

MOUNT SPECIFIC INSTALLATION NOTES

KIT PP(-L, -M, -S) – Post Plate Long, Medium, Short ver 1.2



Photo: PP-L kit with maximum length posts (structural element hidden behind drywall)



WARNING - SAFETY ISSUES READ AND UNDERSTAND THE INFORMATION BELOW BEFORE USING THIS KIT

- ★ **The manufacturer of this kit is not responsible for fastener selection or installation methods used to attach this mount to a ceiling assembly or any other structure.**
- ★ **This kit is designed to be used with the CineSlide™ anamorphic lens transport device. It is not approved or suitable for any other use.**
- ★ **The manufacturer of this kit does not specify, recommend or approve sizing of structural elements including backing plates, joists or any other structural items. A qualified installer should consult a licensed engineer or architect for structural load design and/or for any advice related to the structure's ability to support a CineSlide, and proper sizing of fasteners used to attach a CineSlide or a CineSlide mount to a structural element.**
- ★ **The manufacturer of this kit does not recommend or approve any structural element modifications of any kind.**
- ★ **It is the installer's responsibility to size and use proper fasteners regardless of structure.**

Warnings Continued Next Page

★ It is the installer's responsibility to guarantee and ensure no mechanical or electrical system elements are contacted by any fastener penetration including but not limited to electrical, water, sewer, or gas lines.

★ Any wiring including low voltage must be done in accordance with building codes by a qualified installer or licensed electrician as appropriate for the installation.

★ All local building and electrical codes must be followed.

★ Fastener examples herein are **EXAMPLES ONLY** and not recommendations. Any examples are those that were found to be of sufficient load bearing capability for the particular example installation to wooden ceiling joists. **EACH INSTALLATION IS DIFFERENT, ANY EXAMPLES MAY NOT APPLY.**

★ Any fastener must be of sufficient length to penetrate and engage the proper thread depth of the fastener into the structural element. The length must take into account the thickness of the CineSlide metal ceiling mount plate (1/4" typical), drywall thickness (varies by installation), and any other wall/ceiling assembly layer including but not limited to airspace or air gaps between the drywall and the structural element (varies by installation).

★ Installing any CineSlide mount should be treated similarly to mounting a 150-200 lb home theater ceiling mounted projector. Even though the CineSlide and lens is relatively lightweight, it will generate repetitive forces that can work small fasteners free and could cause a mount installation or fastener to fail if sufficient fastener strength is not provided. A general guideline is every individual installed fastener should have a pullout strength of 180 lbs or greater

★ All ceiling plate fastener holes should be used, do not leave any fastener hole unused.

★ **DO NOT INSTALL** or hang a CineSlide directly from drywall, wall board, oriented strand board (OSB), "MDF", particle board, or any similar material. A Structural element of "2x" wood, 3/4" or thicker furniture grade plywood, 3/4" finished oak board, or properly engineered metal supports must be used. Any structural "backing plate" should be made from 2x structural wood material or minimum 3/4" furniture grade plywood with no voids in the plywood layers. Any backing plates must also be properly attached to a structural element.

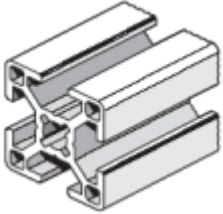
★ Ceiling fan hangers should not be used. This mount may experience lateral (sideways) forces that a Ceiling fan hanger may not be designed to handle.



★ This symbol is used in this document to call attention to items or procedures that require special attention, and may be safety related. Pay careful attention to all such warning symbols and follow their instructions completely.

The Bosch-Rexroth System components:

The CineSlide mount kits are made from Bosch-Rexroth Aluminum Framing system components. The following shows the components used and information about using them.



Posts/Rails

The core component of the Bosch-Rexroth system is its structural aluminum profiles (called rails or posts in these instructions). They are designed so they have a "T-slot" running their length on all 4 sides. CineSlide mounts use these profiles for the *Mount Posts*, and *Headrail* assemblies. They are also used as Isco lens mount posts, identical to the Isco stock mount (except ours are black anodized). The T-slots in these profiles accept a variety of connectors and fasteners. The CineSlide mount kits use Gussets, T-nuts, and T-blocks to interface to the profile's T-slots.



Gussets

One of the main connection components used in the CineSlide mount is the 90 degree gusset. This gusset is made from cast aluminum. Since Cast aluminum does not anodize well, the CineSlide kits include gussets that are painted black. Use caution not to scratch the painted surface on the side of the gusset where it might show.

The Gussets have tabs on one or both of its connecting surfaces that normally align the gusset with the rail's T-slot. **The CineSlide mount kits include (2) different gusset configurations.** The first type has alignment "tabs" on both its connecting surfaces. The second type has the tabs removed on one side only. The second type is for use where a gusset is to be connected to a flat surface, such as the CineSlide body, or a flat Ceiling Plate

When using these gussets, be sure you are using the correct type gusset for the connection location. For a rail-to-rail corner, the first type is used. For a flat-surface-to-rail connection, the gusset with one flat side (no tabs) is used. The alignment tabs fit into the rail's T-slot.



T-nuts

T-nuts are T-slot nuts that can slip straight into a bar's T-slot from the top. This nut does not have to enter via the end of the post/rail. These are designed such that you:

- Place an M6x14mm screw through a gusset hole,
- Thread the T-nut LOOSELY onto the end of the screw,
- Insert the gusset with the T-nut into the T-slot, slide the gusset to its desired

location, and then tighten the M6 screw. The tightening motion causes this specially made T-nut to turn 90 degrees to the slot and then as it is tightened, it will grab the inside of the T-slot and give a very tight hold.



IMPORTANT: When using T-nuts it is important that you visually check to ensure the T-nut did rotate 90 degrees and is perpendicular to the T-slot groove. If a T-nut needs to be loosened for adjustment, etc. **IT MUST be a few several turns.** A T-nut that is tightened from a less than fully loose condition may not turn 90 degrees and may not properly lock. If the T-nut did not turn 90 degrees, loosen it fully then retighten. This procedure should cause the T-nut to turn properly and engage the slot. **ALWAYS VISUALLY CHECK T-nut's after tightening and be SURE it is rotated properly to the locked position (90 degrees from the slot direction)**

Other Fasteners used with the CineSlide Mount Kits and Bosch Components:

A flat head cap screw and a button head cap screw.	Flat Head Cap Screw (FHCS) Button Head Cap Screw (BHCS)	FHCS used with Ceiling Plate to posts, lens mount posts BHCS used with Gussets, CineSlide to post screws
A socket head cap screw.	Socket Head Cap Screw (SHCS)	SHCS used with some lens mount post safety stops
A hex head screw.	Hex Head Screw (HHS)	Hex head screws used with lens mount plate
A nylon insert lock nut.	Nylon Insert Lock Nut	Nylon inset lock nuts used with some Gusset connections, lens mount plate safety nut
A flat washer.	Flat Washer	Flat washers and lock washers used on CineSlide body-to-post, also used with lens mount plate hex screws
A split lock washer.	Split Lock Washer	

Metric Fasteners are used with these components. More than one size of a particular fastener type may be used in the mount kit. Check sizes listed in the instructions and use the proper size, type, and length fastener as indicated.

NOTE:

Fasteners in this manual are referenced using their name abbreviation, followed by their size

Example:

M6 x 25 BHCS = 6mm screw size, 25mm long, Button Head Cap Screw.

Ceiling Plate Safety Screws

The PP kit includes M8x25 FHCS "safety screws". These are installed in the upper ends of the mount posts and attach the mount plate to the mount post. These screws prevent a mount post from coming loose from a ceiling plate in the event a gusset comes loose from a T-slot...

CineSlide Posts are shipped with the mount posts pre-threaded and this screw pre-installed. If posts are cut/shortened, this screw **MUST BE REINSTALLED**. If the mount post is cut by the installer (vs. factory cut), the cut end must be tapped with an M8x1.25mm thread and countersunk before reassembly.



NEVER OMIT THE UPPER MOUNT POST SAFETY SCREW. FAILURE TO INCLUDE THIS SCREW IS UNSAFE AND NOT APPROVED.

Special tools required:

- ★ 10mm open ended wrench for lens mount plate
- ★ 4 mm Hex key Wrench (Allen wrench) for gusset fasteners - **Ball head strongly recommended**
- ★ 5 mm Hex key wrench for CineSlide to post screws, Safety FHCSs

ONLY IF MOUNT POSTS ARE CUT TO LENGTH BY THE INSTALLER:

- ★ Non-ferrous metal cutting blade metal saw (if post length is to be cut on-site. Posts are available pre-cut to order). **HAND CUTTING WILL NOT PRODUCE AN ACCEPTABLE CUT OR PROPER STRENGTH JOINT.** A proper saw capable of making a clean, square cut is necessary to cut the mount posts to length.
- ★ M8 x 1.25 hand tap
- ★ Power drill for use with Hand Tap

Installation

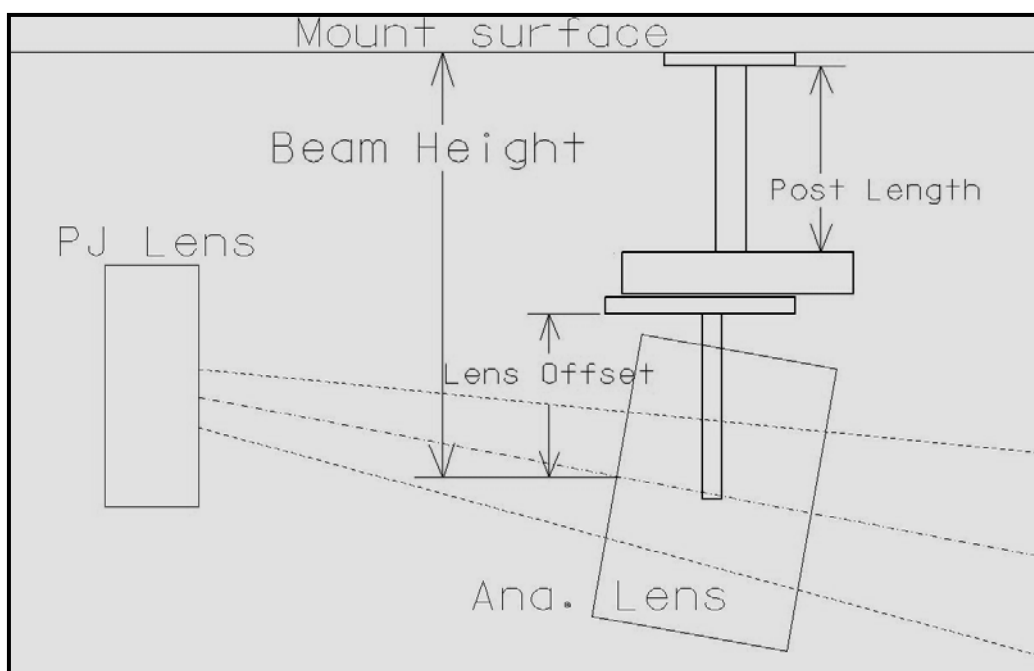
Installing a CineSlide mount kit involves the same basic steps. There are several ways to accomplish each step and the experienced installer may find a method that works better for them. The steps outlined below are a reliable method to do it correctly.

Start with the CineSlide assembled, including a complete lens-mount but **NO LENS**. See manual for lens-mount assembly.

1. Size and prepare mount posts, cut to length

NOTE: If your posts were pre-cut to length by the factory, skip this step.

- a) Determine "Beam Height". Turn on the projector, project a bright image or white test pattern that is aligned with the screen. Measure the distance from the ceiling plate's **mount surface** to the center of the rectangular beam of light at the point where the rear of the anamorphic lens will sit in front of the PJ. This is the "beam height" For **most installations this is not the vertical center of the projector's lens** (See diagram below) Remember to account for any structural element that the ceiling plates will mount to (e.g. plywood, oak board, etc.). The structural element is the mount surface.
- b) Determine "lens offset". The lens offset is the distance from the lens mount plate to the center of the rear of the lens (in its tilted orientation). This will vary by installation but the lens offsets listed below will work for most installations and allow some up/down adjustment range. If the installation needs to be as close as possible, tight to the ceiling, you should measure and determine the minimum/smallest lens offset possible.
 - Isco III typical lens offset: **3.25"**
 - Schneider CineDigital typical lens offset: **2.5"**



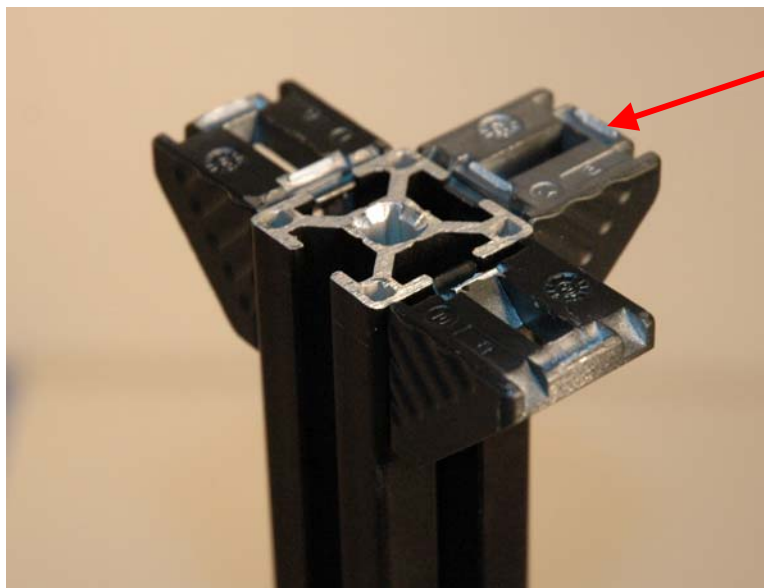
c) Calculate post length: We subtract the CineSlide thickness, the mount hardware thickness, and the lens offset from the beam length. Use the following formula to determine the post length:

- For mount kits without a header bar (e.g. JPP):
Post length = Beam height" – 1.625" - "Lens Offset"

EXAMPLE: Typical tilt Isco III lens installation, using a kit with no header bar, beam height measured to be 15" from a ¾" oak ceiling plate. Post length=
15" – 1.625" – 3.25" = 10.125 = 10 1/8"

- d) The mount posts were shipped with the upper and lower gussets pre-installed. If the posts are being cut to length, make a note of how the gussets were installed and then remove the:
- a. Upper safety screw
 - b. All upper gussets
- e) Using a proper metal saw cut the posts to the proper post length. The post must be cut with a saw capable of making a clean and square cut such as a metal saw with a carbide non-ferrous metal cutting blade. The connection at the CineSlide body **MUST** be square. **HAND CUTTING WILL NOT PRODUCE AN ACCEPTABLE CUT OR PROPER STRENGTH JOINT.**
- f) Use a file and smooth any sharp cut edges. Debur the cut. Avoid damaging the black anodize finish, touchup silver edges if necessary with a permanent black marker or model paint.
- g) Tap the center holes of the cut ends with a M8 x 12.5mm hand tap.
- h) Attach the upper stabilization gusset(s), position so the upper edge of the gusset is just slightly above the mount post edge. Also orient the gusset so the gussets "flat side" (no guide tabs) is up, where it will be flat against the ceiling plate. With the gusset aligned, tighten the gusset(s) to the post. Repeat for all upper gussets (**Photo Below**):

Note that the PP-L kit has 3 upper gussets. The PP-M and PP-S kits have only one upper gusset. For PP-M and PP-S kits, orient upper gusset on same side of post as lower gusset.



**Rear of PP-L
post**

- i) Attach the ceiling plate to the post end using the M8x25 FHCS. Align the post square with the ceiling plate, align the gussets with their mount holes then tighten this screw.
- j) Install the gusset-to-ceiling plate hardware for all the gusset(s) on each leg. Use M6x18 FHSC, and nylon lock nuts. Tighten firmly.



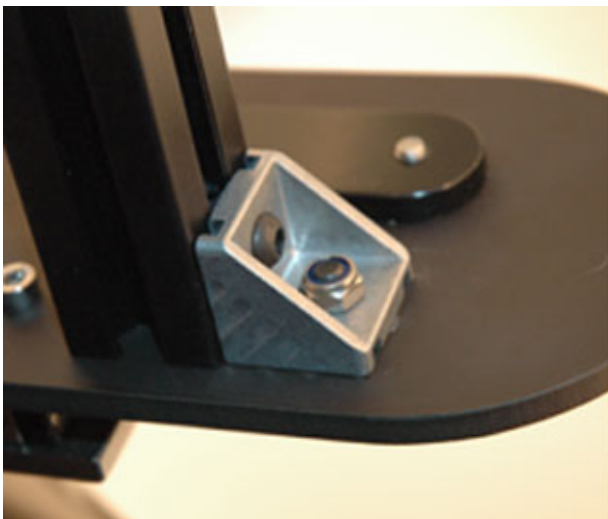
Ceiling Plate with Fasteners Top view



Ceiling Plate with Fasteners Bottom view

2. Assemble mount posts to the CineSlide.

- a) Using (2) M8 x 25 button head cap screws, 2 split ring lock washers, and (2) flat washers, Attach the mount posts to CineSlide™ body. Be careful not to damage the finish. The posts are attached to each side of the CineSlide body through the slotted 8mm (larger slot) mount holes. Position the mount bolts and posts in the center of this slotted hole. Rotate the posts so its front is parallel with the CineSlide front. Gently snug the M8 mount screw to hold the post in its correct position.
- b) Install CineSlide body-to-post gussets, one for each post using an M6x20 BHCS, flat washer, and a M6 nylon insert locknut. Orient the Gusset's flat side (no guide tabs) against the CineSlide body. Orient the screw/nut so it is at the outside of the gusset's slotted hole (away from the corner). Washers and/or lock washers go on the bottom side as shown below.
- c) Gently tighten the M6 BHCS and the M8 BHCS.



Gusset installed on CineSlide



Bottom view of BHCS into post bottom and gusset

4. Locate mount on a structural backing plate.

The PP kit must be installed to a structural backing plate of some type. We recommend installing to a suitable length $\frac{3}{4}$ " thick furniture grade plywood or finished oak board. The installer may find it necessary to mount the PP ceiling plates to the structural element, and then install the structural element to a ceiling. Installing a structural element such as plywood to a ceiling is beyond the scope of this document. These instructions are written to address how to locate the mount on an element on the ceiling.

Gently move the CineSlide lens mount to the Lens-ON position stop by hand (see manual for description of "Lens-ON" position; this is typically the motor-side stop).

Have one or two helper's lift and firmly hold the CineSlide and mount assembly to what will be its final, mounted position on the ceiling. Fine tune the location and check these items:

- The lens mount is in the "Lens-ON" position (to the travel stop), and the lens mount is centered to projector lens OR to the projector's light path (for projectors with side offset lens)
- The rear of the lens mount is located the preferred distance from the front of the projector (typically as close as possible)
- The ceiling plates are flush against the mount surface. If the mount surface is level, the posts will be plumb when the ceiling plates are flush. If they are not plumb and are significantly out, shims may be required under the ceiling plates.
- The CineSlide is oriented parallel to the screen (or at the desired angle relative to the projector/screen). Be sure that any mount angle will not cause the lens to move into the Projector once installed (i.e. incorrectly angled toward projector).

With the assembly being held so the CineSlide is in its final location as described above, mark the ceiling mount plate mount holes on the structural element.

Once the ceiling plates and are properly located on the structural element, securely mount the ceiling mount plates to the ceiling structural element. Use appropriate fasteners (not supplied, **SEE WARNINGS AT BEGINNING OF THIS DOCUMENT**). **Use one fastener in every available mount hole of the ceiling plate. Do not omit any holes, all are required.**

Generally, for an oak board installation, a screw size of #10 for a PP kit with deep threads such as a fully threaded hex-head sheet-metal screw, or a typical square-drive cabinet hanging screw is often an acceptable fastener. Use a Pan, hex, truss-head or similar screw head style. Such a fastener should engage a structural plate fully. For $\frac{3}{4}$ " furniture grade plywood, #10 through-bolts with **nylon insert lock nuts** are usually suitable fasteners. Proper pilot holes should be provided for all screws.

8. DO NOT INSTALL gusset caps until after final fastener check and safety checklist.

9. This completes the PP kit specific steps. See the owner's manual for the final instructions on electrical connections, and fine adjusting, and the safety checklist

10. Complete the safety checklist, verify all mount fasteners are tight, install decorative gusset caps.