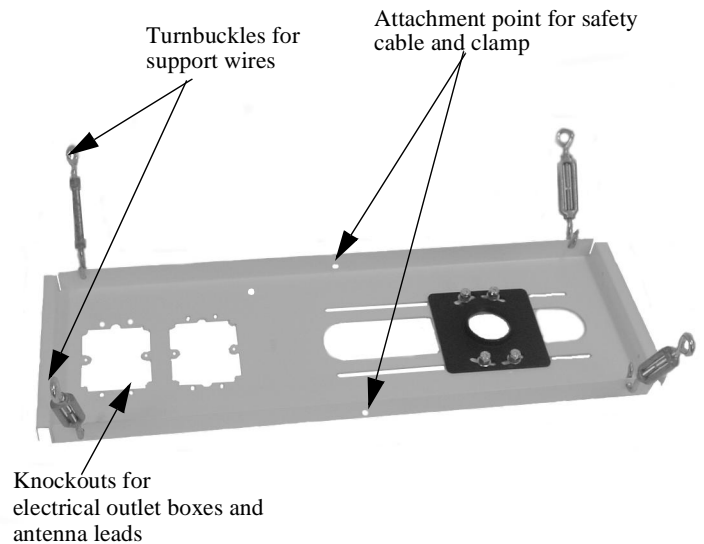

INSTALLATION INSTRUCTIONS

CMA-440 Light Weight Suspended Ceiling Kit

The CMA-440 Light Weight Suspended Ceiling Kit provides a sturdy support for LCD/DLP hanging brackets (and certain other products weighing less than 50 pounds) when installing these products in a suspended ceiling.

The Kit includes a 8 x 24 in. (203 x 610 mm) reinforcing plate that will be suspended by four tie wires from the true ceiling above the suspended ceiling tiles. Turnbuckles allow the installation to be fine-tuned.

The reinforcing plate can be installed anywhere above a 2' x 2' (600 X 600mm) or 2' x 4' (600 X 1200mm) ceiling tile.



BEFORE YOU BEGIN

- **CAUTION:** To prevent damage to the Kit, which could affect or void the Factory warranty, and to the equipment that will be attached to it, thoroughly study all instructions and illustrations before you begin the installation. Pay particular attention to the “Important Precautions” on Page 1.
- The maximum weight to be installed on the CMA-440 mount is 50 pounds (22.68 Kg).
- The ceiling tray is designed to fit above a conventional suspended ceiling system.
- If you have any questions about this installation, contact Chief Manufacturing at 1-800-582-6480.
- In certain installations, it may be easier to install the ceiling anchors (page 3) **before** you attach the hanger brackets to the ceiling tray.



IMPORTANT WARNINGS AND PRECAUTIONS!

- WARNING:** A **WARNING** alerts you to the possibility of serious injury or death if you do not follow the instructions.
- CAUTION:** A **CAUTION** alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.
- **WARNING:Improper installation can result in serious personal injury! Make sure that the ceiling structural members can support a redundant weight factor *five times* the total weight of the equipment: if not, reinforce the ceiling before installing the suspended ceiling kit.**
 - **WARNING:Be aware also of the potential for personal injury or damage to the unit if it is not adequately mounted.**
 - **WARNING:The installer is responsible for verifying that the ceiling to which the CMA-440’s reinforcing plate is anchored will safely support the combined load of all attached components or other equipment.**
 - **WARNING:The weight of the LCD/DLP projector must not exceed 50 lbs (22.68 kg), the maximum load capacity of the reinforcing plate.**
 - **CAUTION:** To avoid personal injury or damage to the suspended ceiling kit, be sure that it is installed square and parallel in all dimensions.
 - **CAUTION:** Check the unit for shipping damage before you begin the installation.

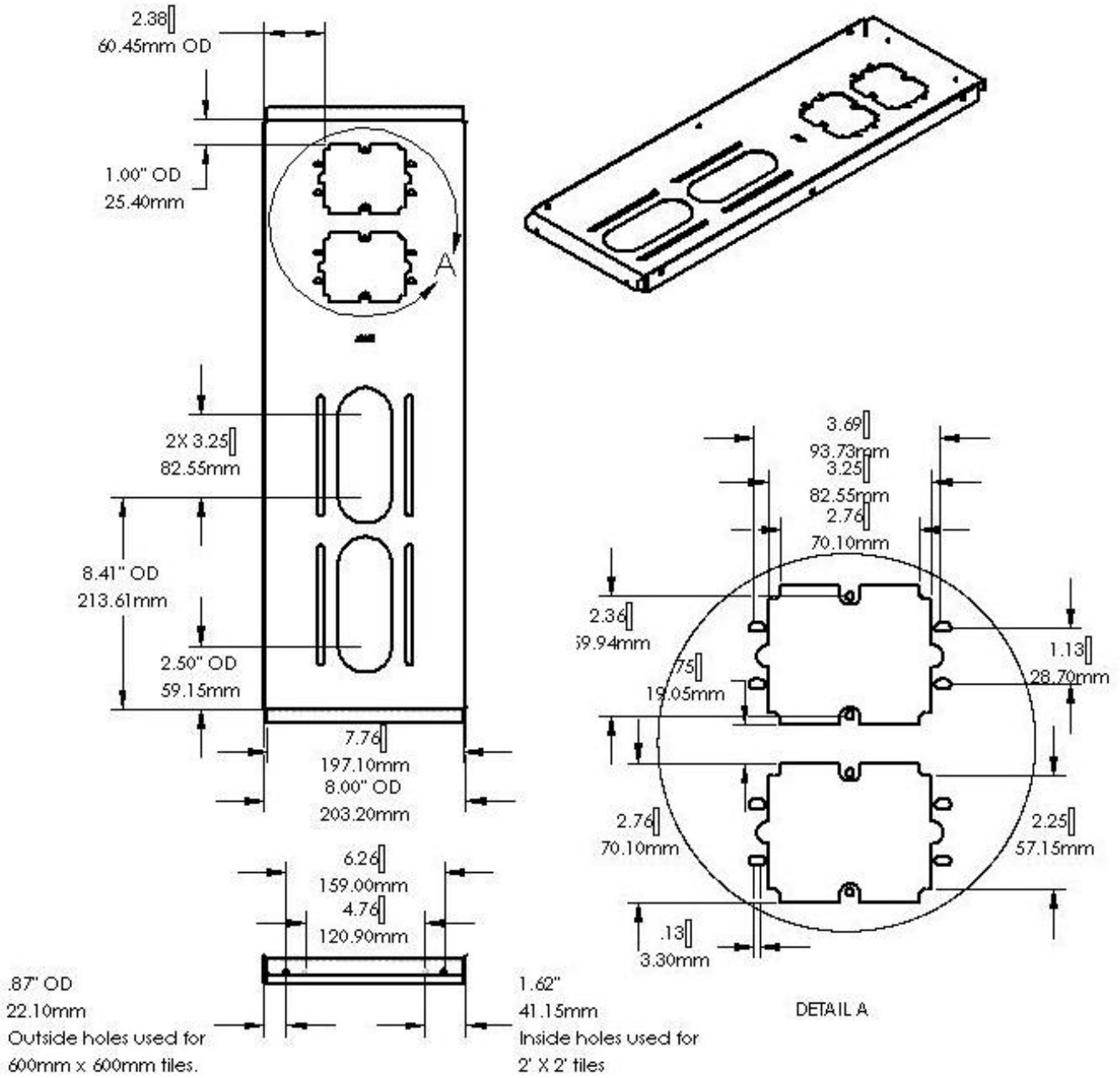
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TOOLS REQUIRED FOR INSTALLATION

- Phillips screwdrivers, No. 1 and No. 2 tip
- Drill and bit set
- Pliers (heavy-duty)
- Wire cutter
- Hammer (claw type), if suspending from a solid concrete ceiling.
- Other tools may be required depending on the method of installing the unit in the ceiling.

DIMENSIONAL DRAWING



ASSEMBLY PROCEDURES

Hang Ceiling Tray

WARNING: Improper installation can cause serious personal injury! Make sure that the ceiling structural members can support a redundant weight factor *five times* the total weight of the equipment you intend to support overhead. The ceiling must be reinforced before you install the Kit if the ceiling cannot support a redundant weight factor *five times* the total weight of the equipment.

1. Insert the center bolt bracket from the under-side of the ceiling tray (see Figure 1).
2. Secure the ceiling mount bracket to the center bolt bracket using four wing nuts and washers provided.
3. Remove the tiles from the area where mounting the ceiling tray.
4. Place the ceiling tray in its mounting location and mark the mounting hole where the pipe will protrude from the ceiling.
5. Install the ceiling tile and ceiling tray and clamp the ceiling tray to the ceiling track.
6. If necessary, remove outlet box knockout(s) from ceiling tray and install electrical outlet box(es) in the opening(s).
7. Place the ceiling tray into the 24 x 24 in. (600 x 600 mm) or 24 x 48 in. (600 x 1200 mm) opening in the ceiling in place of a ceiling tile, or mount the tray above the ceiling (see Figure 2 for SAE applications or see Figure 3 for metric applications).
8. Using four 10 x 24 x 5/8" Phillips-head self-tapping screws in the inside four holes for SAE applications (see Figure 2) or in the outside four holes for metric applications (see Figure 3) of the ceiling tray, clamp the ceiling tray to the ceiling runners.
9. Hook turnbuckles into the hanger brackets.

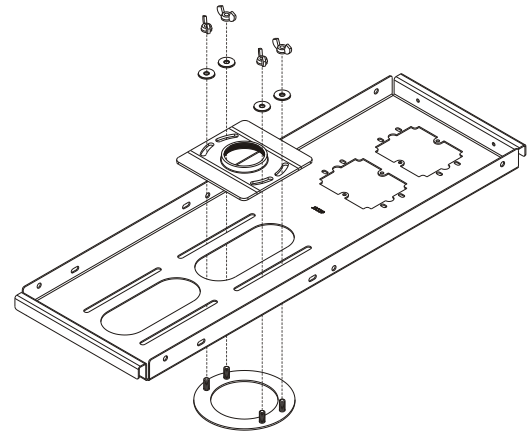


Figure 1. Center Bolt Ring Attachment

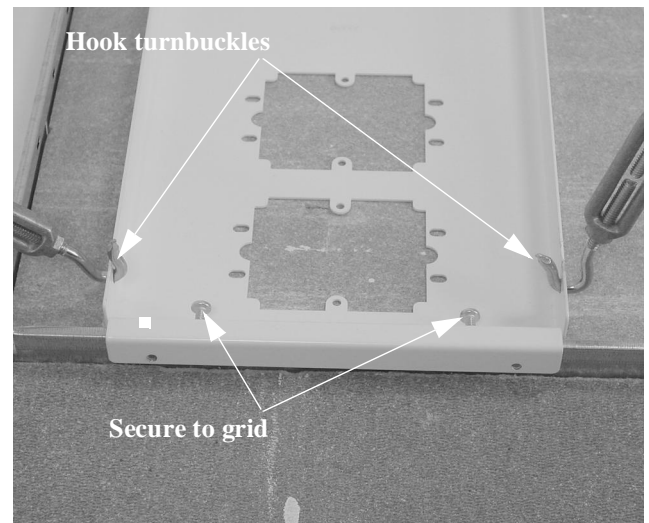


Figure 2. Bracket Attachment for USA/SAE

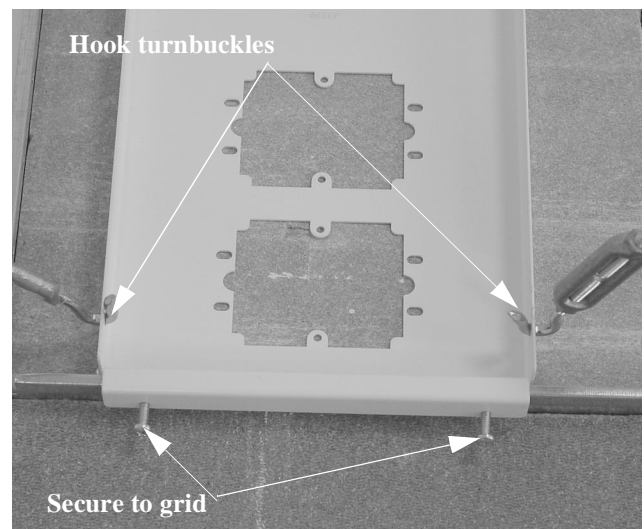


Figure 3. Bracket Attachment for Europe/Metric

ANCHOR THE TRAY TO THE CEILING

NOTE: If the true ceiling is more than 36 in. (914 mm) above the suspended ceiling, you must obtain additional anchoring wire. Use 14-gauge soft galvanized wire. A longer safety cable may also be required. Contact Chief Manufacturing for assistance in determining your specific requirements.

Anchoring Methods

Select the appropriate anchoring method for your ceiling:

NOTE: Four eye lag screws and four concrete anchors are shipped with the Kit.

- **Wood Joists or Beams.** Drill four 5/32-in. dia. holes, at least 2 in. deep (4-mm dia. holes, 51 mm deep). Fully insert eye lag screws (see Figure 4).
- **Solid Concrete.**
 1. Drill four 1/4-in. dia. holes 1-3/8 in. deep (6-mm dia. holes, 36 mm deep). Use ANSI B94.12-1977 carbide bit (see Figure 5).
 2. Tap anchors into hole to an embedded depth of at least 1" (25.4 mm deep).
 3. Using a hammer with a claw, pull anchor out 1/4" (6.36 mm) to activate anchor.
- **Truss Ceiling.** Attach the tie wire to the turnbuckle and loop its upper end around the ceiling truss. Pull the tie wire tight and twist it around itself at least four times. No additional anchor is required (see Figure 6).

Anchoring Procedure

1. Cut the 20-ft (6.1 m) tie wire into four pieces of equal length.

WARNING: Make sure the tie wire will not become loose. Thread the end of the wire back through the first loop, closest to the eyebolt, and bend the end of the wire up to prevent the wire from untwisting (see Figure 7).

2. Insert the wires through the ends of the turnbuckles. Twist each wire around itself at least four times, then thread the wire back through the loop closest to the eyebolt (see Figure 7).
3. If required (see "Anchoring Methods" above), drill holes for the four ceiling anchors. Position the holes so that the tie wires, when attached and taut, will angle outward at 15° as shown.
4. For all anchoring methods, drill an anchor hole for the safety wire **directly above the center** of the ceiling tray. **Do not attach** the safety cable at this time (see page 5).
5. Pull the tie wires tight and attach them to the ends of the ceiling anchors (or to the truss) and secure as in Step 2. The weight of the ceiling tray should now be supported by the tie wires.

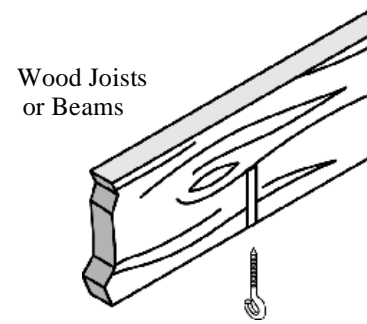


Figure 4. Anchoring in Wood

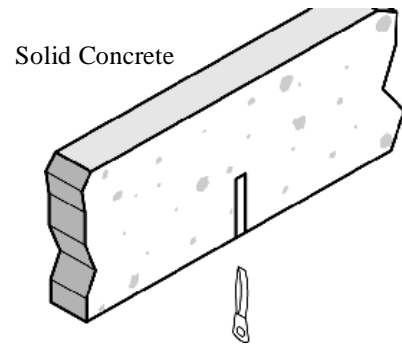


Figure 5. Anchoring in Concrete

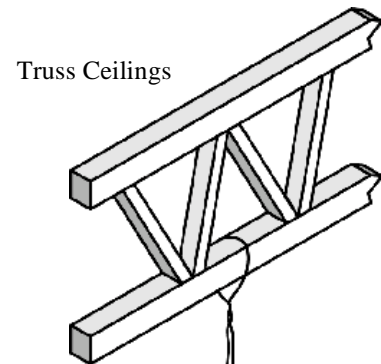


Figure 6. Truss Anchoring

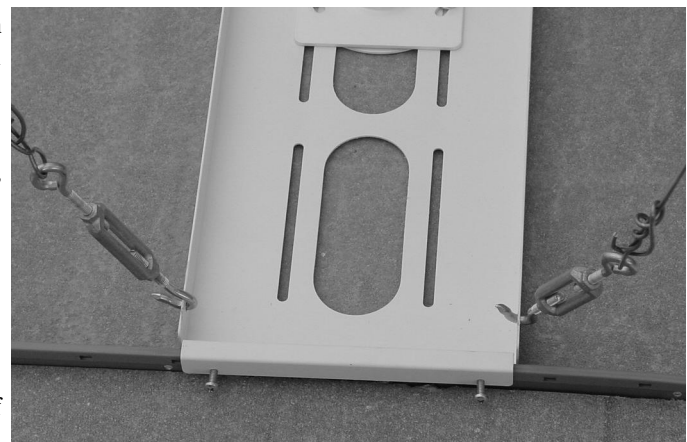


Figure 7. Anchoring

SECURE THE SAFETY CABLE

WARNING: It is the responsibility of the installer to verify that the ceiling to which the Kit is anchored will safely support the combined load of all attached components and equipment.

1. Run the safety cable through the remaining ceiling anchor. Pass each end through the holes in the ceiling plate reinforcements and join them with the cable clamp. ***Do not tighten yet!***
2. Attach all components and equipment to the reinforcing plate (refer to the instructions supplied with components).
3. After all components are attached, adjust the tension on the tie wires by adjusting turnbuckles.

WARNING: The load must be carried by the tie wires, not by the suspended ceiling runners.

4. Take up the slack in the safety cable, leaving it slightly loose, and tighten both safety cable clamps.

PARTS

Ref	Description	Qty
10	PLATE, ceiling, 8" X 24"	1
20	SCREW, Phillips-head, self-tapping 10 x 24 x 5/8"	4
30	RING, escutcheon	1
40	TURNBUCKLE, 1/4-20 with hook and loop	4
50	SCREW, lag, eye	4
60	ANCHOR, concrete	4
70	CLAMP, wire rope (for 1/8" wire)	2
80	WIRE, 14 gage, 20 ft (6.1 m)	1
90	CABLE, 1/8", 10 ft. (3 m)	1
100	BRACKET, center bolt	1
110	BRACKET, ceiling mount	1
120	WING NUT, 1/4-20	4
130	WASHER, 3/16 in.	4

