

100mm Metric Ball End Hex Bit

Ball End Hex Screwdriver Bit Instruction Manual

MODEL: 100MM METRIC BALL END HEX BIT

1. Introduction

This manual provides essential information for the safe and effective use of your Ball End Hex Screwdriver Bit. Please read these instructions carefully before use and retain them for future reference. This tool is designed for fastening and unfastening hex screws in various applications, including automotive, household, and manufacturing tasks.

2. Safety Information

WARNING: Always wear appropriate personal protective equipment, such as safety glasses, when using power tools and accessories.

- Ensure the screwdriver bit is securely seated in the driver before operation.
- Do not use damaged or worn bits. Inspect the bit for cracks or deformation before each use.
- Apply appropriate torque. Over-tightening can damage the screw head or the bit.
- Keep hands and loose clothing away from rotating parts.
- Store bits in a dry, secure location away from children.

3. Product Overview

The Ball End Hex Screwdriver Bit is a specialized tool designed for driving hex screws. Its ball end allows for an entry angle of up to 25 degrees, providing greater access in confined spaces compared to standard hex bits. The bit features a magnetic tip to securely hold screws during operation and is constructed from durable steel for longevity.



Image 3.1: A single 100mm long ball end hex screwdriver bit, showcasing its hexagonal shank and ball-shaped tip.

This bit is suitable for use with various power drills and impact drivers that accept a standard 1/4-inch hex shank.

4. Setup

1. **Select the Correct Bit Size:** Ensure the hex bit size (e.g., H6) matches the hex screw head you intend to drive.
2. **Insert into Driver:** Insert the hexagonal shank of the bit firmly into the chuck of your power drill or impact driver. Pull back the collar of the chuck if necessary, insert the bit, and release the collar to lock it in place.
3. **Verify Security:** Gently pull on the bit to ensure it is securely seated and will not wobble during operation.

5. Operating Instructions

Using the ball end hex screwdriver bit effectively requires proper technique:

- **Align the Bit:** Place the ball end of the bit into the hex recess of the screw.
- **Angled Entry (Ball End Feature):** For screws in hard-to-reach areas, the ball end allows you to engage the

screw at an angle of up to 25 degrees. This flexibility helps in situations where a straight approach is not possible.

- **Apply Pressure:** Apply firm, steady pressure directly in line with the screw to prevent cam-out (the bit slipping out of the screw head).
- **Start Slowly:** Begin driving the screw at a low speed to ensure proper engagement, then increase speed as needed.
- **Avoid Over-tightening:** Stop driving once the screw is snug to prevent damage to the screw, workpiece, or bit.

6. Maintenance

- **Cleaning:** After each use, wipe the bit clean with a dry cloth to remove any debris or residue.
- **Storage:** Store the bit in a dry environment to prevent rust. A tool organizer or bit holder is recommended to keep bits organized and protected.
- **Inspection:** Regularly inspect the bit for signs of wear, such as rounding of the hex edges or damage to the ball end. Replace worn bits to ensure optimal performance and prevent damage to fasteners.

7. Troubleshooting

- **Bit Slipping/Cam-out:**
 - Ensure the correct bit size is used for the screw.
 - Apply more direct, firm pressure.
 - Reduce rotational speed.
 - Inspect the screw head for damage.
- **Screw Head Stripping:**
 - This often occurs due to incorrect bit size, insufficient pressure, or excessive torque.
 - Ensure the bit is fully seated in the screw head.
 - Use a lower torque setting on your driver if available.
- **Bit Not Holding Screws (Magnetic Issue):**
 - The magnetic property may weaken over time or with exposure to strong magnetic fields.
 - Clean the bit tip to remove any metal shavings that might interfere with magnetism.

8. Specifications

100MM*H6 Ball Head Hexagon



Image 8.1: The ball end hex screwdriver bit with key dimensions indicated, showing 100mm length and 6.35mm shank.

Feature	Detail
Type	Ball End Hex Screwdriver Bit
Length	100mm
Shank Type	1/4 inch (6.35mm) Hex Shank
Material	Steel (e.g., S2 Alloy Steel)
Tip Feature	Magnetic
Angle of Entry	Up to 25 degrees (ball end)

9. Disposal

When the product reaches the end of its useful life, please dispose of it responsibly according to local regulations.

Metal components can often be recycled. Do not dispose of with general household waste.



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