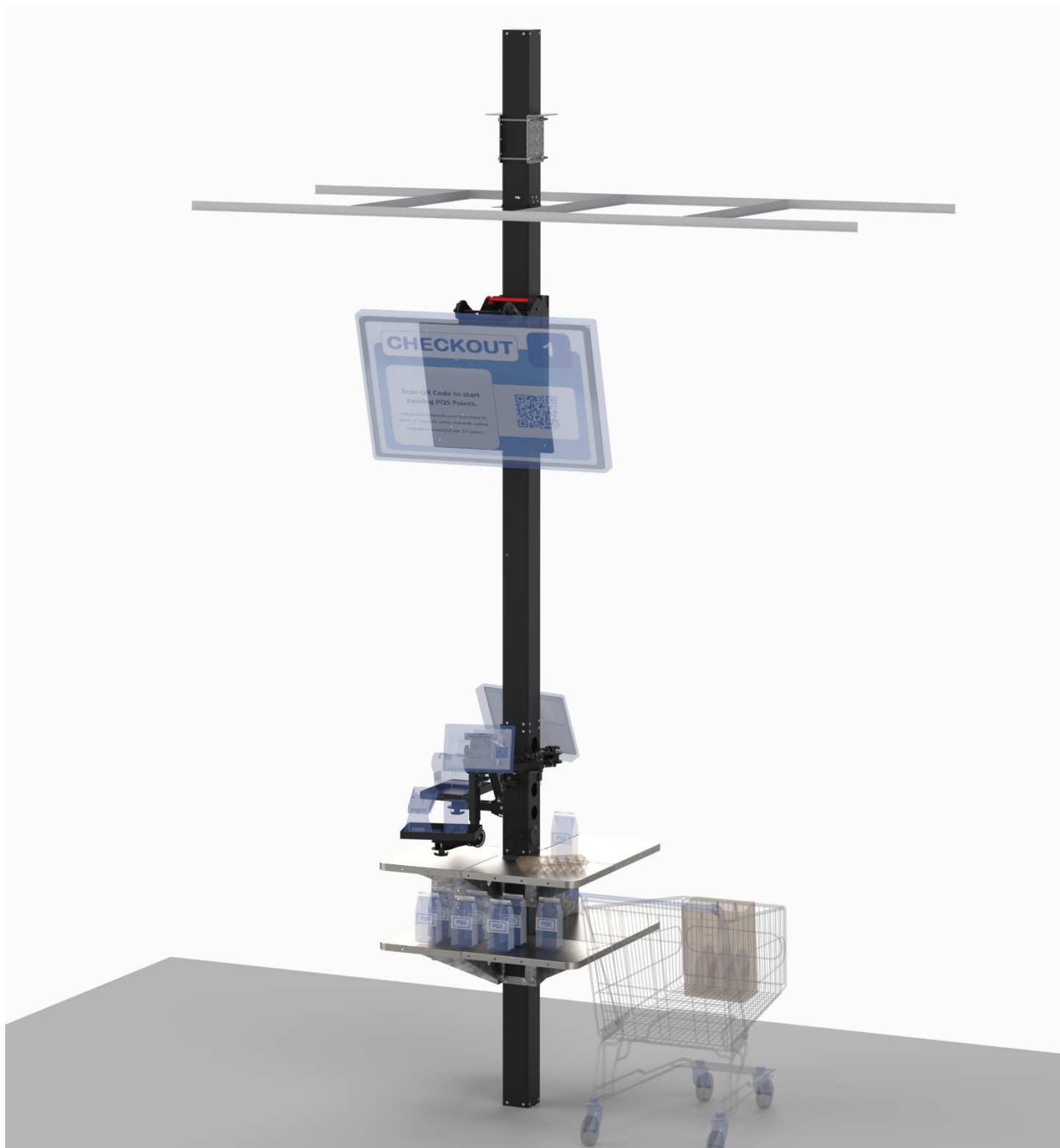


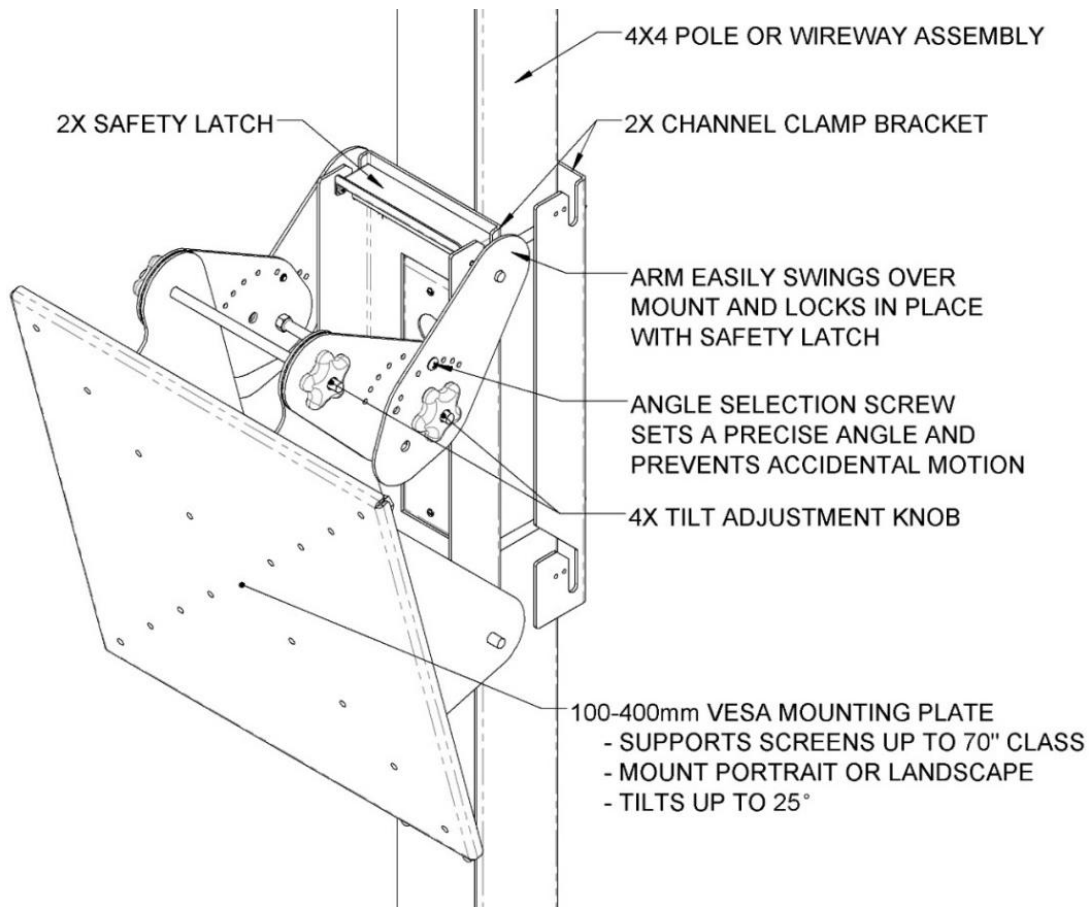
# PQS

PRACTICAL QUALITY SYSTEMS  
*Fast Custom Manufacturing - Nationwide Installation Services*



PN 81454 show, POS equipment and other misc. items not included

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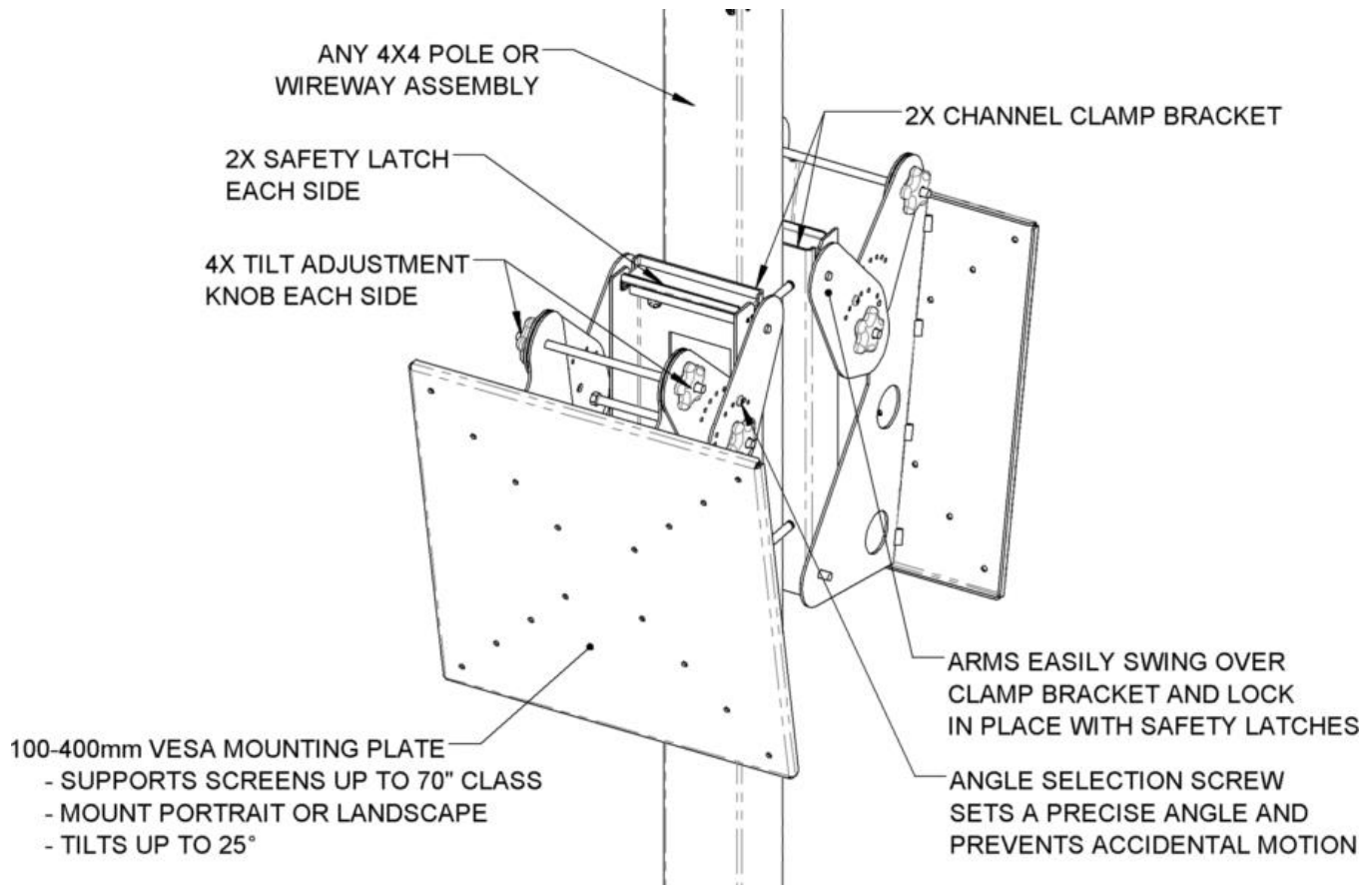
### PN 81561 Clamp On 100-400mm VESA Tilting Mount

- The 100-400mm VESA Clamp on mount allows screens up to 70" class to be mounted in either portrait or landscape orientation and tilted forward up to 25 degrees.
- Includes VESA mounting patterns for 100mm, 200mm, 300mm, 400mm or any height and width combination of these mounting standards.
- The Tilt Mount securely clamps to any 4"x4" vertical Pole or Wireway Assembly.
- The screen tilt position is adjustable from 0 degrees flat to 25 degrees forward and is secured with four 5-point hand knobs located behind the back of the screen, allowing easy adjustment without tools.
- Two Phillips head screws on the inner ends of the tilt link plates can be tightened into angle selection holes to more permanently lock the tilt position in increments of 5 degrees.
- Both of the channel clamping sections include cut out areas that allow the mount to be installed over two standard single gang outlets.
- Dual safety latches secure the tilt assembly to the channel clamp.
- Both of the channel clamping sections include through holes to allow self-drilling screws to be installed into the pole for a more permanent method of securing the mount.
- The clamping channel sections include a cut out section that allows two single gang power and /or data outlets to be installed behind the screen.
- Also available in a double configuration (PN 81562) with two screens oriented "back to back" on opposite sides of the pole assembly.
- For installation instructions, refer to the sections:

**Attaching a PN 81561 4X4 Clamp On 100-400mm VESA Tilting Mount to the back of a screen.**

**Installing the 4X4 Clamp On 100-400mm VESA Tilting Mount Clamping Assembly on a pole.**

**Attaching a screen with a 100-400mm VESA Mounting Plate Assembly onto a Clamping Assembly on a pole. (Parts 1, 2)**



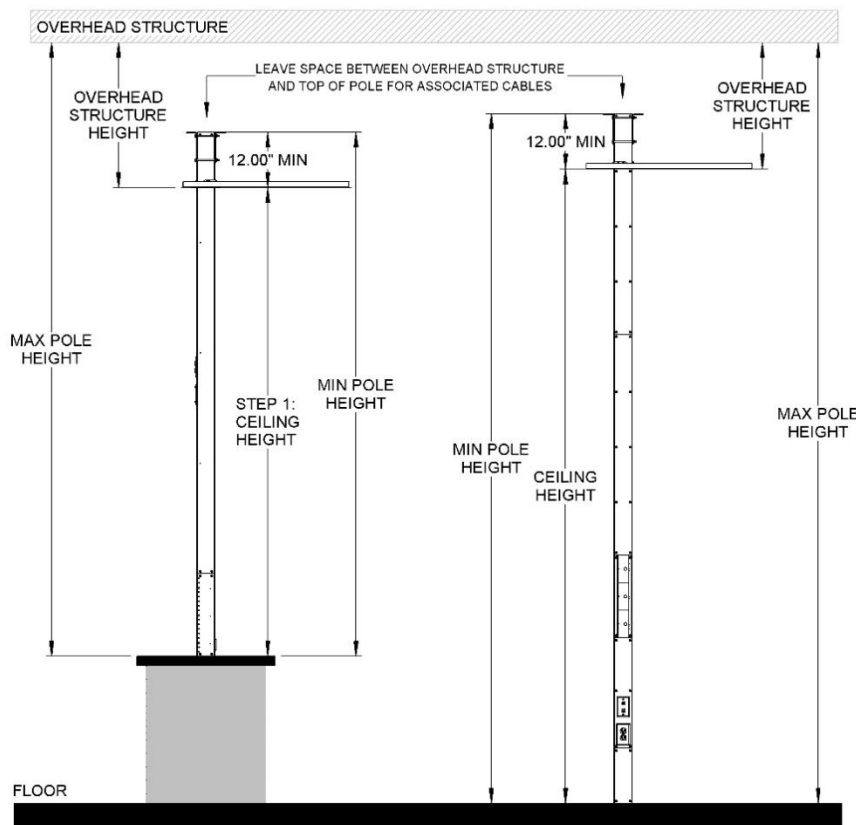
### 81562 Clamp On 100-400mm VESA Tilting Mount Two Screen

- The 100-400mm VESA Clamp on mount allows two screens up to 70" class to be mounted in a back to back configuration in either portrait or landscape orientation and tilted forward up to 25 degrees.
- Includes VESA mounting patterns for 100mm, 200mm, 300mm, 400mm or any height and width combination of these mounting standards.
- The Tilt Mount securely clamps to any 4"x4" vertical Pole or Wireway Assembly.
- The screen tilt position is adjustable from 0 degrees flat to 25 degrees forward and is secured with four 5-point hand knobs located behind the back of the screen, allowing easy adjustment without tools.
- Two Phillips head screws on the inner ends of the tilt link plates can be tightened into angle selection holes to more permanently lock the tilt position in increments of 5 degrees.
- Both of the channel clamping sections include cut out areas that allow the mount to be installed over two standard single gang outlets.
- Dual safety latches secure the tilt assembly to the channel clamp.
- Both of the channel clamping sections include through holes to allow self-drilling screws to be installed into the pole for a more permanent method of securing the mount.
- The clamping channel sections include a cut out section that allows two single gang power and /or data outlets to be installed behind the screen.
- Also available in a double configuration (PN 81562) with two screens oriented "back to back" on opposite sides of the pole assembly.
- For installation instructions, refer to the sections:

**Attaching a PN 81561 4X4 Clamp On 100-400mm VESA Tilting Mount to the back of a screen.**

**Installing the 4X4 Clamp On 100-400mm VESA Tilting Mount Clamping Assembly on a pole.**

**Attaching a screen with a 100-400mm VESA Mounting Plate Assembly onto a Clamping Assembly on a pole. (Parts 1, 2)**



### Calculating the vertical height of a 4x4 Pole Assembly that spans to the ceiling

**IMPORTANT!** : You must calculate the necessary vertical height of the Pole Assembly **BEFORE** placing your equipment order

Step 1 -Measure the distance from the desired attachment point on the floor, countertop or other horizontal mounting surface to the ceiling and record this distance. Take this first measurement and add 12" to allow for the minimum amount of additional vertical channel section that will be needed above the ceiling to attach the assembly to the overhead structure; record this distance. Understand that this total measurement will be the **MINIMUM** length of the vertical Pedestal Channel and / or Channel Extension Assembly that will be needed for your application.

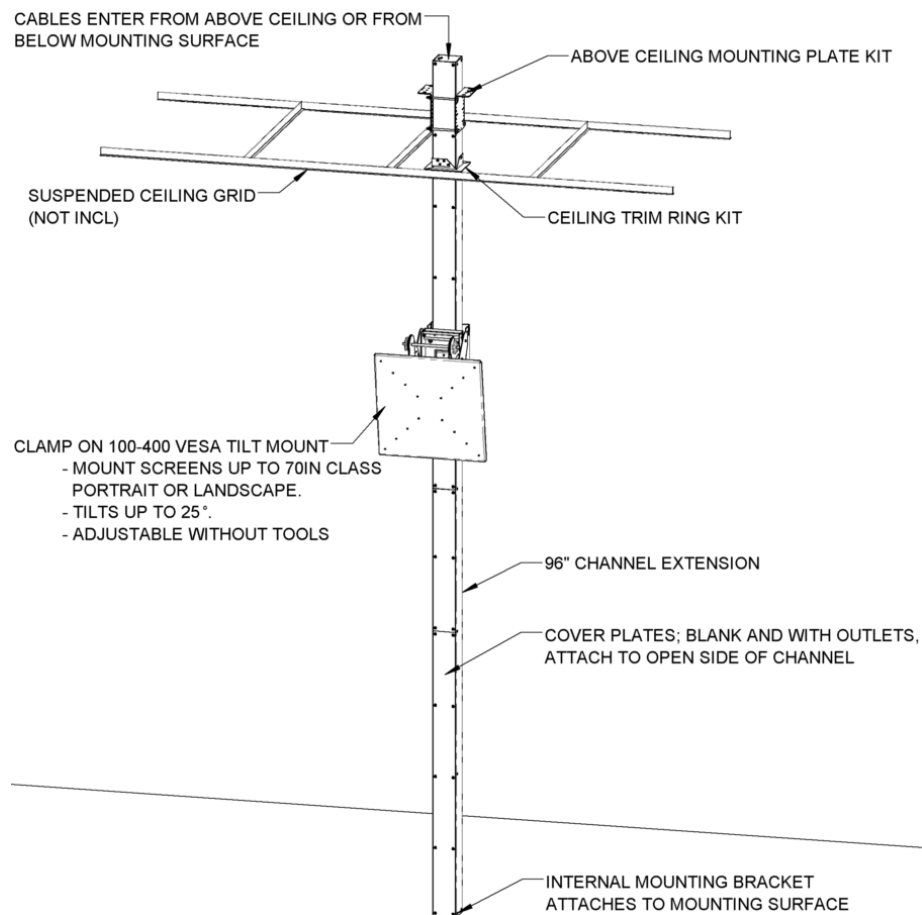
Step 2- Measure the distance from the ceiling to the overhead structure above the ceiling where the Pole Assembly will be installed and record this distance.

Important Note: When determining the maximum height of the vertical section of the Pole Assembly above the ceiling; be sure to factor in some space that will allow the associated conduits and/ or cabling to be fed into the top open end of the wireway channel section while maintaining the minimum bend radius of the conduits and cables and without conflicting with the overhead structure of the ceiling.

Step 3- Add the measurement from Step 1 together with the measurement in Step 2 together and record this total. Understand that this total measurement will be the **MAXIMUM** length of the vertical channel section that can be used for your application.

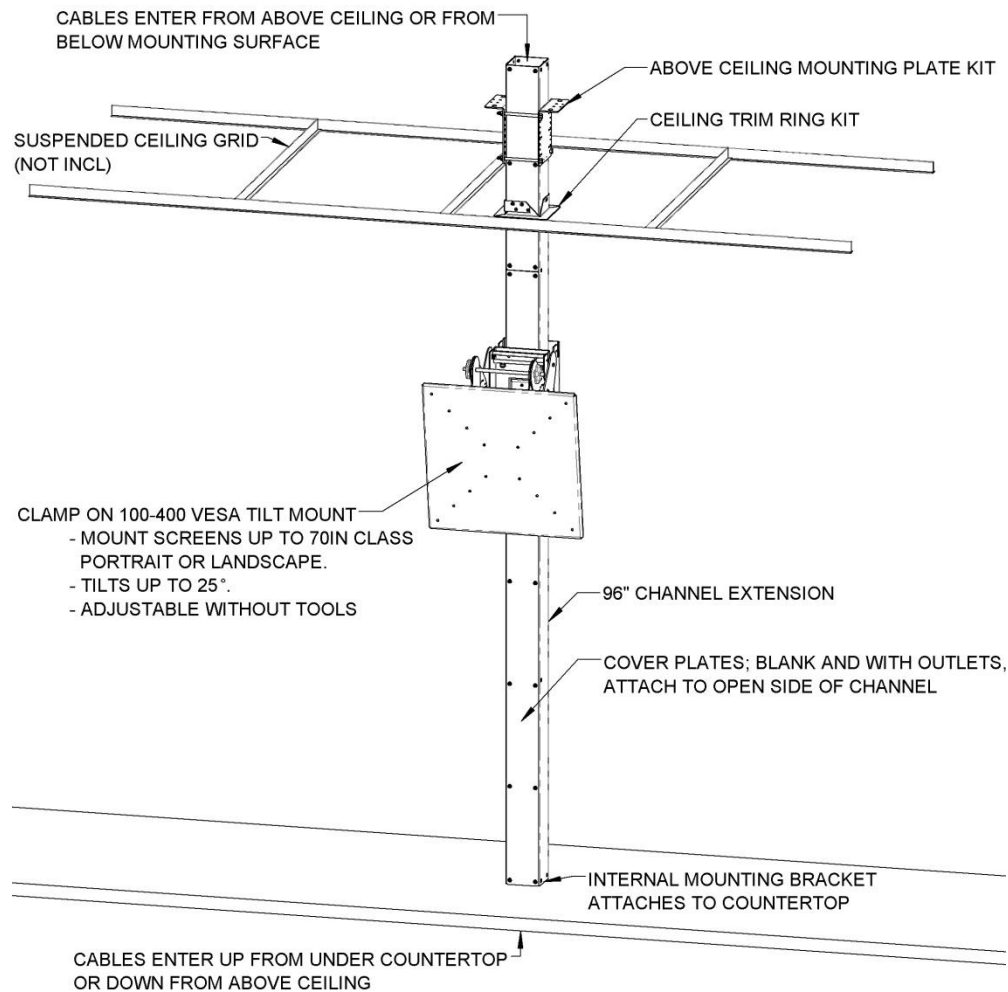
Step 4 -Compare the two totals found in steps 1 and 3 above and know that the total length of the vertical section needed for your Pole Assembly must be somewhere between them.





### Planning the installation of the equipment and associated wiring on a Pole Assembly that spans to the ceiling Part 1

1. Create some basic sketches of your Pole Assembly in profile orientation that indicates the following heights:
2. Indicate the total height of the Pole Assembly above the mounting surface, the ceiling height above the mounting surface if applicable, the height of the overhead structure above the ceiling if applicable. Include all of the measurements established in the section "**Calculating the vertical height of a 4x4 Pole Assembly**".
3. Indicate the heights of the ends of the various arms that will support the various pieces of equipment above the mounting surface.
4. If the bottom of your pole assembly being attached directly to a countertop create a second sketch that indicates where the Base of the Pedestal Channel and / or Extension section with the cable feed through hole will need to be located relative to the front and rear edges of the countertop.
5. Refer to your sketches to address the following considerations and then adjust the design of your system as needed to answer the following questions and consider the following installation notes:
6. If your design includes equipment that must be seen and/ or touched by the system users; is the equipment located at the optimum heights and side to side locations for optimum access by all users?
7. If your pole assembly is going through the ceiling; you'll need to design a supporting structure to connect the above ceiling mounting plates to the structure above the ceiling. Refer to the section: **Attaching the Above Ceiling Mounting Plates to the overhead ceiling structure.**
8. If your pole assembly is going through the ceiling and power and data or other low voltage circuits are intended to be fed down into the pole from the top; you'll need to determine how the associated conduits and/ or wiring circuits are going to be routed across the ceiling and into the top of the pole.

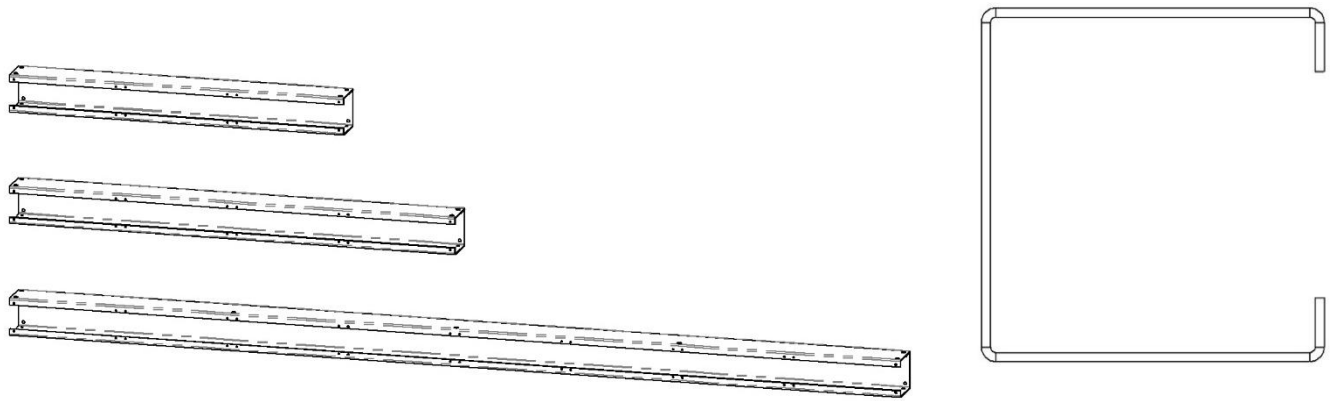


### Planning the installation of the equipment and associated wiring on a Pole Assembly that spans to the ceiling Part 1

9. If your pole assembly is attached directly to a Countertop, the floor or other surface and the power and data or other low voltage circuits being fed up from below the mounting surface and into the bottom of the pole assembly; you'll need to determine if the cable feed through hole will conflict with structural members, conduits or other items that are located on the underside of the countertop or floor, where the outlets for these circuits will be located and how the wiring circuits are going to be routed from the outlets beneath the Countertop or floor to the cable feed through hole on the bottom of the pole assembly.

### Making final connections for power, data or other associated cables to screens, printers and other equipment .

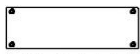
1. If your assembly has a Pedestal Channel with arms that support screens or other equipment; move each arm and each piece of attached equipment to discover the desired full range movement; tie off the cabling and then feed any excess cabling back into the Pedestal Channel.
2. When all of the cables have been connected, perform power up and operational tests on all of the installed equipment.
3. When you are satisfied that all of the equipment is operating correctly; secure all of the cabling inside of the Pedestal Channel using the two sets of hook and loop straps which are located on two opposite sides of the channel interior. We recommend that all high voltage power cabling be kept in one bundle on one side of the pedestal channel and all low voltage cabling be kept in a separate bundle on the other side.



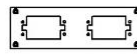
## Understanding the Basic Functions of Channel Extension Sections

- Channel Assemblies consist of modular Channel Extension Sections 4"x4" square C channels with three solid sides and one "open" side made of heavy duty steel. Available in 36", 48", and 96" lengths. Channel extensions may be cut to size in-field for applications where necessary.
- Channel Extension Sections can be used alone or in combination with Pedestal Channel Sections via internal coupler sections to create modular, vertical pole assemblies from 36" to 144" H.
- Channel Extension sections can be mounted to a Movable Base, directly to a horizontal surface, or directly to the floor spanning to the ceiling using the Above Ceiling Mount Kit and Trim Ring.
- After installation the channel is enclosed by using Cover Plates to close the open side.
- Cover Plates available in two basic types with multiple lengths:
  - Blank Cover Plates - available in 12", 24", 36", 48" lengths
  - Cover Plates with two outlet Cut Outs- available in 12" and 24" lengths.
- The positions of Cover Plates are interchangeable along the entire length of the open side of a Channel Extension Section. All cover plate kits include 10-32 X 3/8" Phillips countersunk head mounting screws.
- Custom Channel Extension Section Cover Plates can also be ordered with custom cut-outs, custom lengths and in brushed stainless steel finish or a variety of powder coat options. Contact our applications and design team for more information.
- Channel Assemblies are available in multiple configurations:
  - 36" Channel Extension Sections can be used with an 32" Contoured Movable Base for countertop or desktop applications, supporting up to four 32" class screens.
  - 48" Channel Extension Sections can be used with a 22" Round Movable Base and 4X4 clamp On Assemblies for floor stand applications to support any variety of equipment.
  - Channel Extension Sections can be used alone or in combination with Pedestal Channel Sections to create vertical pole assemblies up to 144" total height. The lower end is attached directly to the floor or countertop and the upper end attached to the overhead ceiling structure.
  - To understand the difference between the two types of channels; know that pedestal channels have a series of 6" tall doors installed on the "Open side" of the channel; while Channel Extension sections have Cover Plates installed on the on the "Open side" of the channel.





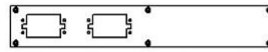
PN 51075 - 12" BLANK



PN 51075 - 12" 2 OUTLET



PN 51071 - 24" BLANK



PN 51071 - 24" 2 OUTLET



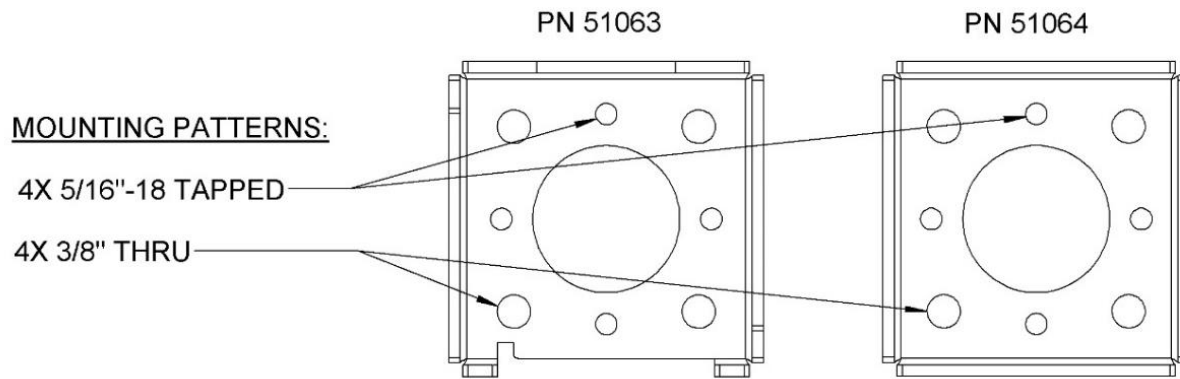
PN 51070 - 36" BLANK



PN 51069 - 48" BLANK

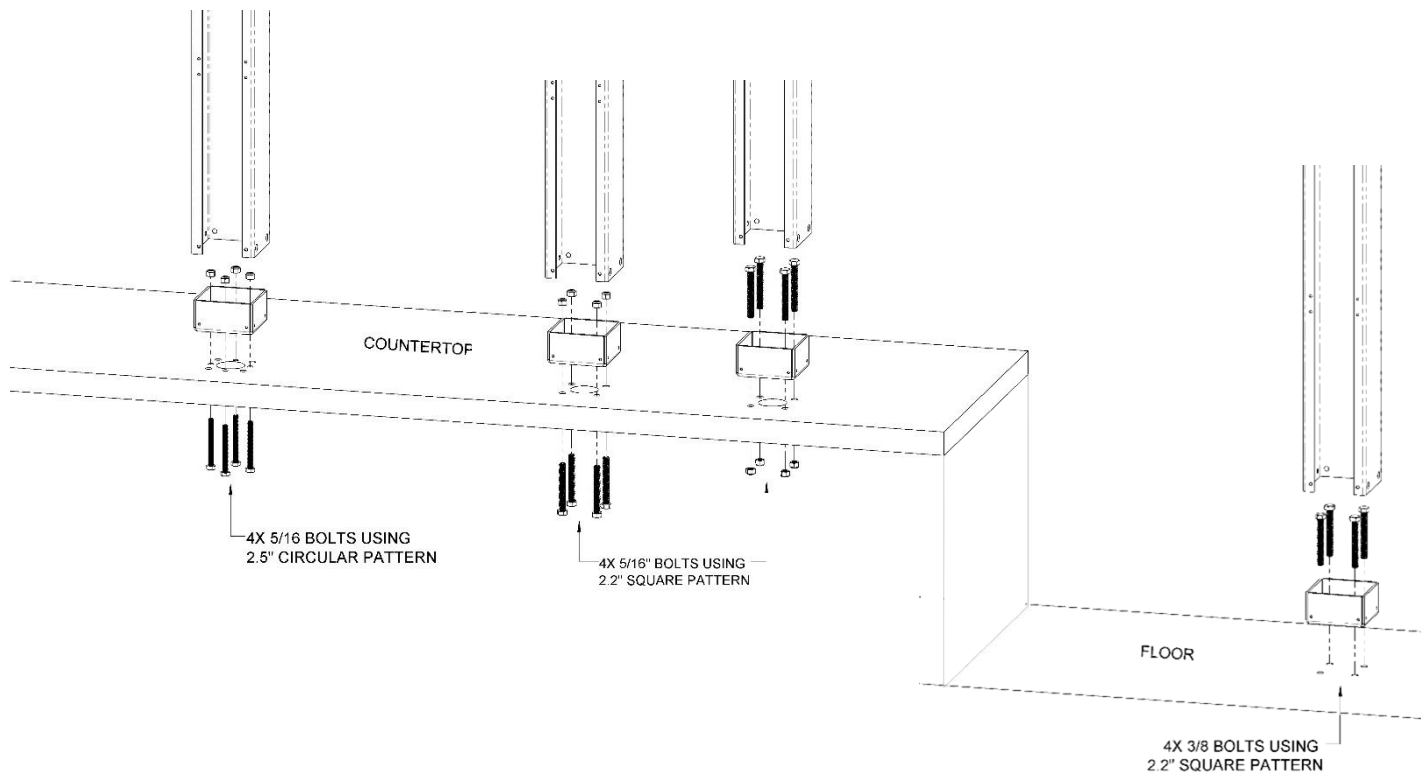
### Understanding Channel Extension Cover Plates

- Channel Extension Cover Plates are flat sheet metal panels used to cover the open side of Channel Extension sections. Cover Plates are available in two basic types and varying lengths.
- One type of Channel Extension Cover Plates are smooth, solid blanks with no cut-outs and are available in 12", 24", 36" and 48" lengths.
- One type of Channel Extension Cover Plates has multiple single-gang outlet cut-outs and are available in 12" and 24" lengths, and can be used with or without electrical junction boxes to create power, data or other types of outlets.
- Cover Plates are attached to the Channel Extension sections using #10-32 X 3/8" L Countersunk Phillips Head Stainless steel screws. All Cover Plate kits include mounting screws
- Cover Plate positions are interchangeable along the entire length of the Channel Extension section.
- Channel Extension cover plates have black powder coat finish.
- Custom Channel Extension Cover Plates can also be ordered with custom cut-outs, lengths, and finishes such as brushed stainless steel or a variety of powder coat options. Contact our applications and design team for more information.



### Locating and installing a base mounting bracket

1. If you have not already done so; temporarily install the Feed Through mounting base Bracket onto the bottom of the assembled Pole Assembly.
2. Carefully lift and support the Pole Assembly in the vertical position and securely attach the safety restraint assembly to the overhead structure in a manner to prevent the Pole Assembly` from falling. Once the Pole Assembly is stabilized; carefully shift the bottom of the assembly so that the Feed Through mounting plate base is aligned correctly with the mounting surface.
3. Use a marker to transfer the positions of the large center feed through hole and all of the mounting hole locations in the Feed Through base plate onto the mounting surface. Use a level to double check for correct vertical alignment of the Pole Assembly.
4. Important note – Make a label with the letter “F” or the word “front” directly and place it onto the mounting surface to indicate the correct orientation of the open side or outlet side of the channel section.
5. Carefully support the Pole Assembly, remove the six 10-32 screws that attach the bottom of Pole Assembly to the three closed sides of the mounting plate base and then remove the base plate.



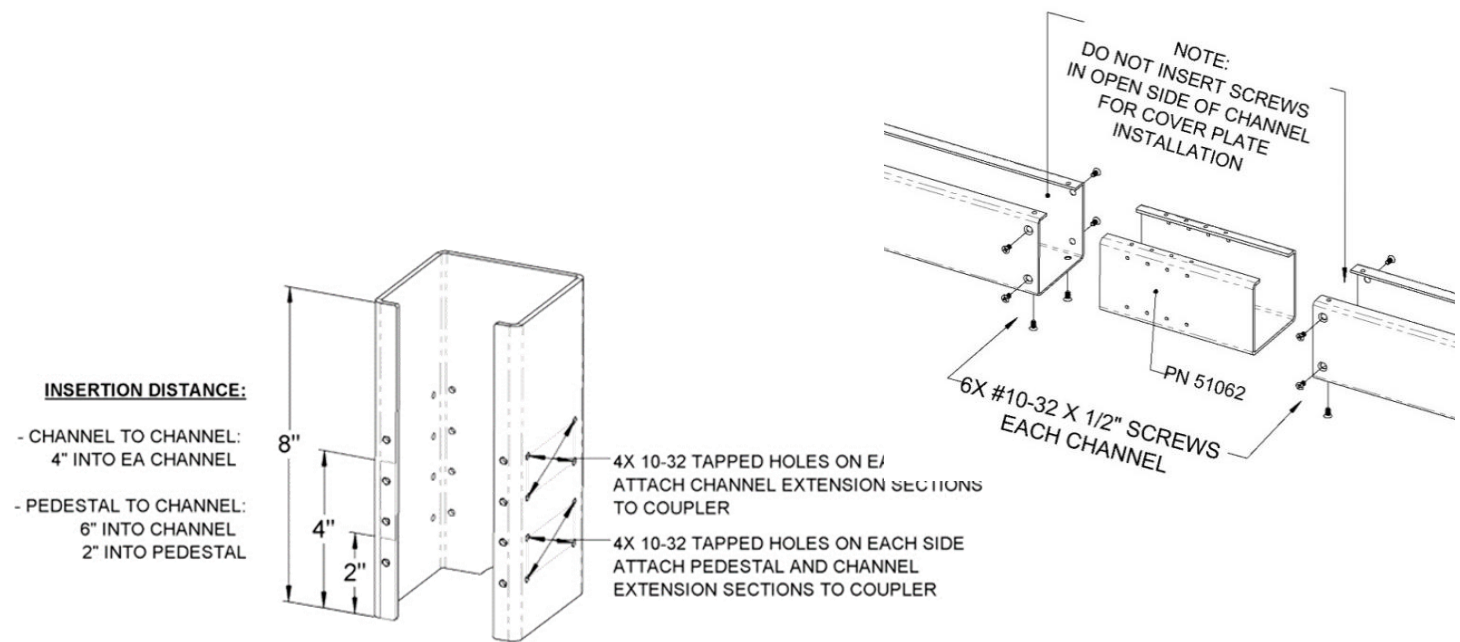
### Permanently attaching the Feed Through mounting base bracket to the mounting surface

1. Once the feed through hole has been made in the mounting surface; place the mounting base plate on the mounting surface. That the open side of the Pole Assembly is aligned correctly with the letter "F" or the word "front" written on to the mounting surface. Then align the center hole and mounting holes in the plate with the center hole and marks on the mounting surface and install the appropriate fasteners through the holes in the mounting base plate to permanently secure it to the mounting surface.

2. Once the Feed Through mounting Bracket is permanently attached to the mounting surface; carefully support the Pole Assembly, lift the bottom of the Pole Assembly and align the open side of the bottom of the Pole Assembly with the shorter flange on the base plate; then reinstall the (8) 10-32 Phillips Countersunk head screws that attach the bottom of the Pole Assembly to the four sides of mounting Bracket.

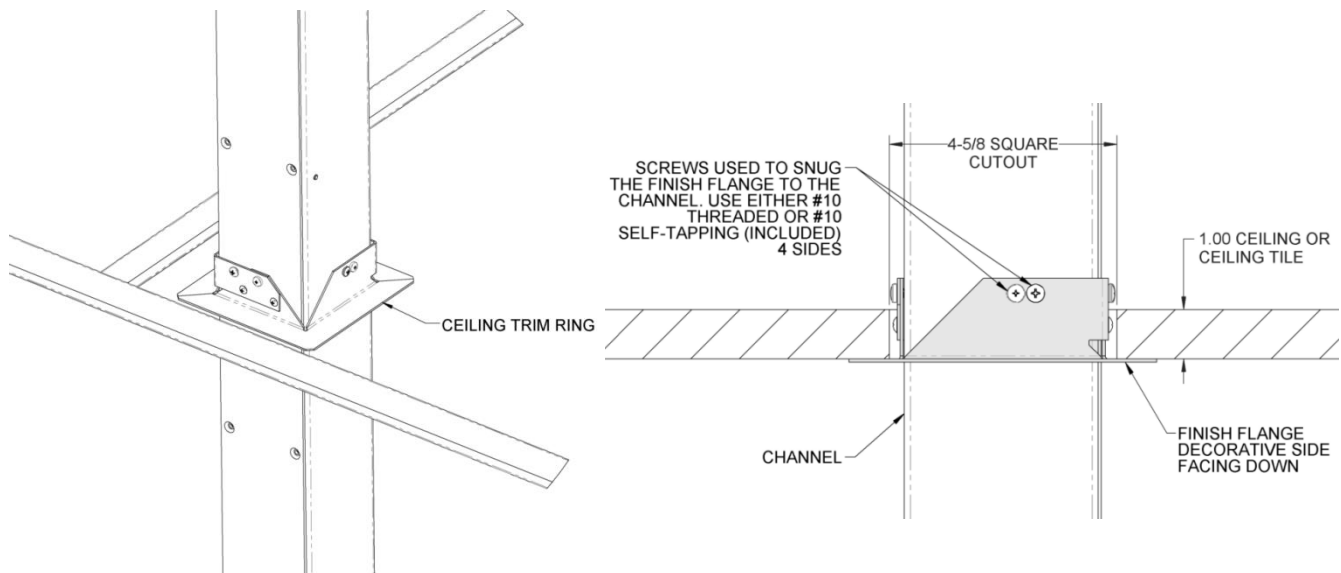
Option 1= If you are attaching the mounting bracket to a countertop; install 4 EA 5/16" bolts up from the underside of the countertop and into the tapped holes in the mounting bracket.

Option 2= If you are attaching the mounting bracket to a floor; install 4 EA 3/8" anchors in the floor and install 3/8" bolts through the 3/8" holes in and into appropriate anchor installed in the floor.



### Pre-assembling the Pole Assembly and installing an internal coupler to connect two Channel Extension sections

1. If your Pole assembly is made of separate sections; the first step is to use an internal coupler and screws to connect the channel sections together to create a single vertical assembly. Do not install the cover plates at this time.
2. Once you have the channel section completely assembled; verify the correct orientation of the open or cover plate / outlet side of the wireway channel section assembly relative to which direction you would like the cover plate with the outlets to face.
3. The internal coupler is 8" long, made of thick galvanized steel and is used to join any two channel Extension sections of together end to end. Lay the two Pedestal Extension sections that are to be joined together on a flat surface so that the open sides of both channels are facing up and the ends of each section are approximately one foot apart.
4. Note that there are four sets of eight tapped holes; the two sets of tapped holes located in the center of the coupler are used to join two channel Extension sections together. Use the two sets of 8 holes located at the center of the coupler so that 4" of the 8" L coupler is inserted into each channel extension section
5. Orient the coupler so that the open side in the coupler is facing up and is aligned with the open sides of the two Extension sections and then carefully slide the coupler 4 inches into the end of one of the Extension sections, align the first set of eight tapped holes in the center of the coupler with the eight through holes in the channel and then install six screws into each of the holes on the three closed sides of the Extension section.
6. Carefully guide the second Extension section onto the free end of the coupler until it stops against the end of the first channel section and then install six screws into each of the holes on the three closed sides of this channel section.

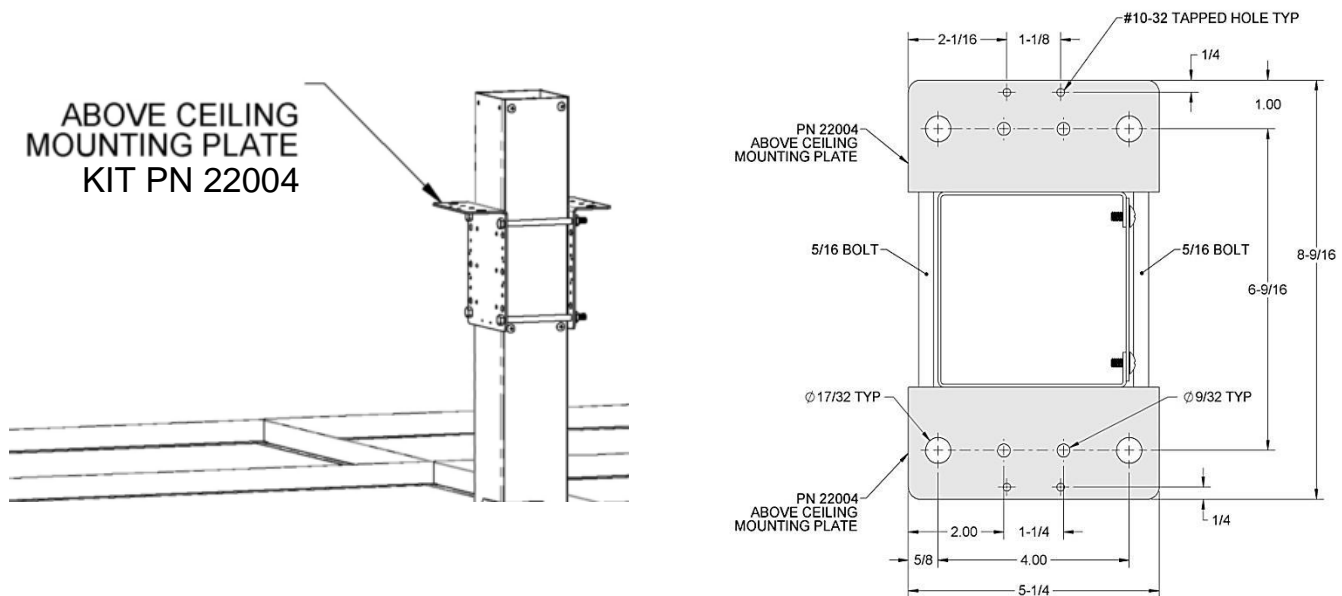


### Locating the Pole Assembly in a Suspended Tee Bar ceiling

1. If your ceiling is a suspended "Tee Bar" type; the best scenario is if the top of the Pole Assembly can be located in one of the corners of the metal Tee bar grid.
2. A second-best choice would be to locate the Pole Assembly directly against one of the sides of a section of the Tee bar. Using either of these techniques will make it much easier to cut and reinstall the ceiling tile so that the Pole Assembly can pass through it.
3. If neither of these techniques will work in your situation; you can still fabricate some custom sections of Tee Bar and ceiling tile to fill in around the area where the Pole Assembly penetrates the ceiling grid.
4. Locating the top of a Pole Assembly in the ceiling -Use a laser level or a plumb bob suspended from the ceiling to locate the side to side and forward and back center position of the assembly. Mark this location on the ceiling and on the floor or other horizontal mounting surface.

### Cutting a square opening in the ceiling for the Pole Assembly

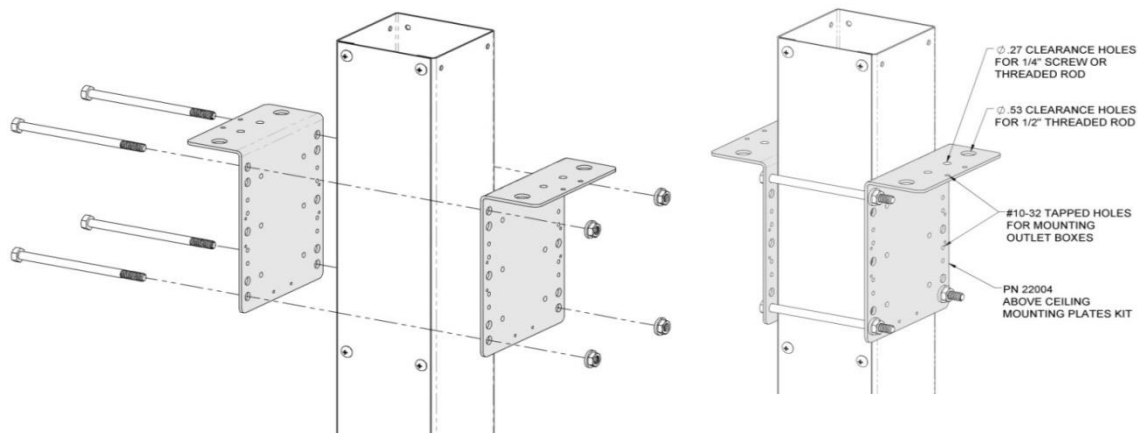
1. You will need to cut a square hole that is  $4 \frac{3}{4}$ " W X  $4 \frac{3}{4}$ " D in your ceiling material.
2. The horizontal frame of the Ceiling trim ring extends 1 inch out from the vertical flanges and should cover any rough edges.
3. Important note- The two taller, pointed, vertical flanges on the Ceiling Trim Ring assembly must extend up through the ceiling surface so that mounting screws for the trim ring can be accessed from above the ceiling.



### Understanding how to attach the of the top of the pole assembly to the structure above the ceiling

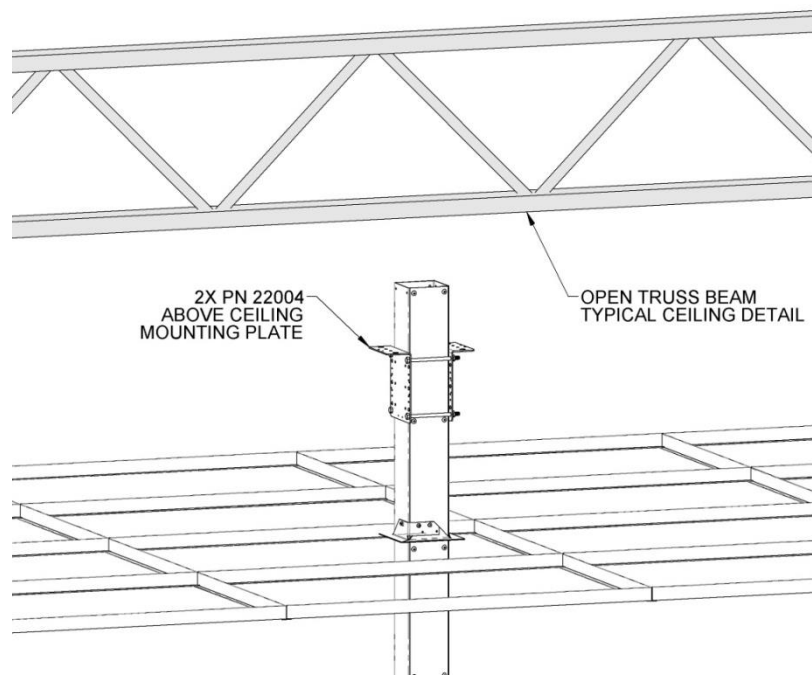
1. Survey the area above the ceiling and identify the appropriate overhead structure elements which are above and adjacent to the top of the channel location for attaching the bracing structure.
2. Measure and record the distance from the top of the channel to the overhead structure above the ceiling. You will need these measurements to help design, fabric and install the additional items such as user supplied threaded rod, channel strut, angle brackets or DIY EMT conduit struts and miscellaneous hardware needed to attach the Above Ceiling Mounting Plates to the structure above the ceiling. Refer to the section: **Attaching the Above Ceiling Mounting Plates to the overhead ceiling structure**





### Attaching the Above Ceiling Mounting Plates to the top of the Pole Assembly

1. Before proceeding, while the pole assembly is still at floor level; identify the Above Ceiling Mounting Plates Kit. Review how this system attaches via a clamping action to the two solid sides at any point along the length of the channel section that extends above the ceiling.
2. Consider the optimum height the Above Ceiling Mounting Plates should be located on the pole assembly for your installation scenario and mark this location on the channel section. With the channel assembly still at floor level; orient the two Above Ceiling Mounting Plates so that they will lay against the two solid sides of the channel and then install the included 4 EA 5/16"-18 X 5"L bolts and lock nuts through the holes in both Mounting Plates and across both of the solid sides of the channel section.
3. Position the plates so that they align with the mark you made in the last step; then use 1/2" wrenches to carefully tighten these fasteners just enough to secure the plates to the channel at the desired height. Do not overtighten as you may crush the channel. Install a self-drilling screw through one of the holes in each of the Above Ceiling Mounting Plates and into the sides of the channel section to further secure the plates to the channel.
4. Before proceeding; you must acquire and install a safety restraint assembly (not included) that is securely attached to the top of the channel assembly that can also be attached to the overhead structure as soon as the channel section is raised to the vertical position.
5. Important note - be aware that BEFORE the associated conduits and or cabling and the top most cover plate and the ceiling trim ring has been installed on the channel assembly; you must be sure to return to the top of the channel assembly and finish tightening the 4 EA 5/16"-18 X 5"L bolts and lock nuts that secure the Above Ceiling Mounting Plates to the top of the Pole Assembly.
6. Adding a safety restraint to secure the top of the Pole Assembly; In order to ensure the stability of the Pole Assembly the installer must now source and / or fabricate a safety restraint assembly made of cable, wire, chain or other suitable flexible material and attach it to both of the Above Ceiling Mounting Plates and to the overhead structure. This safety restraint assembly must be kept properly tensioned to prevent the Pole Assembly from falling until the Above Ceiling Mounting Plates are permanently attached to the overhead structure.
7. Permanently Securing the Above Ceiling Mounting Plates -VERY IMPORTANT- before all of the associated conduits, cabling, the cover plates and the Ceiling trim ring have all been installed on the Pole Assembly; return to the Above Ceiling Mounting Plates and fully tighten the (4) EA 5/16"-18 X 5" long bolts and lock nuts that secure the Mounting Plates to the Pole Assembly.



### Attaching the Above Ceiling Mounting Plates to the overhead ceiling structure

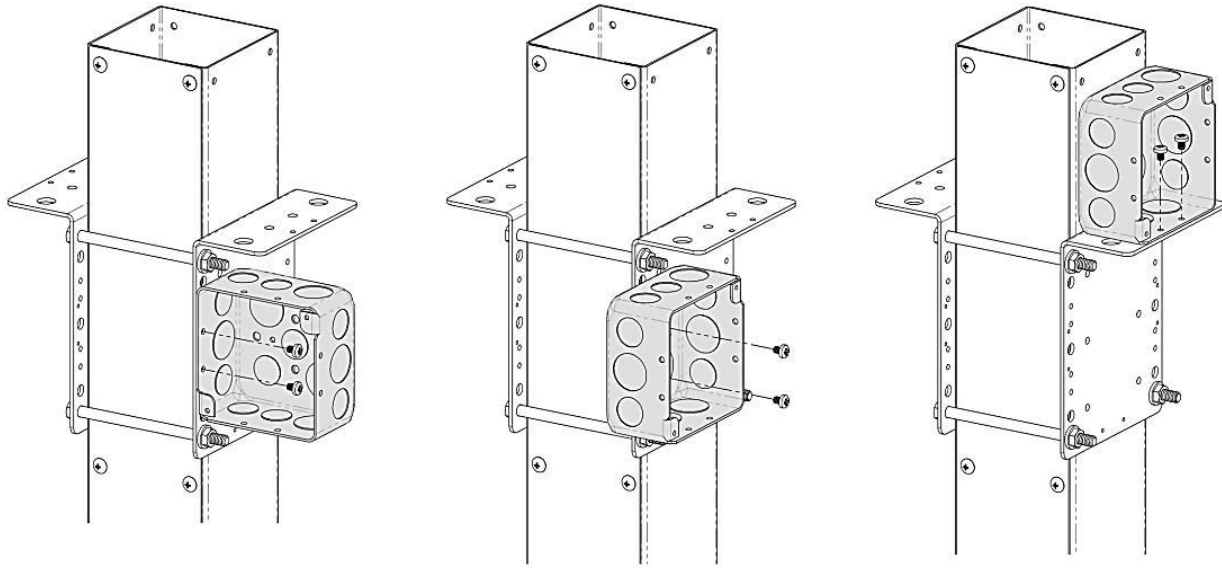
Once the Feed Through mounting base plate is permanently attached to the mounting location and the bottom of the channel assembly is attached base plate; you'll need to return to the top of the Pole Assembly and attach the Above Ceiling Mounting Plates to the overhead ceiling structure.



For this step; you will need to design, fabricate and install a custom support assembly consisting of threaded rods, channel strut, steel angle, guide wires, beam clamps, EMT conduit struts or other suitable materials and hardware as needed to securely brace and permanently attach the Above Ceiling Mounting Plates which are attached to the top of the channel assembly. These bracing materials are not included; but are commonly available.

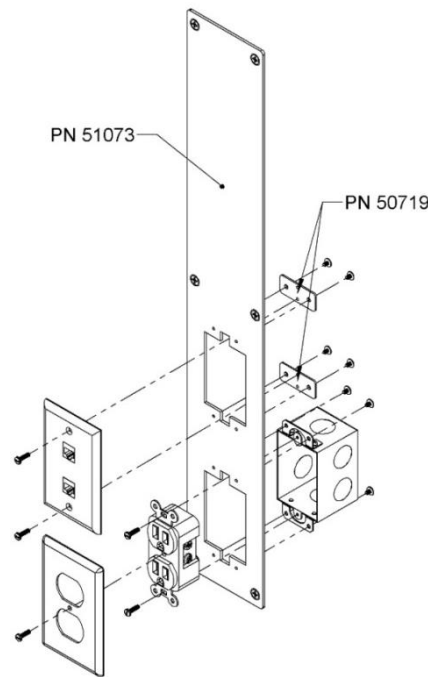
### Fabricating bracing struts with EMT conduit to brace the top of a Pedestal Extension Section

One method of bracing the Above Ceiling Mounting Plates that attach the top of the Pedestal Extension Section to the overhead structure is to fabricate custom length steel tubing struts made out of common EMT conduit. It is important to consult with your local building and safety department to verify if this type of bracing is or is not permitted in your jurisdiction. The attachment points on the ends of the struts can be made by flattening the last few inches of the conduit section, drilling through holes that are large enough for your fasteners in the flat sections and then carefully bending the flattened sections to create mounting flanges. We recommend using  $\frac{3}{4}$ " trade size or larger EMT conduit for making these struts.



### Attaching Junction boxes to the Above Ceiling Mounting Plates

- The Above Ceiling Mounting Plates are also equipped with multiple threaded holes to allow simplified attachment of standard 4" X 4" or 5" X 5" electrical junction boxes as needed.
- The tapped holes are located on then horizontal and the vertical planes of the mounting plates to allow a range of options for attaching either with the side or the back of the junction box flat against the mounting plates. 10-32 junction box mounting screws are included in the hardware Kit.



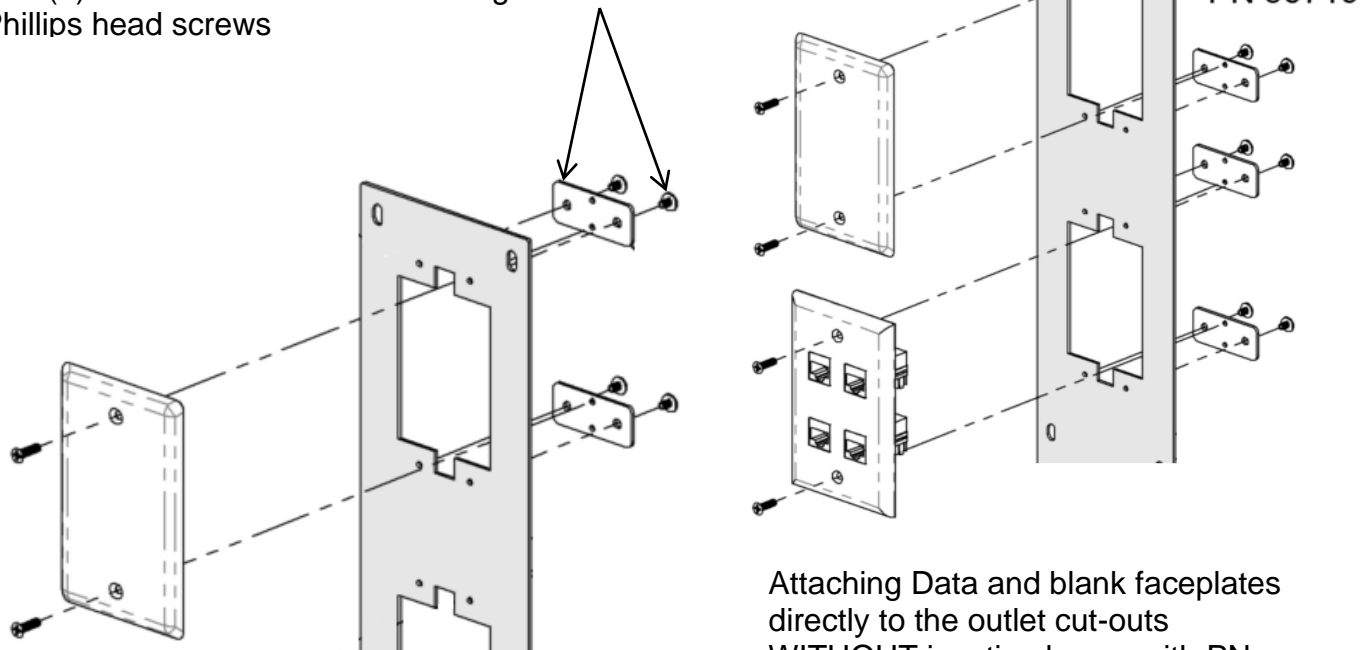
### Assembling and connecting the outlets on the cover plates

- Identify the cover plates with the outlet cut- outs. Also locate all of the junction boxes, faceplates, receptacles and all other items necessary to assemble the various outlets in your assembly, reference the lists of included items for your assembly.
- All outlet cut-outs on channel extension section cover plates are sized to fit a standard 3"H x 2" W "cut in type" single gang junction box with mounting brackets and any standard faceplate.
- "Cut in type" single gang junction box are available in a range of different depths and all are equipped with two L shaped mounting brackets with one end of each bracket attached to the end of the junction box with two screws. Two additional 10-32 screws are used to attach the other end of each L bracket to the rear / inside of the cover plates over the outlet cut- outs. Junction boxes with mounting brackets are Zinc Plated and available with both  $\frac{1}{2}$ " and  $\frac{3}{4}$ " trade size knock outs for connecting conduit.
- If your assembly includes outlets 3"H x 2" W X 2  $\frac{1}{2}$ " D "cut in type" single gang junction and your application requires deeper junction boxes; refer to the list: Know that using junction boxes that are deeper than the standard 2  $\frac{1}{2}$ " depth will REDUCE the conduit and cabling loading capacity of the channel extension.
- Consult your local building codes to determine if conduits are required above the ceiling and/or conduit and junction boxes are required inside of the vertical wireway for your new data or other low voltage or cabling circuits. If you ARE permitted to install the data cabling circuits inside of the vertical wireway WITHOUT conduit and junction boxes; know that you can also install Low voltage, Data or blank faceplates on any outlet cut- out without a junction box by using a PN 21208 NO J BOX Faceplate Adapter Kit.

### Create a layout for the outlets in the Channel Extension cover plates

- Know that all of the single gang outlet cutouts on the cover plates can be used interchangeably for power, data or other applications.
  - Review the various desired locations of all the power and data outlets on your assembly.
- Create labels made of blue painter's tape and then apply these directly onto the Channel Extension sections to indicate the assignment of each of the outlet cutouts in cover plates that will be used in your application.

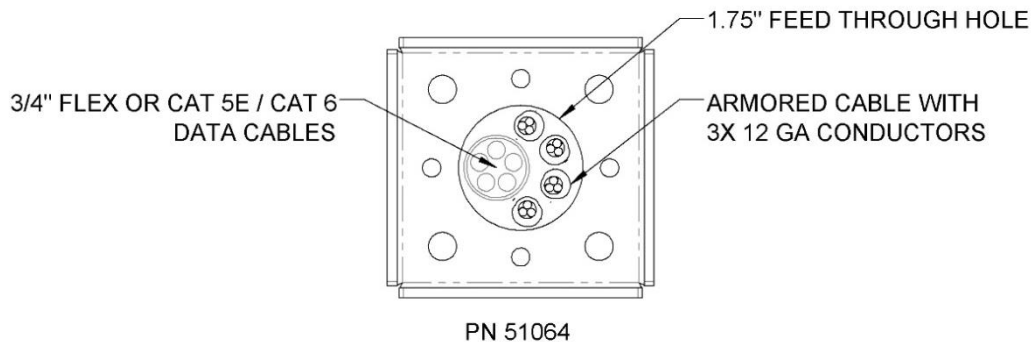
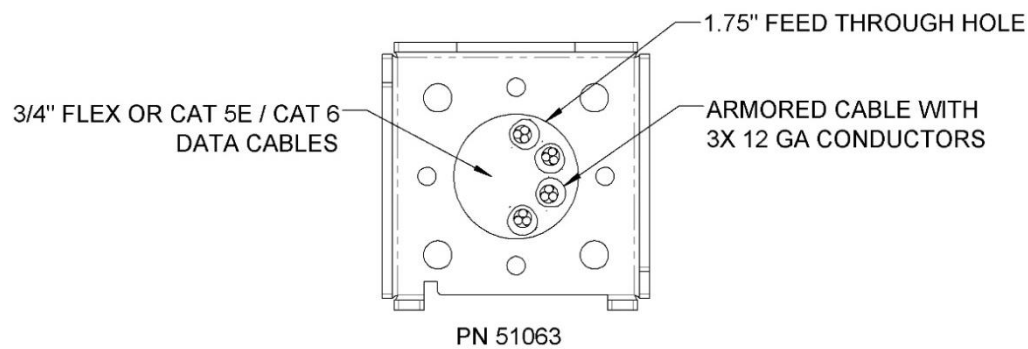
PN 50719 NO J BOX Faceplate Adapter plates are used to attach Data and blank faceplates to the cut-outs in the cover plates with (4) PN 70415 #6-32 X 3/16 "long Phillips head screws



Attaching Data and blank faceplates directly to the outlet cut-outs WITHOUT junction boxes with PN 21208 NO J BOX Faceplate Adapter

**Using a PN 21208 NO J BOX Faceplate Adapter kit to attach Data, blank or other single gang faceplates to the cut-outs on channel extension section cover plates**

1. Use 2 EA PN 70415 #6-32 X 3/16 "long Phillips head screws to attach the PN 50719 Faceplate Adapter plates to the top and bottom of the outlet cut-outs on the inside of the channel extension section cover plates.
2. Once the Faceplate Adapter plates are installed; any standard single gang faceplate can be attached to the Faceplate Adapter plates with 6-32 screws.



### Installing the associated conduits and cabling into the Pole Assembly

- Create a wiring list that includes all of the various types of new high and low voltage cabling circuits that will be needed to connect all of the various types of outlets on your assembly.
- Consult your local building codes to determine the types of cabling and conduits that are required.
- It is recommended that the high voltage circuits be installed with armored cable or flexible metallic conduit to a junction box that is attached to the Above Ceiling Mounting Plates near the top of the Pole Assembly.
- Add "whip sections" of armored cable or flexible metallic conduit from the junction box attached to the Above Ceiling Mounting Plates or somewhere above the ceiling to extend these circuits from this junction box to the various junction boxes located at the power outlets in the cover plates.
- If your channel assembly has outlets; refer to the sections:

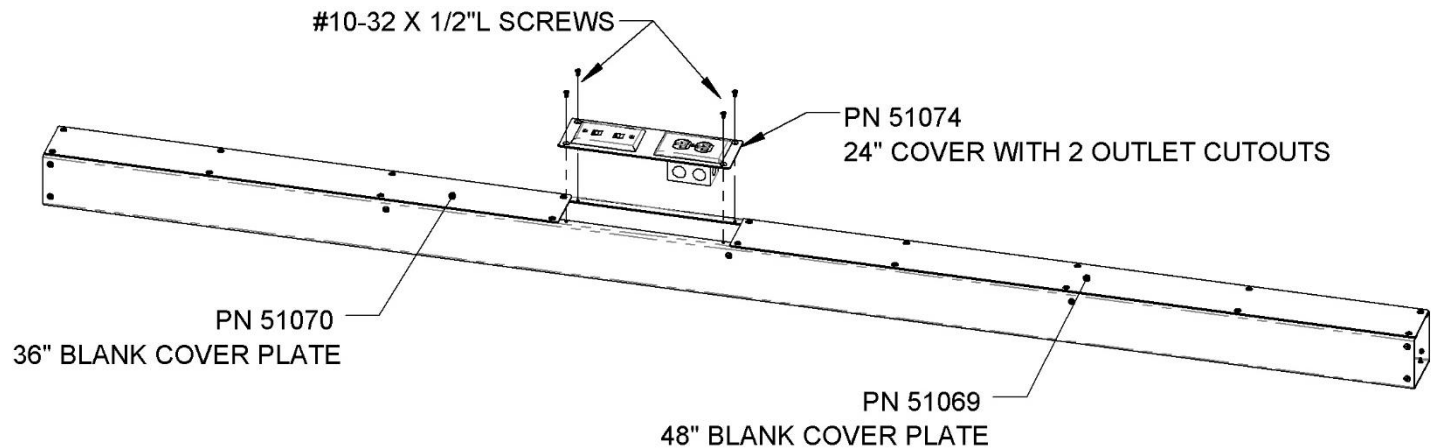
### Assembling and connecting the outlets on the channel extension cover plates

### Attaching Junction boxes or faceplates to outlet cut-outs on cover plates

### Installing cover plates on Channel Extension sections

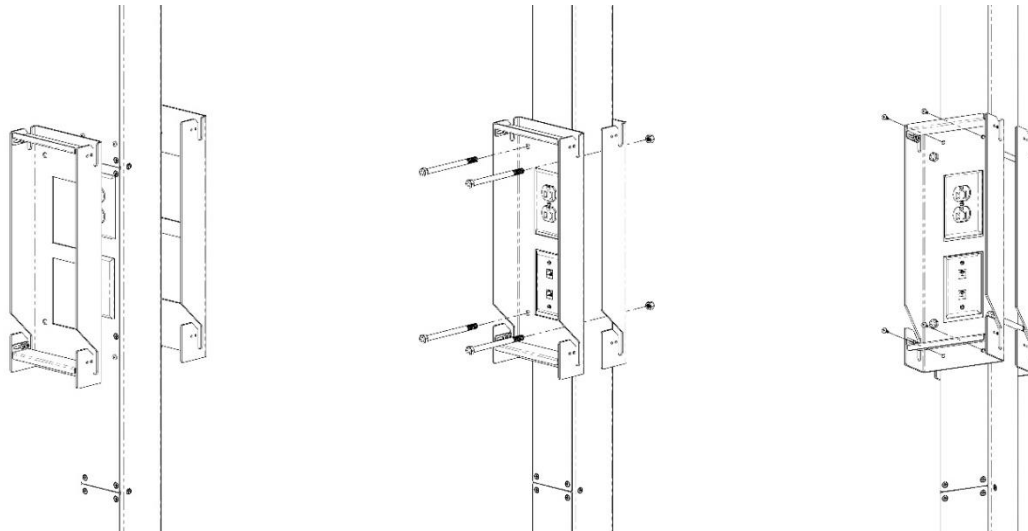
- Consult your local building codes to determine if conduits are required above the ceiling and/or inside of the channel Extension section for your new low voltage or data cabling circuits. If you are permitted to install the data cabling circuits inside of the wireway WITHOUT conduit; know that Data faceplates can be attached directly to the outlet cutouts WITHOUT junction boxes by using a PN 21208 NO J BOX Faceplate Adapter Kit.





### Installing Cover Plates on Channel Extension sections

1. Installing the cover plates should be the last step in assembling your Channel Extension assembly.
2. Locate the 10-32 X 1/2" long Phillips Countersunk screws in the hardware kit.
3. Align the holes in the cover plates with the tapped holes in the open side of the extension sections and then install one screw loosely through each of the holes in the cover plates and into the tapped holes extension sections.
4. Once all of the screws have been installed, verify that the alignment of all cover plates is correct, adjust the position of any covers plates as needed, then return to each screw and tighten them



### **Installing the 4X4 Clamp On 100-400mm VESA Tilting Mount Clamping Assembly on a pole.**

Note 1 - As shipped; the 4X4 Clamp On 100-400mm VESA Tilting Mount will be in two sections:

Section 1 = The 100-400mm VESA Mounting Plate Assembly

Section 2 = The 4X4 Clamp On 100-400mm VESA pole clamping assembly.

1. Measure the desired final height of the center of the screen and which side of the pole you would like your screen located on. Also consider if you will be locating power and data outlets behind the screen and which side will be optimum for their location. Apply a small section of tape to the pole to indicate the screen position on the pole.

2. Note; if you are locating power and data outlets behind the screen; these will need to be installed BEFORE the channel sections are attached to the pole.

3. Verify that the bottom and top of the pole assembly are properly secured before attempting to install the 4X4 Clamp On 100-400mm VESA Tilting Mount.

3. Locate the following items:

1 EA 100mm-400mm VESA Clamp on Mount Pole Channel section with the red lock assemblies

1 EA 100mm-400mm VESA Clamp on Mount Pole Channel section (bare)

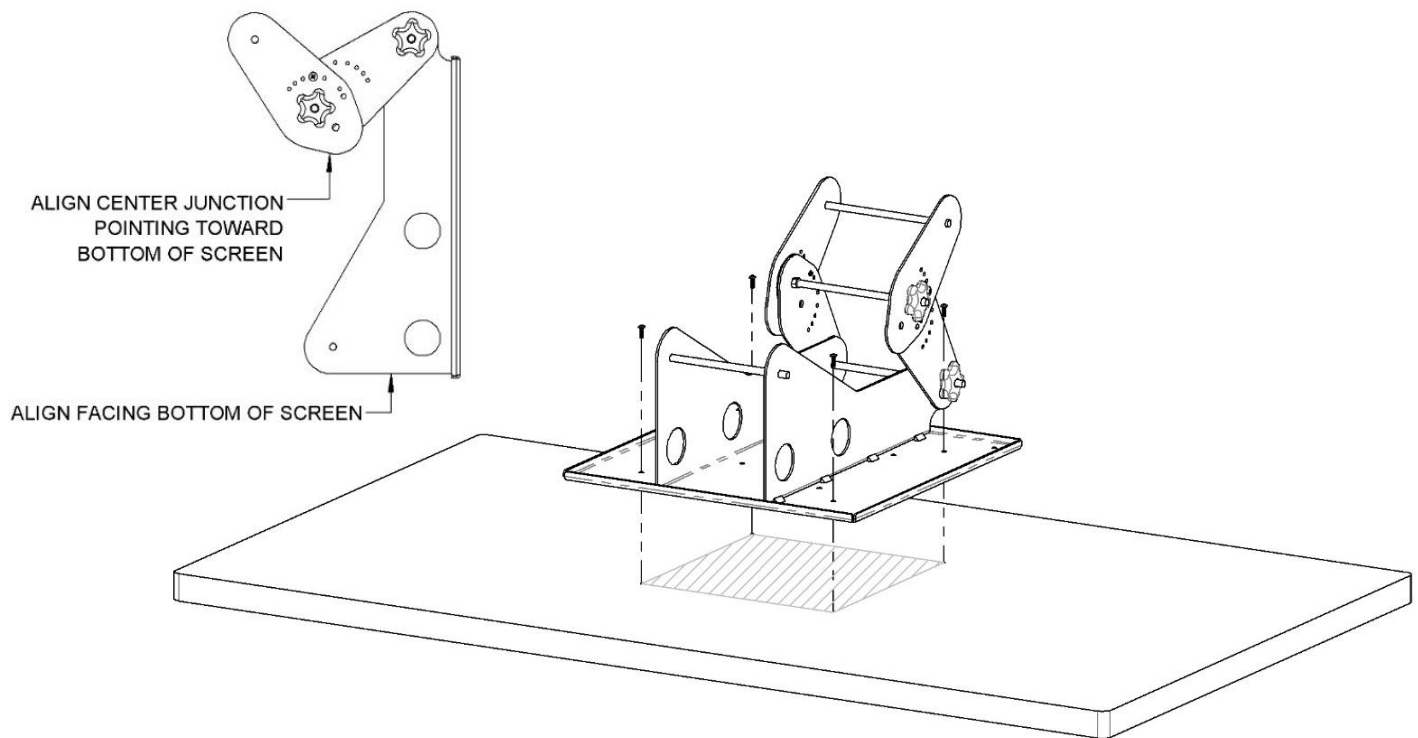
4 EA PN 70420 Bolt 3/8-16 X 5" L Zinc

4 EA PN 70063 Nylon lock nut 3/8-16 hex zinc

4 EA PN 70077 #10 X 1/2" L Self-Drilling Screw Hex head Zinc

3. Orient the channel section with the red lock assemblies that will be supporting the screen so the flat side is flush against the side of the pole and the open side of the channel is oriented away from the pole with the two sets of attachment "Hooks" facing up. Move the channel section to the position indicated by the screen locator tape. If you are installing a single screen' orient the second channel section (bare) with the "open side" turned so that it fits around the pole assembly. If you are installing two screens back to back; orient the second channel section with the "open side" turned away from the pole.

4. Align the four holes in the two channel sections and insert the four 3/8-16 X 5" L bolts through holes, install the 3/8-16 lock nuts onto the ends of the bolts, verify that the assembly is at the correct location; then tighten the bolts securely and install the four Self-Drilling Screws to permanently secure the channel sections to the pole.



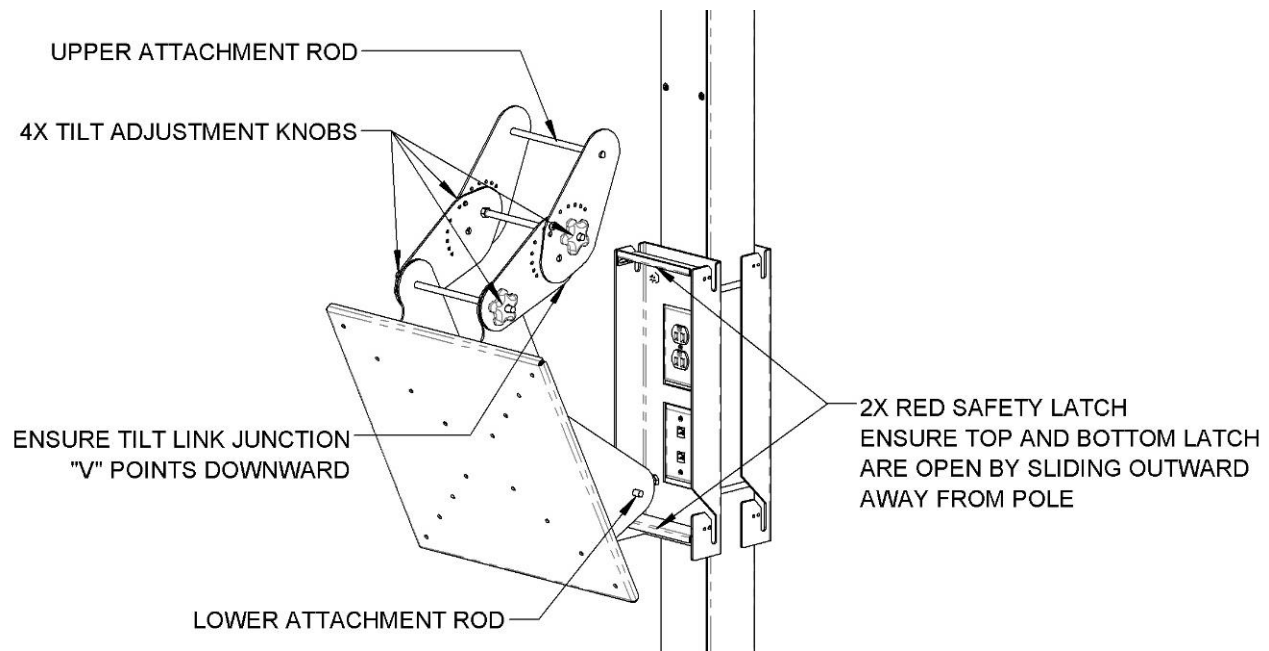
### Attaching a PN 81561 4X4 Clamp On 100-400mm VESA Tilting Mount to the back of a screen

Note - As shipped; the 4X4 Clamp On 100-400mm VESA Tilting Mount will be in two sections:

Section 1- The 100-400mm VESA Mounting Plate Assembly.

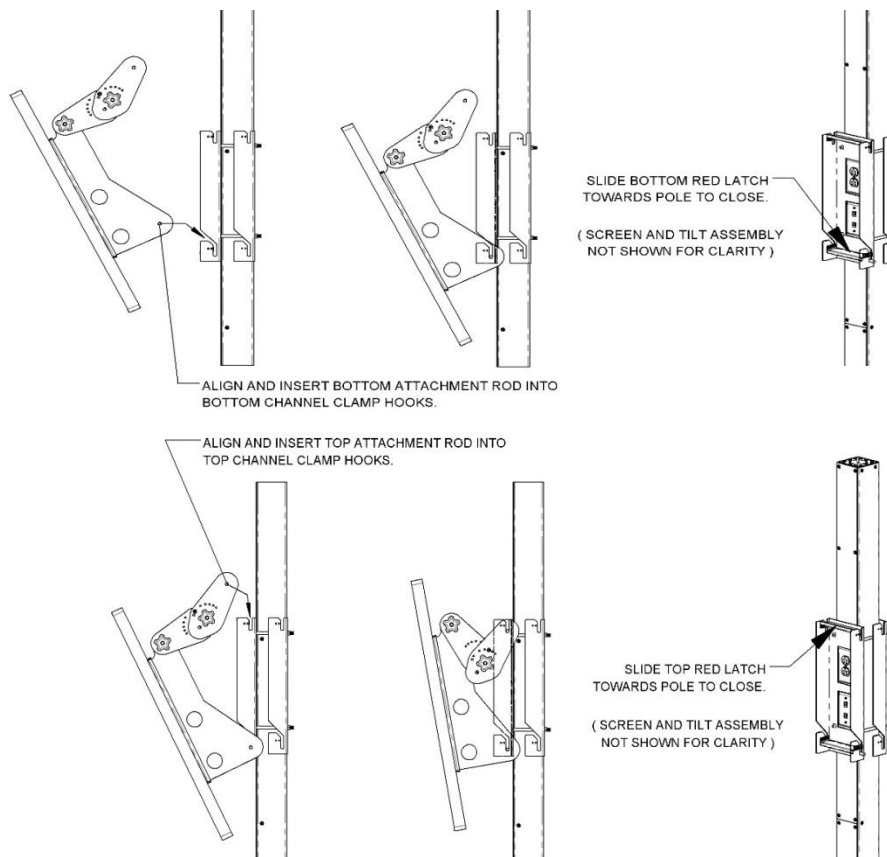
Section 2- The 4X4 Clamp On 100-400mm VESA pole clamping assembly.

1. Lay the screen facing down on a flat, smooth surface, then lay the 100-400mm VESA Mounting Plate Assembly with the center junction of the Tilting link arms pointing down towards the bottom of the screen.
2. Align the square pattern of 100, 200, 300 or 400mm holes on the 100-400mm VESA Mounting Plate with the pattern of four tapped holes on the back of the screen.
3. Identify the included pack of screws:
  - 4 EA M6 X 10mm L Philips head screws (recommended for larger screens)
  - 4 EA M4 X 10mm L Philips head screws (recommended for smaller screens)
  - 5 EA flat washers for the M4 screws
4. Use a Phillips screw driver to carefully install the four appropriate screws through the holes in the 100-400mm VESA Mounting Plate and into the tapped holes on the back of the screen.



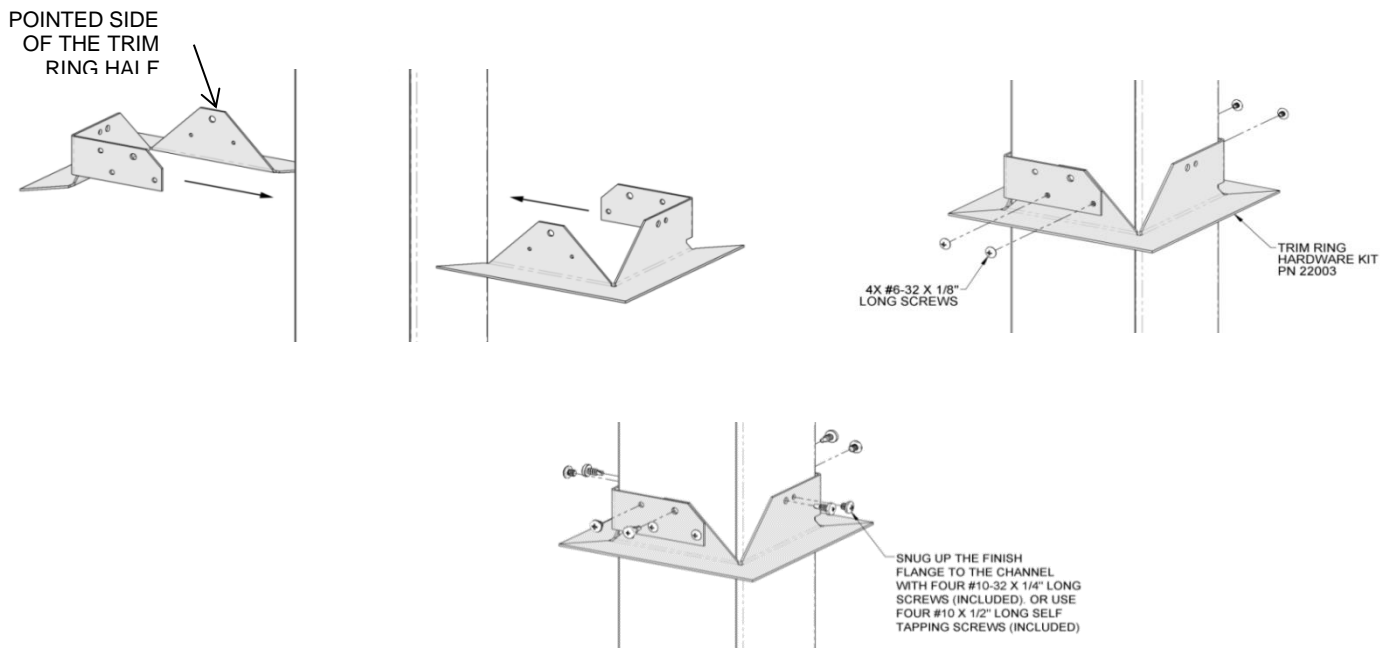
### Attaching a screen with a 100-400mm VESA Mounting Plate Assembly onto a Clamping Assembly on a pole. (Part 1)

1. Note – Do not attempt to lift and install the screen without assistance.
2. Verify that the 100-400mm VESA Mounting Plate Assembly is securely attached to the back of the screen with the center junction of the Tilting link arms pointing down towards the bottom of the screen.
3. Examine the lower attachment rod on the bottom of the 100-400mm VESA Mounting Plate Assembly, locate the lower set of attachment hooks on the channel assembly and confirm that you understand that the rod must be inserted into the two lower attachment hooks on the channel section to support the screen.
4. Examine the four Tilting link arms, the upper attachment rod and confirm that you understand that the rod must be inserted into the two upper attachment hooks on the channel section to support the screen.
5. Verify that the four Tilting link arms are in a “semi folded V position” with the outer set of arms extended away from the back of the screen; verify that the four five point knobs on the Tilting link arms are loose enough to allow the links to be easily moved; but are not so loose as to allow the assembly fully expand without slight resistance.
6. Verify that the channel section with the red lock assemblies is installed with the two sets of attachment “Hooks” facing up and that both channel sections are securely attached to the pole assembly.
7. Verify that the upper and lower bars of the red lock assemblies are in the open position and the both sets of attachment hooks on the channel assembly are clear.



### Attaching a screen with a 100-400mm VESA Mounting Plate Assembly onto a Clamping Assembly on a pole. (Part 2)

6. Identify the lower attachment rod on the bottom of the 100-400mm VESA Mounting Plate Assembly, locate the lower set of attachment hooks on the channel assembly and understand that once the screen is lifted; the bar must be aligned and then guided into the attachment hooks on the channel assembly.
7. Identify the outer Tilting link arms and the upper attachment rod on the top of the 100-400mm VESA Mounting Plate Assembly, locate the upper set of attachment hooks on the channel assembly and understand that once the screen is lifted; the bar must be aligned and then guided into the attachment hooks on the channel assembly.
8. Carefully lift the screen and guide the lower attachment rod until it is fully seating into the lower set of attachment hooks on the channel assembly; then pull the lower red lock bar outward to close the top of the attachment hooks.
9. Carefully guide the outer the Tilting link arms so the upper attachment rod is fully seating into the upper set of attachment hooks on the channel assembly; then pull the upper red lock bar outward to close the top of the attachment hooks.
10. Tighten the inner screws on the sides of the upper and lower red lock bars to secure the bars permanently in the locked position.
11. Adjust the tilt angle of the screen to the final desired position, and then securely tighten the four five point knobs on the tilting link arms. To permanently secure the tilt position; tighten the two tilt position locking screws into the holes on the inner tilt link arms to lock the screen tilt position in 5 degree increments from 0-25 degrees of forward tilt.






### Installing the Ceiling Trim Ring

1. The trim ring assembly attaches to the channel section where it penetrates the ceiling. You should have already created a square hole that is 4  $\frac{3}{4}$ " W X 4  $\frac{3}{4}$ " D in your ceiling material during the initial fitting of your channel section. Refer to section: **Cutting a square opening in the ceiling for the Pole Assembly.**
2. Install the trim ring BEFORE installing the cover plates. The two "C" shaped / double corner sections of the trim ring need to be assembled together around the wireway channel BELOW the ceiling and ABOVE all of the outlets and any couplers to create the completed square trim ring assembly. Important note: The two POINTED mounting flanges of the trim ring assembly MUST be aligned with the closed right and left sides of the Pedestal Extension section, NOT the open front, and closed rear sides. Align the two section of the trim ring so that the two POINTED mounting flanges are POINTING UP so that the tapped holes on these flanges will be located INSIDE of the two flat- topped mounting flanges when the two halves are slid together.
3. Carefully slide the two trim ring sections together until the two types of flanges are partially overlapping and the through holes on each of the flat- topped / outside flanges are aligned with the tapped holes in the pointed / inside flanges. Install the (4) #6-32 screws to lock the two trim ring sections together. Once assembled the trim ring can be slid up to where the wireway meets the surface of the ceiling.
4. Align the square frame of the trim ring with the opening in the ceiling, push it up until it is flush with the underside of the ceiling, support it at this position and then temporarily secure it in place with sections of painter's tape.
5. From above the ceiling; locate the threaded trim ring clamping screw holes in the trim ring mounting flanges and install the clamping screws in the holes. Tighten these screws only enough to secure the trim ring to the channel section; but not enough to deform it.
6. Once the two trim ring clamping screw holes have been installed, verify that the trim ring is flush with the underside of the ceiling and install two self- drilling screws into the through holes and into the sides of channel section to secure it permanently.



# PQS

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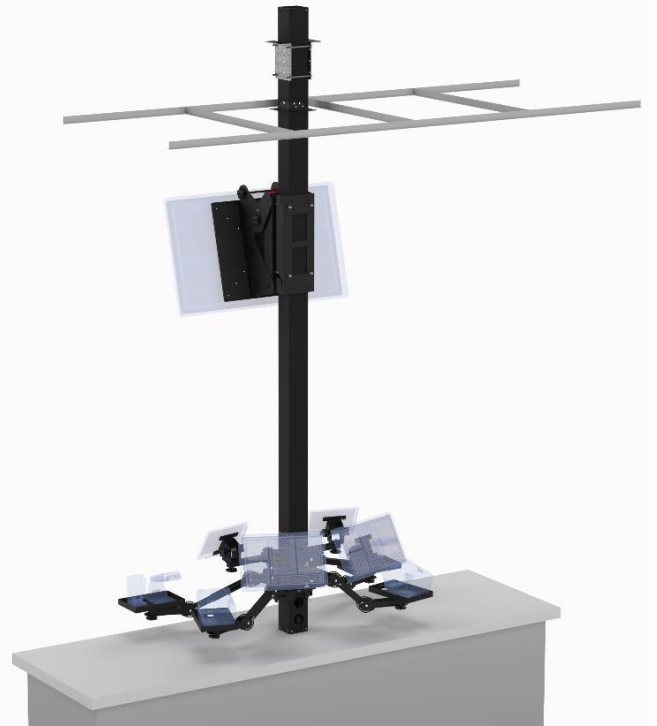
		
<a href="#"><u>PN 81564 - 4X4 Clamp on Mount + Adjustable 8\"</u></a> <a href="#"><u>Arm + VESA Pan and Tilt Head</u></a>	<a href="#"><u>PN 81566 - 4X4 Clamp on Mount + Adjustable 8\"</u></a> <a href="#"><u>Arm + POS Printer Tray</u></a>	<a href="#"><u>PN 81567 - 4X4 Clamp on Mount + Fixed Stainless</u></a> <a href="#"><u>POS Printer Tray + Storage compartment</u></a>
		
<a href="#"><u>PN 81569 - 4X4 Clamp on Mount + Fully</u></a> <a href="#"><u>Articulated Arm + POS Printer Tray</u></a>	<a href="#"><u>PN 81571 - 4X4 Clamp on Mount + Fully Articulated,</u></a> <a href="#"><u>Extendable arm + Enhanced VESA Pan + Tilt Head</u></a>	<a href="#"><u>PN 81573 - 4X4 Clamp on Mount + Fully Art.</u></a> <a href="#"><u>Extend. Arm + POS Printer or Peripherals Tray</u></a>
		
<a href="#"><u>PN 81575 - 4X4 Clamp on Mount + 100mm</u></a> <a href="#"><u>VESA Flat Quick Disconnect</u></a>	<a href="#"><u>PN 81576 - 4X4 Clamp on Mount + 100mm VESA</u></a> <a href="#"><u>Flat</u></a>	<a href="#"><u>PN 81577 - 4X4 Clamp on Mount + 100mm VESA</u></a> <a href="#"><u>Tilting</u></a>
		
<a href="#"><u>PN 81579 - 4X4 Clamp on Mount + Side Shelf</u></a> <a href="#"><u>and Bag Holder</u></a>	<a href="#"><u>PN 81580 - 4X4 Clamp on Mount + Side Shelf for</u></a> <a href="#"><u>Mini Cash Drawer or other peripherals</u></a>	<a href="#"><u>PN 81581 - 4X4 Clamp On Mount + 12\" X 24\"</u></a> <a href="#"><u>Stainless table</u></a>
		
<a href="#"><u>PN 81583 - 4X4 Clamp on Mount + 2 adjustable</u></a> <a href="#"><u>8\" Arms + POS Printer Tray+ VESA Pan-Tilt</u></a> <a href="#"><u>Head</u></a>	<a href="#"><u>PN 81561 - 4X4 Clamp On Mount 100-400mm</u></a> <a href="#"><u>VESA Tilting Mount, for a screen up to 70\" class.</u></a>	<a href="#"><u>PN 81562 - 4X4 Clamp On Mount 100-400mm</u></a> <a href="#"><u>Two screen VESA Tilting Mount, for two screens</u></a> <a href="#"><u>up to 70\" class.</u></a>

**Introduction to the 4X4 Pole Systems Product Sub Groups - Page 1**

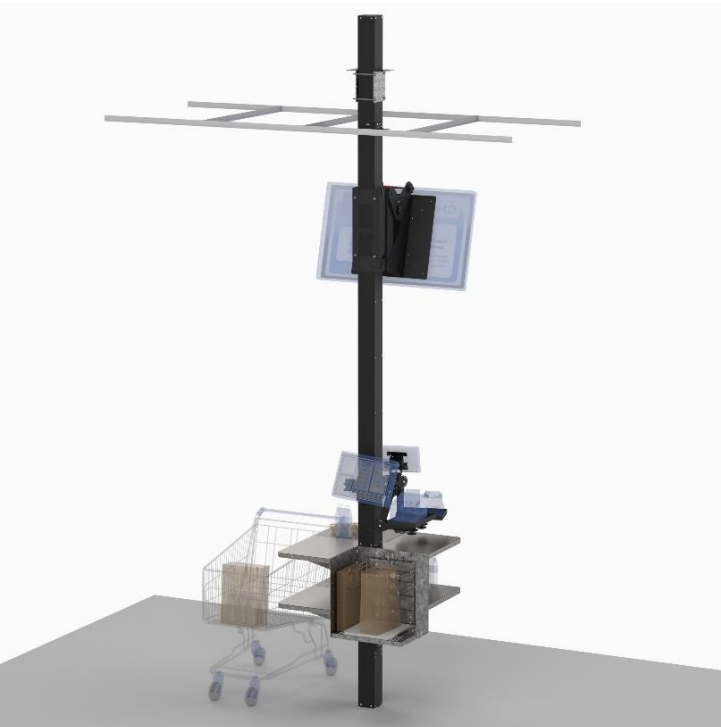
For more information; click on the images or descriptions to visit the individual product sub group pages on our website.

**Movable Countertop Point of Sale Stands** –

Very stable; but easily relocated on any horizontal surface.

**Direct Mount Countertop Point of Sale Stands**–

Attach directly to countertops, some configurations span to ceiling, optional digital signage.



**Point of Sale Cashier Pole Stands**– Attach to floor and span to ceiling, with or without cabinet, optional digital signage.



**Point of Sale Cashier Floor Stands**– Available in movable configurations.

## Introduction to the 4X4 Pole Systems Product Sub Groups - Page 2

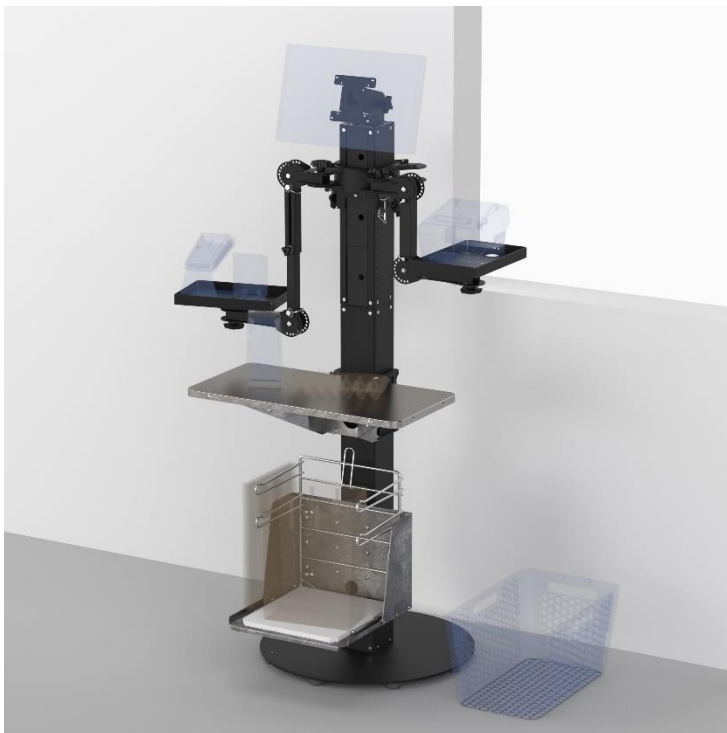
For more information; click on the images or descriptions to visit the individual product sub group pages on our website.

New Product  
Coming Q3  
2023

New Product  
Coming Q3  
2023

**Mobile Cashier Stands** - With fold up side tables and extendable wheels.

**Point of Sale Self-Check Out Kiosk Pole Stands**- Attach to floor and span to ceiling with or without cabinet, optional digital signage.



New Product  
Coming Q3  
2023

**Point of Sale Self-Check Out Kiosk Floor Stands**-Available in movable configurations.

**Mobile Self- Check Out Kiosks-** With fold up side tables and extendable wheels.

**Introduction to the 4X4 Pole Systems Product Sub Groups - Page 3**

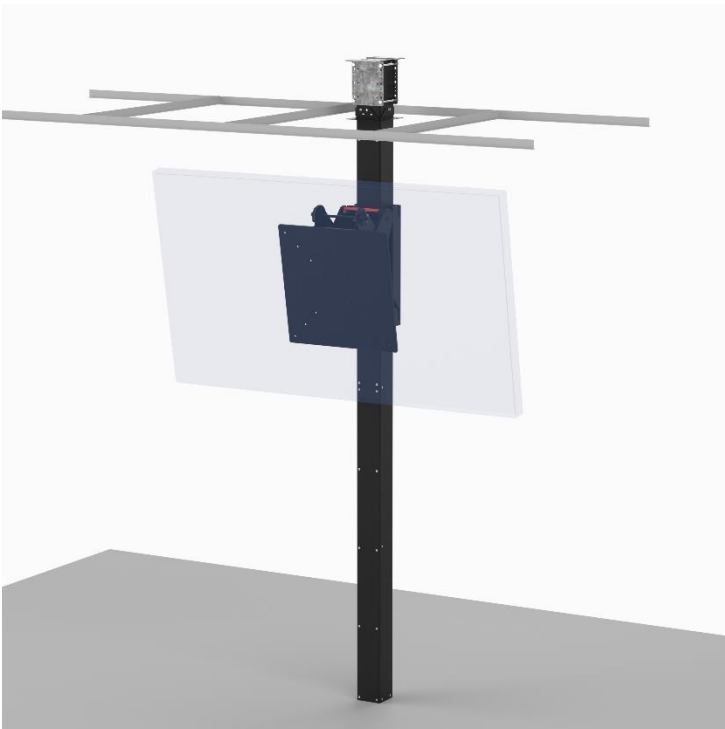
For more information; click on the images or descriptions to visit the individual product sub group pages on our website.



**Take Out Pickup Pole Stands**- Attach directly to floor and span to ceiling, optional digital signage.



**Take Out Pickup Floor Stands**- Available in movable configurations.



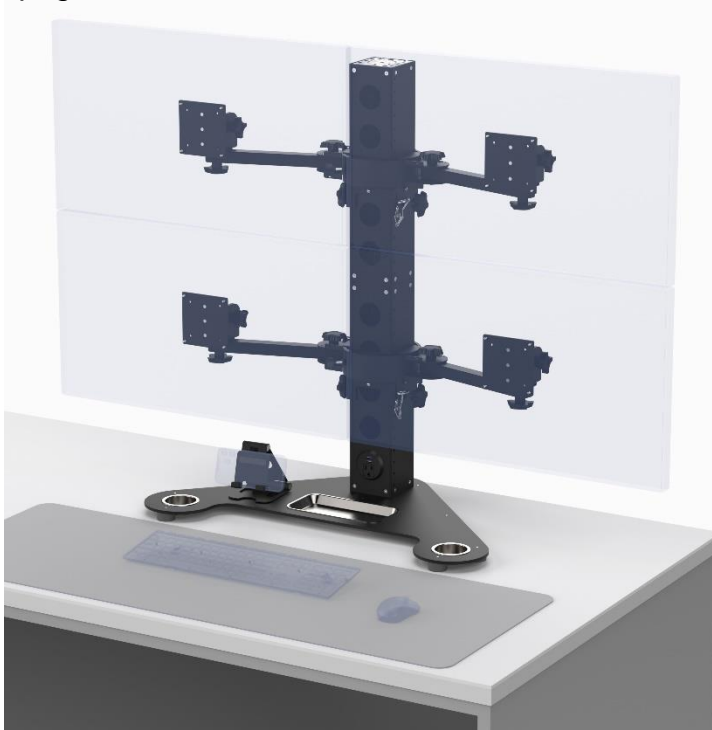
**Digital Signage Pole Stands**- Attach directly to floor or countertop and span to ceiling.



**Information Kiosk Floor Stands**- Available in movable configurations.

**Introduction to the 4X4 Pole Systems Product Sub Groups - Page 4**

For more information; click on the images or descriptions to visit the individual product sub group pages on our website.

**Desk Top Multi-Screen Pedestal Stands**

Available in 2 or 4 screen movable configurations.



**4X4 Pole Clamp on Mounts**- These attach to any 4" X 4" square channel assembly without tools and support many different types or equipment.

New Product  
Coming Q3  
2023



**4X4 Accessories** - A wide range of accessories that work with all 4X4 product sub groups

**[Link to Practical Quality Systems Home Page](#)**

**Bonus page**