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› Milwaukee 2903-20 M18 FUEL 18V Lithium-Ion Brushless Cordless 1/2 in. Drill/Driver User Manual

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Brand: Milwaukee

Model: 2903-20

1. INTRODUCTION

The MILWAUKEE M18 FUEL 1/2 Drill Driver is engineered for superior performance, offering the industry's most powerful drilling capabilities and a compact design for enhanced maneuverability. Featuring a POWERSTATE Brushless motor, it delivers exceptional power for demanding applications, including drilling large holes in dense materials. The AutoStop Control Mode provides enhanced safety by preventing over-rotation during bind-up situations, with an industry-leading reaction time. REDLINK PLUS intelligence ensures maximum performance while protecting against overloads, heating, and over-discharge. This tool is designed for durability and efficiency, making it ideal for a wide range of professional and DIY tasks.



Figure 1: Milwaukee 2903-20 M18 FUEL 1/2 inch Drill/Driver (Tool-Only).

2. KEY FEATURES

- **Auto-Stop Control Mode:** Enhanced safety feature to prevent over-rotation in bind-up situations.
- **POWERSTATE Brushless Motor:** Delivers maximum power for the widest range of drilling and driving applications.
- **Fastest Drilling and Driving:** Optimized for speed under load.
- **Compact Design:** Only 6.9 inches in length for access into tight spaces and reduced fatigue.
- **Mechanical Clutch:** Ensures consistency in driving a wide range of fasteners.
- **LED Light:** Provides better visibility in low-light situations.

- **REDLINK PLUS Intelligence:** Protects from overloads, heating, and over-discharge.
- **All-Metal Ratcheting Chuck:** Best-in-class for increased grip strength, durability, and corrosion resistance.

3. SETUP

3.1 Battery Installation and Removal

The Milwaukee 2903-20 Drill/Driver is compatible with M18 Lithium-Ion battery packs. To install the battery, align the battery pack with the base of the tool and slide it in until it clicks securely into place. To remove, press the release tabs on the sides of the battery pack and slide it out.



Figure 2: M18 battery pack attached to the drill, showing the battery indicator lights.

3.2 Bit Installation and Removal

To install a drill bit or driver bit, twist the chuck counter-clockwise to open the jaws. Insert the bit into the chuck, ensuring it is centered. Then, twist the chuck clockwise firmly to tighten the jaws around the bit. For optimal grip, ensure the bit is inserted as far as possible without interfering with the chuck mechanism. To remove, twist the chuck counter-clockwise until the jaws release the bit.



Figure 3: Close-up view of the drill's chuck, where bits are inserted and secured.

3.3 Attaching Side Handle and Belt Clip

The drill comes with a side handle and a belt clip for user convenience. The side handle can be attached to the front of the drill for improved control during heavy-duty tasks. The belt clip can be attached to either side of the drill's base, allowing for easy carrying and access during work.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off and Speed Control

The drill is activated by pressing the trigger switch. The speed of the drill is variable and controlled by the amount of pressure applied to the trigger. For precise control, start with light pressure and gradually increase as needed. The drill also features a two-speed gear selector located on top of the tool. Position '1' provides lower speed and higher torque, ideal for driving screws or drilling larger holes. Position '2' provides higher speed and lower torque, suitable for faster drilling in softer materials.

4.2 Forward/Reverse and Lock-Out

A forward/reverse selector switch is located above the trigger. Push the switch to the left for forward rotation (clockwise) and to the right for reverse rotation (counter-clockwise). When the switch is in the center position, the trigger is locked, preventing accidental operation. Always engage the lock-out feature when changing bits, performing maintenance, or storing the tool.

4.3 Torque and Mode Selection

The adjustable torque collar allows you to set the amount of torque applied before the clutch disengages, preventing overtightening or stripping screws. Rotate the collar to select the desired torque setting (numbered 1-16). For drilling, select the drill icon setting, which provides maximum torque. If your model includes a hammer drill function (indicated by a hammer icon), select this mode for

drilling into masonry or concrete. The product description mentions "hammer drill" capability, so this model supports it.



Figure 4: Side view of the drill, highlighting the torque collar, speed selector, and forward/reverse switch.

4.4 LED Work Light

The integrated LED light illuminates the work area when the trigger is pressed, providing improved visibility in dimly lit environments. The light will remain on for a short period after the trigger is released.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Milwaukee Drill/Driver.

- **Cleaning:** Keep the tool's ventilation openings clear and free of debris. Use a soft, damp cloth to clean the exterior. Do not use harsh chemicals or abrasive cleaners.
- **Battery Care:** Store batteries in a cool, dry place away from direct sunlight. Do not store batteries in a discharged state for extended periods.
- **Chuck Maintenance:** Periodically clean the chuck jaws to ensure proper bit gripping. Remove any dust or debris that may accumulate.
- **Bit Inspection:** Regularly inspect drill bits and driver bits for wear or damage. Replace worn bits to ensure efficient and safe operation.
- **Storage:** Store the tool and batteries in a secure, dry location, out of reach of children.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Tool does not start	Battery not installed correctly; Battery discharged; Forward/Reverse switch in lock-out position.	Ensure battery is fully seated; Charge battery; Move switch to forward or reverse position.
Bit slips in chuck	Chuck not tightened sufficiently; Bit shank is dirty or damaged.	Tighten chuck firmly; Clean or replace bit.
Reduced power/performance	Low battery charge; Incorrect speed/torque setting; Worn or dull bit.	Charge battery; Adjust speed/torque; Replace bit.
Tool overheats	Overloading the tool; Blocked ventilation slots.	Reduce load; Clear ventilation slots. Allow tool to cool.

7. SPECIFICATIONS

- **Brand:** Milwaukee
- **Model Number:** 2903-20
- **Power Source:** Battery Powered
- **Voltage:** 18 Volts
- **Amperage:** 8 Amps
- **Maximum Rotational Speed:** 2100 RPM
- **Maximum Torque:** 1200 Inch Pounds
- **Drill Type:** Combination Drill (Drill/Driver with Hammer Function)
- **Battery Cell Type:** Lithium Ion
- **Item Weight:** 4.59 pounds
- **Product Dimensions:** 12"L x 8"W x 4"H
- **Included Components:** Side handle, Belt clip (Tool-Only, batteries and charger sold separately)

8. OFFICIAL PRODUCT VIDEOS

No official seller-created product videos are available for this item at this time.

9. WARRANTY AND SUPPORT

Milwaukee offers a limited warranty on its power tools. For specific warranty details, registration, and support, please refer to the warranty card included with your product or visit the official Milwaukee Tool website. Keep your purchase receipt as proof of purchase for warranty claims.

For further assistance, you may contact Milwaukee customer support through their official channels. Always use genuine Milwaukee replacement parts and accessories to maintain product performance and warranty validity.