

BLUEROCK® Tools

OPERATION MANUAL V1.0

20FG | 20" FLOOR GRINDER

3 HP (2.2 kW) • 220V • Single Phase



READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THE MACHINE

Keep this manual for future reference

© BLUEROCK® TOOLS 2026

IMPORTANT SAFETY INFORMATION**WARNING**

Before using this equipment, read this entire manual and become familiar with the machine and its controls. Do not allow untrained or unauthorized persons to operate the equipment.

General Safety Rules

WARNING: Read and understand this entire manual before operating the BLUEROCK 20FG. Failure to follow the operating and safety instructions may result in serious injury, death, electric shock, fire, or equipment damage.

- Operate the machine only if you are trained and capable of doing so safely. Become familiar with all controls, including the normal stop control and emergency stop, and know how to stop the grinder quickly before beginning work.
- Inspect the grinder before each use. Check the grinding tooling, magnetic holders and retaining components, grinding head, dust shroud, wheels, handles, controls, power cord, plug, fasteners, and other components for damage, excessive wear, looseness, or improper installation. Correct any unsafe condition before operating the machine.
- Keep all guards, covers, the dust shroud, and safety components installed, properly secured, and in working condition. Never operate the machine with a required guard or safety device removed, damaged, modified, or bypassed.
- Keep hands, feet, clothing, hair, power cords, vacuum hoses, tools, and other objects away from the grinding head and all moving parts. Never reach beneath the machine while it is connected to electrical power.
- Wear appropriate personal protective equipment (PPE). This includes appropriate eye protection, hearing protection, sturdy protective footwear, work clothing, and respiratory protection when required. Additional PPE may be required depending on the material being ground and jobsite conditions.
- Use only grinding tools and accessories that are compatible with the machine, mounting system, application, and operating speed. Tooling must be securely installed before operation.
- Inspect all grinding tools before every use. Never use tooling that is cracked, broken, loose, excessively worn, improperly mounted, or otherwise damaged.
- Install compatible tooling uniformly across the grinding heads. Mismatched, missing, improperly installed, or unevenly worn tooling can cause excessive vibration, poor machine control, or damage to the grinding system.
- Control exposure to respirable crystalline silica. Grinding concrete, terrazzo, masonry, stone, and similar materials can generate hazardous silica dust. Use an appropriate industrial dust extractor and other exposure-control measures as required by the application and applicable regulations.
- Connect the grinder only to a properly grounded 220V, 60Hz, single-phase power supply compatible with the machine's NEMA L6-20P plug and electrical requirements.
- Do not operate the machine with a damaged power cord, plug, switch, control, or electrical enclosure. Keep electrical connections dry and protected from damage.
- Route the power cord and vacuum hose behind the operator and away from the grinding path. Never allow the grinding head to contact the power cord or vacuum hose.
- Maintain a safe work area. Keep bystanders and unnecessary personnel away from the machine and grinding area. Provide adequate lighting and remove loose objects, debris, cords, and other hazards that could interfere with safe operation.
- Inspect the work area before grinding. Be aware of floor openings, edges, drop-offs, slopes, protruding objects, embedded materials, and other conditions that could affect machine control or damage the grinding tooling.
- Maintain control of the grinder at all times. Keep both hands on the operating handle during grinding, maintain stable footing, and be prepared for movement or torque when the grinding head starts or encounters changes in the floor surface.
- Use additional caution near walls, edges, floor openings, ramps, slopes, and other locations where unexpected machine movement could result in loss of control.
- Do not force the machine. Allow the machine weight and properly selected diamond tooling to perform the grinding. Excessive force can reduce grinding performance, overload the motor, damage tooling, or cause loss of control.

- Stop operation immediately if the machine develops unusual vibration, abnormal noise, overheating, loss of power, repeated overload, erratic movement, burning odor, damaged tooling, or any other abnormal condition. Disconnect the machine from power and determine the cause before continuing operation.
- Never leave the machine unattended while it is connected to electrical power.
- Before installing or removing tooling, cleaning, inspecting, adjusting, transporting, clearing an obstruction, or servicing the grinder, switch the machine OFF, disconnect the power plug from the electrical supply, and wait for all moving components to come to a complete stop.
- Prevent accidental or unexpected startup during maintenance or service. Do not rely solely on the machine's switches or emergency-stop control to prevent startup. Disconnect the machine from the electrical supply before servicing.
- Do not modify the machine, electrical system, guards, grinding head, tooling mounts, controls, or safety components. Electrical repairs and internal electrical service should be performed only by qualified personnel.

IMPORTANT: These general safety rules do not replace the more specific warnings and operating instructions provided throughout this manual. Follow all applicable jobsite rules and local, state, and federal safety requirements.

Respirable Silica Dust

Grinding concrete, terrazzo, masonry, stone, and similar materials can generate respirable crystalline silica dust. Exposure to respirable crystalline silica can cause serious or fatal respiratory disease.

Use an industrial dust extractor suitable for concrete grinding and for the amount of dust generated by the application. Keep the grinder's dust shroud properly positioned and inspect the vacuum hose, connections, filters, and dust-collection system for damage, leakage, blockage, or loss of suction.

Do not continue dry grinding if the dust-collection system is not functioning properly or if excessive visible dust is being released from the grinding area.

Use appropriate respiratory protection when required and follow applicable OSHA requirements, jobsite exposure-control procedures, and other applicable regulations concerning respirable crystalline silica.

Electrical Safety

- Use only a properly grounded 220V, 60Hz, single-phase electrical supply suitable for the machine's 15A rated current.
- The 20FG is equipped with a NEMA L6-20P, 250V twist-lock plug. Connect the machine to a compatible NEMA L6-20R grounded receptacle.
- Do not remove, modify, bypass, or defeat the grounding connection. Never modify the supplied plug to fit an incompatible receptacle.
- Before connecting the machine, verify that the available power supply corresponds with the voltage and frequency specified on the machine.
- When an extension cord is required, use only a grounded, heavy-duty cord suitable for the voltage, current, environment, and length of the run.
- Use a minimum **12/3 AWG extension cord for lengths up to 50 ft**. For runs greater than 50 ft and up to 100 ft, use a minimum **10/3 AWG extension cord**.
- Excessive extension-cord length or insufficient conductor size can cause voltage drop, overheating, reduced motor performance, and equipment damage. Use the shortest practical extension cord and do not exceed the recommended length.
- Do not use damaged, undersized, modified, ungrounded, or household-type extension cords.
- Inspect the machine power cord, plug, receptacle, and extension cord before use. Do not operate the machine if electrical components are cut, crushed, loose, burned, overheated, or otherwise damaged.
- Keep the power cord and extension-cord connections away from the grinding head, traffic paths, sharp edges, heat, standing water, and other conditions that could damage the cord or create an electrical hazard.
- Route the power cord and vacuum hose behind the operator and away from the grinding path.
- Do not expose the motor, electrical controls, plug, receptacle, extension-cord connections, or electrical enclosures to standing water, rain, or direct water spray.

- Do not pull or carry the machine by the power cord or disconnect the plug by pulling on the cord.
- Switch the machine OFF before connecting or disconnecting electrical power.
- Disconnect the power plug before changing grinding tooling, clearing obstructions, cleaning, inspecting, adjusting, transporting, or servicing the machine.
- Internal electrical inspection, repair, or modification must be performed by qualified personnel.

Grinding Tool Safety

- Use only grinding wheels, diamond tooling, holders, adapters, and accessories that are compatible with the BLUEROCK 20FG, its mounting system, and the intended application.
- Verify that all grinding tooling is rated for the machine's operating speed. Never use tooling with a maximum rated speed lower than the speed at which it will be operated.
- Inspect all grinding tools before installation and before each use. Do not use tooling that is cracked, chipped, bent, excessively worn, damaged, or otherwise questionable.
- Keep magnetic holders and all mating surfaces clean and free of concrete dust, metal particles, and other debris that could prevent the tooling from seating properly.
- Make sure each grinding tool is fully seated and securely retained before operating the machine. Check retaining sleeves, fixing pins, magnets, holders, adapters, and related mounting components for damage or excessive wear.
- Install compatible tooling uniformly across all three grinding heads. Use tooling of the same type, size, and similar wear condition unless a specific application requires an approved alternative configuration.
- Never operate the grinder with missing, loose, improperly installed, or mismatched tooling. An unbalanced grinding assembly can cause excessive vibration, loss of machine control, damage to the grinder, or separation of tooling.
- After installing or changing tooling, manually check the grinding assembly for proper clearance and secure installation before returning the machine to its normal operating position.
- Keep hands, feet, power cords, vacuum hoses, and other objects away from the grinding head whenever the machine is connected to electrical power.
- Never reach beneath the machine, inspect the underside, or attempt to adjust or remove grinding tooling while the grinder is connected to electrical power.
- Before installing, removing, inspecting, cleaning, or adjusting grinding tooling, switch the machine OFF, disconnect the power plug, and wait for all moving components to come to a complete stop.
- Grinding tools can become hot during operation. Allow tooling and surrounding components to cool before handling. Wear appropriate gloves when handling recently used tooling.
- Stop the machine immediately if excessive vibration, unusual noise, uneven grinding, tooling movement, or other abnormal operation occurs. Disconnect power and inspect the grinding tooling and mounting system before restarting.
- Do not attempt to modify grinding wheels, holders, adapters, magnets, retaining components, or the grinding-head assembly to accept incompatible tooling.
- Select the correct diamond bond, grit, and tooling type for the material and application. Incorrect tooling can reduce grinding performance, increase vibration or loading, and cause premature wear or damage.

WARNING: Improperly installed, damaged, or incompatible grinding tooling can break or separate during operation and may cause serious injury. Always disconnect the machine from electrical power before accessing the grinding head or tooling.

TECHNICAL DATA

Specification	20FG
Model	BLUEROCK 20FG
Motor	3 HP (2.2 kW)
Amperage	15 A
Voltage / Frequency	220V, 60Hz
Phase	Single Phase
Plug	NEMA L6-20P, 250V Twist Lock
Grinding Path	20" (480 mm)
Grinding Heads	3
Grinding System	3-Head Planetary
Primary Tool Capacity	(3) 7" (180 mm) Diamond Cup Wheels
Alternate Tooling	(6) 4"/5" Grinding Wheels or 2" Grinding Plugs with compatible adapters
Head Speed	380 RPM
Maximum Head Pressure	247 lb (112 kg)
Additional Weight	48.5 lb (22 kg)
Production Rate	Approx. 540-810 sq. ft./hr. (50-75 m ² /hr.), application dependent
Machine Dimensions	21.5" × 57.1" × 39.6" (545 × 1450 × 1005 mm)
Net Weight	353 lb (160 kg)
Dust Collection	Integrated dust shroud and vacuum port

Intended Use

The BLUEROCK 20FG is an electrically powered, walk-behind **3-head planetary floor grinder** designed for professional grinding, surface preparation, and polishing of concrete, terrazzo, and similar hard floor materials. The machine is designed for use with compatible diamond grinding tooling and an appropriate industrial dust-extraction system.

Typical applications include:

- Concrete surface preparation and profiling
- Grinding and leveling concrete surfaces
- Removal of surface irregularities and high spots
- Removal of compatible coatings, adhesives, thinset, and surface residue using application-appropriate tooling
- Preparation of concrete prior to the application of coatings, overlays, or flooring systems
- Concrete grinding and polishing using appropriate diamond tooling
- Terrazzo grinding, restoration, and polishing using compatible tooling

Grinding performance and production rate will vary depending on floor material and hardness, surface condition, tooling type, diamond bond and grit, coating or material being removed, desired surface profile, operator technique, and dust-extraction performance.

The 20FG is intended for professional floor-grinding applications only. Do not use the machine for cutting, scarifying, milling, sanding wood, grinding metal, or any application for which the machine and installed tooling were not designed.

Use only tooling and accessories that are compatible with the 20FG and suitable for the material and application. Do not modify the machine or grinding system to perform applications outside its intended use.

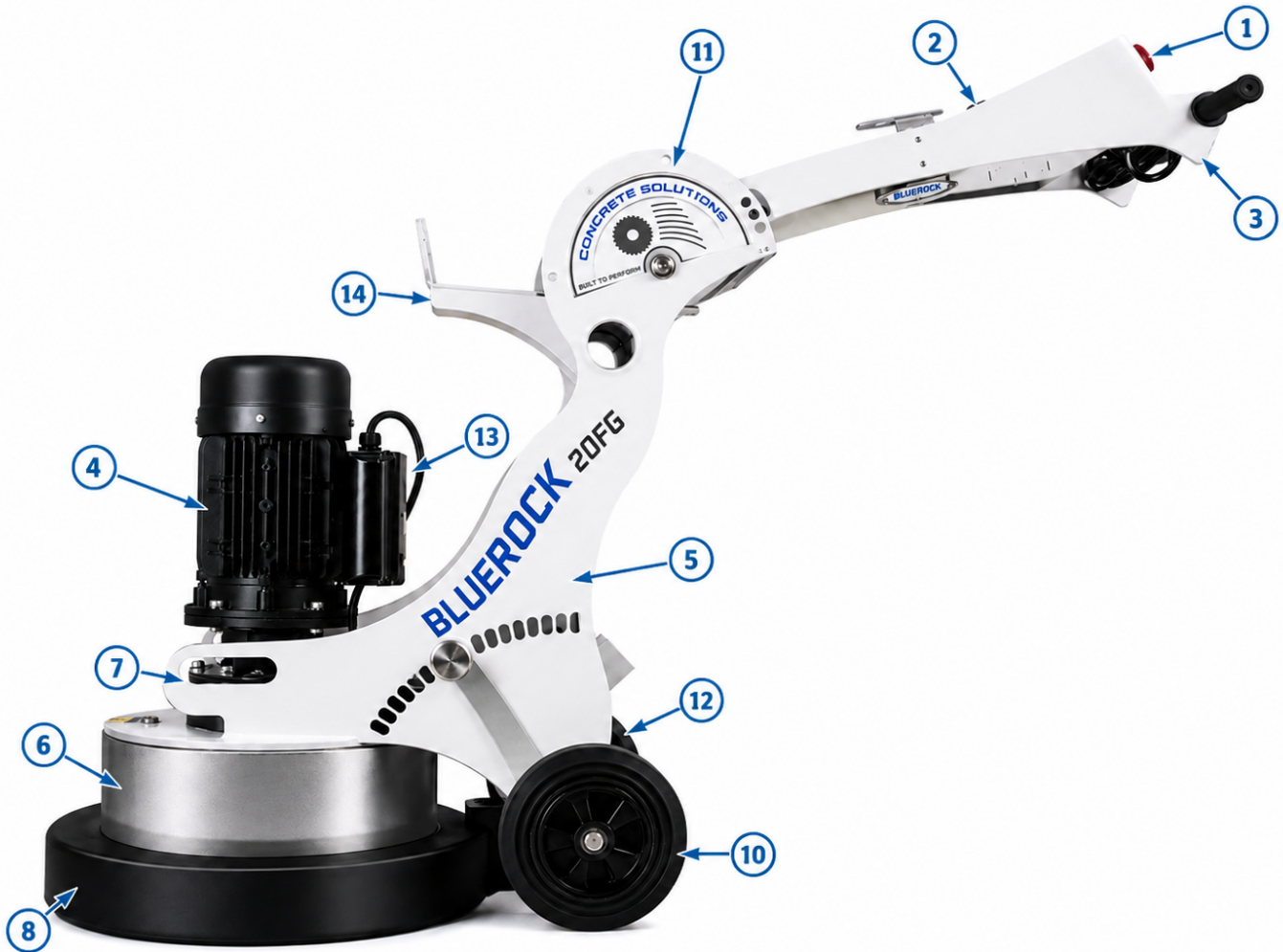
IMPORTANT: Use of the machine outside its intended purpose, with incompatible tooling, or in a manner contrary to the instructions in this manual may result in loss of control, equipment damage, serious injury, and may void applicable warranty coverage.

BLUEROCK® TOOLS

MACHINE DESCRIPTION

Main Components

The 20FG includes a folding multi-position operator handle, control panel with LED display, electric motor, 3-head planetary grinding assembly, magnetic tooling holders, dust shroud and vacuum port, transport wheels, machine-level adjustment, and removable/additional weight system.



Specification	20FG
1	Emergency stop
2	Cup Holder
3	Operator Handles
4	Electric motor
5	Main frame
6	Grinding head / planetary assembly
7	Magnetic tooling holders
8	Dust shroud
10	Transport wheels
11	Variable Height Adjuster
12	Vacuum port
13	Capacitor Box

HANDLING AND TRANSPORT**CAUTION**

The 20FG weighs approximately 353 lbs. (160 kg). Use appropriate assistance, ramps, lifting equipment, and securement methods when loading, unloading, or transporting the machine.

Moving the Machine on the Jobsite

- Switch the machine **OFF**, disconnect it from the power supply, and wait for the grinding head to come to a complete stop before moving the grinder between work areas.
- Disconnect the vacuum hose and secure the power cord before transporting the machine.
- Use the operator handle and transport wheels to move the grinder. Maintain control of the machine at all times.
- The 20FG is heavy. Use appropriate assistance when moving the machine over ramps, thresholds, steps, uneven surfaces, or other obstacles.
- Move slowly and maintain secure footing. Do not attempt to move the machine on a slope or surface where its weight could cause loss of control.
- Never pull, lift, or move the machine by the power cord, control panel, vacuum port, dust shroud, or other non-structural components.
- Remove the additional weight when necessary to reduce machine weight for handling or transportation.
- Keep hands and feet clear of pinch and crush points around the folding handle, frame, wheels, grinding head, and removable weight.
- Do not drag installed diamond tooling across the floor during transportation.

WARNING: The 20FG weighs approximately **353 lb (160 kg)**. Do not attempt to manually lift the complete machine. Use appropriate lifting equipment, ramps, or sufficient assistance when loading, unloading, or moving the grinder where rolling it safely is not possible.

Folding and Adjusting the Handle

1. Switch the machine OFF, disconnect it from electrical power, and wait for all moving components to stop.
2. Maintain control of the handle while releasing the handle-position locking mechanism.
3. Move the handle to the desired operating, transport, or storage position.
4. Keep hands and fingers clear of the handle pivot and other pinch points while adjusting the handle.
5. Fully engage and secure the locking mechanism before operating or moving the grinder.
6. Before operation, apply light pressure to the handle to verify that it is securely locked in position.

CAUTION: Always support the handle while releasing the locking mechanism. The handle may move unexpectedly when unlocked.

Removable Additional Weight

- The 20FG is equipped with an optional removable **48.5 lb (22 kg) additional weight**.
- Switch the machine OFF and disconnect electrical power before installing, removing, or repositioning the weight.
- Use proper lifting technique and maintain a secure grip when handling the weight.
- Keep hands and feet clear of pinch and crush points while installing or removing the weight.
- Make sure the weight is properly positioned and secured before operating or transporting the machine.
- Remove the additional weight when appropriate to reduce machine weight during transportation or handling.

Vehicle Transport

- Switch the machine OFF, disconnect electrical power, disconnect the vacuum hose, and secure the power cord before loading or transporting the grinder.

- Use a properly rated ramp, lift, or other suitable equipment when loading or unloading the machine. Do not attempt to manually lift the complete grinder.
- Keep the machine upright and stable during transportation.
- Secure the grinder with properly rated tie-downs so it cannot roll, slide, tip, or shift during transport.
- Attach tie-downs only to suitable structural portions of the machine. Do not secure the grinder by the operator controls, electrical components, power cord, vacuum port, dust shroud, or other non-structural components.
- Remove or separately secure the additional weight and any loose accessories when necessary for safe transportation.
- After transport, inspect the grinder for loose fasteners, damage, misalignment, or other conditions that could affect safe operation before returning it to service.

GRINDING TOOL INSTALLATION AND REMOVAL**WARNING**

Disconnect the power plug before installing, removing, inspecting, or adjusting grinding tools. Wait until the grinding head has completely stopped.

Compatible Grinding Tooling

The BLUEROCK 20FG is designed to accept multiple grinding-tool configurations depending on the application and mounting hardware installed.

- **(3) 7" (180 mm) diamond cup wheels**
- **(6) 4" or 5" diamond grinding wheels** with the appropriate mounting hardware
- **2" diamond grinding plugs** with compatible holders/adapters

Use only grinding tooling that is compatible with the 20FG mounting system and suitable for the material and application. All installed tooling must be properly rated for the machine's operating speed.

IMPORTANT: Do not mix different tooling sizes, types, or significantly different levels of wear on the same grinding setup unless the tooling configuration is specifically designed for that application.

Before Installing or Changing Tooling

1. Move the machine to a stable, level surface.
2. Switch the machine **OFF**, disconnect the power plug from the electrical supply, and wait for all moving components to come to a complete stop.
3. Disconnect or position the vacuum hose and power cord so they will not interfere with the tooling change.
4. Carefully position the grinder in the proper tool-change/service position while maintaining control of the machine.
5. Clean the magnetic tooling holders and all mating surfaces. Remove concrete dust, metal particles, and other debris that could prevent the tooling from seating properly.
6. Inspect the tooling holders, magnets, retaining sleeves, fixing pins, cushions/shock pads, and related mounting components for damage, looseness, or excessive wear.
7. Inspect each grinding tool for cracks, chips, distortion, excessive or uneven wear, or other damage.
8. Verify that the tooling being installed is compatible in **size, type, mounting configuration, operating speed, and intended application.**

WARNING: Never access the underside of the grinding head or change tooling while the machine is connected to electrical power.

Installing 7" Diamond Cup Wheels

The standard 7" configuration uses **three 7" (180 mm) diamond cup wheels**, with one cup wheel installed at each grinding-head position.

1. Complete all steps under **Before Installing or Changing Tooling.**
2. Make sure each magnetic tooling holder and mating surface is clean and free of debris.
3. Position one compatible 7" diamond cup wheel at each of the three grinding-head mounting positions.
4. Make sure each cup wheel is fully seated in its mounting position.
5. Install and engage all applicable retaining pins, sleeves, or other retaining components.
6. Check each cup wheel individually to confirm that it is properly seated and securely retained.
7. Check the complete grinding assembly for loose components, interference, or obvious imbalance.
8. Carefully return the machine to its normal operating position.
9. Before beginning work, start the machine in a clear area and observe it for abnormal vibration or noise. Stop the machine immediately if abnormal operation occurs.

IMPORTANT: Never operate the 20FG with a grinding tool missing from a required mounting position or with loose, damaged, improperly installed, or incompatible tooling. Replace damaged or excessively worn mounting and retaining components before operating the machine.

Installing Other Grinding Tooling

The 20FG can also accept **4"/5" grinding wheels and 2" grinding plugs** when equipped with the appropriate holders, adapters, and mounting components.

Installation procedures vary according to the tooling and mounting system being used. Make sure all adapters and tooling are compatible with the 20FG and securely installed before operation.

Do not modify the grinding head, holders, adapters, or tooling to install an incompatible grinding product.

NOTE: Always follow any installation and operating instructions supplied with the grinding tooling or adapter system.

STARTING, GRINDING AND STOPPING

Before Starting

Before each use, perform the following checks:

- Read and understand this manual and become familiar with the machine controls, normal stop control, and emergency stop.
- Inspect the work area. Remove loose debris, cords, hoses, protruding objects, and other hazards that could interfere with operation or contact the grinding tooling.
- Inspect the floor for openings, edges, drop-offs, significant cracks, embedded objects, or other conditions that could affect machine control or damage the tooling.
- Inspect the machine for loose, damaged, worn, or missing components. Check the grinding tooling and retaining components, grinding head, dust shroud, vacuum connection, power cord, plug, controls, transport wheels, handle-locking mechanism, and accessible fasteners.
- Verify that all grinding tools are properly installed, securely retained, and appropriate for the material and intended application.
- Make sure the grinding head and tooling are free of obstructions and that the dust shroud is properly positioned.
- Connect an appropriate industrial dust extractor to the vacuum port before dry grinding. Inspect the vacuum hose and connections for damage, blockage, or leakage.
- Route the power cord and vacuum hose behind the machine and away from the grinding path.
- Verify that the electrical supply is **220V, 60Hz, single phase** and compatible with the machine's **NEMA L6-20P** plug and 15A rated current.
- Make sure the operator handle is adjusted to a comfortable working position and securely locked.
- Make sure the emergency stop is released and the normal start/stop control is in the **OFF** condition before connecting the machine to electrical power.
- Make sure all bystanders and unnecessary personnel are clear of the work area.

WARNING: Do not start the grinder if tooling is loose or damaged, guards or the dust shroud are missing, electrical components are damaged, or any condition exists that could make operation unsafe.

Starting the 20FG

1. Position the grinder on a stable work surface with the grinding head and installed tooling properly positioned against the floor.
2. Make sure the operator handle is securely locked in the desired operating position.
3. Connect the vacuum hose to the grinder and start the dust extractor.
4. Connect the grinder to the proper grounded electrical supply.
5. Check the LED display and controls for any indication of an abnormal electrical or machine condition.

6. Take the normal operating position behind the machine with stable footing and both hands on the operator handle.
7. Make sure the power cord and vacuum hose remain behind and clear of the grinding path.
8. Start the grinder using the normal start control.
9. Maintain firm control of the handle as the grinding head starts. Be prepared for initial machine movement or torque.
10. Allow the grinding head to reach normal operating speed and confirm that the machine is operating smoothly before beginning the grinding pass.

WARNING: If the grinder develops excessive vibration, unusual noise, erratic movement, burning odor, or any other abnormal condition during startup, switch the machine OFF immediately and disconnect electrical power. Determine and correct the cause before restarting.

Grinding Operation

1. Guide the grinder across the floor using slow, controlled movement.
2. Use overlapping passes appropriate for the installed tooling, floor condition, and desired surface profile.
3. Maintain steady movement while grinding. Do not allow aggressive grinding tooling to remain stationary in one location, as this can create grooves, depressions, or an uneven surface.
4. Maintain a stable operating position and keep both hands on the handle while the grinding head is rotating.
5. Allow the machine weight and properly selected diamond tooling to perform the grinding. Do not apply excessive downward, upward, or sideways force to the operator handle.
6. Do not intentionally tilt the grinder or operate with only part of the grinding assembly contacting the floor unless a specific procedure expressly requires it.
7. Maintain awareness of the power cord and vacuum hose throughout operation. Keep both behind the machine and away from the grinding head.
8. Monitor dust collection continuously. Stop grinding if the dust extractor loses suction, the vacuum hose becomes blocked or disconnected, the dust shroud is damaged, or excessive visible dust is released.
9. Pay attention to changes in machine sound, vibration, movement, grinding performance, or electrical operation.
10. Stop the machine immediately if excessive vibration, unusual noise, erratic movement, overheating, burning odor, repeated electrical overload, tooling movement, or another abnormal condition occurs.
11. Periodically stop the machine, disconnect electrical power, and inspect the grinding tooling for wear, damage, looseness, or uneven wear. Rotate or replace tooling as necessary to maintain consistent grinding performance.
12. Use additional caution when approaching walls, edges, floor openings, transitions, slopes, or other areas where machine movement may be restricted or loss of control could occur.

IMPORTANT: Grinding performance depends on the material, concrete hardness, diamond bond and grit, tooling condition, machine pressure, surface condition, and operator technique. Do not increase grinding pressure excessively in an attempt to compensate for unsuitable or worn tooling.

Stopping the Machine

1. Bring the grinder to a controlled position while maintaining a firm grip on the operator handle.
2. Switch the grinder **OFF** using the normal stop control.
3. Maintain control of the machine and keep hands and feet away from the grinding head until all rotating components have come to a complete stop.
4. Disconnect the power plug before leaving the machine unattended or before changing tooling, clearing an obstruction, cleaning, inspecting, adjusting, transporting, or servicing the grinder.
5. Allow the dust extractor to continue operating briefly, when appropriate, to remove residual airborne dust and clear dust remaining within the shroud and vacuum hose.
6. Switch off the dust extractor after grinding operations are complete.

Emergency Stop

Use the emergency-stop button when an unsafe or emergency condition requires the grinder to be stopped immediately.

1. Press the **Emergency Stop** button.
2. Maintain control of the machine until the grinding head and all moving components have come to a complete stop.
3. Disconnect the grinder from electrical power.
4. Identify and correct the condition that required the emergency stop before returning the machine to service.
5. Reset the emergency-stop button only after the machine is safe to operate and the normal start control is in the **OFF** condition.
6. Reconnect electrical power and restart the machine using the normal starting procedure.

IMPORTANT: The emergency-stop button is a safety device and should not be used as the normal method of stopping the grinder.

OPERATING REMINDERS AND ABNORMAL CONDITIONS

Operating Reminders and Prohibited Practices

- Do not operate the grinder without the dust shroud properly installed and in serviceable condition.
- Do not allow the grinding head to contact or run over the power cord, extension cord, or vacuum hose. Route cords and hoses behind the machine and away from the grinding path.
- Do not operate the grinder on steep slopes, unstable surfaces, near unprotected floor openings or edges, or in other locations where the machine's weight or movement could cause loss of control.
- Maintain stable footing and keep both hands on the operator handle while the grinding head is rotating.
- Do not force the machine or use the operator handle as a lever to apply excessive grinding pressure. Allow the machine weight and properly selected diamond tooling to perform the grinding.
- Use compatible, properly installed tooling of the same type, size, and similar wear condition across the grinding heads unless a specific approved tooling configuration requires otherwise.
- Do not operate with missing, loose, damaged, improperly installed, or excessively worn grinding tooling.
- Stop the machine immediately if abnormal vibration, unusual noise, erratic movement, burning odor, overheating, tooling movement, or another abnormal condition develops. Disconnect electrical power and determine the cause before restarting.
- Do not attempt to clear accumulated material, inspect the underside of the machine, or adjust the grinding tooling while the grinder is connected to electrical power.
- Grinding tooling and surrounding components may become hot during operation. Allow them to cool before handling and wear appropriate gloves when necessary.
- Do not operate the machine with the grinding head intentionally tilted or partially supported unless specifically required by an approved operating procedure.
- Never leave the grinder unattended while it is connected to electrical power.
- Do not allow untrained personnel or bystanders within the immediate operating area.

If the Grinding Head Stalls or the Motor Overloads

If the grinding head stops rotating, the motor stalls, an overload-protection device activates, or the machine unexpectedly loses grinding power:

1. Switch the grinder **OFF** immediately.
2. Disconnect the power plug from the electrical supply.
3. Wait for the grinding head and all moving components to come to a complete stop.
4. Do not attempt to rotate, free, or clear the grinding head while the machine is connected to electrical power.
5. Inspect the grinding tooling and underside of the machine for foreign objects, excessive material buildup, loose or damaged tooling, damaged mounting components, or other obstructions.
6. Check that the grinding tooling is appropriate for the material and application and is not being subjected to excessive grinding pressure.
7. Inspect the power cord, plug, receptacle, and extension cord. Verify that the electrical supply is correct and that any extension cord is properly sized for its length.
8. Verify that the power cord and dust-extraction hose are clear of the grinding assembly and are not restricting machine movement.
9. Allow the motor and electrical components to cool if an overload or overheating condition has occurred.

10. Correct the cause of the stall or overload before reconnecting electrical power.
11. After correcting the condition, return the grinder to its normal operating position and restart it according to the normal starting procedure.

WARNING: Repeated stalling, overload activation, circuit tripping, abnormal vibration, overheating, or loss of power indicates a condition that must be investigated and corrected. **Do not repeatedly reset an overload device or circuit breaker and continue operating the machine without determining the cause.** If the cause cannot be identified and safely corrected, discontinue use and contact BLUEROCK Tools for technical assistance.

BLUEROCK® TOOLS

PERIODIC INSPECTION AND MAINTENANCE

WARNING

Disconnect the grinder from electrical power before cleaning, inspection, adjustment, tooling changes, or service.

After-Use Cleaning and Inspection

Proper cleaning and inspection after each use will help maintain safe operation and extend the service life of the 20FG.

1. Switch the grinder **OFF**, disconnect the power plug from the electrical supply, and wait for the grinding head and all moving components to come to a complete stop.
2. Allow the motor, grinding tooling, and other components to cool before cleaning or inspection.
3. Use the connected dust extractor or another suitable dust-control method to remove accumulated concrete dust and debris from the dust shroud, grinding-head area, frame, wheels, motor ventilation openings, and accessible surfaces.
4. **Do not use compressed air to blow concrete dust from the machine where doing so could create an airborne dust hazard or force abrasive dust into the motor, bearings, controls, or electrical components.**
5. Do not wash the machine with a pressure washer or direct water spray at the motor, controls, LED display, switches, electrical enclosures, bearings, power plug, cable connections, or other electrical components.
6. Inspect the grinding tooling for cracks, chips, excessive or uneven wear, looseness, or other damage. Replace damaged or excessively worn tooling before the next use.
7. Inspect the magnetic tooling holders, magnets, retaining sleeves, fixing pins, cushions/shock pads, and related mounting components for damage, looseness, contamination, or excessive wear.
8. Clean the magnetic holders and tooling-mounting surfaces as necessary. Keep these surfaces free of concrete dust, metal particles, and other debris that could prevent proper tooling installation.
9. Inspect the dust shroud, vacuum port, vacuum-hose connection, and related components for wear, damage, blockage, or leakage.
10. Inspect the power cord and NEMA L6-20P plug for cuts, abrasion, crushing, exposed conductors, loose components, discoloration, heat damage, or other defects.
11. Check accessible nuts, bolts, handle locks, transport wheels, weight-retention components, and other accessible fasteners for looseness or damage.
12. Correct any damage, excessive wear, looseness, or other unsafe condition before the machine is used again.

WARNING: Do not clean, inspect, adjust, or service the underside of the grinder while the machine is connected to electrical power.

Regular Maintenance

Regular inspection and maintenance are necessary to keep the 20FG operating safely and efficiently. Inspection frequency should be increased when the machine is used heavily or in particularly dusty or demanding conditions.

- Inspect and tighten accessible fasteners regularly. Pay particular attention to fasteners during the first several hours of operation and after transportation.
- Inspect the operator handle, folding mechanism, locking components, and adjustment points for looseness, wear, or damage.
- Inspect the transport wheels, wheel shafts, and related mounting components for wear, looseness, and proper operation.
- Inspect the grinding-head assembly and tooling mounting system regularly for abnormal wear, looseness, or damage.
- Inspect the grinding-head cushions, shock pads, magnets, retaining sleeves, fixing pins, and related components regularly. Replace damaged or excessively worn components.
- Keep the magnetic tooling holders and mating surfaces clean and free of accumulated dust and debris.

- Keep the motor ventilation openings clean and unobstructed. Do not operate the machine if airflow to the motor is restricted.
- Inspect the dust shroud and vacuum connection regularly and replace damaged components that prevent effective dust collection.
- Inspect the power cord and plug regularly. Replace damaged electrical components before operating the machine.
- Check the emergency-stop function and normal operating controls regularly for proper operation.
- Inspect the machine for unusual vibration, noise, overheating, fluid leakage from the gearbox, or other changes in normal operation.
- Have internal electrical components, motor components, gearbox/drive components, and other internal systems inspected or serviced by qualified personnel when necessary.

IMPORTANT: Replace damaged, excessively worn, or defective components before returning the grinder to service. Do not continue operating the 20FG when a condition exists that could affect safe operation or proper control of the grinding system.

Storage

Before storing the 20FG:

- Switch the machine **OFF**, disconnect it from electrical power, and allow the machine and grinding tooling to cool.
- Clean the grinder and remove accumulated concrete dust and debris.
- Inspect the machine for damage, loose components, worn tooling, or maintenance requirements that should be corrected before the next use.
- Coil and secure the power cord so that it cannot be crushed, cut, sharply bent, or otherwise damaged during storage.
- Disconnect and properly store the vacuum hose and loose accessories.
- Place the folding handle in an appropriate storage position and make sure the locking mechanism is securely engaged.
- Store the machine upright on a stable, level surface where it cannot roll, tip, or fall.
- Store the grinder in a clean, dry, secure location protected from rain, standing water, excessive moisture, corrosive materials, extreme temperatures, and unauthorized use.
- Store grinding tooling and adapters in a dry location where they are protected from impact, moisture, contamination, and damage.
- Keep the machine and its accessories out of the reach of children and untrained persons.

Before returning a stored machine to service, perform the complete pre-operation inspection described in this manual.

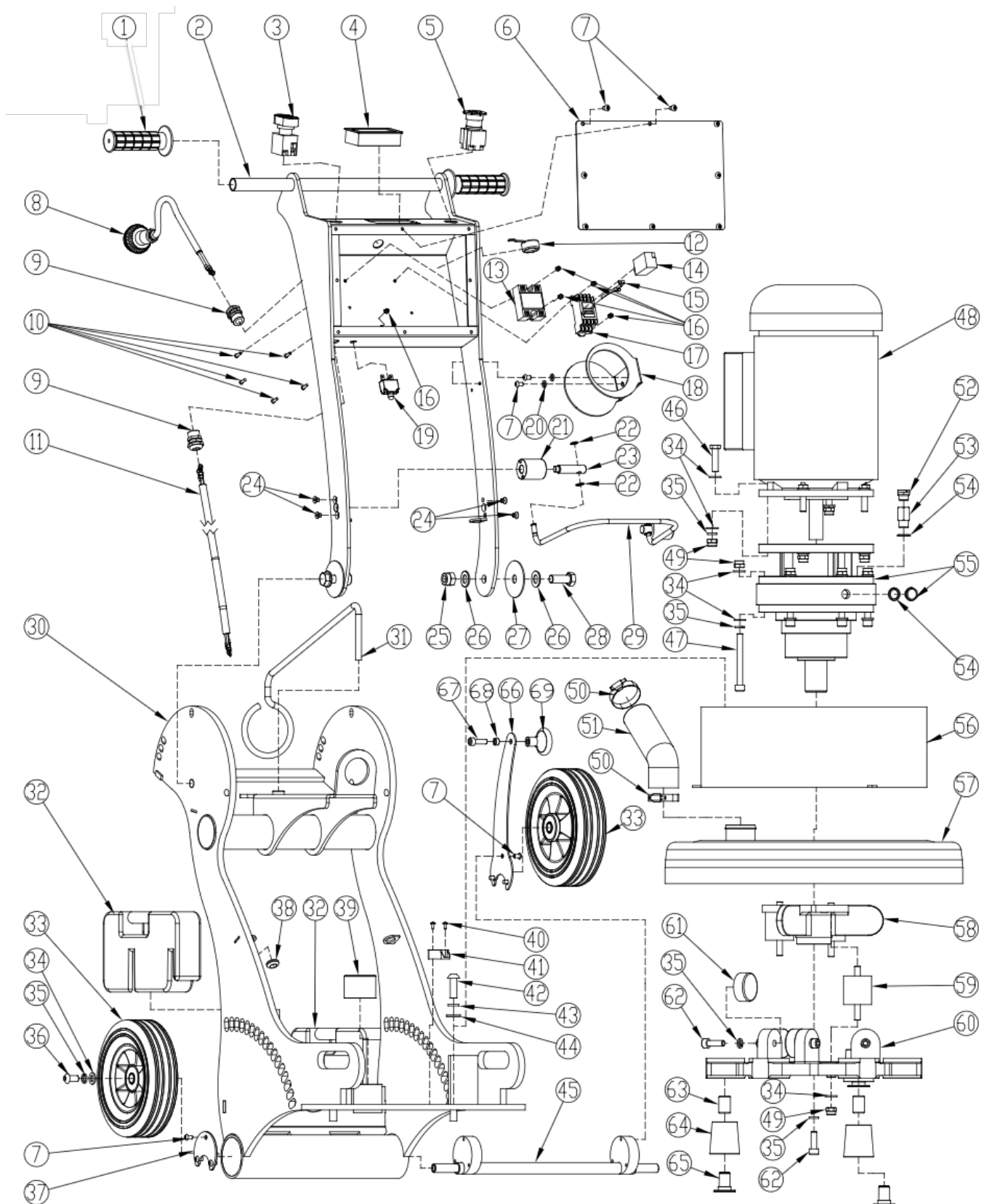
TROUBLESHOOTING

Condition	Possible Cause	Corrective Action
Machine does not start	No electrical power; incorrect supply voltage; emergency stop engaged; overload protection activated; damaged power cord or plug; control fault	Verify the 220V, 60Hz power supply and receptacle; confirm plug connection; release emergency stop; allow overload protection to reset as applicable; inspect cord and plug for visible damage. If the machine still does not start, discontinue use and contact BLUEROCK Tools.
Machine starts, then stops	Overload condition; inadequate supply voltage; undersized or excessively long extension cord; grinding head obstructed; excessive grinding load; electrical fault	Switch OFF and disconnect power. Inspect for obstruction or excessive load. Verify supply voltage and extension-cord size. Allow the machine to cool if necessary. If the condition repeats, discontinue use and contact BLUEROCK Tools.
Motor runs but grinding performance is poor	Incorrect tooling; worn or glazed diamond tooling; unsuitable diamond bond or grit; insufficient grinding pressure; tooling not contacting floor evenly	Verify that tooling is appropriate for the material and application. Inspect tooling condition and wear. Replace or dress tooling as appropriate. Check machine leveling and tooling contact.
Grinding head does not rotate normally	Obstruction; loose or damaged tooling; drive-system problem; gearbox problem	Switch OFF and disconnect power immediately. Inspect the grinding head and tooling for visible obstruction or damage. Do not continue operation if the grinding head does not rotate normally. Contact BLUEROCK Tools if the cause is not readily identified.
Excessive or abnormal vibration	Loose, damaged, mismatched, or unevenly worn tooling; debris between tooling and mounting surfaces; damaged tooling holder; worn cushions/shock pads; grinding-head damage	Stop immediately and disconnect power. Inspect all tooling and mounting surfaces. Clean and reinstall or replace tooling as necessary. Inspect holders, cushions, shock pads, and retaining components. Do not operate until the cause is corrected.
Machine pulls to one side or grinds unevenly	Uneven tooling wear; mismatched tooling; machine not level; damaged holder or cushion; uneven floor conditions	Inspect the complete tooling set for consistent type and wear. Check machine leveling and tooling contact. Replace worn or damaged components and readjust the machine as necessary.

WARNING: Always switch the machine OFF, disconnect the power plug, and wait for all moving components to stop before inspecting the grinding head, tooling, or underside of the machine. Do not perform internal electrical, motor, or drive-system repairs unless qualified to do so.

IMPORTANT: If a problem cannot be identified and safely corrected using the procedures in this manual, discontinue use of the machine and contact BLUEROCK Tools for technical assistance. Do not continue operating a machine that exhibits repeated overload, abnormal vibration, overheating, unusual noise, electrical problems, or other unsafe conditions.

EXPLODED PARTS DIAGRAM



No.	Part Name	Qty	No.	Part Name	Qty
1	Handle	2	35	Spring gasket $\Phi 10$	19
2	Upper bracket	1	36	Hexagonal round cup screw M10X16	2
3	Start button	1	37	Axle stop	1
4	Data display instrument	1	38	Protective cable sleeve $\Phi 12$	3
5	Emergency stop switch	1	40	M4X8 with flat cushion Phillips screws	2
6	Control pad	1	41	Water level	1
7	Half round head hex socket screw M6X10	16	42	Hexagonal round cup screw M12X35	3
8	Power plug	1	43	Spring gasket $\Phi 12$	3
9	Nylon waterproof joint	3	44	Flat pad $\Phi 12$	3
10	Hexagonal half round head screws M4x20	5	45	Wheel shaft	1
11	Power line	1	46	Outer hex screw M10X40	4
12	Current inductor	1	47	Hex socket screw M10X90	6
13	Solid state relay	1	48	Electrical machinery	1
14	Relay	1	49	Lock nut M10	13
15	Relay latch	1	50	Laryngeal cavity $\Phi 27-51$	2
16	Lock nut M4	5	51	Steel wire hose 1D50X200mm	1
17	Relay socket	1	52	Pressure balancer	1
18	Cup holder	1	53	Balancer adapter	1
19	Overload protection switch	1	54	Combined seal gasket $\Phi 16$	2
20	Flat pad $\Phi 6$	2	55	gearbox	1
21	Handle fixing sleeve	2	56	Dust collector	1
22	Shaft circlip $\Phi 8$	4	57	Dust cover	1
23	Handle pin	2	58	Motor output flange	1
24	Hexagonal countersunk head screw M6X8	4	59	Up and down cushion	3
25	Lock nut M14	2	60	Mounting plate	1
26	Flat pad $\Phi 14$	4	61	L/R shock pad	6
27	Gasket $\Phi 64*\Phi 14.3*2$	2	62	Hex socket screw M10X30	7
28	Outer hexagon bolt M14x40	2	63	Strong magnet $\Phi 20X30$	3
29	Angle control handle	1	64	Millstone retaining sleeve	3
30	Lower support frame	1	65	Fixing pin for the mill	3
31	Vacuum pipe support rod	1	66	Leveling plate	1
32	Clump weight	2	67	Hex socket screw M8X35	1
33	Wheels 8 inches	2	68	Round nut M8	1
34	Flat pad $\Phi 10$	4	69	Horizontal adjusting handle	1

LIMITED WARRANTY

1-Year Limited Warranty

The BLUEROCK 20FG is covered by a 1-Year Limited Warranty against defects in materials and workmanship, subject to the BLUEROCK Tools Limited Warranty terms and conditions in effect at the time of purchase.

During the applicable warranty period, BLUEROCK Tools may, at its discretion and subject to the terms of the warranty, repair or replace a covered component determined to be defective in materials or workmanship.

This limited warranty applies only when the machine has been operated, maintained, transported, and stored in accordance with this manual.

Warranty coverage does not extend to damage or failure resulting from normal wear, misuse, abuse, improper operation, inadequate maintenance, unauthorized modification or repair, accidents, improper transportation or storage, unsuitable accessories or grinding tooling, or operation outside the specifications and intended use of the machine.

Normal Wear and Consumable Components

- Diamond grinding wheels, plugs, and other grinding consumables
- Grinding-head cushions and shock pads
- Magnets, retaining sleeves, fixing pins, and other tooling-retention components subject to normal wear
- Bearings and seals
- Wheels and wheel components
- Dust shrouds, hoses, and couplings
- Filters and vacuum-system consumables
- Other components subject to normal deterioration through use

Warranty Exclusions

- Misuse, abuse, neglect, or operator error.
- Use of the machine for purposes other than its intended use.
- Failure to follow the operating, safety, electrical, or maintenance instructions provided with the machine.
- Continued operation after abnormal vibration, overload, unusual noise, overheating, or other indication of a problem.
- Use of incorrect, damaged, improperly installed, or unsuitable grinding tooling.
- Operation without required guards, dust shroud, or safety components.
- Unauthorized alteration, modification, repair, or disassembly.
- Accident, impact, dropping, improper handling, or improper transportation.
- Improper storage, corrosion, water damage, contamination, or operation outside stated specifications.
- Normal wear and deterioration associated with ordinary use.

Obtaining Warranty Assistance

If you believe the 20FG has developed a defect covered by warranty, contact BLUEROCK Tools before returning or shipping the machine.

- Proof of purchase
- Machine model
- Machine serial number
- Date of purchase
- Description of the problem
- Photographs or video when requested
- Additional diagnostic information reasonably necessary to evaluate the claim

Do not ship or return the machine to BLUEROCK Tools without first obtaining return or service instructions. Unauthorized shipments may be refused.

Replacement Parts and Technical Support

Replacement and service parts are available for the 20FG through BLUEROCK Tools. BLUEROCK Tools also provides Lifetime U.S.-Based Technical Support for assistance with machine operation, troubleshooting, maintenance, and replacement-part identification.

IMPORTANT: This manual provides a summary of warranty coverage for the 20FG and is not intended to replace the complete BLUEROCK Tools Limited Warranty terms and conditions. In the event of a conflict, the applicable BLUEROCK Tools Limited Warranty terms and conditions in effect at the time of purchase will govern.

BLUEROCK® TOOLS