

Ingco 20V impact drill

Ingco Cordless Impact Drill Machine User Manual

Model: 20V impact drill

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 before operating this product.

- **Work Area Safety:** Keep the 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 drill for extended periods. Dress properly; do not wear loose clothing or jewelry. Keep 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 Pack Use and Care:** Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

2. Product Overview and Components

The Ingco Cordless Impact Drill Machine is a versatile tool designed for drilling and fastening tasks. It features a brushless motor for efficient performance and an impact function for masonry work.

2.1 INCLUDED COMPONENTS

- Cordless Impact Drill Machine
- 2 x 20V 2.0Ah Batteries
- 1 x Battery Charger

- 47 Pcs Drill Bits and Accessories
- Carrying Case

2.2 DRILL COMPONENTS



Figure 1: Complete Incco Cordless Impact Drill Machine kit. This image shows the drill, two 20V batteries, a battery charger, a set of drill bits and accessories, and a yellow carrying case.

1. **Chuck:** Holds drill bits and other accessories.
2. **Torque Adjustment Ring:** Selects the desired torque setting (22+1+1).
3. **Mode Selector:** Switches between drilling, screwdriving, and impact drilling modes.
4. **Speed Selector Switch:** Controls the two mechanical speed gears.
5. **Trigger Switch:** Activates the drill and controls speed.
6. **Forward/Reverse Selector:** Changes the rotation direction.
7. **LED Work Light:** Illuminates the work area.
8. **Battery Pack:** Provides power to the drill.

9. **Battery Release Button:** For removing the battery pack.

3. Setup

3.1 CHARGING THE BATTERY

Ensure the battery is fully charged before first use. Use only the Ingco charger provided with the tool.

1. Connect the charger to a suitable power outlet.
2. Slide the battery pack onto the charger until it clicks into place.
3. The charger indicator light will show the charging status. Refer to the charger's specific instructions for light indications.
4. Once fully charged, disconnect the charger from the power outlet and remove the battery pack.

3.2 INSTALLING AND REMOVING THE BATTERY PACK

- **To Install:** Align the battery pack with the base of the drill handle and slide it in until it locks securely.
- **To Remove:** Press the battery release button and slide the battery pack out of the handle.

3.3 INSTALLING AND REMOVING DRILL BITS/ACCESSORIES

Always ensure the drill is switched off and the battery pack is removed before changing accessories.

1. Rotate the chuck counter-clockwise to open the jaws.
2. Insert the drill bit or accessory into the chuck, ensuring it is centered.
3. Rotate the chuck clockwise to tighten the jaws firmly around the bit. Hand-tighten securely.
4. To remove, rotate the chuck counter-clockwise to loosen the jaws and pull out the accessory.

4. Operating Instructions

4.1 POWERING ON/OFF AND SPEED CONTROL

- **To Power On:** Press the trigger switch. The speed increases as you press the trigger further.
- **To Power Off:** Release the trigger switch.
- The integrated LED work light will activate when the trigger is pressed, illuminating the work area.

4.2 SELECTING ROTATION DIRECTION (FORWARD/REVERSE)

Use the forward/reverse selector switch located above the trigger to choose the rotation direction. Push left for forward (clockwise) rotation, and right for reverse (counter-clockwise) rotation. Ensure the switch is in the center position for locking the trigger when not in use.

4.3 ADJUSTING TORQUE SETTINGS

TORQUE SETTINGS: 22+1 METAL CHUCK MECHANICAL 2-SPEED GEAR



MAX TORQUE: 66 NM

Figure 2: Torque adjustment ring and mode selector. The ring allows selection of 22 torque settings, a drilling mode, and an impact drilling mode.

The drill offers 22 torque settings for screwdriving, plus a drilling mode and an impact drilling mode. Rotate the torque adjustment ring to select the desired setting:

- **Settings 1-22:** For screwdriving applications. Lower numbers provide less torque, suitable for smaller screws and softer materials. Higher numbers provide more torque for larger screws and harder materials.
- **Drill Icon:** For general drilling without impact.
- **Impact Icon:** For impact drilling into masonry or concrete.

4.4 SELECTING MECHANICAL SPEED GEAR

**NO-LOAD SPEED:
0-500 / 0-2000 RPM**



MECHANICAL 2-SPEED GEAR

Figure 3: Mechanical 2-speed gear selector. The switch allows selection between low speed (1) and high speed (2).

The drill features two mechanical speed gears:

- **Gear 1 (Low Speed):** Provides higher torque and lower speed (0-500 RPM), ideal for screwdriving and drilling large diameter holes.
- **Gear 2 (High Speed):** Provides lower torque and higher speed (0-2000 RPM), suitable for fast drilling of small diameter holes.

Always select the appropriate gear before starting the drill. Do not change gears while the drill is running.

4.5 USING THE IMPACT FUNCTION

**MAX IMPACT RATE:
30000 BPM**



Figure 4: Impact function selected. This mode is used for drilling into hard materials like masonry.

When drilling into masonry, concrete, or other hard materials, select the impact drilling mode on the torque adjustment ring. This activates the hammer mechanism, providing rapid impacts (up to 30,000 BPM) in addition to rotation, to break through tough surfaces.

Ensure you use appropriate masonry drill bits when using the impact function.

5. Maintenance

Regular maintenance ensures optimal performance and extends the life of your tool.

- **Cleaning:** Keep the ventilation slots of the drill clean to prevent overheating. Use a soft, damp cloth to clean the tool casing. Do not use harsh chemicals or abrasive cleaners.
- **Chuck Maintenance:** Periodically clean the chuck jaws to ensure proper grip on bits.
- **Battery Care:** Store batteries in a cool, dry place away from direct sunlight. Do not store fully discharged batteries for extended periods. Recharge them periodically if not in use.
- **Storage:** When not in use, store the drill and its accessories in the provided carrying case in a dry, secure location out of reach of children.

6. Troubleshooting

Problem	Possible Cause	Solution
Drill does not start.	Battery not charged or improperly installed. Trigger lock engaged.	Ensure battery is fully charged and correctly inserted. Check if the forward/reverse selector is in the center (locked) position; move it to forward or reverse.
Reduced power or short operating time.	Battery charge is low. Battery is old or damaged.	Recharge the battery. If the problem persists, the battery may need replacement.
Drill bit slips in chuck.	Chuck not tightened sufficiently. Bit shank is dirty or damaged.	Ensure the chuck is hand-tightened firmly. Clean the bit shank. Replace damaged bits.
Overheating during operation.	Blocked ventilation slots. Excessive load.	Clean ventilation slots. Reduce pressure on the tool or use a sharper bit. Allow the tool to cool down.

7. Specifications

Feature	Value
Brand	Ingco
Model Number	20V impact drill
Power Source	Battery Powered
Voltage	20 Volts
Motor Type	Brushless Motor
Maximum Torque	66 Newton Metres
No-Load Speed (Gear 1)	0-500 RPM
No-Load Speed (Gear 2)	0-2000 RPM
Maximum Impact Rate	30,000 BPM
Torque Settings	22 + 1 (Drill) + 1 (Impact)
Chuck Size	13 Millimeters
Battery Capacity	2 Amp Hours (per battery)
Product Dimensions	32.6L x 10W x 26.6H Centimeters
Item Weight	3 Kilograms
Special Features	Brushless Motor, Built-In LED Working Light, Cordless, Portable, Rechargeable

8. Warranty and Support

Ingco products are manufactured to high-quality standards and are warranted against defects in materials and workmanship. The specific warranty period and terms may vary by region and product.

For warranty claims, technical support, or service inquiries, please contact your local Ingco authorized dealer or visit the official Ingco website for contact information. Please retain your proof of purchase for warranty validation.

Note: Some third-party sellers may not be authorized by Ingco for warranty purposes. It is recommended to verify warranty terms with your point of purchase.