

G-170

Operator's Manual



Contact Information

Concrete Polishing Solutions

PO Box 520

Norris, TN 37828

877.472.8200

www.go2cps.com

1.0 GENERAL INFORMATION

1.1 Warranty Information

Concrete Polishing Solutions (CPS) warrants to the purchaser that under normal use and service, the G-170 grinder purchased hereunder shall be free from defects in material and workmanship for a period of 1 year. Expendable or consumable items or parts are not covered under this warranty. This warranty does not cover equipment or parts which have been misused, altered, neglected, handled carelessly, or used for purposes other than which they have been manufactured. Further, this warranty does not cover loss, damages resulting from accident, or damages resulting from an unauthorized service

1.2 Return Policy

Please open and inspect your order promptly upon receipt. Should you find an issue with the contents, please contact a member of the CPS sales and technical staff first, so they can resolve the issue as quickly as possible.

Any returns must be made within 30 days of delivery and must be accompanied by a return authorization number, as well as a copy of the original invoice. CPS will then review the complaint and inspect the merchandise before a credit can be processed.

Any items that are returned because of obvious misuse will be shipped back to the sender at their expense and no credit shall be issued.

Any returned items, including items under warranty, must be sent at the customer's expense. No authorization number is necessary if you are returning an item for repair that will be returned back to you after said repairs.

Before you return an item, CPS asks that you first call a member of the sales and technical staff at 877.472.8200 and vide your company name, address, telephone number, and a brief statement explaining the problem.

If an item was delivered to you in error, please let CPS know and the item will be picked up at CPS' expense. If your order contains a shortage, report the shortage no later than 24 hours after receiving your shipment. Shortage claims will be honored only when reported promptly. CPS cannot accept any products that have been either modified to a customer's specifications, or is a non-stocking special order item. Any products, such as machines or other equipment that sustain aftermarket alterations not pre-approved by CPS are not returnable.

1.3 Damaged Shipments

CPS carefully inspects all orders prior to shipment and then packs shipments as carefully as possible. CPS advises that you thoroughly check all cartons before you sign for the order. Any claims for merchandise damaged in transit must be filed with the delivering carrier, not CPS.

1.4 Liability

Important Notice:

The following is made in lieu of all warranties, expressed or implied. CPS and/or manufacturer's only obligation shall be to replace such quantity of product proved to be defective, provided that such guarantees or replacements are a stated policy of the manufacturer. CPS and/or manufacturers shall not be liable for any injury, loss, or damage whether direct, incidental, or consequential, arising from the negligence or misuse of the product. Before using, user shall determine the suitability of the product for its intended use and the user assumes all risk and liability whatsoever in connection therewith. The foregoing may not be altered, except by an agreement signed by at least two of the officers of Concrete Polishing Technologies, Inc. CPS will not be liable for delays in shipping due to circumstance beyond the control of CPS. Warranties will be null and void if after-market alterations, changes, or modifications have been made to the equipment.

1.5 Customer Service and 24/7 Technical Support

Concrete Polishing Solutions has a well-trained service department, as well as an exceptional sales and technical staff, who have extensive knowledge on how to service our equipment. Being the manufacturer, CPS best understands its equipment and already stock parts to service equipment. CPS can send you the parts to help you service your own equipment over the phone. In many locations, CPS can vide the information of a service person in your area who will be happy to assist you with parts and service.

If you do need to contact the Service Department, you will need to vide the product model and serial numbers to the person assisting you. You can reach the CPS Service Department 24/7 by calling 877.472.8200 or via email at info@go2cps.com.

CPS vides technical support to our customers twenty-four hours a day, seven days a week. Trained representatives will be happy to help you with any questions you may have. Please feel free to contact CPS any time of day or night for assistance by calling 877.472.8200 or emailing info@go2cps.com.

This operator's manual vides instruction for safe, trouble-free operation of your machine. Anyone who will be operating or maintaining your machine are required to read and understand the information herein.

This manual vides insight into safety messages and controls to help you operate the machine safely. It also vides answers to specific questions about operation and servicing. There is an index located in the back of the manual that will assist you in finding information quickly within this manual.

Owners and operators must keep the owner's manual available for frequent reference. Contact CPS for assistance, information, or additional copies of this manual.

1.5.1 Contact Information and Additional Support:

If you are in need of assistance, contact CPS Customer Service, day or night:

By phone: 877.472.8200

By email: info@go2cps.com

For informational videos on CPS equipment, including instructional videos and tips for bidding and more, visit CPS on YouTube by searching Concrete Polishing Solutions and clicking 'Subscribe'. Follow us on Facebook at <http://www.facebook.com/concretepolishingsolutions>.

2.0 SAFETY

This operator's manual provides instructions for safe, efficient, and trouble-free operation of your machine. You and anyone else who will be using or maintaining the machine are required to read and understand the information contained in this manual. Owners and operators must keep the owner's manual available for frequent reference. Contact Concrete Polishing Solutions if you need any assistance, information, or additional copies. The G-170P machines are designed to be used by a professional. The user is expected to have good knowledge and understanding of the user and safety instructions before operating, inspecting, or adjusting the machine.

2.1 Special Symbols

The symbols below represent a need for extra consideration when using the G-170 Machine.

Special Symbols

Throughout this manual, you will see symbols that accompany important information at a glance, including warnings to prevent machine damage, injury, or death. Please pay close attention to warnings.



Use Caution

This symbol and text highlights potential hazards or death to the operator or bystanders and/or property damage if proper procedures are ignored.



Tip

Text following this symbol indicates advice on operating the machine most effectively.

2.2 Safety Rules

It is imperative to follow all safety instructions herein, as well as ensuring that safety guidelines are followed by anyone in the vicinity of work being done with the G-170, along with any current workplace safety regulations or rules.

Work should only be performed by a trained professional. Each operator of the machine should be familiar with the manual and should be aware of the risks of incorrect use or operation.



WARNING

- **Training is required before operating this machine.**
- **Keep machine out of the vicinity of children.**
- **Do not allow children on or near the machine.**
- **Those with impaired mental, physical, or sensory abilities should not operate the machine.**

Concrete Polishing Solutions machines should be used only in the manner CPS recommends. Anyone using the G-170 should know about:

- Machine Functions
- Emergency Stop Procedure
- Workplace Safety Rules

The operator of the machine:

- Should ensure that no unauthorized person is in the area when the machine is started.

The workplace:

- Should be suitable to using a grinder, including per ventilation
- Should be free of debris and loose objects that could potentially be thrown out by the machine
- Should be free of exposed bolts or other implements that could damage the machine or cause injury.

Personal Protective Equipment (PPE):

- Safety Goggles
- Protective Gloves
- Steel Toe Safety Shoes
- Hearing Protection
- Respiratory Mask
- Do not wear clothing that is loose-fitting, as it could become caught or snagged by the machine, including scarves, bracelets, or rings.

Precautions:

- Maintenance and service should only be performed by qualified personnel or certified servicers.
- Access to a clearly marked fire extinguisher should be vided at all times.
- Do not perform maintenance or service on live or operational machines. Machine should be turned off before any service or maintenance is completed.

3.0 TRANSPORTATION OF YOUR MACHINE

To transport the G-170:

1. Place the handle in the upright position and lock the handle pin.
2. Carefully pull the machine back, using a foot placed on the machine to gain leverage.
3. Transport the machine using the wheels, with the machine tipped back.



Warning

- **Strap down equipment securely (across non-moving parts) when transporting from jobsite. Unsecure or unanchored equipment can cause property damage, injury, or death.**
- **Be sure to place hands in the center of handlebars when lowering and raising the machine. The placement increases stability and reduces the risk of machine tilting**

3.1 Storage

Store your CPS grinder in an area that is dry. Cold or damp conditions can damage the grinder.

4.0 MACHINE INFORMATION

Your G-170 machine was carefully inspected and protectively packaged to prevent damage in shipment. We suggest that upon removing the unit from its carton, you carefully inspect it for any possible damage in transit. Immediately notify the transportation company who delivered your machine.

CPS grinders are equipped to handle various types of jobs, including surface preparation, grinding, and polishing of concrete flooring. The G-170 is equipped with one grinding head upon which plates and tooling for different applications can be attached. For more information on CPS tooling visit <http://www.go2cps.com/tooling.html>

The following items should be included with the delivery of your machine. Please notify CPS if anything is missing:

1. One (1) G-170 Grinder
2. One (1) Dust Skirt
3. One (1) Operator's Manual

Power:	Electric
Weight:	280 lbs.
Grinding Width:	17"
Power Required:	Single Phase/220V
Engine:	5 HP
RPM:	Variable

4.1 Machine Diagram

G-170

1. Grinding Head Assembly
2. Motor
3. Safety Shroud
4. Two Dust Exhaust Ports
5. Inverter Box
6. Water Tank
7. Handlebars
8. Control Panel



4.2 Control Panel



Reverse

To operate machine in reverse, press button toward REV.

Forward

To operate machine in forward motion, press button toward FWD.

Speed Potentiometer

The speed dial should be started at the lowest setting when starting the machine. Gradually increase speed to desired rate.

The Emergency Stop Button

The emergency stop button on the 210 is located on the box below and to the right of the control panel. It is labeled "Emergency Stop". The emergency stop button must be disengaged before starting the machine. When stopping the machine, turn the throttle down to lower the RPM and depress the Emergency Stop button. This button should also be depressed in case of emergency necessitating stopping the machine

Jog Function

The jog function on the control panel is obsolete.

5.0 OPERATING THE MACHINE

5.1 General

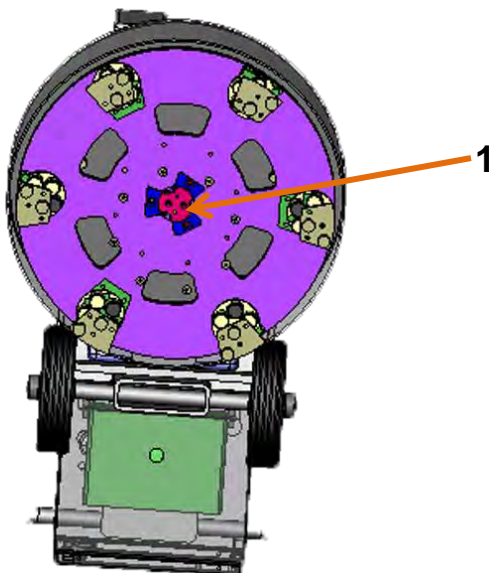
The following information is intended to provide you with general instruction on how to properly operate your G-170 machine. Be sure to follow all workplace safety regulations and rules when operating the machine. Training in proper techniques and methods is available through CPS and its distributors. To find a training near you and more visit www.go2cps.com

5.2 Attaching Tooling

The G-170 Machine is fitted with one cross-complete inside the grinding head assembly for attaching plate and tooling.

To attach the appropriate grinding tools to the G-170:

1. Make sure the handle is in the upright "locked" position. Place hands in the center of the handlebars when lowering and raising the machine. This method increases the control you have when maneuvering the machine.
2. Lay the machine on its back with the handle lying on the floor. This exposes the driving plate on the underside of the machine.
3. From a standing position at the side of the upended machine, put metal bond plate on the cross-complete (1). Turn the cross-complete in either direction to lock the plate onto the machine.
4. Place the tooling of choice securely onto the plate.
5. Return the machine to the upright position.



Warning

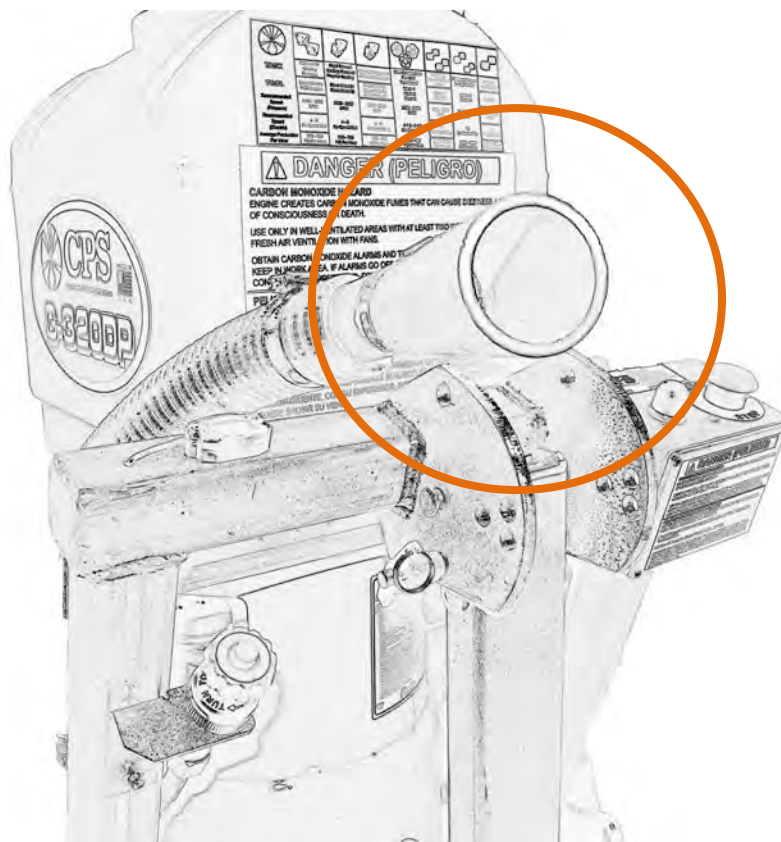
- Never kneel in front of the machine when attaching tooling or replacing tooling.
- Increased heating of the tooling and equipment may occur due to grinding speed, increase of pad diameter, or grinding with or without water. Wear heat-resistant gloves when changing tooling.

5.3 Attaching the Vacuum Hose

If dry-grinding, be sure to attach the vacuum hose to your G-170 machine before beginning any work. Follow all workplace safety requirements when wet or dry-grinding.

 **WARNING**

- **Dust from grinding can be dangerous and damaging to the lungs. Be sure to wear proper protective equipment to prevent inhalation.**
- **If wet grinding, be sure to have a slurry containment system in place.**



To attach a dust interceptor/vacuum, locate the hose on the upper frame of the machine. (See above diagram). Be sure to connect hoses firmly for most efficient dust interception.

6.0 Starting the Machine

Starting the Electric Machine

1. Adjust handlebars to the desired height.
2. If dry grinding, hook machine hose to vacuum for dust removal.
3. Locate the power cord for your electric grinder.
4. Plug machine into appropriate power source.
5. Stand behind the machine with feet planted firmly.
6. Press the “**FWD or REV**” button to engage the power supply.
7. Turn Speed Potentiometer to the desired RPM.
8. Push FWD or REV button to off position to power machine off.
9. After stopping machine, lower the speed potentiometer back to 0.
- 10.. Disconnect the power cord from the outlet, then from the grinder.



Warning

- **Do not start machine with grinding head in the upright position.**
- **Always use a three-wire electrical system connected to the electrical ground.**
- **For maximum electric shock protection, use a circuit protected by a ground fault circuit interrupter.**

7.0 MAINTENANCE

CPS Machines are meant to be low-maintenance for the owner/operator, though there are some important routine maintenance that should be done. See the Maintenance Checklist below for more information.

Be sure to follow all workplace safety procedures when performing maintenance.

7.1 Cleaning The Machine

The CPS G-170 should be cleaned after each use to ensure continued functionality.



WARNING

- **Do not use chemicals or solvents to clean the machine. Harsh chemicals can cause damage to the inner workings of the machine.**
- **When wet grinding, be sure to clean machine of slurry thoroughly before storing.**

7.2 Before Beginning Work

Your machine should be checked before beginning each new project.

- **Check that the cooling system air inlet is clean.** Located on the engine, the cooling system air inlet should be checked every before operation to clear it of debris and dust.

7.3 Every 100 Hours of Operation

- **Clean the cooling system.** The engine cooling system should be free of debris and dust. See p.
- **Clean oil cooler fins.** The oil cooler fins should be cleaned every 100 hours to ensure they are free of debris and dust and cooling effectively. See p.
- **Tighten nuts and screws.** The engine should be checked for loose nuts and screws regularly, with special attention to tightening every 100 hours of operation. See p.

8.0 TROUBLESHOOTING

8.1 Electric Machine Troubleshooting

Symptoms	
Failure to Start	<ul style="list-style-type: none">• Ensure that the power cord is securely plugged in.• Make sure the prongs on the cord are making good contact with the outlet.• Check that all phase indicator diodes are lit up.• Check the speed you are starting on.• Press Reset if the Stop button was pressed.
Stops Suddenly	<ul style="list-style-type: none">• Check to see if the cable is hot. If it is hot, the cable may be too long or have too small a cross-sectional area.• Reduce speed. The machine may have been continuously run at high speed with an inefficient electrical supply.
Vacuum Not Working	<ul style="list-style-type: none">• Check that hoses are fastened securely and that vacuum is functional.
Head Does Not Turn	<ul style="list-style-type: none">• Check belt tension.• If the fan on the engine is running but the head is not turning, the belt is slipping or broken. Call CPS for service.
Heads Spin, Housing Doesn't	<ul style="list-style-type: none">• If the head spins, but the housing doesn't, the pinion gear shear pin has broken. Test it by turning the head manually. The housing should turn.•
Machine is Vibrating or Running Unevenly	<ul style="list-style-type: none">• Check for uneven wear on diamonds. If the heads are not running evenly, rebuild Flex Heads.• A concentration of dirt can cause the driving plates to become hard and inelastic. Clean the machine between the housing and heads.• Check that grinding tools are properly positioned and not too worn.

For all other error codes your machine may display, contact CPS at 877.472.8200 or your certified service technician.

Repairs

All repairs for CPS machines must be completed by a CPS authorized service technician. Contact CPS or your retailer to locate certified service centers. Repairs must be completed by trained specialists, authorized by CPS to complete machine repairs. Failure to use a certified service technician may result in a voided machine warranty.

9.1 Plates

The plate for the CPS G-170 grinder is a 17" plate.

17" Metal Bond Plate

APMF6

9.2 Tooling

There are many applicable tools for the G-170 machine. From tools perfect for surface prep to polishing resins, CPS has you covered. Visit www.go2cps.com/tooling.html for more.

10.0 MAINTENANCE INDEX

In this section, you will find instructions for the most common routine maintenance procedures. For any other issues or maintenance your machine requires, call CPS or your retailer to find a certified service technician in your area.

10.1 Rebuilding Flex Heads

Rebuilding Flex Heads

Rebuilding heads after extended periods of use is one important way to maintain grinding consistency and the consistency of the final product. Flex heads should be rebuilt when they aren't seeming to run "true", that is, they are warped or off-kilter.

Parts Needed

- AMPF1818: One (1) 1/4" Polycord
- AMPF1039: One (1) Inner Polycord Holder
- AMPF1145: Eight (8) 1/4" x 20 x 3/4" Flat Head Socket Screws
- Loctite
- APMF0313: One (1) Mounting Plate
- APMF0317: One (1) Die Spring
- APMF0316: One (1) Drive Shaft
- APMF0310: One (1) Backing Plate with Studs
- APMF1038: One (1) Outer Polycord Holder
- APMF....: Eight (8) 1/4" x 20 Nylon Lock Nuts
- APMF....: Eight (8) 5/16" Flat Washers

Tools Needed

- Manual Press
- Socket
- 7/16" Wrench



Flex Head Rebuild Kit: APMF1851K

Step 1:



Place the inner polycord holder on the countersink holes facing up. Be sure the inner polycord holder is placed such that four holes are in one line from bottom to top. (See photo)

Step 2:



Place the inner polycord holder on the polycord and push through 8 flat head screws dipped in Loctite. The screw heads should be flush with the surface of the inner polycord.

Step 3:



Place the mounting plate on the screws, ensuring that the three holes on the mounting plate line up with the three holes on the polycord holder. The above picture shows the way plate should be lined up when placed on screws.

Step 4:



Tighten the 8 flat head socket screws to a snug fit by tightening screws across from each other (criss-cross method). Only do one full turn of the wrench before moving onto the next screw, until snug. After all screws are snug, tighten all screws in the same pattern to 6 foot lbs of torque.

Step 6:



Place the main mounting plate with the studs facing up. Place the grinding shaft in the center slots. Then place the spring in the center hole of the grinding shaft. The prongs on the grinding shaft should be aligned to the mounting slots as well.

Step 7:



Place the first assembly (inner polycord holder) onto the grinding shaft making sure the holes are aligned with the main mounting plate.

Step 8:



Place the outer polycord holder on top of the inner polycord assembly. Move the loosely fit assemblies to the press, making sure to keep the two assemblies properly aligned.

Step 9:



Place the assembly on the manual press. Apply downward pressure. Studs from below should protrude through the inner polycord holder, polycord, and outer polycord holder. Place a flat washer and nut on studs. Do not tighten nuts.

Step 10:



Tighten nuts to snug with a 7/16" wrench. Remove assembly from the press. Torque all nuts to 6 foot lbs.

