CABLE MANAGEMENT SOLUTIONS, INC.

CABLE MANAGEMENT AND POWER DISTRIBUTION

Seismic Bracing Kits Installation Instructions

Seismic Bracing Kits with Crimp Tool & Cutter

Part Number	Description
CM201/801-SBK1-XX	Kit for Anchoring Snake Tray and Mega Snake in Concrete Ceilings
CM 201/801-SBK-J-XX	Kit for Anchoring Snake Tray and Mega Snake around Joists
CM 201/801-SBK-L-XX	Kit for Anchoring Snake Tray and Mega Snake with Lag Bolts into Wood Beams
CM 201/801-SB-CT	Crimp Tool
CM 201/801-SB-CU	Cutter

Seismic Restraints for Threaded Rod Suspended Cable Pathway

I. Installation

1. The CM 201/801-SBK1, -J, and -L are restraint kits for cable pathways and other devices suspended on threaded rod. The kits themselves are UL listed, and approved by the California Office of Statewide Health Planning and Development (OSHPD, 2007) and others.
2. The kits come with restraining cables. The cable length required must reach from the restraining point to the anchoring point plus 12 inches. This length must be determined before ordering. Standard length is 7 feet. Longer or shorter cables are available as CM 201/801-SBK-(1, J, or L)-XX, where XX is the number of feet required.
3. The assembly instructions below are for the installing technician to assemble each restraint system. The quantity and spacing of these restraints, as well as the use of stiffening members is site specific, and must be determined and certified by a Professional Engineer (PE) in the state in which the system is to be installed.
4. Software tools for the designing and certifying PE are available at www.seismicdesigngroup.com.

II. Assembly – Single Rod Suspended

1. Install the desired 3/8 threaded rod, anchors, and hardware as is standard for Snake Tray cable pathways or other desired device hung from a single threaded rod, EXCEPT, at the bottom of each rod that will have a seismic restraint, install an additional nut and 2 large flat washers (included) above the nut that determines the height of the tray or other device, as shown in the accompanying drawing. This is the “Restraining Point.”
2. Raise the top nut such that you can install the Slotted Universal Restraint Clips in place between the washers. Note: Some locations will require two Restraint Clips, others will require only one. This must be determined by the PE that designed and certified the system.
3. Tighten the top nut down on the assembly.
4. Run the Restraining Cable through an Oval Sleeve. Then Loop the Restraining Cable through one of the holes in the Slotted Universal Restraint Clips and back through the Oval Sleeve such that they over lap 3 to 6 inches. Do not crimp at this time. Repeat this for the other hole, and for the other Restraint Clip as required.

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III. Assembly – Double Rod Suspended

1. Install the desired 3/8 threaded rod, anchors, and hardware as is standard for Snake Tray Mega Snake Cable Tray or other desired device hung from two threaded rods, EXCEPT, at the bottom of each rod that will have a seismic restraint, install an additional nut and 2 large flat washers (included) above the nut that determines the height of the tray or other device, as shown in the accompanying drawing. This is "Restraining Point One."
2. Raise the top nut such that you can install one Slotted Universal Restraint Clips in place between the washers.
3. Run the Restraining Cable through an Oval Sleeve. Then Loop the Restraining Cable through one of the holes in the Slotted Universal Restraint Clips and back through the Oval Sleeve such that they over lap 3 to 6 inches. Do not crimp at this time. Repeat this for the other hole.
4. Repeat step 3 above for the other threaded rod, creating Restraining Point two.
5. Choose the "Anchor Point" for the other ends of the cables such that the angle formed by the cable is a maximum of 45 degrees with respect to the Restraining Point.

IV. Assembly – Anchor Points and Final Assembly

1. To set at the Anchor Point for a cable:
   a. If the anchoring surface is concrete you will use the SBK1. The SBK1 is also appropriate where a concrete slab has been poured over corrugated steel.
      i. At the Anchor Point, drill a 3/8 hole 2 ¾- 3 inches deep.
      ii. Hammer in the Concrete Anchor provided.
      iii. Slip the Anchor Lug over the threaded portion of the anchor. Slide on one small flat washer and lock washer, and hold in place with 3/8 nut provided.
      iv. Secure the Anchor Lug and set the anchor in place by tightening the 3/8 nut.
   b. If the Anchoring Point is to be looped around a ceiling joist you will use the SBK-J.
      i. Run the Restraining Cable through an Oval Sleeve.
      ii. Loop the Restraining Cable around the joist and back through the Oval Sleeve provided such that they over lap 3 to 6 inches.
      iii. Crimp the Oval Sleeve in place using Crimp Tool CM 201/801-SB-CT.
   c. If the anchoring surface is wood you will use the SBK-LAG.
      i. At the Anchor Point, drill a 9/32 hole 3 ½ -4 inches deep.
      ii. Slip the Anchor Lug over the 3/8-inch lag, and slide on one small flat washer and lock washer.
      iii. Secure the anchor lug by tightening the lag bolt into the hole.

2. Return to the Restraining Point(s) at the threaded rod(s).
3. Tighten each cable by pulling the excess through the Oval Sleeve, and crimp in place using Crimp Tool CM 201/801-SB-CT.
4. Repeat Step G for all cables at the Restraining Point(s).
5. Depending on the length of and load on of the threaded rod, stiffeners may be required as per the designing and certifying PE.
6. To install a stiffener:
   a. Cut a piece of 1-inch schedule 40 rigid conduit (not supplied) to fit from the top to just above the Restraining Point on the threaded rod.
   b. Fix the rigid conduit to the threaded rod with Rod Stiffener Clips CM 201/801-RSC, as required by the designing and certifying PE.
7. Install tray or other device below each Restraining Point on the threaded rods.