

Ingco Premium Version

INGCO 20V Cordless Angle Grinder Machine Instruction Manual

Model: Premium Version

1. IMPORTANT SAFETY INSTRUCTIONS

Always observe basic safety precautions when using electrical tools to reduce the risk of fire, electric shock, and personal injury. Read all instructions carefully before operating this tool.

General Power Tool Safety Warnings:

- **Work Area Safety:** Keep your work area clean and well-lit. Cluttered or dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Electrical Safety:** Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- **Personal Safety:** Always wear eye protection. Use safety glasses, goggles, or a face shield. Wear hearing protection when operating the tool for extended periods. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing, and gloves away from moving parts.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.
- **Battery Tool Use and Care:** Recharge only with the charger specified by the manufacturer. Use power tools only with specifically designated battery packs.

Angle Grinder Specific Safety Warnings:

- Always use the auxiliary handle provided with the tool.

- Ensure the wheel guard is correctly positioned and securely fastened before operation.
- Never use damaged or incorrect grinding/cutting discs.
- Keep hands clear of the rotating disc.
- Secure the workpiece firmly. Never hold a workpiece in your hand or across your leg.
- Be aware of sparks and flying debris during operation.

2. PRODUCT OVERVIEW

The INCCO 20V Cordless Angle Grinder is designed for cutting and grinding various materials. It features a brushless motor for efficient performance and a cordless design for freedom of movement.



Figure 2.1: Overview of the INCCO 20V Cordless Angle Grinder components. Key parts include the Ergonomically Designed Body, Lock-on Switch, Aluminum Alloy Gear Box, Metal Wheel Guard, Auxiliary Handle, Brushless Motor, Dustproof Screen, and Three-speed Regulation.

Key Components:

- **Brushless Motor:** Provides powerful and efficient operation with extended runtime.
- **Ergonomic Design Body:** For comfortable handling and reduced fatigue.

- **Lock-on Switch:** For continuous operation.
- **Aluminum Alloy Gear Box:** Enhances durability and protection.
- **Metal Wheel Guard:** Protects the user from sparks and debris.
- **Auxiliary Handle:** Provides additional control and comfort, adjustable to two positions.
- **Dustproof Screen:** Helps protect internal components from dust ingress.
- **Three-speed Regulation:** Allows adjustment of rotational speed for different applications.
- **Spindle Lock (M10 thread):** For easy and safe accessory changes.

3. SETUP

3.1 Battery Installation and Charging

The angle grinder operates on a 20V Lithium-ion battery. Ensure the battery is fully charged before use.

1. To install the battery, align the battery pack with the tool's battery port and slide it in until it clicks securely into place.
2. To remove the battery, press the release button on the battery pack and slide it out.
3. To charge the battery, connect the charger to a power outlet and insert the battery pack into the charger. Refer to the charger's manual for specific charging indicators and times.



Figure 3.1: The INGCO 20V Cordless Angle Grinder with the battery pack installed.

3.2 Auxiliary Handle Attachment

The auxiliary handle can be attached to either side of the gear housing for optimal control and comfort, depending on the application and user preference.

1. Screw the auxiliary handle clockwise into one of the threaded holes on the gear housing until it is firmly secured.

3.3 Wheel Guard Adjustment

The wheel guard must be adjusted to protect against sparks and debris during operation.

1. Loosen the screw or lever on the wheel guard.

2. Rotate the guard to the desired position to deflect sparks away from you.
3. Tighten the screw or lever to secure the guard in place.



Figure 3.2: Proper positioning of the wheel guard for safety.

3.4 Disc Installation/Changing

Always ensure the tool is switched off and the battery is removed before changing discs.

1. Press and hold the spindle lock button.
2. Use the provided combination wrench to loosen the outer flange nut by turning it counter-clockwise.
3. Remove the outer flange nut and the old disc.
4. Place the new disc onto the inner flange, ensuring it is correctly seated.
5. Replace the outer flange nut and tighten it clockwise with the wrench while holding the spindle lock button.



Figure 3.3: The spindle lock button facilitates easy disc changes.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

The angle grinder features a slide switch with a lock-off/on feature for continuous operation.

1. To turn on, slide the switch forward. For continuous operation, push the switch further forward until it locks into place.

2. To turn off, release the switch. If locked on, push the switch backward to release it and turn off the tool.

4.2 Variable Speed Control

This model offers three-speed regulation for different material requirements.



Figure 4.1: The angle grinder in operation, demonstrating its variable speed capability (3000/6000/9000 RPM).

1. The speed can be adjusted using the three-speed regulation control located on the tool body.
2. Select the appropriate speed (3000/6000/9000 RPM) based on the material being worked on and the type of disc used. Lower speeds are generally for softer materials or polishing, while higher speeds are for cutting and grinding harder materials.

4.3 Grinding and Cutting Techniques

Always maintain a firm grip on the tool with both hands using the main handle and the auxiliary handle.

1. **Grinding:** Hold the grinder at a slight angle (15-30 degrees) to the workpiece. Apply moderate pressure and move the tool smoothly across the surface.
2. **Cutting:** Hold the grinder perpendicular (90 degrees) to the workpiece. Allow the disc to cut through the material without forcing it. Ensure the workpiece is stable and supported.



Figure 4.2: Proper technique for cutting with the angle grinder.

4.4 Soft Start Function and Restart Safeguard

The tool is equipped with a soft start function for smooth power-up and a restart safeguard for user protection.

- **Soft Start:** Reduces the initial torque, preventing sudden jolts and improving control when starting the tool.
- **Restart Safeguard:** Prevents the tool from automatically restarting after a power interruption if the switch is in the 'on' position. The switch must be manually reset to 'off' and then 'on' to resume operation.

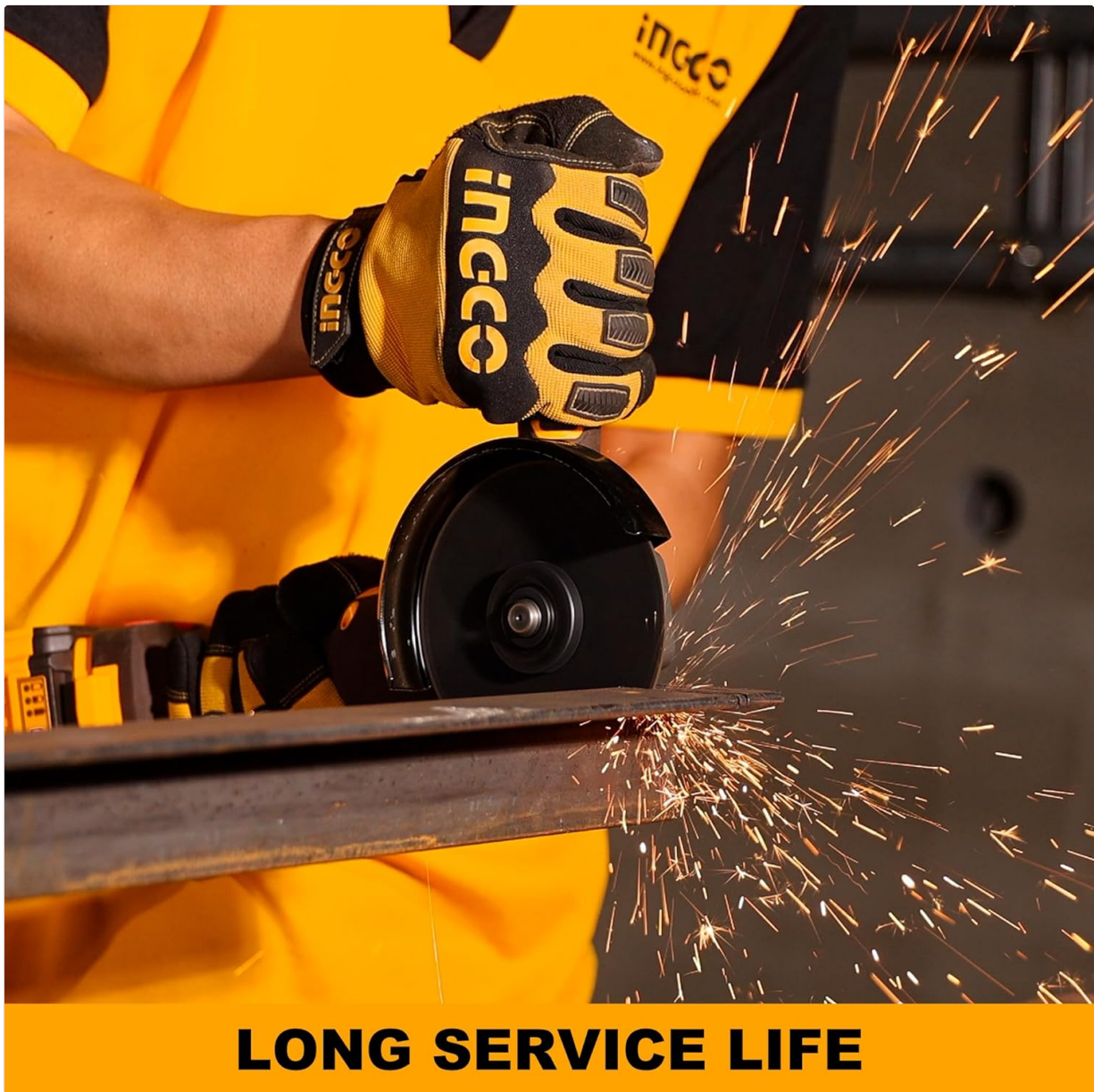


Figure 4.3: The angle grinder incorporates safety features for secure operation.

5. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your angle grinder. Always disconnect the battery before performing any maintenance.

5.1 Cleaning

- Keep the ventilation openings and the dustproof screen clean to prevent overheating. Use a soft brush or compressed air to remove dust and debris.
- Wipe the tool housing with a damp cloth. Do not use harsh chemicals or abrasive cleaners.



Figure 5.1: Ensure air vents are clear for proper cooling and dust removal.

5.2 Battery Care

- Store batteries in a cool, dry place away from direct sunlight and extreme temperatures.
- Do not store batteries in a discharged state for extended periods. Recharge them periodically.
- Inspect battery packs for damage before each use.

6. TROUBLESHOOTING

If you encounter issues with your angle grinder, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Tool does not start	Battery not charged or improperly installed; Switch not engaged; Tool malfunction.	Ensure battery is fully charged and correctly inserted. Check the slide switch is fully engaged. If problem persists, contact support.
Reduced power or speed	Low battery charge; Overload; Worn carbon brushes (for brushed motors, though this is brushless); Blocked vents.	Recharge battery. Reduce pressure on workpiece. Clean ventilation openings.
Excessive vibration	Damaged or improperly installed disc; Loose auxiliary handle.	Inspect and replace disc if damaged. Ensure disc is correctly installed. Tighten auxiliary handle.
Tool stops during operation	Overload protection activated; Low battery; Restart safeguard activated.	Reduce load. Recharge battery. Reset the power switch (off then on) if restart safeguard was triggered.

7. SPECIFICATIONS

The following are the technical specifications for the INGCO 20V Cordless Angle Grinder, Model Premium Version:

Feature	Specification
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Feature	Specification
Brand	Ingco
Model Number	Premium Version
Power Source	Battery Powered
Voltage	20 Volts
Maximum Rotational Speed	8500 RPM
No-Load Speed	3000/6000/9000 RPM (Variable Speed)
Spindle Thread	M10
Material	Aluminium, Plastic
Product Dimensions (L x W x H)	11L x 13W x 33H Centimeters
Item Weight	3.3 Kilograms
Included Components	1 x cordless angle grinder, 1 x auxiliary handle, 1 x combination wrench, 2 x 5.0Ah Battery, 1 x charger

8. WARRANTY AND SUPPORT

For warranty information, service, or technical support, please contact the manufacturer or your local dealer.

Manufacturer Contact Information:

- **Manufacturer:** INGCO
- **Contact Number:** +91 731 051 0199

Please retain your proof of purchase for any warranty claims.