OPERATING INSTRUCTIONS

FLEXTOOL PORTAGRIND®
FCG-125

Version 2.0 (September 2025)

FOR MORE INFORMATION VISIT flextool.com.au

CONTENTS

INTRODUCTION

Thank you for your selection of Flextool equipment.

Flextool has specialised in the design and manufacture of quality products since 1951 and have taken care in the assembly and testing of this product. Should service or spare parts be required, prompt and efficient service is available from our extensive dealer network.

The goal of Flextool is to provide power equipment that helps the operator works safely and efficiently. The operator is the most crucial safety component for this equipment and using caution and sound judgement is the best way to prevent injury. While we cannot cover all potential hazards, we have highlighted some key points. Operators should pay attention to and follow Caution, Warning, and Danger signs on equipment and in the workplace, as well as reading and following the safety instructions for each product in the operating instructions manual.

It is important to understand how each machine operates. Even if you have had experience with similar equipment previously, inspect each machine carefully before use. Get the “feel” of it and familiarise yourself with its capabilities, limitations, potential hazards, how it operates, and how it stops.

APPLICATIONS

The Flextool PortaGrind FCG-125 is a high-performance handheld surface grinder, purpose-built for the detailed grinding and surface preparation of concrete and masonry substrates, especially in confined or hard-to-reach areas. Designed to complement larger walk-behind concrete grinders, the Flextool PortaGrind is ideal for precision work where control, access, and accuracy are critical.

The Flextool PortaGrind FCG-125 is commonly used in a wide variety of construction, renovation, and repair projects, and is especially useful in tasks that require edge grinding, localized correction, or surface touch-ups.

Key Application Areas:

- **Edge grinding:** Perfect for grinding and smoothing concrete edges near walls, columns, and other obstructions where larger machines cannot reach.
- **Surface preparation**: Use to prepare small or detailed areas of concrete for the application of coatings, sealers, or adhesives by removing laitance, contaminants, or surface irregularities.
- **Patch leveling:** Effective for levelling small concrete repairs or patches to blend them into the surrounding surface.
- **Coating and residue removal:** Capable of removing thin coatings, adhesives, paint, epoxy, and other residues from concrete surfaces, particularly in spot repair or prep work.

The Flextool PortaGrind FCG-125 offers a lightweight and manoeuvrable solution for professionals seeking efficient surface preparation in tight corners, edges, and restricted spaces where precision and control are paramount.

IMPORTANT NOTE

The Flextool PortaGrind FCG-125 is <u>not</u> designed or intended for cutting applications. It does not include a cutting guard, or accessories suited to such operations and should only be used for grinding related tasks in accordance with safety guidelines.

FUNCTIONS AND KEY FEATURES

The Flextool PortaGrind FCG-125 is a compact and powerful handheld concrete grinder, purpose built for edge work and tight access grinding applications. This portable unit is perfect for grinding along walls, slab edges, around columns, and in hard-to-reach spaces where larger machines can't go.

Fitted with a 1500 W electric motor featuring soft start function, the Flextool PortaGrind delivers efficient, controlled grinding performance. The variable speed dial allows users to adjust grinding speed from 3000 to 8500 rpm, ensuring optimal results across a variety of surfaces and materials.

The Flextool PortaGrind FCG-125 includes the following key features.

Ergonomic D-handle design
Provides improved comfort, control, and stability – especially in tight or awkward spaces

Variable speed control
- Enables precise adjustment of the grinding speed to suit a wide range of materials and grinding applications
- 3000 to 8500 rpm

Powerful 1500 W motor
Provides efficient and consistent grinding performance, ideal for demanding edge and corner work

Soft-start function
Reduces start-up torque for smoother operation and extended motor life

Floating dust shroud with 32 mm vacuum outlet
Maintains close contact with the surface for effective dust extraction when connected to a dust collector

Safety trigger system
Dual switch function provides enhanced safety preventing unwanted start-up

Spindle lock mechanism
Quick and hassle-free cup wheel changes

Convertible dust shroud
Hinged shroud design enables precise edge grinding for clean, professional results

GENERAL SAFETY AND HAZARD INSTRUCTIONS

Always follow the safety instructions outlined in this manual and review the associated product Risk Assessment prior to operating this equipment. Ensure that safety information and equipment decals are always well-maintained and legible. Compliance with safety instructions is mandatory.

For additional safety information relating to engines, motors and batteries, please refer to the manufacturer's Operating Instructions.

RISKS AND HAZARDS

- NEVER allow an untrained person to operate equipment without adequate instruction.
- ENSURE all users read, understand, and follow the operating instructions.
- SERIOUS INJURY may result from improper or careless use of this equipment.
- NEVER operate this equipment without personal protective equipment.
- NEVER operate this equipment when feeling unwell due to illness, fatigue, or medication.
- ALWAYS keep a first aid kit and appropriate fire extinguishers in accessible location.
- ALWAYS follow appropriate lifting and site handling procedures.

MECHANICAL HAZARDS

- DO NOT operate the equipment unless all protective guards are in place.
- ENSURE where applicable to remove spark plugs, disconnect battery from motor and isolate power cable from power outlet prior to undertaking any maintenance and repair.
- AVOID contact with hot surfaces such as engines, batteries and motors, as this can lead to severe burns.
- KEEP hands and feet clear of rotating or moving parts to avoid injury.
- ONLY trained and competent personnel should perform equipment repairs and maintenance.
- ONLY licenced personnel should perform electrical repairs and maintenance.

FIRE AND EXPLOSION HAZARDS

- DO NOT operate this equipment in combustible environments.
- DO NOT operate this equipment in the vicinity of sparks, naked flames or other sources of ignition.
- DO NOT smoke near equipment.
- IMMEDIATELY discontinue operation if damage to wiring or other electrical components is identified.
- ALWAYS ensure power leads are fully uncoiled during operation.

NOISE HAZARDS

- EXCESSIVE NOISE can lead to temporary or permanent loss of hearing.
- ALWAYS wear approved hearing protection to limit noise exposure.

VIBRATION HAZARDS

- EXCESSIVE or prolonged exposure to body and hand vibration, can cause temporary and permanent injury.
- ENSURE any abnormal or excessive vibration in equipment is reported and repaired.
- ALWAYS grip controls as lightly as possible, whilst in full control, using vibration absorbing gloves.

PERSONAL PROTECTIVE EQUIPMENT

- ALWAYS wear appropriate personal protective equipment as outlined in the safety decal section of this manual.

ENVIRONMENTAL SAFETY

- ONLY operate equipment within prescribed times as determined by local noise control laws.

SILICOSIS AND RESPIRATORY HAZARDS

- Workplace processes such as crushing, cutting, drilling, grinding, sawing or polishing of masonry, stone, concrete and other man-made products may produce dust containing crystalline silica. Exposure to crystalline silica can be extremely harmful to your health, causing a wide range of serious or fatal respiratory diseases, including silicosis. Some authorities have even classified respirable crystalline silica as a known carcinogen that has the potential to cause cancer.
- To reduce the risk of exposure to crystalline silica, it is recommended to use a H-Class dust collector or vacuum system in conjunction with this equipment to capture dangerous dust partials. It is also crucial to strictly adhere to all safety advice included within this manual.
- It is recommended that all operators of equipment used in the above listed activities familiarise themselves with the “Working with silica and silica containing products” safety handbook available on the Safe Work Australia website: www.safeworkaustralia.gov.au

KICKBACK AND SAFETY PRECAUTIONS

Kickback is a sudden and forceful reaction that occurs when the grinding cup wheel binds or catches during operation. This can cause the tool to forcefully pull in the opposite direction of the cup wheels rotation, potentially leading to loss of control and serious injury.

Kickback is typically the result of improper tool use, incorrect working techniques or loss of concentration during tool operation. It can be minimized or avoided by following these safety practices:

- ALWAYS maintain a secure grip on the tool and keep your arms and body positioned to manage any unexpected movement.
- KEEP hands away from the rotating accessory. A kickback can cause the tool or accessory to move unpredictably, posing a risk of injury.
- AVOID standing in the potential path of kickback. Position yourself away from the expected movement direction of the tool should a bind occur.
- USE extra caution when working near corners, edges, or uneven surfaces. These areas are more likely to cause the grinding cup wheel to bind or catch causing kickback.

ADDITIONAL HAZARDS

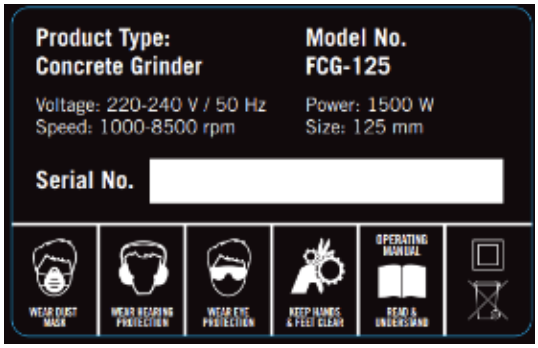
- ALWAYS maintain a clean and safe work environment, free from obstacles and tripping hazards as slips, trips and falls are major causes of serious injury or death.
- ALWAYS maintain good footing when operating the equipment.
- NEVER expose electrical equipment and leads to water
- ENSURE if an extension cord is used, it is suitable for outdoor use and is in good working condition. Never connect multiple extension cords and limit the extension cord length to 20 metres. Do not operate the equipment using coiled or tangled extension leads.
- ALWAYS wear gloves when removing diamond grinding shoes as they can become very hot during operation.
- **For further information on hazards, please refer to the risk assessment document available on Flextool.com.au.**

SAFETY DECAL AND LABELS

Before operating this equipment, it is essential to read this entire manual and follow all safety precautions outlined in the manual and the product risk assessment, which can be found on the Flextool website (www.flextool.com.au).

Failure to understand and follow these safety warnings may result in injury. The safety decals on the machine play a crucial role in ensuring the operator's safety. If any decal is damaged or illegible, it must be replaced immediately.

The decals associated with the operation of this equipment are detailed in the manual.

	**Dust –** Always wear a dust mask while using equipment. Use of this equipment without the use of a dust mask can lead to sever respiratory illness. **Noise –** Always wear hearing protection while using equipment. Use of this equipment without the use of hearing protection can lead to hearing loss. **Eye Protection –** Always wear eye protection while using equipment. **Rotating Parts –** Keeps hands and feet clear of rotating and moving parts to avoid entanglement. **Operating Manual –** Read and understand the operating manual in full prior to operating equipment
	**Electrical Hazard –** Always disconnect power when changing grinding cup wheels to avoid injury.

OPERATION

It is essential to operate the equipment and its components strictly in accordance with the provided operating instructions. Take the time to learn how each machine works, even if you have previously used similar equipment. Carefully inspect each machine before use, and familiarize yourself with its capabilities, limitations, potential hazards, and how it operates and stops.

BEFORE GRINDING

- Ensure there is a clear and safe working environment that is free from hazards prior to starting operation.
- Ensure the grinder is switched off and unplugged from the wall outlet before changing or fitting the grinding shroud and grinding cup wheels.
- Concrete grinders must always be used in conjunction with a suitable dust collector equipped with H-Class filtration for the safe extraction and capture of concrete dust. This is done by connecting the hose of the dust collector to the grinding shroud.

FITTING THE GRINDING SHROUD

- Ensure the grinder is disconnected from the power supply.
- Position the grinding shroud with the locking mechanism open, as shown in Fig 1.
- Align the grinder above the grinding shroud as depicted in Fig 2 and push it into place as shown in Fig 3, making sure the shroud is seated correctly, with the dust outlet facing to the rear of the grinder.
- Once the shroud is in position, push the locking lever into place as shown in Fig 4. The grinding shroud should now be securely attached to the grinder.

Fig 1

Fig 2

Fig 3

Fig 4

FITTING A GRINDING CUP WHEEL

- Ensure the grinder is disconnected from the power supply.
- Turn the grinder upside down so that the large “D” shape handle is resting on the ground or bench and the drive spindle is facing upwards.
- Secure the rear flange onto the drive spindle, ensuring proper alignment to prevent slipping or rotation.
- Position the grinding cup wheel onto the rear flange ensuring it locates into position correctly.
- Thread the front flange onto the grinder spindle paying particular attention to its orientation as highlighted in Fig 1. and Fig 2. The front flange’s orientation is specific to the material thickness of the cup wheel. If the cup wheel thickness is greater than 6 mm, adopt flange orientation of Fig 1, if the cup wheel thickness is less than 6 mm, adopt flange orientation of Fig 2.
- Press and hold the orange spindle lock button to prevent rotation.
- Using the supplied pin wrench, tighten the front flange by turning it clockwise. Once fully tightened, release the spindle lock button and remove the wrench.

Fig 1

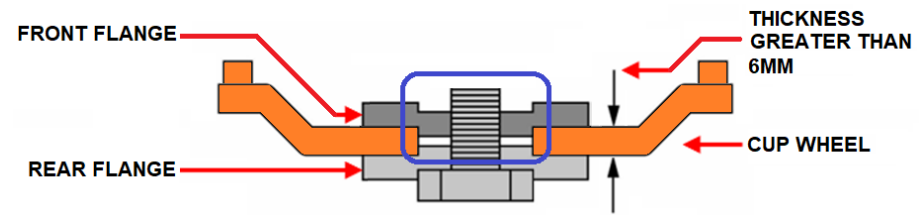
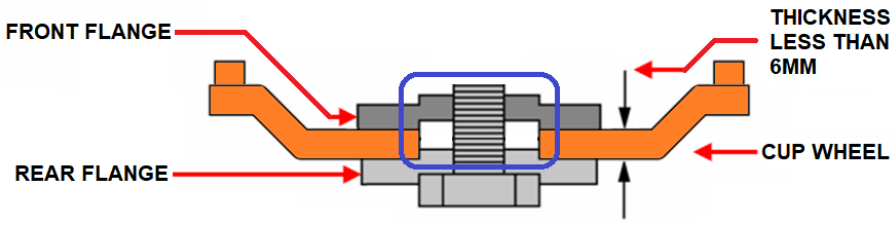


Fig 2



REMOVING A GRINDING CUP WHEEL

- Ensure the grinder is disconnected from the power supply.
- ALWAYS wear gloves when removing cup wheels as they can become very hot during operation.
- Press and hold the orange spindle lock button to secure the drive spindle in place.
- Using the supplied pin wrench, loosen the front flange by turning it counter-clockwise.
- With the front flange now loose, release the orange spindle lock button and remove both the front flange and grinding cup wheel from the drive spindle.

GRINDING CUP WHEEL SELECTION

Description	Blade Diameter mm (in)	Arbour Size mm (in)	Segment Height mm (in)	Max rpm		Product Code
Flextool BladeTec Diamond Cup Wheel – Turbo Segment (Course)	125 (5)	22.2 (0.874)	6 (0.236)	12,000	✓	FT102336-UNIT
Flextool BladeTec Diamond Cup Wheel – Turbo Segment (Fine)	125 (5)	22.2 (0.874)	6 (0.236)	12,000	✓	FT102337-UNIT
Flextool BladeTec Diamond Cup Wheel – Spiral Segment	125 (5)	22.2 (0.874)	7 (0.275)	12,000	✓	FT102341-UNIT
Flextool BladeTec Diamond Cup Wheel – PCD Segment	125 (5)	22.2 (0.874)	–	12,000	✓	FT102341-UNIT

STARTING THE GRINDER

- Ensure the grinder is plugged into a suitable wall power outlet.
- Connect the dust shroud outlet to an appropriate dust collector for effective dust control.
- Hold the Flextool PortaGrind securely with both hands and adopt a stable, balanced stance.
- Lift the grinding cup wheel slightly off the surface. Press and hold the safety lock button on the handle, then squeeze the on/off trigger to power on the grinder.

GRINDING

- **Setting the speed:** Begin with the lowest speed setting (3000 rpm). Gradually increase speed as needed based on the grinding cup wheel type and substrate conditions. The grinder can operate up to 8500 rpm.
- **Start grinding:** Gently lower the grinding cup wheel onto the surface.
- **Maintain movement:** Move the grinder in a steady, overlapping motion to ensure a consistent and even finish.
- **Avoid excess pressure:** Do not force the grinder or apply excessive downward pressure. Allow the tool's weight and the rotating action of the cup wheel to do the work.
- **Keep it flat:** Always keep the grinding cup wheel level with the surface. Tilting or angling the grinder can concentrate pressure and cause gouging or uneven removal.
- **Adjust the shroud:**
    - Use the closed position of the shroud for general grinding to maximize dust containment.
    - For edge grinding or working around obstacles, switch to the open position to allow the cup wheel to access tight areas more easily.

STOPPING THE GRINDER

- Release the on/off trigger to stop the grinder.
- Allow the cup wheel to come to a complete stop before placing the tool down.

SERVICE AND PREVENTIVE MAINTENANCE

Qualified personnel should be assigned the task of performing service and maintenance on this equipment. To ensure safe operation and optimal performance, thorough inspection and on time maintenance is imperative.
Consistently monitor the machine's condition and proactively maintain it in its optimal state.

- ONLY licenced personnel should perform electrical repairs and maintenance.
- ENSURE mechanical repairs and maintenance of the equipment is performed only by trained and competent personnel.
- ONLY use genuine parts and accessories to ensure compatibility and safe operation of equipment.
- ENSURE where applicable to remove spark plugs, disconnect battery from motor and isolate power cable from power outlet prior to undertaking any maintenance and repair.
- ENSURE guards, safety switch and any other safety mechanisms are free from damage and installed prior to testing and returning product to service.
- ALWAYS wear PPE when servicing and repairing equipment (gloves, glasses, dust mask and steel cap boots) to reduce risk of cuts, burns, crushing, eye injuries, skin exposure to fuel or oils, dust inhalation, etc.

SERVICE MAINTENANCE SCHEDULE

All parts and components should be replaced if signs of deterioration, cracks, damage or wear has been identified to maintain equipment safety and performance.

Flextool PortaGrind Maintenance Schedule						
		Daily	Weekly or every 20hrs	Monthly or every 50hrs	Quarterly or every 100hrs	Yearly or every 200hrs
Electrical Leads	Inspect for damage	Y				
Dust Shroud	Inspect for wear, deformity or cracks	Y				
Carbon Brushes	Inspect for signs of breakage or burning on the brushes. Clean and replace when necessary			Y		

STORAGE AND TRANSPORT

It is essential to prioritise safety and proper handling when it comes to the storage, lifting, and transportation of equipment. Following safe storage practices ensures the longevity and operational reliability of the equipment. During transportation and lifting it is important to exercise caution to avoid any potential harm and to adhere to the following guidelines.

- ALWAYS follow correct manual handling techniques.
- ALWAYS unplug the power supply cord before storing an electric tool or appliance.
- NEVER drag or pull the equipment by the hose or power cord.
- ENSURE all electrical equipment, power supply leads and accessories are stored in a dry environment away from moisture.

PRODUCT DECOMMISSIONING

Decommissioning is a controlled process used to safely retire a piece of equipment that is no longer serviceable. If the equipment poses an unacceptable and unrepairable safety risk due to wear or damage or is no longer cost effective to maintain (beyond life-cycle reliability) and is to be decommissioned or dismantled, please adhere to the following guidelines.

- ALWAYS contact your local council or recycling agency in your area to arrange for proper disposal of:
    - Electrical components and batteries. Exercise caution when handling and transporting batteries.
- CONSIDER recycling all recyclable materials in line with local council or recycling agency capabilities in your area. This can include steel, aluminium, copper, plastics, etc.

TECHNICAL DATA

Model	Grinding Width mm (in)	Operating Weight kg (lb)	Voltage V/Hz	Power W	Grinding Speed rpm	Spindle / Arbour Size mm (in)	Dust Outlet mm (in)	Power Cord Length m (ft)	Product Code
FCG-125	125 (5)	3.85 (8.5)	240 50	1500	3000 to 8500	22.2 (0.87)	32 (1.26)	2.5 (8.2)	FT100509-UNIT

TROUBLE SHOOTING

Efficient troubleshooting is vital for the optimal functioning of this equipment. In addressing issues, a systematic approach is key. This section provides guidance on identifying, analysing, and resolving potential challenges to maintain the equipment's performance and longevity.

Symptom	Possible causes and correction
PortaGrind does not start	• Check there is power supply at the wall outlet by testing the outlet with another power tool or appliance. • Check that all electrical plugs and leads are in good working condition, free from damage and plugged in correctly. Isolate and discontinue use immediately if there is any sign of damage. Have the cord repaired by a qualified electrician or replace if necessary. • Check the ON/OFF switch to ensure that it is switched “ON” • Inspect the carbon brushes. Have the grinder checked by a trained electrical specialist and the carbon brushes replaced if necessary.
PortaGrind is not achieving full operating power or speed	• The tool has been overloaded. Ensure to release the ON/OFF switch and then press it again. Allow the power tool to run under no load for approx. 30 seconds. • There is inadequate power supply getting to the grinder. Check operation using another wall outlet, use a heavier gauge and smaller length extension lead.
PortaGrind vibrates during operation	• Inspect for correct installation of the grinding cup wheel. • Inspect for damage to the cup wheel (i.e. has it dropped a segment and is unbalanced). Discontinue use and dispose of damaged grinding accessories.

Flextool

1956 Dandenong Road, Clayton VIC 3168, Australia
Phone (AUS): 1300 353 986
flextool.com.au
ABN 80 069 961 968