PN 80092, 81300 Preconfigured 4X4 Stainless Steel Vertical Wireway with 4 Integral Outlets for Power & Data

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PN 81300 144” Vertical shown left.

PN 80092 96” Vertical shown right.

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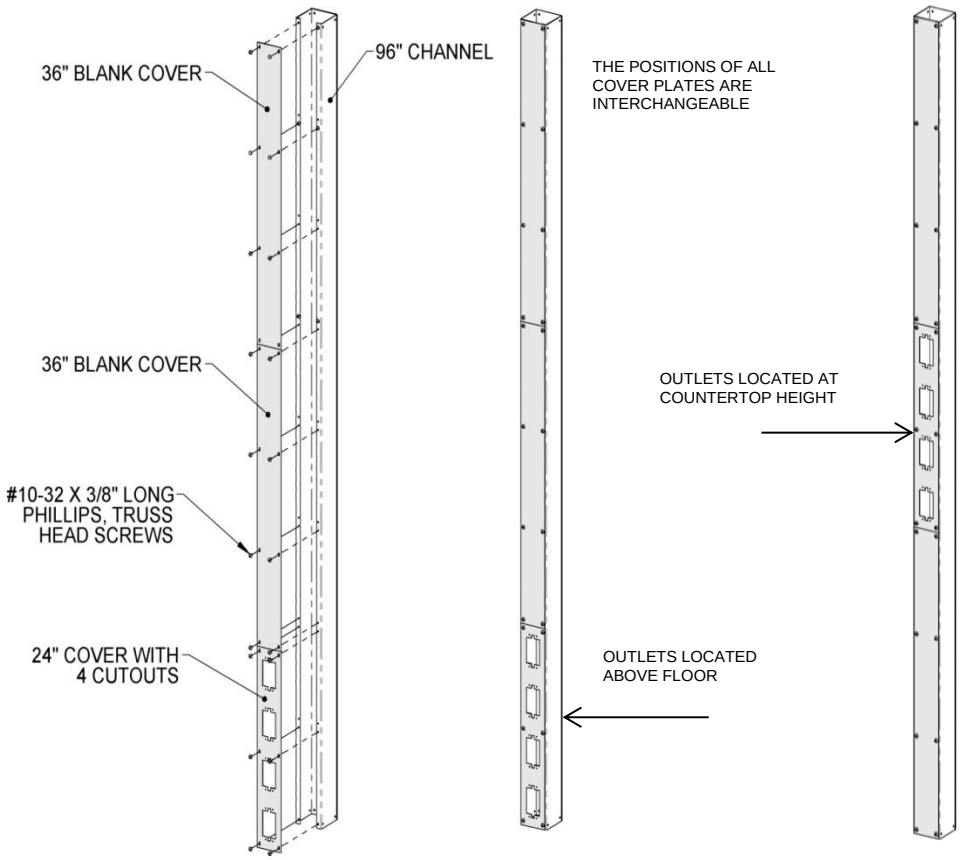
ALL PRODUCTS PATENT PENDING

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Overview of the 4X4 Stainless Steel Wireway Product Group Part 1

- This assembly is part of our 4X4 Stainless Steel Wireway group of products that all share a common square 4” W X 4” D form factor.
- Conduits and/or cabling for power, data or other applications are routed into and then along the interior of the wireway to conceal and protect these circuits.
- The conduits and/or cabling can enter from the ends of a wireway channel section or on any of the three “closed sides” of the channel at any location along the length of the wireway via custom openings or direct conduit connections made by the installer.
- These wireways can be installed vertically or horizontally and can also be joined together at right angles at any location as needed to transition from vertical to horizontal. This simplified system empowers installers with common tools and techniques to easily construct basic L, T or U-shaped wireway assemblies without having to order special junction sections or other additional parts.
- The system is based on wide range of stock lengths of channel sections with detachable cover plates that are available as smooth blank type, with multiple standard single gang outlet cut-outs or with custom cut-outs made to your specifications.
- This stainless steel wireway system has been designed with modularity, flexibility and durability in mind; making them a good fit for applications in commercial kitchens, hospitals, laboratories, clean rooms or other clean environments where the space must be kept sanitary and can be regularly washed down.
- Know that the positions of the various cover plates can be interchanged along the length of the vertical channel section. Examples; with the 24” cover that has the four outlets installed at the lowest position; the first outlet will be located approximately 3” above the floor. With one of the 36” long blank covers installed at the floor in the lowest position; the 24” cover with the four outlets can then be installed 36” above the floor; which is just above the height of a standard table top.
- This system is compatible with our 4X4 Clamp On mounts and accessories enabling direct attachment of peripheral devices such as screens, printers, or other equipment.

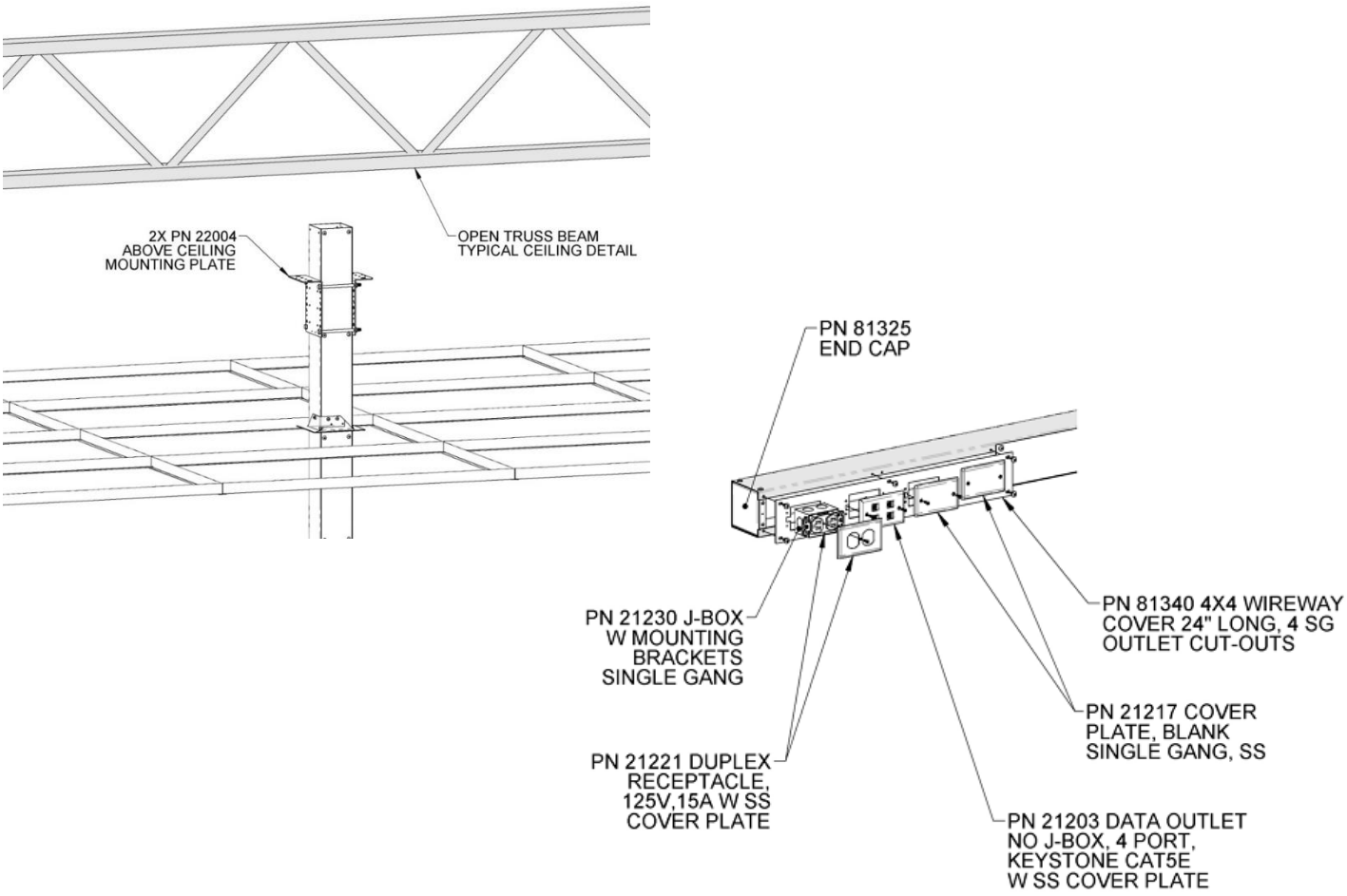


Overview of the 4X4 Stainless Steel Wireway product group part 2

Several wireway assemblies are available as compete, preconfigured kits that are designed to address a number of common applications such as;

- **Stand-alone vertical wireways with integral outlets that attach to a surface and that is connected to the structure above the ceiling.**
- **Stand-alone horizontal wireways with integral outlets that attach to a surface.**
- **Combination horizontal wireways with integral outlets that attach to a surface and are fed from a vertical wireway that is connected to the structure above the ceiling.**

- Note: All preconfigured kits can be easily modified in the field to add, relocate or change outlet types as needed to meet many different types of applications.
- All individual wireway system components as well as various accessories are also available separately. This makes it easy to order the exact components you need to design and build your own custom assemblies. Refer to the individual sections included in the document for more information on these wireway system components.
- If you don’t see a preconfigured wireway assembly that meets your application and require a quantity; know that our design team can put together a custom preconfigured wireway kit to meet your exact specifications.
- The 4-inch square wireway profile standard is also used on wireways offered by several other manufacturers which make it easy to join our wireway to other brands.
- The top of the vertical wireway assembly is attached to the overhead ceiling structure with the included Above Ceiling Mounting Plates Kit and other additional user supplied materials which are needed to properly brace the assembly. The bottom of the vertical wireway assembly must be attached to the floor or other mounting surface with the included Mounting Base Plate Kit and additional user supplied fasteners.
- Refer to the following sections for more information on the various included sub-assemblies, included hardware kits, optional individual components and accessories.



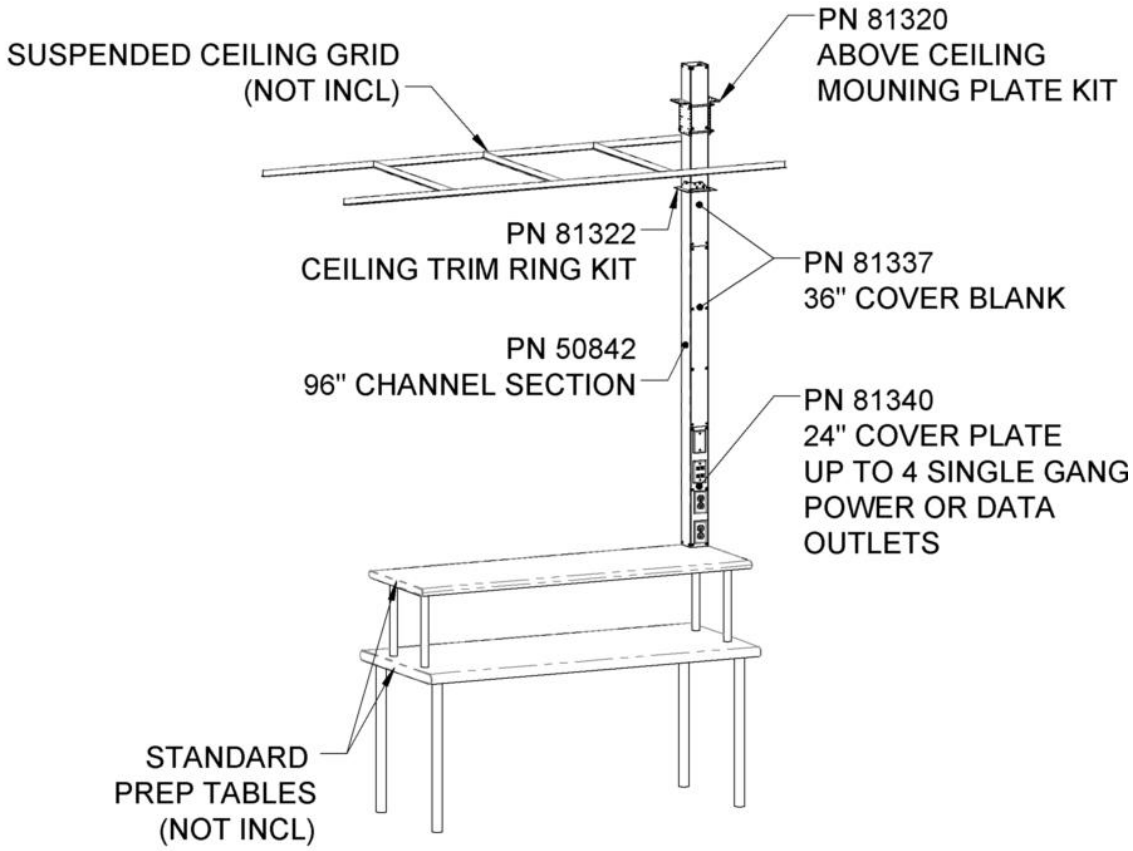
More info on stand-alone Horizontal wireways with integral outlets

A horizontal wireway assembly can be installed as a standalone “power and data bar” with multiple outlets located at regular intervals along the length of the wireway. All preconfigured kits can be easily modified in the field to add, relocate or change outlet types as needed to meet many different types of applications. Horizontal wireways include end caps with the same fine brushed stainless steel finish as the channel sections and cover plates.

Any one of the three “closed” sides of a horizontal wireway channel section can be attached directly to most smooth, flat surfaces with the appropriate fasteners, here are some examples; the rear or back side of the channel section can be attached directly to a wall. The top or bottom sides of the channel section can be attached directly to the top of a table, a countertop or on the top or underside of a shelf.

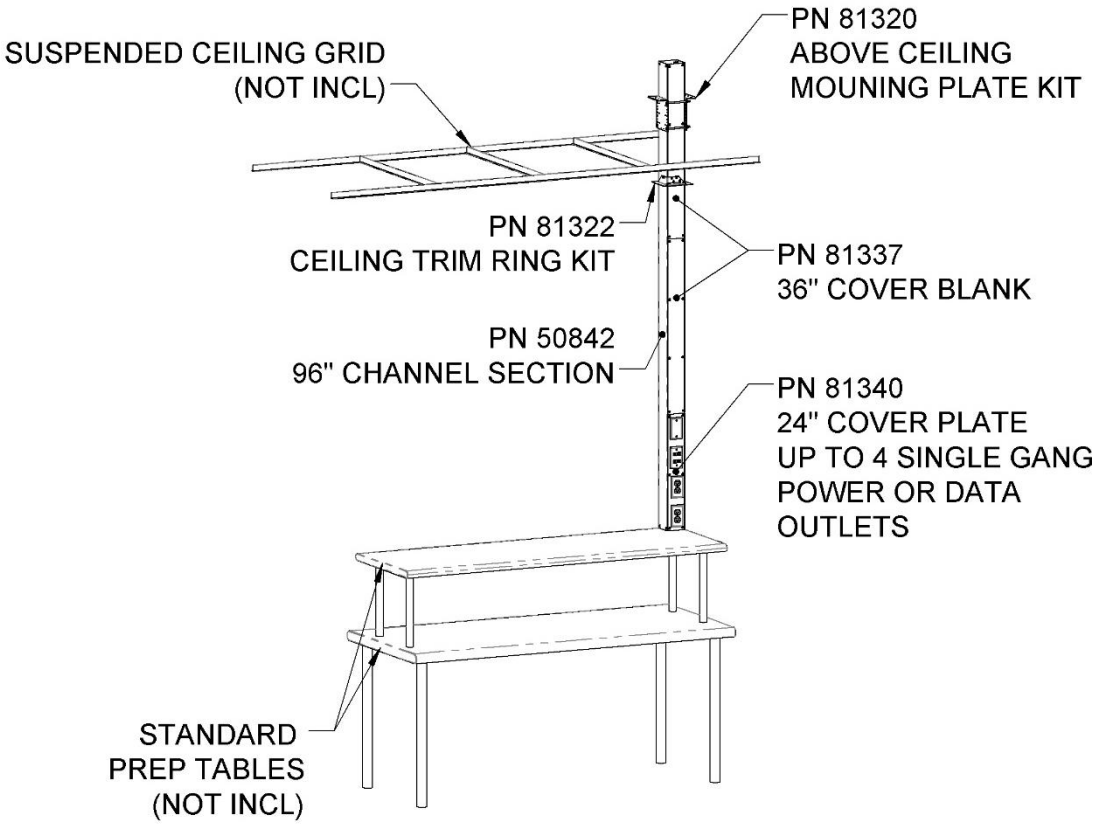
Holes for the passage of conduits or cabling can be made in any of at three closed sides of the channel section along its entire length as long as they do not conflict with the locations of any internal items such as couplers, end cap flanges or junction boxes.

Refer to the following sections for more information on the various included sub-assemblies, included hardware Kits, optional individual components and accessories.



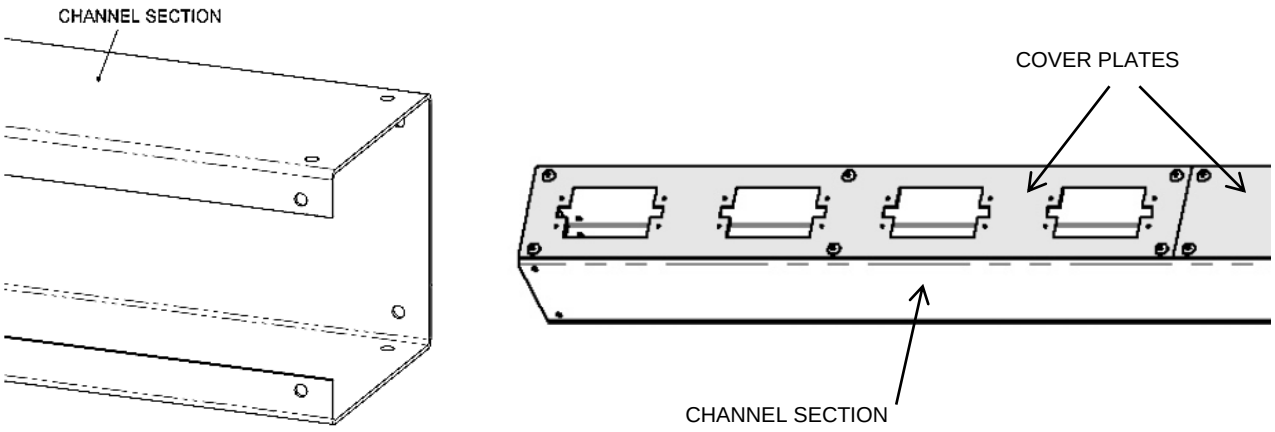
PN 80092 96” L 4X4 Stainless Steel Vertical Wireway with 4 Single Gang Outlets for Power & Data
Designed as a complete package to be installed as a stand-alone vertical wireway with four integral single gang outlets that is normally fed from conduits and/or cabling that enter the wireway from above the ceiling.

CK	QTY	PN	Description
	1	50842	96“ L 4X4 Stainless Steel Wireway Channel Section
	2	81337	36“ L 4X4 Stainless Steel Wireway Blank Cover Plate Kit
	1	81340	24" L 4X4 Stainless Steel Wireway Cover Plate + 4 SG outlet cut-outs Kit
	1	81320	4X4 Wireway or PED3 Above Ceiling Mounting Plates Kit
	1	81322	4X4 Wireway SS Trim Ring Kit
	1	81324	4X4 Stainless Steel Wireway Mounting Base Plate 2.5" Feed Through Kit
	1	21220	Duplex Recep. Straight Blade BLK 15A 125V + 2.5” D junc. Box+ SS Faceplate Kit
	1	21221	Duplex Recep. Straight Blade ORG IG 15A 125V + 2.5” D junc.+ SS Faceplate Kit
	1	21203	4 Port SS Keystone CAT5E Data outlet NO J BOX Faceplate Adapter Plates Kit
	1	21217	Blank Stainless Steel Faceplate Single gang
	2	21208	NO J BOX Faceplate Adapter Plates Kit
	4	30091	CAT5E RJ45 Keystone Data Jack 110 IDC Blue
	2	30074	Keystone Blank Insert White
Packed by:			Date



PN 81300 144" L 4X4 Stainless Steel Vertical Wireway + 4 Single Gang Outlets for Power & Data
Designed as a complete package to be installed as a stand-alone vertical wireway with four integral single gang outlets that is normally fed from conduits and/or cabling that enter the wireway from above the ceiling.

CK	QTY	PN	Description
	1	50842	96" L 4X4 Stainless Steel Wireway Channel Section
	1	50844	48" L 4X4 Stainless Steel Wireway Channel Section
	2	81337	36" L 4X4 Stainless Steel Wireway Blank Cover Plate Kit
	1	81335	48" L 4X4 Stainless Steel Wireway Blank Cover Plate Kit
	1	81340	24" L 4X4 Stainless Steel Wireway Cover Plate + 4 SG outlet cut-outs Kit
	1	81321	4X4 Wireway Channel Internal Coupler Kit
	1	81320	4X4 Wireway or PED3 Above Ceiling Mounting Plates Kit
	1	81322	4X4 Wireway SS Trim Ring Kit
	1	81324	4X4 Stainless Steel Wireway Mounting Base Plate 2.5" Feed Through Kit
	1	21220	Duplex Recep. Straight Blade BLK 15A 125V + 2.5" D junc. Box+ SS Faceplate Kit
	1	21221	Duplex Recep. Straight Blade ORG IG 15A 125V + 2.5" D junc.+ SS Faceplate Kit
	1	21203	4 Port SS Keystone CAT5E Data outlet NO J BOX Faceplate Adapter Plates Kit
	1	21217	Blank Stainless Steel Faceplate Single gang
	2	21208	NO J BOX Faceplate Adapter Plates Kit
	4	30091	CAT5E RJ45 Keystone Data Jack 110 IDC Blue
	2	30074	Keystone Blank Insert White
Packed by:			Date



Understanding 4X4 Stainless Steel Wireway Channel sections

- Our square 4X4 Wireway Channel sections can be installed vertically or horizontally with any of the three closed sides being attached directly to the mounting surface or supported in a vertical orientation with an Above Ceiling Mounting Plates Kit that is attached to the top of a vertical wireway and the overhead structure above the ceiling.

- Channel sections can be joined together end to end either vertically or horizontally with a heavy duty galvanized internal coupler to create any custom length. The ends of channel sections can be attached to mounting surfaces with mounting base plates or they can be terminated with matching brushed, stainless steel, blank end caps.

- A vertical wireway assembly can be installed as a standalone “power and data pole” with the upper end secured above the ceiling with a pair of adjustable “clamping” mounting plates and the lower end being attached directly to the floor or other flat surface with fixed internal mounting base plates.

- A horizontal wireway assembly can be installed as a standalone “power and data bar” with the rear side of the channel section attached directly to a wall or the top or bottom sides attached directly to the top of a table, a countertop or on the top or underside of a shelf.

- 4X4 Wireway Channel sections can be joined together at right angles from vertical to horizontal to easily create custom T, L or U-shaped assemblies with a heavy duty galvanized internal feed through mounting plate base that allows the internal passage and routing of flexible conduits and /or cabling.

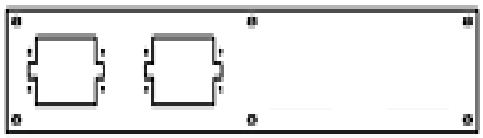
- A stainless-steel trim ring assembly is used to frame the opening where a vertical wireway channel section penetrates the ceiling.

- Channel sections have three closed, solid sides; but also include two extra bends on the open side for added rigidity. Our wireway cover plates attach to the channel sections with screws to add the fourth wall to seal the open side of the channel section and create a square, 4” W X 4” D profile.

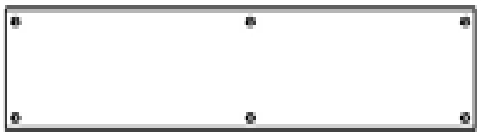
- Channel sections have a fine brushed stainless-steel finish and are available in six different lengths from 24 to 96 inches long. Custom lengths are also available.

- The 4-inch square wireway profile standard is also used on wireways offered by several other manufacturers which make it easy to join our wireway to other brands.

- Refer to the lists of Individual components for more information on 4X4 Wireway Channel sections.



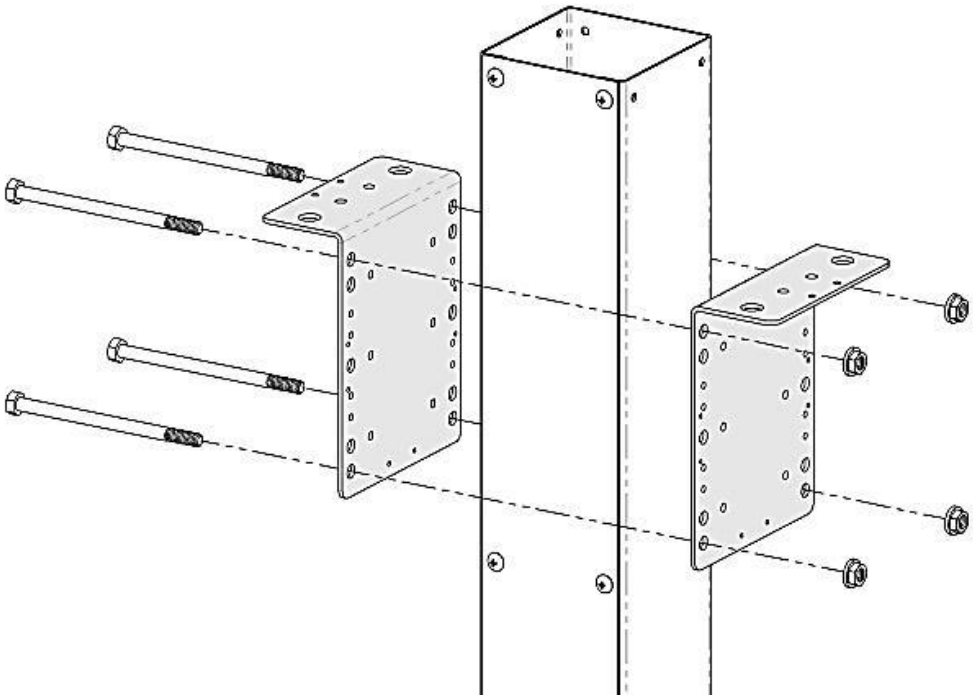
PN 51013
24” L COVER PLATE,
2 OUTLET CUT-OUTS



PN 51011
24” L COVER PLATE,
BLANK

Understanding 4X4 Stainless Steel Wireway Cover Plates

- 4X4 wireway cover plates are attached to the open side of the three- sided channel sections to add the fourth wall and complete the 4” W X 4” D square profile.
- One group of cover plates is blank with no cut-out sections. One group of cover plates has multiple outlet cut-outs for single gang electrical junction boxes to create power, data or other types of outlets. Cover plates can also be ordered with custom cut-outs.
- Cover plates are interchangeable and can be installed at any position along the open side of a wireway channel section. All cover plate kits include 10-32 X 3/8” Stainless steel mounting screws.
- The holes in the cover plate for the attachment screws are slightly slotted to allow a small amount of lengthwise position adjustment to improve fitment if a cover plate or a channel section has been cut.
- Wireway cover plates have a fine brushed stainless-steel finish and all edges have been deburred.
- All cover plates are available in six different lengths from 24 to 96 inches long in 13 different configurations both with and without outlet cut-outs. Custom lengths are also available.
- Refer to the lists of Individual components for more information on 4X4 Wireway cover plates.



PN 22004 Above Ceiling Mounting Plates Kit

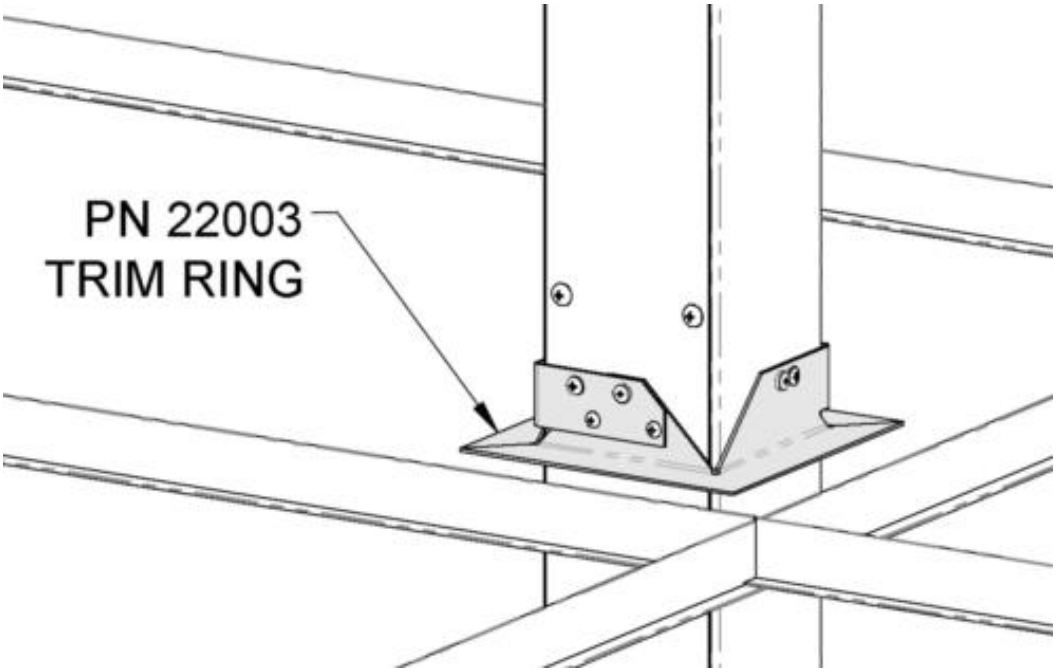
The Above Ceiling Mounting Plates Kit includes two heavy duty galvanized steel clamping plates that attach to the 4X4 wireway at any point along its length by tightening two pairs of 5/16”-18 bolts on either side of the wireway channel section. This attachment method creates a very secure clamping action against the sides of the channel.

Self-drilling screws are also included to further secure the plates to the wireway channel section.

The Above Ceiling Mounting Plates are equipped with multiple threaded holes to allow simplified attachment of standard electrical junction boxes directly to the plates as needed.

Multiple 10-32 junction box mounting screws are included.

The Above Ceiling Mounting Plates are equipped with multiple threaded and through holes to allow simplified attachment or bracing materials to secure the wireway to the structure above the ceiling. These bracing materials are not included; but include commonly available items such as channel strut, threaded rods DIY EMT struts and guy wires and additional hardware.

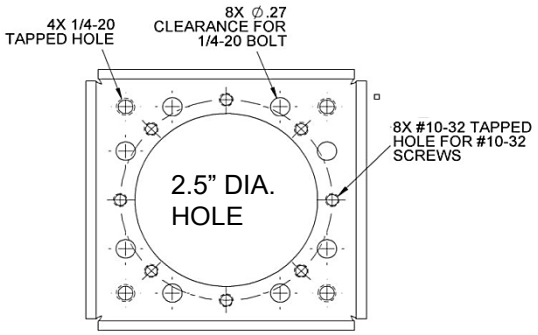


PN 81322 Ceiling Trim Ring Kit

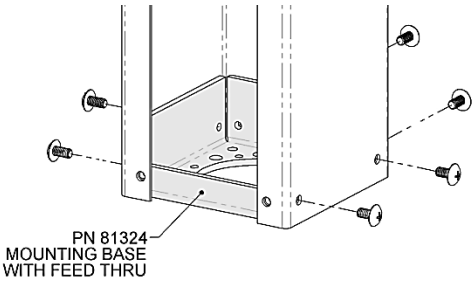
The Ceiling Trim Ring Kit creates an attractive square finished frame around the location where the 4X4 wireway penetrates the ceiling.

The Trim Ring can be attached to the wireway at any location along its length and is secured to the channel section with clamping screws and self- drilling screws.

The Trim Ring has the same fine brushed stainless steel finish as the channel sections, cover plates and end caps.



PN 81324



PN 81324 Pass Through Mounting Base Plate Kit

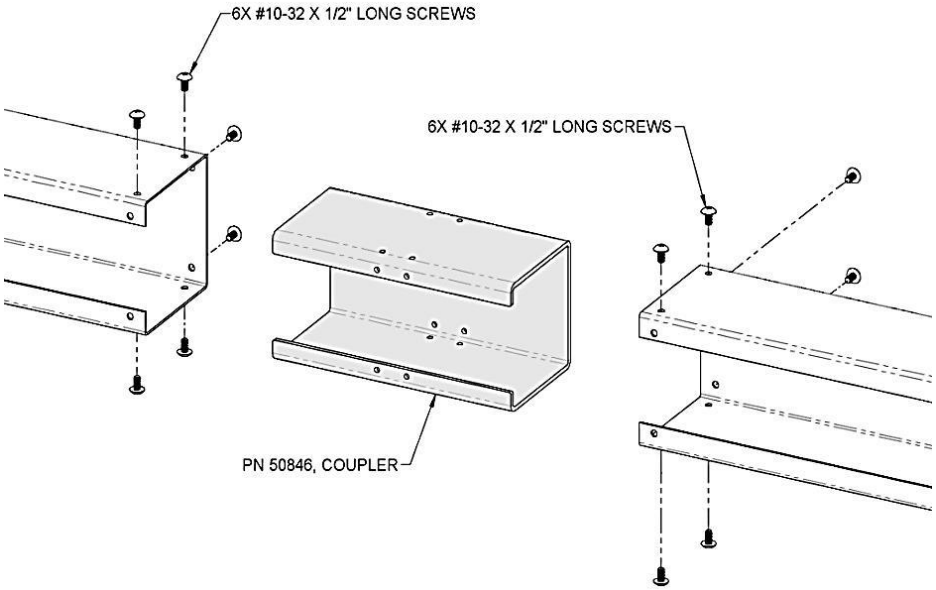
The Pass Through Mounting Base Plate is a heavy duty, internal structural member that is made of thick galvanized steel that resists corrosion.

It is attached to the bottom of a vertical wireway assembly with (8) EA 10-32 screws. The base plate can be attached to a floor, a table or shelf top, a horizontal wireway section or any other horizontal surface.

This mounting plate has a 2.5" diameter round opening in the center to allow a number of conduits, armored cables or other cabling to be passed through if needed.

The mounting plate includes arrays of through and tapped holes for attaching the plate to the mounting surface.

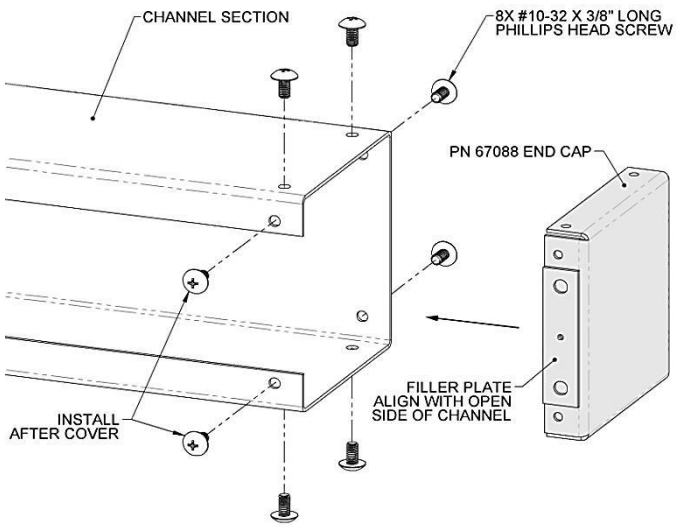
If you are attaching a vertical wireway to a horizontal wireway; we recommend using the included ¼" -20 X ¾" long bolts installed into ¼" – 20 tapped holes in the Feed Through mounting plate base with ¼" -20 nuts added to secure it to the horizontal wireway.



PN 81321 Internal Coupler for Wireway Channel sections

The Internal Coupler is a heavy duty, internal structural member that is made of thick galvanized steel that resists corrosion.
The coupler is 8 inches long and is used to join two wireway channel sections together.

(16) EA 10-32 screws are used to secure the ends of channel sections and the cover plates to the internal coupler.



PN 81325 End Caps for Wireway Channel sections

End Caps are used to close the ends of horizontal wireways.

The four flanges on the end cap fit inside of the channel section with the flange has the small plate oriented to the “open” side of the channels section.

End caps are attached to the end of channel section and the end of the last cover plate with (8) EA 10-23 screws.

The End Cap has the same fine brushed stainless-steel finish as the channel sections, cover plates and the ceiling trim ring.

Lists of Preconfigured Stand-alone Wireway kits

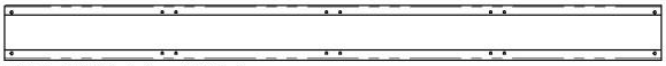
PN	Preconfigured Stand-alone Vertical Wireways with integral outlets
80092	96” L 4X4 Stainless Steel Vertical Wireway with 4 Single Gang Outlets for Power & Data
81300	144 L 4X4 Stainless Steel Vertical Wireway with 4 Single Gang Outlets for Power & Data

PN	Preconfigured Stand-alone Horizontal Wireways with integral outlets
81302	72” L 4X4 Stainless Steel Horizontal Wireway with 6 Single Gang Outlets for Power & Data
81303	96” 4X4 Stainless Steel Horizontal Wireway with 8 Single Gang Outlets for Power & Data

PN	Preconfigured Combination Horizontal Wireways with integral outlets and a Vertical Feed Wireway
81304	72” L 4X4 Stainless Steel Horizontal Wireway + 6 Single Gang Outlets for Power & Data + 96” L Vertical Wireway
81305	96” L 4X4 Stainless Steel Horizontal Wireway + 8 Single Gang Outlets for Power & Data + 96” L Vertical Wireway
81306	72” L 4X4 Stainless Steel Horizontal Wireway + 6 Single Gang Outlets for Power & Data + 144” L Vertical Wireway
81307	96” L 4X4 Stainless Steel Horizontal Wireway + 8 Single Gang Outlets for Power & Data + 144” L Vertical Wireway


PN 51010 24" long


PN 51022 36" long


PN 50844 48" long


PN 51030 60" long


PN 51040 72" long


PN 50842 96" long

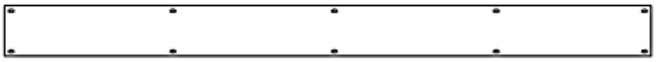
PN	4X4 Stainless Steel Wireway Channel Sections – NO hardware
50842	96“ L 4X4 Stainless Steel Wireway Channel Section
51040	72“ L 4X4 Stainless Steel Wireway Channel Section
51030	60“ L 4X4 Stainless Steel Wireway Channel Section
50844	48“ L 4X4 Stainless Steel Wireway Channel Section
51022	36“ L 4X4 Stainless Steel Wireway Channel Section
51010	24“ L 4X4 Stainless Steel Wireway Channel Section



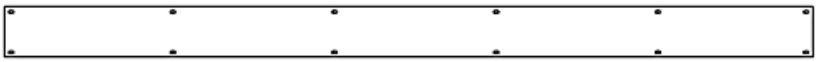
PN 51011 4x24 Blank



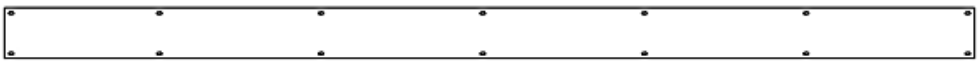
PN 51023 4x36 Blank



PN 50845 4x48 Blank



PN 51031 4x60 Blank

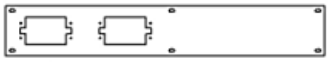


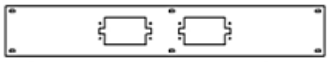
PN 51041 4x72 Blank

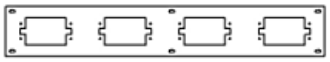


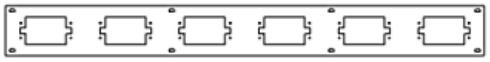
PN 50843 4x96 Blank

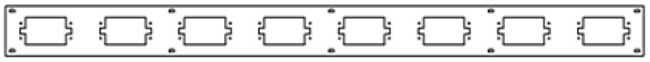
PN	4X4 Stainless Steel Wireway BLANK Cover Plate Kits
Note: All BLANK cover plate kits include 10-32 X 3/8 “L Phillips Truss Head Screw Stainless Steel to attach the plate to the wireway channel	
81330	96“ L 4X4 Stainless Steel Wireway Blank Cover Plate 18S Kit
81332	72“ L 4X4 Stainless Steel Wireway Blank Cover Plate 14S Kit
81334	60“ L 4X4 Stainless Steel Wireway Blank Cover Plate 12S Kit
81335	48“ L 4X4 Stainless Steel Wireway Blank Cover Plate 10S Kit
81337	36“ L 4X4 Stainless Steel Wireway Blank Cover Plate 8S Kit
81339	24“ L 4X4 Stainless Steel Wireway Blank Cover Plate 6S Kit

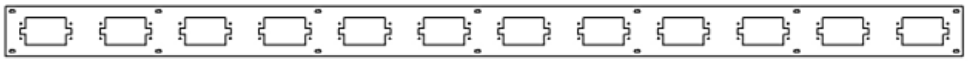

PN 51013 24" long, 2 outlets on end

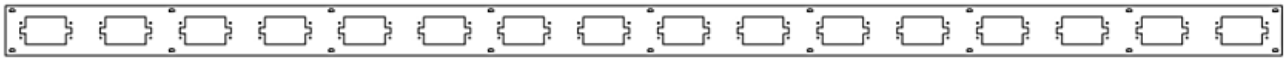

PN 51014 24" long, 2 outlets centered


PN 51012 24" long, 4 outlets

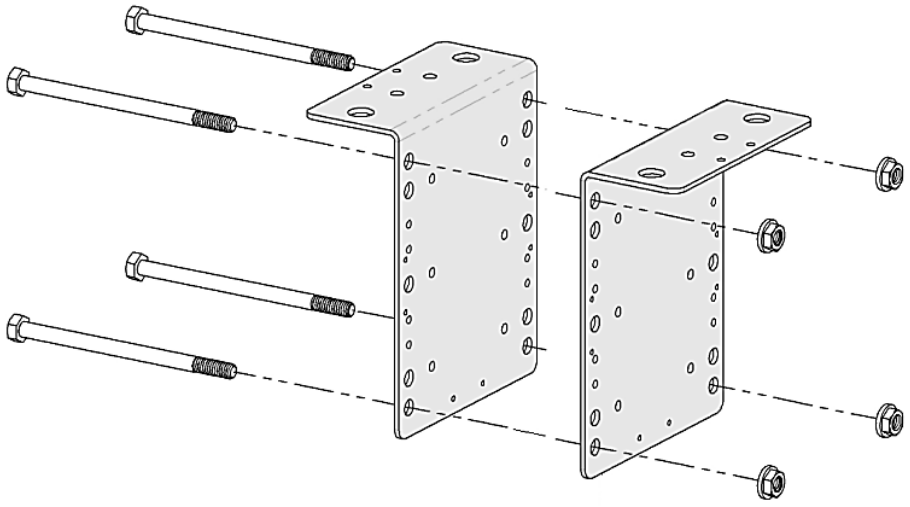

PN 51024 36" long, 6 outlets


PN 51000 48" long, 8 outlets

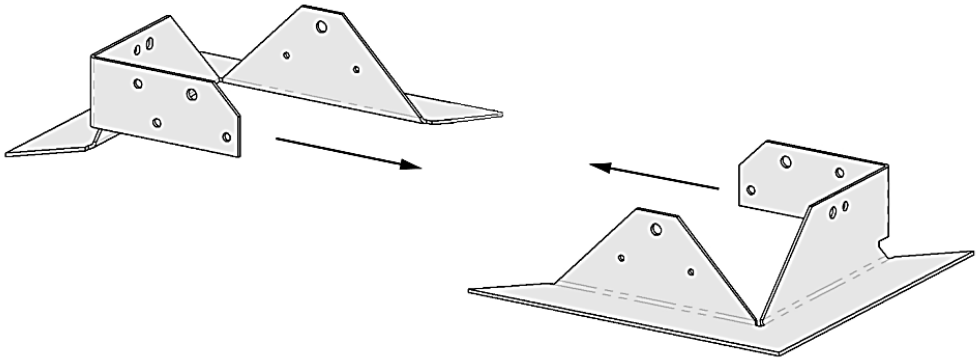

PN 51042 72" long, 12 outlets


PN 51050 96" long, 16 outlets

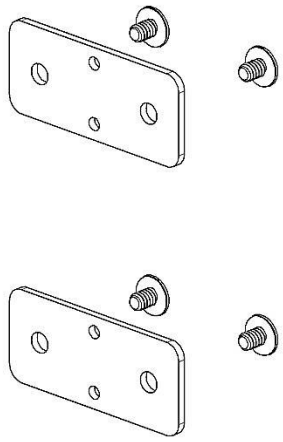
PN	4X4 Stainless Steel Wireway Cover Plates with Single Gang Outlet Cut-Outs Kits
Note: All cover plate kits include 10-32 X 3/8 “L Screw Phillips Truss Head Stainless Steel to attach the plate to the wireway channel. Cover plate kits with outlet cut-outs do NOT include junction boxes.	
81331	96“ L 4X4 Stainless Steel Wireway Cover Plate + 16 SG outlet cut-outs 18S Kit
81333	72“ L 4X4 Stainless Steel Wireway Cover Plate + 12 SG outlet cut-outs 14S Kit
81336	48“ L 4X4 Stainless Steel Wireway Cover Plate + 8 SG outlet cut-outs 10S Kit
81338	36“ L 4X4 Stainless Steel Wireway Cover Plate + 6 SG outlet cut-outs 8S Kit
81340	24“ L 4X4 Stainless Steel Wireway Cover Plate + 4 SG outlet cut-outs 6S Kit
81341	24“ L 4X4 Stainless Steel Wireway Cover Plate + 2 SG outlet cut-outs on one end 6S Kit
81342	24“ L 4X4 Stainless Steel Wireway Cover Plate + 2 SG outlet cut-outs in middle 6S Kit



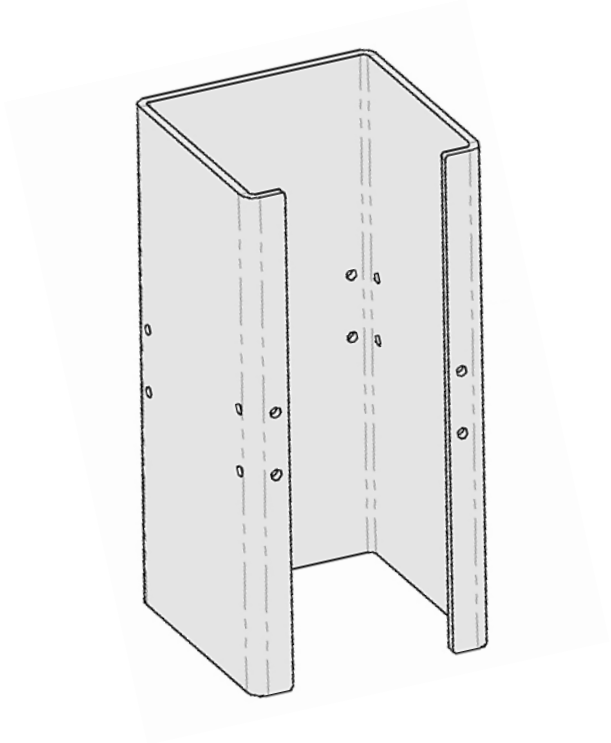
PN 22004 Above Ceiling Mounting Plates Kit		
QTY	**PN**	**Description**
2	50848	Above Ceiling Mounting Plate, galvanized
4	70260	Hex bolt 5/16”-18 X 5“ L Zinc Hex
4	70063	Nylon Lock nut 5/16”-18 Zinc
4	70164	Screw #10-32 X 3/16” L S.S. Phillips
4	70079	Screw #10X 1/2” L self-drilling Zinc Phillips



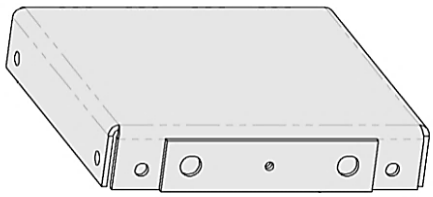
PN 81322 4X4 Wireway SS Trim Ring Kit		
QTY	**PN**	**Description**
2	50849	4X4 Wireway SS Trim Ring Half –Corner Section Stainless Steel
4	70336	Screw #6-32 Phillips head, stainless steel
4	70164	Screw #10-32 X ¼” L Phillips head, Zinc
4	70077	Screw, Self-Tapping #10-32 X ½” L Phillips head, Zinc



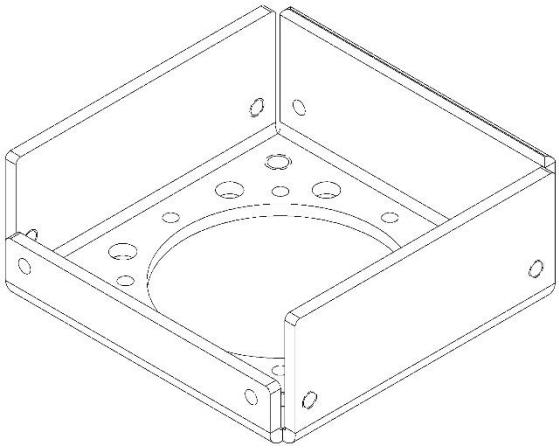
PN 21208 NO J BOX Faceplate Adapter Kit		
QTY	**PN**	**Description**
2	50719	NO J BOX Faceplate Adapter Plate, 4X4 wireway galvanized
4	70153	6-32 X 3/16”L Screw Zinc Phillips



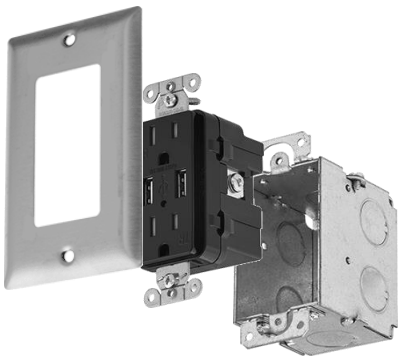
PN 81321 4X4 Wireway Channel Internal Coupler Kit		
QTY	**PN**	**Description**
1	50846	Wireway Channel Coupler, galvanized
16	70065	10-32 X 3/8 “L Screw Phillips Truss Head Stainless Steel



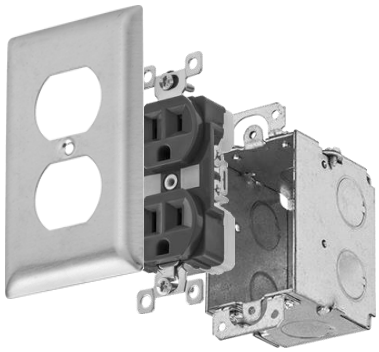
PN 81325 4X4 Stainless Steel Wireway End Cap Kit		
QTY	**PN**	**Description**
1	67088	4X4 Stainless Steel Wireway End Cap
8	70065	10-32 X 3/8 “L Screw Phillips Truss Head Stainless Steel



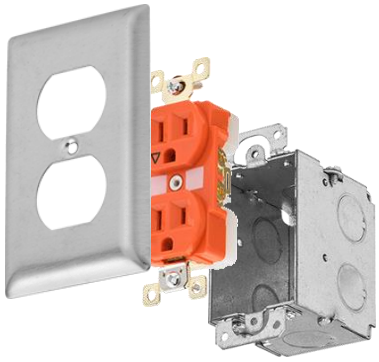
PN 81324 4X4 Wireway Mounting Base Plate 2.5IN Feed Through Kit		
QTY	**PN**	**Description**
1	51005	Wireway Mounting Base Plate 2.5IN Feed Through, galvanized
8	70065	10-32 X 3/8 “L Screw Phillips Truss Head Stainless Steel



PN 21219

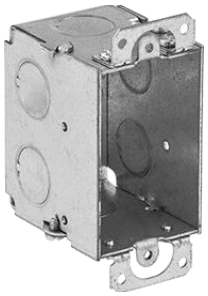


PN 21220

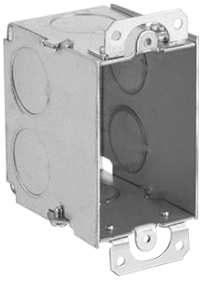


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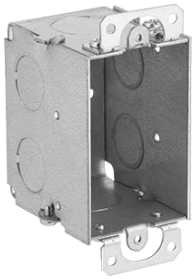
Duplex Receptacles with 2.5” D Junction Boxes and Single Gang Faceplate Kits	
Note: All Duplex Recep. + Faceplates + J Box Kits include the following items: ▪ 1 EA **PN 21230** - 3”H x 2” W X 2 ½” D, “Cut In” Type, Single Gang Junction Box ▪ 4 EA #6-32 X 3/16 “L Phillips head screws (for attaching the J box to a channel cover plate) ▪ 1 EA Duplex or Receptacle ▪ 1 EA Duplex or Decora style Receptacle Faceplate, Stainless Steel ▪ 2 EA #6-32 X 1/2 “L Phillips head screws (for attaching the Faceplate to the J box)	
PN	**Description**
21219	USB-A Dual Charger + Decora Duplex Recep. BLK 15A 125V + 2.5” D junc. Box+ SS Faceplate Kit
21220	Duplex Recep. Straight Blade BLK 15A 125V + 2.5” D junc. Box+ SS Faceplate Kit
21221	Duplex Recep. Straight Blade ORG IG 15A 125V + 2.5” D junc.+ SS Faceplate Kit



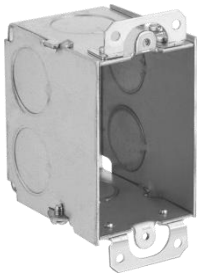
PN 21230



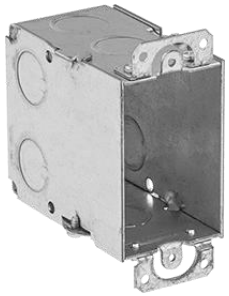
PN 21231



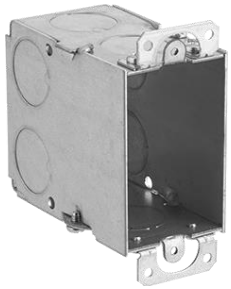
PN 21232



PN 21233



PN 21234

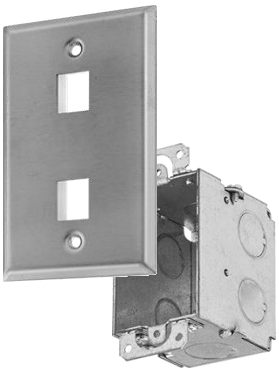


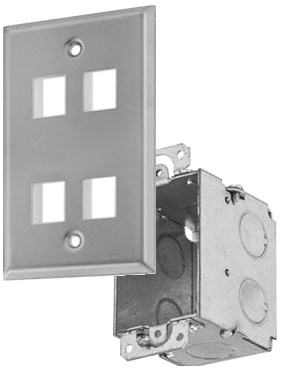
PN 21235

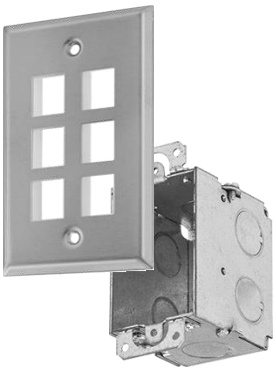
4X4 Wireway Compatible Single Gang Junction Boxes with Mounting Brackets Kits

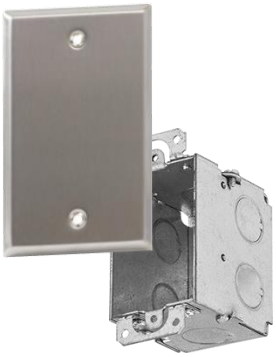
- **Note 1:** All J boxes are Single Gang for one device and include 2 installed Mounting Brackets.
- **Note 2**: All J boxes are Zinc Plated.
- **Note 3**: All J box Kits include 4 EA #6-32 X 3/16 “L Phillips head screws (for attaching the J box mounting brackets to the cover plate)
- **Note 4**: J boxes deeper that 2 1/2” D will reduce conduit loading capacity per specifications diagram

PN	Num. KOs	KO Trade Size	Height	Width	Depth	Cap cu. in.
21230	8	1/2	3”	2"	2 1/2"	12.5
21231	8	1/2	3”	2"	2 3/4"	14
21232	8	1/2, 3/4	3”	2"	2 1/2"	12.5
21233	8	1/2, 3/4	3”	2"	2 3/4"	14
21234	9	1/2	3”	2"	3 1/2"	18
21235	10	1/2, 3/4	3”	2"	3 1/2"	18


PN 21200


PN 21202


PN 21204


PN 21217

Single Gang Keystone Data Faceplate Kits with 2.5” D Junction Boxes	
Note: All Faceplates Kits for J Boxes include the following items: ▪ 4 EA #6-32 X 3/16 “L Phillips head screws for attaching J box to a channel cover plate ▪ 1 EA **PN 21230** - 3”H x 2” W X 2 ½” D, “Cut In” Type, Single Gang Junction Box ▪ 2 EA #6-32 X 1/2 “L Phillips head screws for attaching the Faceplate to the J box	
PN	**Description**
21200	2 port SS Keystone CAT5E Data outlet + 2.5” D Junction Box Kit
21202	4 port SS Keystone CAT5E Data outlet + 2.5” D Junction Box Kit
21204	6 port SS Keystone CAT5E Data outlet + 2.5” D Junction Box Kit

Single Gang Data and Blank Faceplate Kits with NO J BOX Faceplate Adapter Plates Kit	
Note: All Faceplates Kits with NO J BOX Faceplate Adapter Plates Kit include the following items: ▪ 4 EA #6-32 X 3/16 “L Phillips head screws (for attaching NO J Adapters Plates to Channel Cover Plates ▪ 2 EA #6-32 X 3/8 “L Phillips head screws for attaching the Faceplate to the Adapter Plates ▪ 2 EA NO J BOX Faceplate Adapter Plates, galvanized	
PN	**Description**
21201	2 port SS Keystone CAT5E Data outlet + NO J BOX Faceplate Adapter Plates Kit
21203	4 port SS Keystone CAT5E Data outlet + NO J BOX Faceplate Adapter Plates Kit
21205	6 port SS Keystone CAT5E Data outlet + NO J BOX Faceplate Adapter Plates Kit
21217	Blank Single Gang Faceplate + NO J BOX Faceplate Adapter Plates Kit





PN 30091



PN 70414



PN 70415



PN 70416



PN 70065



PN 30088



PN 30090



PN 70409



PN 70411



PN 30089



PN 30094

4X4 Stainless Steel Wireway Accessories	
PN	**Description**
30091	CAT5E RJ45 Keystone Data Jack 110 IDC Blue
70414	Keystone Blank Insert White 10 PACK
70415	#6-32 X 3/16 “L Phillips head screw Zinc 25 PACK
70416	#10X 1/2” L self-tapping screw hex head Zinc 25 PACK
70065	#10-32 X .38” Phillips Pan head screw, Zinc 25 PACK
70418	Duplex Recep. Straight Blade ORNG IG 15A 125V
30090	Single Gang Duplex Receptacle faceplate, Stainless Steel + 1 EA #6-32 X1/2” L screws
70409	USB Dual Type A Charger + Decora Duplex Recep. BLK 15A 125V
70411	Faceplate, Single Gang, Decora, Stainless Steel + 2 EA #6-32X1/2” L screws
70418	Duplex Recep. Straight Blade BLK 15A 125V
70409	Single Gang Blank faceplate, Stainless Steel + 2 EA #6-32 X1/2” L screws
30094	Single Gang 2 port Keystone faceplate, Stainless Steel + 2 EA #6-32 X1/2” L screws
30095	Single Gang 4 port Keystone faceplate, Stainless Steel + 2 EA #6-32 X1/2” L screws
30096	Single Gang 6 port Keystone faceplate, Stainless Steel + 2 EA #6-32 X1/2” L screws

4X4 WIREWAY INSTALLATION INSTRUCTIONS INTRODUCTION

Important Notes

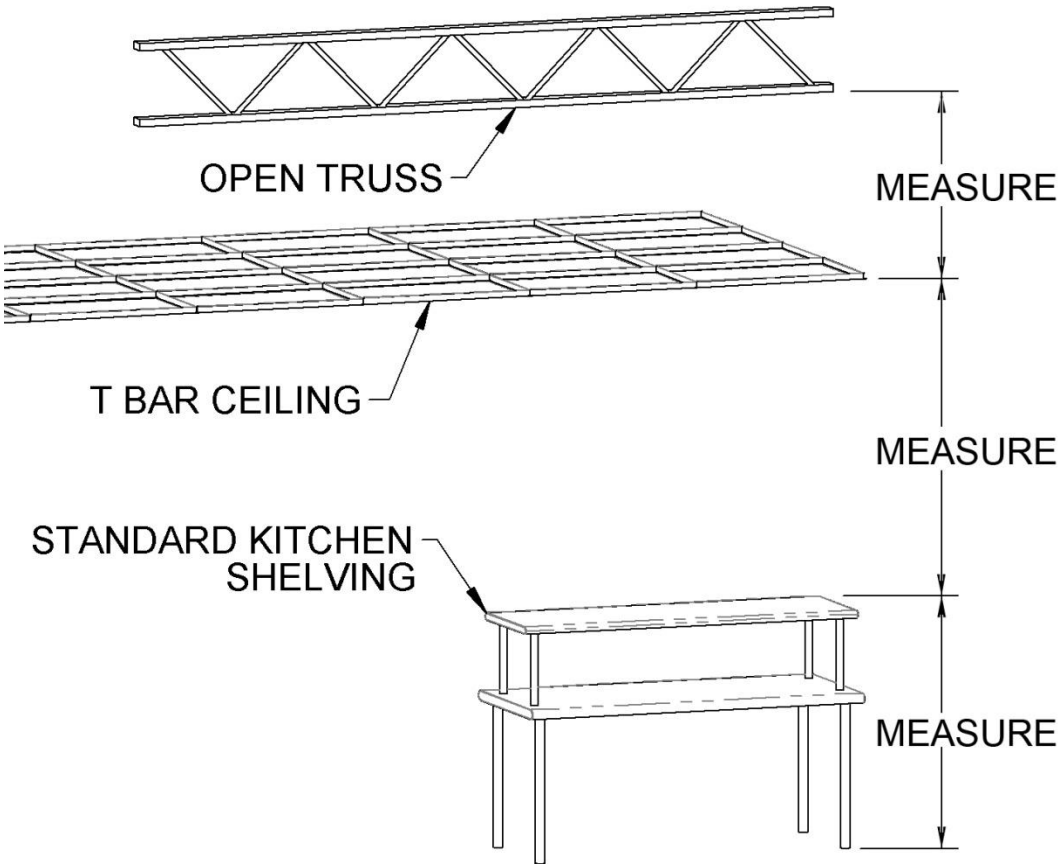
1. IMPORTANT! : Calculate the height of the vertical wireway BEFORE placing your equipment order. Refer to sections: Calculating the height of a vertical wireway Part 1&2

2. These instructions include sections which are necessary to understand the installation of the entire 4X4 Stainless Steel Wireway group of products; so not all sections will be applicable to the particular assembly that you are using. However; we strongly recommend that you read the entire content of these installation instructions BEFORE proceeding with the design of the system, the ordering of assemblies or parts and before performing any installation work.

3. The installation of these systems should only be performed by qualified persons such as Journeyman Electricians and/ or Professional Riggers.

4. Using this document
You will be prompted at various points throughout these instructions to reference sections which will include additional details on the various installation procedures. There are many notes, recommendations and tips included in the text of the various sections of the installation instructions; these are included as helpful suggestions only; DO NOT substitute them for your own best practices or established safety procedures.

5. Installation instructions navigation for all 4X4 Stainless Steel Wireway systems
The following installation instructions are applicable to all of the following 4X4 wireway products:
Preconfigured, Stand-alone Vertical Wireways with integral outlets.
Preconfigured, Stand-alone Horizontal Wireways with integral outlets.
Preconfigured, Combination Horizontal Wireways with integral outlets and a Vertical Feed Wireway.
All Individual Wireway Components and Accessories.
Custom Wireway Assemblies.



Calculating the height of a vertical wireway Part 1

IMPORTANT! : Calculate the height of the vertical wireway 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 10” 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 wireway 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 wireway 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 wireway assembly that can be used for your application.

Calculating the height of a vertical wireway Part 2

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 wireway assembly must be somewhere between them.

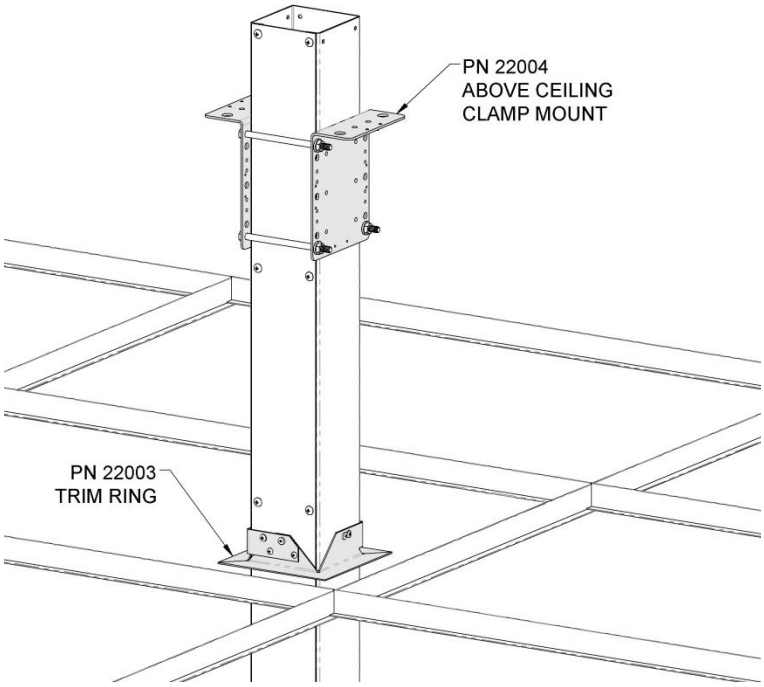
Important Note: When determining the maximum height of the vertical section of wireway above the ceiling; be sure to factor in some space that will allow the associated conduits and/ or cabling to be fed into the top open end of the wireway channel section while maintaining the minimum bend radius of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

What to do if a wireway is too long
If you have purchased a preconfigured wireway package and while evaluating your site survey measurements; you determine that a section of the wireway is too LONG and is conflicting with other items; you have a couple of options:

Option 1- If the problem wireway is in two sections; you can order a shorter channel section and cover plate to reduce the overall length of your assembly. Refer to the sections that detail the part numbers and specifications of the available individual channel sections and cover plates.

Option 2 - Know that the channel sections and cover plates can be shortened in the field with a metal cutting saw. Refer to the sections: **Tips on cutting or drilling stainless steel**
Tips on cutting or drilling a stainless-steel channel section or cover plate

What to do if a wireway is too short
If you have purchased a preconfigured wireway package and while evaluating your site survey measurements; you determine that the wireway is too SHORT for your application; you can order a longer channel section, an additional cover plate and an internal coupler to as needed to extend the total length of your wireway. Refer to the sections that detail the part numbers and specifications of the available individual channel and cover sections.



Locating the vertical section of a wireway in the ceiling

Use a laser or a plumb bob suspended from the ceiling to locate the side to side and forward and back center position of the wireway.

Mark this location on the ceiling and on the floor, horizontal wireway section or other horizontal mounting surface.

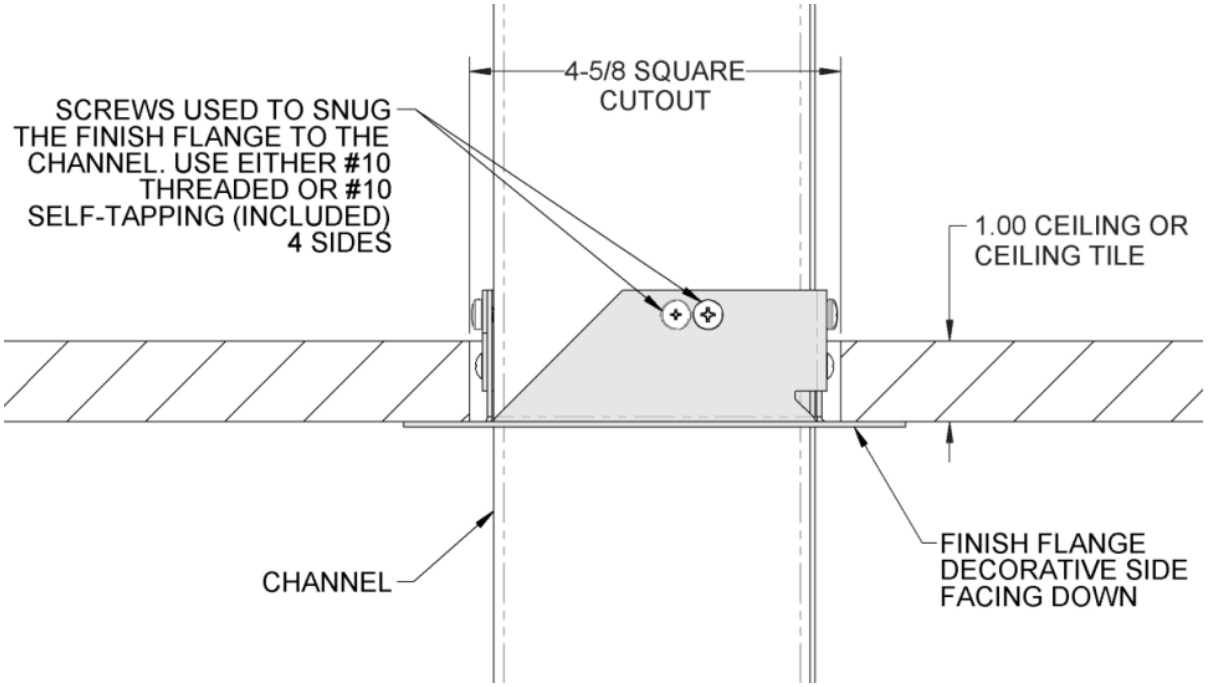
Locating the Vertical wireway in a Suspended Tee Bar ceiling

If your ceiling is a suspended “Tee Bar” type; the best scenario is if the top of the vertical wireway section can be located in one of the corners of the metal Tee bar grid.

A second-best choice would be to locate the wireway 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 wireway can pass through it.

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 wireway penetrates the ceiling grid.

Refer to section; **How to determine the best location to attach the base of a vertical wireway**

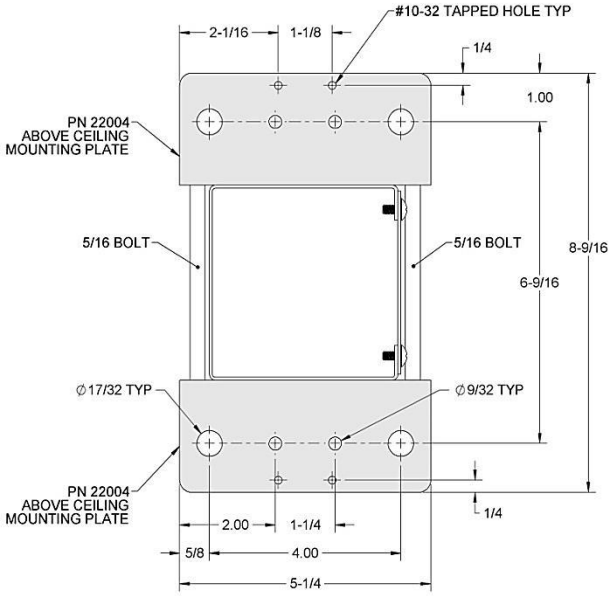


Cutting a square opening in the ceiling for the vertical wireway

You will need to cut a square hole that is 4 ¾" W X 4 ¾" D in your ceiling material.

The horizontal frame of the Ceiling trim ring extends 1 inch out from the vertical flanges and should cover any rough edges.

Important note- The two taller, semi 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.
Refer to section: Installing the Ceiling Trim Ring



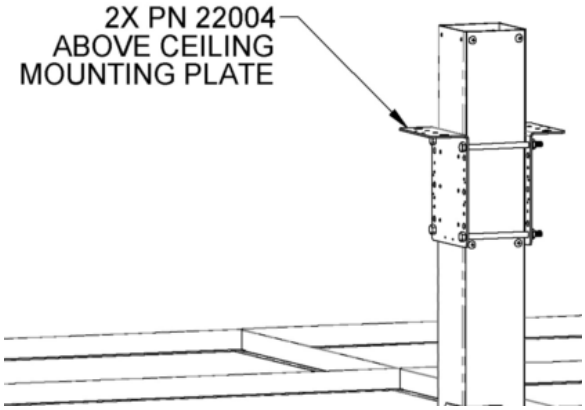
Understanding how to attach the of the top of vertical wireway to the structure above the ceiling

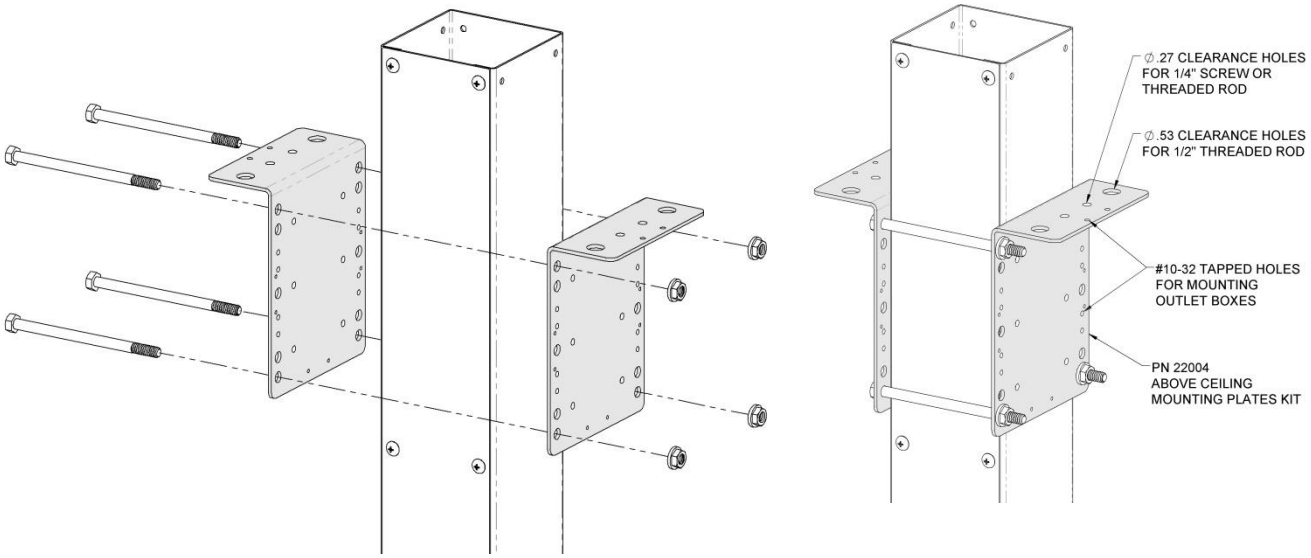
Survey the area above the ceiling and identify the appropriate overhead structure elements which are above and adjacent to the top of the vertical wireway location for attaching the bracing structure.

Measure and record the distance from the top of the vertical wireway 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 sections: **Attaching the Above Ceiling Mounting Plates to the overhead ceiling structure**
Permanently Securing the Above Ceiling Mounting Plates
Fabricating struts with EMT conduit to brace the top of a Vertical wireway

Before proceeding, while the vertical channel assembly is still at floor level; identify the Above Ceiling Mounting Plates Kit and 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. Consider the optimum height the Above Ceiling Mounting Plates should be located on the wireway for your installation scenario and mark this location on the channel section.





Attaching the Above Ceiling Mounting Plates to the top of the vertical wireway channel section

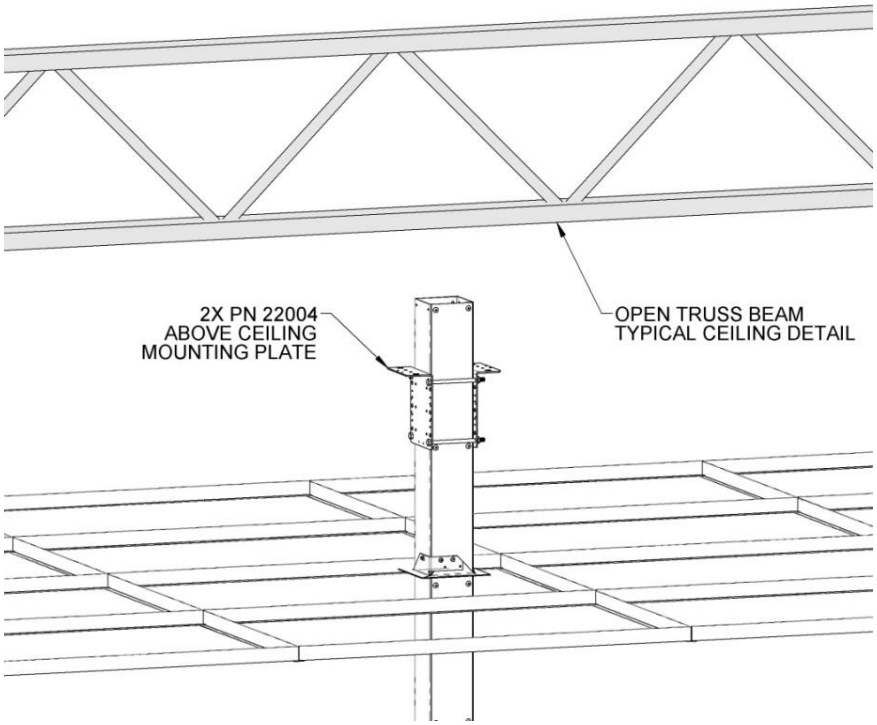
With the vertical channel assembly still at floor level; orient the two Above Ceiling Mounting Plates so that they will lay against the two solid sides of the channel and then install the included 4 EA 5/16”-18 X 5“L bolts and lock nuts through the holes in both Mounting Plates and across both of the solid sides of the channel section.

Position the plates so that they align with the mark you made in the last step; then use ½” 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.

Important note - Before proceeding; you must install a safety restraint assembly that is securely attached to the top of the vertical wireway that can also be attached to the overhead structure as soon as the channel section is raised to the vertical position. Refer to section: **Adding a safety restraint to secure the top of the vertical wireway.**

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 vertical wireway; you must be sure to return to the top of the vertical wireway 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 vertical wireway channel section.

Adding a safety restraint to secure the top of the vertical wireway
In order to ensure the stability of the vertical wireway 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 vertical wireway from falling until the Above Ceiling Mounting Plates are permanently attached to the overhead structure.



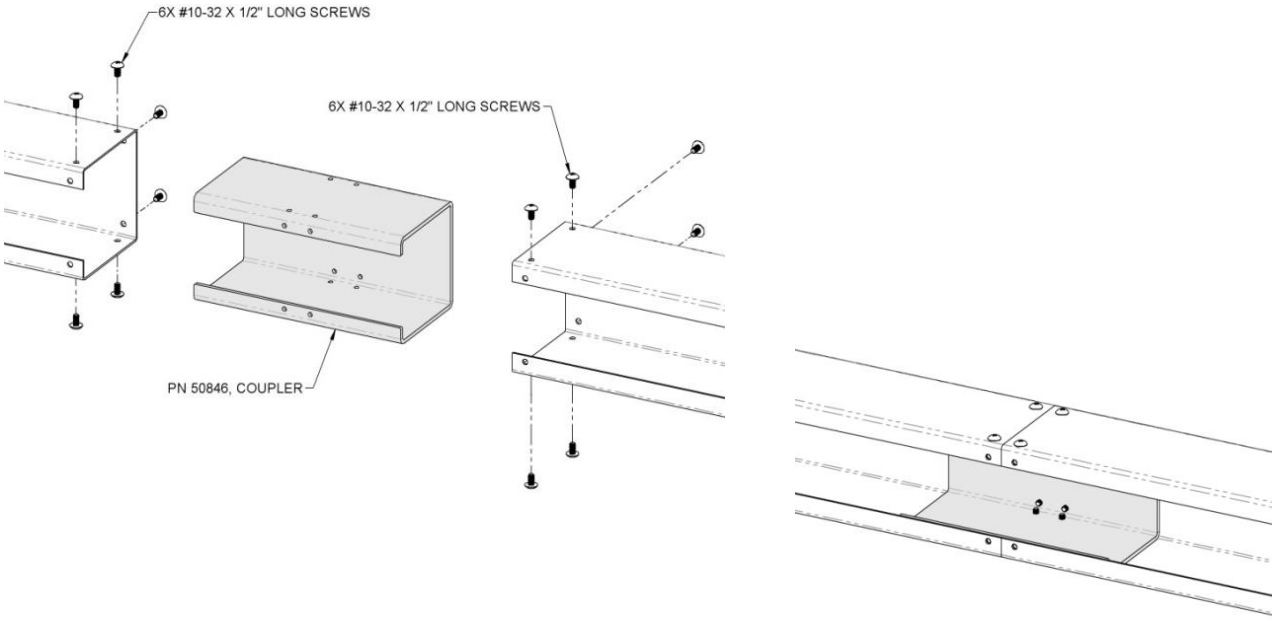
Attaching the Above Ceiling Mounting Plates to the overhead ceiling structure

Once the Feed Through mounting base plate is permanently attached to the mounting location and the bottom of the vertical wireway is attached base plate; you'll need to return to the top of the vertical wireway 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 vertical wireway. These bracing materials are not included; but are commonly available. To use DIY EMT conduit struts; refer to section: **23.6 Fabricating struts with EMT conduit to brace the top of a Vertical wireway**

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 vertical channel section; 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 vertical channel section.



Pre-assembling the vertical section of a wireway

If your vertical wireway is made of separate channel sections; the first step is to use an internal coupler and screws to connect the channel sections together to create a single vertical assembly.

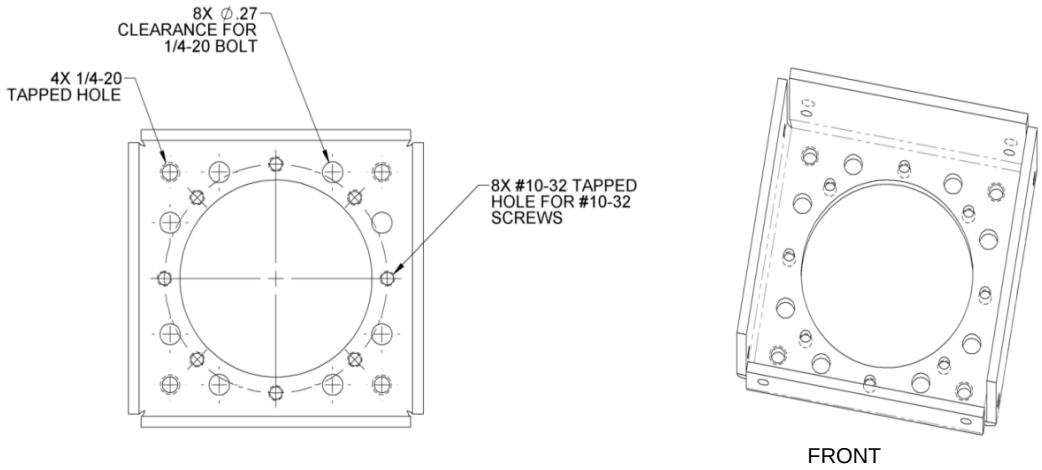
Installing an internal coupler to connect two sections of a wireway channel
The internal coupler is 8” long, made of thick galvanized steel and is used to join any two wireway channel sections of together end to end. Lay the two channel sections that are to be joined together on a flat surface so that the open sides of both channels are facing up and the ends of each section are approximately one foot apart.
Note that there are two sets of eight tapped holes at the center of the coupler that are used to join the two channel sections together. Orient the coupler so that the open side in the coupler is facing up and is aligned with the open sides of the two channel sections.

Carefully slide the coupler into the end of one of the channel 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 channel section.

Next; carefully guide the second channel 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.

Note that the screws on the open side of the wireway channel will be installed in the slots in the end of the cover plate. Also; if some of the sixteen screws that secure the channel sections to coupler are preventing the channel from laying flush to the mounting surface; screws on that side can be removed; Refer to section:
Attaching one side of a wireway channel section FLUSH to a flat surface

Once you have the vertical wireway channel section 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.
Important note- If you are using a Feed Through mounting plate base; you can also install it onto the bottom of the vertical wireway. Be sure to install the base plate so that one shorter flange is aligned with the open side of the channel section.



How to determine the best location to attach the base of a vertical wireway

If you are attaching the base of a vertical wireway to the top of a shelf, counter top, work table, horizontal wireway section or other horizontal surface; you'll need to carefully evaluate all of the ways that the wireway will interact with all of the various details of the ceiling structure and the items that will be placed around the proposed location where the base will be attached to the mounting surface.

If you are attaching the vertical wireway to top of a shelf, counter top or work table; as a general rule the base of the of the wireway should be located near the center, between the front and rear edges of the defined horizontal surface.

Attaching the bottom of a vertical wireway to a horizontal wireway or other horizontal surface.
Read all the following sections before proceeding.

Locating a vertical wireway section relative to the mounting location at the base
If you have not already done so; temporarily install the Feed Through mounting plate base onto the bottom of the assembled vertical wireway section.

Be sure to install the base plate so that one shorter flange is aligned with the open side of the channel section.

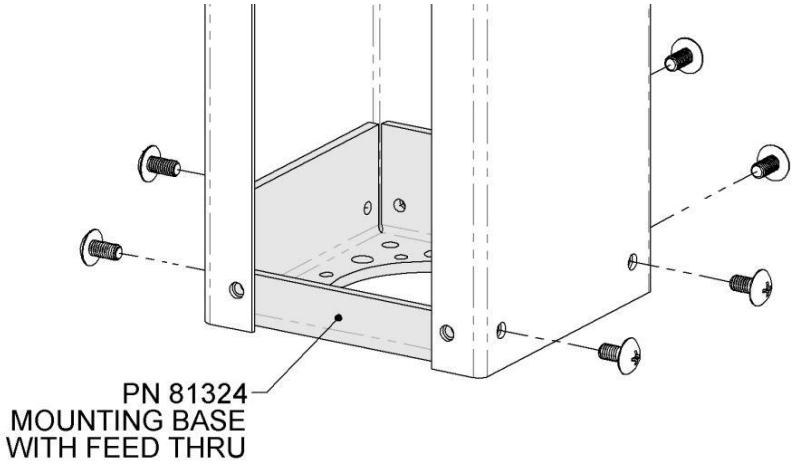
Carefully lift and support the vertical wireway channel assembly in the vertical position and securely attach the safety restraint assembly to the overhead structure in a manner to prevent the vertical wireway from falling.

Once the vertical wireway is stabilized; carefully shift the bottom of the assembly so that the Feed Through mounting plate base is aligned correctly with the horizontal wireway or other mounting surface.

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 wireway assembly.
Important note – Write a letter "F" or the word "front" directly onto the mounting surface to indicate the correct orientation of the base plate so that one shorter flange is aligned with the open side or outlet side of the channel section.

Carefully support the vertical wireway channel assembly, remove the six 10-32 screws that attach the bottom of channel assembly to the three closed sides of the mounting plate base and then remove the base plate.



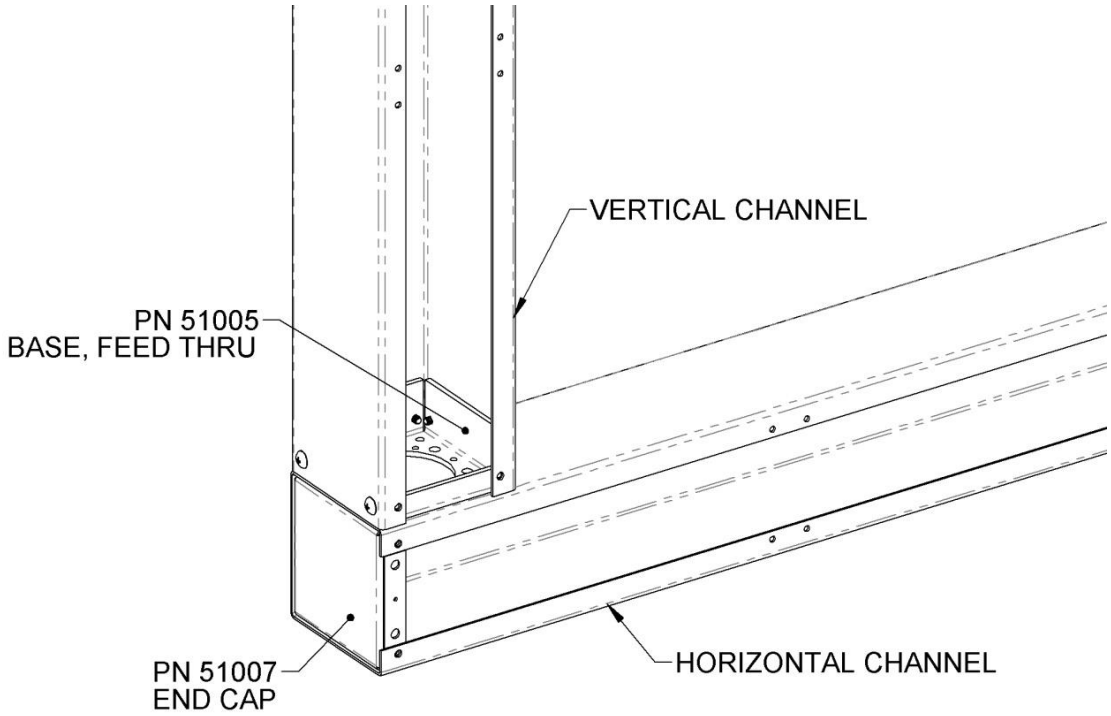
Permanently attaching the Feed Through mounting base plate to the mounting surface

Once the feed through hole has been made in the mounting surface; place the mounting base plate on the mounting surface.

Verify that the shorter flange on base plate 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.
Refer to section- **Selecting and using wireway mounting fasteners**

If you are attaching a vertical wireway to a horizontal wireway; we recommend using the included ¼” -20 X 1” long bolts installed into ¼” – 20 tapped holes in the Feed Through mounting plate base with ¼” -20 nuts added to secure it to the horizontal wireway.

Once the Feed Through mounting base plate is permanently attached to the mounting surface; carefully support the vertical wireway channel assembly, lift the bottom of the channel section and align the open side of the bottom of the channel section with the shorter flange on the base plate; then reinstall the (6) 10-32 screws that attach the bottom of channel section to the three closed sides of mounting base plate.

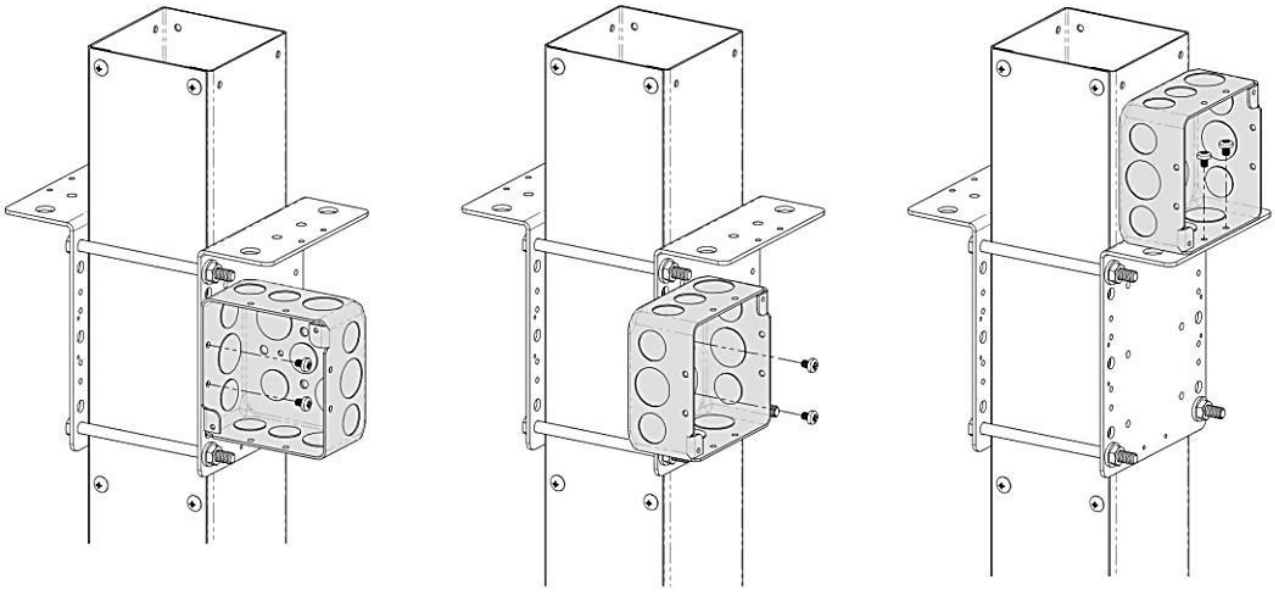


Making a feed through hole in a horizontal wireway or a sheet metal mounting surface

If you are routing conduits and / or cabling through the mounting plate base and into a horizontal wireway or sheet metal mounting surface; you must make a large passage hole in the mounting surface.

We recommend using a hole saw or punch to make the feed through passage hole in the mounting surface BEFORE installing the fasteners that will secure the bottom of the vertical wireway to the mounting surface. If you are using a hole saw to make the Feed through passage hole; refer to section: **Using a Hole saw on sheet metal**

The large round hole in the center of the Feed Through mounting base plate is 2.5” inches in diameter. However; the Feed through hole that you must make on the side of the horizontal wireway channel section or other sheet metal mounting surface can be made smaller depending on the number of conduits and / or cabling that your assembly will require. However; we recommend making the passage hole as large as the tooling you have access to will allow (up to 2.5” DIA)

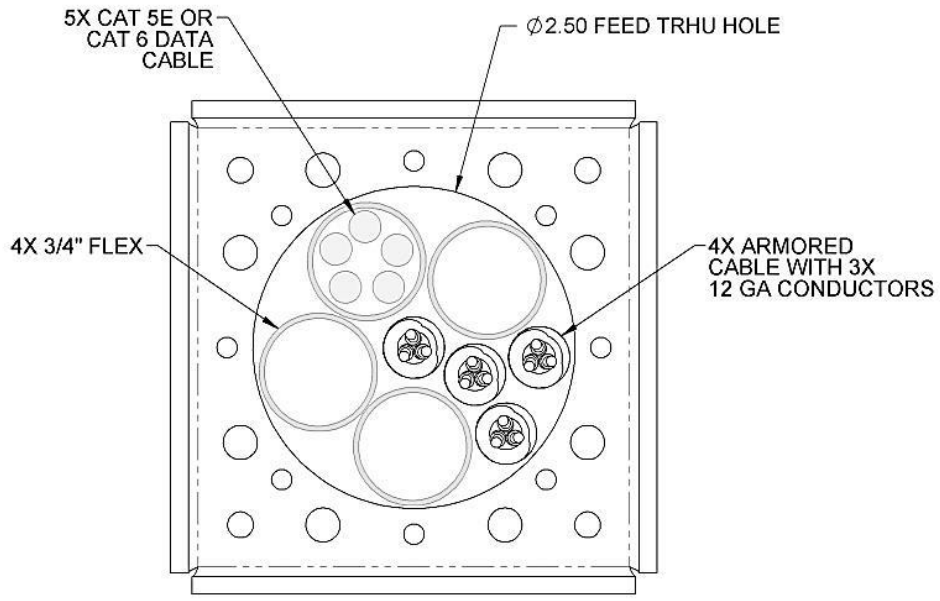


Attaching Junction boxes to the Above Ceiling Mounting Plates

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.



Installing the associated conduits and cabling into the vertical channel section

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.

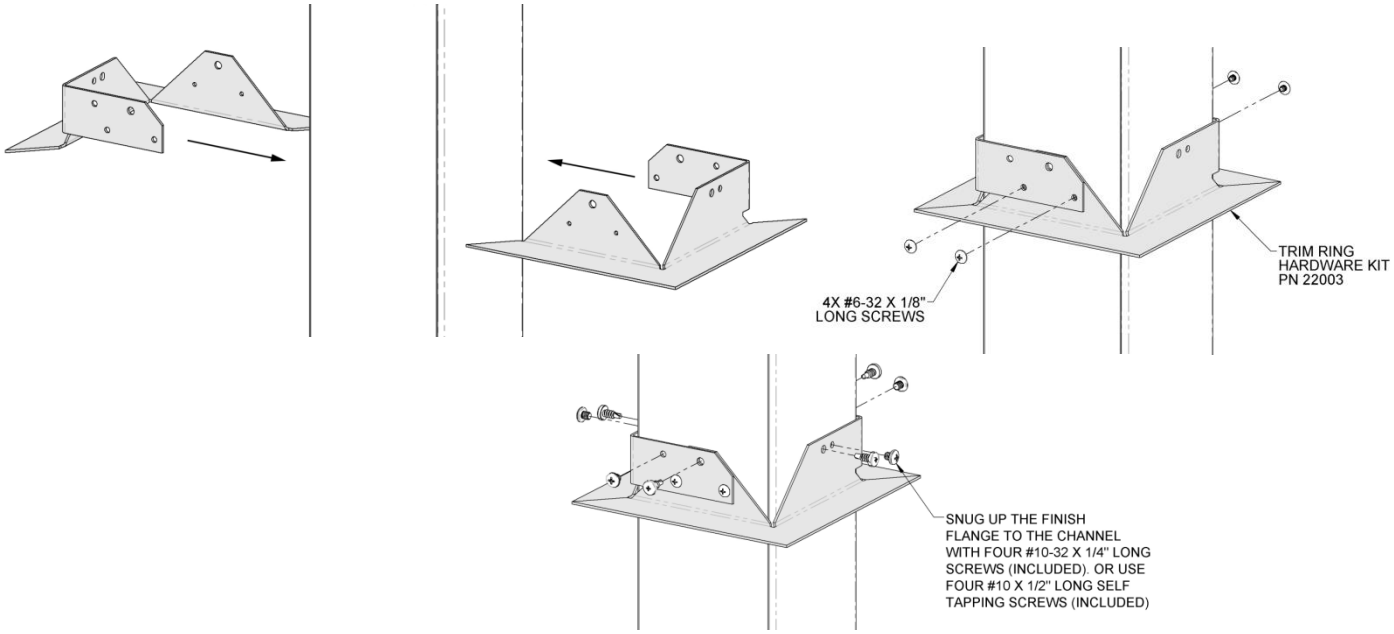
Consult your local building codes to determine the types of cabling and conduits that are required.

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 vertical channel section.

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 vertical wireway has outlets; refer to the sections:
Assembling and connecting the outlets on the cover plates
Attaching Junction boxes or faceplates to outlet cut-outs on cover plates
Installing cover plates on wireway channel sections

IMPORTANT NOTE - Consult your local building codes to determine if conduits are required above the ceiling and/or inside of the vertical wireway 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 the Ceiling Trim Ring

The trim ring assembly attaches to the vertical channel section where it penetrates the ceiling.
You should have already created a square hole that is 4 ¾" W X 4 ¾" D in your ceiling material during the initial fitting of your vertical channel section. Refer to section: **Cutting a square opening in the ceiling for the vertical wireway**
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 vertical channel section, NOT the open front, and closed rear sides.

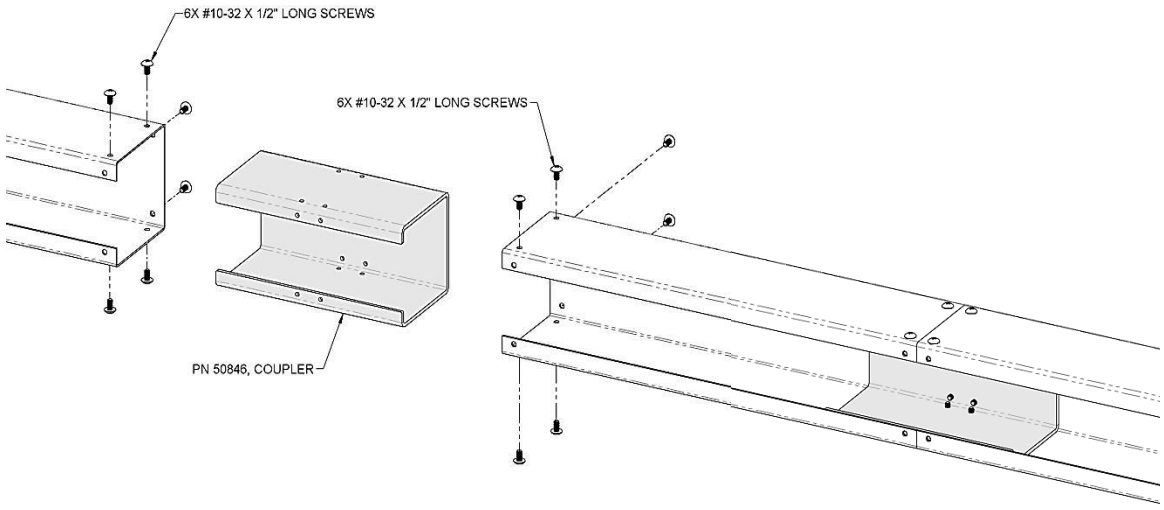
Align the two section of the trim ring so that the two POINTED mounting flanges are POINTING UP so that the tapped holes on these flanges will be located INSIDE of the two flat- topped mounting flanges when the two halves are slid together.

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.

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.

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.

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 (2) to (4) self- drilling screws into the through holes and into the sides of channel section to secure it permanently.



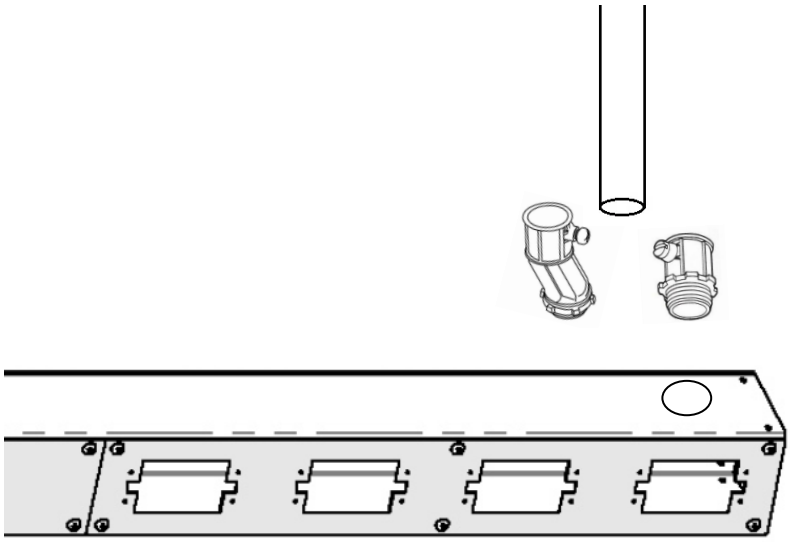
Pre-assembling a horizontal wireway
If your horizontal wireway is made of separate channel sections; the first step is to use an internal coupler and screws to connect the channel sections together to create a single horizontal assembly.
Refer to the section: **Installing an internal coupler to connect two sections of wireway channel**

Do not install the cover plates at this time. If the end caps will not conflict with the installation of the associated conduits, cabling, connection of a vertical wireway or attachment to the mounting surface; they can be installed now. Once you have the horizontal wireway channel section assembled; verify the correct orientation of the open side or cover / outlet side of the wireway channel section assembly relative to which direction you would like the cover / outlets to face. Refer to sections:
Installing end caps onto a horizontal wireway channel section
Attaching one side of a wireway channel section to a flat surface
Attaching one side of a wireway channel section FLUSH to a flat surface

Installing an internal coupler to connect two sections of a wireway channel
The internal coupler is 8” long, made of thick galvanized steel and is used to join any two wireway channel sections of together end to end. Lay the two channel 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.
Note that there are two sets of eight tapped holes at the center of the coupler that are used to join the two channel sections together. Orient the coupler so that the open side in the coupler is facing up and is aligned with the open sides of the two channel sections.

Carefully slide the coupler into the end of one of the channel 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 channel section.

Next; carefully guide the second channel 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.
Note that the screws on the open side of the wireway channel will be installed in the slots in the end of the cover plate. Also; if some of the sixteen screws that secure the channel sections to coupler are preventing the channel from laying flush to the mounting surface; screws on that side can be removed; Refer to section:
Attaching one side of a wireway channel section FLUSH to a flat surface



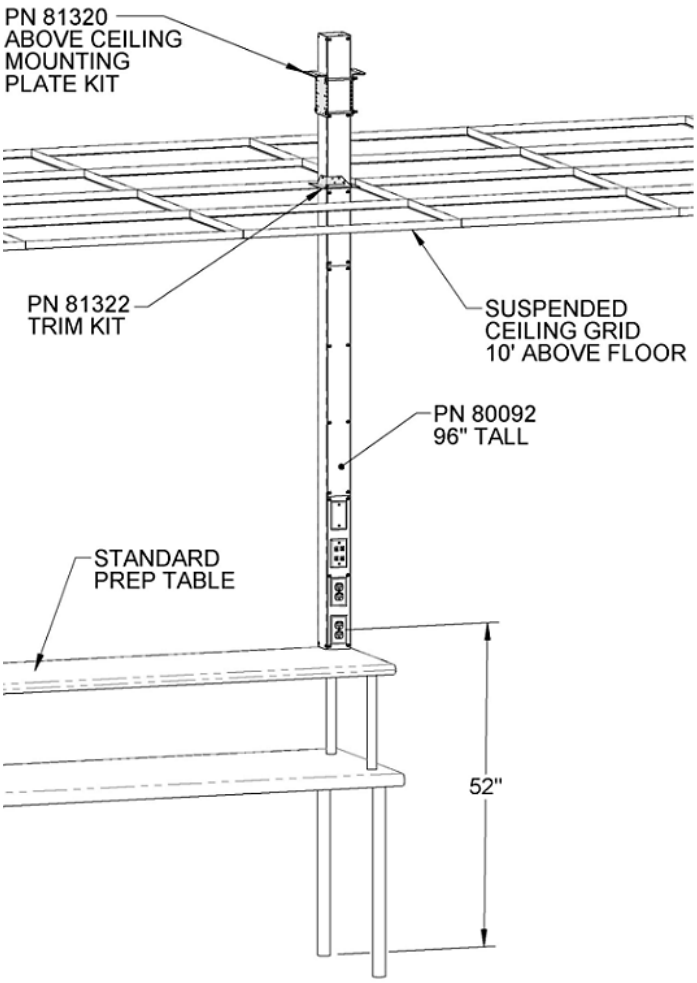
Attaching conduits to the side of a wireway

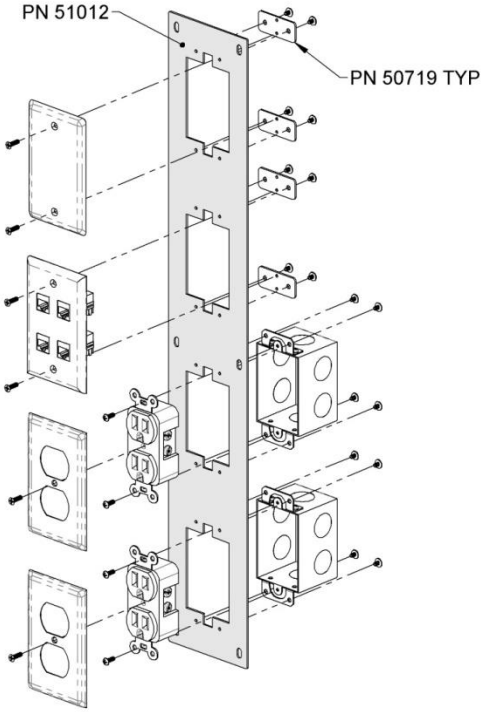
Holes can be made in any of at three closed sides of the channel section along its entire length as long as they do not conflict with the locations of any internal items such as couplers, end cap flanges, junction boxes, conduits or cabling.
Use a punch, hole saw or a step drill bit to create holes for connecting conduits directly to any of the three closed sides of the channel section or for making an opening in one of the sides so that flexible conduit can be fed into the interior of the wireway and then routed through the interior of the wireway to the junction boxes.

Surface mounted rigid conduit can be attached directly to any of the three closed sides of wireway at any location as long as it does not conflict with the locations of any internal channel items such as couplers, end cap flanges, junction boxes, conduits or cabling.

Once a rigid conduit is attached to the one of the three closed sides of the channel section; a section of flexible conduit can be connected to it and then routed through the interior of the wireway to the junction boxes.

If the rear side of a horizontal wireway is being attached to the surface of a hollow structure such as a wall and flexible conduit is being fed down inside the wall to the wireway; an opening can be made in the rear side of the wireway to create a passage so that the conduit can be fed into the channel section and then routed through the interior of the wireway to the junction boxes.


PN 81320
ABOVE CEILING
MOUNTING
PLATE KIT
PN 81322
TRIM KIT
SUSPENDED
CEILING GRID
10' ABOVE FLOOR
PN 80092
96" TALL
STANDARD
PREP TABLE
52"


PN 51012
PN 50719 TYP

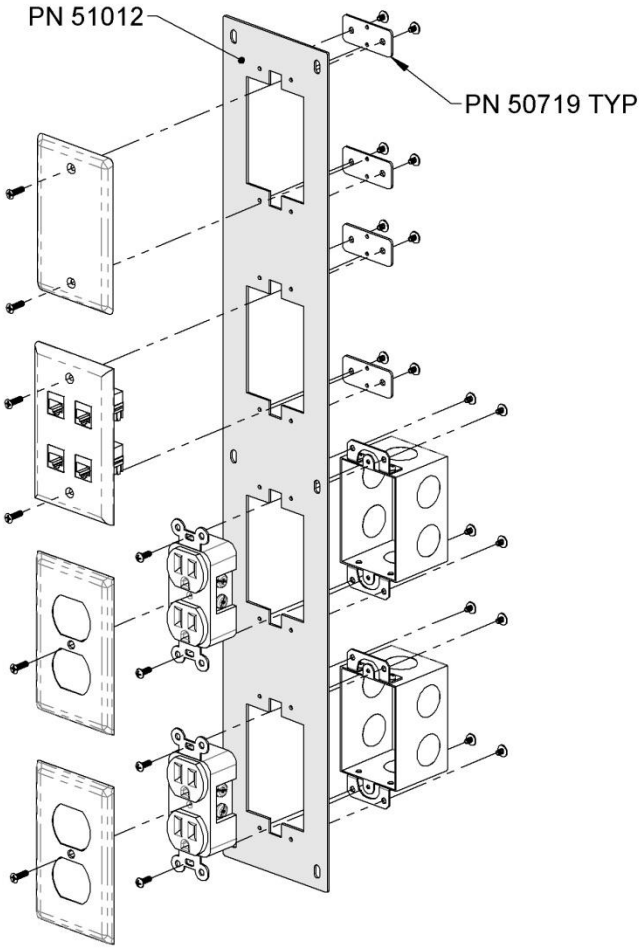
Creating a layout for the outlets in the cover plates

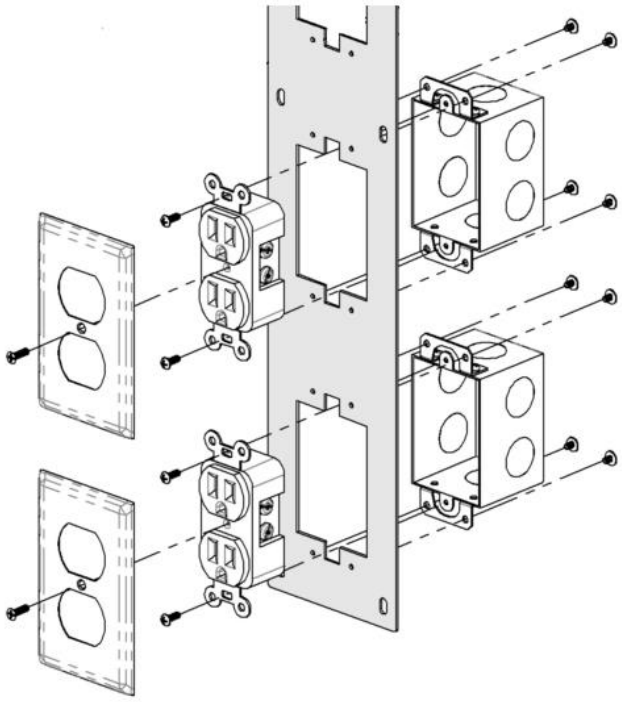
Know that all of the single gang outlet cutouts on the cover plates can be used interchangeably for power or data outlets, blank covers or other single gang compatibles devices.

Review the various desired locations of various outlets on your assembly and develop a list that includes the total number of each type of outlet.

Create labels made of blue painter's tape to designate the locations of the various types of outlets.

Apply these labels directly to the side of the channel sections immediately adjacent to each of the outlet cut outs to indicate the location assignments of each type of outlet that will be used in your application.





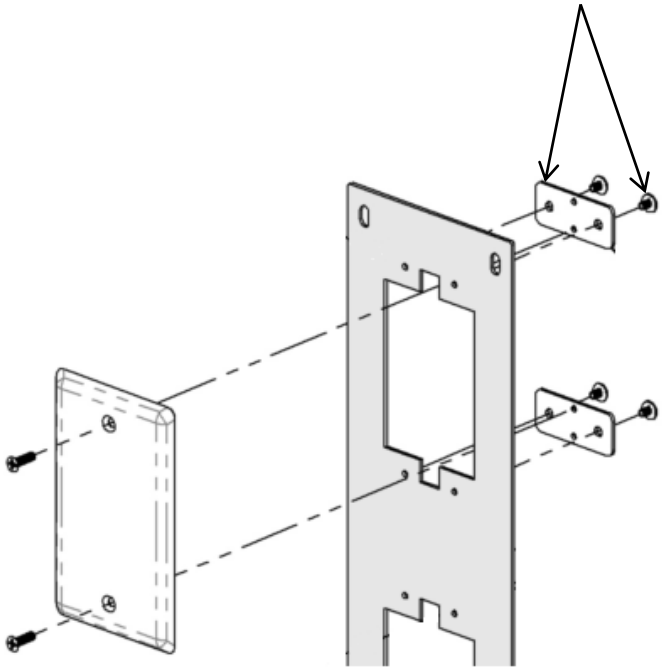
Single gang junction boxes with mounting brackets are attached to the cut-outs in the cover plates with four PN 70415 #6-32 X 3/16 "L Phillips head screws

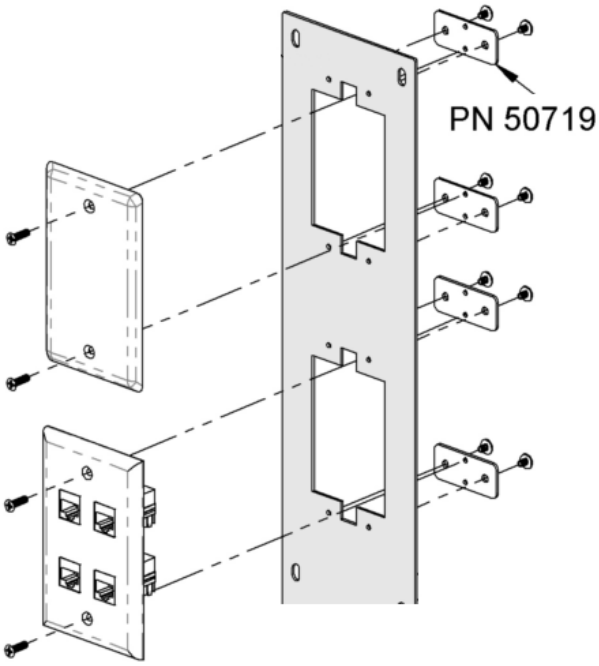
Assembling and connecting the outlets on the cover plates

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 and also refer to the section: C**reating a layout for the outlets in the cover plates**

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 Kit

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

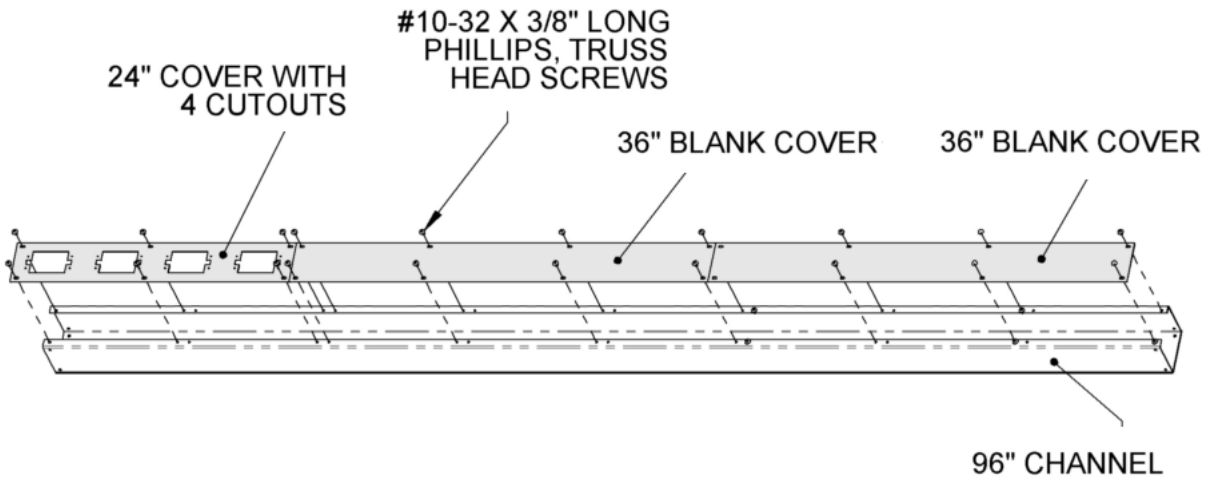
All outlet cut-outs are sized to fit a standard 3”H x 2” W “cut in type” single gang junction box with mounting brackets and any standard faceplate.

Wireway junction boxes 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 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 ½” and ¾” trade size knock outs for connecting conduit.

Preconfigured wireway assemblies will usually ship with multiple 3”H x 2” W X 2 ½” D “cut in type” single gang junction boxes with mounting brackets; if your application requires deeper junction boxes refer to the list: Know that using junction boxes that are deeper than the standard 2 ½” depth will REDUCE the conduit and cabling loading capacity of the wireway.

Know that you can also install a blank faceplate on an outlet cut- out without a junction box by using a PN 21208 NO J BOX Faceplate Adapter Kit

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 Data faceplates can be attached directly to the outlet cutouts WITHOUT junction boxes by using PN 21208 NO J BOX



Faceplate Adapter Kit

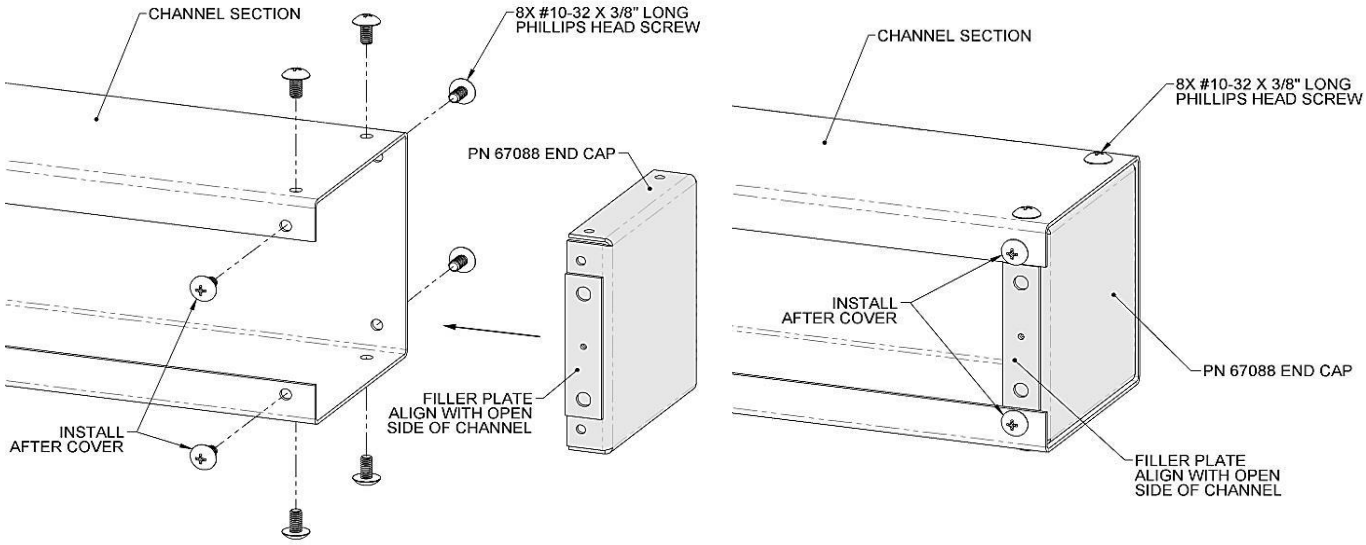
Installing cover plates on wireway channel sections

Installing the cover plates should be the last step in assembling your wireway.

Locate the 10-32 X 1/2” long stainless steel Phillips truss screws in the hardware kit.

Align the slots in the cover plates with the tapped holes in the open side of the channel sections and then install one screw loosely through each of the slots in the cover plates and into the tapped holes channel sections.

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 securely.



Installing end caps onto a horizontal wireway channel section

Installing the end caps is often one of the last steps in the installation of a horizontal wireway.

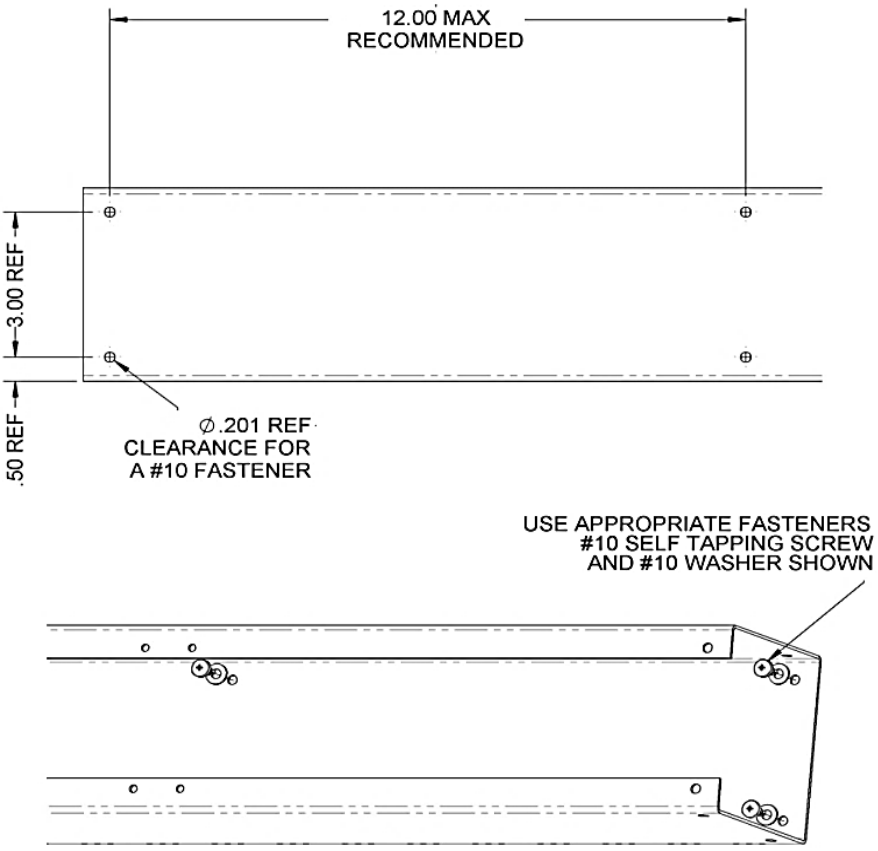
Note that there are four flanges on the Stainless-steel end cap that align and fit snuggly inside of the end of the wireway channel.

To install; align the four flanges of the end cap with the end of the channel section so that the flange with the small filler plate is oriented to the “open” side of the channel section. Slide the end cap into the end of the channel section and align the tapped holes in the end cap with the three pairs of through holes that are present on the three “closed” side channel section.

Install (6) EA 10-32 stainless Phillips truss head screws through the holes in the closed sides of the channel section and into the tapped holes in the End Cap.

Note that the two screws on the open side of the wireway channel will be installed in the slots in the end of the last cover plate.

If some of the eight screws that secure the end cap to the end of the channel are preventing the channel from laying flush to the mounting surface; these screws can be removed; Refer to sections: **Attaching one side of a wireway channel section FLUSH to a flat surface**

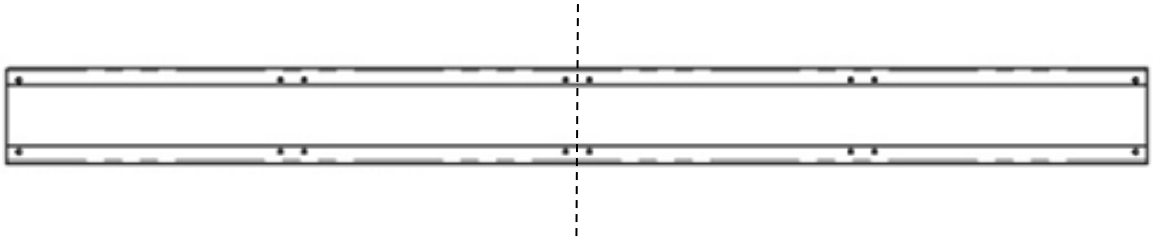


Attaching one side of a wireway channel section to a flat surface

Vertical and Horizontal wireway channel sections can be attached directly to most smooth, flat surfaces. You'll need to drill a number of mounting holes through one of the three "closed" sides of the channel section in order to attach it to the mounting surface with the appropriate fasteners. Starting from the end of the channel section; drill pairs of mounting holes at regular intervals of 12" or less. Always use washers with the appropriate fasteners to increase the surface area of the fastener head. Refer to section: **Selecting and using wireway mounting fasteners**

Attaching one side of a wireway channel section FLUSH to a flat surface

To install a channel section so that it is completely flush with the mounting surface; you will need to remove any screws that are securing one side of any end caps or internal couplers on the side of the channel which will be placed flush against the mounting surface.

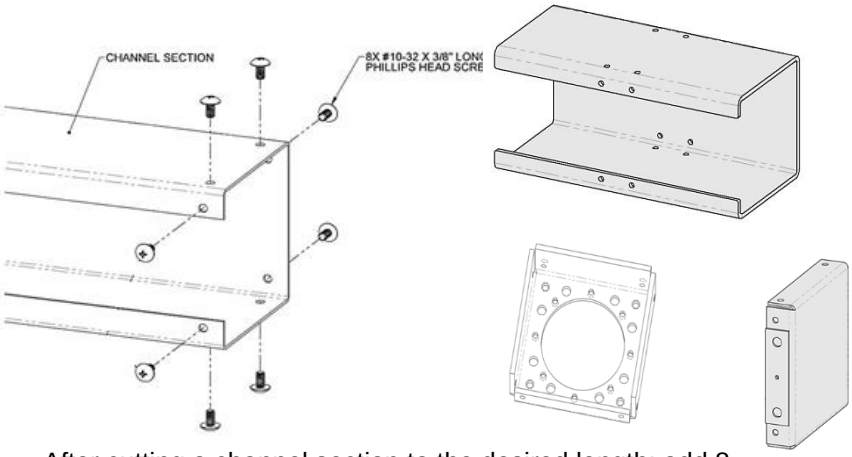


Example; 48” L channel sections shown. Cut between sets of holes to create 2 PCS 24” long

Cutting and drilling Stainless-Steel channel sections and covers

Before cutting or drilling any channel sections or covers; carefully recheck your length calculations and then apply at a couple of layers of wide, blue, painter’s tape over the surface area where a cut or hole will be located to minimize the possibility of scratches. Once the surface is covered, mark the cutting or drilling locations directly onto the tape. Always use a center punch to start all holes.

To ensure proper assembly; the channel and cover sections should be cut at 12-inch increments directly between the two sets of the tapped screw holes of the channel section and the sets of slots on the cover plates. Refer to sections: **Tips on cutting or drilling stainless steel, Tips on cutting or drilling a stainless-steel channel section or cover plate**



After cutting a channel section to the desired length; add 8 holes on the four faces of the channel for the 10-32 screws to attach a coupler, base plate or end cap

Adding holes to the cut end of a channel section for an internal coupler junction, mounting base plate or end Cap

If you are cutting a channel section that is going to be joined to another channel section or be fitting with a end cap; you will also have to add a pair of new holes on each of the four of the channel section for the 10-32 screws that will attach these components.

You will need a cordless drill and a No.9 (.1960) OR No.7 (.2010) OR 13/64" drill bit to create the holes for the #10-32 screws.

Installation Tips
The following installation tips are included as helpful suggestions only; DO NOT substitute these suggestions for your own best practices or established safety procedures.

Tips on cutting or drilling stainless steel
Know that the stainless steel can quickly become “work hardened” by overheating during cutting or drilling operations and that this condition can render the metal MUCH more difficult to machine.

When cutting or drilling stainless steel, start with using slow to moderate pressure and speed. Keep these inputs steady and then very slowly increase the speed and/or the pressure until you start to see metal chips appear. When this happens; DO NOT increase the speed or the pressure as this can quickly cause overheating and work hardening to the metal.

Also know that stainless steel will often have a “Skin Affect” wherein the outer layer of metal will have a much HARDER layer of chromium oxide than the inner material. This outer layer will often require more pressure to penetrate and once through it; you should reduce pressure. With patience, correct technique AND OIL; you will be able to confidently make repeated perfect cuts and holes in stainless steel.

Tips on cutting or drilling a stainless-steel channel section or cover plate
If you must cut a channel section or cover plate we recommend using a band saw or a reciprocating saw with a fine-toothed blade that is intended to cut steel and keep the cut lubricated with oil.

For drilling holes; always use a center punch to start the hole. If you are very experienced with drilling stainless steel; a high-speed steel or “HSS” type of drill bit with a black oxide coating can be used with oil for good results. However; for consistent drilling of numerous holes or for those with little experience; it is recommended to use drill bits which are infused with titanium, tungsten carbide or nitride coatings and apply oil in order to cool and lubricate the bit and render better overall results.

After cutting or drilling; always be sure to remove all burrs and sharp edges with a file, grinder, sanding wheel or a countersink bit on holes.

We do not recommend using an abrasive “cut off” type saw or wheel on stainless steel as this operation will subject the metal to extreme heating which will dramatically discolor the finish where the cut was made.












Using a Hole saw on sheet metal

If you are cutting Stainless steel with a hole saw; refer to the following sections as these tips also apply to using a hole saw:
Tips on cutting or drilling stainless steel
Tips on cutting or drilling a stainless-steel channel section or cover plate

Start by using a hole saw with this greatest number of teeth available or use a saw with carbide teeth and always cut with oil.

If you are using a hole saw with a standard ¼" pilot drill bit in the center:
Remove the pilot bit from the hole saw mandrel and replace it with a section of solid steel rod. This will keep the center hole from enlarging; which will keep the saw rotating in a much tighter and controllable circle.

Mark the center hole location, center punch the location and then carefully drill it through with a ¼" drill bit. Run the hole saw with low pressure and use short impulses of slow speed; add oil, when you see metal chips forming around the edges of the saw; it is an indication that you are cutting correctly; do not change your speed or pressure.

Gently rock the hole saw in a circular motion slightly while cutting as this action will lift some of the saw teeth above the surface. This will reduce the torque needed for the cut, it will help to remove the chips from the cut and it will also increase the control of the saw.

If you are having trouble starting a cut; try running the hole saw in reverse, at a slow speed, for a short time to create a shallow starting / guide cut.

Once some of the saw teeth have begun to penetrate all the way through the sheet; continue with slow speed, low pressure and slightly increase the angle of the gentle rocking action in a circular motion with attention to keeping the time when the saw is in contact with the surface focused on the uncut section until the entire blade of the saw has penetrated the sheet.

Another technique that can work is to cut the same size hole that you are using in a small section of ¾" thick plywood. Then clamp this plywood section securely onto the sheet metal work surface so that it is centered over the hole location and once installed; it will serve as a guide for the outside edge of the hole saw and assist in keeping it running in a truer circle.



Selecting and using wireway mounting fasteners

Choose fasteners that are appropriate for the material that the mounting surface is constructed of and whether the surface is solid or hollow.

Fasteners can be installed directly through pre punched holes in both types of mounting bases.

The installer must make a series of mounting holes in one of the solid sides of the wireway channel sections when attaching it to a surface.

Always use washers with the appropriate fasteners on the inside of the channel section to increase the surface area of the fastener head. Refer to section: **Attaching one side of a wireway channel section to a flat surface.**

If the mounting surface is sheet metal and you are using larger sized “Tek point” or other self-drill screws such as sizes #10, #12 or ¼” to attach channel sections or a mounting base plate; we advise pre-drilling each screw location in the mounting surface with small pilot holes for each fastener.

If you are attaching a vertical wireway to a horizontal wireway; you will need to transfer the holes on the mounting base plate to the side of the horizontal wireway channel section and then drill holes where indicated before installing the fasteners to secure the wireway sections together, Refer to section: **Attaching the bottom of a vertical wireway to a horizontal wireway or other horizontal surface.**





Fabricating struts with EMT conduit to brace the top of a Vertical wireway

One method of bracing the Above Ceiling Mounting Plates that attach the top of the vertical wireway 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 ¾" trade size or larger EMT conduit for making these struts.

Welding option
As a more permanent connection option; the wireway channel sections can be tack welded at the junction points or to a mounting location that is also made of stainless steel.

Know that if welding is used; that the weld locations will be dull and discolored and so will require a secondary process known as passivation aka pickling to reform the shiny, bright, silver outer layer of chromium oxide to restore the original appearance of the stainless steel finish.

Important note - If welding is used to connect the wireway channel sections; internal couplers and mounting base plate must also still be installed at all junction points to ensure the structural integrity of the assembly. We do NOT recommend welding on the end caps or cover plates as doing so would render the wireway assembly unserviceable.

Interactive Catalog of Stainless Steel Wireways
These mounts are included in the **"Stainless Steel Wireways"** product group pages on our website.
For more information; click on the images or descriptions to visit the individual product pages on our website.
PDF Product Information Sheets are available at the Product Attachments tab on each product page.
Practical Quality Systems Home Page



PN 80092 - Wireway, 4"x4", 96" long, stainless steel, w 4 single gang outlets



PN 81300 - Wireway, 4"x4", 144" long, stainless steel, w 4 single gang outlets



PN 81302 - 72" L 4X4 Stainless Steel Horizontal Wireway with 6 Single Gang Outlets for Power & Data



PN 81303 - 96" 4X4 Stainless Steel Horizontal Wireway with 8 Single Gang Outlets for Power & Data

Interactive Catalog of Stainless Steel Wireways
These mounts are included in the **"Stainless Steel Wireways"** product group pages on our website.
For more information; click on the images or descriptions to visit the individual product pages on our website.
PDF Product Information Sheets are available at the Product Attachments tab on each product page.
Practical Quality Systems Home Page



PN 81304 - 72" 4X4 Stainless Steel Horizontal Wireway + 6 Single Gang Outlets for Power & Data + 96"L Vertical Wireway



PN 81305 - 96" 4X4 Stainless Steel Horizontal Wireway + 8 Single Gang Outlets for Power & Data + 96"L Vertical Wireway



PN 81306 - 72" 4X4 Stainless Steel Horizontal Wireway + 6 Single Gang Outlets for Power & Data + 144"L Vertical Wireway



PN 81307 - 96" 4X4 Stainless Steel Horizontal Wireway + 8 Single Gang Outlets for Power & Data + 144"L Vertical Wireway

We believe in ethical SEO relevancy; the following section was included to assist the all-knowing algorithms in locating this page; however, some humans like it too.

These Stainless-Steel products are known by several different names such as:

- Stainless-Steel Wireway
- Stainless-Steel Wire Way
- Stainless-Steel Wire Duct
- Stainless-Steel Wire Trough
- Stainless-Steel Wiring Trough
- Stainless-Steel Gutter
- Stainless-Steel Auxiliary
- Stainless-Steel Cable Trunking
- Stainless-Steel Cable Manager
- Stainless-Steel Cable Duct
- Stainless-Steel Raceway
- Stainless-Steel Power Pole
- Stainless-Steel Data Pole
- Stainless-Steel Power and Data Pole
- Stainless-Steel Power and Data Outlet Strip
- Stainless-Steel Wire Channels
- Stainless-Steel Service Pole
- Stainless-Steel Feed Pole