

# SILENTMESH CEILING SYSTEM INSTALLATION GUIDE

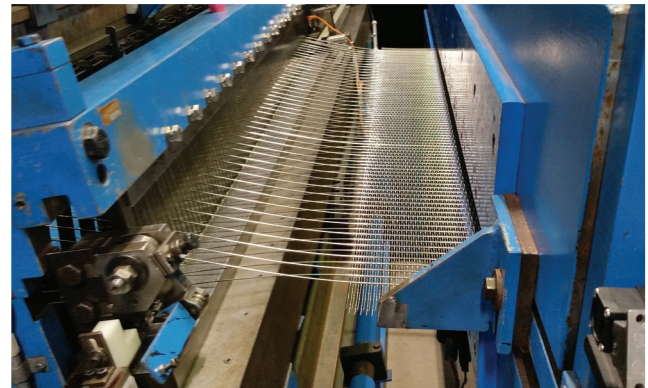
## Ceiling Systems

The ceiling system is made up of panels of metal woven wire and fastened to a typical suspension system (main beams, cross tees and hangers) via proprietary attachment clips. The integrity of the entire suspended silentmesh ceiling system depends on the hangers – commonly wires – which are used to support the suspension system main beams. Sections of main beams are spliced together and are connected by cross tees. In some cases the ends of the main beams and cross tees may rest on a wall molding.



## Before You Start

GKD Silentmesh ceiling panels are made of woven stainless steel, and as such are extremely durable and maintenance free, however extreme care is to be taken when handling and installing each panel. Each panel should be handled by two or more installers to prevent racking and deformation. Failure to support the panel could result in permanent damage. Panels are custom fabricated for each project resulting in extended lead times. Cotton gloves are recommended to prevent fingerprint stains from appearing on the finished panels. The panels are to be kept clean, dry and protected from the elements.



Silentmesh panels being woven

## Tools

The tools you will need will vary depending on the type of hangers used, but generally you will need: ladders, scaffolding or scissor lift; drywall lift; 90 degree automotive hook, a tape measure; pencil; chalk line; hammer; screw driver or drill; sheet metal punch; aviation snips; wire cutting pliers; utility knife; level and string. Most jobsites also require some safety equipment such as a hard hat or safety glasses.



90° automotive clip

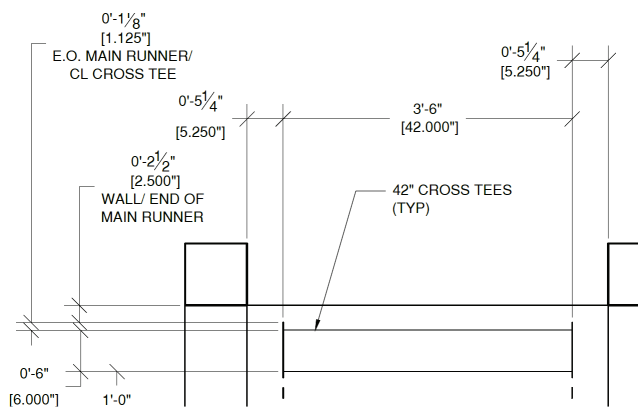


Drywall lift recommended for lifting mesh panels into place



## Suspended Grid Layout

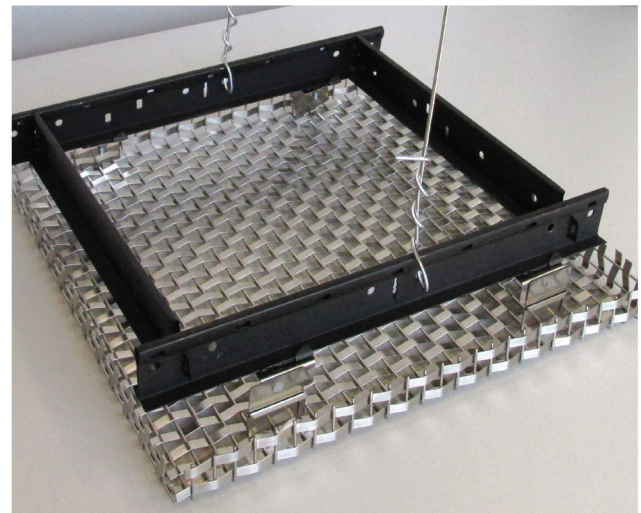
The suspended grid is to be installed per approved GKD shop drawings. The shop drawings will include the distance from a known wall or feature to the centerline of the main runner. They will also display the distance from the wall or known feature to centerline of the first cross tee which runs perpendicular from the main tees. This dimension is critical since it will match the required attachment clip spacing also shown on the approved GKD shop drawings. (see example below).



Suspended grid reflected ceiling plan

## Installation of Hangers and Fasteners

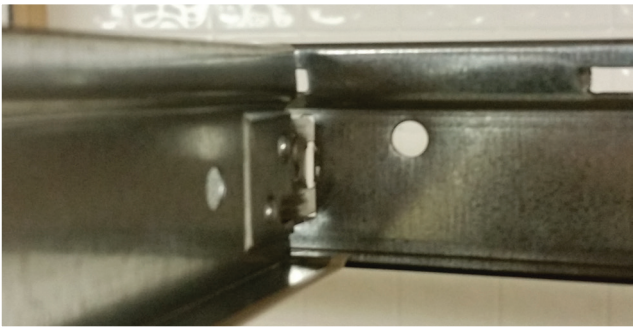
- Hangers will need to be installed above the main beams typically every four feet (as shown on approved GKD shop drawings)
- Snap a chalk line for each of the main beams. Attach hangers and wires to the deck above the first row of main beams at four-foot intervals.
- Stretch a leveling guide string from one end of the room to the other, where the first main beam will hang
- Bend the wires at the height of the string so that the main beam is held at the correct height (as shown on approved GKD shop drawings)
- Install the first main beam at the distance shown on approved GKD shop drawings
- Insert a hanger wire into a hanger wire hole near the other end of the main beam. Bend the wire up and wrap it around itself three times. Continue to insert all other hanger wires. Install splay wires as required per approved GKD shop drawings.
- Install remaining beam in the first row as shown on approved GKD shop drawings
- If required per approved GKD shop drawings, cut off end of final main beam



- Use leftover piece of main beam to start next row and repeat the process for next main beam
- Install Cross Tees
- Find the location of the first cross tee per approved GKD shop drawings
- Snap the end of the cross tee into the main beams at locations shown on approved GKD shop drawings
- Repeat the process for next cross tee

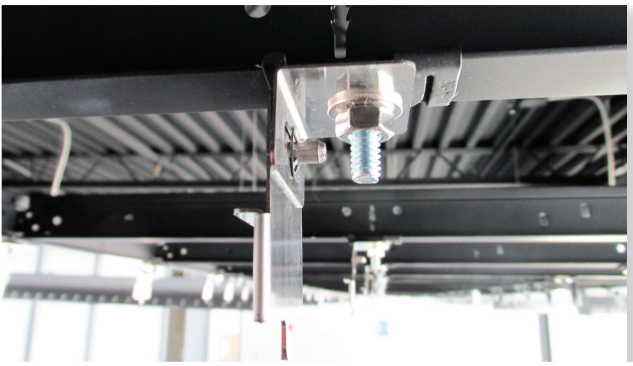
### Installation of Hangers and Fasteners (cont.)

- Join attaching sections of the main beam as required to reach the other end wall. Attach hangers and check level as the installation proceeds.
- After installing two cross tees measure across the diagonals. This measurement will be the same if the grid is square.
- Install remaining main beams and cross tees.
- Complete the installation of rows of main beams as shown on approved GKD shop drawings.
- Note: if you have additional rows of main beams to install, stretch a second string from one side of the room to the other, aligning it with the first cross tee.
- This second string will be your guide for cutting the remaining rows of main beams. Just measure from the end wall to the string to determine the distance for the first cross tee slot you will use.
- You must line up all cross tee slots for the grid to be square.

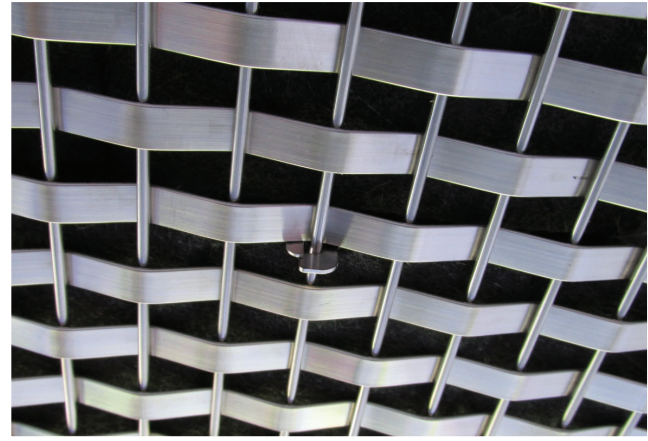


### Installation of Attachment Clips

Per approved GKD shop drawings install attachment clips to main beams or cross tees at locations shown on drawings. The clip installs by pushing up against the grid or beam and twisting clip into place.



### Installation of Silentmesh Panel

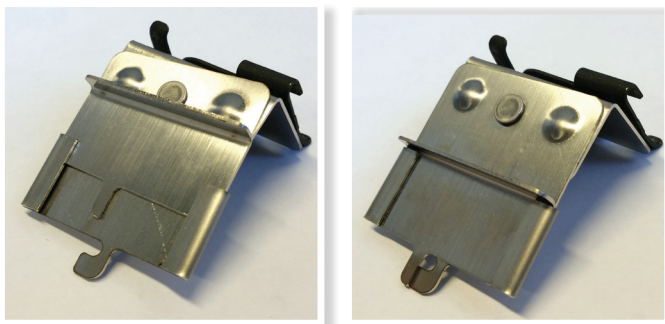


- Place a clean sheet of plywood on drywall lift to help support the panel
- Carefully remove mesh panels from crate
- Place mesh panel on clean plywood
- Measure across diagonals to ensure panel is square
- Position drywall lift underneath the location where the first panel will be installed
- Lift mesh panel into position at distance from wall or other mesh panel that is shown on approved GKD shop drawings
- Lift the mesh panel to within 1" of the attachment clip
- Lift one corner of the mesh panel and install the first mesh clip by sliding clip hook through slot on the mesh panel and lifting the clip door, then close door around mesh rod
- When access is not available, install the clip from below the mesh panel by using an automotive 90 degree pick to open and close clip door
- When access is available, the mesh clips can be installed to the mesh panels from above as shown below

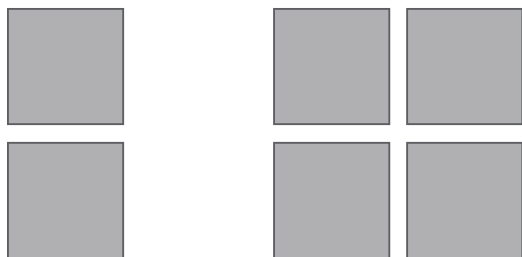


### Installation of Silentmesh Panel (cont.)

- Repeat for remaining clips using the same parallel slot and perpendicular rods to attach to
- Lower drywall lift and repeat for remaining panels
- Check periodically for square



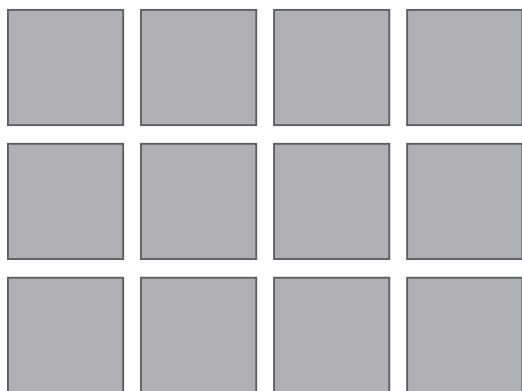
### Recommended Panel Gaps



**Config 1:** 2 panels or panels in a continuous row

**Config 2:** 4 panels

**No Minimum panel gaps**



**Config 3:** Multiple panels (4 or more)

(Maximum panel size - inches/16) = minimum panel gap  
 Example: (maximum panel - 72"/16) = 4.5" minimum panel gap

### Installation of Acoustic Blanket (if required)

- Acoustic blanket should be installed after each mesh panel is installed in place
- Measure distance from clip to edge of mesh and length required
- Unroll acoustic blanket
- With paper side up, measure and mark desired size
- Using a straight edge, cut acoustic blanket strip with razor knife
- Install acoustic blanket above mesh by placing on edge of blanket into place, then press the other side into place
- Repeat for remaining strips

