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- › [Hillman](#) /
- › Hillman 240420 Carriage Bolt User Manual - 3/4 x 2-Inch, Zinc-Plated

Hillman 240420

Hillman 240420 Carriage Bolt User Manual

3/4 x 2-Inch, Steel, Zinc-Plated

PRODUCT OVERVIEW

The Hillman 240420 Carriage Bolts are designed for securely fastening a wooden component to either a wood or metal frame. These bolts feature a distinctive flat, rounded head and a square neck directly beneath the head. This design allows the square neck to seat into the material, preventing the bolt from rotating during tightening, thus eliminating the need for a separate driving tool to hold the bolt head.

Key features of these carriage bolts include:

- **Versatile Fastening:** Ideal for joining wood to wood or wood to metal applications.
- **Semi-Flush Finish:** The flat, rounded head provides a clean, low-profile appearance.
- **Integrated Washer Function:** The head design often negates the need for an additional washer under the bolt head.
- **Self-Locking Design:** The square neck prevents rotation, simplifying installation.
- **Zinc-Plated Finish:** Offers moderate corrosion resistance and a consistent silver appearance. Note that while rust-resistant, zinc plating may not be suitable for all outdoor or highly corrosive environments.



Image: A single Hillman 240420 Carriage Bolt, showing its rounded head, square neck, and threaded shaft. This bolt measures 3/4 inch in diameter and 2 inches in length, featuring a zinc-plated finish.

SETUP AND PREPARATION

Proper preparation ensures secure and effective fastening. Follow these steps before installation:

1. **Select Correct Size:** Ensure the 3/4 x 2-inch carriage bolt is appropriate for your application's thickness and load requirements. The bolt length should be sufficient to pass through all materials and allow for a nut and washer to be securely fastened.
2. **Drill Pilot Hole:** Drill a pilot hole through all materials to be joined. The drill bit diameter should match the bolt's shank diameter (3/4 inch) to allow the square neck to properly seat without excessive force, but also without being too loose.
3. **Material Compatibility:** Confirm that the materials (wood, metal) are suitable for carriage bolt application. For wood-to-wood connections, ensure the wood is not prone to splitting.
4. **Gather Tools:** You will need a drill, appropriate drill bit (3/4 inch), a hammer or mallet (optional, for seating the square neck), and a wrench or socket for the nut (not included).

OPERATING INSTRUCTIONS (INSTALLATION)

Follow these steps for proper installation of the Hillman 240420 Carriage Bolt:

1. **Align Materials:** Position the wooden face and the frame (wood or metal) precisely where they are to be joined.
2. **Insert Bolt:** Insert the carriage bolt through the pre-drilled holes from the side of the wooden face.
3. **Seat Square Neck:** Gently tap the head of the carriage bolt with a hammer or mallet until the square neck fully seats into the wood. This action prevents the bolt from spinning when the nut is tightened. Ensure the head is flush or semi-flush with the surface of the wood.
4. **Add Washer and Nut:** On the opposite side, place a washer (if desired, though the bolt head often eliminates the need for one on its side) over the threaded end, followed by a compatible nut.
5. **Tighten Fastener:** Using a wrench or socket, tighten the nut until the connection is secure. Avoid over-

tightening, which can strip threads or damage the material. The self-locking square neck will prevent the bolt from turning during this process.

6. **Verify Security:** Check the connection for stability and ensure the bolt head remains properly seated.

MAINTENANCE

Hillman 240420 Carriage Bolts are designed for durability with their zinc-plated finish. Minimal maintenance is required, but proper care can extend their lifespan and maintain appearance:

- **Regular Inspection:** Periodically inspect installed bolts for any signs of loosening, corrosion, or damage.
- **Cleaning:** If bolts become dirty, wipe them with a clean, dry cloth. Avoid abrasive cleaners or harsh chemicals that could damage the zinc plating.
- **Corrosion Protection:** While zinc-plated, these bolts offer moderate corrosion resistance. For applications in high-moisture, outdoor, or corrosive environments, consider applying a protective coating or using fasteners specifically designed for such conditions.
- **Storage:** Store unused bolts in a dry environment to prevent premature corrosion.

TROUBLESHOOTING

Here are solutions to common issues encountered during the use of carriage bolts:

- **Bolt Spins During Tightening:**
 - **Cause:** The square neck is not fully seated in the material, or the pilot hole is too large.
 - **Solution:** Ensure the pilot hole diameter matches the bolt's shank. Tap the bolt head firmly with a hammer or mallet to fully embed the square neck into the wood. If the hole is too large, consider using a larger washer under the head or filling the hole and re-drilling.
- **Bolt Head Not Flush/Semi-Flush:**
 - **Cause:** Insufficient force applied to seat the head, or material is too hard.
 - **Solution:** Apply more force with a hammer or mallet. For very hard woods, a slightly larger pilot hole for the square neck portion might be necessary, but ensure it's not too large to compromise the self-locking feature.
- **Corrosion Appears Prematurely:**
 - **Cause:** Exposure to harsh environmental conditions (e.g., high humidity, saltwater, chemicals) beyond the protection offered by zinc plating.
 - **Solution:** For such environments, consider using fasteners made from stainless steel or with a more robust corrosion-resistant coating. For existing bolts, clean and apply a rust-inhibiting paint or coating.
- **Difficulty Inserting Bolt:**
 - **Cause:** Pilot hole is too small or misaligned.
 - **Solution:** Verify the pilot hole diameter is 3/4 inch. Re-drill if necessary, ensuring proper alignment through all materials.

SPECIFICATIONS

Detailed specifications for the Hillman 240420 Carriage Bolt:

Model Number	240420
Fastener Type	Carriage Bolt
Size Name	3/4 x 2-Inch
Thread Size	3/4 Inch-2
Material	Alloy Steel
Exterior Finish	Zinc-Plated
Color	Silver
Head Style	Dome, Flat, Round, Square (referring to the square neck under the round head)
Drive System	Square (for the neck)
Grade Rating	Grade 2
Thread Coverage	Fully Threaded
Number of Pieces	20
Item Dimensions (L x W x H)	2 x 0.75 x 0.75 inches (approximate bolt dimensions, derived from 3/4 x 2-inch size, not package dimensions)
Manufacturer	The Hillman Group

WARRANTY INFORMATION

Specific warranty details for Hillman 240420 Carriage Bolts are not provided in this manual. Generally, fasteners are covered against manufacturing defects. For detailed warranty information, please refer to the official Hillman Group website or contact their customer service directly. Keep your purchase receipt as proof of purchase.

CUSTOMER SUPPORT

For further assistance, technical questions, or to report any issues with your Hillman 240420 Carriage Bolts, please contact The Hillman Group customer support. You can typically find contact information, including phone numbers and email addresses, on the official Hillman website or on the product packaging.

Online Resources: Visit the official Hillman website for product catalogs, FAQs, and additional support resources. [Visit the Hillman Store on Amazon](#)