

Instruction Manual for Installing a Sliding Door into a Grain Bin

1. Introduction

Purpose of the Manual: This manual provides detailed, step-by-step instructions for installing your sliding door into the side of your grain bin. Following these instructions will ensure a safe and efficient installation process.

Safety Warnings and Precautions:

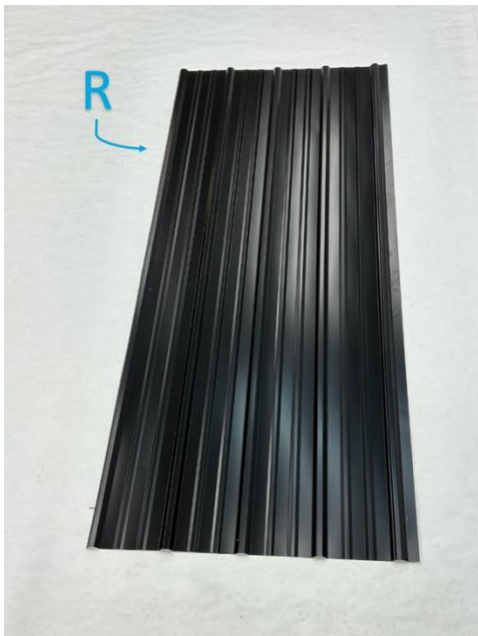
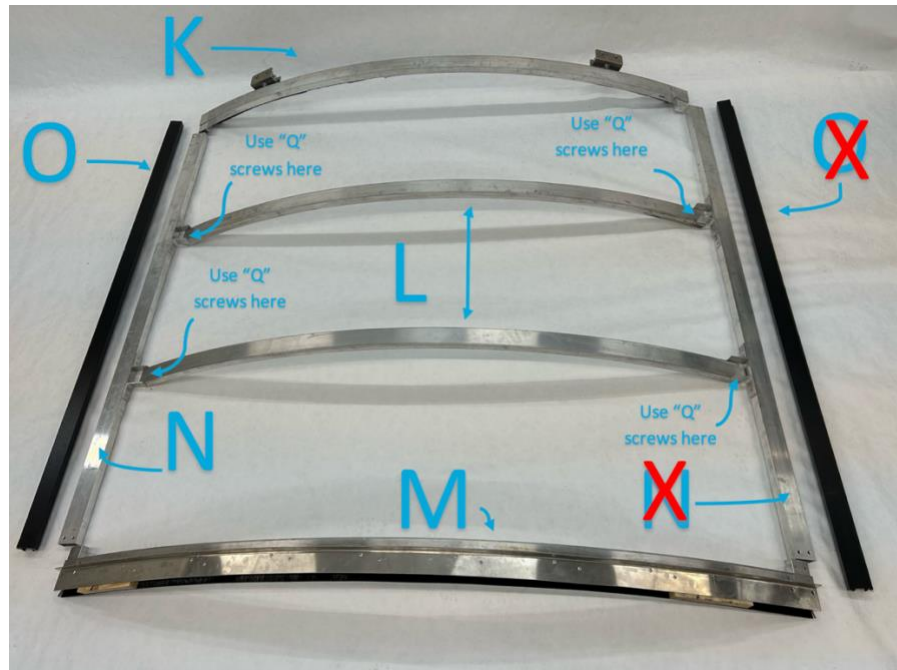
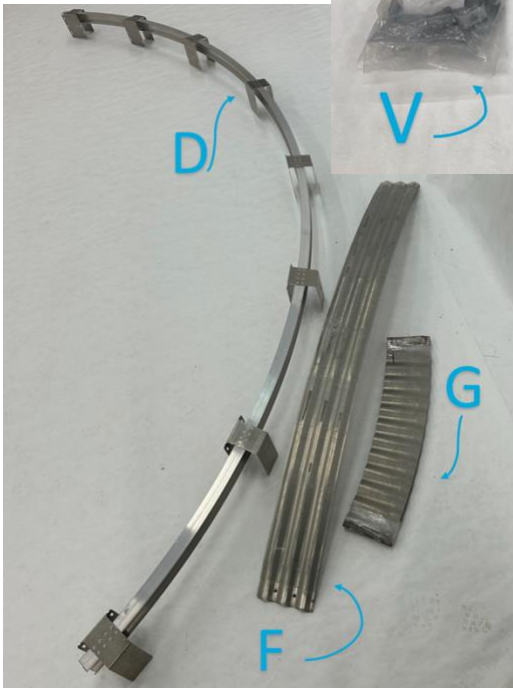
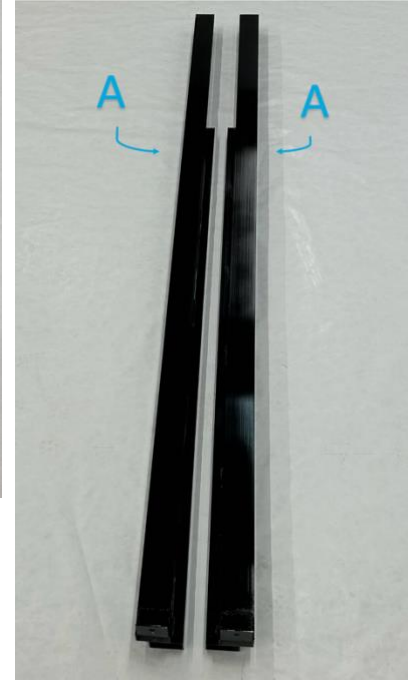
- Always wear protective gear, including gloves, safety goggles, and hearing protection.
- Ensure the grain bin is empty and stable before beginning installation.
- Be cautious when handling sharp tools and metal edges.

2. Tools and Materials Needed

Tools:

- Level or laser level
- Black marker
- Grinder with metal cutting wheels
- 3/8" masonry bit (for bin jamb to floor brackets)
- 7/16 masonry bit for guide wheels
- Rotary hammer drill
- 3/16" drill bit (for pre-drilling bin wall, if needed)
- 13/64 drill bit for 1/4" rivets
- 7/64 drill bit for 3/16" rivets
- 3/8" extended drill bit (8 to 12" long for drilling through track and bin wall)
- 5/16" drill bit (for bolting door stops to bin wall)
- 5/16" hex drive
- Rivet gun (for 3/16" and 1/4" rivets)
- Caulking gun (for sealant)
- 9/16" wrench (for track roller adjustment)
- 9/16" impact socket
- Drill, impact driver
- Tin snips
- Vice grips

Picture of Materials Included. (Description below)



1. **Jambs for Door Opening (A)**
2. **12x1” 5/16 Hex Head Self-Tapping Galvanized Screws with Rubber Washer (B)**
 - *Used for bin metal to jamb and door latch.*
3. **3/8x3” Tap-Con Cement Screws (C)**
 - *Used for mounting bottom jamb plate to cement pad.*
4. **Track with Track Brackets Installed (D)**
 - *Use 5/16 x 1 1/4” bin bolts with rubber washer.*
5. **5/16x1 1/4” Grain Bin Bolts with Rubber Washer and Nuts (E)**
 - *Used for bolting on the track and door stops.*
6. **Track Top Cover (F)**
7. **Track Face Cover (G)**
8. **Track End Caps (H)**
9. **Pop Rivets 3/16x1/4” Grip Range (I)**
 - *Used for track top cover, track face cover, and track end caps.*
10. **Gray Sealant (J)**
 - *Used for top track cover and jambs.*
11. **Door Top Rail with Rollers (K)**
12. **Door Mid Rails (L)**
13. **Door Bottom Rail (M)**
14. **Door Side Rails (N)**
15. **Door Sheets (R)**
16. **12x1” Self-Tapping 5/16 Hex Head Colored Screws with Rubber Washer (S)**
 - *Used for colored door sheets and door rail cover.*
17. **Door Handles (T)**
18. **Door Stop (U)**
19. **Draw Latches (V)**
20. **10x1” Self-Tapping Flat Head Phillips Screws (W)**
 - *Used for exterior latch lever to jamb and draw latches.*
21. **Exterior Latch (X)**
22. **Bucket for Parts (Y)**

3. Installation Instructions

1. Door Opening Layout

1. Position the bottom rail (M) on the exterior cement where the door will be installed. Ensure adequate space is available for the door to open fully to the left or right.
2. Mark the bin on each end of the bottom rail (M) with a black marker.
3. Level vertically from each mark to the desired door opening height, marking the bin wall.
4. To double-check spacing, move the bottom rail (M) to the top of the opening.
5. Determine the high point of the cement slab, then measure up from this point:
 - o 8' for an 8' door
 - o 10' for a 10' door, etc.
6. Mark the top of the opening and ensure the vertical and horizontal marks represent the sides and top of the opening, respectively.

2. Temporary Support

1. Inside the grain bin, position a vertical 2x6 lumber (not included) at the center of the opening, with the bottom resting on the cement and the top extending above the door opening.
2. Drill and screw through the bin wall into the 2x6 for support. This will remain until the door opening is cut and the structural jambs (A) are installed.

3. Cutting the Bin Wall

1. Use a grinder with a cutting wheel to cut across the top of the door opening first.
2. Cut down each side, removing one row of bin sheets at a time until the opening is complete.

4. Installing Structural Aluminum Members

1. Install the structural side jambs (A) on each side of the opening, ensuring screws are installed all the way to the top of the long structural member.
2. Use 1" gray self-tapping screws (B) and a 3/16" drill bit if needed.
3. Install screws (B) in every valley and caulk sides as necessary using gray sealant (J).

5. Door Jamb to Floor Mounting Plate

1. Install 4 tap-cons (C) into the floor mounting plates, which are welded to the bottom of the structural jamb.
2. Double-check the alignment of the bin wall and install 4-3/8" x 3" tap-cons with washers (C).

6. Track Installation

1. Level across the entire track length and mark the bin wall before starting.
2. The bottom of the track support bracket (D) must align with the opening height.
3. Install the track in two halves, starting 1/2" past the outside edge of the finished jamb.
4. Drill 4-3/16" rivets (I) to splice the two halves.
5. Bolt the track to the bin wall using 5/16" x 1 1/4" hex bolts with rubber washers (E).
6. Clean the track of all drill filings and debris.

7. Door Assembly

1. Assemble the door on a clean, flat, level area (using the bin floor is recommended).
2. Take side rails "O" and lay them on flat level surface. Install horizontal rails "K", "L", and "M" into side rail "O". Drill and install 1/4" rivets.

8. Installing the Colored Door Panels

1. Ensure horizontal rails are not sagging and the door is square before installing the sheets.
2. Use 5/16" x 1" hex-headed colored screws (S) to secure the sheets (R), trimming the last sheet as needed.

9. Track Cover and Face Cover Installation

1. Install the track top cover (F), starting at the end above the door opening, using 3/16" aluminum pop rivets (I).
2. Secure the track face cover (G), overlapping splices by 6" and drilling/riveting to the track bracket face. Ensure the cover doesn't tip towards the door.
3. Install the track end caps (H) using 3/16" rivets (I).

10. Installing the Door Stop

1. Install the door stop (U) approximately 12" from the floor using 5/16" x 1 1/4" bin bolts (E).

11. Installing the Door Latch

1. Mount the door latch to the outside of the door jamb using 5/16" x 1" gray hex-headed screws (B).
2. Install the latch release lever onto the jamb face using self-tapping screws (W).
3. Install the strike below the latch on the door, ensuring the latch rod inserts into the strike.

12. Handle Installation

1. Install the handles (T) with gray-colored screws (B), following the provided photos for reference.

13. Installing the Interior Draw Latch

1. Mount the draw latch body (V) onto the door jamb with self-tapping screws (W), ensuring it aligns with the door side rails.

Troubleshooting

- **Door does not slide smoothly:** Check for obstructions or debris on the tracks; lubricate the tracks.
- **Door does not close properly:** Adjust the alignment of the door or the tracks.
- **Water leakage around the door:** Reapply sealant or replace weather stripping.

Maintenance Tips

- Regularly check the sliding mechanism for wear and tear.
- Lubricate the tracks and rollers as needed to ensure smooth operation.
- Periodically check the sealant and weather stripping to ensure the door remains weatherproof.