



CEILING SYSTEMS

[Between us, ideas become reality.]®

INFUSIONS® Accent Canopies Assembly and Installation Instructions

1. DEFINITION

Infusions Accent Canopies feature a selection of finishes in clear or translucent plastic and aluminum. Infusions are available in three sizes: 2 foot by 5 foot, 2 foot by 6 foot and 4 foot by 10 foot. 2' x 5' and 2' x 6' Canopies can be formed to create hills or valleys with either 60° or 90° arcs. 4' x 10' Canopies can be formed to create hills or valleys with either 30° or 50° arcs. 4' x 10' Canopies are only available in channeled polycarbonate. Infusions can be suspended individually or they may be linked together in a variety of ways, including side-to-side and end-to-end. They may be suspended from the building structure or one end may be attached to a wall.

2. DESIGN AND INSTALLATION LIMITATIONS

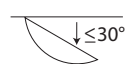
Infusions panels should always be installed in accordance with all applicable building codes and regulations.

Do not cut holes in or drill through Infusions panels. Doing so may cause the panel to bend in an irregular fashion.

Do not allow panel to get wet.

Panels are susceptible to “wicking.” If the panel is placed in a damp or wet area, water may “wick” up through the panel.

The lowest point of a suspended Infusions panel should be at least 7'-6" above the finished floor surface.



Canopies must be suspended with the extrusions level and the tension cables no more than 30° off horizontal.

Infusions panels are not approved for exterior application.

Polycarbonate panels can be damaged by exposure to high temperatures. Panel temperature should not be permitted to exceed 100° F after the tensioning cables have been installed. Follow these guidelines for minimum distance from standard light sources:

Lamp Type	Label Wattage	Minimum Distance
Halogen FL XL PAR 30	60	14"
Incandescent Bulb	120	15"
Quartz Halogen Work Light	500	23"

3. FIRE PERFORMANCE

Infusions Canopies, as with other architectural features located at the ceiling, may obstruct or skew the planned fire sprinkler water distribution pattern or possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13 and their local codes for guidance where automatic fire detection and suppression systems are present.

IMPORTANT: For proper fire performance, do not install polycarbonate panels so that any portion of the panel is suspended directly above any portion of an aluminum panel.

Infusions Canopies have been tested according to NFPA 286 and are equivalent to Class A Interior Finish as defined in Chapter 8 of the International Building Code.

Metal panels are noncombustible.

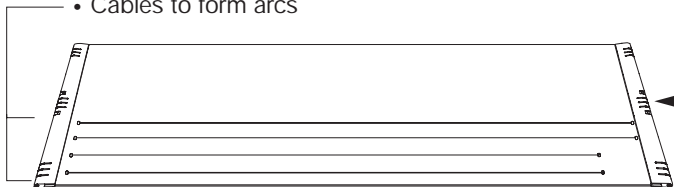
Contact TechLine at (877) 276-7876, option 1, then 2, then 3, for specific US and Canadian fire performance data.

4. PANEL KIT CONTENTS

Infusions Canopy Panel Kit

Kit Contents:

- Flat Infusions Panel (1 or 2) with extrusions attached
- Cables to form arcs

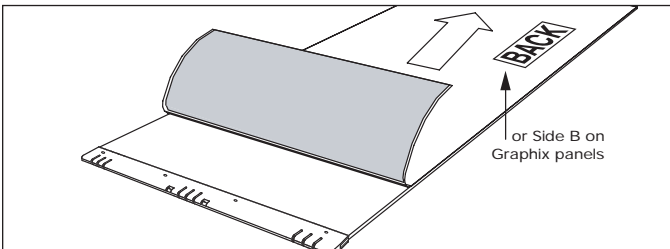


Arc	Tension Cable Length	
	2' x 5'	2' x 6'
60°	58"	69-3/4"
90°	55"	65-3/4"
Arc	4' x 10'	
30°	120"	
50°	117-3/10"	

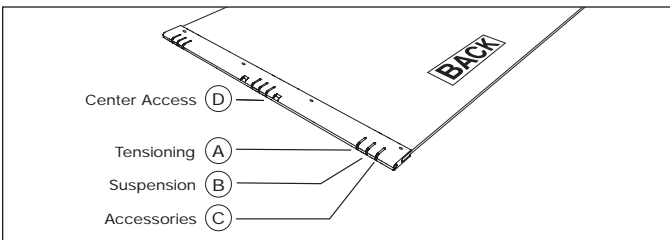
NOTE: Panel extrusions for nominal 4' x 10' panels are 48-1/2" long. Suspension points for those panels are 44-1/2" apart.

5. CREATING ARCS

Peel back and remove protective films covering the face and back of the panel (as shown below). **Please Note:** Infusions Graphix panels have a different covering protecting the face and back. This covering is not a film, but a plastic sleeve enclosing the panel. Remove the panel from the sleeve very carefully. The sleeve can be removed at the ends or sides by carefully cutting with scissors or tearing.

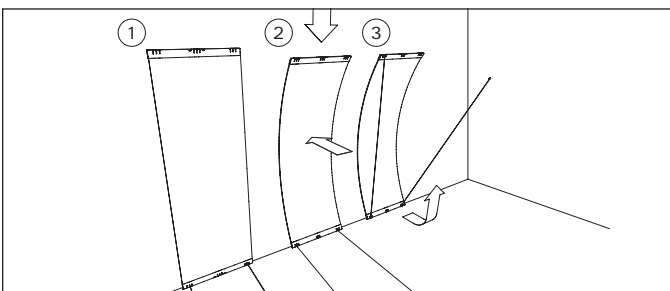
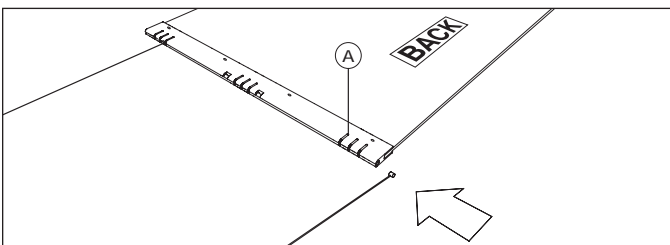


Attachment positions on extrusions



Insert ends of tension cables into extrusions at ends of the panel, sliding it into slot "A" of the three end slots.

IMPORTANT: When large and small Canopies are to be linked together end-to-end, some parts of the hinge assembly must be inserted into the large panel extrusions before tension cables are installed. Please refer to Section 11 of these instructions for information on proper placement of these parts.



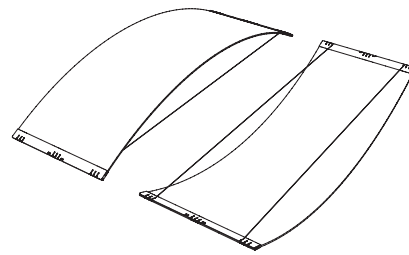
CAUTION: Be careful when tensioning panels. Use a wall to support the bottom of the panel when tensioning.

1. Place one end of the panel on the floor, on a protected surface, and butt against a wall or building column.
2. Flex the panel by pulling straight down toward the floor and insert ends of cables into tension position A.

Avoid extending body parts over the flexed panel until both tensioning cables are installed. Two people are required for this operation with larger panels.

CAUTION: Only use cables from Panel Kits for tensioning panels. (Cables from Kit 7004, 7005 and 7010, shown in section 6, are **only** for hanging panels).

HILL AND VALLEY CONFIGURATIONS



6. GRAPHIX PANEL VISUAL CONSIDERATIONS

The Infusions Graphix printed panels have different "Side A" and "Side B" visuals based on different colors and extrusion differences on each side.

Please Note: The extrusions on Sides A and B are not symmetrical. Side B has small but visible screw holes for factory-installed extrusion attachment as well as two small center notches.

Installers should be aware of which visual is desired to face upward and downward and install the product accordingly.

Installers should **never** remove or change the attached end extrusions in order to change this installed view. This would void the product warranty and could create safety concerns.

7. PANEL SUSPENSION

The International Building Code requires the attachment of free floating architectural components to be sized for three times the design load. Use the assembled Canopy weights provided in this table to select mounting hardware that will meet this requirement:

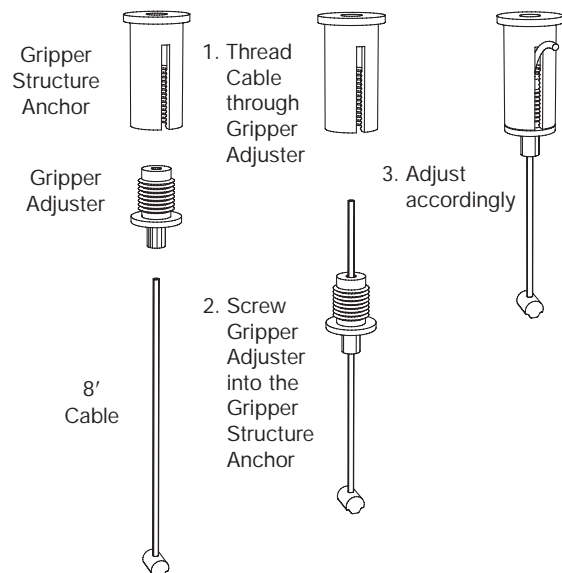
Material	2' x 5'	2' x 6'	4' x 10'
Channeled Polycarbonate	6.0 lb	7.0 lb	26.0 lb
Solid Polycarbonate	21.0 lb	25.0 lb	N/A
Aluminum	21.0 lb	25.0 lb	N/A

INSTALLATION KITS

Standard 8' Hanging Kit – 7004

Kit Contents:

- (2) Gripper Structure Anchors
- (2) Gripper Adjusters
- (2) Suspension Cables (8')



NOTE: Cables must not exit the Gripper Adjusters at an angle. The maximum allowable deflection is 5 degrees. Substitute Kit 7005 or 7010 when cables meet the structure at an angle.

Extended 16' Hanging Kit – 7005

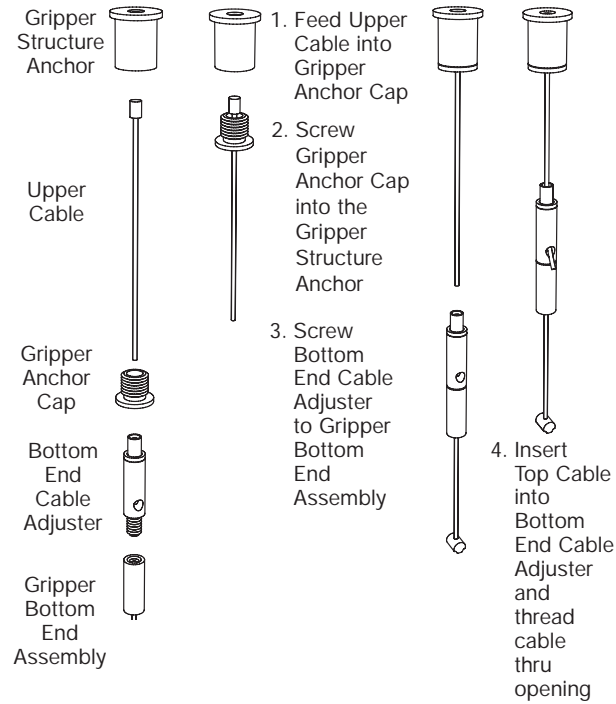
Allows for extended drops from deck and bottom end adjustment of height at panel.

Kit Contents:

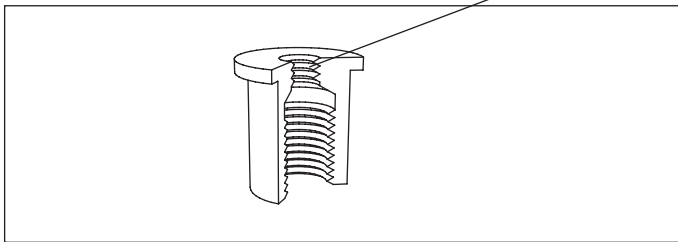
- (2) Gripper Structure Anchors
- (2) Gripper Anchor Caps
- (2) Upper Cables (16')
- (2) Gripper Bottom End Assemblies
- (2) Bottom End Cable Adjusters

Extended 30' Hanging Kit – 7010

Same as Kit 7005 except it contains (2) Upper Cables (30')



NOTE: Gripper Structure Anchors have 1/4" - 20NC internal

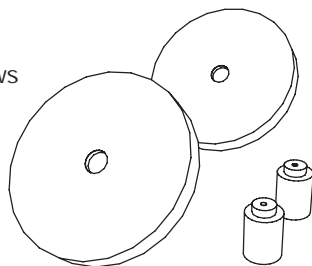


threads that may be used for attachment to structure.

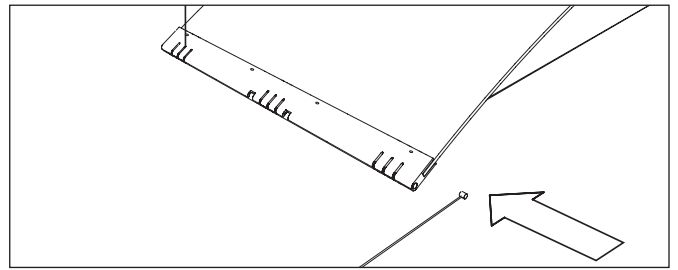
Escutcheon Kit – 7006

Kit Contents:

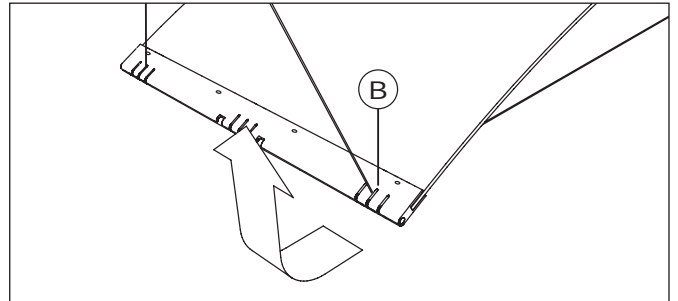
- (2) Collars with Set Screws
- (2) Escutcheons (2")



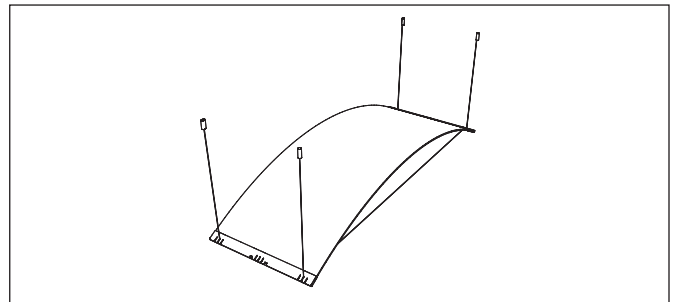
8. INSERTING SUSPENSION CABLES



Insert Suspension Cable



Engage Suspension Cable

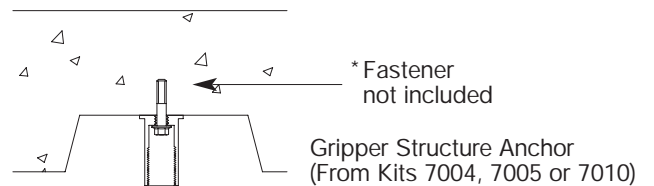


Standard Suspension

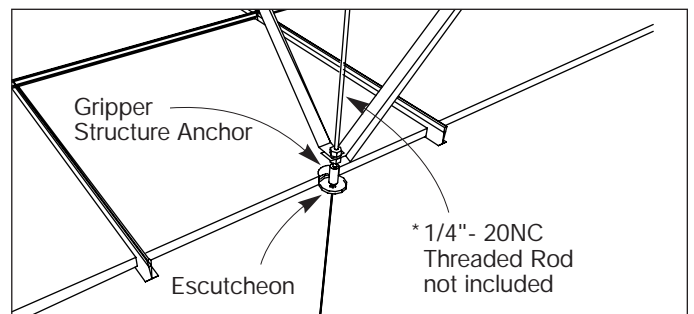
9. ATTACHING CANOPIES TO THE STRUCTURE – TWO METHODS

*** NOTE: Components required for attachment to structure are not included in installation hardware kits since they vary by building structure.**

a. Direct to Structure



b. Below or through an existing ceiling



10. SIDE-TO-SIDE LINKED CANOPIES

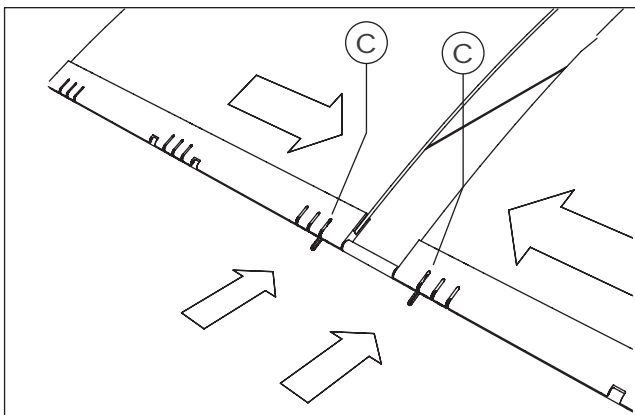
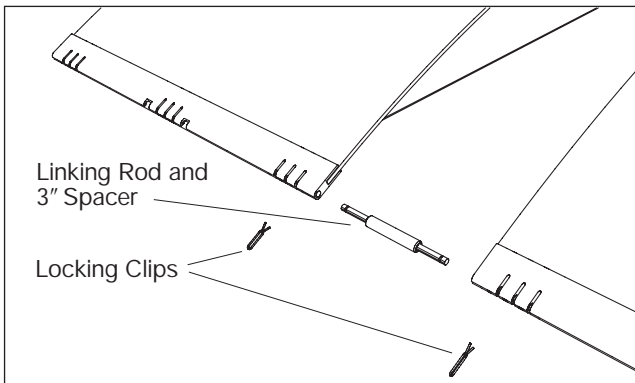
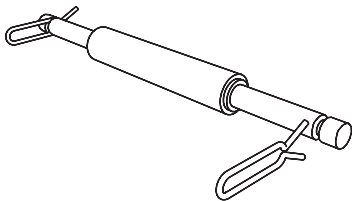
To link Canopies side-to-side, use one of three hardware kits: 7042 Flush Spacing Kit, 7043 1/2" Spacing Kit or 7007 3" Spacing Kit.

Example: 3" Spacing Kit – 7007

Links 2 Canopies, side-to-side at one end with 3" spacing.

Kit Contents:

- (2) Locking Clips
- (1) Linking Rod
- (1) 3" Spacer



The spacing kits can also be used to link Canopies side-by-side at the end of a continuous run of Canopies linked end-to-end.

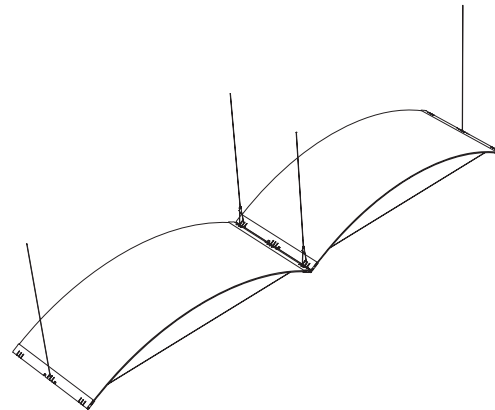
11. END-TO-END LINKED CANOPIES (SAME SIZE)

These instructions depict hardware designed to allow two or more Infusions Canopies of the same size to be linked end-to-end. Additional components permit attaching rows of end-linked Canopies side-to-side with either no space between them, a 1/2" of space or a space of 3".

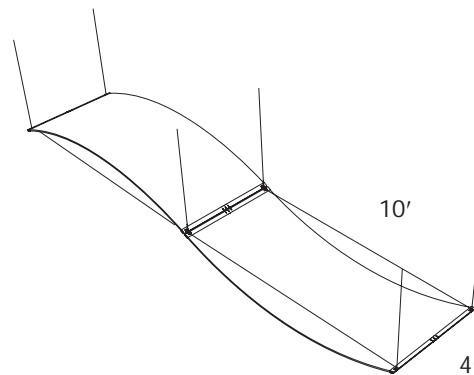
11.1 Use the Dual Canopy Hanging Kit (item 7041) at linked Canopy ends. A dual assembly will support one end of each of the linked Canopies. The length of the yoke can be adjusted by means of a set screw accessible from the bottom of the adjuster. Loosen the screw and slip the cable so that each leg evenly supports the weight of the attached Canopies. Retighten the set screw.



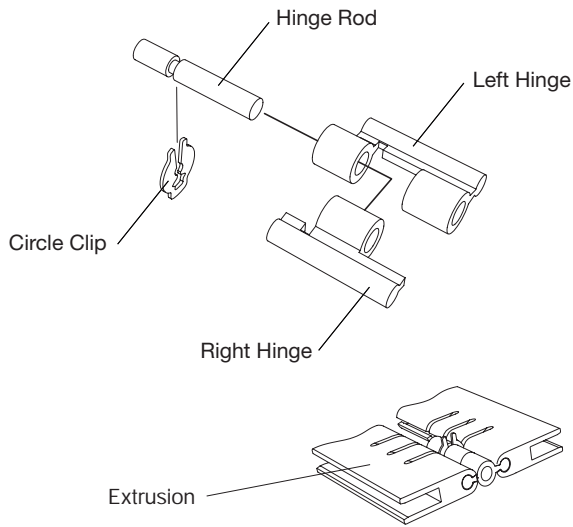
11.2 Smaller Canopies that are joined end-to-end, but not side-to-side must have at least three points of support. One cable is connected to the center of one extrusion and two cables should be located in the second slot from each end of the extrusion at the opposite end.



NOTE: Each 4' x 10' Canopy must have four points of support. Two cables are to be located in the second slot from the end of each extrusion.

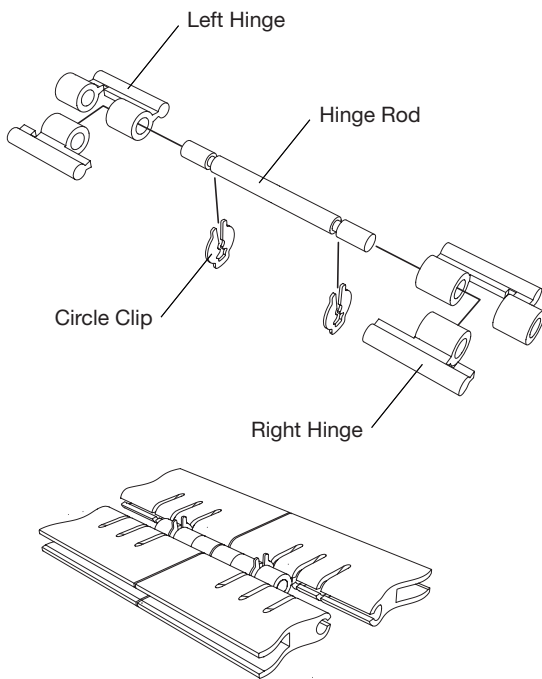


11.3 Use **two** Single Hinge Linking Kits (item 7044) to link canopies end-to-end. Insert the Left Hinge into the extrusion on the end of one of the Canopies. Insert the Right Hinge into the other Canopy. Insert the Hinge Rod and lock components together by inserting the Circle Clip into the slot closest to the end of the extrusions.

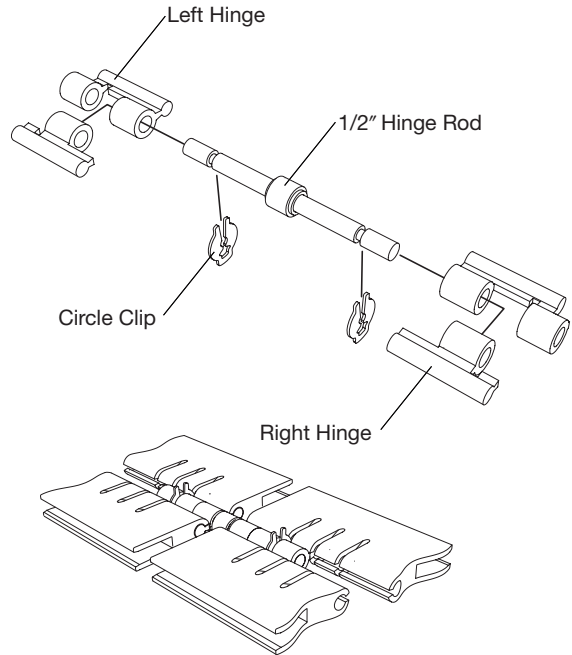


11.4 Repeat at opposite side of end-linked Canopies. This will be the same process for all hinge assemblies. The end of the Hinge Rod will always be flush with an extrusion.

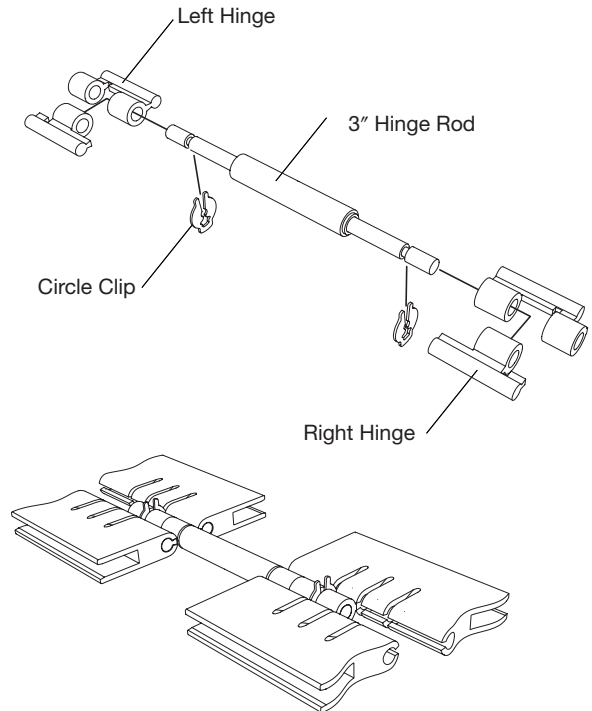
11.5 Use this hardware – the Dual Hinge Flush Linking Kit (item 7045) – to join paired Canopies end-to-end and with no space side-to-side.



11.6 Use this hardware – the Dual Hinge 1/2" Linking Kit (item 7046) – to join paired Canopies end-to-end and with 1/2" of space side-to-side.



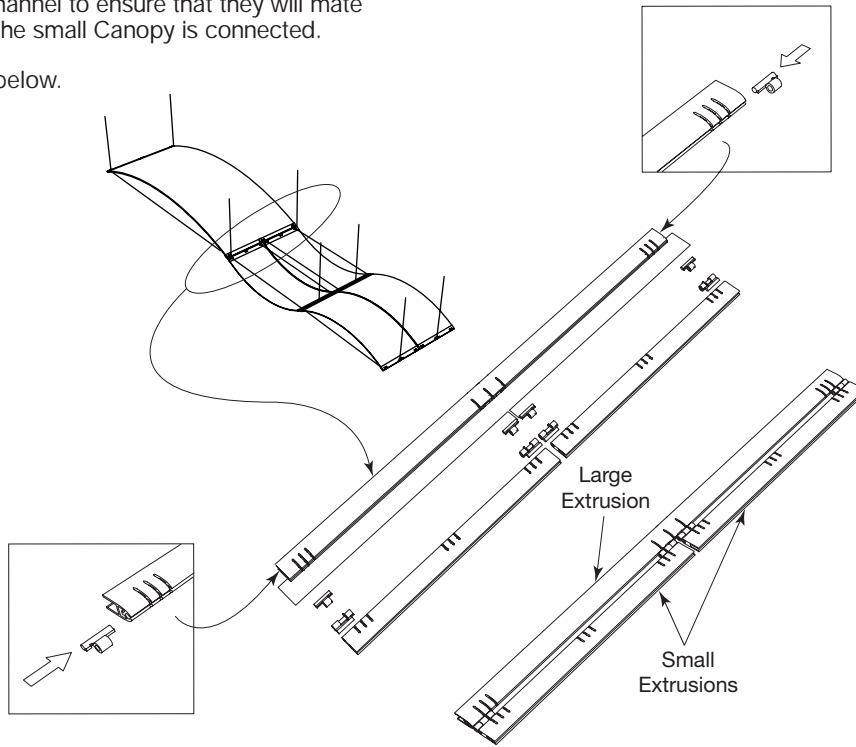
11.7 Use this hardware – the Dual Hinge 3" Linking Kit (item 7047) – to join paired Canopies end-to-end and with 3" of space side-to-side.



12. END-TO-END LINKING OF SMALL AND LARGE CANOPIES AND OFFSETTING SAME-SIZED CANOPIES

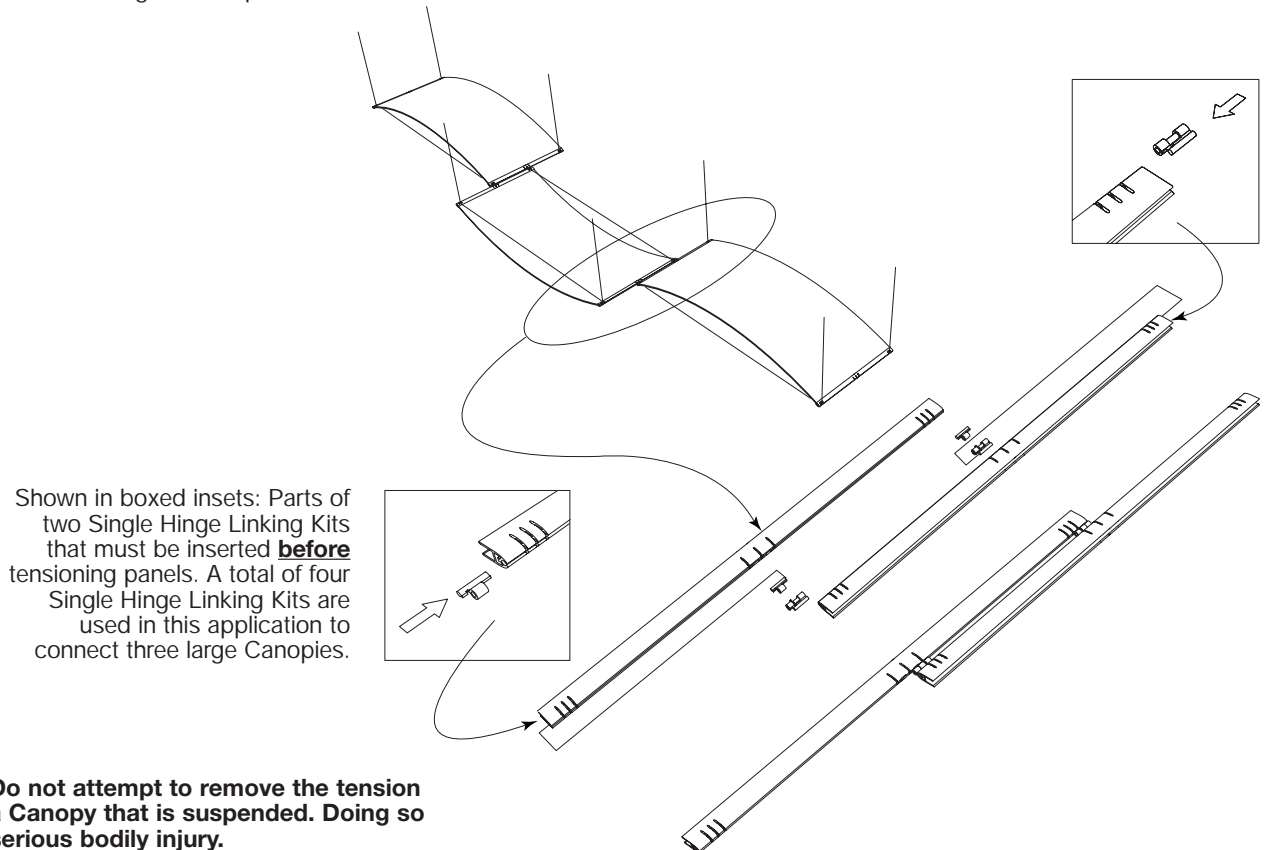
Hinge parts that will be positioned between the tension cables on large panels must be inserted into the extrusion channel before the large Canopy is tensioned. Check the orientation of these hinge parts carefully as they are inserted into the channel to ensure that they will mate up properly when the small Canopy is connected.

See the example below.



Shown in boxed insets: Parts of two Single Hinge Linking Kits that must be inserted **before** tensioning panels. A total of six Single Hinge Linking Kits are used when connecting four small Canopies and one large Canopy as pictured in application. (See CS-3871, page 6, for other hardware accessory kits used in this application.)

This method of assembly for linking hinges also applies to installations with staggered same-size panels. See the example with offsetting 4' x 10' panels below.



Shown in boxed insets: Parts of two Single Hinge Linking Kits that must be inserted **before** tensioning panels. A total of four Single Hinge Linking Kits are used in this application to connect three large Canopies.

WARNING: Do not attempt to remove the tension cable from a Canopy that is suspended. Doing so may cause serious bodily injury.

13. WALL MOUNTING OF CANOPIES

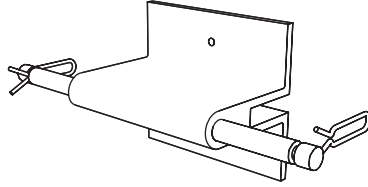
Use these hardware kits when one end of the Canopy will be attached to the wall.

Wall Attachment Kit – 7008

Anchors Canopies side-by-side to wall.

Kit Contents:

- (2) Locking Clips
- (2) Linking Rods (2-1/4")
- (1) Wall Bracket (3")

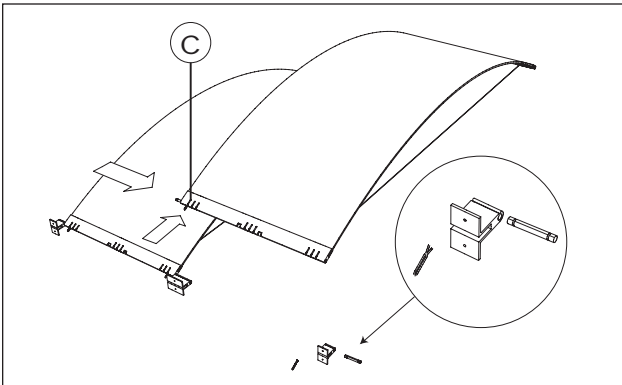
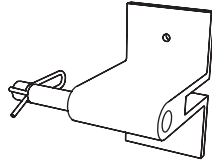


Wall End Attachment Kit – 7009

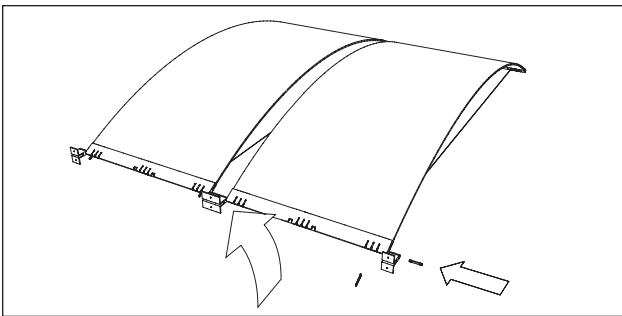
Used at ends when linking single or multiple Canopies.

Kit Contents:

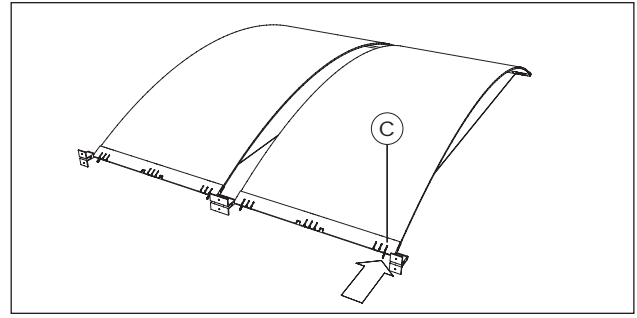
- (1) Locking Clip
- (1) Linking Rod (2-1/4")
- (1) Wall Bracket (1-1/2")



1. Mount wall brackets.
2. Install linking rod and locking clip in one end of the panel.
3. Insert second pin into the wall bracket at the opposite side of the panel.



4. Insert pinned end of panel into wall bracket.
5. Push linking pin into wall bracket at opposite side of panel.



6. Install locking clip.

14. SEISMIC RESTRAINT¹

- The International Building Code allows architectural components to swing freely as long as they will not be damaged or cause damage. Cable lengths less than 20" will generate the greatest amount of pendulum reaction during a seismic event and should therefore be avoided. When it is not practical to use cables greater than 20" long allow lateral clearance around the Canopies equal to, or greater than, the length of the cable.
- Canopies suspended from cables greater than 20" long will swing no more than 8". Restraint of Canopies has proven to be ineffective and is not recommended.

¹ Pendulum reaction information is based on full scale testing and computer modeling conducted at the Structural Engineering Earthquake Simulation Lab located at the State University of New York at Buffalo.

15. CLEANING RECOMMENDATIONS

General Recommendations

- Avoid wiping the panel surfaces with abrasive compounds of any type.
- Panels should be handled with clean gloves/hands to avoid fingerprints. **PLEASE NOTE:** This is especially important with the printed panels to avoid scratches or fingerprints on the more clear part of the visuals.
- Static charges that may build up after removing protective masking can be removed by wiping the sheet with a cloth dampened with water.
- Lightly dust with a duster or soft, clean cloth first. Keep the cleaning cloth free of grit.
- **CAUTION:** Do not allow panel edges to get wet when cleaning the panel surface. This would damage the panel and void the product warranty.

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.

For the latest product selection and specification data, visit armstrong.com/cloudsandcanopies

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