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› IVY Classic 09076 4 Piece Countersink Tapered Drill Bit Set User Manual

## IVY Classic 09076

# IVY Classic 09076 4 Piece Countersink Tapered Drill Bit Set User Manual

Model: 09076

## 1. PRODUCT OVERVIEW

The IVY Classic 09076 is a 4-piece set of M2 High Speed Steel Countersink Tapered Drill Bits designed for use with wood screws. This set is engineered to perform three functions simultaneously: drilling a pilot hole, countersinking for the screw head, and counterboring for a plug. Each bit features a 90-degree tapered drill and an 82-degree countersink point angle, optimized for efficient wood screw applications.

The set includes bits suitable for #6, #8, and #10 screws, along with an adjustable counterbore and a 1/4" Hex Power Shank for quick changes in compatible drill chucks.



Image 1.1: The IVY Classic 09076 4 Piece Countersink Tapered Drill Bit Set, showing the packaging and included components: three drill bits, a hex key, and a depth stop.

## 2. PRODUCT COMPONENTS

The IVY Classic 09076 set includes the following components:

- One (1) Countersink Tapered Drill Bit for #6 screws (9/64" drill diameter)
- One (1) Countersink Tapered Drill Bit for #8 screws (11/64" drill diameter)
- One (1) Countersink Tapered Drill Bit for #10 screws (3/16" drill diameter)
- One (1) 1/8" Hex Key for depth adjustment
- One (1) Adjustable Depth Stop

Each drill bit features a 4-cutter adjustable alloy-steel counterbore with two set screws for depth adjustment, and a 1/4" Hex Power Shank for rapid bit changes.

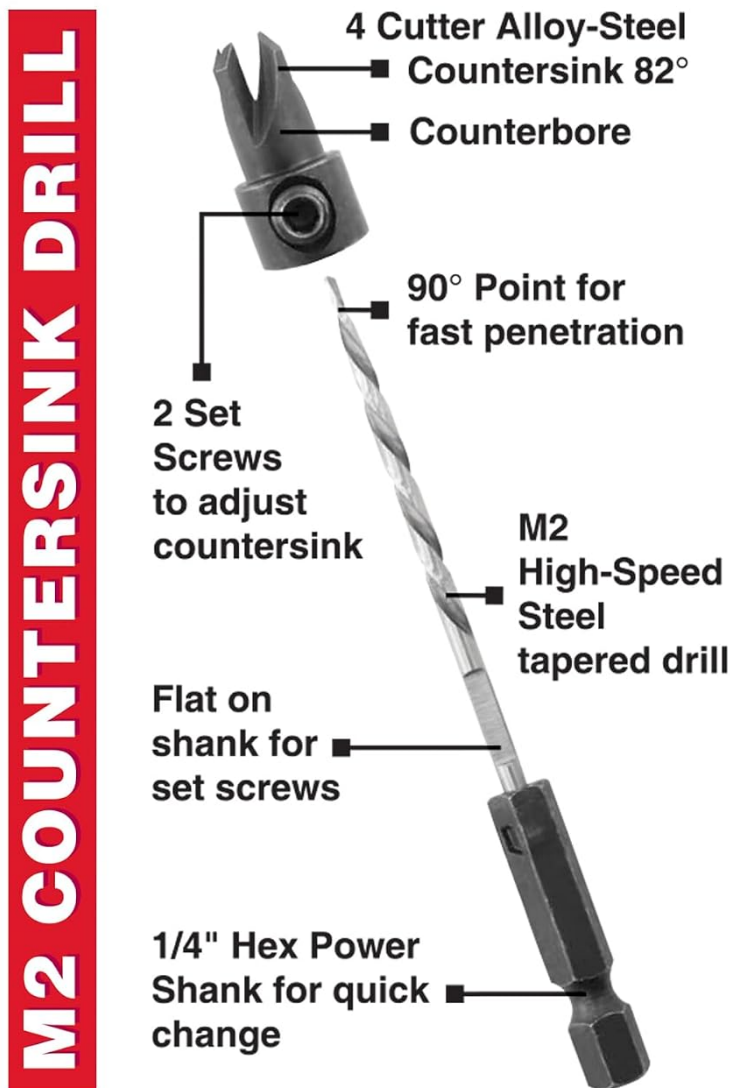


Image 2.1: Detailed view of a single M2 Countersink Drill, highlighting the 4-cutter alloy-steel counterbore, 82-degree countersink, 90-degree point, M2 High-Speed Steel tapered drill, flat on shank for set screws, and 1/4" Hex Power Shank.

### 3. SETUP AND ADJUSTMENT

Before operation, ensure the correct drill bit size is selected for the screw you intend to use. The set includes bits for #6, #8, and #10 screws.

#### 3.1 Attaching the Bit to Your Drill

1. Insert the 1/4" Hex Power Shank of the chosen countersink drill bit into your drill's chuck.
2. Tighten the chuck securely to prevent the bit from slipping during operation. The hex shank design allows for quick changes in compatible chucks.

#### 3.2 Adjusting Counterbore Depth

The counterbore depth can be adjusted to control how deep the screw head or a wood plug will sit below the surface of the material.

1. Locate the two set screws on the side of the 4-cutter alloy-steel counterbore.
2. Use the provided 1/8" Hex Key to loosen these set screws.
3. Slide the counterbore up or down the tapered drill bit to achieve the desired depth. Sliding it further down the bit will create a shallower counterbore, while sliding it up will create a deeper one.
4. Once the desired depth is set, securely tighten both set screws using the hex key. Ensure they are firm to prevent movement during drilling.

### 3.3 Using the Depth Stop (Optional)

For consistent drilling depth across multiple holes, the adjustable depth stop can be used.

1. Slide the depth stop onto the drill bit, above the counterbore.
2. Adjust its position to limit the penetration depth of the entire assembly.
3. Tighten the set screw on the depth stop to secure it in place.

## 4. OPERATING INSTRUCTIONS

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These countersink tapered drill bits are designed for use with wood. Always wear appropriate safety gear, including eye protection, when operating power tools.

1. **Prepare Workpiece:** Secure the workpiece firmly to prevent movement during drilling.
2. **Select Bit:** Choose the correct drill bit size corresponding to the wood screw you will be using (#6, #8, or #10).
3. **Set Depth:** Adjust the counterbore depth as described in Section 3.2.
4. **Position Drill:** Place the tip of the drill bit at the desired drilling location on the wood surface.
5. **Begin Drilling:** Start the drill at a moderate speed and apply steady, even pressure. Allow the bit to cut through the material. The tapered drill will create a pilot hole, followed by the countersink for the screw head, and then the counterbore if adjusted for it.
6. **Monitor Depth:** Continue drilling until the desired depth is reached, or until the depth stop (if used) makes contact with the workpiece.
7. **Withdraw Bit:** Once the hole is complete, withdraw the drill bit cleanly from the workpiece while the drill is still rotating.

# Countersink Tapered Drills

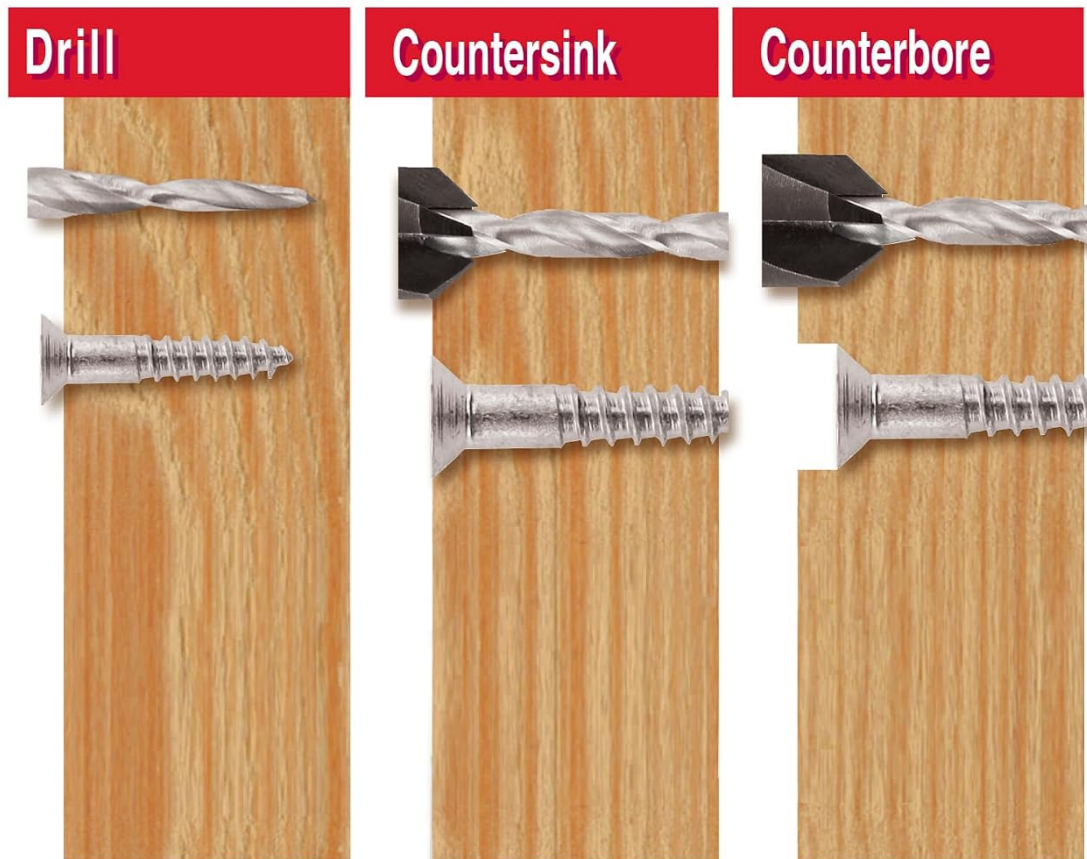


Image 4.1: Visual representation of the three stages of operation: drilling a pilot hole, countersinking for a flush screw head, and counterboring for a recessed screw head or plug.

## 5. MAINTENANCE

Proper maintenance extends the life and performance of your drill bits.

- **Cleaning:** After each use, clean the bits to remove wood dust and debris. A brush or compressed air can be used.
- **Lubrication:** Periodically apply a light coat of machine oil to the metal surfaces to prevent rust, especially if storing in humid conditions.
- **Storage:** Store the drill bits in their original packaging or a suitable drill bit case to protect them from damage and moisture.
- **Sharpening:** While these bits are made from M2 High Speed Steel for durability, they may eventually dull with extensive use. Sharpening should be performed by a qualified professional or with appropriate sharpening tools designed for tapered drill bits and countersinks.
- **Inspection:** Regularly inspect the bits for signs of wear, damage, or dullness. Replace any damaged or excessively worn bits to ensure safe and effective operation.

## 6. TROUBLESHOOTING

This section addresses common issues that may arise during the use of the countersink tapered drill bits.

- **Bit not cutting efficiently:**
  - Ensure the bit is securely fastened in the drill chuck.
  - Check if the bit is dull or damaged. Sharpen or replace if necessary.
  - Verify that the correct bit size is being used for the application.
- **Inconsistent hole depth:**
  - Ensure the counterbore set screws are tightened securely.
  - If using a depth stop, ensure it is firmly secured and not slipping.
  - Maintain consistent pressure and drill speed during operation.
- **Bit shank breaking:**
  - Avoid excessive side pressure or bending force on the bit during drilling.
  - Ensure the drill is running straight and not wobbling.
  - Do not force the bit through the material; allow it to cut at its own pace.
  - Ensure the bit is fully inserted and securely tightened in the drill chuck.
- **Burning wood:**
  - This indicates the bit is dull or you are drilling too slowly. Increase drill speed or replace/sharpen the bit.
  - Clear chips frequently to prevent heat buildup.

## 7. SPECIFICATIONS

| Feature                     | Detail                                                                |
|-----------------------------|-----------------------------------------------------------------------|
| Model Number                | 09076                                                                 |
| Material                    | M2 High Speed Steel (HSS)                                             |
| Shank Type                  | 1/4" Hex Power Shank                                                  |
| Cutting Angle (Countersink) | 82 Degrees                                                            |
| Tapered Drill Point Angle   | 90 Degrees                                                            |
| Number of Pieces            | 4 (3 drill bits + 1 hex key + 1 depth stop)                           |
| Screw Sizes Supported       | #6 (9/64" Drill Dia.), #8 (11/64" Drill Dia.), #10 (3/16" Drill Dia.) |
| Counterbore Diameters       | 3/8" (for #6, #8, #10 bits)                                           |
| Recommended Surface         | Wood                                                                  |
| Item Weight                 | 4.1 ounces                                                            |
| Package Dimensions          | 8.25 x 3.75 x 0.73 inches                                             |

| Feature | Detail       |
|---------|--------------|
| UPC     | 738226090764 |

# **Countersink Tapered Drills**

| Product       | Screw Size                  | Drill Dia. | Counterbore Dia. |
|---------------|-----------------------------|------------|------------------|
| <b>09064</b>  | #4                          | 7/64"      | 3/8"             |
| <b>09066</b>  | #6                          | 9/64"      | 3/8"             |
| <b>09068</b>  | #8                          | 11/64"     | 3/8"             |
| <b>09070</b>  | #10                         | 3/16"      | 3/8"             |
| <b>09072</b>  | #12                         | 7/32"      | 1/2"             |
| <b>09076*</b> | #6, #8, #10 Countersink Set |            |                  |

\* Set includes adjustable depth stop and hex key

Image 7.1: A table detailing various IVY Classic Rapid Reload Countersink Tapered Drill models, including screw size, drill diameter, and counterbore diameter. This specific set (09076) includes bits for #6, #8, and #10 screws.

## 8. WARRANTY AND SUPPORT

IVY Classic Industries products are manufactured to high standards. Specific warranty details may vary. Please refer to the product packaging or the official IVY Classic website for the most current warranty information.

For technical assistance, product inquiries, or to report any issues, please contact IVY Classic customer support through their official channels. Contact information can typically be found on the product packaging or their corporate website.

*Note: The manufacturer is IVY Classic Industries.*

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This manual is for informational purposes only. Specifications are subject to change without notice.