

# **TECHVENT 5300®**

## INSTALLATION OVERVIEW



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## TABLE OF CONTENTS

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<b>I INTRODUCTION</b>	<b>PAGE 3</b>
<b>I SYSTEM OVERVIEW</b>	<b>PAGE 4</b>
<b>I STEP 1:</b> Prepare For Installation	<b>PAGE 5</b>
<b>I STEP 2:</b> Hinge Bar and Sill/Jamb Angles	<b>PAGE 6</b>
<b>I STEP 3:</b> Sill Flashings	<b>PAGE 7</b>
<b>I STEP 4:</b> Engage Sashes	<b>PAGE 8</b>
Engage Sashes   Detail Of Sash Engagement	<b>PAGE 9</b>
<b>I STEP 5:</b> Complete Sash Installation	<b>PAGE 10</b>
<b>I STEP 6:</b> Drive Shafts, Pinions & Mounting Brackets	<b>PAGE 11</b>
<b>I STEP 7:</b> Operating Hardware   Rack Arms	<b>PAGE 12</b>
Operating Hardware   Articulated Arms	<b>PAGE 13</b>
<b>I STEP 8:</b> Drive Units   Hand cranks	<b>PAGE 14</b>
Drive Units   Chain falls	<b>PAGE 14</b>
Drive Units   Electric motors	<b>PAGE 15</b>
<b>I ASSISTANCE:</b>	<b>PAGE 16</b>

## I INTRODUCTION

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The TECVENT 5300® is a heavy-duty industrial window system designed for both new construction and retrofit usage. These instructions provide an overview of a typical TECHVENT 5300® installation. Please refer to project specific install

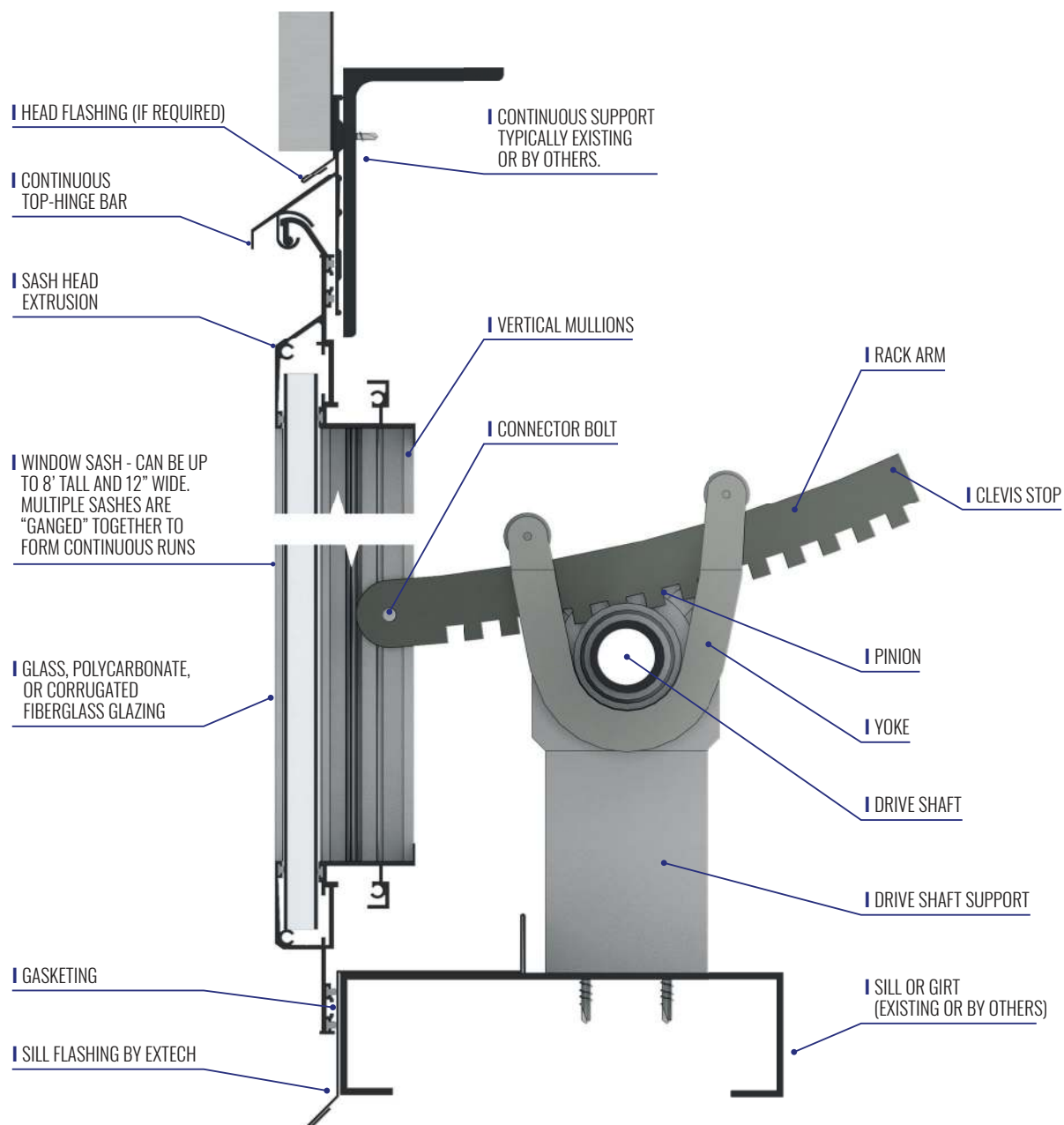
drawings for dimensions, configuration and installation notes that may be unique to your project.

If you have any questions regarding installation, please call EXTECH technical support at **1-800-500-8083**.



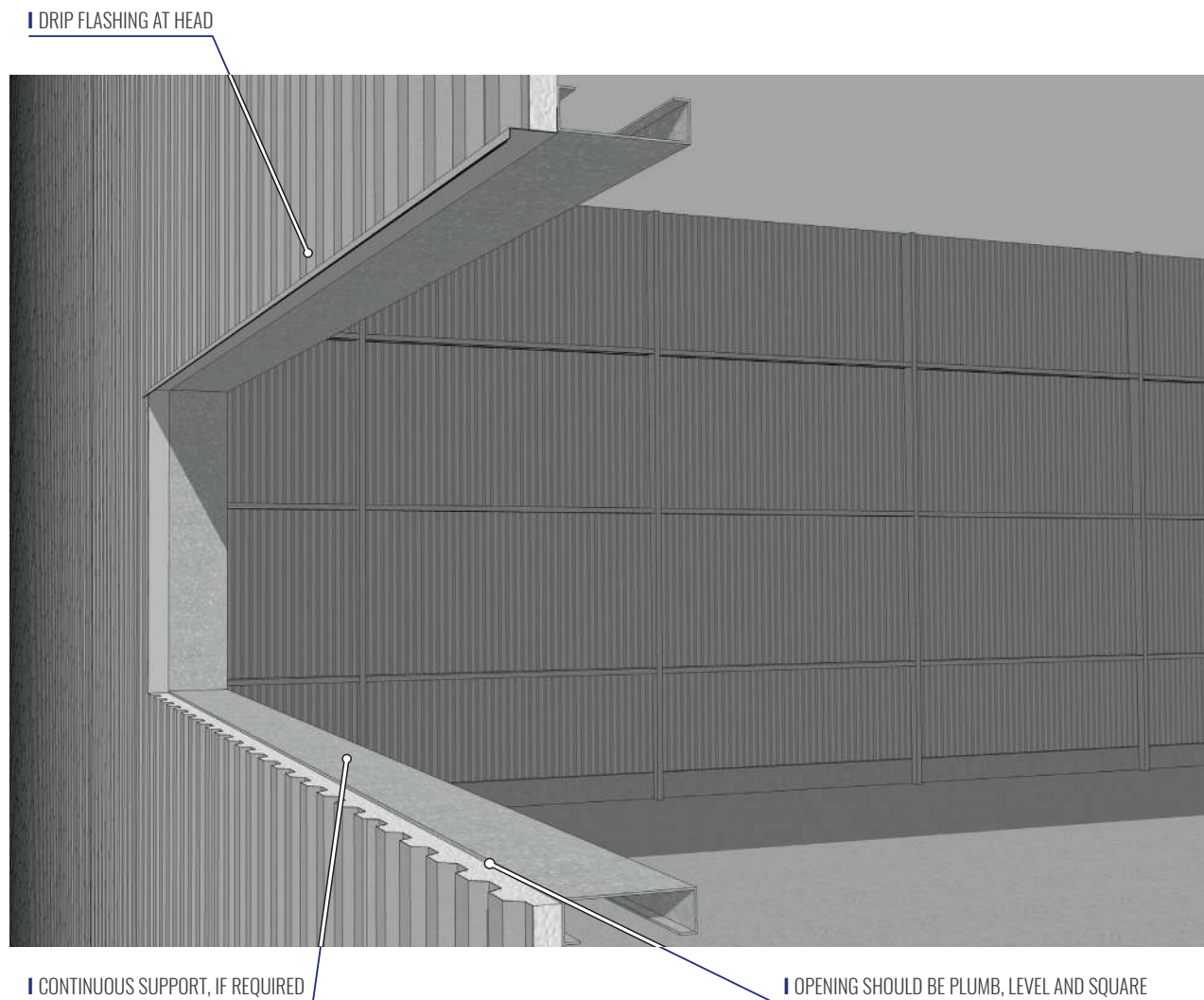
## SYSTEM OVERVIEW

EXTECH offers a variety of hardware options and building attachment methods and your particular configuration may not be represented exactly by this diagram.



## STEP 1: PREPARE FOR INSTALLATION

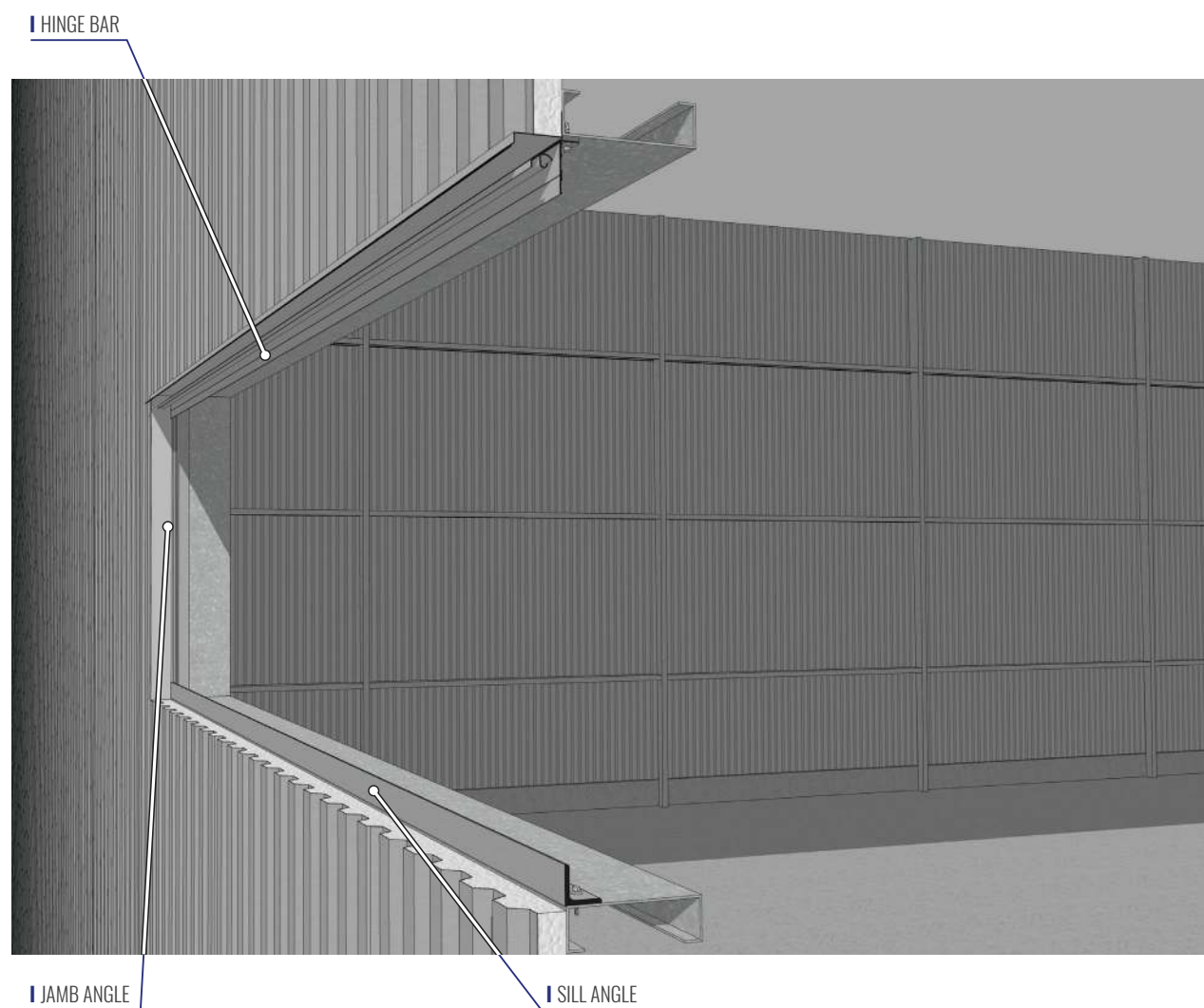
- Review your project specific installation drawings prior to starting.
- If you are replacing existing windows, remove them and clear the opening.
- Ensure that the opening is plumb, level and square.
- If required, install any additional continuous support.
- In new construction, head flashing may be provided by your building supplier. In a retrofit situation, or if it is not provided, install the head flashing.



*Note: Your project may require a different system configuration or a different installation sequence and could vary from the steps shown in these instructions. Please make sure to review project shop drawings before starting installation.*

## STEP 2: HINGE BAR AND SILL/JAMB ANGLES

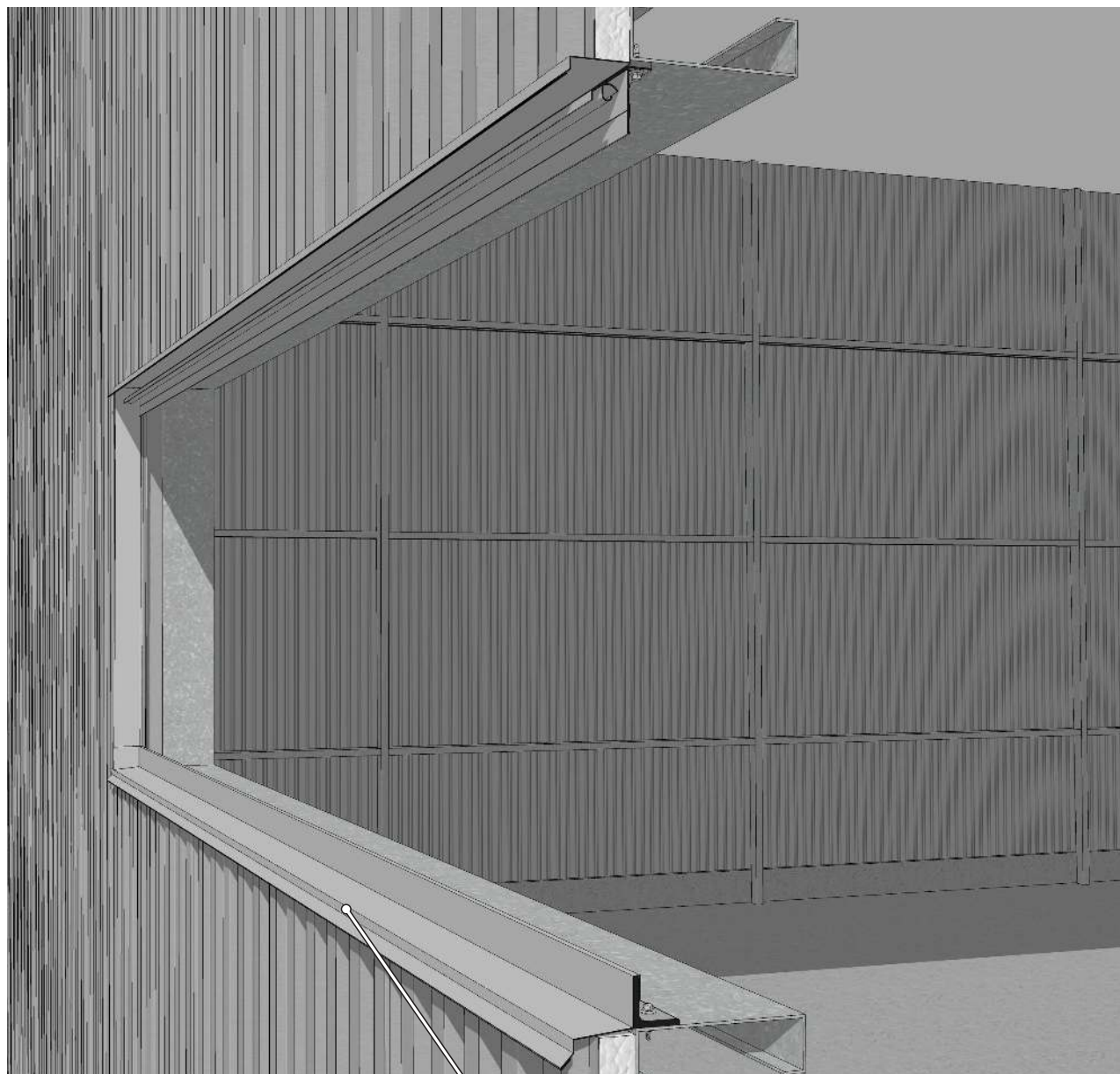
- Install the Sill and Jamb Angles.
- Install the Hinge Bar in the opening head according the project specific Installation drawings.



*Note: refer to the project installation drawings for sealant, fastener and placement recommendations.*

## I STEP 3: SILL FLASHINGS

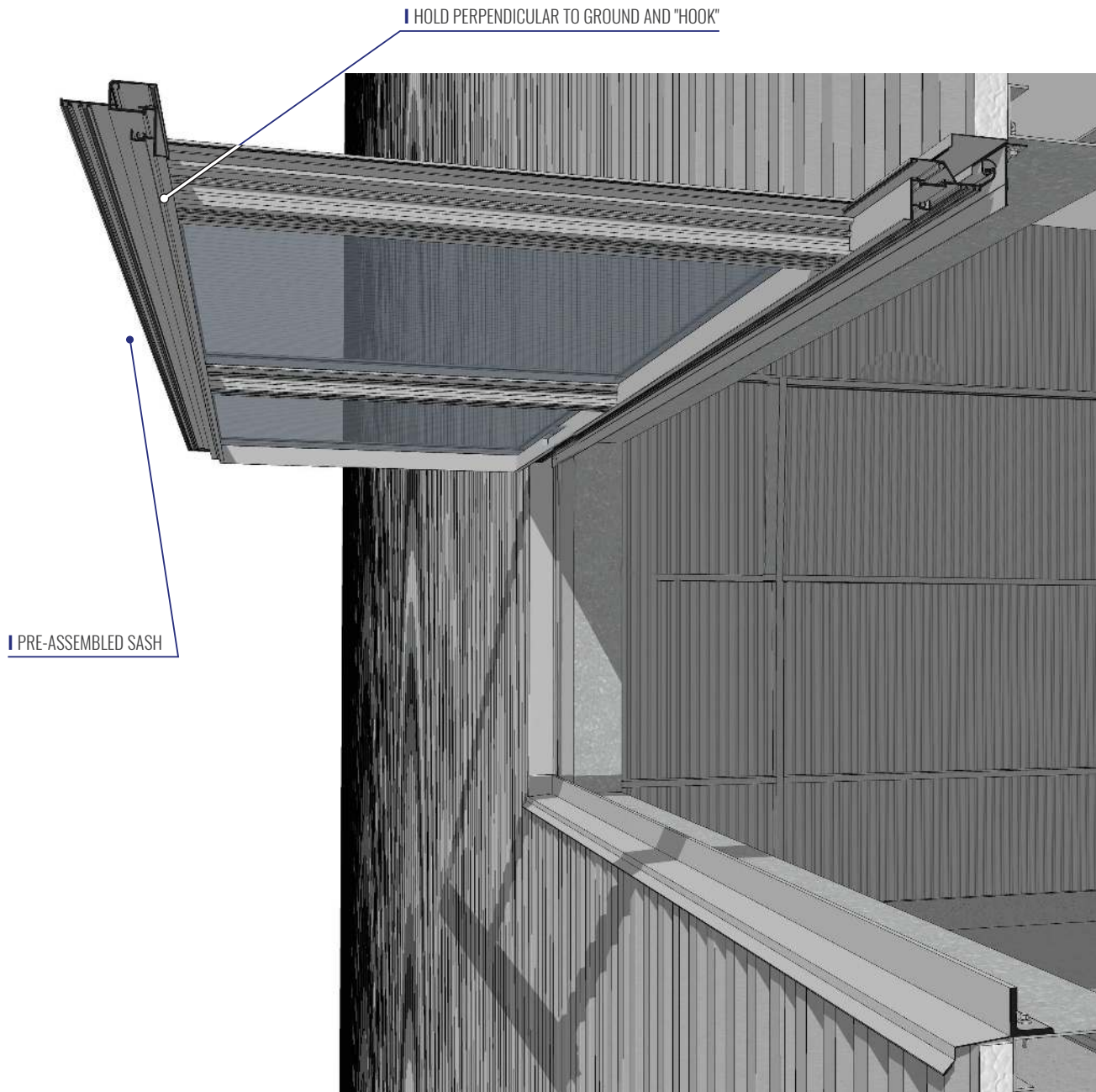
Install the Sill flashings according to the project specific installation drawings.



I SILL FLASHINGS

## STEP 4: ENGAGE SASH

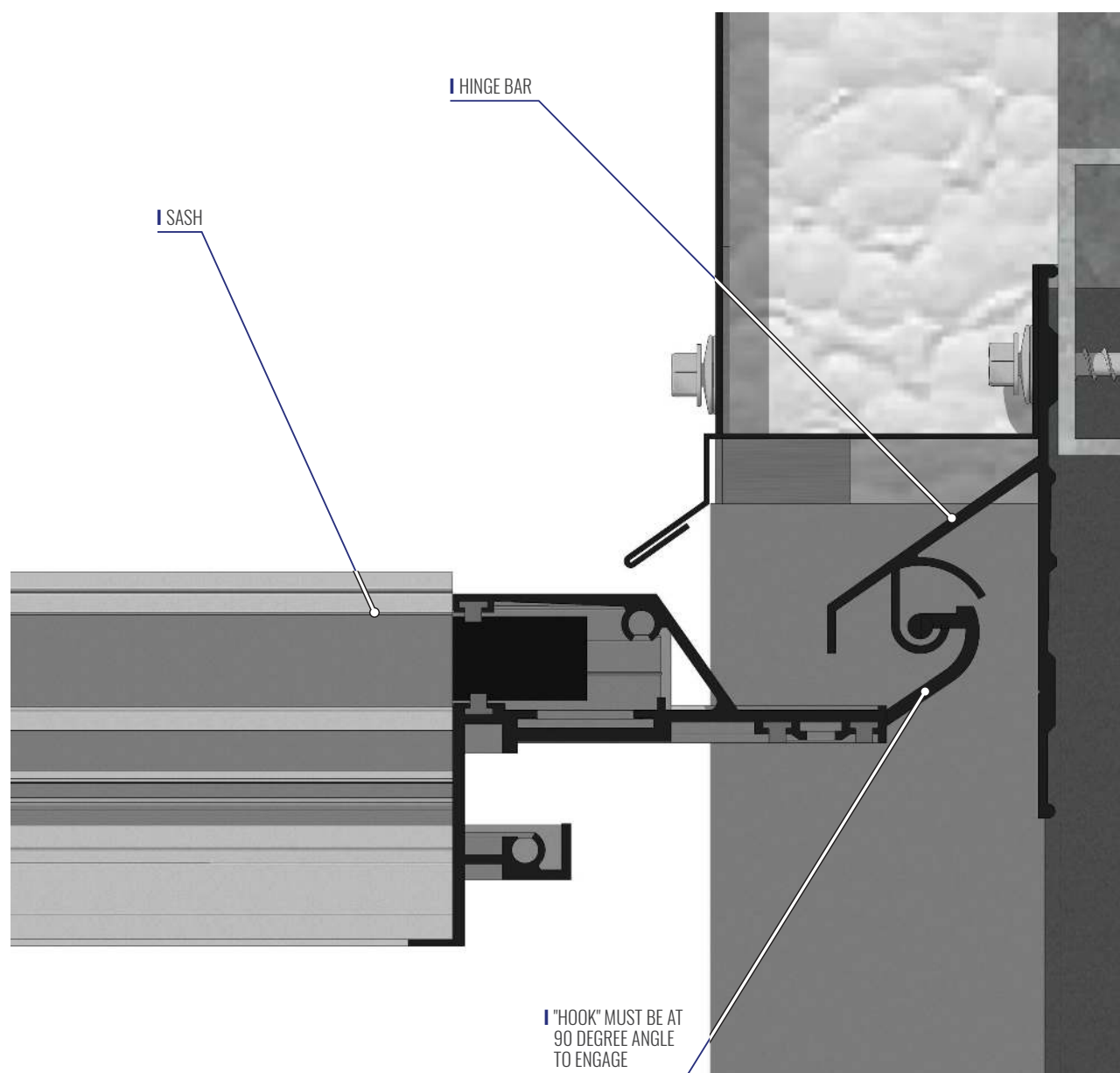
- Begin at one side of the opening.
- Install the first sash unit by holding it parallel to the ground and “hooking” the top of the sash into the hinge bar.



*Note: In some applications it may be possible (and simpler) to slide the sashes into the hinge bar from the closed position starting at the end of the run.*



## STEP 4b: DETAIL OF SASH ENGAGEMENT



## I STEP 5: COMPLETE SASH INSTALLATION

- Allow the sash to close against the Sill Angle.
- Check for proper engagement, fit, etc. also make sure the first sash is slid into the correct starting position.

For additional sashes:

- Repeat Step 4 for each sash installation.
- In the closed position, slide the additional sashes against the first.
- Each additional sash will snap-fit into to the preceding one.

I CHECK FOR SMOOTH OPERATION OF SASH

I ADDITIONAL SASHES WILL BE SNAPPED TOGETHER



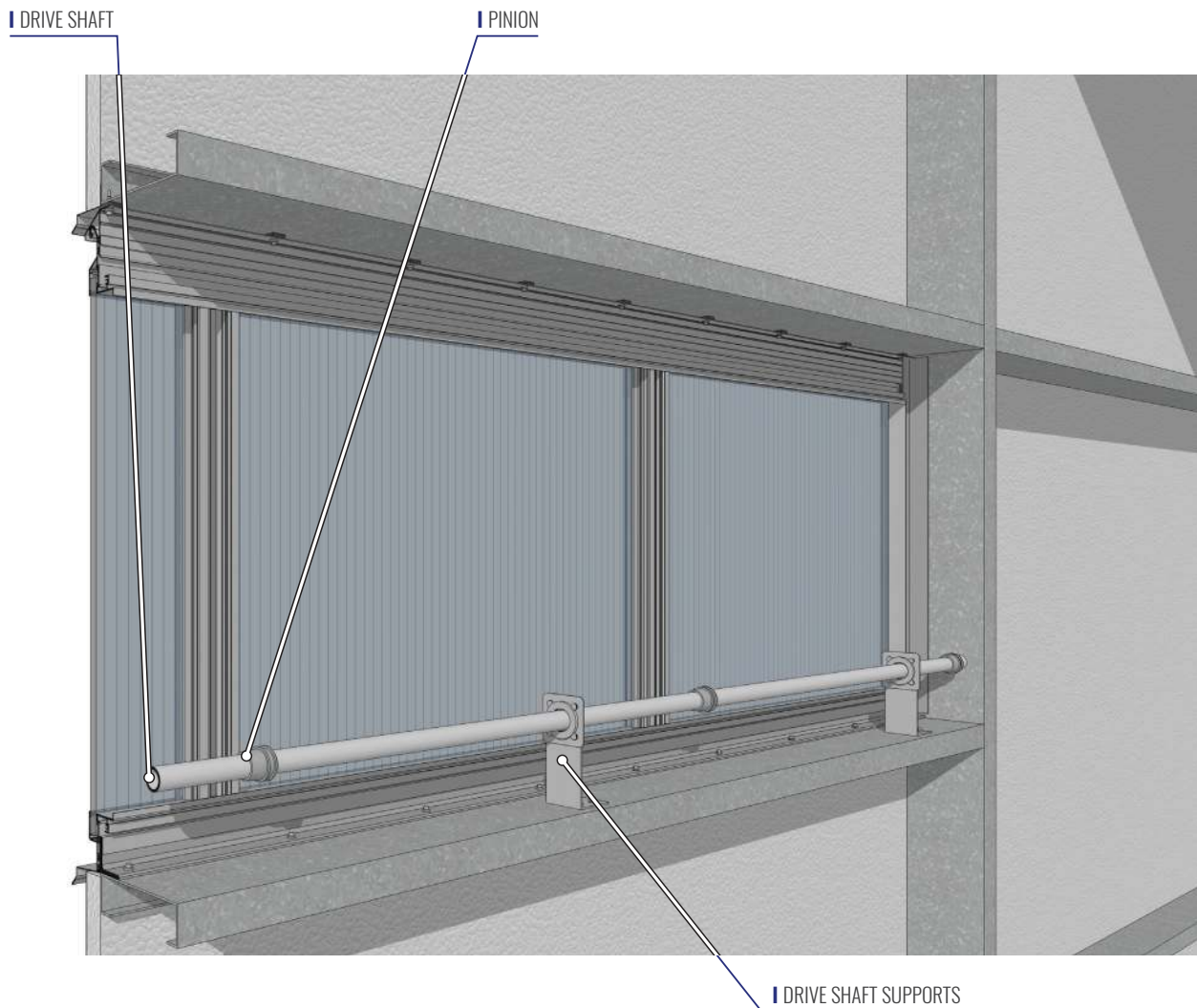
I ENSURE SASH IS ADEQUATELY SEALING AGAINST SILL ANGLE



*Warning: All operating hardware must be installed to secure the windows. If the operating hardware is not installed, strong winds could cause the windows to open and disengage causing a safety hazard. Any sashes that must be left unattended without operating hardware at this point should be either removed or strongly secured.*

## STEP 6: DRIVE SHAFTS, PINIONS & MOUNTING BRACKETS

- Install the drive shaft supports according to placements called for in the project installation drawings.
- String the drive shaft supports and pinions onto the drive shaft in order.
- Mount the drive shaft supports to the sill.
- Align pinions with rack arm attachment points on the vertical mullions.

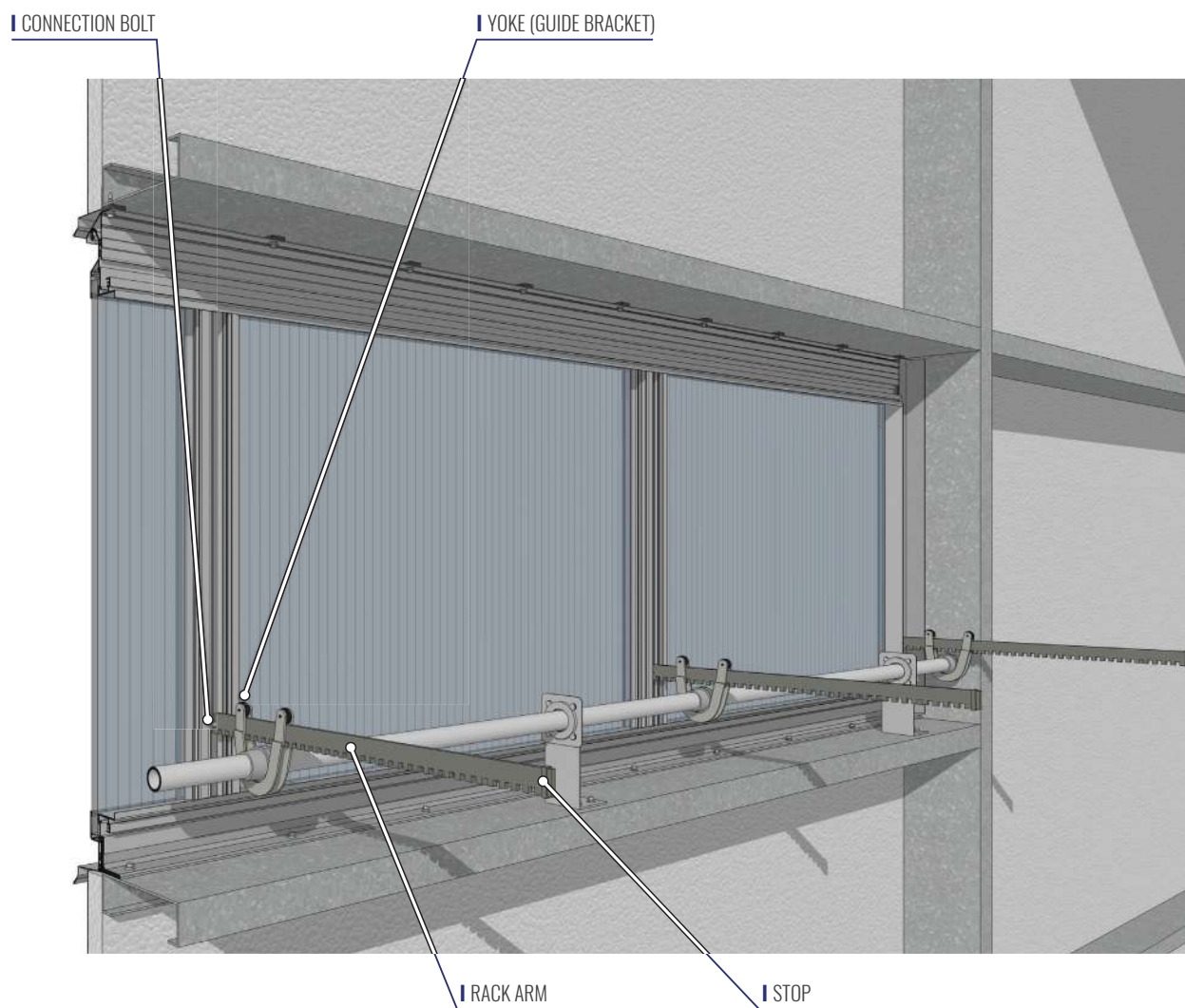


*Note: For steps 6-7, it may be beneficial to work in 10-20 foot sections, completing all operating hardware steps prior to moving to the next section.*

*Note: For articulating arm installations pinions are replaced with cast articulating arms.*

## STEP 7: RACK ARMS, YOKES AND CLEVIS STOPS

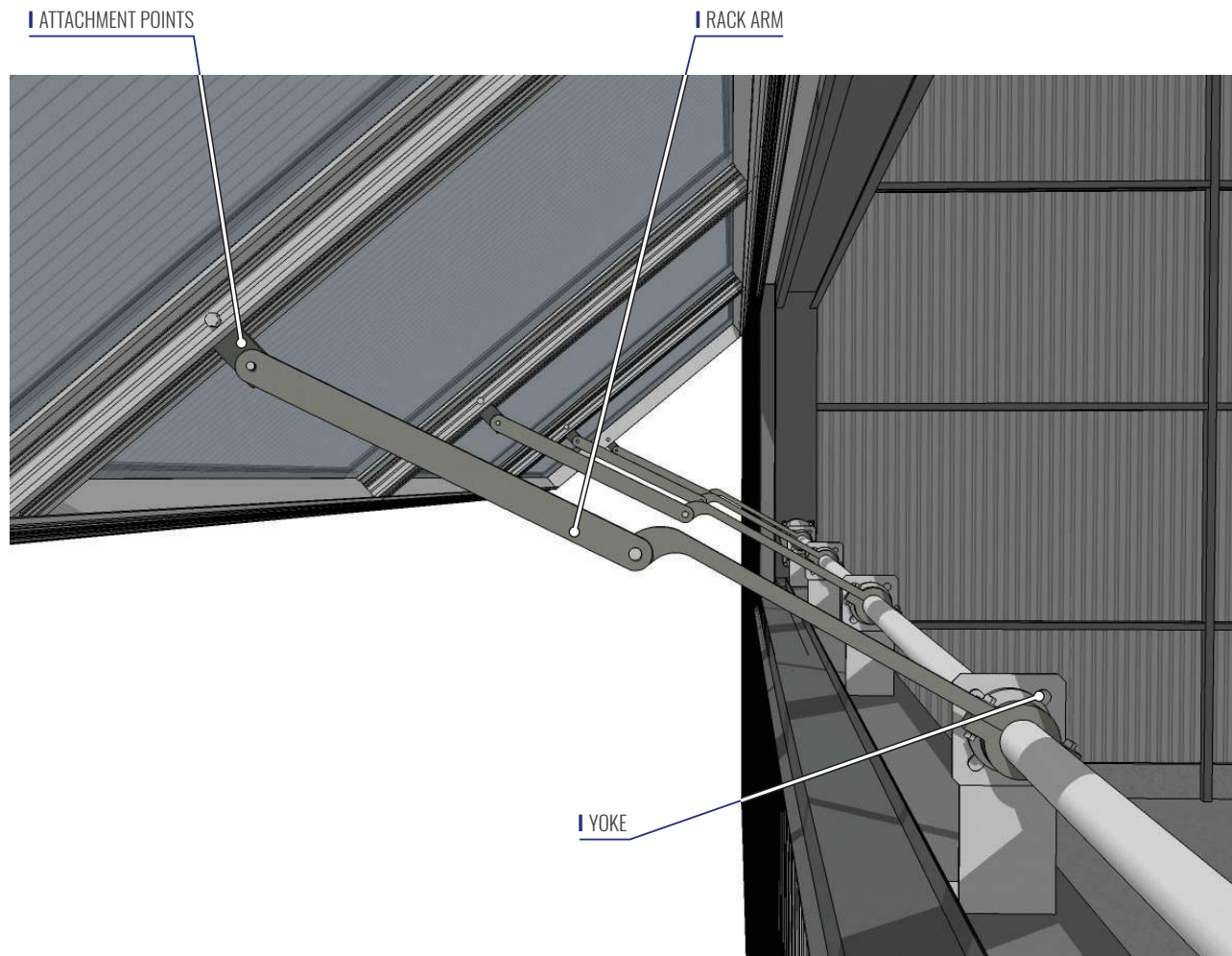
- With the window in the closed position, place the Yoke around the pinion gear and slide the Rack Arm through it.
- Connect the Rack Arm to the sash using a bolt through the connection hole. See the project installation drawings for location. In some cases a spacer may also be provided.
- Ensure that the rack arm is perpendicular to the sash in plan, and that it is firmly engaged with the pinion. Adjust the pinion gear placement as necessary to accomplish this.
- Attach the Clevis Stop at the end of the Rack Arm to prevent the window from over extending and the rack arms from becoming dis-engaged. The clevis stops should be installed in a consistent location on all rack arms.
- Repeat for additional rack arms.



*Note: Actual rack arms may be different from the diagram as they can be supplied as curved or straight and in various lengths, depending on the application.*

## STEP 7b: ARTICULATED ARM DETAIL

- Loosely clamp the articulated arm around the drive shaft in the area near the attachment point.
- With the window in the close position, connect the articulated arm to the sash at the attachment point.
- Ensure that the articulated arm is perpendicular to the sash in plan, and that the position is as shown in the project install drawings.
- Once the position is set, fasten the articulated arm firmly to the drive shaft by tightening the set screws and bolts.
- Repeat for additional articulated arms.





## STEP 8: DRIVE UNITS

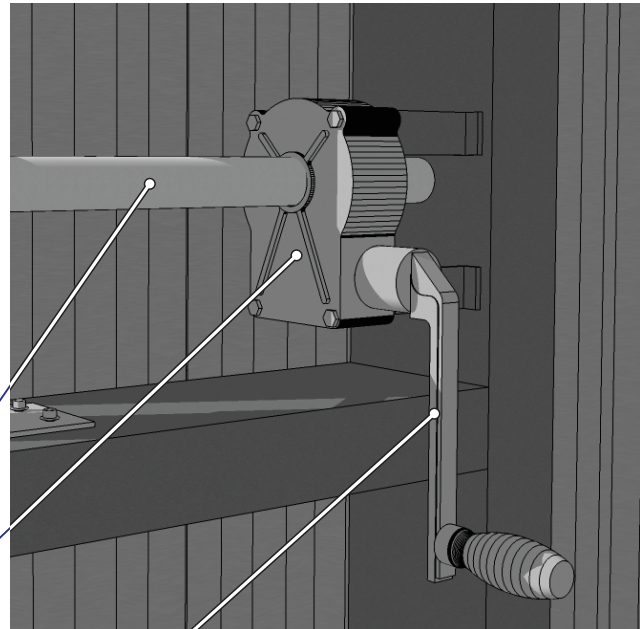
### HAND CRANKS

Several different hand-crank options are available, and mounting locations vary from project to project. Hand cranks work best with smaller openings with fewer sashes and are often used in situation where the windows are at ground level and opened infrequently.

- Mount the gear box in the location called for in the project installation drawings.
- Connect the drive shaft to the gear box.
- Attach the hand crank to the gear box.

DRIFT SHAFT

GEAR BOX



HAND CRANK

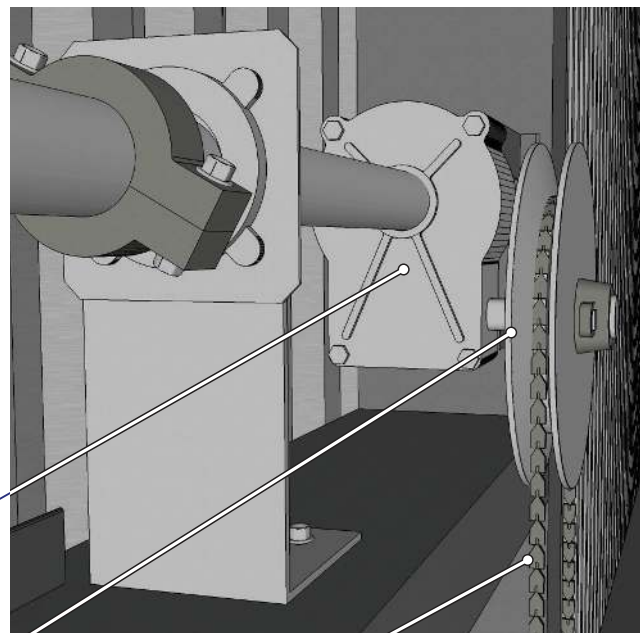
### CHAIN FALLS

Chain falls work best for openings that are above operator reach and for small to mid-size openings.

- Mount the gear box in the location called for in the project install drawings.
- Connect the drive shaft to the gear box.
- Attach the guide wheel to the gear box.
- Mount chain guards on wall, as necessary, to prevent chains from tangling or binding.

GEAR BOX

GUIDE WHEEL



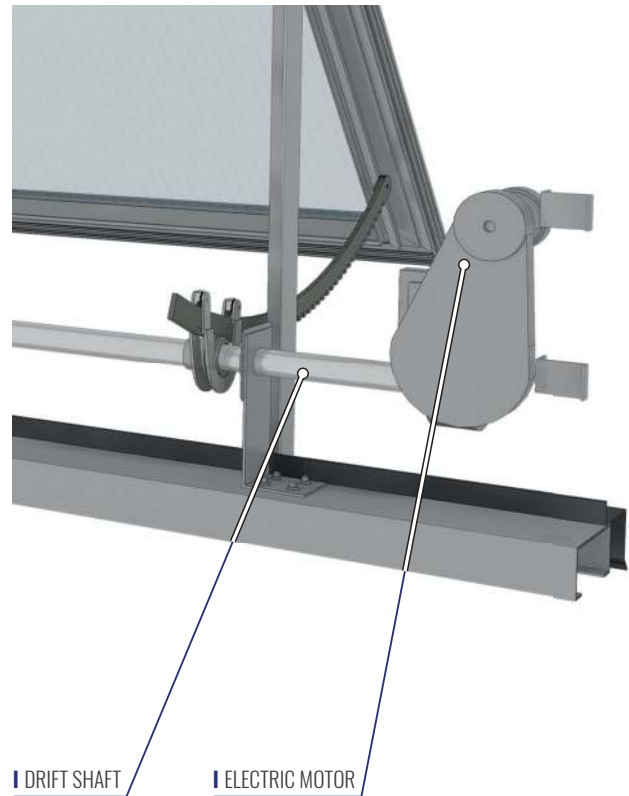
CHAIN

## I STEP 8B: DRIVE UNITS

### ELECTRIC MOTORS

Electric motors allow for larger openings, or even multiple openings to be controlled by the push of a button. The motor size and placement must be matched to each project. Please refer to the project install drawings for specific instructions.

- Power drops must be run to the motor location by a qualified licensed electrician. The power requirements vary depending on the chosen motor.
- The motor is mounted as called for in the installation drawings.
- The drive shaft is connected.
- Power is connected to the motor.
- Larger installations with multiple motors, long drive shaft runs, etc require fine adjustment of the hardware for proper opening sequencing; your project engineer will advise.



## ASSISTANCE

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If you need assistance, please call  
**1-800-500-8083**


EXTECH can provide


- Dedicated phone support
- On-site installation startup assistance
- Complete Installation Services









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