



## CEILING SYSTEMS

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# METALWORKS Linear Connections Ceilings - Installation Instructions

## 1. GENERAL

### 1.1 Product Description

Metalworks Connections is a linear metal ceiling with panels that are available perforated or non-perforated in widths of 4" (.018" thick) and 8" (.022" thick). The aluminum panels are 12 feet long. Perforated panels are available with acoustical fleece on the back. The panels are fastened to single or double carrier channels. The carrier channels are connected to 12 gauge hanger wires by means of a linear suspension clip. Carriers are hung on 4 foot centers.

### 1.2 Storage and Handling

The ceiling panels shall be stored in a dry interior location and shall remain in cartons prior to installation to avoid damage. The cartons shall be stored in accordance with the instructions on the carton. Proper care should be taken when handling to avoid damage or soiling.

### 1.3 Site Conditions

Building areas to receive ceilings shall be free of construction dust and debris.

### 1.4 Ceiling Panel Layout.

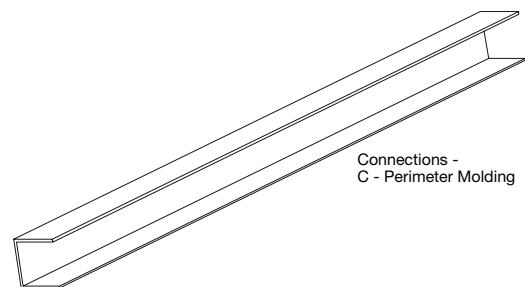
The ceiling panel layout should have perimeter panels equal in width on opposite ends. These cut perimeter panels should be more than 50% of their original width. This will create the best visual.

## 2. PREPARATION

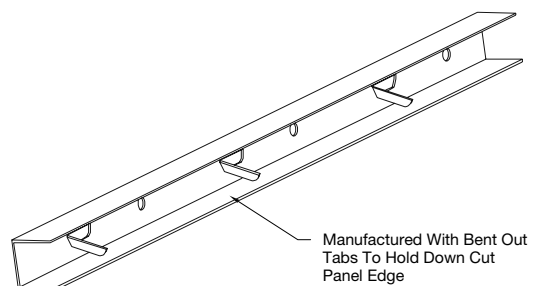
- 2.1 Determine desired height of new ceiling.
- 2.2 Strike a level line around the perimeter of the area at this height.
- 2.3 Determine direction of linear ceiling.
- 2.4 The carriers will be installed on 4 foot centers perpendicular to this direction.

## 3. INSTALLATION

- 3.1 Install Connections "C" Perimeter Molding on two walls. These walls will be perpendicular to the direction of the linear ceiling.

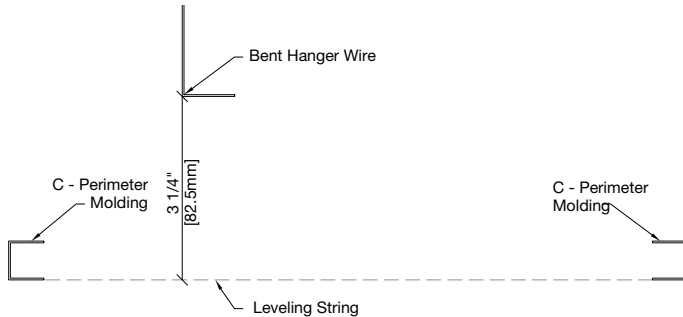


- 3.2 Install Connections "C" Lock Perimeter Molding on the other two walls. These walls will be parallel to the direction of the linear ceiling.

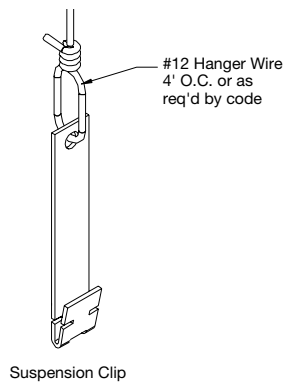


Connections - C - Lock Perimeter Molding

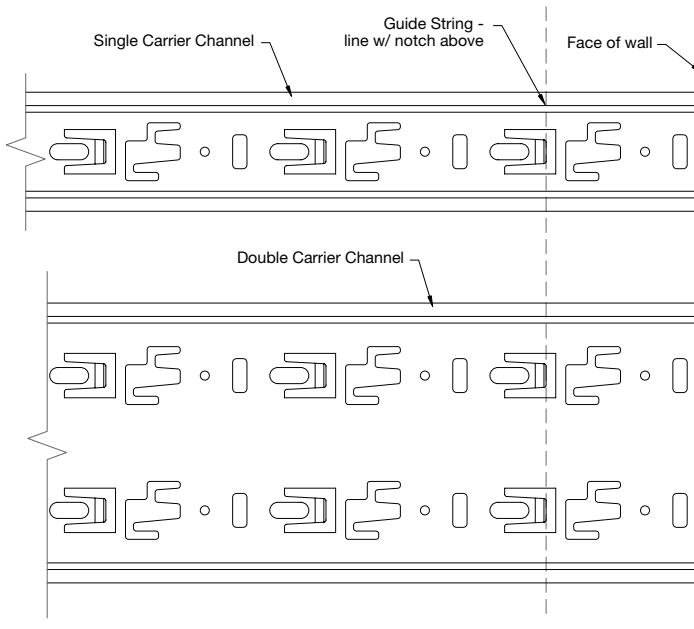
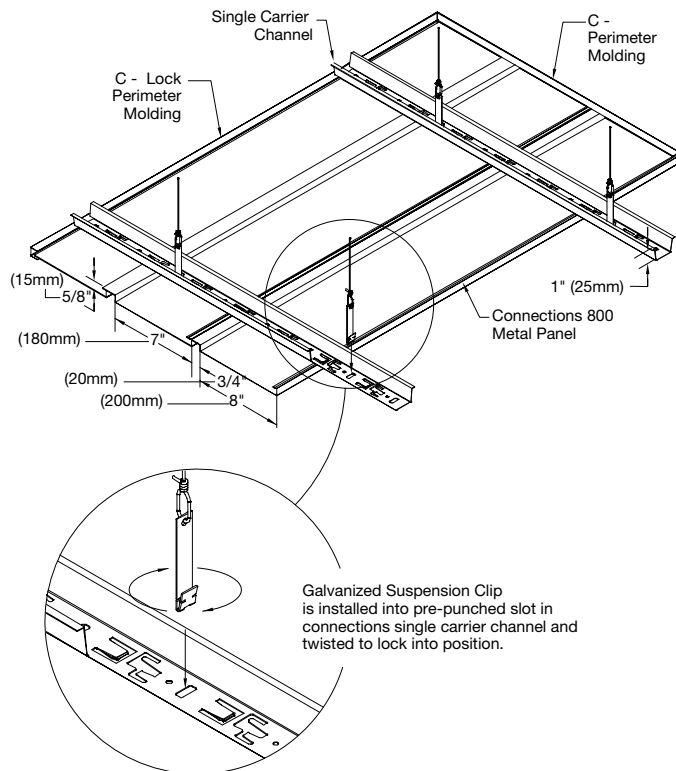
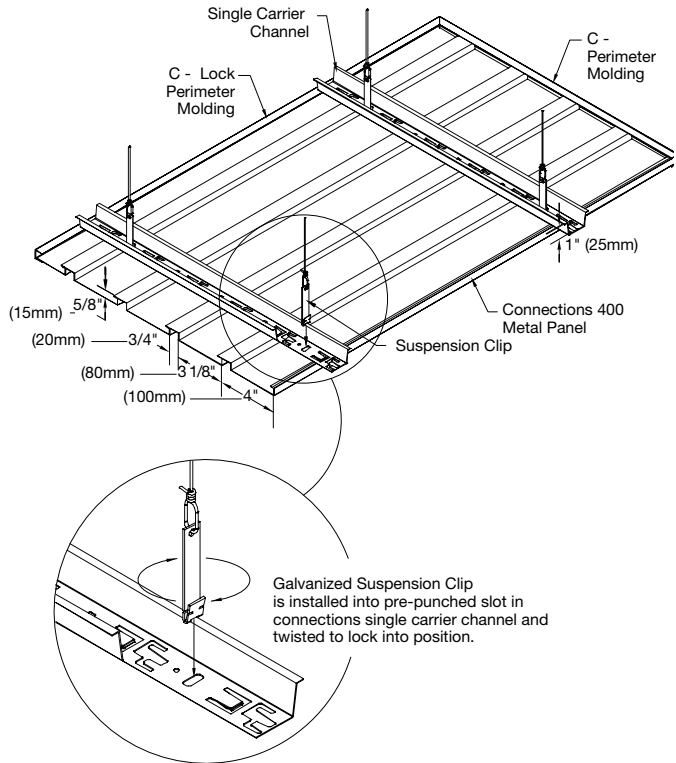
- 3.3** Secure hanger wires to the structure above. Wire spacing should be every four feet on center in both directions. The first wire should be within 2 feet of one corner of the area. The last row of hangers should be within 2 feet of the other side of the area.
- 3.4** Stretch a string from the bottom of the "C" molding from one side to the other along a row of hanger wires. Bend the wires 3 1/4" (82.6mm) above the string.



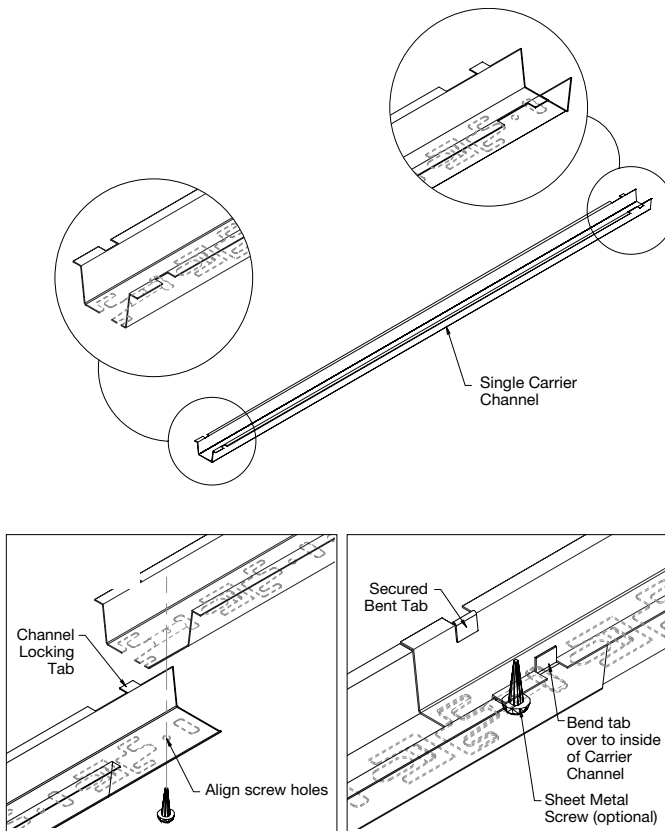
- 3.5** Hang a Linear Suspension Clip from each wire and secure with three wraps.
- 3.6** Stretch a string from one side of the room to the other just above the "C" mold (string perpendicular to carrier). The string should be out from the "end" wall the calculated width of the first "plank."
- 3.7** Measure from this string to the wall. Cut the first carrier channel in each row so the indicated notch lines up with this string.



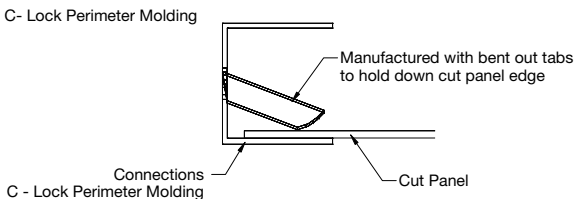
- 3.8** Fasten the carriers to the Linear Suspension Clips as indicated.



- 3.9** The carriers are configured so they are “handed.” The ends overlap and form their own splice when lined up as indicated. Fold the tab on one end over the cutaway in the other end as indicated and put a screw through the round hole at the bottom of the overlapped carriers to secure the splice.

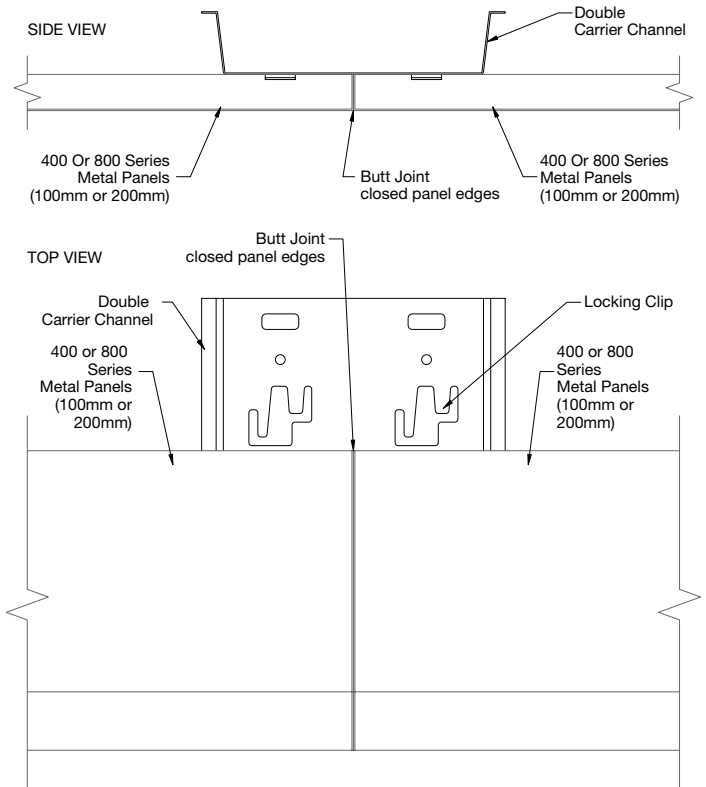


- 3.10** Complete the run of carriers to the other end of the space.
- 3.11** Measure from the wall to the string several places and determine the exact width of the first row of panels.
- 3.12** Mark the plank and cut to width with electric shears. The long edge with the short return is cut off.
- 3.13** Slide the long cut edge of this plank into the “C” Lock Perimeter Molding under the fingers and above the bottom of the molding.

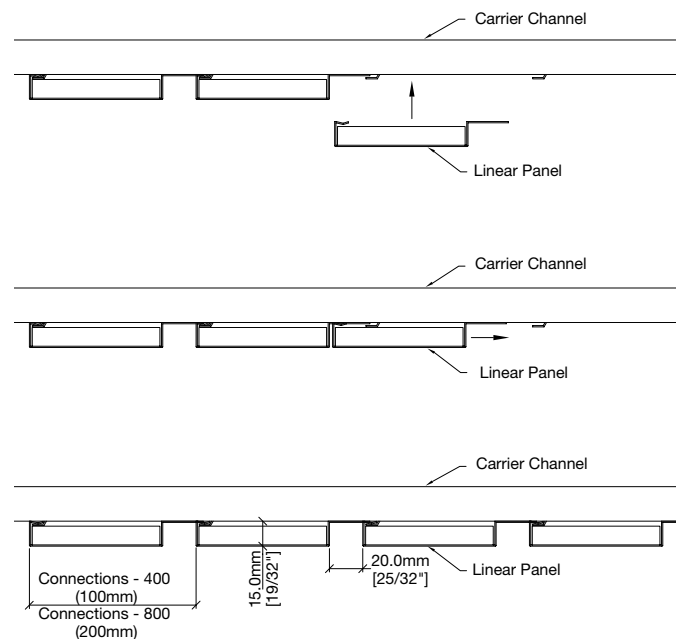


- 3.14** The other long edge (factory edge) of the plank will slide under the tab on the carrier.
- 3.15** Cut planks to length to fit the space.
- 3.16** The cut short ends of the panels will fit into the “C” perimeter molding.

- 3.17** When the panels do not reach across the space in one piece, they must have factory closed ends on one or both ends of the panel butting at a double carrier. The ends of the panels will be in a line on this carrier. The ends will not be staggered in the space.



- 3.18** Install the second row of panels by sliding the long edges under the tabs in the carrier.
- 3.19** Cut the last row of panels to width and insert the long cut edge into the “C” Lock molding under the fingers and above the bottom flange.



- 3.20** Slide the long factory edge onto the tabs in the carrier to secure it.

#### 4. EXTERIOR INSTALLATION LIMITATIONS AND SPECIAL PROVISIONS (BASED ON 2000 IBC)

##### 4.1 Criteria

- Basic wind speed 90 mph
- Building height 60' or less
- Exposure B
- For areas exceeding the above criteria contact Architectural Specialties
- It is recommended that ceiling panels be run in the short direction on all canopies
- Minimum of 1" drip edge must be provided on the fascias.
- C-profile edge trim must be used for all perimeter details (field fabricated hold down clips required for cut panels)
- Connections 400/800 – Non-perforated panels only
- Carrier channels, hangers, and other accessories shall be galvanized or with rust inhibitive coating.

4.2 Panel carrier channels shall be double wire tied to 1-1/2" carrying channel (black iron) spaced 24 inches O.C.

4.3 To provide bracing against wind uplift and/or suction, the supports for the carrying channel shall be either sub framing or compression posts. Both shall be 4 feet O.C. and supported to the main structure.

4.4 The first and last carrying channels (black iron) shall be no more than 6 inches from perimeter walls.

4.5 Splice carrying channels (black iron) by overlapping 12 inches and double wire tying. (Do not weld or fasten splices in any other way)

4.6 The ends of panel carrier channels and carrying channels (black iron) shall be securely fastened to the interior face of the surrounding walls.

4.7 If compression posts are used, splay wires in 4 directions at selected compression post locations shall be used to laterally stabilize the system.

4.8 Panel carrier channels shall be spaced no more than 24 inches O. C.

4.9 Splice panel carrier channels as described above in section 3.9. Do not weld or fasten in any other way.

4.10 Perimeter trim shall be c-profile and securely fastened to surrounding walls maximum 24 inches O.C.

4.11 Light fixtures and other accessories shall be installed and independently supported from the structure above.

4.12 Connections for 400/800 butt joints shall be back-to-back c-profile edge trim, fastened 12 inches O.C. in conjunction with the double panel carrier.

4.13 Expansion joints for Connections 400/800 shall be constructed by using the c-profile edge trim as it is used in butt joints. The edge trims shall not be fastened to each other.

4.14 Panels shall be installed with ends and edges fit snugly into perimeter, butt end joint, and expansion joint edge trims (if used).

4.15 Field fabricated hold down clips shall be used for cut edges.

4.16 As ceiling panels are being installed, lock each panel into place by bending down the locking tab of the carrier to prevent the panel from being dislodged.

These drawings show typical conditions in which the Armstrong product depicted is installed. They are not a substitute for an architect's or engineer's plan and do not reflect the unique requirements of local building codes, laws, statutes, ordinances, rule and regulations (Legal Requirements) that may be applicable for a particular installation.

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#### MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.

For complete technical information, detail drawings, CAD design assistance, installation information and many other technical services, call TechLine™ services at 1 877 ARMSTRONG or FAX 1-800-572-TECH.

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