

I-005 Acoustic Panel & Ceiling Cloud Installation Manual

THIS MANUAL WILL COVER MOUNTING PANELS INTO: DRYWALL, CONCRETE, AND CORRUGATED AND RIBBED METAL.

Measurement for Installation

- 1. Measure length of wall(s) or ceiling
- 2. Determine number of panels that will fit on each wall or row
- 3. Subtract the panel length from wall length for total space available
- 4. Spread the open space evenly amongst all panels
- 5. Mark location of panel mounts along entire wall or row. At end of wall, double-check that spacing is still in line.
- 6. Ensure that all panels are hung at exactly the same height. Make minor measurement and hanging adjustments prior to moving to next room or wall.

Wall Mounting

Mounts should be placed centered to desired mounting location with the top row of impaling clips mounted in the top 1/4 region the panel.

- 1. Locate the mounting location and the location of the center of the panel
 - a. Use (2) impaling clips for 2'x2' and 2'x4' panels
 - b. Use(4) impaling clips for 4x4 and 4'x6' panels
 - c. Use (6) impaling clips for 4'x8' panels
 - d. For **wood-framed** panels, add an additional (2) impaling clips. If working with 4'x8' wood-framed panels; also mount 90° angle brackets and install tucked underneath panel.
- 2. Position impaling clips accordingly to **Figure 1** shown below.
- Place the impaling clip(s) against the wall to mark screw holes before installing.

For Drywall: drill holes large enough to accommodate the drywall anchors. Tap the anchors in by using a hammer, then screw the impaling clips to the anchors using matching screws.

For Concrete: Use the rotary hammertoboreaholematching the Tapcon screws. Then fasten the impaling clips to the wall with the



tap cons. Ensure that the specific screws do not strip the bored hole and spin freely. *Concrete anchors and screws can be used similarly to drywall installation.*

For Metal: Use self-tapping screws directly through the impaling clips into the metal surface. Ensure that the screws do not strip the hole in the wall and spin freely.

FOR ALL SURFACES: Ensure the impaling clips are securely fastened to the wall by tugging them with moderate force. Position the panel in place an inch and half above the desired mounting height. Ensure none of the impaling clips are encumbered in any way by the fabric. Firmly press the panel towards the wall while applying downward force. Use a level to ensure the mounting is level.

Cloud Mounting

The Project Manager (PM) must provide quality and safety assurance of all clouds as well as ensure compliance with all local fire coding regarding mounting proximity to fire suppression systems.

- 1. Locate the edge position of the cloud mounting from the surrounding walls; use the perpendicular laser to outline two of the edge positions of the cloud.
- 2. Mark the mounting locations based on the outer edge to match the positions of the Rotofast anchors based on **Figure 2**.
- 3. Installation of the ceiling anchor.

For Drywall:

- a. Drill ¼" holes at the mounting location, insert Toggler brand expanding anchors, ensure that the anchors are not deformed by the hammering and are flush to the ceiling.
- b. Screw in eyelets of at least #6 size or greater; as the resistance increases, use a hand tool to force the eyelet into the Toggler until the screw side of the eyelet is bottomed out to the Toggler.
- c. Once the screw eyelet has completely bottomed out, test the strength of the mount with weighted test, using a 16lb weight, if the mount deforms or slips at all it must be removed and remounted.

For Metal, Corrugated Metal and Ribbed Metal

a. Drill holes large enough to accommodate the screwed expanding steel anchor. Ensure

that the hole is positioned to allow the anchor to expand, usually into the bottom or side section of the ribbing/corrugation.

- b. Secure suspension cables directly to anchors with ferruled steel cable and nut. Ensure suspension cable has enough extra material for adjustments and securing with a ferrule.
- c. Test the mount with a hand pull test examining the expanding steel anchor and metal ceiling for deformation or slippage.

For Concrete:

- a. Bore holes with the hammer drill corresponding to concrete anchors
- b. Secure suspension wire with a nut similar of the process used for metal ceilings
- 4. Align the ceiling anchors with the locations for the Rotofast anchors ensure the panel is rotated to

2'x2' 4'x4' 4'x4'

Figure 2

maintain an even pattern. Firmly press panel into the ceiling mounts, then lower the panel.

- 5. Insert Rotofast anchors into divots created by the ceiling mount.
- 6. Fasten the panel to the cloud mount using vice grips to hold the cloud temporarily. Make certain the ferrules are in place on the cables before securing the vice grip in place.
- 7. Check the cloud alignment and installation tolerances:
 - a. Align the cloud to the laser, if the cloud is off from the laser uninstall the Rotofast anchors one at a time and move them to maneuver the cloud into correct position.
 - b. Tolerances for alignment will vary. Be sure the cloud is rotationally-aligned beyond noticeability from ground-level. Ensure the cloud is within one inch of its intended placement.
- 8. Use a level to ensure the cloud is level along both axes, adjust the cabling with the vice grips until the panel reaches true level. Secure the ferrules with the deepest part of the pliers. Apply weight to the cloud totaling three times the weight of the panel alone to ensure stability of the cloud.
- 9. Cut excess braided steel cable from suspension wires

Direct Mounting (Ceiling Panel)

Notes: PM must quality and safety check all direct mounted panels

- Locate the two edges of the mounting location, according to the sales team made layout or according to the layout plan made on site. Use the laser to ensure panel placement evenness throughout the pattern.
- 2. Place panel against the ceiling ensuring the panel alignment with laser.
- 3. Using impaling spike with a spinning motion slide the spike through the panel fabric and fiberboard until the tip is pressed into the mounting surface (a mark needs to be left on the mounting surface), ensure the proper location using figure 3. NOTE: Take extreme care with the spike, the tip should be inserted between the fibers. This ensures the weave spreads around the spike rather than the individual fibers breaking.
- 4. Being careful not damage the panels fabric shift or hammer the impaling spike in place to mark the ceiling.



Figure 3

- 5. Direct mount installation
 - a. Drywall
 - i. Drill quarter inch holes for cobra triple grip drywall anchors At the site of the mark left by the impaling spike
 - ii. Insert anchors using a hammer or hand pressure, ensure the anchors have not deformed or broken
 - iii. Fasten the Rotofast Direct mount anchor into the cobra anchor using a matching screw (#8 sheet metal). Ensure the screw is not so tight as to prevent the rotation of the Rotofast direct mount. Also ensure that the anchor is secure and not spinning freely.
 - b. Concrete
 - i. Use a Rotary hammer to bore a hole for a wide bore Tapcon, this process can also be done with concrete anchors and screws.
 - ii. Fasten the Rotofast direct mount to the ceiling using a wide bore Tapcon screw ensuring the Rotofast anchor can still spin freely
 - iii. Hand pull the Rotofast[™] direct mount to test for solid mount
 - c. Corrugated Metal
 - i. Ensure the mount mark is centered on the lower portion of the corrugation.
 - ii. Verify that the corrugation is at least twice as wide as the width of the Rotofast anchor, if it is not bridge the corrugation with a plywood fastened into two corrugations and use the plywood as the mounting location
 - iii. Fasten the Rotofast direct mount to the mounting location with a self-tapping modified pan head screw, ensuring that the Rotofast direct mount spins freely and that the self-tapped hole does not strip
 - iv. Hand pull test the Rotofast direct mount checking specifically for slippage of the screw and warping of the metal ceiling, either necessitates moving the mounting location
 - d. Tuck the attached hex key nut into the receptor
 - e. Wrap the center of the panel with a braided steel cable with attached carabiner
 - f. Position the panel in the install location with the handled hexkeys inserted through the holes made with the impaling tool
 - g. Insert handled hex key into the hex nut on the Rotofast direct mount
 - h. Pressthepanel firmly into the ceiling, rotate the handled hexkeys one and three quarters counter clockwise or until resistance increases.
 - i. Using the attached braided steel cable and attached carabiner a weight equal to twice the weight of the panel to the braided steel wire cable attached to the panel to test. Listen specifically for the sound of fiber board ripping. Remove the weight and braided cable

Face Mounted Washers (Metal Ceiling only)

- 1. Locate the two edges of the mounting location according to the pre install layout or according to the layout plan made on site. Use the laser to ensure evenness throughout the pattern.
- 2. Place panel against the ceiling ensuring the panel alignment with laser.
- 3. When the panel is in the correct position locate the lower corrugation as close as possible to the mounting locations marked in figure 3. Drill self tapping screw with washer (Minimum 2 and ¾ long) through the face of the panel into the corrugated ceiling. When first inserting the self tapping screw into the face of the panel, take care that the screw

does the minimal amount of damage to the fabric.

4. Spray paint the washer and screw with spray paint most closely matching the color of the fabric

Ceiling Baffle Installation

- 1. Site the mounting locations 1' from each edge of the baffle. The baffle shall hang 3-12" from the joist, T-grid, or eye-bolt.
- 2. Attach the baffle with airline wire or steel zip tie to the mounting location.
- 3. Ensure that airline wire or steel zip tie is taught, and snip excess wire.

Ceiling-Mounted Z-Clips

- 1. Z-Clips should be used for ceiling mounts if the ceiling is less than 12' high.
- 2. Use Monarch Z-clips, and mount to ceiling through pre-drilled holes with mounting methods described in "Cloud Mounting" above.
- 3. Apply Liquid Nails or Loctite onto ceiling-mounted Z-clips.
- 4. Slide Z-clips on back of Ceiling Panel into the ceiling-mounted Z-clips.
- 5. After 30 seconds, pull lightly to ensure that Z-clip is permanently adhered.