

IBELL VR BD21-80

IBELL VORMIR VR BD21-80 Brushless Cordless Impact Drill

User Manual

INTRODUCTION

Thank you for choosing the IBELL VORMIR VR BD21-80 Brushless Cordless Impact Drill. This manual provides essential information for the safe operation, maintenance, and troubleshooting of your new tool. Please read these instructions carefully before use and retain them for future reference.

GENERAL SAFETY INSTRUCTIONS

WARNING: Read all safety warnings, instructions, illustrations, and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

- **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 appropriate personal protective equipment such as dust masks, non-skid safety shoes, hard hats, or hearing protection when necessary. Dress properly; do not wear loose clothing or jewelry. Keep hair and clothing 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. Do not use battery packs with any other power tools. When the battery pack is not in use, keep it away from other metal objects.
- **Service:** Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

PRODUCT COMPONENTS

The IBELL VORMIR VR BD21-80 comes with the following components:

- 1x IBELL VORMIR VR BD21-80 Brushless Cordless Impact Drill
- 1x 4.0Ah Li-ion Battery
- 1x Fast Charger
- 2x Concrete Bits
- 3x Steel Bits
- 3x Wood Bits
- 1x Star Bit
- 1x BMC Box (Impact-resistant case for storage and transport)



Image: The IBELL VORMIR VR BD21-80 drill shown with its included accessories, highlighting the versatility for concrete, wood, and steel applications.



Image: Detailed view of the drill's internal brushless motor technology, integrated work light, and two-mode transmission for enhanced performance and durability.

TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	VR BD21-80

Brand	IBELL
Power Source	Battery Powered (20V Max)
Battery Capacity	4.0 Ah Li-ion
Motor Type	Brushless
Maximum Torque	80 Nm
No-Load Speed (Gear 1)	0–500 RPM
No-Load Speed (Gear 2)	0–2000 RPM
Impact Frequency	0–30000 IPM
Chuck Size	13 mm Keyless Metal Chuck
Torque Settings	20+3 Modes
Drilling Capacity (Wood)	36 mm
Drilling Capacity (Steel/Metal)	13 mm
Drilling Capacity (Concrete)	13 mm
Special Features	Built-In LED Working Light, Cordless, Heavy-Duty, Rechargeable
Product Dimensions (L x W x H)	11.3L x 33W x 38.6H Centimeters
Item Weight	0.97 Kilograms



Image: The drill's compact design highlighting the 13mm keyless chuck and key specifications like 20V DC rated voltage, 4000 mAh battery capacity, and 80 Nm torque.

SETUP INSTRUCTIONS

1. Charging the Battery

1. Ensure the charger is connected to a standard power outlet.
2. Slide the 4.0Ah Li-ion battery pack onto the charger until it clicks into place.
3. The charging indicator light on the charger will show the charging status. Allow the battery to fully charge

before first use.

4. Once fully charged, disconnect the charger from the power outlet and remove the battery.

2. Installing/Removing the Battery Pack

1. To install: Align the battery pack with the base of the drill handle and slide it in until it locks securely.
2. To remove: Press the battery release button (usually located on the sides of the battery pack) and slide the battery out.

3. Installing/Removing Drill Bits

The drill features a 13mm keyless metal chuck for easy bit changes.

1. Ensure the drill is switched off and the forward/reverse switch is in the center (locked) position.
2. Hold the rear part of the chuck firmly and rotate the front part counter-clockwise to open the chuck jaws.
3. Insert the desired drill bit or screwdriver bit into the chuck, ensuring it is centered.
4. Rotate the front part of the chuck clockwise to tighten the jaws securely around the bit. Hand-tighten only; do not use tools to tighten the chuck.
5. To remove a bit, reverse the process.



Image: Illustration of the drill's chuck mechanism, demonstrating the forward, lock, and reverse positions for bit installation and removal, and for different drilling applications.

OPERATING INSTRUCTIONS

1. Power On/Off and Speed Control

1. To start the drill, press the trigger switch. The speed is variable depending on how far you press the trigger.
2. To stop the drill, release the trigger switch.
3. The built-in LED work light will illuminate when the trigger is pressed, providing visibility in dark areas.

2. Forward/Reverse Rotation

The forward/reverse switch is located above the trigger. This switch controls the direction of rotation and also acts as a lock-off button.

1. For forward rotation (drilling/driving screws in), push the switch to the left.
2. For reverse rotation (removing screws/backing out bits), push the switch to the right.

3. For locking the trigger (preventing accidental start-up), place the switch in the center position.

3. Speed Gear Selection

The drill features a 2-speed gearbox for optimal performance across different tasks.

- **Gear 1 (Low Speed, 0-500 RPM):** Use for high torque applications such as driving large screws or drilling large holes in wood/metal.
- **Gear 2 (High Speed, 0-2000 RPM):** Use for fast drilling in wood, metal, or for hammer drilling applications.

To change the speed gear, slide the gear selector switch located on top of the drill. Ensure the drill is stopped before changing gears to prevent damage.

4. Torque and Mode Settings (20+3)

The torque adjustment ring allows you to select the desired torque level (20 settings) or one of the three operating modes.

- **Torque Settings (1-20):** Adjust for screwdriving applications. Lower settings are for smaller screws or softer materials to prevent overtightening or stripping. Higher settings are for larger screws or harder materials.
- **Drilling Mode (Drill Icon):** For general drilling in wood, plastic, or metal without impact.
- **Hammer Drilling Mode (Hammer Icon):** For drilling into masonry, concrete, or brick. This mode engages the impact mechanism.
- **Screwdriving Mode (Screw Icon):** For driving and removing screws with clutch action.

Rotate the torque adjustment ring to select the appropriate setting for your task. Always start with a lower torque setting and increase if necessary.



Image: The drill in operation, demonstrating its use for precision drilling. Key performance metrics such as impact frequency, no-load speed, max torque, rated voltage, and chuck size are displayed.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your IBELL VORMIR VR BD21-80 drill.

- **Cleaning:** Keep the ventilation slots of the tool clean to prevent overheating. Use a soft, damp cloth to wipe down the tool. Do not use harsh chemicals or abrasive cleaners.
- **Chuck Maintenance:** Periodically clean the chuck jaws to ensure proper gripping of bits. Remove any dust or debris.

- **Battery Care:** Store batteries in a cool, dry place away from direct sunlight and extreme temperatures. Do not store fully discharged batteries for extended periods. Charge them periodically if not in use.
- **Brushless Motor:** The brushless motor requires no carbon brush replacement, reducing maintenance needs.
- **Storage:** When not in use, store the drill and its accessories in the provided BMC box in a dry, secure location out of reach of children.

TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Drill does not start	Battery not charged or improperly installed; Forward/Reverse switch in center (locked) position; Faulty battery or tool.	Charge battery fully and ensure it is securely installed. Move F/R switch to forward or reverse. If problem persists, contact customer support.
Reduced power or short run time	Battery not fully charged; Battery nearing end of life.	Ensure battery is fully charged. If battery life is consistently short, consider replacing the battery.
Drill bit gets stuck or breaks	Incorrect bit for material; Excessive force; Not using reverse mode to extract.	Use appropriate bits for the material. Apply steady, even pressure. Always use reverse mode to extract bits from holes. Allow bit to cool down when drilling tough materials.
Overheating during use	Continuous heavy use; Blocked ventilation slots.	Allow the tool to cool down during prolonged use. Ensure ventilation slots are clear of debris.
Chuck not holding bit securely	Chuck jaws dirty or damaged; Bit shank dirty.	Clean chuck jaws and bit shank. Ensure bit is inserted fully and chuck is hand-tightened.

WARRANTY AND SUPPORT

The IBELL VORMIR VR BD21-80 Brushless Cordless Impact Drill comes with a **1-year manufacturer warranty**. To activate the full warranty, you must register your tool directly on the official IBELL online portal using your purchase invoice. Failure to register may result in a basic 6-month warranty from the seller.

For technical assistance, warranty claims, or spare parts, please contact IBELL customer support:

- **Customer Service:** HITECH MACHINERIES & EQUIPMENT
- **Toll-Free Number:** 1800 103 4090

Please have your model number (VR BD21-80) and purchase details ready when contacting support.