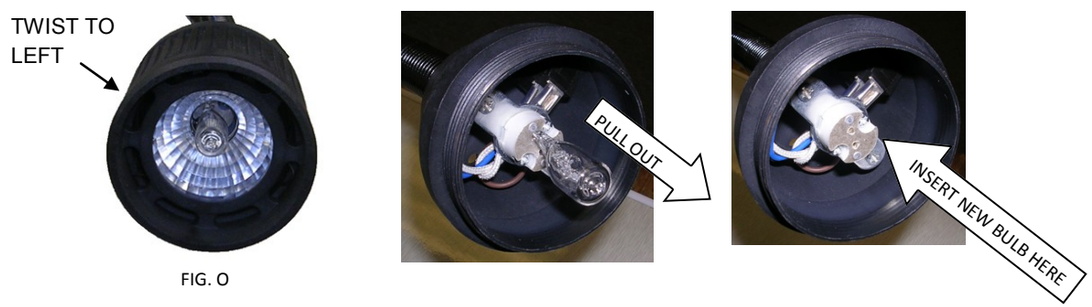


FIG. O