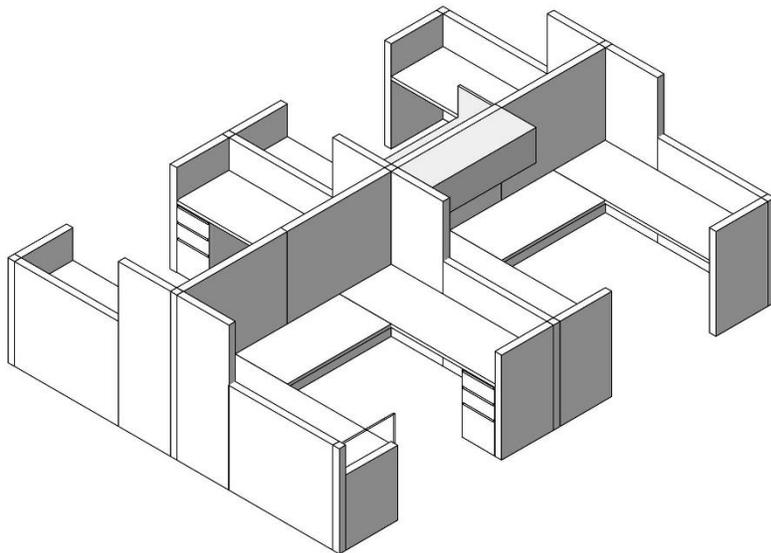
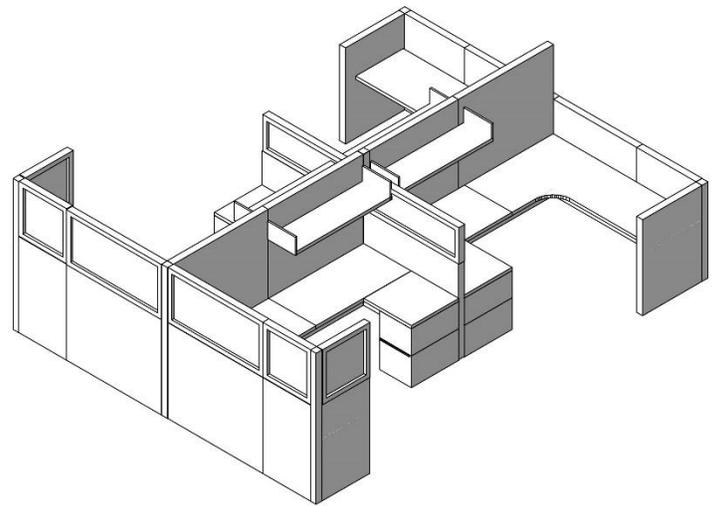


1205

**MODULAR SYSTEM
CONSTRUCTION
AND QUALITY I**



Carpenters Training Committee for Northern California (CTCNC)

OFFICE MODULAR SYSTEMS INSTALLER

APPRENTICESHIP PROGRAM

Course of Instruction

Year	Class#	Class Title (All classes 36 hours - Four (4) Days - 7:00am - 4:30pm)
1	1201	Orientation to Health and Safety
	1202	Introduction to Office Modular Systems Installation
	1203	Tool and Equipment Applications
	1204	Print Reading – Measurement and Layout
2	1205	Modular System Construction and Quality Control I
	1206	Modular System Construction and Quality Control II
	1207	Drapery & Window Coverings, Fine Furnishings
	1208	Floor to Ceiling Wall System Construction

1205

**MODULAR SYSTEM
CONSTRUCTION
AND QUALITY
CONTROL I**

Carpenters Training
Committee for Northern
California

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CARPENTERS TRAINING COMMITTEE FOR NORTHERN CALIFORNIA

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This material was produced using the following elements:

Microsoft Word™
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2014 Windows™ 7

Opeiu29aflicio
Revised 11/8/2017 DK/jt

CARPENTERS TRAINING COMMITTEE

FOR NORTHERN CALIFORNIA

SEXUAL HARASSMENT & APPRENTICE CONDUCT

Sexual harassment in any form or degree by an employee or apprentice against another individual, regardless of their relationship or respective status, is strictly against the policy of the Carpenters Training Committee for Northern California and will not be tolerated. Any such action or activity shall be reported immediately to the person in charge of the training facility. The matter will be promptly investigated and appropriate action will be taken. Copies of all complaints and actions are to be forwarded to the Assistant Director of Field Operations.

Apprentices shall not use lewd and vulgar language while they are on the premises of the Carpenter's Training Center. Any such action shall be reported immediately to the person in charge of the training facility. The matter will be promptly investigated and appropriate action will be taken.

Any person violating the above policies shall be subject to disciplinary action, which may include suspension or expulsion from the training center and/or cancellation from the program.

MODULAR APPRENTICE TOOL LIST

Minimum tools required for a Modular Installer should include:

1. Hard Hat
2. Safety Glasses
3. Work Boots
4. Safety Vest
5. 25' Tape Measure
6. Carpenter Bags or Cloth Apron
7. Tool box or Bag
8. Dead Blow/Rubber Mallet
9. Wonder Bar
10. Socket Set- Up to 3/4" Sockets
11. Adjustable Wrench
12. Set of Straight and Phillips Screwdrivers
13. Set of Wrenches
14. Bits---P1, P2 ,P3 Straight Slot and Phillips Head Bits
15. Robertson Square Bit
16. Magnetic Bit Holder
17. Hex Drive Magnetic Bits—1/4", 5/16", 3/8" and 1/2"
18. Utility Knife
19. Electric Meter Tester
20. Hack Saw
21. 9" Torpedo Level (Magnetic Preferred)
22. Chalk box and chalk

MODULAR INSTALLER GRADING AND EVALUATION

Grading

A uniform weighing system will be used as follows:

- 1. Class Participation and Attitude 10%
- 2. All Tests Except Final Exam 10%
- 3. Hands On Lessons..... 60%
- 4. Final Exam 20%

Assignment Of Grades Will Be As Follows:

- A 92 – 100%
- B 82 – 91%
- C. 73 -81%
- D 68 – 72%
- F Less than 68%

Criteria for Evaluation

- 1. Completion of assignments
- 2. Accuracy
- 3. Participation
- 4. Following instructions

COURSE OBJECTIVES

At the completion of this course, the apprentice will be competent in the assembly of three different cubicle clusters. The student will be able to follow the process from print reading, to layout, to assembly, and then to disassembly. In addition, the apprentice will demonstrate a knowledge of wall mounting and office setup. Finally, the student will be knowledgeable in the types and maintenance of task chairs.

SPECIFIC OBJECTIVES

Upon the completion of this unit, the student will be able to:

1. Understand the basics of lasers including the types and uses.
2. Use the laser to establish the high point of the floor.
3. Identify the parts of the task chair.
4. Make repairs to different types of task chairs.
5. Make a list from a manufacturer's catalog of all the parts needed for a cluster and checks this list against the actual parts of the project.
6. Layout, assemble and dismantle a cluster of four cubicles of Herman Miller Ethospace.
7. Layout, assemble and dismantle a cluster of four cubicles of Kimball Office XSite.
8. Layout, assemble and dismantle a cluster of four cubicles of Haworth Compose.
9. Identify the parts and procedure for installing wall mounting.
10. Locate studs in a wall and use a variety of anchors for wall mounting.
11. Correctly install an office set up.
12. Correctly install wall units and overheads.

**1205- MODULAR SYSTEM CONSTRUCTION
AND QUALITY CONTROL I
PRE-TEST**

Instructions: In the following true/false questions circle the correct answers.

1. T F A laser is only good for shooting grades.
2. T F Chairs with fixed arms are good for your posture.
3. T F The first step in cubicle installation is reviewing the plans.
4. T F Trim includes top trim, hi lo trim and end trim.
5. T F The height of a task chair is controlled by a gas cylinder.
6. T F Squaring a project can be done by using the numbers 3-5-6
7. T F A zipit insert is used to wall mount heavy objects.
8. T F Cut the hole for the doggie door before leveling the cube.
9. T F Generally the skins are installed before the panels are stood in place.
10. T F Most arm pads just screw on and off.
11. T F Usually, electrical must be run before the panels are installed.
12. T F When shooting points, the smallest tape measure reading is on the high spot of the floor.
13. T F Besides cylinder repair, the most common needed repair is the casters.
14. T F There are two types of laser light beams, infrared and invisible.
15. T F ADA stands for Americans with Disabilities Act.
16. T F Wall mountings and overheads must be attached to studs.
17. T F When assembling frames, begin with panels at 90° to each other to brace each other.
18. T F All task chair bases have 4 arms.
19. T F Quality lasers are accurate within 1/16" per 100'.
20. T F Chair gas cylinders are held in place with a clip.

Chapter 1 Laser Level

The laser level is an electronic device that uses a concentrated beam of light to establish reference points and check lines and surfaces for plumb and/or level. Lasers have been used in construction for many years and they have become more sophisticated, cheaper and more versatile. Among other things, carpenters use lasers to establish grades and set concrete forms to the correct elevation, acoustical installers use lasers to establish level ceilings, and drywallers use lasers to set ceilings and to plumb up walls. The modular installer uses lasers to level systems furniture and to plumb up wall systems. Shown below are several types of lasers.

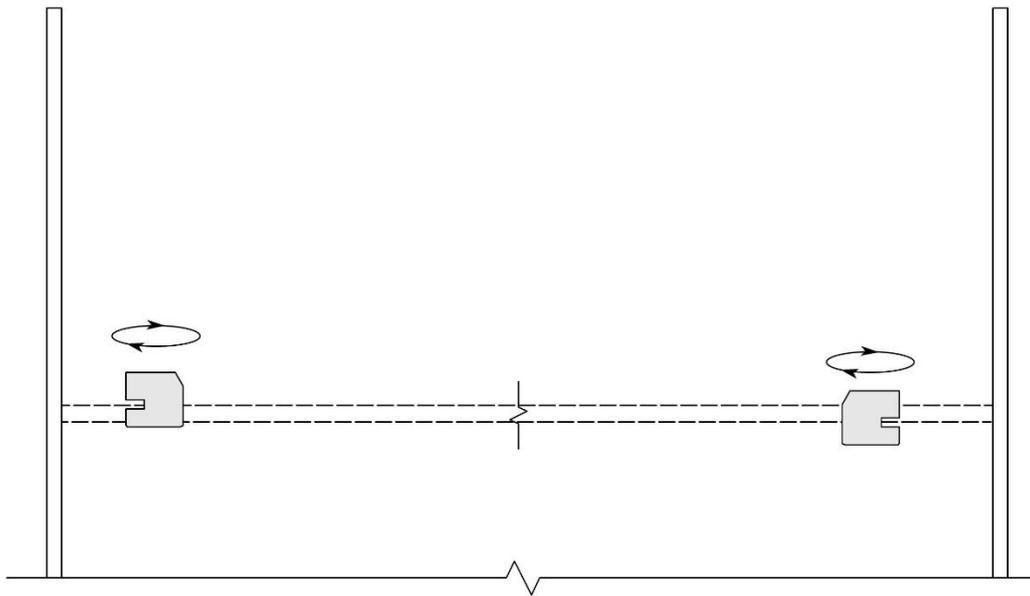


Lasers are generally a rotating level or a fixed split-beam (point to point) laser. The rotating level moves in a continuous 360° level motion and are used for leveling foundations or setting grades. High quality levels are typically accurate within 1/16" per 100'. The split-level emits two fixed laser beams that are at a 90° to each other. The light does not rotate, it simply creates a visible plumb or level line. The accuracy of this type is generally less, closer to 1/4" per 50 ft. This is the type of laser that is commonly used for modular work. In the past, lasers needed to be leveled up by the user. Lasers today, however, are self-leveling, that is you set it up and push a button and, internally, the laser finds level. When most lasers are bumped or knocked out of level, they will either shut themselves off or they will quickly relevel and give a new level line. If you move the laser, shut it off and then turn it on again in its new location.

There two types of laser light beams, infrared and visible. The infrared beam is used in general construction and heavy earth moving. The infrared light is invisible to the human eye which makes it ideal for working outdoors. The infrared light requires the use of a receiver or target (often attached to a rod) that accepts the signal and gives a visual and audio indication of when it is at the correct elevation. The other type of laser emits a visible line and this is the preferred type in modular work.

The visible beam can be damaging to your vision, so the beam should never be directed at or pointed at persons. Do not set up the laser at eye level, this is sometimes difficult with systems furniture since the top of the panels are often at eye level. If this is the case, the laser can be set above or below eye level and then measure up to, or down to the level line. CAL/OSHA states that warning signs and labels should be posted when lasers are in use. Lasers should be turned off when not in use.

While lasers are easy to use, they are delicate instruments that must be handled with care. If the laser is not accurate, there could be serious layout problems. A laser should be checked for before use for accuracy. Shown here is one way to check a point to point laser.



Set the laser up 6" or so from a wall and mark the line, rotate the laser 180° and make another mark on wall about 25' away. Move the laser and place it 6" or so from the other wall, mark the line and then rotate the laser 180° and mark the other wall. Measure the distance between the two lines. If the measurements are the same, the laser is accurate. If there is a difference, divide that difference by two and that will be how much the laser is out of level. At 25' or so, if the difference is more than 1/8", the laser should probably be recalibrated. To check the laser for plumb, set up the laser and mark the beam on the floor and then mark the beam on the ceiling. Drop a plumb bob down from the top mark and see how it lines up with the other mark.

The technology of lasers has progressed to such up point, that they are essential to any modular installation.

Chapter 2 Chairs

Task Chairs

A major part of the systems furniture industry is chairs. Chairs are a part of every installation. Any chair that is damaged or assembled improperly can cost the installation company money to fix it or replace it. Besides that, there is a liability if someone was to be injured sitting on a damaged or broken chair. The most common type of chair for the end user is the office task chair. Task chairs are made to be sat in for long periods of time and to accommodate a large variety of body types. Task chairs also usually have adjustments for chair height, and many upscale chairs have a large variety of ergonomic settings. There are other types of chairs, such as conference chairs that little or no adjustments. Some chairs are delivered pre-assembled and covered with a plastic bag for protection, others come in pieces and must be assembled. Chairs need to be handled carefully during the unloading, staging and installation process.

The installer should be familiar with the basic elements of the task chairs, sometimes you may be called on to do a simple repair or adjustment. All office swivel task chair are made up of five key components: Base, pneumatic lift, seat, back and arms.

- ❖ Base— There are many types of bases. All bases have 5 arms, which are more stable than the 4 armed bases that were the norm in the past. The most common type of base is a plastic base. These are high quality injection molded bases; they are strong and lightweight. The plastic base should have an underside honeycomb of plastic cross members which keep it rigid. Steel bases have become popular lately, however, they are usually used on cheaper chairs, and although they may look high quality, they are of lower quality. Aluminum bases are lightweight and strong and are usually more decorative.



- ❖ Pneumatic gas lift---The gas lift is what controls the height of the chair, it is a cylinder that moves up and down between the base and the seat of the chair. They come in different capacities, most will support users up to 250 lbs. in weight.



- ❖ **Seat**---The seat is the most important element for the user, if the seat is uncomfortable, the user will suffer. There are two main functions that are critical if you are to stay comfortable over a length of time: seat depth and seat tension. The seat needs to be the proper depth for the user, if it is the wrong depth for your legs, you will suffer discomfort in your legs. A good chair will allow you to adjust the depth. Seat tension refers to how hard or easy it is for you to lean back in your chair, the chair needs to be tuned to your weight so that you can do this smoothly. There is usually a knob under the seat that increases or decreases the tension.
- ❖ **Back**---The back of a chair are usually offered in low, medium or high. The key is to have the support where your back needs it. Some are adjustable, but many are fixed. Using a fixed height chair is okay, provided it is a full height back. Ideally the chair should have some lumbar support and hopefully it is adjustable.
- ❖ **Arms**---Many chairs come with fixed arms. These are not a good idea. Most often fixed arms hold your lower arms in an unnatural position, which in turn can push your shoulders and neck into an unhealthy posture. Simple height adjustment arms will allow the user to set them to a comfortable height. Some users may want for the arms to be removed entirely. Padded arms are preferable over hard arms, and being able to adjust the width of the arms is another plus.



Furniture manufacturers are competing for the huge chair market, there are nearly constant changes in styles, appearance, functionality and comfort. Herman Miller's Aeron chair is one of the leading chairs as is Steelcase's Leap, however, there are hundreds of other chairs available. These chairs can cost hundreds or even thousands of dollars and given the size of the market, we are talking about major expenses for client.

Chairs are an integral part of the modular industry. While they do not generally involve much assembly, it is important that they be protected from damage throughout the unloading and staging process.

Chair Repair

Depending on the client, task chairs are either new or existing chairs at the facilities. Sometimes chairs need to be repaired or fixed. This includes new chairs that have been damaged during shipment or handling (do not toss the boxes around), or older chairs that have wear and tear. The installer should have a basic knowledge on how to replace or repair various chair components. One of the most common issues with these chairs, is the failure of the pneumatic gas cylinder to raise or lower the chair or to stay in a given position. This usually requires replacing the cylinder. Replacing the gas cylinder, in most chairs is fairly easy, if you have the right parts and tools. Below are the steps for the replacement of the cylinder, remember there are several ways to perform this task:

First find a clean area to work in or lay down a furniture pad so that you don't make a mess. This also protects the chair. Ideally, have the chair at a convenient work height.

Flip the chair over and remove the base. The base is usually pressure fitted and so you may need to use your mallet and a protective block to knock the base loose from the cylinder. Once loose, there is a telescoping cover that will fall off, be aware of the order that the cover came off

The cylinder is held in place with a clip. To free the cylinder, open the clip with a screwdriver and push the clip off. The cylinder should be free from its tapered sleeve. The cylinder comes in different lengths, so measure the cylinder to make sure you have the right replacement. Shown below on the left is the clip and on the right we see the cylinder and the tapered sleeve.



On the bottom of the cylinder, there is a ring of ball bearings, if these are damaged, they should be replaced. The new cylinder will be reassembled in the reverse order.

The back of the chair can be removed along the seat of the chair. This allows for replacement of a soiled seat or a broken back. Changing parts can often be more economical than buying a new chair. In some cases the chair is under warranty and so the cost of the repair is covered by the manufacturer.



Another common repair is to replace the arm pads which get worn from use and often are damaged by forcefully shoving the chair under the worksurface. In addition, new arms may be needed. Most pads and arms just screw on and off.

After cylinder damage, the most common repair needed is the casters. These are sometimes damaged during staging handling the chairs too roughly. The most common cause of caster failure is the plastic housing on the caster will crack and the caster will not stay on the shaft. The caster is removed by prying it off the shaft and the new caster is pushed back on with enough force to snap into place.



These are some of the basic repairs that encountered; others may be more involved, like dealing with the tilt and swivel mechanisms.

The installer should be knowledgeable about the repair of different chairs and that skill can make you in demand with your employer. In some companies, one employee might be designated to do all the chair repair which can be a good job to have. Again, handle chairs with care, there is no reason for a chair to be damaged or broken by the installer.

Chapter 3 Project Procedure Sheet

We will be installing three different mockups of cubicles; Ethospace by Herman Miller, Compose by Haworth, and XSite Office by Kimball. You will be divided into groups and each of the three groups will work on the complete installation of one of these mockups. With each installation, we will follow the same procedures to lay out, assemble and dismantle the project.

First we will look through the manufacturer's specifications for each product. This is what the designer uses to specify what product to use. This gives the dimensions of each piece including the height, width and thickness of the frames. These will also include the thickness of the panels, which when added to the frame will affect the total dimensions of the cluster. For example, a completed panel (frame + 2 skins) on the Compose mockup is equal to 3", whereas, an Ethospace completed panel is equal to 3 1/2". This information is essential for the correct layout of the project.

The second step is to thoroughly study the plans. As seen on the shop plan, the three mockups rotate their position in the shop. Each group will eventually build all three of the mockups. In addition there is a floor plan for each of the products, the apprentice should become familiar with this floor plan and closely follow it. Some of the plans include elevations and components that will give information about the tiles (skins) and such things as worksurfaces and storage. Other information needed are the locations of receptacles and various types of ties and supports.

Once in the shop, you need to lay out your cluster of cubicles. To begin layout, you need to have at least two references as to where you will position the cluster in the shop. In the field, these measurements need to be checked for ADA compliance. The ADA stands for the Americans with Disabilities Act, which is a federal law passed by the United States government that guarantees equal opportunities for individuals with disabilities. The purpose of the ADA is to ensure that all Americans have access to public areas for work, leisure, and the performance of everyday activities. The ADA requires that all public buildings are accessible to people with disabilities. Regulations include guidelines for constructing barrier-free accessible routes and installing disability-related components and accessories. ADA regulations also provide construction dimensions, layout considerations, clearances, and tolerances. These regulations must be followed in all phases of construction.

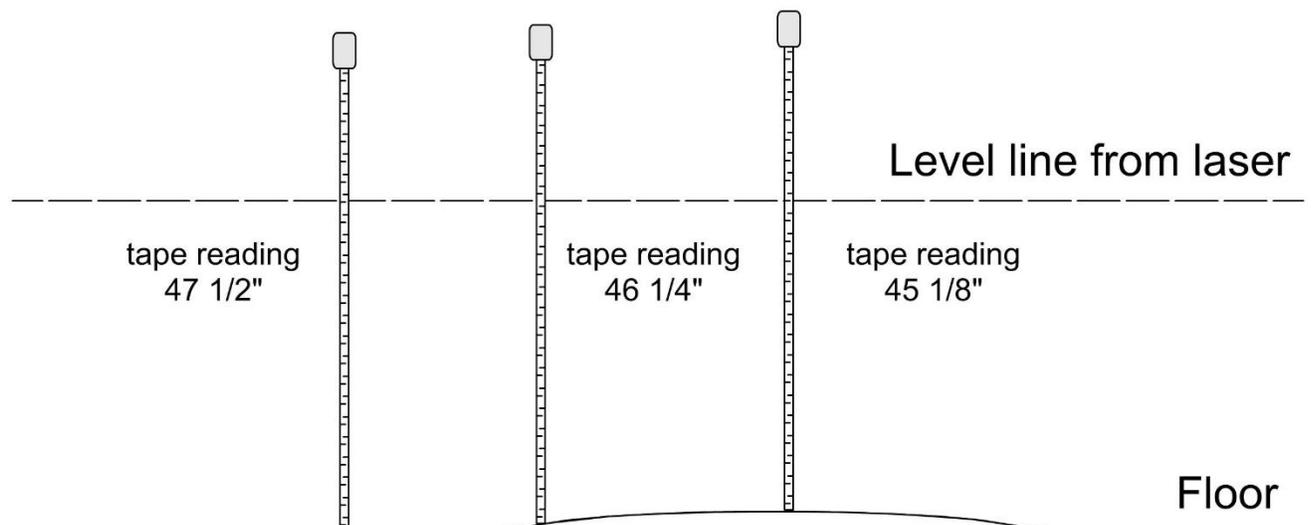
The primary goal of the ADA is to create accessible routes. This is quite important when it comes to placing clusters of cubicles. Accessible routes are continuous, unobstructed paths that accommodate people with disabilities, such as a person who is visually impaired or a person using a wheelchair, walkers or canes. Exterior accessible routes include parking spaces, parking access aisles, curb ramps, crosswalks, and ramps. Interior accessible routes include hallways, floors, ramps, elevators, chairlifts, and clear floor space. Aisles need to be a minimum width of 3'- 8" (44"), so when laying out a cluster, check to make sure that there is sufficient clearance.

In our shop, we can snap chalk lines on the rough floor, however, on a finished floor this is unacceptable, it would need to be cleaned and the chalk could stain the floor. So, with finish floors, you use stringline and tape to make your layout. Usually, the line represents the one of the outside faces of the finished panel. It is not necessary to lay out both sides of the wall.

Now you can move on to staging. Your instructor will provide the location of your product. Using proper lifting techniques, bring the product to the staging area close, but not on your layout. Take care of the product, just because the shop is not a finished space that does not mean that you can handle the products roughly. Do not encroach on any other mockup's space. Compare your checklist of parts against the parts that you have; inform your instructor if anything is missing. Since we will be using these mockups over and over, keep close watch on the parts.

The next step is to find the high spot on the floor for the purpose of being able to level the cluster correctly. This is done by setting up the laser and measuring with a tape at various points along the mockup layout. Locate where your leveling glides will be, and shoot those points. This is so you can have adjustment where it is needed.

Read the measurement where the beam hits the tape measure.



As seen here, the smallest measurements (45 1/8") is really the highest spot on the floor. Once the high point is determined, adjust the leveling glide so that only 1/4" is showing. This will allow some play if necessary. The lower the assembly, the better it looks, it does not look good to have the bottom of the panels sitting 3" off the floor. You rarely can begin leveling at the highest spot, so the laser needs to be set to a height slightly above panel height at the high spot.

The assembly can now begin. Starting with the frames of the spine, form a L or a T, so that the frames will brace themselves. One member of the team should continue with assembling the spine while others drop back and complete the ribs and the wings. Work progressively until all the frames are in place. Before the tiles are installed, more things need to be done.

This is the time when you level the whole mockup. Make sure the level is set up to the high spot that was determined earlier. Begin with the first connection at the spine and adjust that panel to the correct height. Proceed to the post connections on the ribs, and level them. Next, come back and snug up the intermediate glides; it is not necessary to shoot these in. Continue in this manner until the whole assembly is level.

The other thing that needs to be done before installing the tiles, is to ready the electrical. Connect all the electrical straps and install the receptacles (duplexes) according to the plan. Confirm where the power supply is located; it may be different than where it shown on the plan. The supply could be in the floor, in the ceiling or in a wall. If it is in the ceiling, then a power pole (top feed) will be needed. Connect the feed, base or top, into the closest outlet for the supply. At this point, data cabling needs to be run or laced into the system. Kick plates cannot be installed until this is completed. An electrician will be required to connect the house supply to the furniture feed, this not to be done by the apprentice or any installer!

Now that the frames, leveling, electrical and data are completed, the tiles and the kickplates can be installed. Refer to the tile plans or elevations to match the correct skin to the correct frame. The subsequent step is to install the horizontal and vertical trim, specifically the top trim and the end trim.

Before installing the components, you need to straighten, align and square the whole project. If the components were already in, it would tie together the walls and make them harder, and heavier to move. Straightening is done by "eyeballing" and measuring from known distances. It is important that the installation be straight since this is readily visible to the client.

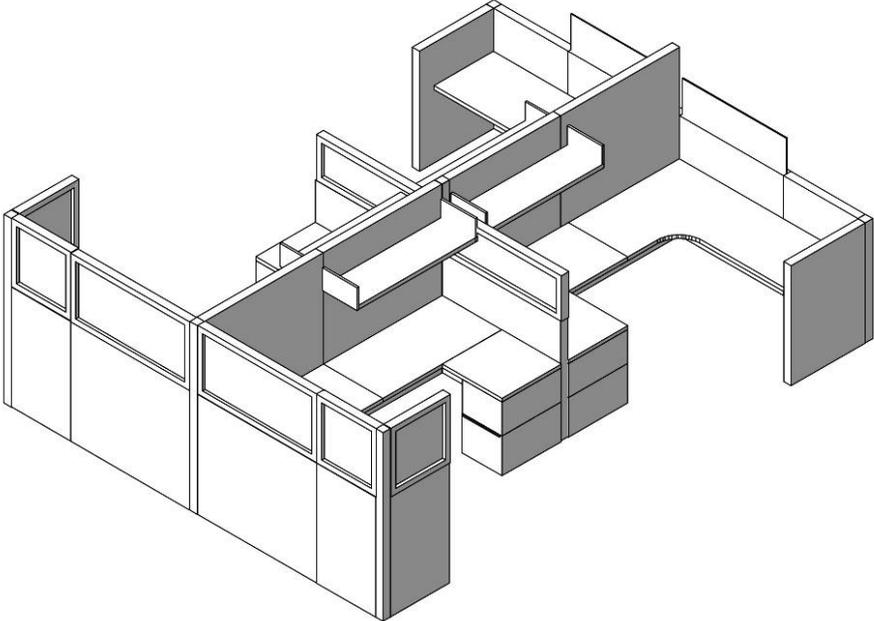
Consult the plans and then put in the components. Begin from the top down, this gives you room to work and avoids reaching to install an overhead over the worksurface. Be sure to use the correct brackets and hardware to support the worksurfaces. This is the time to make any adjustments to worksurface heights. The lead installer should know if there are any ergonomic considerations in any individual cubicle. If not, worksurfaces are generally installed between 27" to 30" to the top of the worksurface.

Lastly, install the pedestal, keyboards, monitor arms and any paper flow accessories. Many pedestals and overheads do not have lock cores already installed. The installer would now put the cores into the pedes and the overheads. The locks for any one cubicle need to be the same.

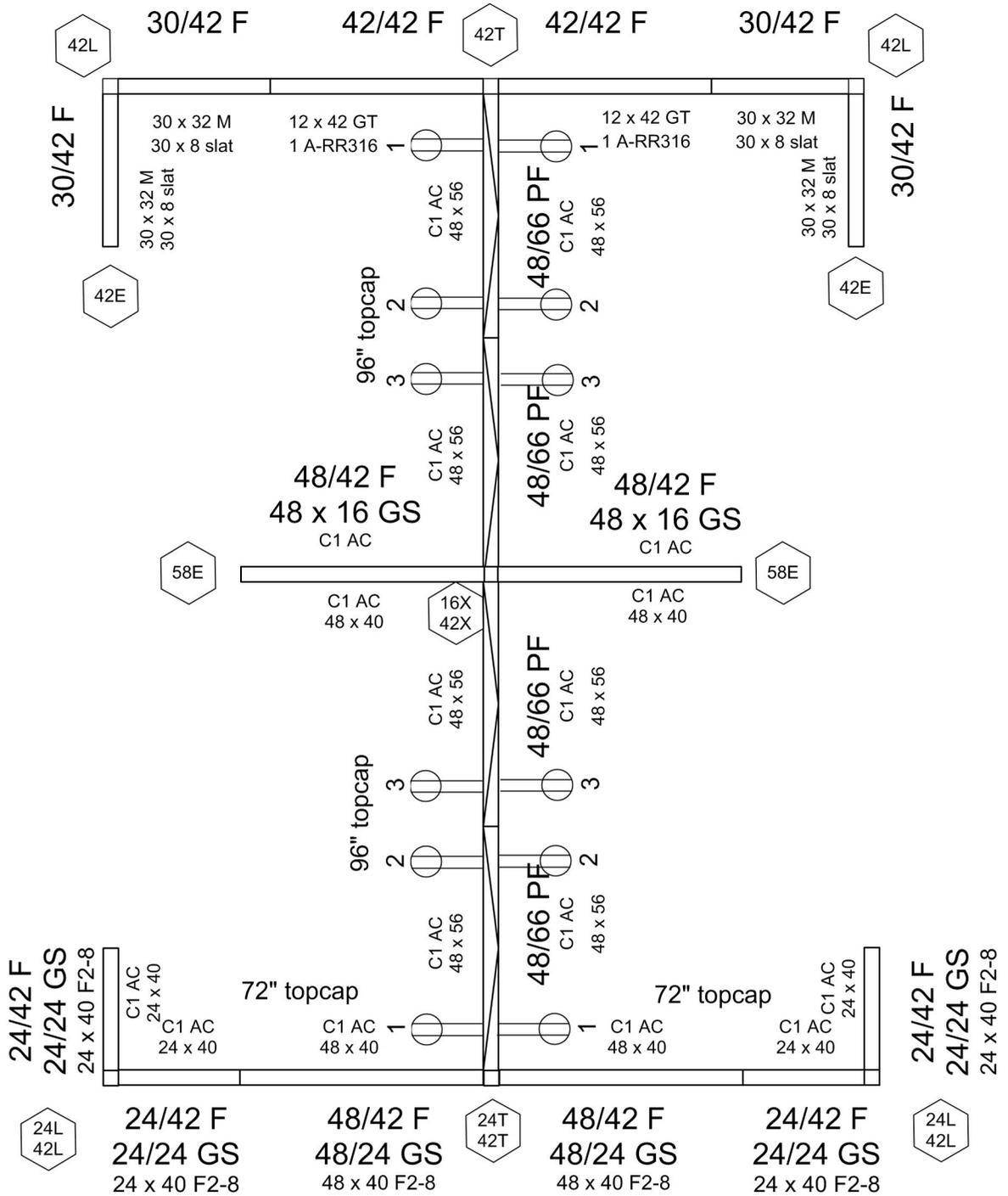
At this point, your instructor will grade your project. The emphasis is on the quality of the installation. While speed is definitely something that is needed in the field, at school, the key to the project is to understand the product and the process.

Once everything is completed, the project now needs to be dismantled. This should be done in the reverse order of the assembly. Remember that, unlike in the field, these mockups will be used many times, so care needs to be taken to ensure that all parts and pieces are accounted for and that attention is paid to make sure that the frames and skins avoid damage.

Lesson 1



HAWORTH COMPOSE



Haworth Compose

Floor Plan

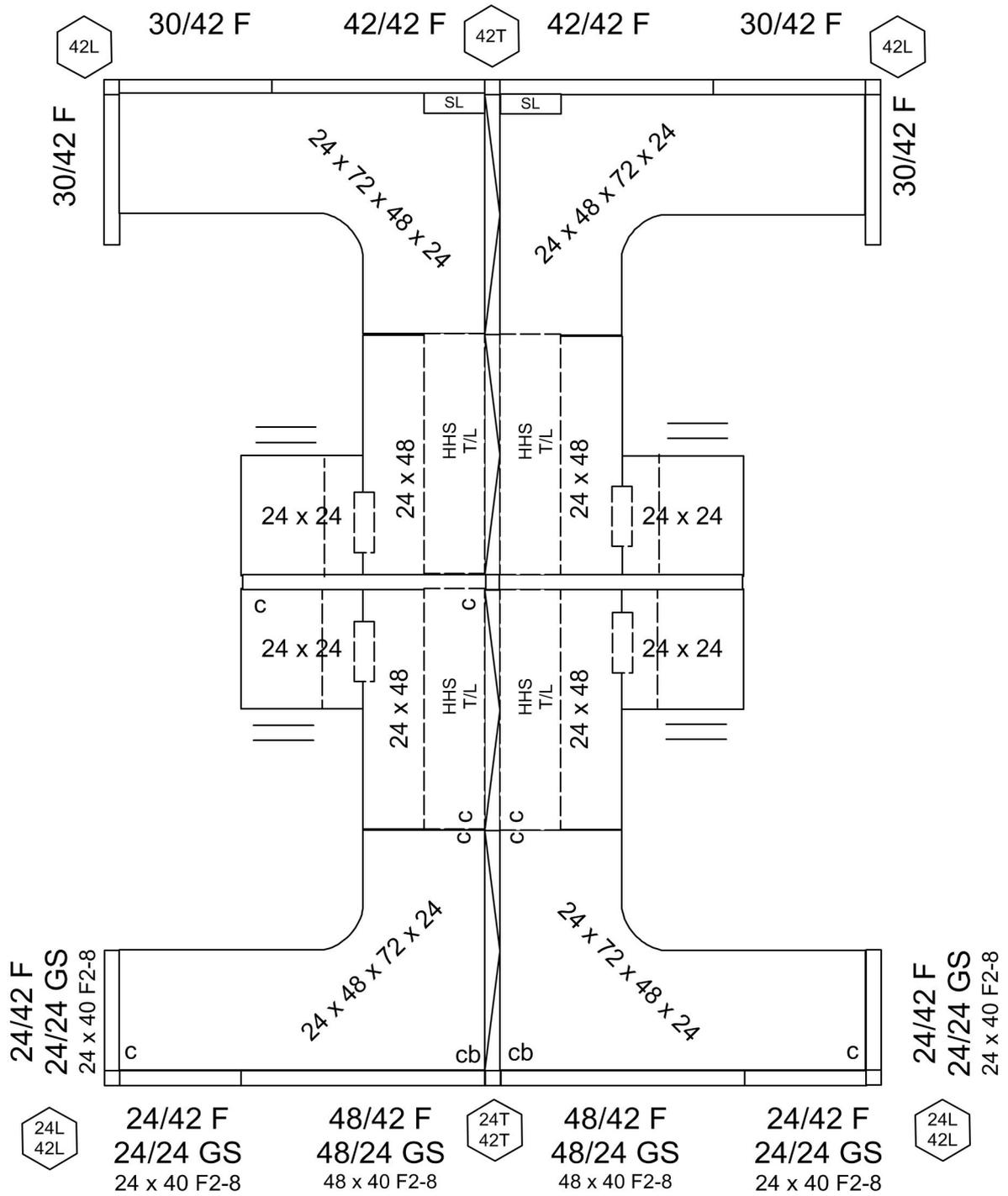
Date:
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Sheet 1 of 2

Scale: 3/8= 1'

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Haworth Compose

Component Plan

Date: 3/28/17

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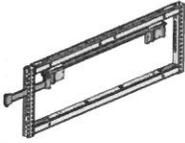
Sheet 2 of 2

Scale: 3/8" = 1'

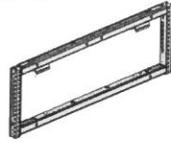
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Product Statement of Line – Compose Connections

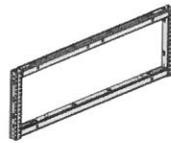
Connections Frames



Connections Frame With Below Worksurface Power – 3-Circuit or 4-Circuit (2+2 or 3+1)



Connections Frame With Knockouts Only for Routing Power (Does not include PDA or Flex Connector)

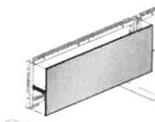


Connections Frame Non-Powered (Does Not Include Knockouts for Routing Power and Data)

Individual Tiles



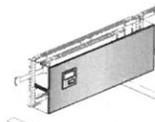
Individual Tile 8" High (Fabric, Laminate, Steel or Wood)



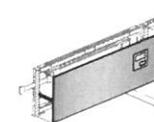
Individual Tile 16" High (Fabric, Laminate, Steel or Wood)



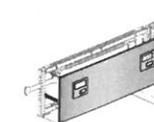
Individual Tile 24" High (Fabric, Laminate, Steel or Wood)



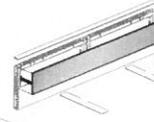
Technology Access Tile – 16" High Single/Left Handed (Fabric, Laminate, or Wood)



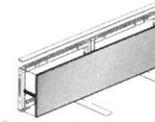
Technology Access Tile – 16" High Single/Right Handed (Fabric, Laminate, or Wood)



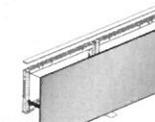
Technology Access Tile – 16" High Double (Fabric, Laminate or Wood)



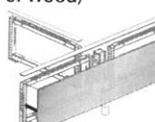
Spanning In-Line Tile – 8" High (Fabric, Laminate, Steel or Wood)



Spanning In-Line Tile – 16" High (Fabric, Laminate, Steel or Wood)

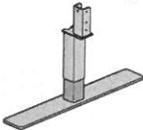


Spanning In-Line Tile – 24" High (Fabric, Laminate, Steel or Wood)



Spanning 3-Way Intersection Tile – 16" High (Fabric, Laminate, Steel or Wood)

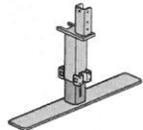
Frame Legs



Connections Frame Leg – With Foot For Square Open Base, In-Line/End of Run Conditions



Connections Frame Leg – No Foot For Square Open Base, In-Line/End of Run Conditions



Connections Frame Leg – With Foot For Tile to the Floor, In-Line/End of Run Conditions



Connections Frame Leg – No Foot For Tile to the Floor, In-Line/End of Run Conditions

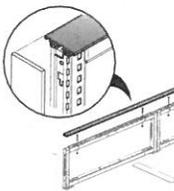


Connections Frame Leg For 90° / 2-Way, 3-Way and 4-Way Intersections

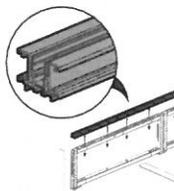


Connections Frame Leg For 120° / 2-Way and 3-Way Intersections

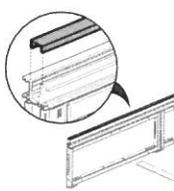
Top Trims and Accessories



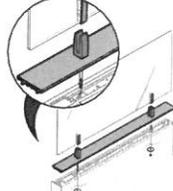
Aluminum Top Trim



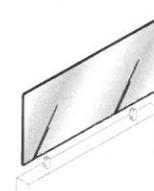
Work Rail Top Trim



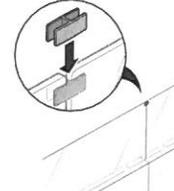
Work Rail Top Trim Cover



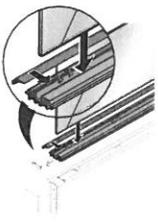
Glass Topper Bottom Rail Kit



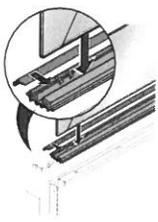
Glass Topper 8", 12" and 16" High



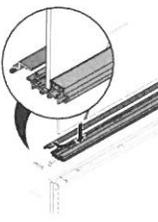
Alignment Clip Kit



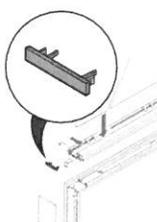
Frameless Glass and Rail Kit – Aluminum ¼" Thick



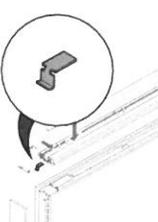
Frameless Glass and Rail Kit – Aluminum ½" Thick



Frameless Glass Bottom Rail Aluminum



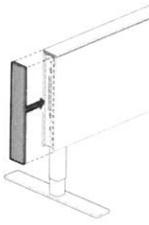
Bottom Rail End Cap



Frameless Glass End-of-Run Clip

Product Statement of Line – Compose Connections

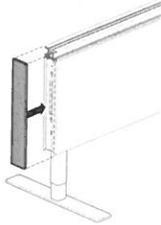
End-of-Run Trim



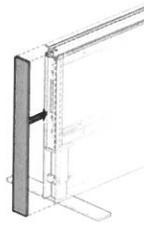
End-of-Run Trim
For use with
Aluminum Top Trim/
Square Open Base



End-of-Run Trim
For use with
Aluminum Top Trim/
Tile to Floor

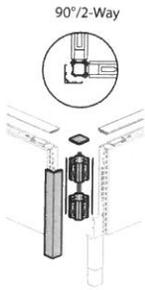


End-of-Run Trim
For use with
Work Rail Top Trim/
Square Open Base

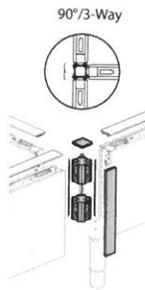


End-of-Run Trim
For use with
Work Rail Top Trim/
Tile to Floor

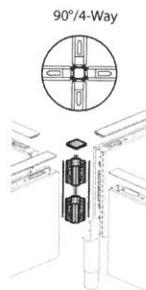
Corner Connectors



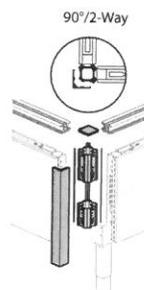
90°/2-Way
Intersection
For use with
Aluminum
Top Trim



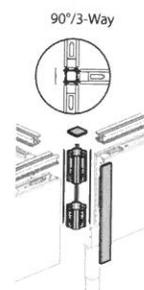
90° / 3-Way
Intersection
For use with
Aluminum
Top Trim



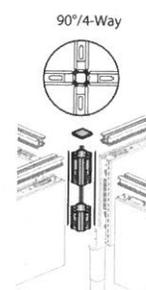
90°/4-Way
Intersection
For use with
Aluminum
Top Trim



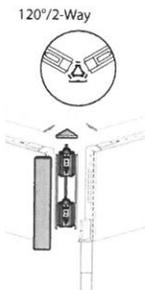
90°/2-Way
Intersection
For use with
Work Rail
Top Trim



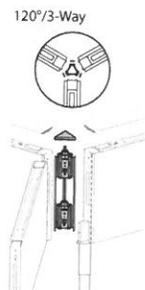
90°/3-Way
Intersection
For use with
Work Rail
Top Trim



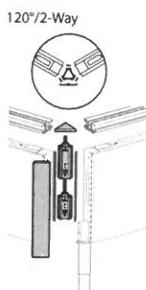
90°/4-Way
Intersection
For use with
Work Rail
Top Trim



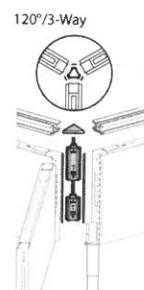
120°/2-Way
Intersection
For use with
Aluminum
Top Trim



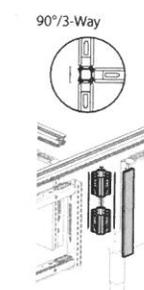
120°/3-Way
Intersection
For use with
Aluminum
Top Trim



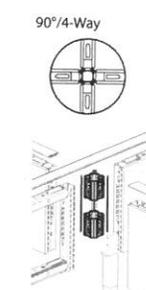
120°/2-Way
Intersection
For use with
Work Rail
Top Trim



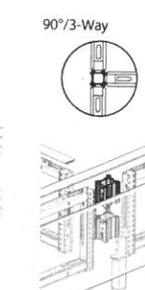
120°/3-Way
Intersection
For use with
Work Rail
Top Trim



90°/3-Way
Intersection
Spanning
Blocks

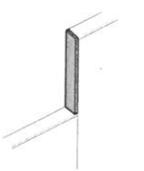


90°/4-Way
Intersection
No Top Caps

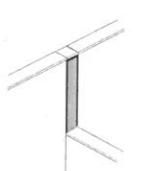


90° / 3-Way
Intersection
No Top Caps

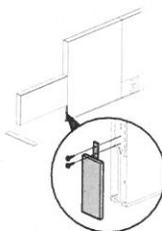
Panel Accessories



Variable Height
Trim - Proud



Variable Height
Trim 3-Way &
4-Way - Flush



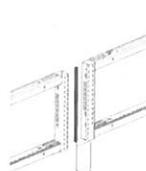
Raceway
End-of-Run
Cover



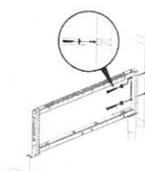
Aligner
Light Block



Half Aligner
Light Block



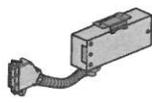
Vertical
Light Block



Frame Wall
Mount

Product Statement of Line – Compose Connections

Electrical Components



Base Feed Module
Concealed Hardwire
Connection
3-Circuit or 4-Circuit



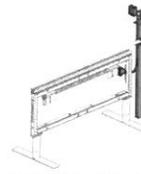
Compose
Connections Infeed
Harness –
3-Circuit or 4-Circuit



Systems Furniture
Power Interface
Jumper
3-Circuit or 4-Circuit



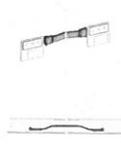
Top Feed Module
3-Circuit or 4-Circuit



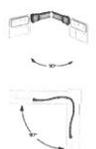
End of Run Top Feed
3-Circuit or 4-Circuit



Connections
Power Retrofit Kit
3-Circuit or 4-Circuit



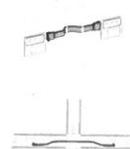
Flexible Power
Connector
3-Circuit or 4-Circuit



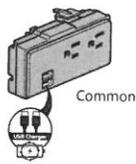
Flexible Power
Connector
90° Corner Span
3-Circuit or 4-Circuit



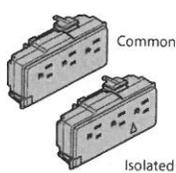
Flexible Power
Connector
120° Corner Span
3-Circuit or 4-Circuit



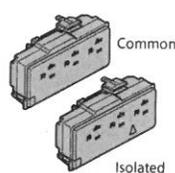
Flexible Power
Connector
Straight Span
3-Circuit or 4-Circuit



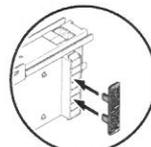
15 Amp Duplex
Receptacle with
USB Charging Outlet
3-Circuit or 4-Circuit



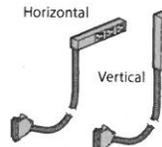
Triplex Receptacles
15 Amp
3-Circuit or 4-Circuit



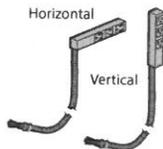
Triplex Receptacles
20 Amp
3-Circuit or 4-Circuit



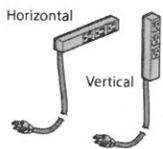
Power Break
Marker



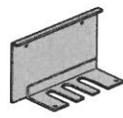
Power Tap
Power Base Connector
3-Circuit or 4-Circuit



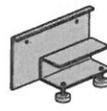
Power Tap
Hardwire



Power Tap
Corded



Power Tap
Bracket Fixed



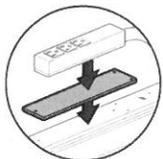
Power Tap
Bracket
Adjustable



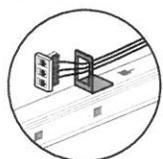
Power Tap
Bracket
Under Surface



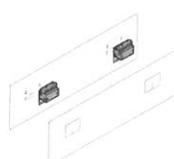
Conduit Clamp



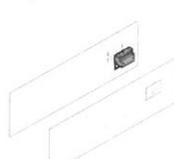
Frame Mounted
Power Tap Bracket
Concealed



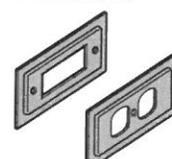
Frame Mounted
Data Plate Bracket
Concealed



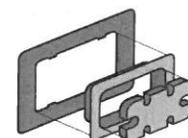
Hardwire Power Kit -
Double Sided
for use on Compose
Connections



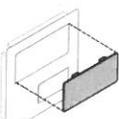
Hardwire Power Kit -
Single Sided
for use on Compose
Connections



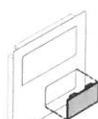
Receptacle Plate
Hardwired



Tile Grommet Kit



Receptacle
Blank Cover



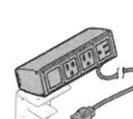
Data Blank
Cover



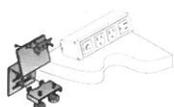
Power and
Communication
Bezel



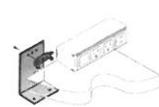
Desktop Port



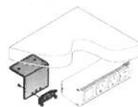
Enhanced Power Module
Corded (3, 4 or 6-Port)



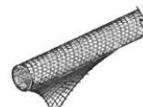
Enhanced Power
Module Brackets
Above Worksurface
Adjustable



Enhanced Power
Module Brackets
Under Worksurface
Fixed



Enhanced Power
Module Brackets
Above Worksurface
Fixed



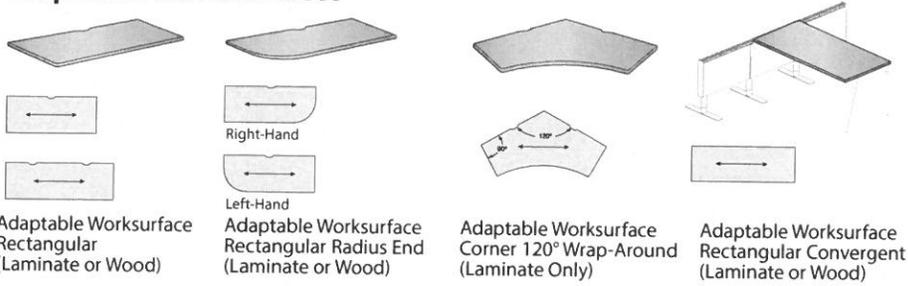
Cord Manager
Mesh



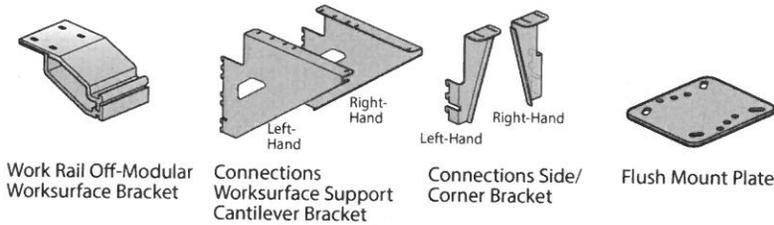
Cable Chain

Product Statement of Line – Compose Connections

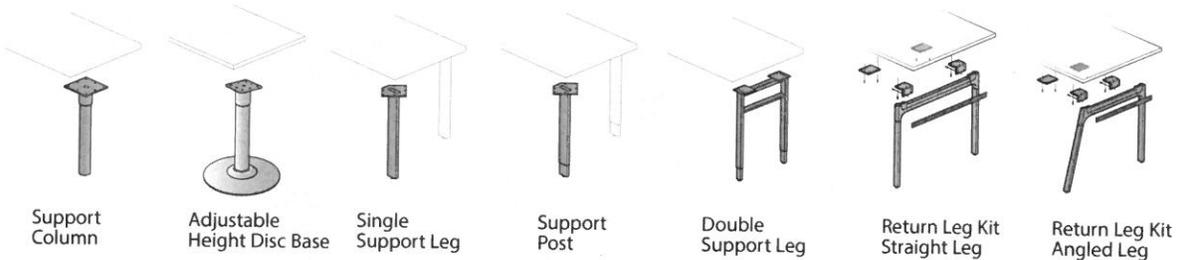
Adaptable Worksurfaces



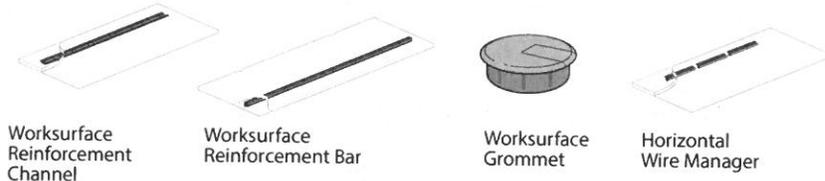
Brackets



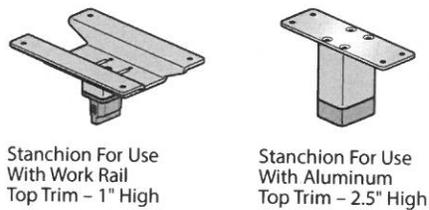
Worksurface Support



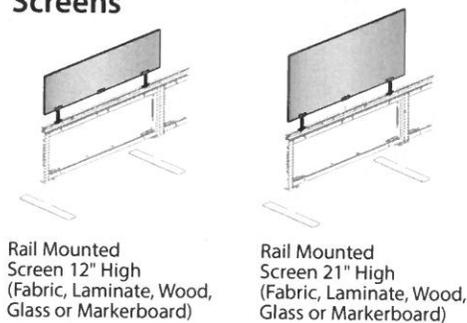
Worksurface Accessories



Desk-Height Storage Support

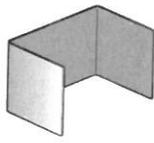


Screens

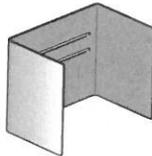


Product Statement of Line – Compose Connections

Belong Work Tools



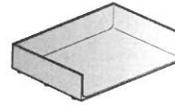
Open C Cubby – No Slots



Open C Cubby – With Slots



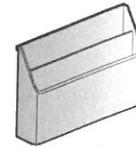
Blotter



Paper Tray Landscape



Tool Cup



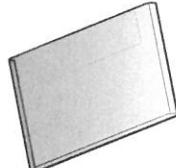
Hanging Sorter



Mini Shelf



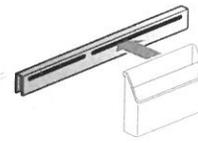
Reference Shelves – Small



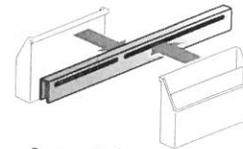
Reference Shelves – Large



Reference Shelves – Blotter Reference Shelf



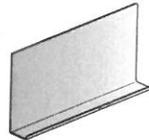
Screen Rail – Single Sided



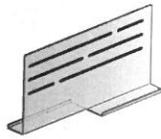
Screen Rail – Double Sided



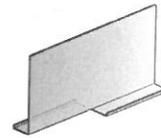
Territory Screen End-of-Run With Slots



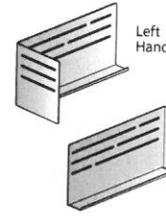
Territory Screen End-of-Run Without Slots



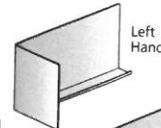
Territory Screen Shared With Slots



Territory Screen Shared Without Slots

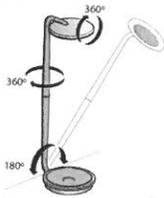


Territory L-Screen With Slots



Territory L-Screen Without Slots

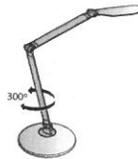
Lighting



Pixo



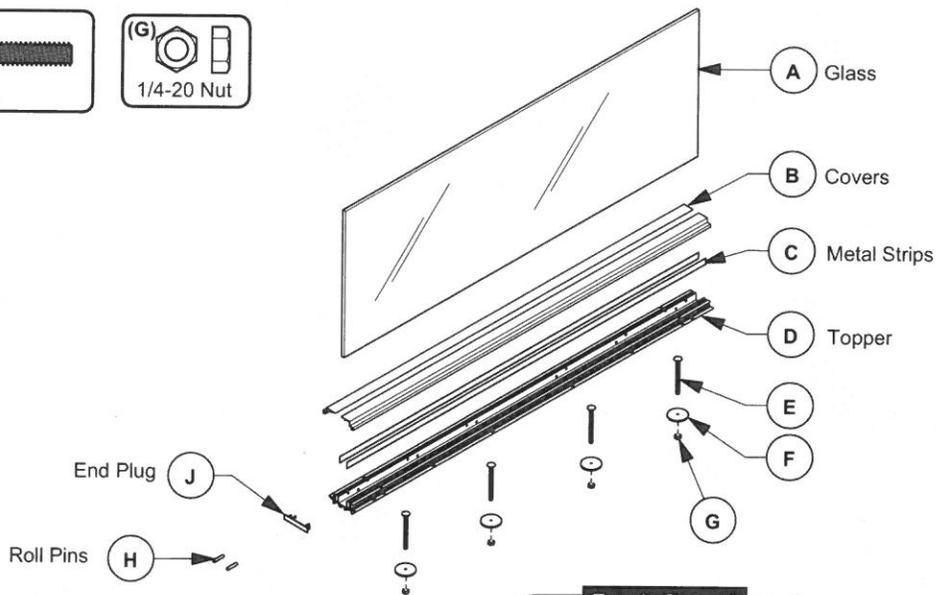
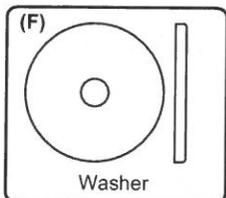
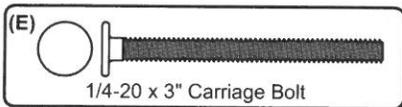
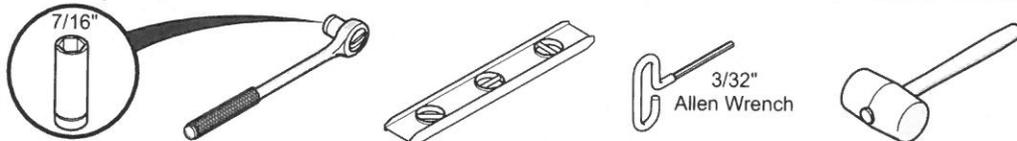
Voyage without Occupancy Sensor



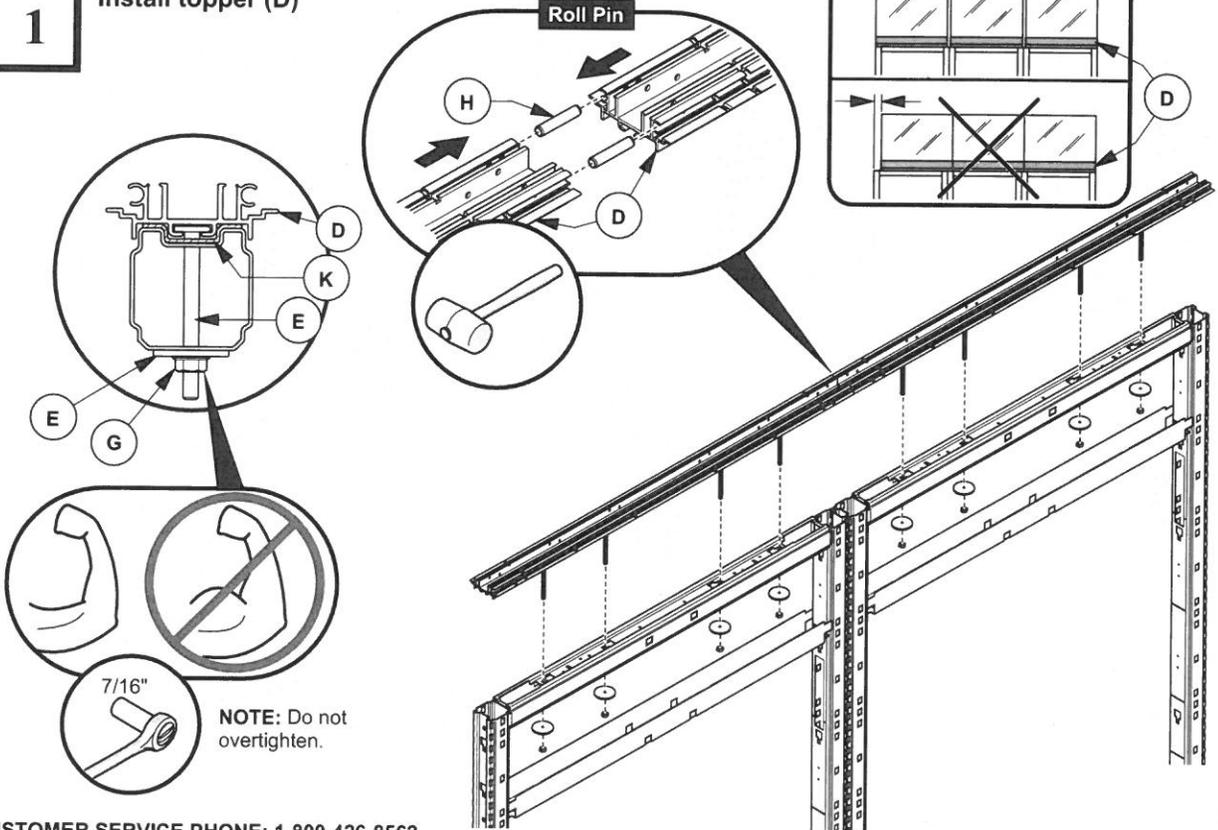
Voyage with Occupancy Sensor

COMPOSE®
Frameless Glass
Installation Instructions

Tools Required



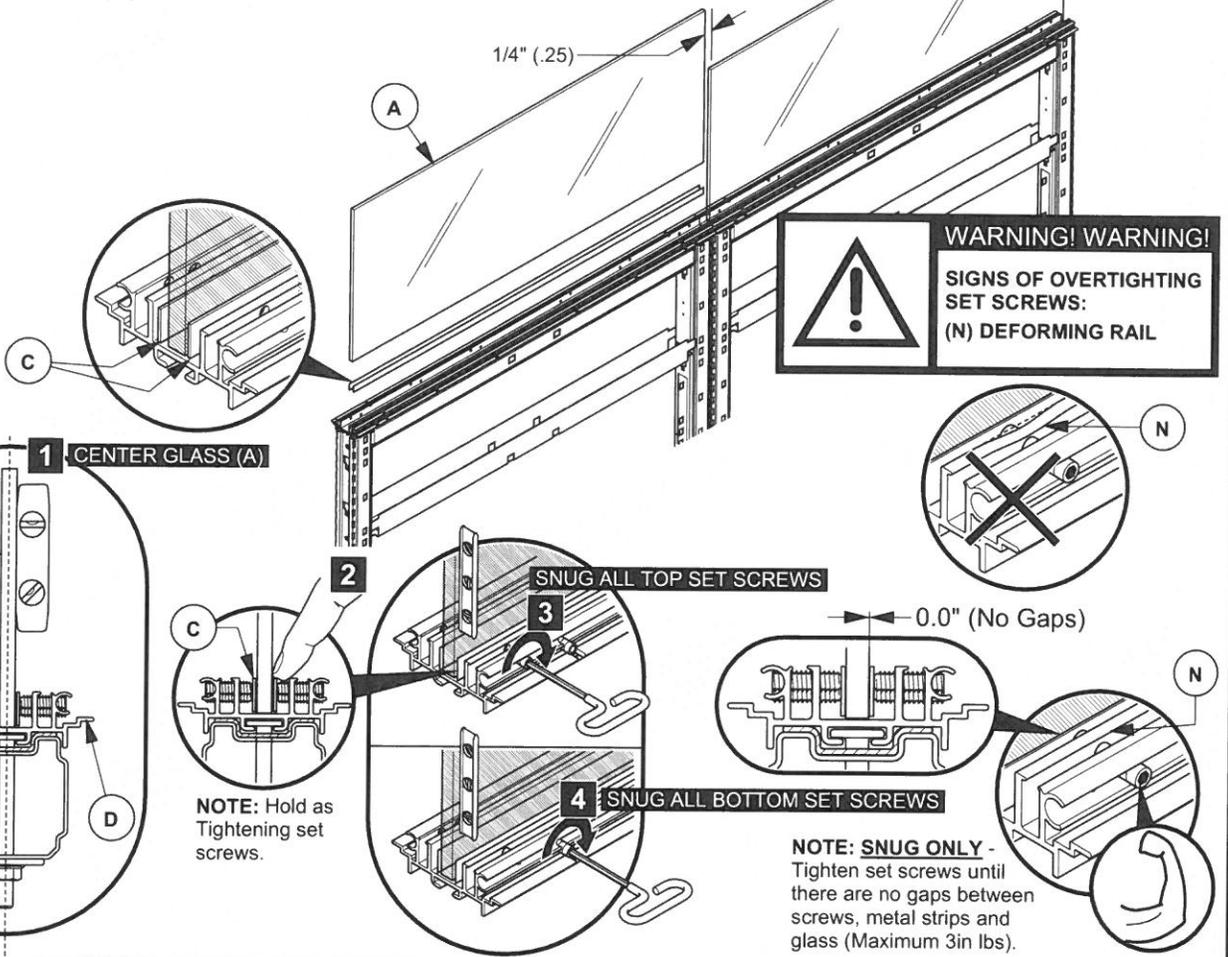
1 Install topper (D)



CUSTOMER SERVICE PHONE: 1-800-426-8562

2

Install glass (A)



1 CENTER GLASS (A)

3 SNUG ALL TOP SET SCREWS

4 SNUG ALL BOTTOM SET SCREWS

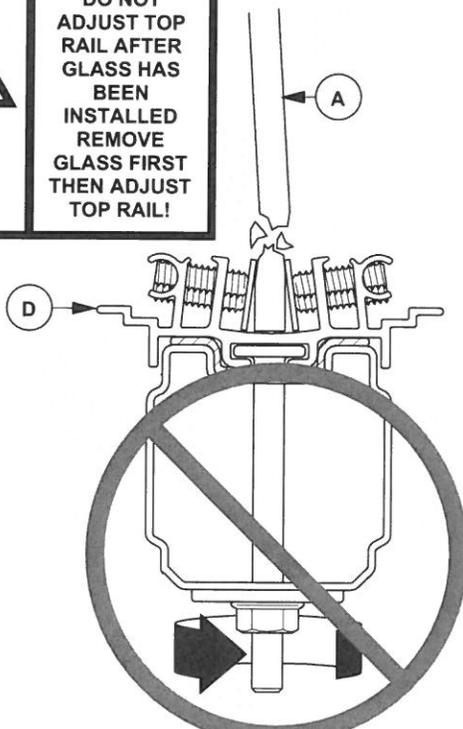
NOTE: Hold as Tightening set screws.

NOTE: **SNUG ONLY** - Tighten set screws until there are no gaps between screws, metal strips and glass (Maximum 3in lbs).

WARNING! WARNING!



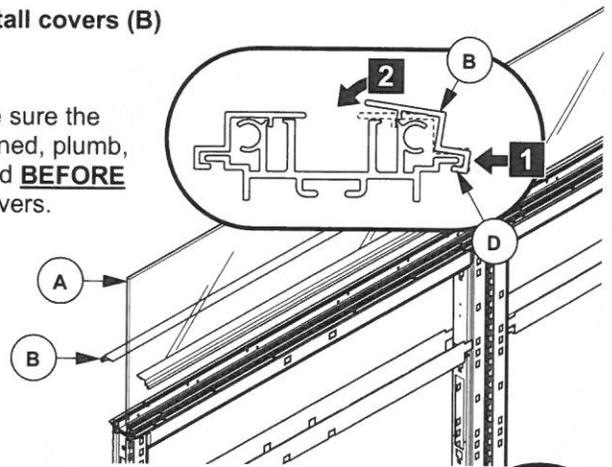
DO NOT ADJUST TOP RAIL AFTER GLASS HAS BEEN INSTALLED REMOVE GLASS FIRST THEN ADJUST TOP RAIL!



3

Install covers (B)

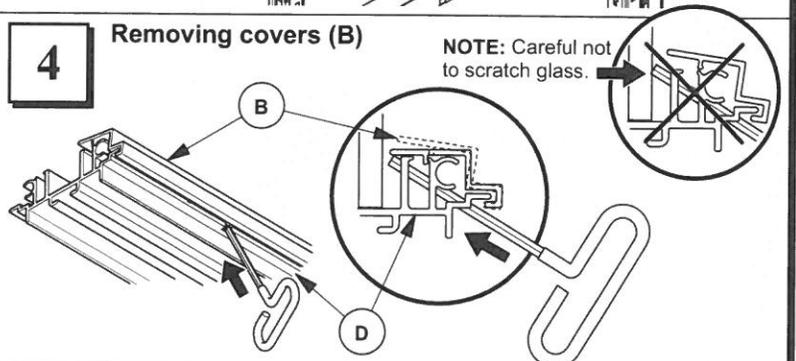
HINT: Make sure the glass is aligned, plumb, and centered **BEFORE** installing covers.



4

Removing covers (B)

NOTE: Careful not to scratch glass.



CUSTOMER SERVICE PHONE: 1-800-426-8562

HAWORTH

E.C.O. No: 360-195

Page: 2 of 3

Part No: 7029-9683

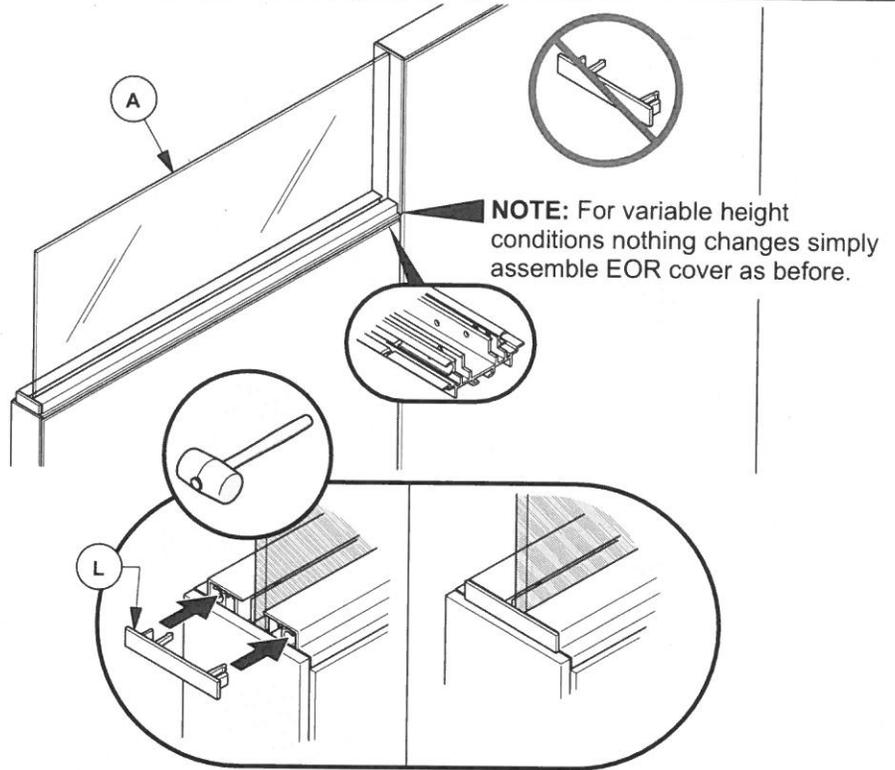
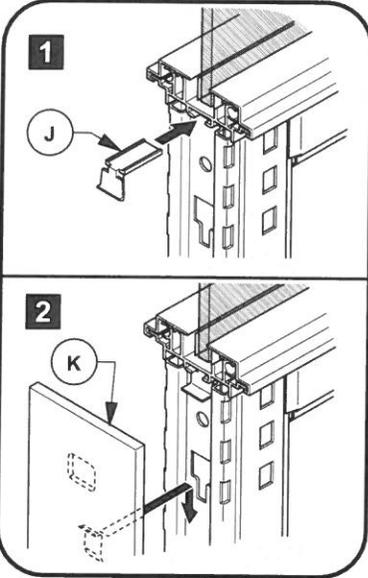
Rev: C

5

Install end-of-run (K)

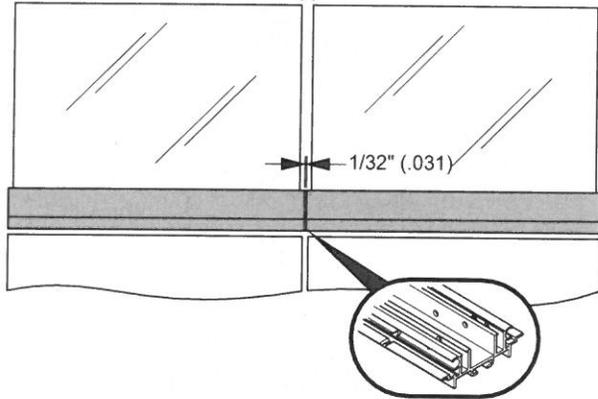
6

Install end plug (L)



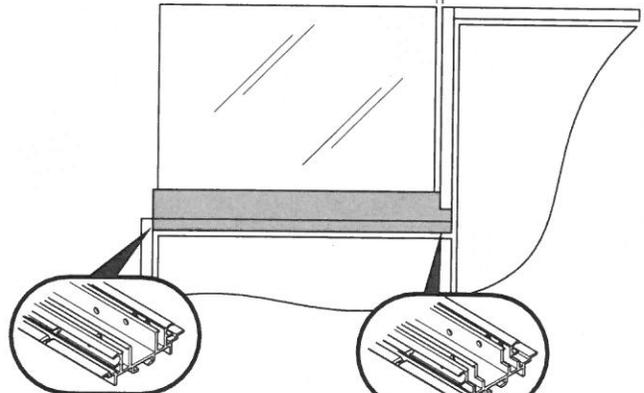
INLINE

1/4" (.25)



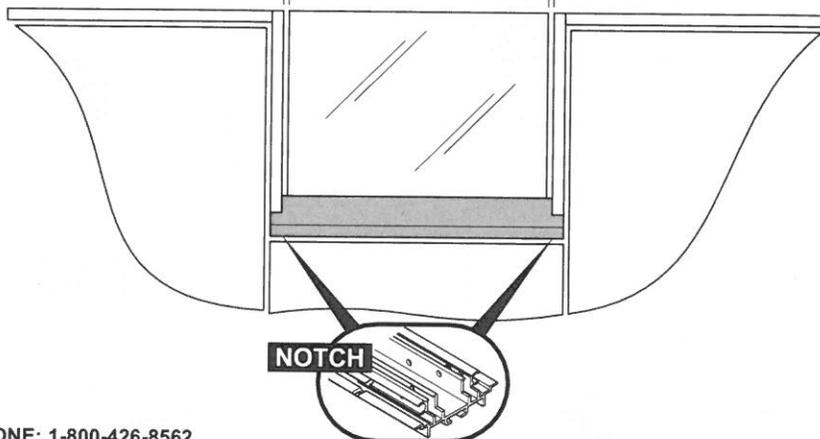
END-OF-RUN

1/8" (.125)



INTERSECTION

1/8" (.125)



NOTCH

CUSTOMER SERVICE PHONE: 1-800-426-8562

HAWORTH®

E.C.O. No: 360-195

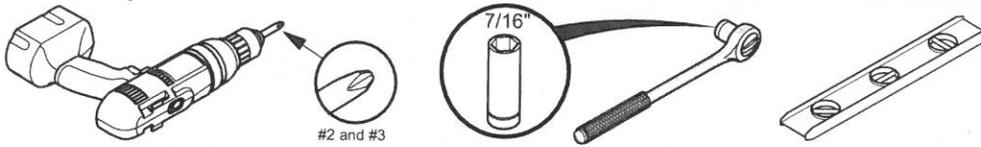
Page: 3 of 3

Part No: 7029-9683

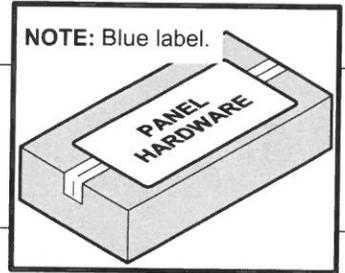
Rev: C

COMPOSE®
Glass Stack
Installation Instructions

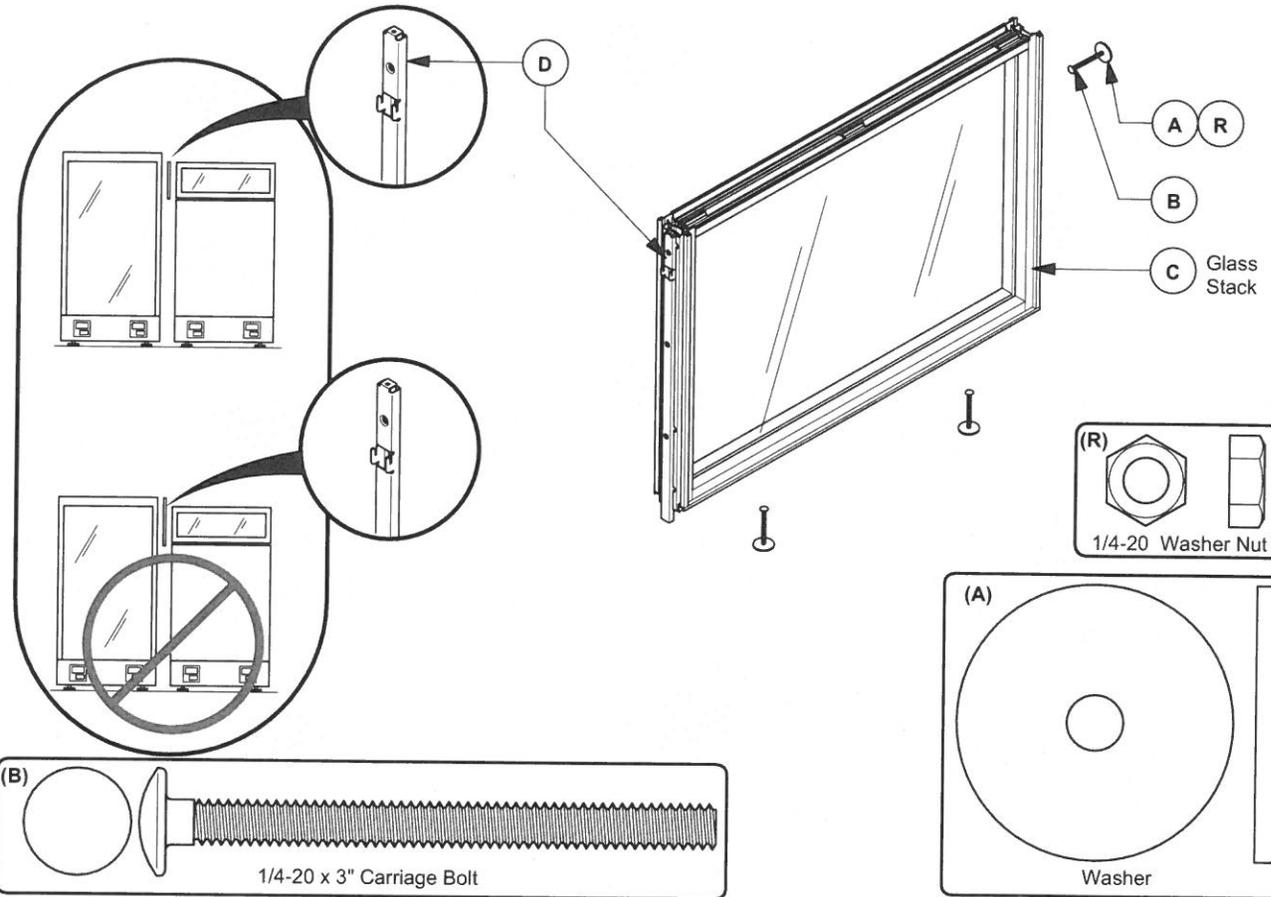
Tools Required



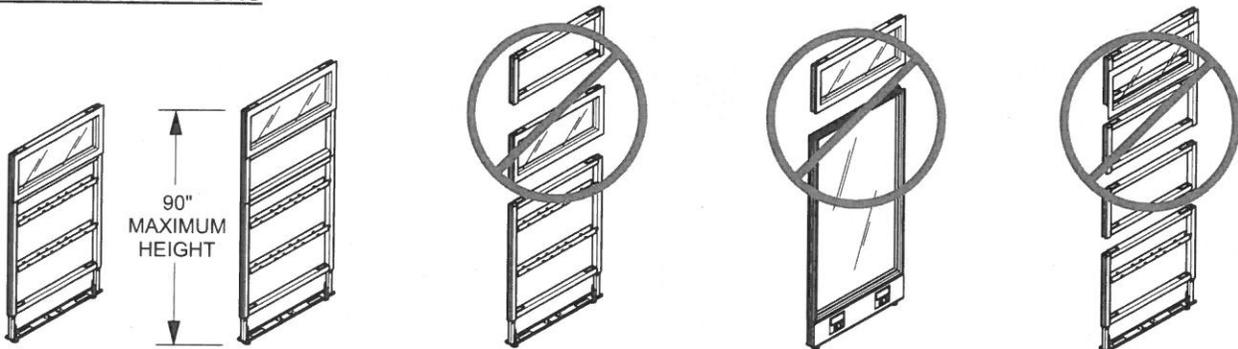
NOTE: Blue label.



NOTE: U-channel (D) must always match height of shortest panel.



GLASS STACK OPTIONS



NOTE: Can not add stack frame to glass stack.

NOTE: Can not stack glass on glass.

NOTE: Two stack limit.

CUSTOMER SERVICE PHONE: 1-800-426-8562

HAWORTH®

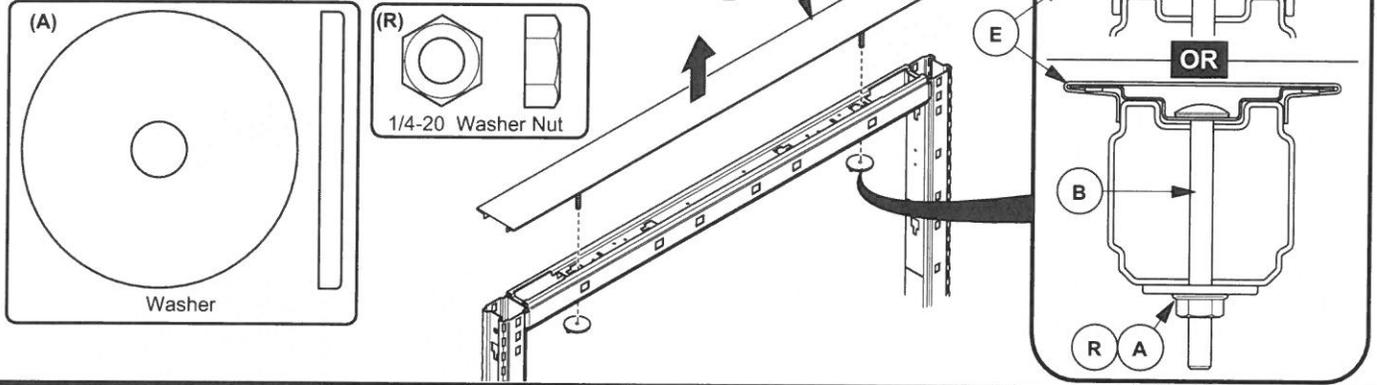
E.C.O. No: 360-109

Page: 1 of 6

Part No: 7021-9511

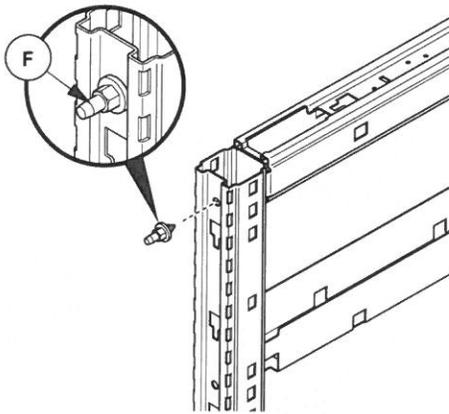
Rev: D

TOP TRIM REMOVAL IF REQUIRED

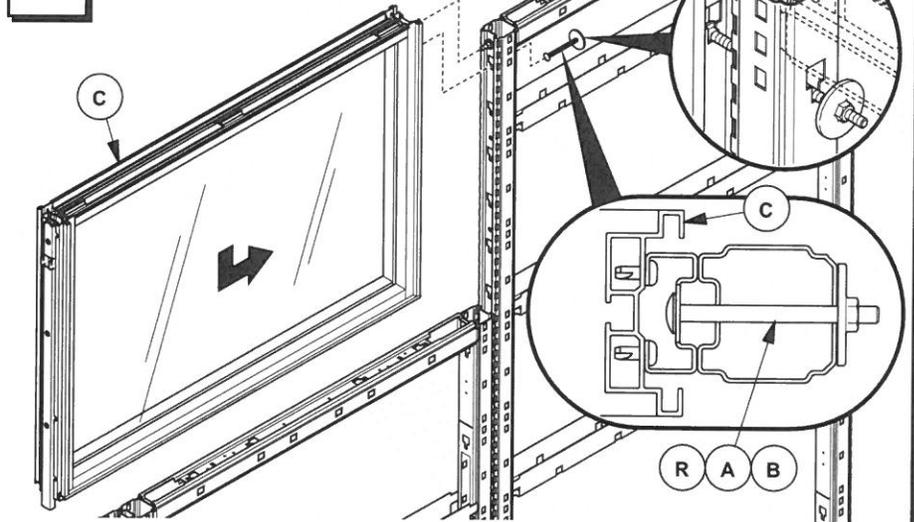


GLASS STACK TO PANEL FRAME INSTALLATION

1 Install aligner pin (F)

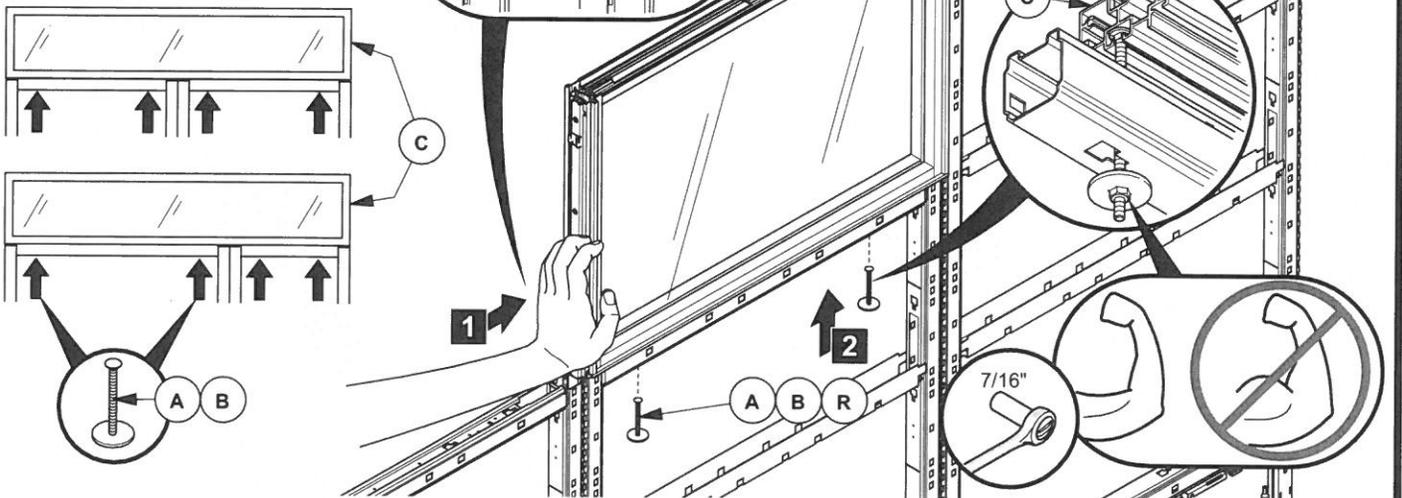


2 Install glass stack (C)



3 Secure glass stack (C)

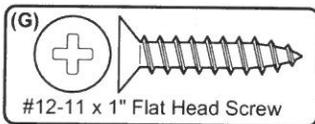
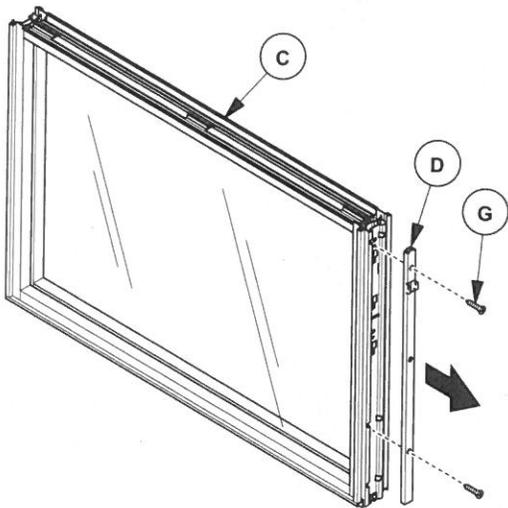
NOTE: Secure glass stacks (C) 6' and greater with 4 fasteners (A&B).



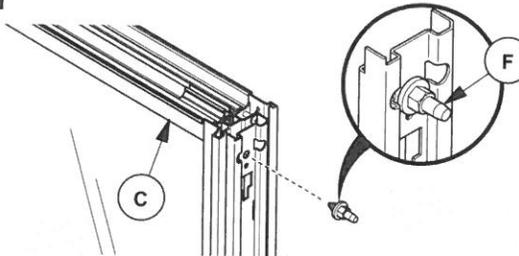
CUSTOMER SERVICE PHONE: 1-800-426-8562

2-WAY & 3-WAY CORNER INSTALLATION

1 Remove U-channel (D) (if necessary)

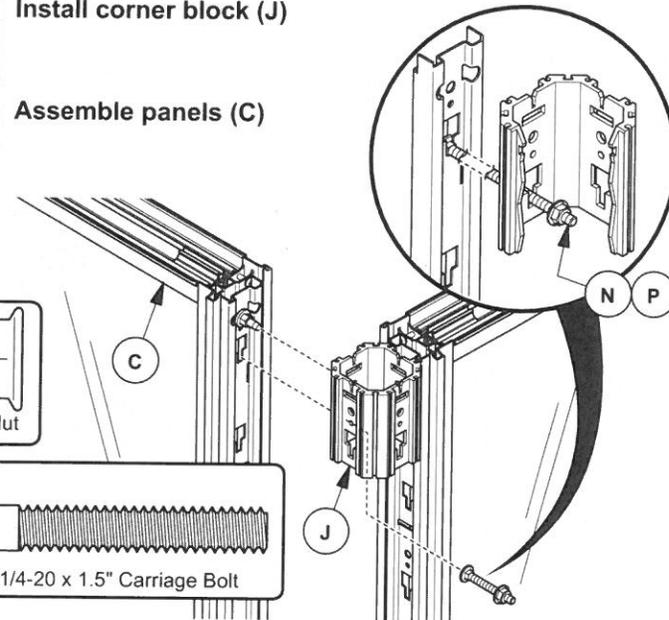
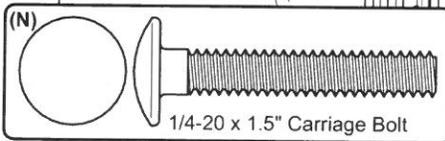
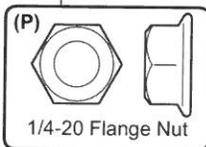


2 Install aligner pin (F)



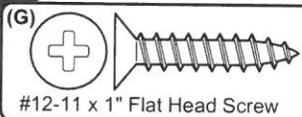
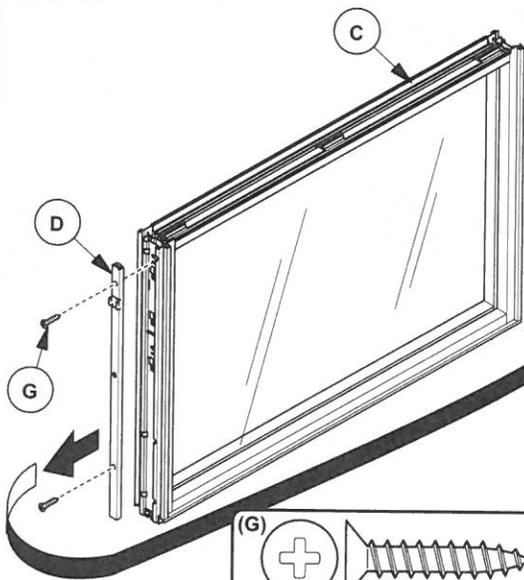
3 Install corner block (J)

4 Assemble panels (C)



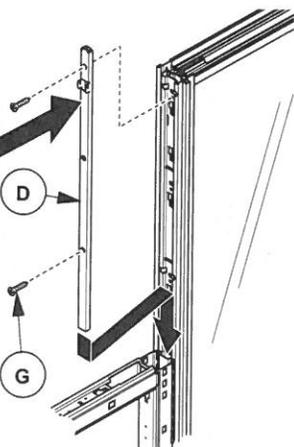
GLASS STACK TO GLASS PANEL OR 4-WAY CORNER INSTALLATION

1 Remove U-channel (D)

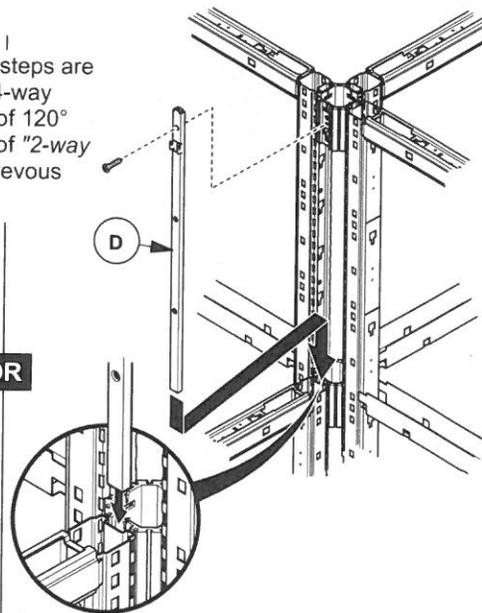


2 Install U-channel (D)

NOTE: The following installation steps are only for the last glass stack in a 4-way panel configuration or assembly of 120° configuration. Repeat the steps of "2-way & 3-way corner installation" on previous page for the first 3 panels.



OR



CUSTOMER SERVICE PHONE: 1-800-426-8562

HAWORTH

E.C.O. No: 360-109

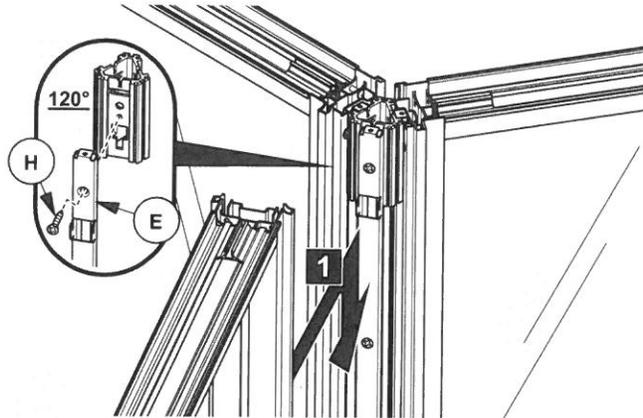
Page: 3 of 6

Part No: 7021-9511

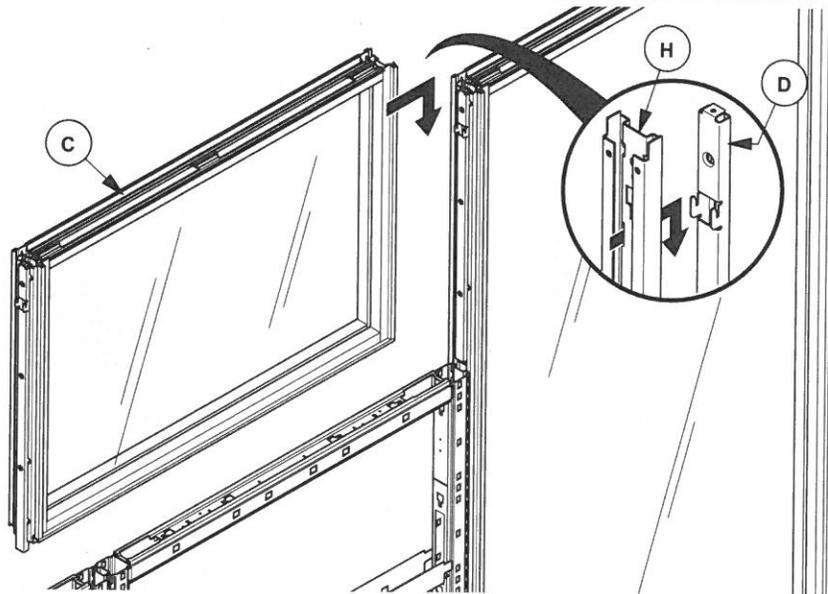
Rev: D

FOR 120° CORNER INSTALLATION

120° ASSEMBLY

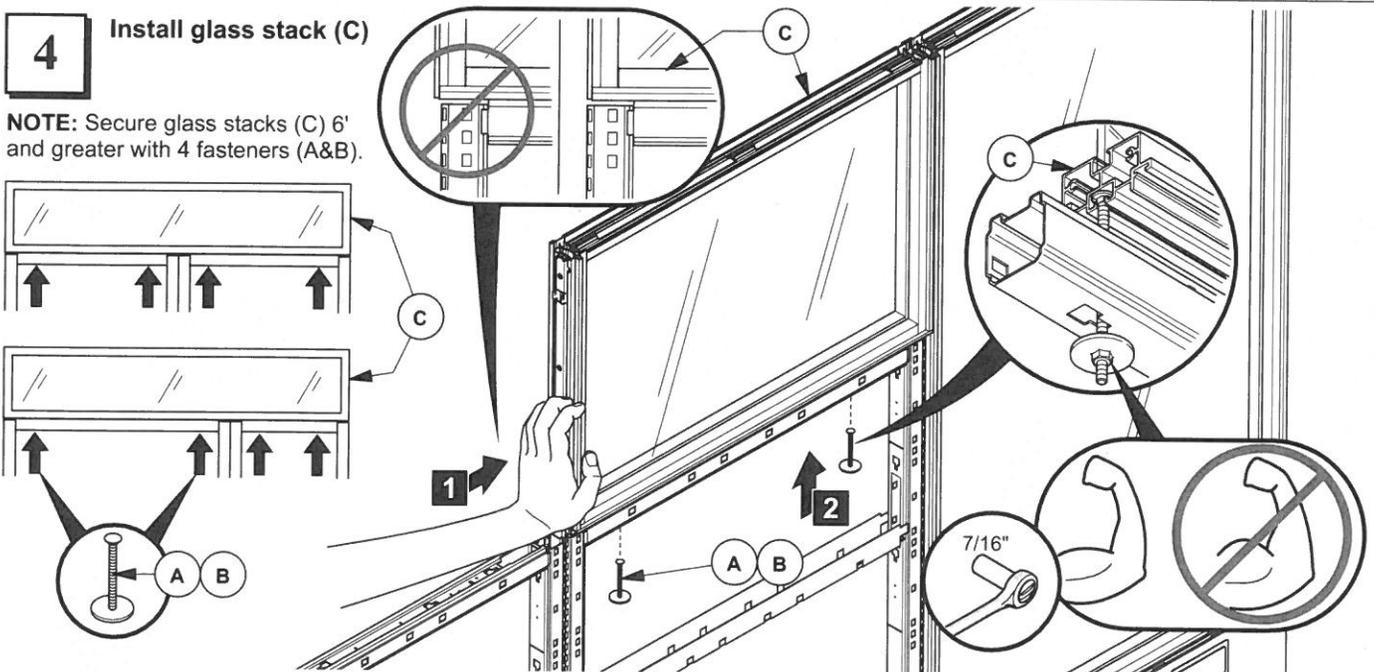


3 Install glass stack (C)



4 Install glass stack (C)

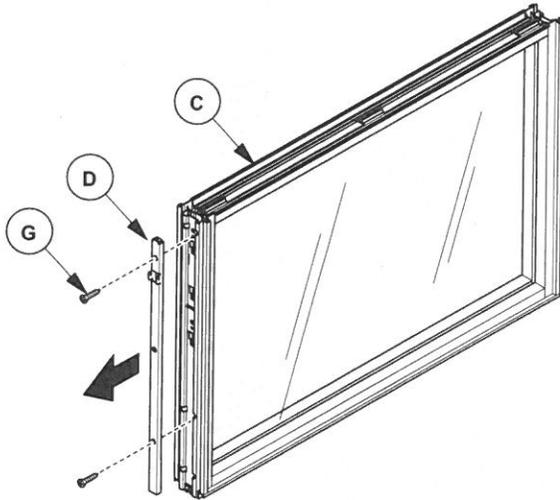
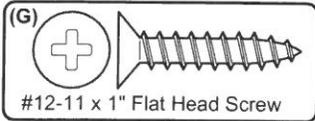
NOTE: Secure glass stacks (C) 6' and greater with 4 fasteners (A&B).



CUSTOMER SERVICE PHONE: 1-800-426-8562

END-OF-RUN TRIM INSTALLATION

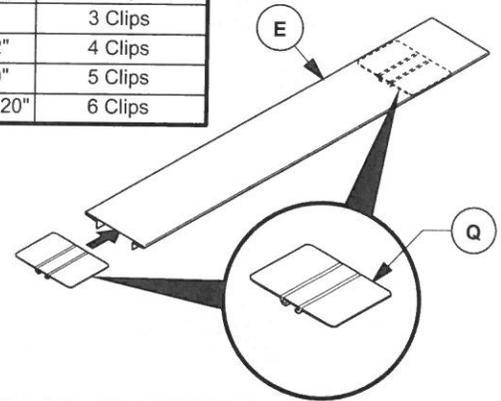
1 Remove U-channel (E)



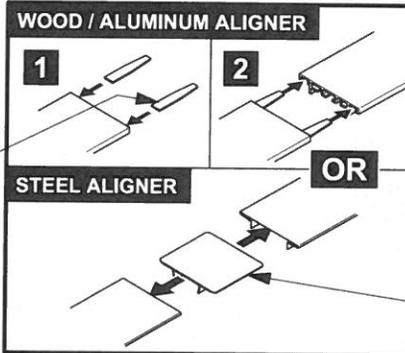
FOR STEEL TOP CAP ONLY

2 Install trim clips (Q)

For Steel Top Trim	
Trim Length	Quantity of Clips
18" to 30"	2 Clips
36" to 60"	3 Clips
51", 66" & 72"	4 Clips
78", 84" & 90"	5 Clips
63", 75", 96 to 120"	6 Clips



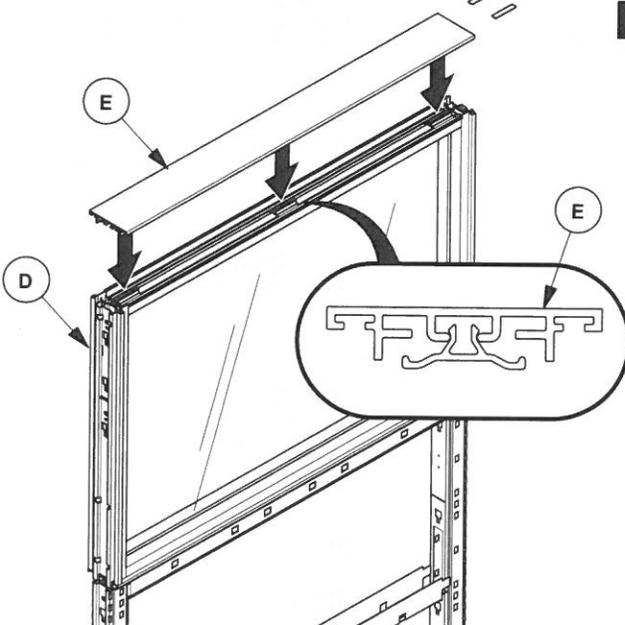
NOTE: Install top cap aligner (P) at intersections for all straight runs.



*NOTE: For use on glass panels manufactured after 11/9/2009.

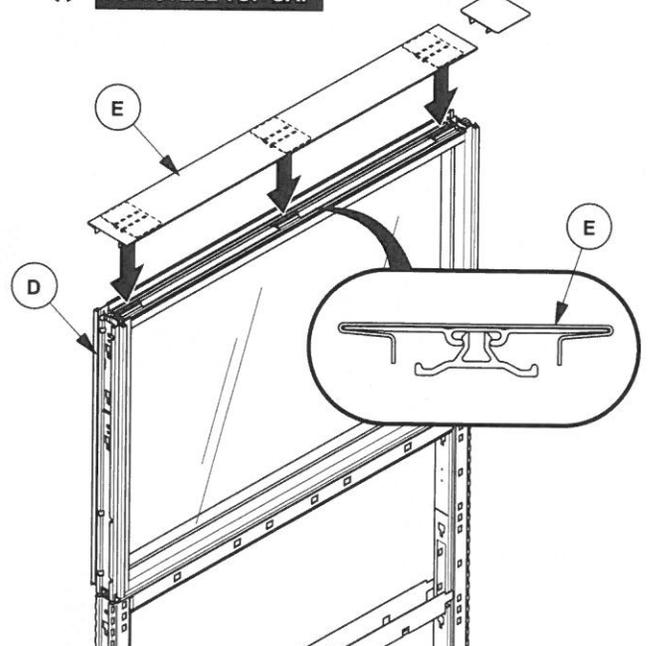
3 Install top trim (E)

FOR WOOD/ALUMINUM TOP CAP



OR

* FOR STEEL TOP CAP



CUSTOMER SERVICE PHONE: 1-800-426-8562

HAWORTH®

E.C.O. No: 360-109

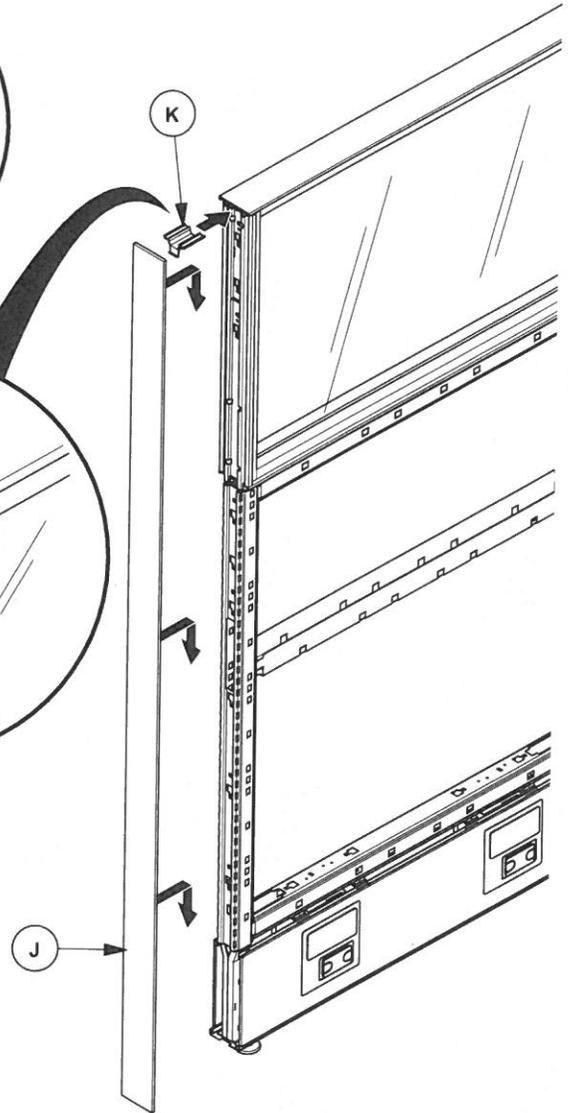
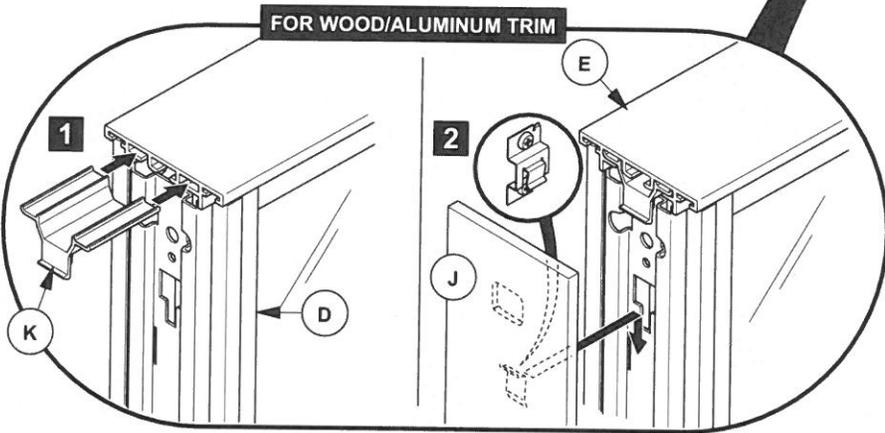
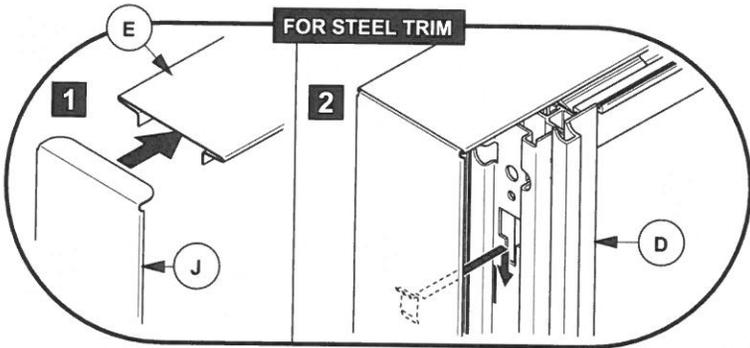
Page: 5 of 6

Part No: 7021-9511

Rev: D

END-OF-RUN TRIM INSTALLATION

4 Install end-of-run trim cover (J)



CUSTOMER SERVICE PHONE: 1-800-426-8562

HAWORTH®

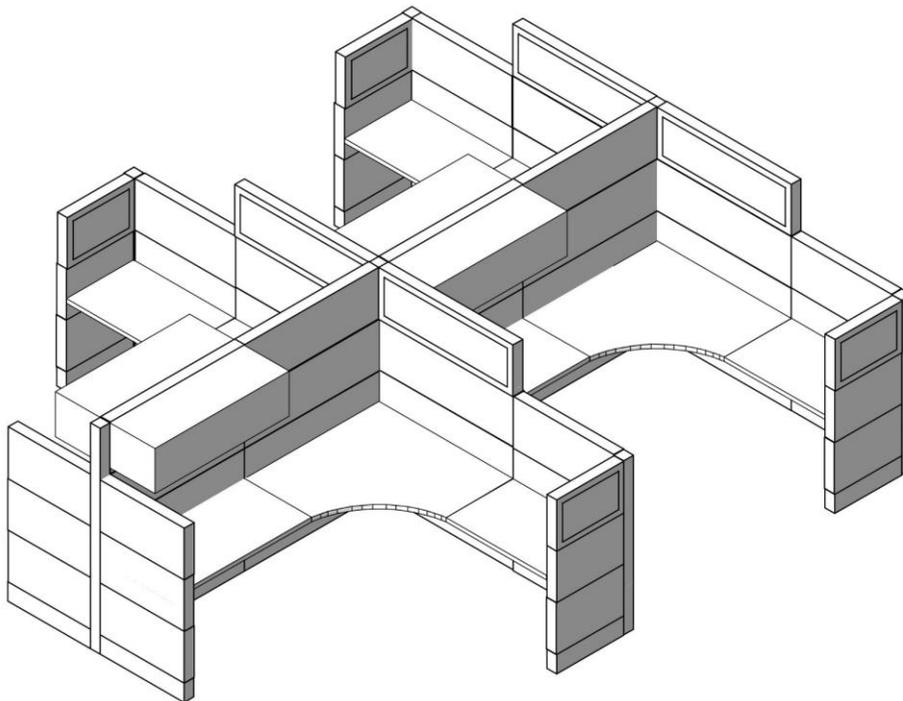
E.C.O. No: 360-109

Page: 6 of 6

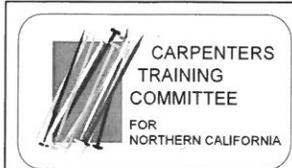
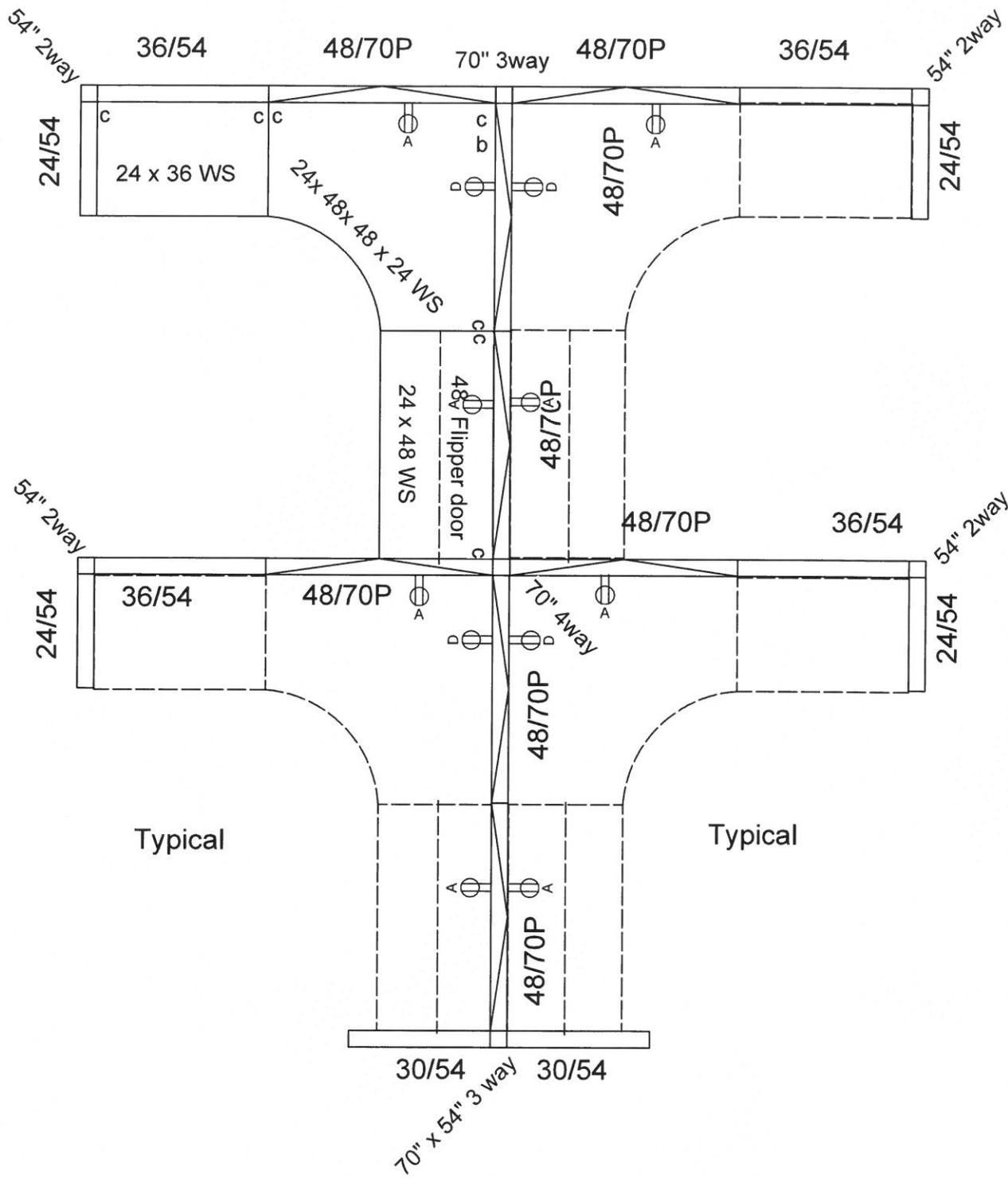
Part No: 7021-9511

Rev: D

Lesson 2



HERMAN MILLER ETHOSPACE

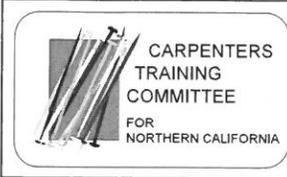
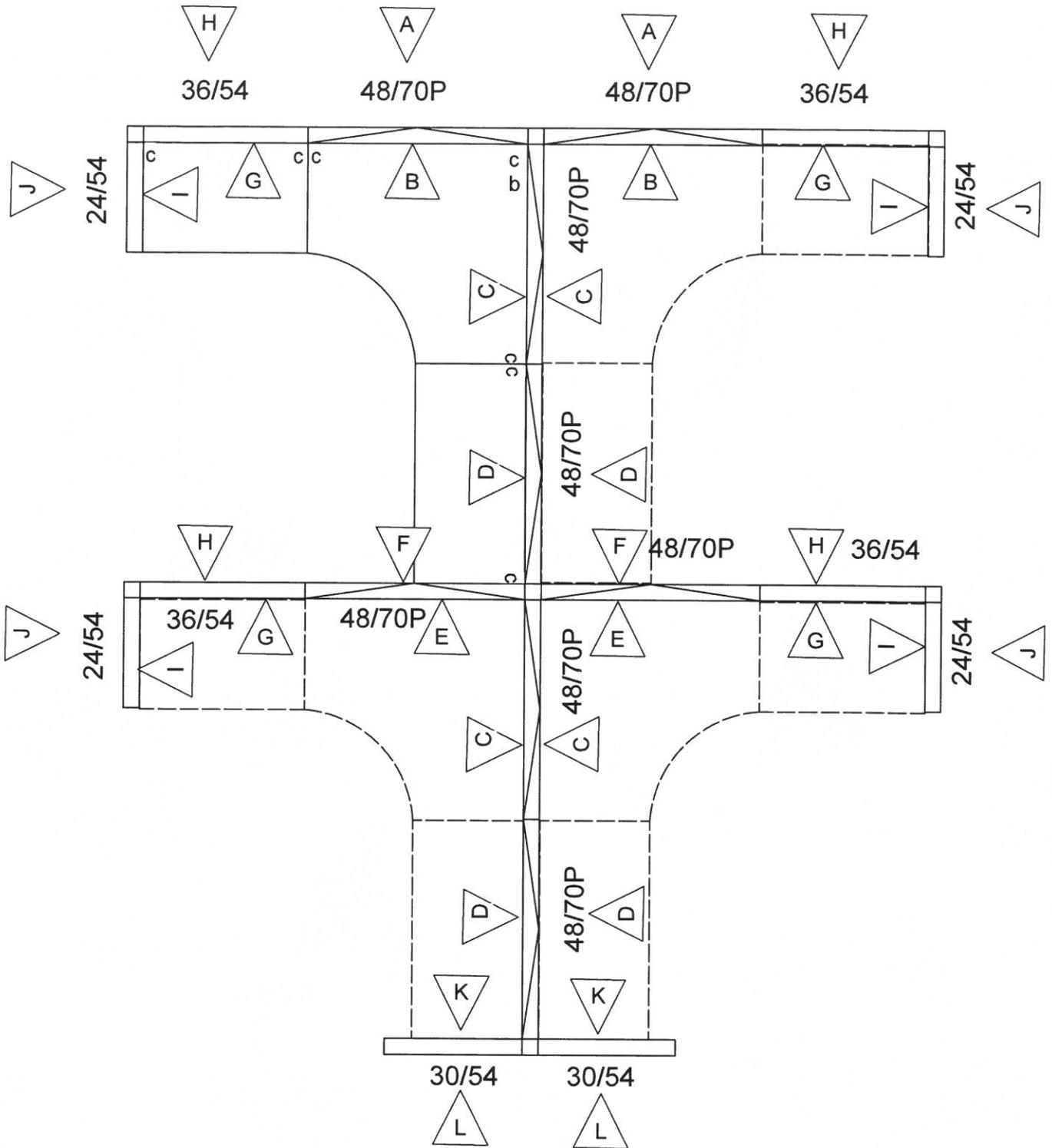


Herman Miller Ethospace
Floor Plan

Date: 3/28/17
 Drawn By: .dk

Sheet 1 of 3
 Scale: 3/8 = 1'

1205

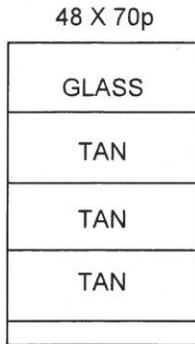


Herman Miller Ethospace
Tile Plans

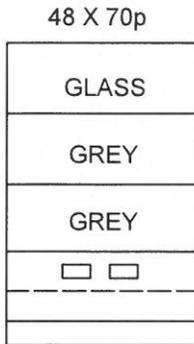
Date: 3/28/17
 Drawn By: .dk

Sheet 2 of 3
 Scale: 3/8" = 1'

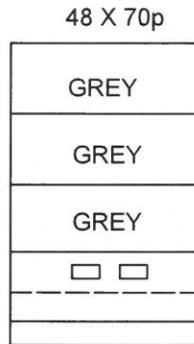
1205



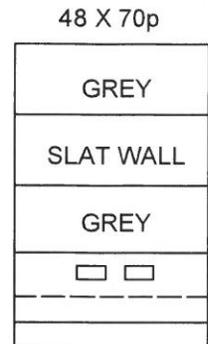
A



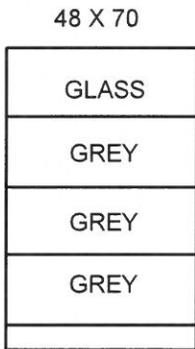
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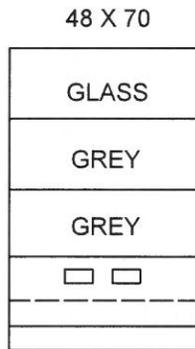
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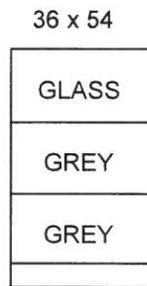
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F



E



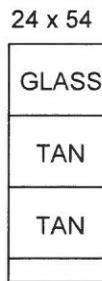
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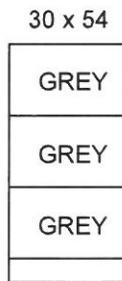
H



I



J



K



L



CARPENTERS
TRAINING
COMMITTEE
FOR
NORTHERN CALIFORNIA

Herman Miller Ethospace

Tile Elevations

Date: 3/28/17

Drawn By: .dk

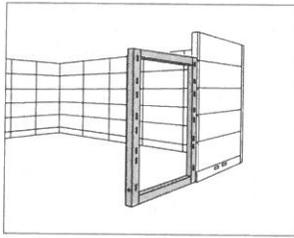
Sheet 3 of 3

Scale: 1/4" = 1'

1205

Bare Frame

E1109.



Product Information

Description

This frame holds individual tiles on both sides. Each frame has adjustable glides and a light seal.

Notes

Order following products separately:

- Draw rod (E1120.)
- Frame top cap (E1260.)
- Monorail (E1267.)
- Side cover (E1263. or E1264.); order 1 for each side of frame

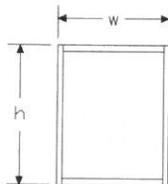
Order optional power separately:

- 4-circuit baseline harness (E1354.)
- 4-circuit receptacle (E1311.)
- 4-circuit tile-height harness (E1357.), to access power at any 8"-high location above base for field installation
- Vertical wire harness (E1343. or E1358.)

When connecting 2 frames of unequal heights, order change-of-height finished end (E1251.) separately.

When plastic wire management clip is needed, order service part (232776 (set of 100)) separately.

Dimensions



Specification Information

Step 1.

E1109.

Step 2. Height

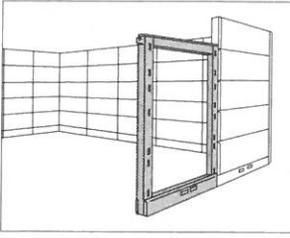
30	30" high
38	38" high
46	46" high
54	54" high
62	62" high
70	70" high
86	86" high

Step 3. Width

18X	18" wide
24X	24" wide
30X	30" wide
36X	36" wide
42X	42" wide
48X	48" wide

Prices for Steps 1-3.

	18X	24X	30X	36X	42X	48X
E1109. 30	\$165	181	191	201	219	247
38	\$194	208	229	238	254	263
46	\$203	225	247	258	262	266
54	\$234	249	266	285	293	314
62	\$238	263	281	299	310	326
70	\$252	287	308	318	330	352
86	\$263	315	339	352	365	387



Ethospace® Walls

Product Information

Description

This frame holds individual tiles on both sides. Each frame has a standard top cap, cable management side covers, and adjustable glides. Cable management side covers are made of fire-retardant polyvinyl chloride (PVC).

The powered frame has a factory-installed electrical harness that distributes double-sided, 4-circuit power within a cable management raceway. Electrical components are UL listed and CSA certified.

The nonpowered, hard-wired frame has cable management side covers with access holes on 1 side that accept standard-size rectangular receptacles. It also has predrilled holes at the top of the frame for countertop supports (38"-high frame only).

Notes

Order draw rod (E1120.) separately.

When connecting 2 frames of unequal heights, order the following separately:

- Change-of-height finished end (E1251.)
- Draw rod (E1120.) to match height of lower frame

For information, see Ethospace® Planning Guide.

When connecting 2 frames to a 2-way connector, order 1 additional draw rod (E1120.) separately; 2-way connectors include 1 draw rod.

For veneer, architectural, or monorail frame top cap, or for workstation countertop, specify "NN" for top cap finish; order top cap (E1260.) or monorail (E1267.) separately.

To access power at any 8"-high tile location, order 4-circuit tile-height harness (E1353. or E1357.); to access power at beltline access only, order vertical wire harness (E1343. or E1358.).

For powered frame, order 4-circuit receptacle (E1311.) separately.

For metal barrier between electrical wires and voice/data cables, order cable/energy barrier (E1380.) separately.

For nonpowered hard-wired workstations with 2 receptacle locations per interior side (power option H), 2 different base covers are included: 1 with 2 receptacle openings and 1 with no receptacle openings. If access to power on both sides is required, 1 additional base cover with receptacle openings must be ordered from service parts.

When plastic wire management clip is needed, order service part (232776 (set of 100)) separately.

For workstation with option 2 electrical, specify hard-wired frame.

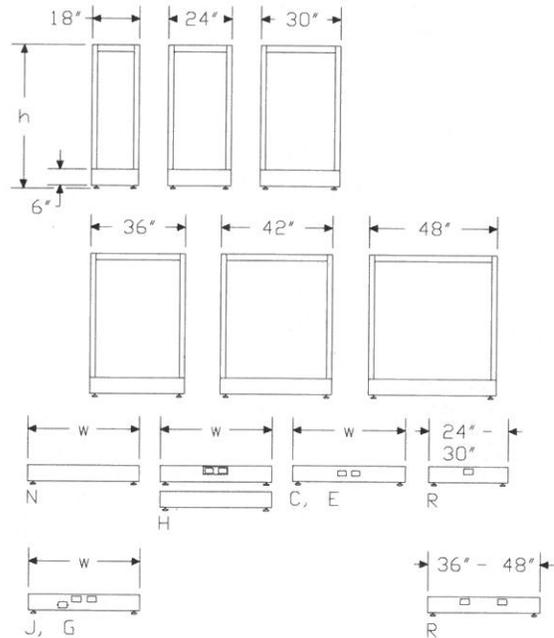
Hard-wired frame can be used with older R-style frame.

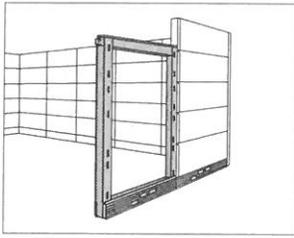
For hard-wired frame, customer must supply rectangular receptacles; frame does not accept R-style-frame baseline or beltline receptacles.

The following tiles cannot attach to the other side of a nonpowered, hard-wired frame (power option H):

- Fabric architectural cladding, 30" or higher (E1445.)
- Floor-length face tile, 30" or higher (E1420.)
- Veneer architectural cladding (E1446.)

Dimensions





Product Information

Description

This frame holds individual tiles on both sides. It has a standard top cap, grooved cable management side covers, and adjustable glides. Cable management side covers are made of fire-retardant polyvinyl chloride (PVC).

The powered frame has a factory-installed electrical harness that distributes double-sided, 4-circuit power within a cable management raceway. Electrical components are UL listed and CSA certified.

Metallic silver (MS) cable management side covers have cool grey neutral (CL) receptacle covers. Metallic champagne (CN) cable management side covers have warm grey neutral (WN) receptacle covers. Remaining finishes have matching receptacle covers.

Notes

Order draw rod (E1120.) separately.

When connecting 2 frames of unequal heights, order the following separately:

- Change-of-height finished end (E1251.)
- Draw rod (E1120.) to match height of lower frame

For information, see Ethospace® Planning Guide.

When connecting 2 frames to a 2-way connector, order 1 additional draw rod (E1120.); 2-way connectors include 1 draw rod.

For veneer, architectural, or monorail top cap, specify "NN" for top cap finish; order top cap (E1260.) or monorail (E1267.) separately.

To access power at any 8"-high tile location, order 4-circuit tile-height harness (E1353. or E1357.); to access power at beltline access only, order vertical wire harness (E1343. or E1358.).

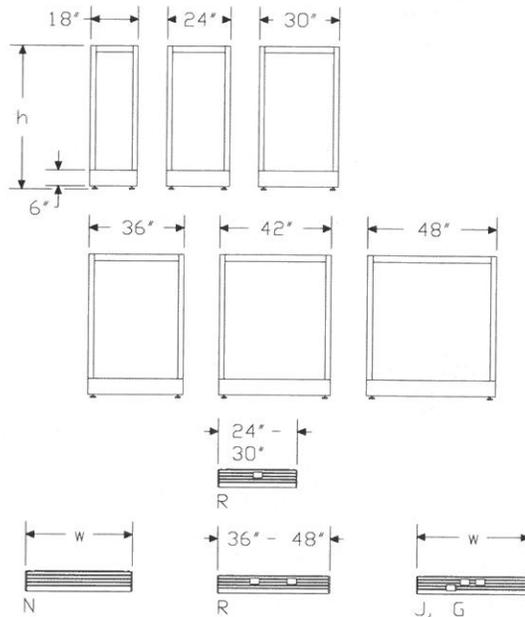
For powered frame, order 4-circuit receptacle (E1311.) separately.

For "J" or "G" power option, order communication port faceplate reducer (G1189.A) and communication port faceplate extender (G1189.B) separately.

For metal barrier between electrical wires and voice/data cables, order cable/energy barrier (E1380.) separately.

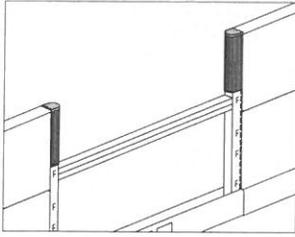
When plastic wire management clip is needed, order service part (232776 (set of 100)) separately.

Dimensions



Stile Covers and Top Caps, Transaction Work Surface Frame

E1117.



Product Information

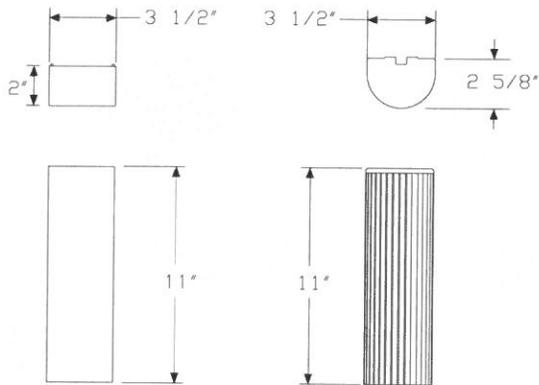
Description

This set of stile covers and stile top caps attaches to a transaction work surface frame to conceal the stiles above the work surface.

Notes

Order transaction work surface frame (E1116.) separately.

Dimensions



Specification Information

Step 1.

E1117.

Step 2. Type

S standard

A architectural

Prices for Steps 1-2.

E1117. S	\$102
A	\$425

Step 3. Finish

For standard (S)

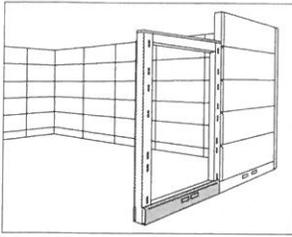
8Q	folkstone grey	+\$0
91	white	+\$0
BU	black umber	+\$0
CL	cool grey neutral	+\$0
HF	inner tone light	+\$0
LU	soft white	+\$0
MT	medium tone	+\$0
SG	slate grey	+\$0
WL	sandstone	+\$0
WN	warm grey neutral	+\$0

For architectural (A)

8Q	folkstone grey	+\$0
91	white	+\$0
BU	black umber	+\$0
CN	metallic champagne	+\$0
EH	metallic bronze	+\$0
HF	inner tone light	+\$0
LU	soft white	+\$0
MS	metallic silver	+\$0
MT	medium tone	+\$0
SG	slate grey	+\$0
WL	sandstone	+\$0

Side Cover

E1263.
E1264.



Ethospace® Walls

Product Information

Description

This cable management side cover attaches to 1 side of a frame and is made of fire-retardant PVC. Attachment hardware is included.

Metallic silver (MS) grooved side covers have cool grey neutral (CL) receptacle covers. Metallic champagne (CN) grooved side covers have warm grey neutral (WN) receptacle covers. Remaining finishes have matching receptacle covers.

Notes

For use with frames manufactured after January 3, 2003.

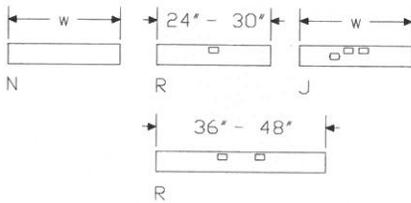
For "J" receptacle/data locations option, order communication port faceplate reducer (G1189.A) and communication port faceplate extender (G1189.B) separately.

For metal barrier between electrical wires and voice/data cables, order cable/energy barrier (E1380.) separately.

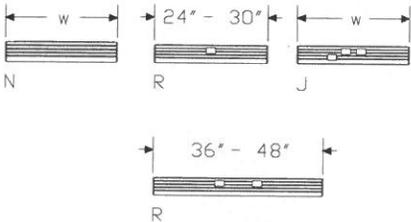
When plastic wire management clip is needed, order service part (232776 (set of 100)) separately.

Dimensions

Plain Base



Grooved Base



Specification Information

Step 1.

E126

Step 2. Base Type

- 3. plain base
- 4. grooved base

Step 3. Width

- 18 18" wide
- 24 24" wide
- 30 30" wide
- 36 36" wide
- 42 42" wide
- 48 48" wide

Step 4. Receptacle/Data Locations

For 18" wide (18)

- N (N) no receptacle locations

For plain base (3.) with 24" wide (24) or 30" wide (30)

- N (N) no receptacle locations
- J (J) 2 receptacle and 1 communication port locations
- R (R) 1 receptacle location (meets Chicago electrical code requirements)

For plain base (3.) with 36" wide (36), 42" wide (42), or 48" wide (48)

- N (N) no receptacle locations
- J (J) 2 receptacle and 1 communication port locations
- R (R) 2 receptacle locations (meets Chicago electrical code requirements)

For grooved base (4.) with 24" wide (24) or 30" wide (30)

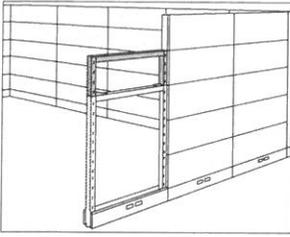
- N (N) no receptacle locations
- R (R) 1 receptacle location (meets Chicago electrical code requirements)
- J (J) 2 receptacle and 1 communication port locations

For grooved base (4.) with 36" wide (36), 42" wide (42), or 48" wide (48)

- N (N) no receptacle locations
- R (R) 2 receptacle locations (meets Chicago electrical code requirements)
- J (J) 2 receptacle and 1 communication port locations

Stacking Frame

E1112.



Ethospace® Walls

Product Information

Description

This 16"-high frame attaches to the top of a frame and holds individual tiles on both sides. It also attaches to an adjacent frame or connector of equal height. A maximum of 2 stacking frames can attach to a frame; the total frame height cannot exceed 118". Attachment hardware is included.

Notes

For appropriate planning applications, see Ethospace Planning Guide.

Components can hang from stacking frame.

Elevated storage cannot be used on stacking frame.

Order optional stacking connector (E1220.16, E1222.16, E1230.16, or E1240.16) separately.

To finish exposed end of frame, order finished end (E1250. or E1252.) separately to match combined height of existing frame and stacking frame.

To accommodate 78", 94", 102", and 118" heights, use a combination of connectors, stacking connectors, finished ends, and change-of-height finished ends.

Top cap on existing frame must be removed before installing stacking frame; same top cap can be used on stacking frame.

When used with window tile, order top tile position (E1415.T) only.

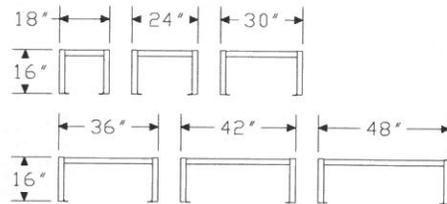
Open tile cannot be used on stacking frame.

Power jumper cannot run vertically through stacking frame. Power jumper can run vertically through adjacent standard frame and run horizontally across stacking frame. Order power jumper (E1341.) separately for adjacent frame.

For stacking frame adjacent to higher frame or connector, order change-of-height stacking frame hardware kit (E1293. or E1294.) separately.

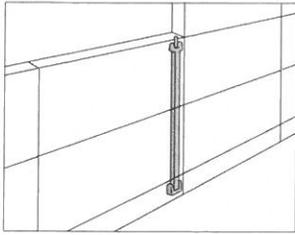
Stacking frame is not compatible with pass-through chart shelf (E3115.) with top frame position.

Dimensions



Draw Rod

E1120.



Product Information

Description

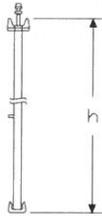
This rod connects frames in a straight line or connects to a 2-way 90° connector.

Notes

Draw rods must be ordered separately for all frames.

1 draw rod is included with each 2-way 90° connector.

Dimensions



Specification Information

Step 1.

E1120.

Step 2. Height

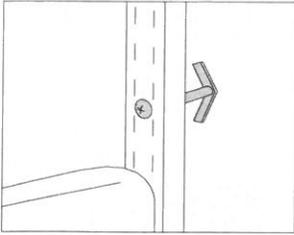
30	30" high
38	38" high
46	46" high
54	54" high
62	62" high
70	70" high
86	86" high

Prices for Steps 1-2.

E1120. 30	\$28
38	\$28
46	\$29
54	\$29
62	\$33
70	\$34
86	\$35

Wall Fastener

X1192.



Ethospace® Walls

Product Information

Description

This black pan head fastener attaches a wall strip to a wall. Package contains 100.

Notes

Specify fastener based on wall construction:

- 1½"-long #10 pan head sheet metal screw (X1192.1) fastens into anchors in cement blocks, poured walls, and brick
- 3"-long #10 pan head sheet metal screw (X1192.2) fastens into studs or TC toggles in drywall
- 3"-long #10 pan head machine screw (X1192.3) fastens into toggle wall strip anchor (X1191.) or wing toggle in drywall.

For drywall applications using X1192.3 wall fasteners, toggle wall strip anchors (X1191.) or equivalent fasteners are recommended; order separately.

Specification Information

Step 1.

X1192.

Step 2. Size

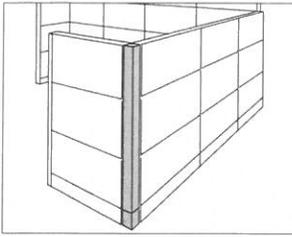
- | | |
|----------|-------------------------------|
| 1 | no. 10, 1½" sheet metal screw |
| 2 | no. 10, 3" sheet metal screw |
| 3 | no. 10, 3" machine screw |

Prices for Steps 1-2.

X1192. 1	\$31
2	\$31
3	\$53

2-Way 90° Connector

E1220.



Ethospace® Walls

Product Information

Description

This connector joins 2 frames of equal or unequal heights at a 90° angle and has a draw rod. It has a vinyl or fabric surface, cable management side cover, and standard top cap.

Notes

When connecting frames of unequal heights, specify connector height to match height of higher frame.

When frame is not same height as connector, order change-of-height finished end (E1251.) separately.

To pass power through connector at beltline, order connector pass-through harness (E1356.) separately.

For metal barrier between electrical wires and voice/data cables, order cable/energy barrier (E1381.) separately.

When using architectural trim products (E1281., E1282., E1283., E1250.A, E1251.A, E1251.B, or E1252.B), order bare connector (E1219.).

Fabric-covered connector accepts Customer's Own Material (COM).

Yardage is estimated for nondirectional, 54"-wide fabrics and for 1 to 6 units.

Height—Yardage

30" to 38"—1

46"—1½

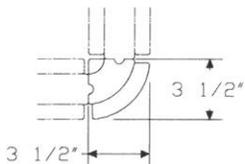
54" to 62"—1¾

70"—2

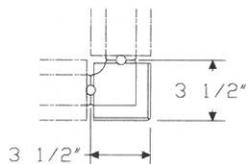
86"—2½

For information on larger quantities or directional fabrics, contact COM Department. See Order Information in Appendices.

Dimensions



Radius



Square

Specification Information

Step 1.

E1220.

Step 2. Height

30	30" high
38	38" high
46	46" high
54	54" high
62	62" high
70	70" high
86	86" high

Step 3. Surface Material

S	vinyl
F	fabric

Step 4. Shape

R	radius
S	square

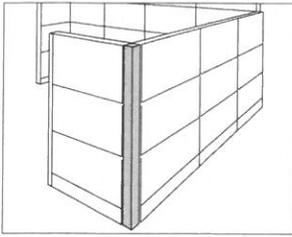
Step 5. Power

N	(N) nonpowered
E	(E) powered

Prices for Steps 1-5.

	RN	RE	SN	SE
E1220. 30 S	\$226	267	238	276
F	\$218	255	223	262
38 S	\$247	287	257	297
F	\$229	267	243	278
46 S	\$264	305	275	313
F	\$249	287	262	301
54 S	\$281	324	297	335
F	\$265	304	277	317
62 S	\$298	339	309	346
F	\$277	317	294	332
70 S	\$309	349	325	365
F	\$289	328	304	342
86 S	\$346	390	366	403
F	\$327	366	342	380

2-Way 90° Connector, Monolithic E1224.



Ethospace® Walls

Product Information

Description

This connector joins 2 frames of equal or unequal heights at a 90° angle and has a draw rod. It has a vinyl or veneer surface; the vinyl-covered connector has a standard top cap, and the veneer connector has a veneer top cap. The veneer connector is 1" higher than the vinyl-covered connector.

Notes

When connecting frames of unequal heights, specify connector height to match height of higher frame.

When frame is not same height as connector, order change-of-height finished end (E1251.) separately.

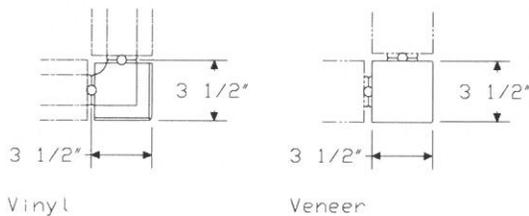
To pass power through connector at beltline, order connector pass-through harness (E1356.) separately.

For metal barrier between electrical wires and voice/data cables, order cable/energy barrier (E1381.) separately.

Veneer connector has a veneer top cap. When using veneer connector, order veneer frame top cap (E1260.W) separately for adjacent frame.

When using architectural trim products (E1281., E1282., E1283., E1250.A, E1251.A, E1251.B, or E1252.B), order bare connector (E1219.).

Dimensions



Specification Information

Step 1.

E1224.

Step 2. Height

30	30" high
38	38" high
46	46" high
54	54" high
62	62" high
70	70" high
86	86" high

Step 3. Surface Material

SS	vinyl
WS	veneer <input type="checkbox"/> A

Step 4. Power

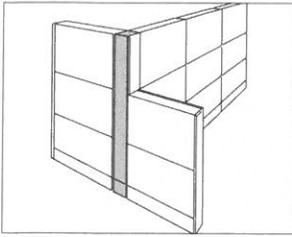
N	(N) nonpowered
E	(E) powered

Prices for Steps 1-4.

	N	E
E1224. 30 SS	\$238	276
WS	\$471	519
38 SS	\$257	297
WS	\$514	561
46 SS	\$275	313
WS	\$556	605
54 SS	\$297	335
WS	\$600	647
62 SS	\$309	346
WS	\$634	681
70 SS	\$325	365
WS	\$667	714
86 SS	\$366	403
WS	\$753	798

3-Way 90° Connector

E1230.



Ethospace® Walls

Product Information

Description

This connector joins 3 frames of equal or unequal heights at 90° angles and has a cable management side cover. It has a vinyl, fabric, or veneer surface; vinyl- and fabric-covered connectors have a standard top cap, and the veneer connector has a veneer top cap. The veneer connector is 1" higher than the vinyl- or fabric-covered connector. Attachment hardware is included.

Notes

When connecting frames of unequal heights, specify connector height to match height of highest frame.

When frame is not same height as connector, order change-of-height finished end (E1251.) separately.

To pass power through connector at beltline, order connector pass-through harness (E1356.) separately.

For metal barrier between electrical wires and voice/data cables, order cable/energy barrier (E1381.) separately.

To order veneer top cap for vinyl- or fabric-covered connector, specify "NN" for top cap finish; order top cap (E1261.) separately.

Veneer connector has a veneer top cap. When using veneer connector, order veneer frame top cap (E1260.W) separately for adjacent frame.

When using architectural trim, order bare connector (E1219.).

Fabric-covered connector accepts Customer's Own Material (COM).

Yardage is estimated for nondirectional, 54"-wide fabrics and for 1 to 8 units.

Height—Yardage

30" to 38"—1

46"—1½

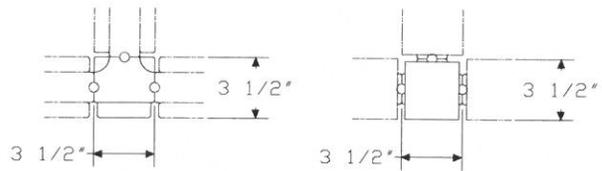
54" to 62"—1¾

70"—2

86"—2½

For information on larger quantities or directional fabrics, contact COM Department. See Order Information in Appendices.

Dimensions

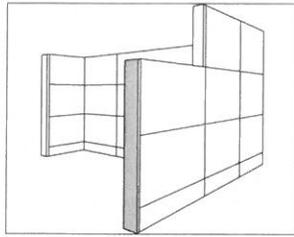


Vinyl, Fabric

Veneer

Finished End

E1250.



Product Information

Description

This cover finishes the exposed end of a frame and has a painted surface. The painted architectural cover (A) is 1/2" higher than the standard finished end (S).

Notes

Order frame top cap and connector top cap separately:

Finished End—Frame Top Cap—Connector Top Cap

Standard (S)—E1260.S—E1261.S

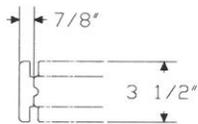
Painted architectural (A)—E1260.A—E1261.A

Painted architectural finished end is used with painted architectural frame top cap (E1260.A) and painted architectural connector top cap (E1261.A) only.

For veneer and veneer architectural finished ends, order veneer finished end (E1252.) separately.

For open return used with painted architectural finished end, order architectural open return bracket (E1143.) separately; this allows access to slots on inside of frame.

Dimensions



Standard



Painted Architectural

Specification Information

Step 1.

E1250.

Step 2. Height

30	30" high
38	38" high
46	46" high
54	54" high
62	62" high
70	70" high
86	86" high

Step 3. Shape

S	standard
A	painted architectural

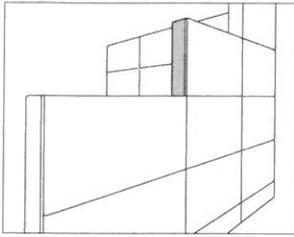
Prices for Steps 1-3.

	S	A
E1250. 30	\$76	102
38	\$79	105
46	\$81	112
54	\$86	119
62	\$90	133
70	\$93	146
86	\$104	164

Step 4. Surface Finish

8Q	folkstone grey	+\$0
91	white	+\$0
BU	black umber	+\$0
HF	inner tone light	+\$0
LU	soft white	+\$0
MT	medium tone	+\$0
SG	slate grey	+\$0
WL	sandstone	+\$0
CN	metallic champagne	+\$7
EH	metallic bronze	+\$7
MS	metallic silver	+\$7

Finished End, Change of Height E1251.



Product Information

Description

This cover finishes the exposed end of a frame or connector when joining frames of unequal heights. It has a painted or veneer surface. The cover includes hardware to connect a lower frame to a higher frame or connector.

Notes

Order frame top cap and connector top cap separately:

Finished End—Frame Top Cap—Connector Top Cap

Standard (S)—E1260.S—E1261.S

Painted architectural (A)—E1260.A—E1261.A

Veneer (W)—E1260.W—E1261.W

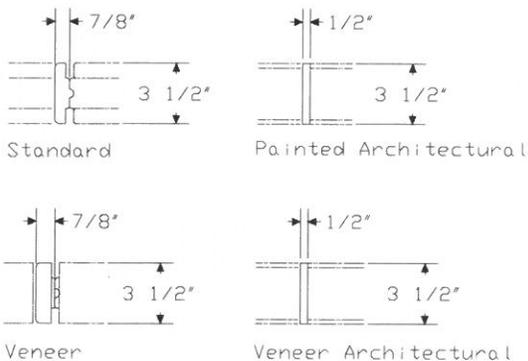
Veneer architectural (B)—E1260.B—see note below

Architectural change-of-height finished end is used with architectural frame top cap (E1260.A or B) and architectural connector top cap (E1261.A or B) only.

When using veneer architectural frame top cap, order extended length to cover connector and frame.

For workstation countertop, specify 12"- or 28"-high finished end.

Dimensions



Specification Information

Step 1.

E1251.

Step 2. Height

08	8" high
12	12" high
16	16" high
24	24" high
28	28" high
32	32" high

Step 3. Shape

For 8" high (08), 16" high (16), 24" high (24), or 32" high (32)

S	standard
A	painted architectural
W	veneer <input type="checkbox"/>
B	veneer architectural <input type="checkbox"/>

For 12" high (12) or 28" high (28)

S	standard
----------	----------

Prices for Steps 1-3.

	S	A	W	B
E1251. 08	\$58	77	171	164
12	\$62	—	—	—
16	\$62	91	198	189
24	\$70	104	218	210
28	\$76	—	—	—
32	\$76	112	241	234

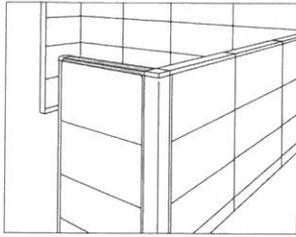
Step 4. Surface Finish

For standard (S) or painted architectural (A)

8Q	folkstone grey	+\$0
91	white	+\$0
BU	black umber	+\$0
HF	inner tone light	+\$0
LU	soft white	+\$0
MT	medium tone	+\$0
SG	slate grey	+\$0
WL	sandstone	+\$0
CN	metallic champagne	+\$7
EH	metallic bronze	+\$7
MS	metallic silver	+\$7

Frame Top Cap

E1260.



Product Information

Description

This cap trims the top of a frame. It has a painted or veneer surface. Architectural top caps (painted and veneer) are 1/2" higher than the frame; veneer top caps are 1" higher than the frame.

Notes

Standard top cap covers depth of frame. Veneer and architectural top caps cover depth of frame with 2 back-to-back tiles attached.

Wider painted architectural frame top cap can span 2 smaller width frames.

Order finished end and connector top cap separately:

Frame Top Cap—Finished End—Connector Top Cap

Standard (S)—E1250.S—included with standard connector

Painted architectural (A)—E1250.A—E1261.A or see note below

Veneer (W)—E1252.W—included with veneer connector

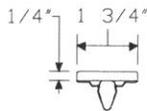
Veneer architectural (B)—E1252.B—see note below

Architectural frame top cap is used with architectural finished end (E1250.A or E1252.B) or architectural change-of-height finished end (E1251.A or B) only.

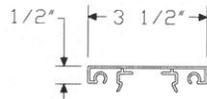
For painted architectural, order painted architectural connector top cap (E1261.A). For veneer architectural, specify width of frame top cap to cover combined width of frame plus 90° connector or spacer.

Architectural frame top caps are to be used with architectural connector covers only.

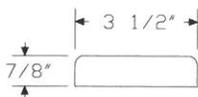
Dimensions



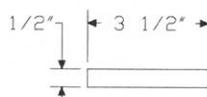
Standard



Painted Architectural



Veneer



Veneer Architectural

Specification Information

Step 1.

E1260.

Step 2. Width

18	18" wide
21	21 1/2" wide
24	24" wide
27	27 1/2" wide
30	30" wide
33	33 1/2" wide
36	36" wide
39	39 1/2" wide
42	42" wide
45	45 1/2" wide
48	48" wide
51	51 1/2" wide

Step 3. Shape

For 18" wide (18)

S	standard
A	painted architectural
B	veneer architectural <input type="checkbox"/> A

For 21 1/2" wide (21), 27 1/2" wide (27), 33 1/2" wide (33), 39 1/2" wide (39), 45 1/2" wide (45), or 51 1/2" wide (51)

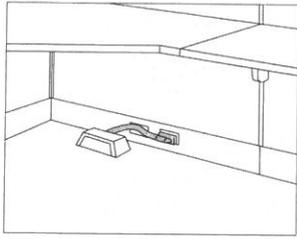
B	veneer architectural <input type="checkbox"/> A
----------	---

For 24" wide (24), 30" wide (30), 36" wide (36), 42" wide (42), or 48" wide (48)

S	standard
A	painted architectural
W	veneer <input type="checkbox"/> A
B	veneer architectural <input type="checkbox"/> A

Power Entry, External Direct Connect, 4 Circuit

E1322.



Product Information

Description

This power entry connects a building's electrical supply from a wall, floor, or column to an Ethospace® powered frame. It plugs directly into a receptacle location on the frame's baseline to distribute up to 4 20-amp circuits. The power entry is manufactured in a right-hand direction but can be field converted to a left-hand direction. The cable is available in 4 lengths and can be field cut to the appropriate length. The power entry is UL listed and CSA certified.

Notes

Licensed electrician must wire power entry.

PVC coated liquid tight conduit.

Dimensions

Specification Information

Step 1.

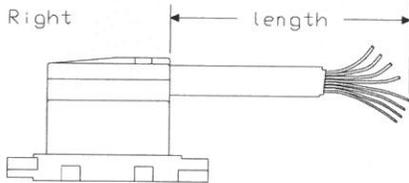
E1322.

Step 2. Length

06E	6' long
12E	12' long
18E	18' long
24E	24' long

Prices for Steps 1-2.

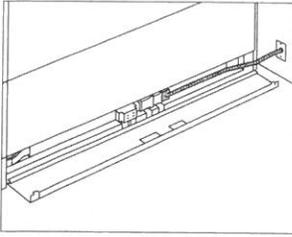
E1322. 06E	\$186
12E	\$252
18E	\$321
24E	\$385



Top View

**Power Entry, Internal Direct
Connect, 4 Circuit**

E1325.



Ethospace® Walls

Product Information

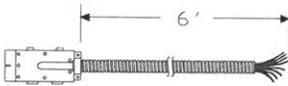
Description

This power entry connects a building's electrical supply from a wall, floor, or column to a powered frame. It enters the frame through the end of the cable management cover and plugs into the right-hand receptacle outlet on a power harness. The power entry includes a 6' cable that can be field cut to the appropriate length. Due to the location of the power entry connection, only 3 receptacle locations remain available in the frame harness. It is UL listed and CSA certified.

Notes

Power entry can connect directly to beltline harness. Distance from work surface-height beltline power harness to cable management cover is 3'.
Licensed electrician must wire power entry.
3/16" extra-flexible conduit used in power entry may not meet local codes; local approval may be required.

Dimensions



Specification Information

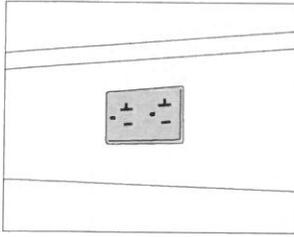
Step 1.

E1325.6E

\$205

Receptacle, 4 Circuit, 20 Amp

X1311.



Ethospace® Walls

Product Information

Description

This receptacle locks into a 4-circuit electrical harness to provide power to equipment with a 20-amp standard plug head or cap. It also accepts 15-amp standard plug heads or caps. The receptacle is UL listed and CSA certified.

Notes

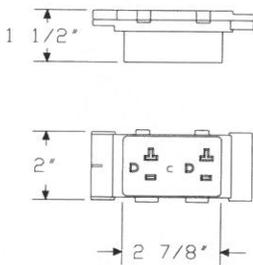
Receptacle cannot be used with hard-wired frame.

Avoid overloading circuit by ensuring total connected load does not exceed 16 amps. If 1 piece of equipment requires all available power, do not use receptacle's second outlet or install additional receptacles on that circuit. In many cases, equipment requiring this receptacle will use all available power.

For information on types of receptacles and their applications, refer to individual product planning guides.

When locked into electrical harness of Action Office® Series 2 powered cable management panel frame or Passage® powered desk module, receptacle extends 3/8" from cable management panel face, trim cover, channel, or power channel trim cover.

Dimensions



Specification Information

Step 1.

X1311.

Step 2. Circuit Type

AT	circuit a
BT	circuit b
CT	circuit c
DTN	circuit d
BIT	circuit b, isolated ground
CIT	circuit c, isolated ground
DT	circuit d, isolated ground

Prices for Steps 1-2.

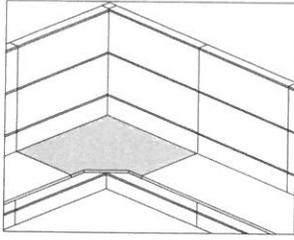
X1311. AT	\$51
BT	\$51
CT	\$51
DTN	\$51
BIT	\$51
CIT	\$51
DT	\$51

Step 3. Receptacle Finish

8Q	folkstone grey	+\$0
91	white	+\$0
BU	black umber	+\$0
CL	cool grey neutral	+\$0
HF	inner tone light	+\$0
HT	inner tone	+\$0
LU	soft white	+\$0
MT	medium tone	+\$0
SG	slate grey	+\$0
WL	sandstone	+\$0
WN	warm grey neutral	+\$0

Corner Surface

EWE20.
EWS20.
EWT20.



Product Information

Description

This 90° corner surface hangs from frames, off-module lower tiles, or wall strips. It has a laminate top and thermoplastic edge, a veneer top and edge, or a painted top and edge. Laminate and veneer surfaces are 1 1/4" thick. Painted Formcoat® surfaces are 1" thick. There is a 1" gap at the back of the surface for standard plug head and cord passage.

Notes

For additional size, shape, cable management, and finish options, see Vary Easy Program in Appendices.

For Ethospace® frame attached surface (F) option:

Order appropriate supports separately; 2 supports are required for each surface (left and right side):

- Work surface support panel, end, glides (E2290.)
- Work surface support panel, mid run, glides (E2291.)
- Open return work surface support (E1142.)
- Work surface support, single (E2393.)
- Surface support rail (E2395.)
- Work surface bracket (E2931.)

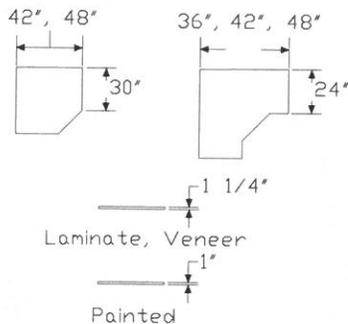
A corner support bracket is included.

To hang work surface on-module from frame or wall strips, specify work surface attachment (F); to hang work surface from off-module lower tile, specify off-module work surface attachment (FR or FL).

Thin- and eased-edge surfaces do not work with the following:

- Open return work surface support (E1142.)

Dimensions



Specification Information

Step 1.

EW

Step 2. Edge

- S20.** squared-edge
- T20.** thin-edge
- E20.** eased-edge

Step 3. Depth

- 24** 24" deep
- 30** 30" deep

Step 4. Width

For 24" deep (24)

- 36** 36" wide
- 42** 42" wide
- 48** 48" wide

For 30" deep (30)

- 42** 42" wide
- 48** 48" wide

Step 5. Surface Material

For squared-edge (S20.)

- L** laminate top/thermoplastic edge
- W** veneer top/veneer edge
- P** painted Formcoat® top/edge

For thin-edge (T20.)

- L** laminate top/thermoplastic edge
- W** veneer top/veneer edge
- P** painted Formcoat® top/edge

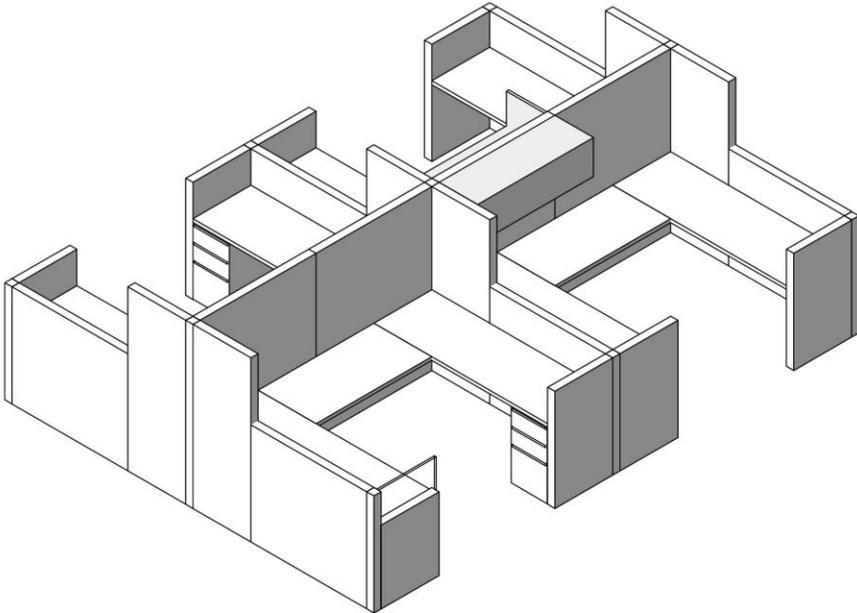
For eased-edge (E20.)

- P** painted Formcoat® top/edge

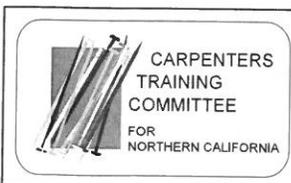
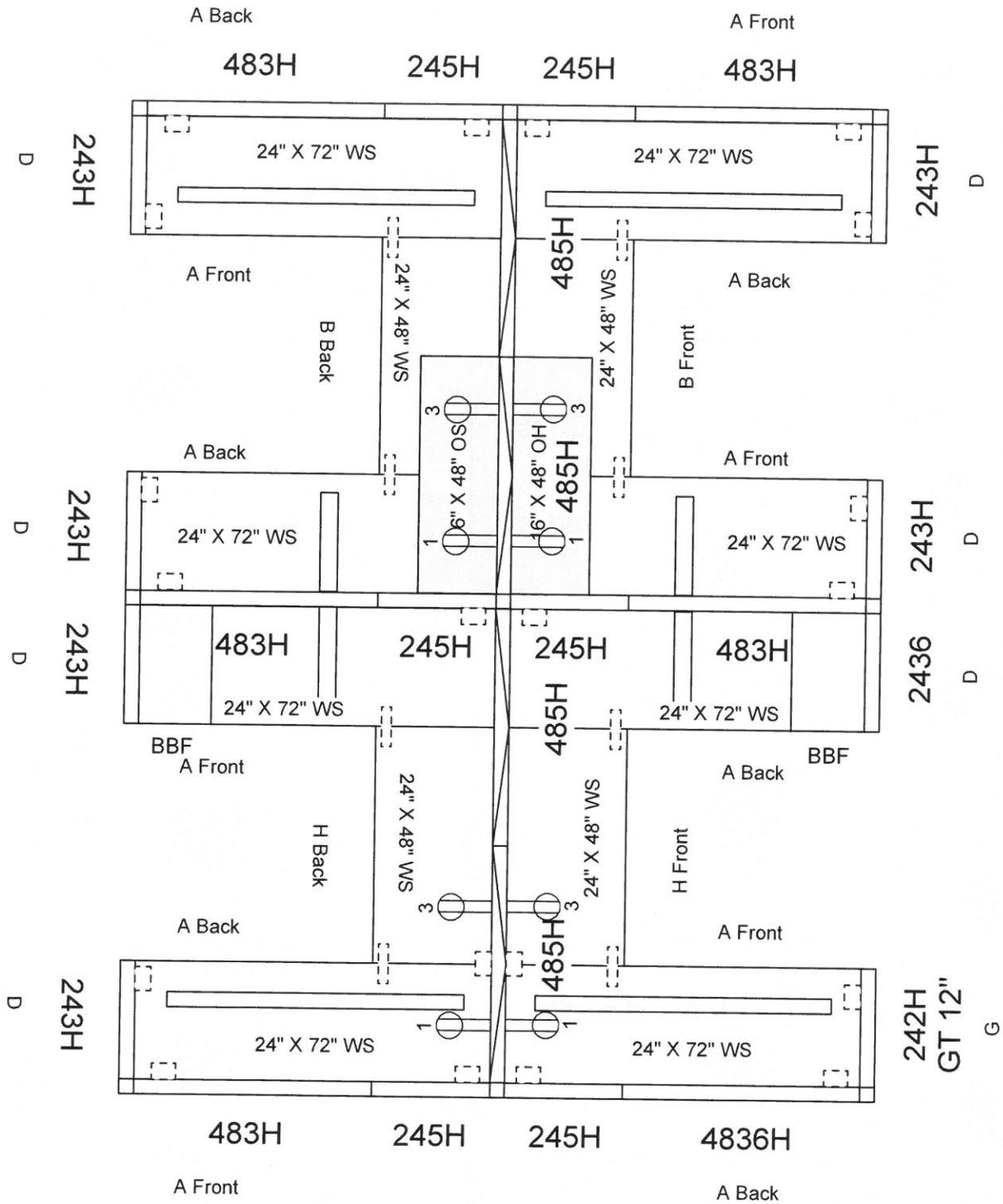
Step 6. Attachment

- F** Ethospace® frame attached surface
- FR** Ethospace® frame attached left, off module right
- FL** Ethospace® frame attached right, off module left

Lesson 3



KIMBALL OFFICE



Kimball Office

Floor Plan

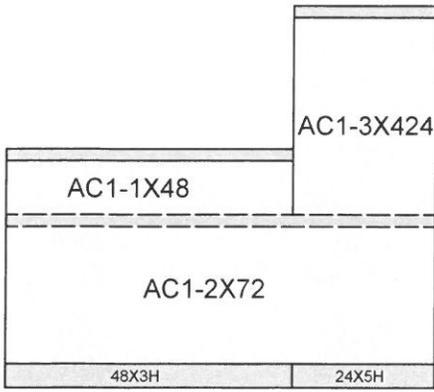
Date: 3/28/17

Drawn By: .dk

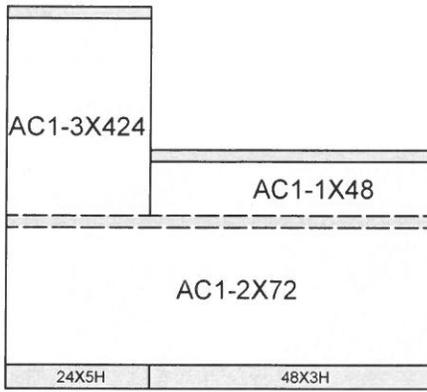
Sheet 1 of 2

Scale: 3/8" = 1'

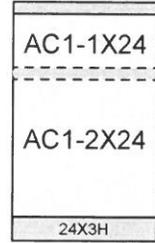
1205



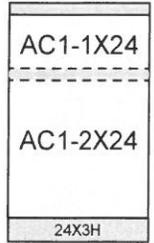
RUN A : FRONT



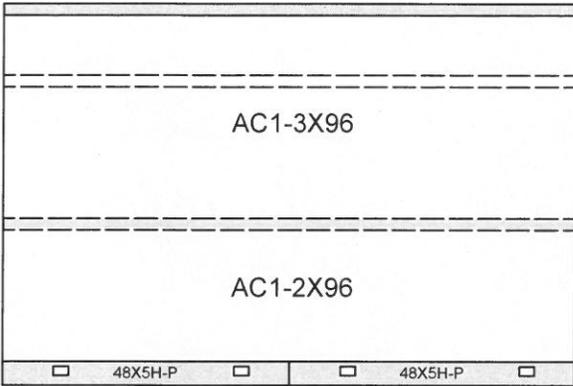
RUN A : BACK



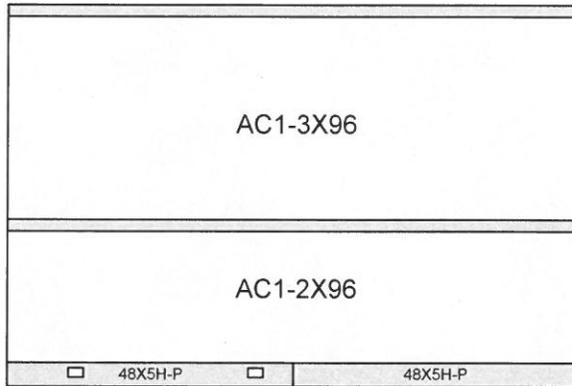
RUN D :
FRONT



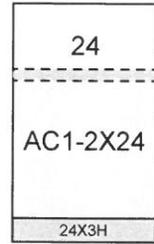
RUN D :
BACK



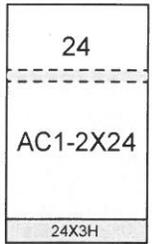
RUN B : FRONT



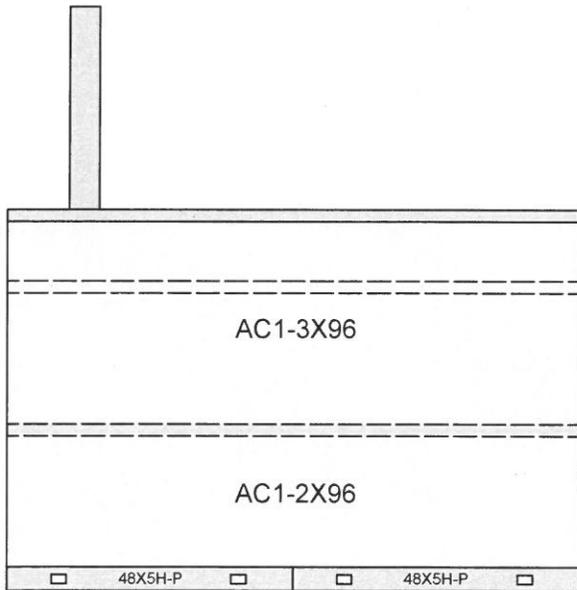
RUN B : BACK



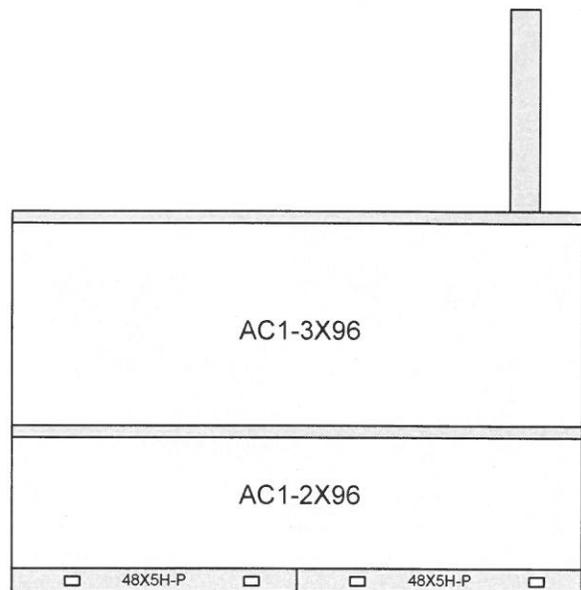
RUN G :
FRONT



RUN G :
BACK



RUN H : FRONT



RUN H : BACK



CARPENTERS
TRAINING
COMMITTEE
FOR
NORTHERN CALIFORNIA

Kimball Office
Elevations

Date:
3/28/17
Drawn By:
.dk

Sheet 1 of 2
Scale: 3/8" = 1'

1205

Xsite®

Xsite Traxx® and Lock Bracket

Tools Required

- Tape Measure
- Rubber Mallet
- Flat Blade Screwdriver

Installation

Note: Each frame of 18"-48" requires two brackets per Traxx location.

Note: Each mid-frame support has two locations for lock brackets. (Figure A).

1. Traxx at the top of frame should be positioned against edge of the connector.
2. Hook back of Xsite Traxx over top channel or mid-frame supports as required. Repeat on opposite side. (Figure B).
3. Engage ridge on inside of Xsite Traxx lock bracket over recess on bottom of Xsite Traxx. Swing up and snap into ridge on opposite Xsite Traxx. (Figure B).

Note: Traxx lock brackets must be installed near the ends of each frame top channel or mid-frame support that supports Xsite Traxx (approximately 6" from the vertical). Maximum distances between lock brackets should not exceed 32".

4. If Xsite Traxx is located on one side only, engage ridge over recess on bottom of Xsite Traxx, swing up and slide over mid-frame support. Repeat for all lock brackets. (Figure C).

Note: Since Traxx lock brackets will not attach to top channels, Traxx must be located on both sides or neither side of a top channel when stacking is used.

5. Carefully tap Xsite Traxx left or right with mallet and flat blade screwdriver for final adjustment.

Note: To remove Traxx lock brackets, slide a screwdriver behind the vertical edge and pry out.

Figure A

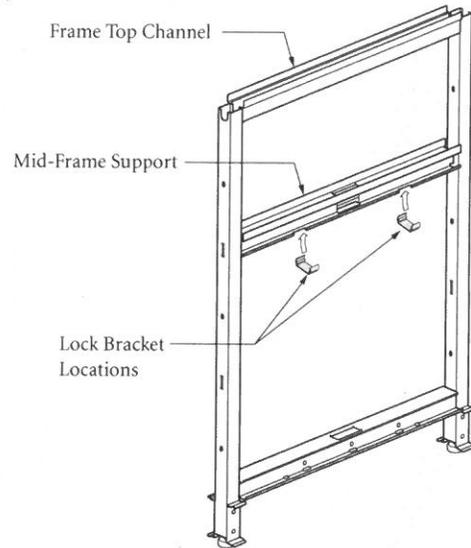


Figure B

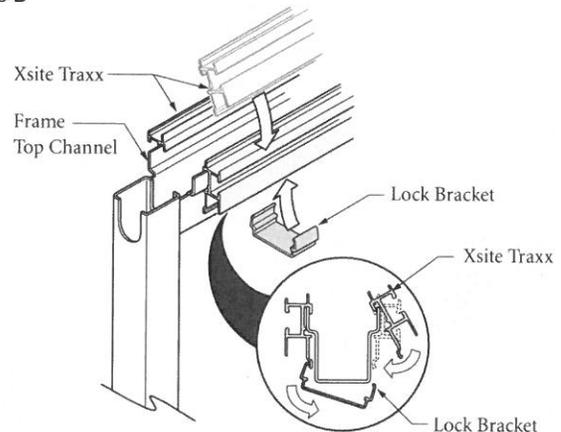
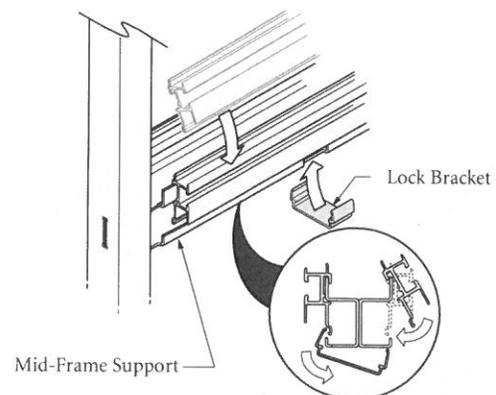


Figure C



Xsite®

Frames, Connectors, and 3" Extender

Tools Required

- Cordless Drill/Driver
- 3/8" Allen Bit
- Tape Measure
- Level
- Pry Bar (for leveling)

Installation

Frame:

1. Locate the high spot of the floor in area where frames are to be assembled. Frame assembly should start at a directional connector (L, T, X, V, Y).
2. Using 2" connector/end trim bolts connect frames to connector using the number of bolts shown. (Figures A & B).
3. Level assembly of frames and connector.
4. Connect additional frames to assembly using 2 1/4" frame-to-frame alignment bolts in the locations shown. (Figure B). Level each frame, ensuring that each glide is touching the floor.

Figure A

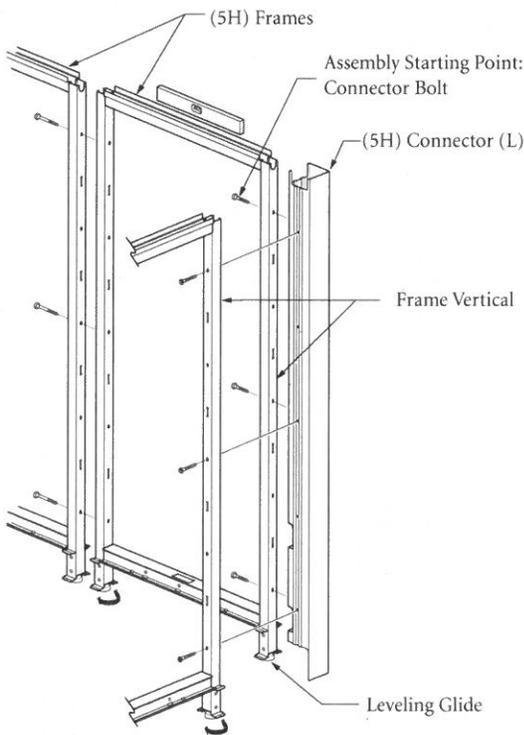
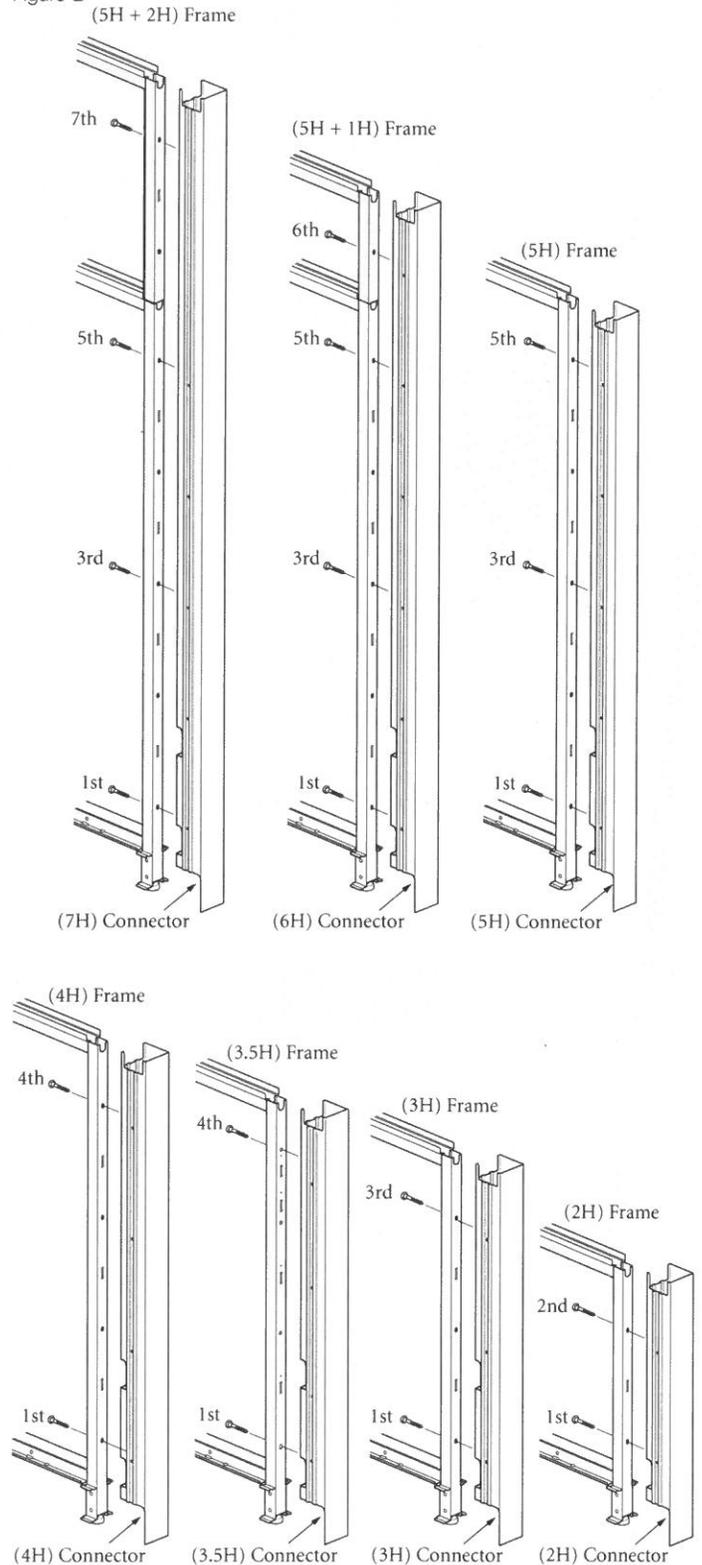


Figure B



Proper product installation, in accordance with these instructions, is the responsibility of the installing agent. If you have any questions concerning these instructions, please call Kimball Office Customer Service.

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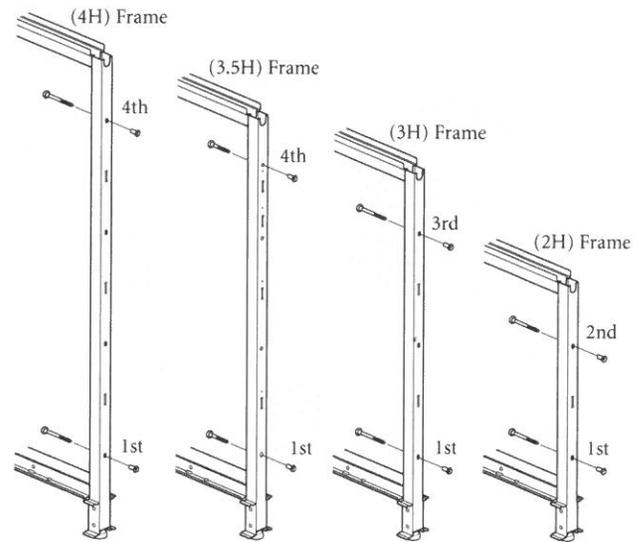
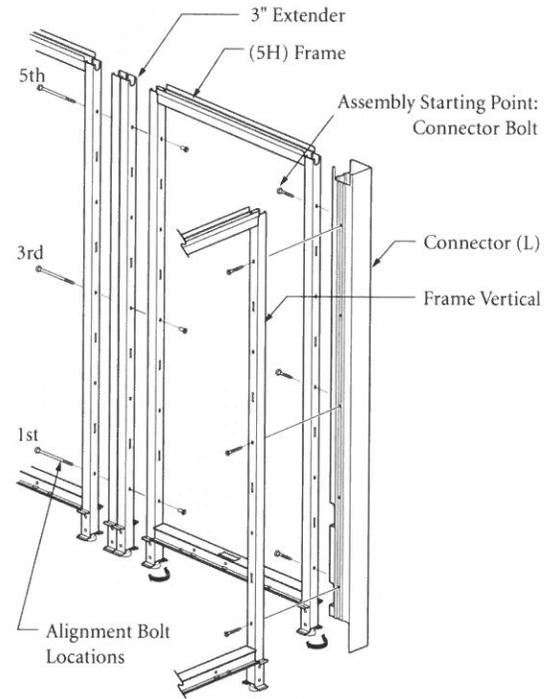
Installation (continued)

3" Extender:

Note: 3" extender may be used between frames, between a frame and a connector, or at the end of a frame.

1. To connect the 3" extender between frames, 5 3/4" extender frame-to-frame alignment bolts are used at the locations shown. (Figure C).
2. To connect the 3" extender to the end of a frame, 5" extender connector/end trim bolts are used at the locations shown. (Figure C). In this application the end trim must be installed at the same time as the 3" extender.

Figure C



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Ceiling Power Entry and Power/Data Pole

Tools Required

- Cordless Drill/Driver
- Flat Blade Screwdriver
- Tape Measure
- #2 Phillips Screwdriver Bit
- Rubber Mallet
- Utility Knife
- Level
- Metal Cutting Saw
- Plumb Bob

Installation

Note: System should be in its final position before proceeding. Independent and shared neutral components cannot be mixed. Reference labels on conduit for wiring diagrams. Junction box, junction box cover, screws for junction box cover, and right angle connector to be supplied by electrician. If using the pole for data, it is recommended that the data cables be routed down through the pole and distributed through the system in the top channel of the frame.

1. Determine location of power and/or data source in the ceiling.
2. Use a plumb bob to line up top channel slot to a point on the ceiling. Mark center point and carefully cut a 5½" x 1½" hole in the ceiling. (Figure A).
3. Measure distance from top channel opening to ceiling. Add sufficient length above the ceiling to allow for proper support and fastening.
4. At top end, cut ceiling power/data pole to length.
5. Slide top trim plate over upper end of pole and bottom trim plate over lower end of pole. (Figure B).
6. Center pole attachment brackets over opening in top channel. Attach with two #8 x ½" self-tapping screws provided. (Figure B).

Figure A

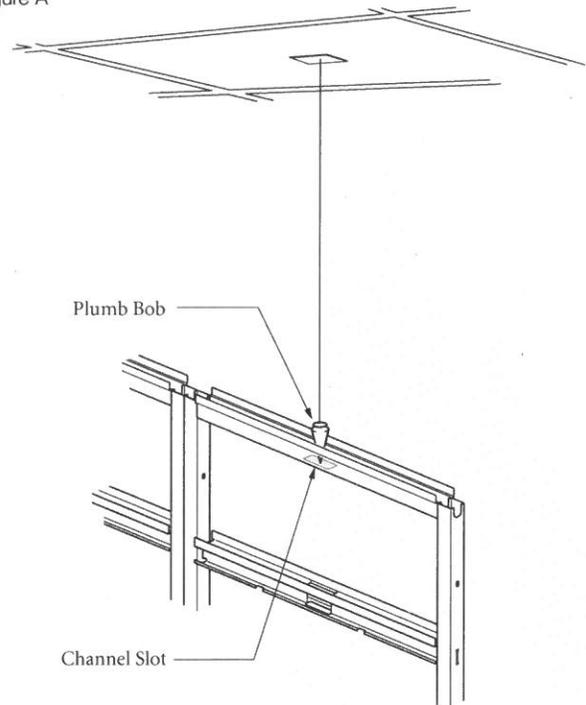
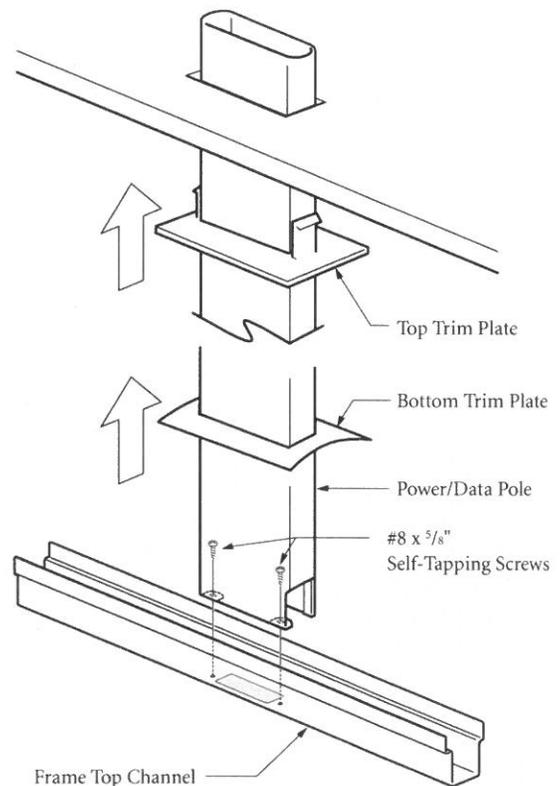


Figure B



Proper product installation, in accordance with these instructions, is the responsibility of the installing agent. If you have any questions concerning these instructions, please call Kimball Office Customer Service.

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Xsite

Installation (continued)

7. Mark and drill two $\frac{5}{32}$ " pilot holes for attaching junction box into top of pole. Attach junction box (supplied by electrician) to top of power pole with two Phillips head #8 x $\frac{5}{8}$ " thread-forming screws (supplied by electrician). (Figure C). Ensure holes to attach right angle connector are exposed when junction box is attached to pole.
8. Feed power entry through power pole, center opening in top channel, through mid-frame supports, bottom channel, into wireway.
9. Install right angle connector (supplied by electrician) in back of box and cut flexible conduit to length. Feed wires into box and fasten with connector. (Figure D).
10. Secure junction box above the ceiling in an approved manner.
Note: *Bracketry to support junction box in ceiling to be supplied by contractor.*
11. Install Xsite Traxx®. (See Xsite Traxx assembly instructions).

Figure C

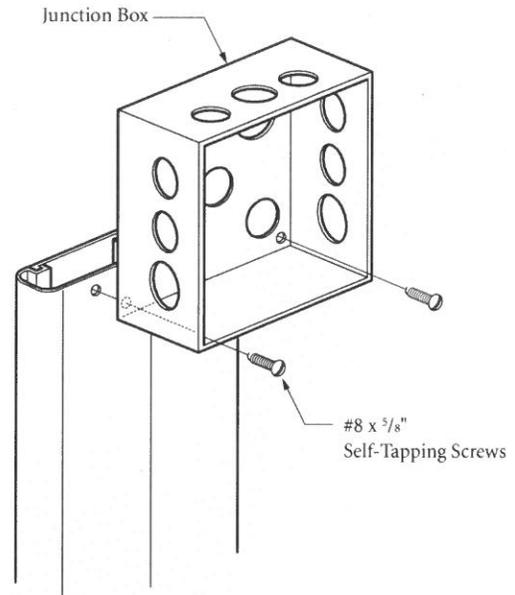
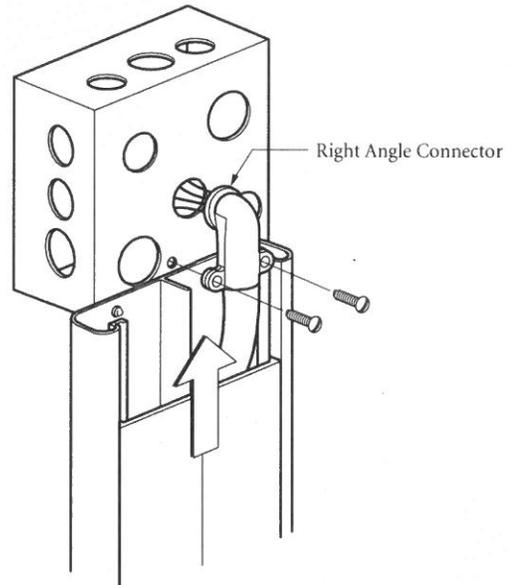


Figure D



Proper product installation, in accordance with these instructions, is the responsibility of the installing agent. If you have any questions concerning these instructions, please call Kimball Office Customer Service.

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Xsite

Installation (continued)

12. Lay ceiling power/data top cap over flanges in Xsite Traxx and push down into place. Slide to line up slot in cap with pole. Repeat for opposite top cap. (Figure E).
13. Slide bottom trim down into place. Slide top trim up to ceiling and engage wings into ceiling. Push up until flush. Adjust wings by bending until secure. (Figure B).
14. With north arrow pointing up, plug end of power entry into right hand block of the base wireway harness. Install two retaining screws and tighten into harness. (Figure F). Consumes one receptacle location.

Note: Power supply to the junction box must be ½" trade size or other approved conduit. After installation is completed the top opening in the power/data pole may be sealed with an approved sealant if required by codes.

Warning: Connection to building power must be completed by a licensed electrician. Installation must be in accordance with the National Electrical Code and local codes. This system may be connected to more than one source of supply. No single circuit may be powered by more than one source. Do not interconnect system electrical power from different feed units. Be certain all sources are disconnected prior to any servicing.

Figure E

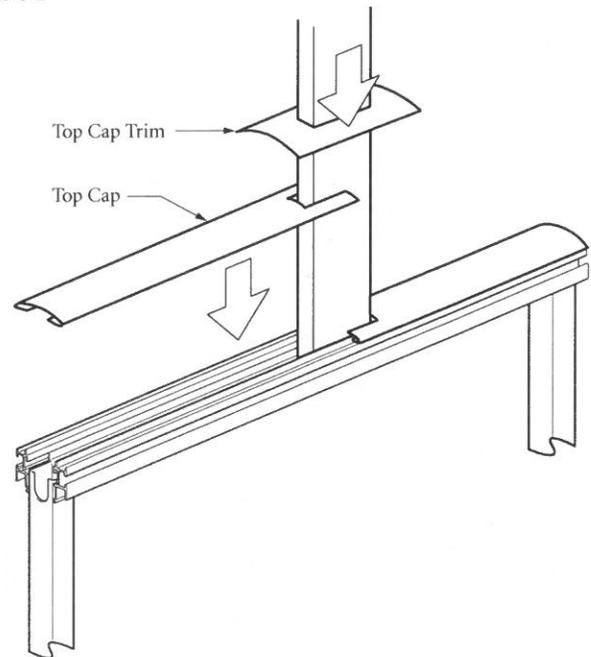
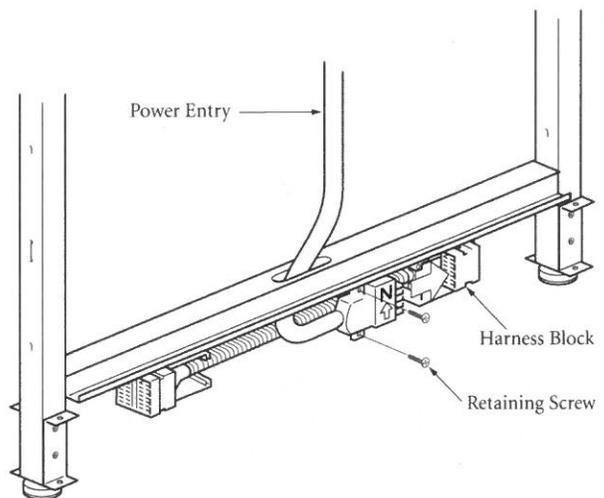


Figure F



Xsite®

Tackable Acoustic, Metal, Wood, Laminate, Paint, Marker Board and Slat Tiles

Caution: Tiles must be installed in a climate controlled environment. Extreme changes in humidity or temperature can damage tiles. Store all tiles flat until installed. Do not stack on top of tiles. Large tiles are to be installed by two people. Do not handle by the corners and be careful not to damage the corners.

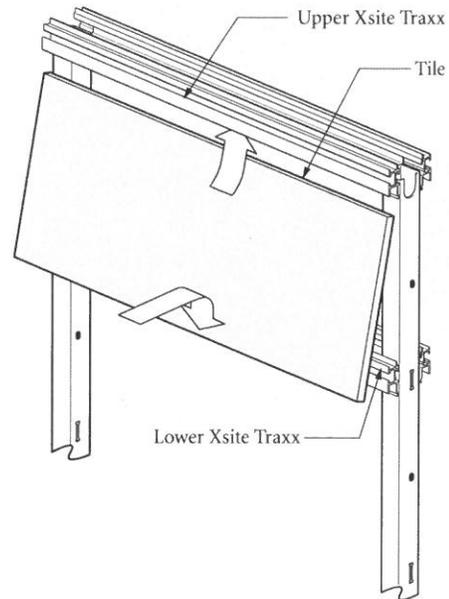
Tools Required

- Tape Measure

Installation

1. On tackable acoustic and wood tiles, locate label on back of tile. Install with label right side up.
2. Insert top of tile into upper Xsite Traxx® and lower into Xsite Traxx or bottom channel below. (Figure A). Carefully slide left or right to align. Frame glides may need to be adjusted to improve tile alignment.

Figure A



Traxx Jack Plates

Tools Required

- Rubber Mallet

Installation

1. Track jack plates sit in the channel formed by the Xsite Traxx. Place the jack plate in the channel with the bend upward. (Figure A).
2. Place track jack plates spaced in top channel as follows:
 18" - 24" Top Cap - 1 per 54" - 72" Top Cap - 3 per
 30" - 48" Top Cap - 2 per 78" - 96" Top Cap - 4 per
 (Figure B).
3. Use a rubber mallet to tap down center of track jack plate to straighten the bend. Track jack plate should appear flat. If the plate does not fit snugly after being straightened, it is not needed in that particular location. Slide the plate to the left or right until it fits snugly. When the jack plate fits securely, it pushes the top channel out to the appropriate width to hold the top cap in place. (Figure C).
4. To remove the track jack plate, use a rubber mallet to tap the center of the plate down to the inverted position. Remove the plate and save for future use. (Figure D). The plate can be re-used by turning it so that the bend is in the upward position. Follow Steps 2 and 3 to install the track jack plate.

Figure A

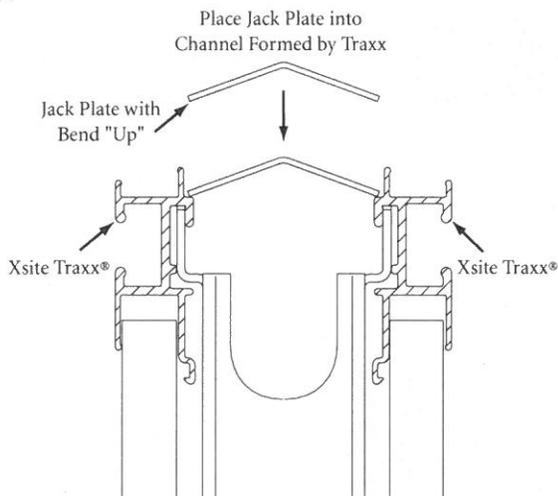


Figure B

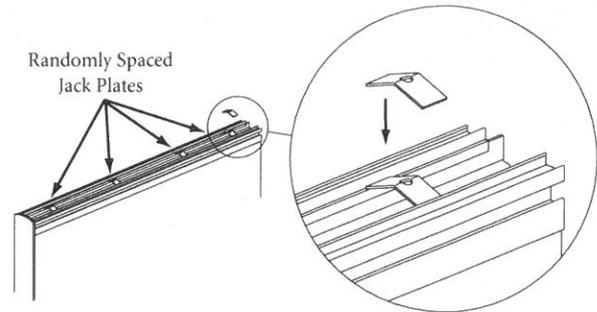


Figure C

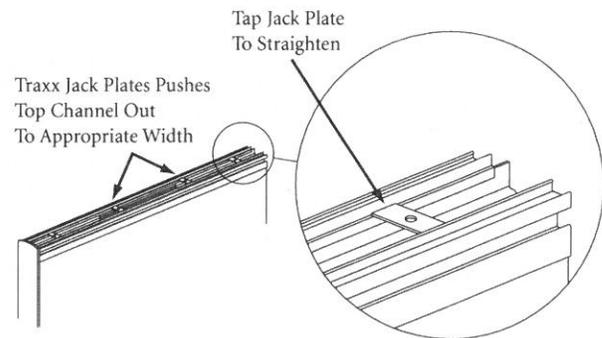
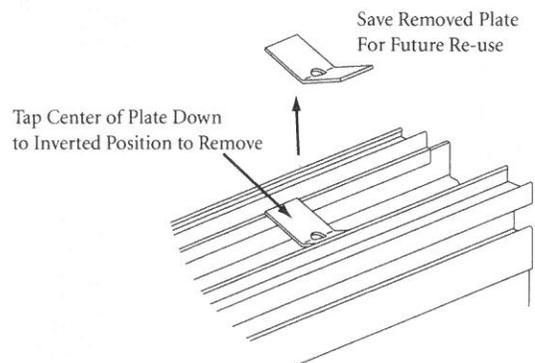


Figure D



Xsite

Installation (continued)

4. Remove adhesive backer from gaskets and install on inside walls of glass holders. Apply 2 gaskets on each holder, 1 per side. (Figure D).
5. Center glass on glass holders with frosted lettering in bottom corner. Install and tighten the $\frac{3}{8}$ "-16 set screw with 20 inch lbs. minimum torque using a $\frac{3}{16}$ " allen tool to capture glass in glass holders. (Figure E). The gap from one glass to the next glass is $1\frac{1}{8}$ " (28mm).
6. Install tile. (Figure F).

Figure D

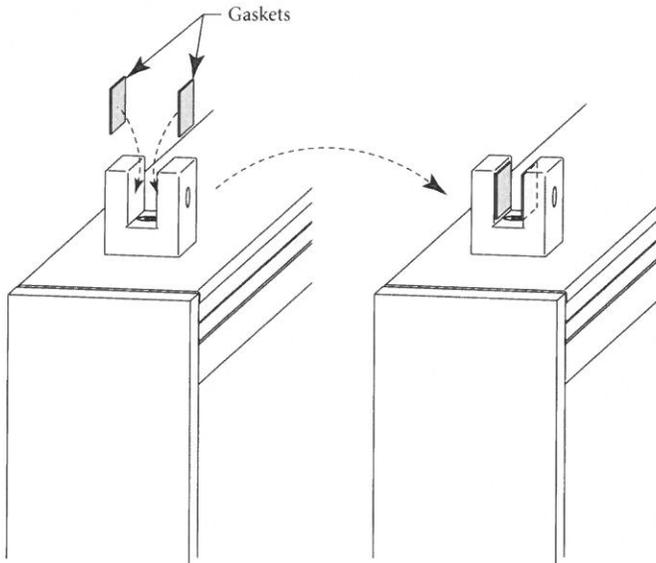


Figure E

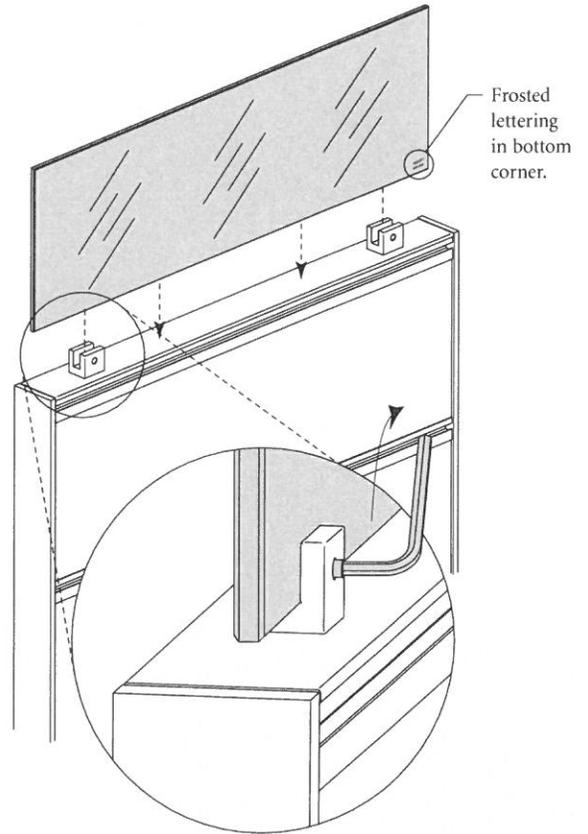
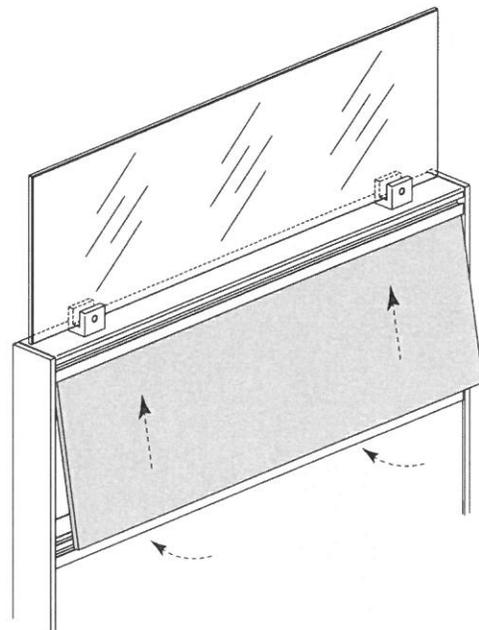


Figure F



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Proper product installation, in accordance with these instructions, is the responsibility of the installing agent. If you have any questions concerning these instructions, please call Kimball Office Customer Service.

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Xsite®

Frameless Glass

Tools Required

- 3/16" Allen Wrench
- 1/2" Allen Wrench

Package Contents

- 1 Top Cap
- 2 Glass Holders
- 2 1/4"-20 Connector Nuts
- 4 Clear Gaskets
- 2 1/4"-20 x 2 1/4" Flat Head Cap Screws
- 2 3/8"-16 Set Screws

Installation

1. Remove existing top cap and discard. (Figure A).
Note: Step 1 only applies for existing Xsite panels. Frameless glass must be installed prior to installing tiles.
2. Remove tile from one side of panel so that the top channel of frame is visible. Attach new top cap (with holes) on top of panel. (Figure A & B).
3. Center glass holders over holes and install a 1/4"-20 x 2 1/4" flat head cap screw through the existing holes in the top channel of the panel frame using the 3/16" allen tool. Thread the 1/4"-20 connector nut from underneath panel frame on bottom end of screw and tighten. Use the 3/16" allen tool on connector nut to keep from rotating. Tighten and confirm no deflection in top cap. (Figure C).

Figure A

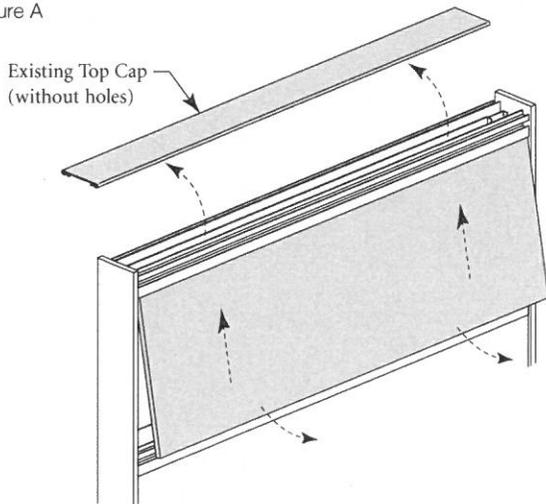


Figure B

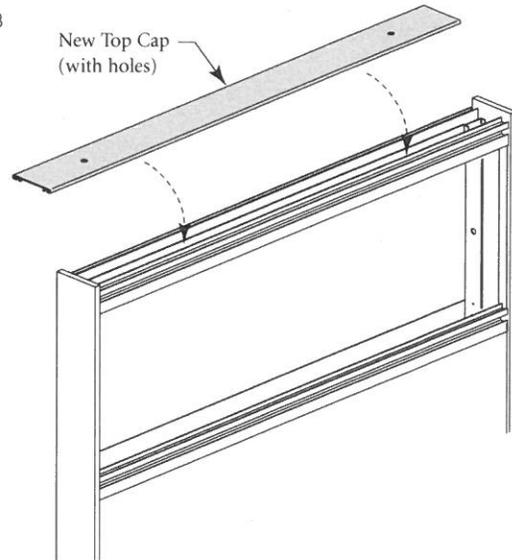
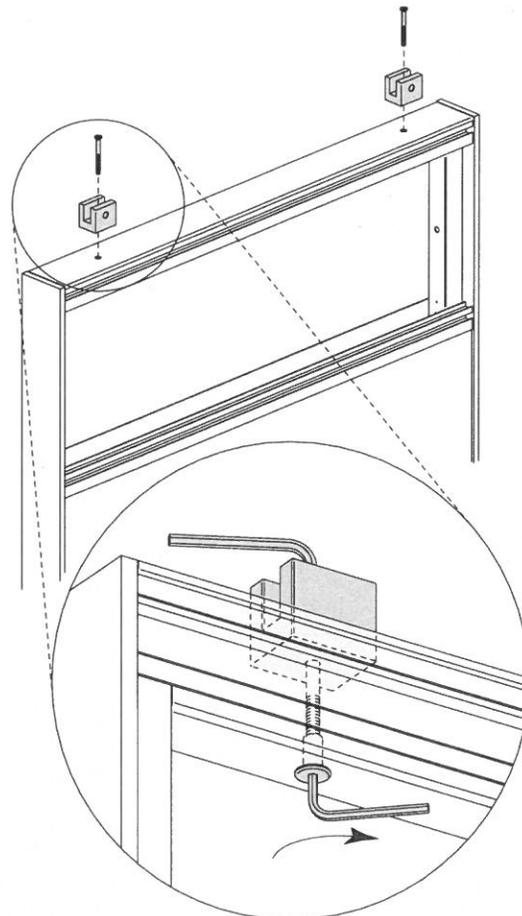


Figure C



Proper product installation, in accordance with these instructions, is the responsibility of the installing agent. If you have any questions concerning these instructions, please call Kimball Office Customer Service.

Kimball Office



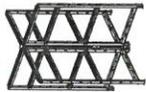
2-Way/L Connectors

- ▶ See page 126 for product info.
- ▶ See page 185 to specify.



3-Way/T Connectors

- ▶ See page 126 for product info.
- ▶ See page 185 to specify.



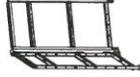
4-Way/X Connectors

- ▶ See page 126 for product info.
- ▶ See page 186 to specify.



Straight Connectors

- ▶ See page 126 for product info.
- ▶ See page 186 to specify.



2-Way/V 120° Connectors

- ▶ See page 126 for product info.
- ▶ See page 187 to specify.



3-Way/Y 120° Connectors

- ▶ See page 126 for product info.
- ▶ See page 187 to specify.



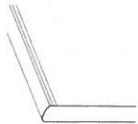
Adjustable Wall-Mount Channels

- ▶ See page 127 for product info.
- ▶ See page 188 to specify.



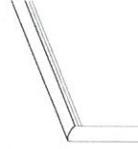
Hi-Lo Trim

- ▶ See page 128 for product info.
- ▶ See pages 190–191 to specify.



End Trim

- ▶ See page 128 for product info.
- ▶ See page 189 to specify.



Top Caps

- ▶ See page 128 for product info.
- ▶ See page 192 to specify.



Frameless Glass

- ▶ See page 129 for product info.
- ▶ See page 193 for panes.
- ▶ See page 197 for top caps.



Base-Wireway Frames

- ▶ See page 117 for product info.
- ▶ See pages 167–168 to specify.



Open-Base Frames

- ▶ See page 117 for product info.
- ▶ See pages 169–170 to specify.



To-the-Floor Frames

- ▶ See page 117 for product info.
- ▶ See pages 171–172 to specify.



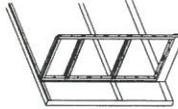
Mid-Frame Supports

- ▶ See page 173 to specify.



3" Extenders

- ▶ See page 174 to specify.



Off-Module Frames

- Available in base-wireway, open-base, and to-the-floor models.
- ▶ See page 118 for product info.
 - ▶ See pages 175–177 to specify.



Stacking Frames

- ▶ See page 119 for product info.
- ▶ See page 178 to specify.



Stacking 3" Extenders

- ▶ See page 179 to specify.



Stacking Off-Module Frames

- ▶ See page 120 for product info.
- ▶ See page 180 to specify.



Sliding Privacy Door

- ▶ See page 121 for product info.
- ▶ See pages 181–182 to specify.



Hinged Doors

- ▶ See page 124 for product info.
- ▶ See page 183 to specify.



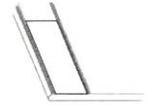
Privacy Panels

- ▶ See page 125 for product info.
- ▶ See page 184 to specify.



Xsite Traxx

- ▶ See page 140 for product info.
- ▶ See page 198 to specify.



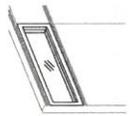
Tackable Acoustical Tiles

- ▶ See page 141 for product info.
- ▶ See pages 199–205 to specify.



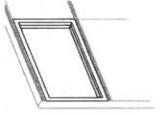
Wood, Laminate, and Paint Tiles

- ▶ See page 141 for product info.
- ▶ See pages 206–210 to specify.



Glass Tiles

- ▶ See page 142 for product info.
- ▶ See pages 211–214 to specify.



Pass-Thru Tiles

- ▶ See page 142 for product info.
- ▶ See page 215 to specify.



Metal Tiles

- ▶ See page 143 for product info.
- ▶ See pages 216–217 to specify.



Marker Board Tiles

- Available in metal or laminate.*
- ▶ See page 144 for product info.
- ▶ See pages 218–219 to specify.



Slat Tiles

- ▶ See page 144 for product info.
- ▶ See pages 220–221 to specify.



Storage Tiles

- ▶ See page 145 for product info.
- ▶ See page 222 to specify.



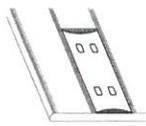
Fold-Down Tiles

- ▶ See page 145 for product info.
- ▶ See page 222 to specify.



Technology Tiles

- ▶ See page 156 for product info.
- ▶ See pages 224–225 to specify.



Power/Data Tiles

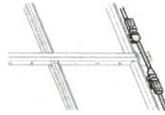
- ▶ See page 162 for product info.
- ▶ See page 232 to specify.

Features	▶ See page 116
Application Guidelines	130
Power & Data Overview	146
Electrical Guidelines	152



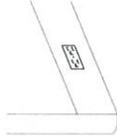
Base Wireway Harnesses

- ▶ See page 147 for product info.
- ▶ See page 234 to specify.



Base Wireway Jumpers

- Available in standard and pass-thru models.
- ▶ See page 148 for product info.
 - ▶ See pages 235–236 to specify.



Duplex & USB Receptacles

- ▶ See page 147 for product info.
- ▶ See pages 237–239 to specify.



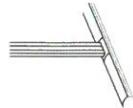
Base Wireway Power Entries

- Available in standard and New York City models.
- ▶ See page 149 for product info.
 - ▶ See page 240 to specify.



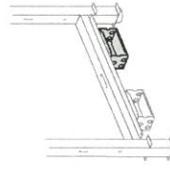
Ceiling Power Entries

- ▶ See page 151 for product info.
- ▶ See page 240 to specify.



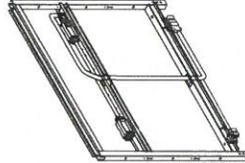
Ceiling Power/Data Pole

- ▶ See page 151 for product info.
- ▶ See page 241 to specify.



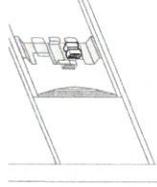
Base Wireway Hardware Boxes and Cover Plates

- ▶ See page 150 for product info.
- ▶ See page 242 to specify.



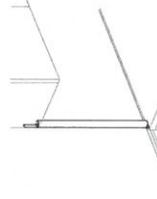
Technology Tile Electrical Components

- ▶ See page 157 for product info.
- ▶ See pages 226–231 to specify.



Power/Data Tile Electrical Components

- ▶ See page 163 for product info.
- ▶ See page 233 to specify.



Cable Management Components

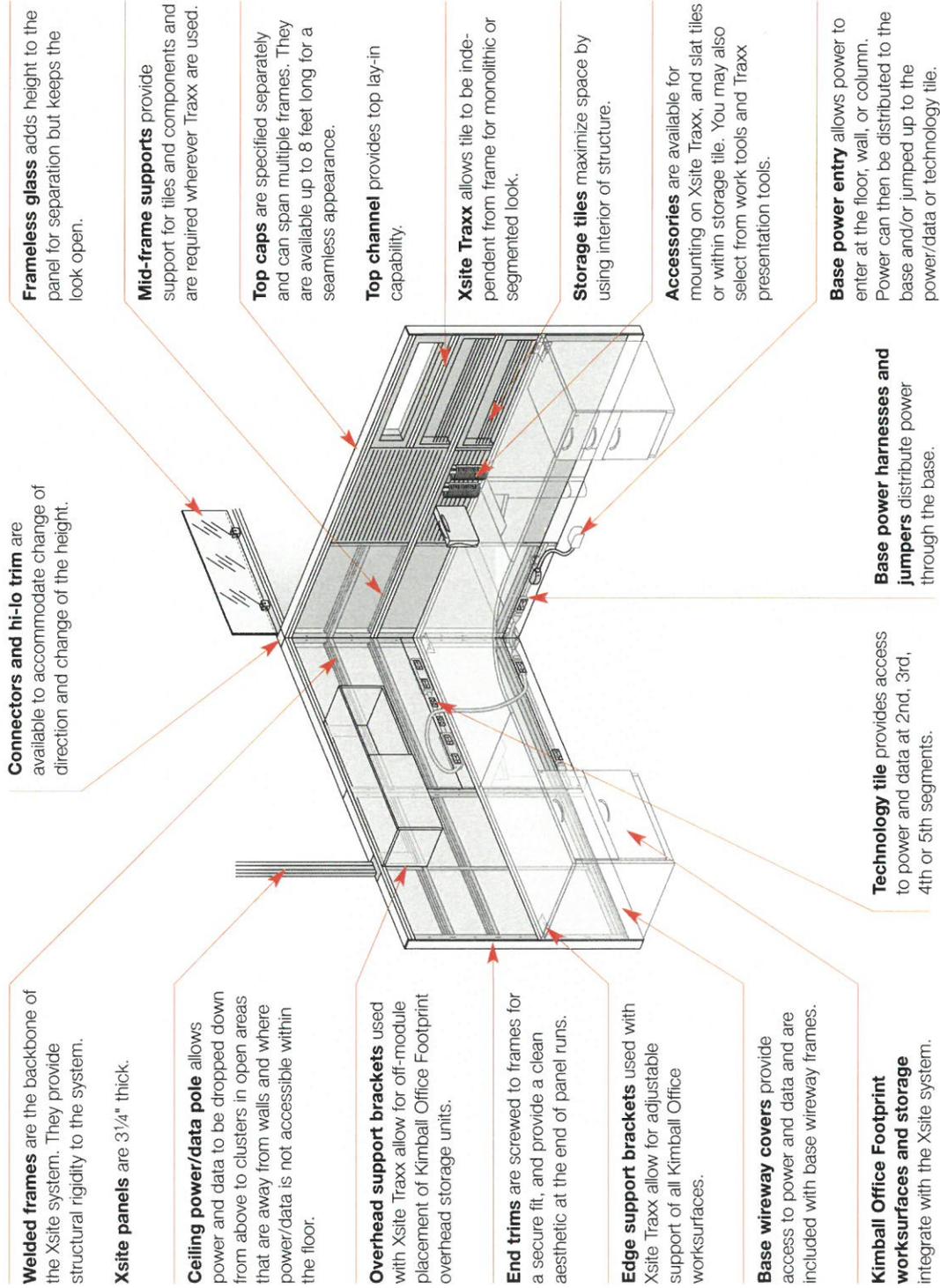
- ▶ See page 165 for product info.
- ▶ See page 243 to specify.

Features

XSITE® System

Overview

Statement of Line	▶ See page 112
Application Guidelines	▶ 130
Power & Data Overview	▶ 146
Electrical Guidelines	▶ 152



Trim Profiles:



Curved

Applies to end trim, hi-lo end trim, and top caps.



Flat

Applies to connectors and frameless glass top caps.



Flat

Applies to connectors and frameless glass top caps.

Top caps and trim are available in wood finishes or paint.

Electrical:



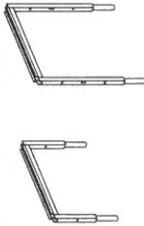
Class A — Tackable acoustical tiles.
Note: COM must comply with U.L. Standard 1286

Class B — Laminate tiles

Class C — Wood and painted tiles

Features	▶ See page 116
Application Guidelines	130
Power & Data Overview	146
Electrical Guidelines	152

Details



Stacking frames may be added to 2-high, 3-high, 4-high, or 5-high base frames to increase the height of the panel.

IMPORTANT: 3.5-high base frames cannot accept stacking frames.

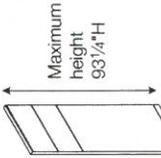
Stacking frames are available in 1-high and 2-high segments. They include:

- Welded frame
- Attachment hardware

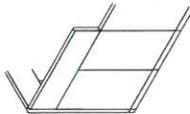
Finishes & Materials

- Vertical frame: 16 gauge cold-rolled steel, black
- Horizontal frame: 14 gauge cold-rolled steel, black

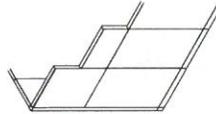
Connections



One 1-high or 2-high stacking frame may be added on top of a base frame (except 3.5-high) up to a max. of 93 3/4" including the top cap.

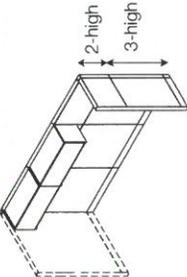


48"W stacking segment can span across two 24"W base structures.



Hi-lo applications can be created by using a 1-high stacking frame next to a 2-high stacking frame. Specify appropriate hi-lo vertical trim for end of the run.

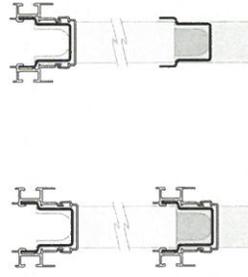
Planning Factors



Stacking frames are loadbearing when same-height return runs are used at each end.

In hi-lo applications, stacking frames can be loadbearing, but require overheads on both sides.

Components must be hung on a top channel of either the base or stacking frame.



Xsite Traxx must be used at the top of the stacking frame on both sides. When stacking, the top of the base frame must have Xsite Traxx on both sides or neither side.

Related Products



Stacking 3" extenders are available in 1-high and 2-high segments and may be added to base extenders of any height. They are available for use in straight panel runs (in-line), next to a connector, or at the end of a panel run; specify the appropriate designator for the application type. Base and stacking extender heights must be equal to the base and stacking frame heights to which they are attached. Specify top caps, Traxx and tiles to span across extenders for a seamless look.

Vertical end trim and connectors must be specified to equal the combined height of the base and stacking frames.

Xsite Traxx and tiles complete the panel frame.

▶ See page 137.

Details



Connectors are available to join two or more panels when changing directions in a panel run. Connectors are constructed of extruded aluminum and have a flat profile. They are painted or covered with premium grade veneer.

Connectors can be used in the following configurations:

- L (2-way 90°)
- T (3-way 90°)
- X (4-way 90°)
- Straight (180°)
- V (2-way 120°)
- Y (3-way 120°/120°/120°)

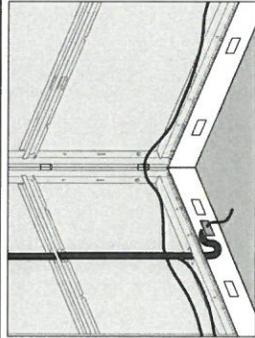
Top cap, vertical trim, and connecting bolts are included with each connector.

Connector top caps are curved profile to match panel top caps.

Finishes & Materials

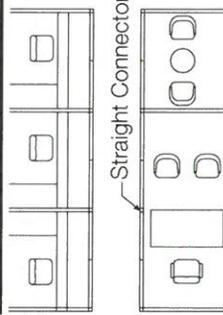
- Connector frame: extruded aluminum, black
- Connector (vertical trim): wood or paint
- Top cap: wood or paint

Power & Data



Cut outs are provided at 2-high just below the work surface, and just above the wireway for routing cables through the connector.

Planning Factors



Straight connectors fill parallel panel runs where one panel run has a connector and the other does not. It is not required to join panels.

Specify appropriate connectors for the combined height of standard and stackable panels.

Trim Profiles:



Curved

Applies to end trim, hi-lo end trim, and top caps.



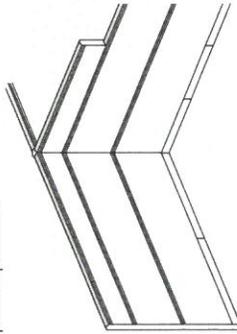
Flat

Applies to connectors (vertical trim) and frameless glass top caps.

Details

Top caps finish the top of the frame and conceal data cables in the top channel.

Specify a monolithic top cap where possible to provide a seamless look and to reduce the number of parts specified.



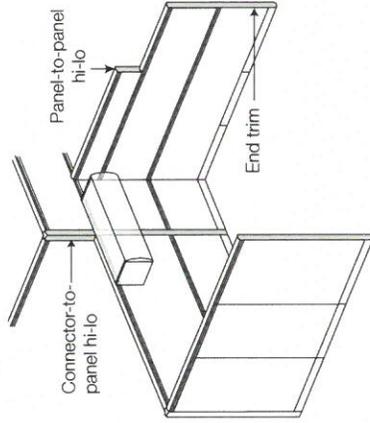
Top caps are available in widths up to 8". They can be field scribed, if necessary.

Note: Top caps are available in additional widths in 3" increments up to the largest standard size. Use your electronic specification tools to specify.

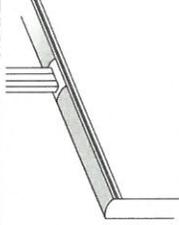
End trim covers the vertical frame edge at the end of each panel run.

Hi-lo trim finishes off the vertical end of frames when transitioning heights.

Panel-to-panel and connector-to-panel hi-lo trims are available.



Related Products



Notched top cap, included with power/data pole, is available in 6" increments from 24" to 48"W.

Top caps for use with frameless glass are pre-drilled to accept frameless glass holders.

▶ See page 129 for details.

Finishes & Materials

- Top caps: wood or paint
- End trim: wood or paint

Connections

Top caps fit securely onto frames using a pressure-fit attachment method.

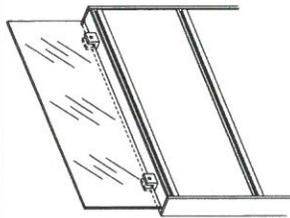
Overall Panel Heights:

The chart below shows the overall panel height including the top cap, frame, and glides.

Panel Height	with		Top Cap
	Curved	Flat	
2-high	30"H	29 ³ / ₄ "H	
3-high	42 ¹⁹ / ₃₂ "H	42 ³ / ₈ "H	
3.5-high	49 ¹⁷ / ₃₂ "H	49 ⁹ / ₃₂ "H	
4-high	55 ⁷ / ₃₂ "H	54 ²⁹ / ₃₂ "H	
5-high	67 ¹³ / ₁₆ "H	67 ¹⁷ / ₃₂ "H	
6-high*	80 ³ / ₈ "H	80 ³ / ₁₆ "H	
7-high*	93"H	92 ³ / ₄ "H	

* 5-high base frame with stacking frame.

Details

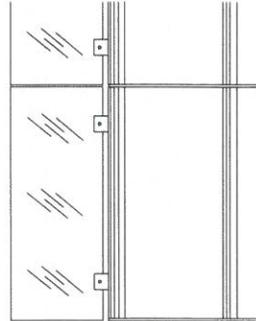


Frameless glass is available as a clear or etched, 3/8"-thick, tempered glass pane with flat polished edges. Two heights are available:

- 12"H
- 13 3/8"H (for use with top cap with inset channel)

Flat profile top caps for use with frameless glass pane must be specified separately. Two different top cap models are available:

- Top cap with aluminum brackets
- Top cap with inset channel



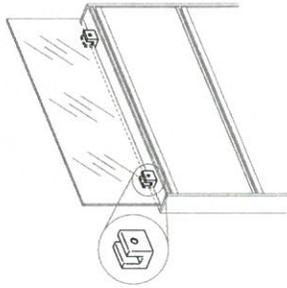
Glass sits 9/16" off the top cap with brackets when installed.

Top cap with inset channel allows pane to sit 13/16" down into the top cap.

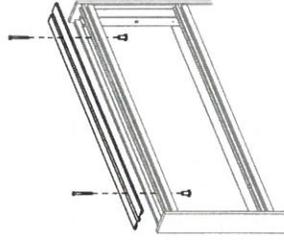
Finishes & Materials

- Pane: clear or etched, tempered glass
- Brackets: aluminum, paint
- Top cap: metal, paint

Connections



Glass pane is centered between the two brackets (shown) or in the inset channel.

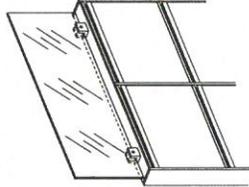


Top cap for use with frameless glass features pre-drilled holes, which allows the top cap with the brackets or top cap with inset channel (shown) to be securely bolted to the panel frame in the field and facilitates correct placement.

Planning Factors

Frameless glass is not loadbearing. Hanging components or accessories on frameless glass are not recommended.

Frameless glass cannot be scribed in the field.



Width of the frameless glass pane must be the same width as the top cap. Both should be specified to match the width of the panel frame to which they will attach or the combined width if spanning over two or more frames up to 96"W. For example, a 96"W pane and top cap can span two 48"W frame or four 24"W frames.

Specify hi-lo glass pane models for the lower panel in a hi-lo application. Glass widths have been adjusted to accommodate the vertical hi-lo end trim.

Note: Hi-lo application is not possible due to the width of the glass.

Overall Heights:

Panel Height	Overall Height with Glass
12"H	13 3/8"H
Glass	Glass

Top Cap with Brackets

2-high	42 3/8"	43 3/4"
3-high	54 1/16"	56 5/16"
3.5-high	61 29/32"	63 9/32"
4-high	67 9/16"	68 1/2"
5-high	80 1/8"	81 1/2"
5-high + 1 stacking	92 3/4"	94 1/8"
5-high + 2 stacking	105 3/8"	106 3/4"

Top Cap with Inset Channel

2-high	41"	42 3/8"
3-high	53 9/16"	54 1/16"
3.5-high	60 17/32"	61 29/32"
4-high	66 3/16"	67 9/16"
5-high	78 3/4"	80 1/8"
5-high + 1 stacking	91 3/8"	92 3/4"
5-high + 2 stacking	104"	105 3/8"

Codes:

U.L. Listing 1286

Specify a 13 3/8"H glass pane for top cap with inset channel when using a 12"H glass pane with top cap with brackets in the same application.

In non-hi-lo applications, a 12"H glass pane can be used with top caps with inset channel; glass will extend above the panel 11 3/16" above the top cap.

Lay-in cabling can be accommodated in the top channel. The frameless glass and glass holders will have to be removed to access the interior of the panel and cables.

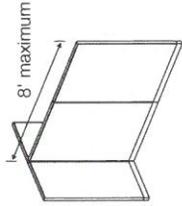
3.5-high base frames can accept frameless glass, but the overall height will not line up with a 4-high panel.

Frameless glass is not recommended on low panels adjacent to high-traffic areas.

Xsite frameless glass models cannot be used on Cetra; likewise, Cetra frameless glass models cannot be used on Xsite.

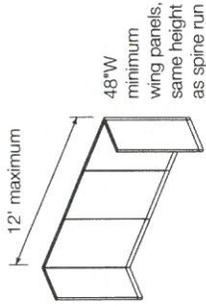
Customer-supplied glass can be used with frameless glass top caps with brackets or with inset channel. Customer's glass should be 3/8"-thick tempered glass or other safety material. The width of the glass should be 1/8" less than the width of the panel frame to which it will attach; for hi-lo applications, the glass should be 5/8" less wide than the panel.

Unsupported Span:



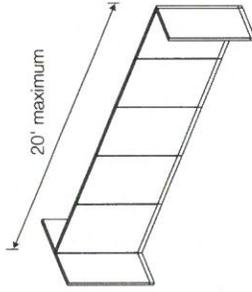
- 8' maximum
- 2 panels maximum; and
- Minimum wing panels
- ▶ See minimum wing panel chart at right.

C-Shaped Workstation:



- 12' maximum
- 48"W minimum wing panels on both ends

T or Wall on One Side:



- 20' maximum
- Minimum wing panel on one end
- T or wall on at least one side
- ▶ See minimum wing panel chart at right.

Note: Frameless glass does not affect application guidelines on this page.

Definitions:

Unsupported panel runs — Runs not attached on BOTH ends to a wall, wing panel, or floor support.

Floor support — Undersurface storage units, support panels, or column legs

Minimum Wing Panel

Widths:

Minimum wing panel widths increase according to the height of the panel run. These minimum widths eliminate the possibility of tipping or injury under standard loading and usage.

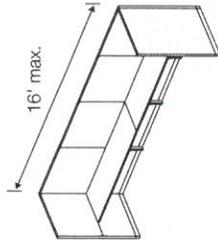
Height of Panel Run	Minimum Wing Width
2-high (30")	30"
3-high (42")	30"
3.5-high (50")	36"
4-high (54")	36"
5-high (68")	36"
6-high (80")	48"
7-high (93")	48"

IMPORTANT: Wing panel height is not required to be the same height as the panel run.

Exception: Wing panels on 6-high and 7-high runs and any height C-shaped workstations must be the same height as the spine run and 48"W.

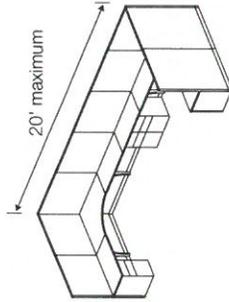
Without Overhead Storage

Supported Runs:



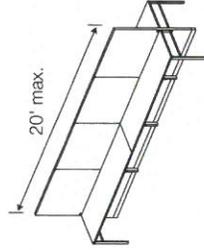
- 16' maximum
- Mid-supports
- Minimum wing panels or 2 support legs; and
- No overheads
- With or without frameless glass
- ▶ See minimum wing panel chart at right.

C-Shaped Workstation:



- 20' maximum
- Mid-supports
- Minimum wing panels
- 2 floor supports mid-run, minimum;
- Floor supports at end of wing panels, and
- No overheads
- With or without frameless glass
- ▶ See minimum wing panel chart at right.

Balanced back-to-back:



- 20' maximum
- Balanced back-to-back
- Mid-supports
- Support legs, storage, or wing panels
- No overheads
- With or without frameless glass

IMPORTANT Unsupported work surface span of 48"W for 1³/₁₆" work surfaces or 60"W for 1⁹/₁₆" work surfaces requires additional support such as a mid-support, support panel, support legs, or undersurface storage.

Definitions:

Unsupported panel runs—Runs not attached on BOTH ends to a wall, wing panel, or floor support.

Floor support—Undersurface storage units, support panels, or column legs

Minimum Wing Panel

Widths:

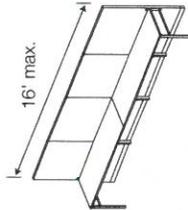
Minimum wing panel widths increase according to the height of the panel run. These minimum widths eliminate the possibility of tipping or injury under standard loading and usage.

Height of Panel Run	Minimum Wing Width
2-high (30")	30"
3-high (42")	30"
3.5-high (50")	36"
4-high (54")	36"
5-high (68")	36"
6-high (80")	48"
7-high (93")	48"

IMPORTANT: Wing panel height is not required to be the same height as the panel run.

Exception: Wing panels on 6-high and 7-high runs and any height C-shaped workstations must be the same height as the spine run and 48"W.

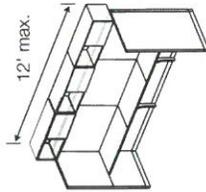
- 16' maximum
 - Mid-supports
 - Support legs or wing panels
 - No overheads
 - With or without frameless glass
- Note: Not applicable with adjustable mid-supports.*



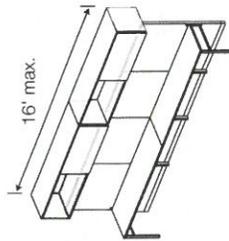
With Center-Mounted Overhead Storage

Features	▶ See page 116
Application Guidelines	130
Power & Data Overview	146
Electrical Guidelines	152

Supported Run:

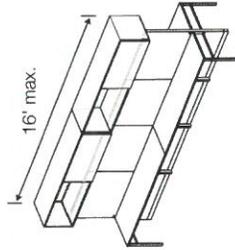


- 12' maximum
- Mid-supports; and
- Minimum wing panels or one wing panel and one end-support leg
- ▶ See minimum wing panel chart on page 130.

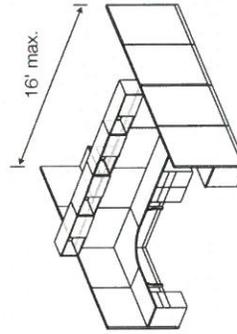


- 16' maximum
 - Mid-supports
 - Minimum wing panels; or
 - Support legs, storage or wing panels
- Note: Not applicable with adjustable mid-supports due to stability. Not recommended for 5H or stacking frames.*

Balanced Back-to-Back:

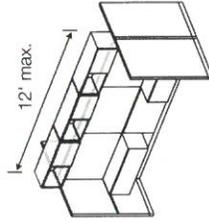
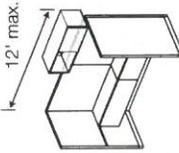


- 16' maximum
- Balanced back-to-back
- Mid-supports
- Support legs, storage or wing panels



- 16' maximum
 - Mid-supports
 - Minimum wing panels; and
 - Balanced back-to-back
 - With or without frameless glass
 - ▶ See minimum wing panel chart.
- Note: Runs over 12' are required to be balanced back-to-back.*

Stacked Overheads:



- 12' maximum
 - Traxx-mount and center-mount overheads;
 - Minimum wing panels
 - With or without frameless glass
- Note: Consider potential bracket interference if stacking center-mount above Traxx-mount overheads.*

Definitions:

Unsupported panel runs — Runs not attached on BOTH ends to a wall, wing panel, or floor support.

Balanced back-to-back — Runs having similar components mounted to opposite sides of the run so as to counter-balance the load.

Center-Mount Overhead Heights:

Panel Config.	Height	Top Cap	
		Flat	Curved
2H	29 1/2"	44 3/16"	44 9/16"
3H	42 1/8"	56 13/16"	57 3/16"
3.5H	49 1/32"	63 11/16"	64 1/16"
4H	54 23/32"	69 3/8"	69 3/4"
5H	67 5/16"	82"	82 3/8"
5H+1H	79 15/16"	94 5/8"	95"
5H+2H	92 9/16"	107 1/4"	107 5/8"

Wskf. to Bottom of Overhead

3H	42 1/8"	13 3/8"	13 3/4"
3.5H	49 1/32"	20 1/4"	20 5/8"
4H	54 23/32"	25 15/16"	26 5/16"
5H	67 5/16"	38 9/16"	38 15/16"
5H+1H	79 15/16"	51 3/16"	51 9/16"
5H+2H	92 9/16"	63 13/16"	64 3/16"

Illustrations at right show tile heights that match the frame height (monolithic panel plus stacking frames); however, many more tile combinations are possible.

Dimensions are calculated to the top of the frame with glides fully recessed. Curved profile top caps will add 1/2" to overall height; flat profile top caps will add 1/4". Glides provides 2 1/2" adjustment.

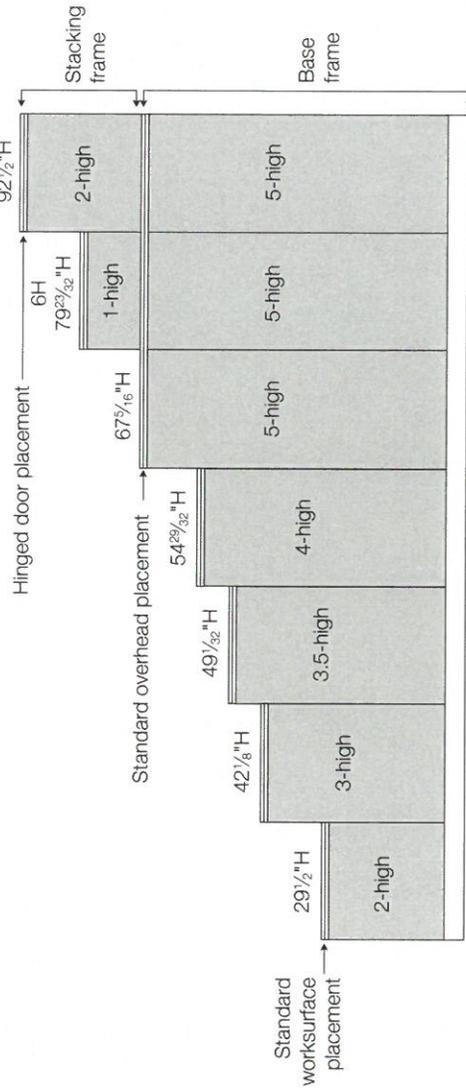
Stacking of 1-high and 2-high frames, along with 1-high and 2-high tiles, can be used to achieve structures up to 6- or 7-high. Stacking is not applicable to 3.5-high frames.

To-the-floor tackable acoustical tiles are available in 1-, 2-, 3-, and 4-high models. They are 3 13/16" longer than standard tiles and must be specified for the entire to-the-floor frame height (monolithic) or the lowest segment plus standard tiles to complete the frame above.

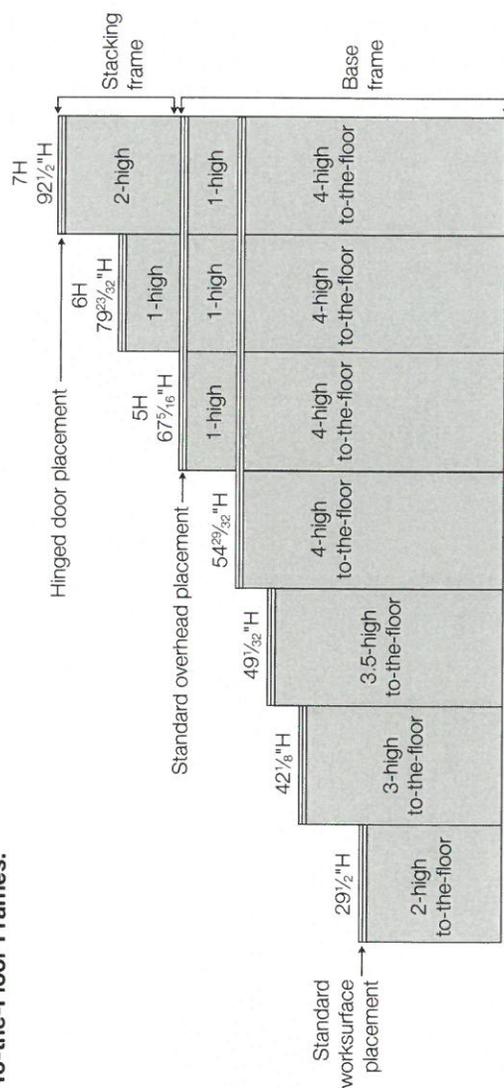
Note: 5-high models for to-the-floor frames are not available due to fabric limitations.

Combined tile heights must match the overall base frame height.

Base-Wireway Frames and Open-Base Frames:



To-the-Floor Frames:



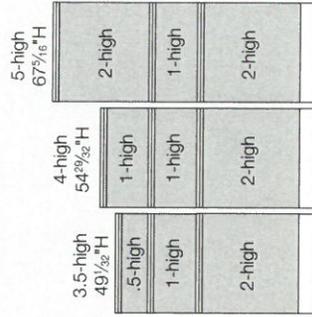
3.5-High Tile Combinations:

Only the height combinations shown below are possible for 3.5-high frames.



* For to-the-floor frames, specify a to-the-floor tile for the full frame or the lowest segment.

3.5-High Frame Traxx Relationships:



Traxx locations at the 2-high and 3-high segments correspond to the same locations on other frames. Traxx at the top to the 3.5-high frame does not line up with possible Traxx locations on other frames.

Xsite offers a 10-wire power system for the base wireway.

- 10-wire shared neutral: 6 hot (3 and 3), 2 neutral, 2 ground
- 10-wire shared neutral can be wired for 8-wire configuration by using 4 hot (3 and 1 or 2 and 2), 2 neutral, 2 ground
- 10-wire independent neutral: 4 hot (2 and 2), 4 neutral, 2 ground

Note: Independent and shared neutral components cannot be mixed.

All electrical components are non-directional. The base wireway harness simply hooks into place—no mechanical attachment is required. Components include:

- Base or ceiling power feeds
- Base wireway harness
- Base wireway jumper
- Pass-thru jumpers
- Technology tile and components
- Power/data tile and components
- Hardware components

The building's power capability

should be determined before power is configured and components are specified.

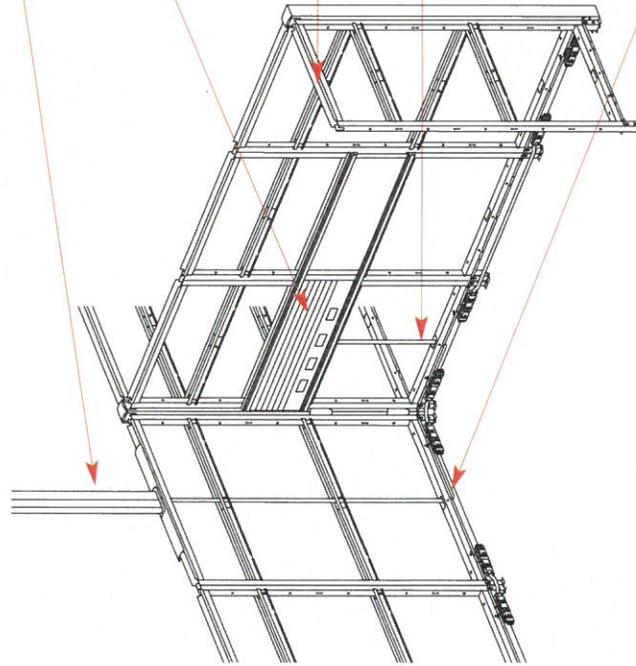
Xsite is approved to accept

Chicago electrical.

Vertical cable managers are

available separately to conceal task light cords.

▶ See page 243 to specify.



Ceiling power/data pole allows power and data to be dropped down from above.

Technology tiles provide access to power and data at 2nd, 3rd, 4th, and 5th segments. Technology tiles utilize an 8-wire system.

Top channel provides top lay-in capability

Data cables may be distributed through the frame and connectors.

▶ See page 166 for cable management information.

Base wireway power harnesses and jumpers distribute power through the base.

Base wireway power entry allows power to enter at the floor, wall, or column. Power can then be distributed to the base and/or jumped up to a technology or power/data tile.

Wireway Cover Options:

NP2	2 non-punched
P1	1 power punched 1 non-punched
P2	2 power punched
PD1	1 power & data punched 1 non-punched <i>Not available on 24"W</i>
PD2	2 power & data punched <i>Not available on 24"W</i>

Note: All punched (power and power & data) covers include two wireway cover doors.

Wireway Cover Punch

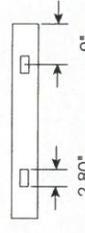
Dimensions:

2.80"W x 1.38"H.

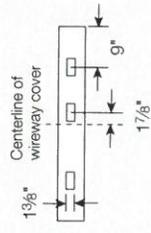
Applies to both power and data punches.



No power or data access

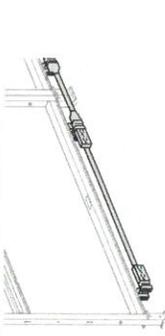


Power access only

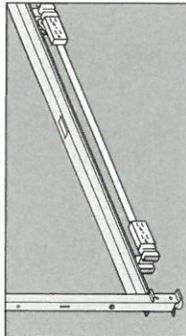


Power and data access

Details

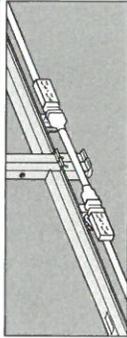


Base wireway harnesses distribute power through the base of the frame.



Base wireway harness provides two duplex receptacles per side, for a total of four.

Connections



Jumper cables are used to pass power from panel to panel or through non-powered panels.
▶ See page 148.

Building-to-panel power connections

can be accomplished whether the power source is in the wall, floor, or ceiling.
▶ See pages 149–151.

Power entry will consume one duplex receptacle location.

Power & data poles bring voice/data cables and electrical wiring from the ceiling to the panel run.
▶ See page 151.

Planning Factors

IMPORTANT: Planning actual power supplies and branch circuits must be performed by qualified electricians or electrical engineers familiar with the National Electrical Code and the appropriate local codes. The information provided herein is intended to assist specifiers.

Specify the appropriate harness based on the corresponding width of the frame. Use 24", 27", and 30"W harnesses for the corresponding frame width. For 33"–36" widths use a 36"W harness; for 39"–42" widths use a 42"W harness; for 45"–48" widths use a 48"W harness.

One receptacle location will be consumed if the harness will have a power entry (floor/wall or ceiling) jumper for technology tile or power/data tile attached.

Specify a base wireway cover without power or data access if access to power is not needed. Receptacles and a punched wireway cover can be added later as needed.

Independent and shared neutral components cannot be mixed.

New York City electrical applications require a special power entry.
▶ See page 149.

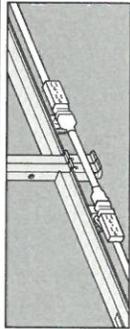
Hardwire electrical components for use in the base wireway are available for areas where local codes do not accept modular electrical plug-in components.
▶ See page 150.

Finishes & Materials

Harness

- Ends: injection-molded plastic
- Conduit: 3/4" oval

Details



Jumpers continue power between two adjacent base wireway harnesses.

Base wireway jumpers are available in 5 different models and are specified according to the application.
▶ See chart at right.

Pass-thru jumpers are available in 8 different models to pass power through a frame base where duplex receptacles are not required. Size required is determined by application.
▶ See chart on page 236.

Finishes & Materials

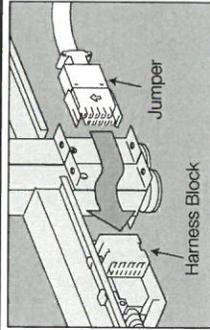
- Ends: injection-molded plastic
- Mesh sleeving
- Metal oval conduit

Related Products

Jumpers for power/data tiles

- ▶ See page 163 for product information.
- ▶ See page 164 for application guidelines.

Planning Factors



Base wireway jumpers and pass-thru jumpers connect to a base wireway harness on each end. They cannot connect to another jumper.

Independent and shared neutral components cannot be mixed.

Base Wireway Jumpers Connection Guidelines:

Straight-Line Connections:



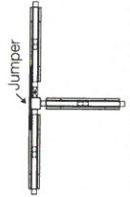
36PEJB1
Panel to panel



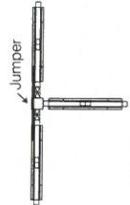
36PEJB5
Through a connector



36PEJB8
Through a 3" extender



36PEJB8
Through a connector and 3" extender



36PEJB9
Through a 3" extender, connector, and 3" extender

90° Connections:



36PEJB2
Through a connector



36PEJB5
Through a connector and 3" extender



36PEJB8
Through a 3" extender, connector, and 3" extender

120° Connections:



36PEJB5
Through a connector



36PEJB8
Through a connector and 3" extender



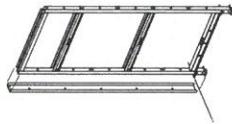
36PEJB9
Through a 3" extender, connector, and 3" extender

Connectors

Adjustable Wall-Mount Channels

GSA SIN 711-1

Overview ▶ See page 116
 Product Information 126
 Application Guidelines 130
 Power & Data Overview 146



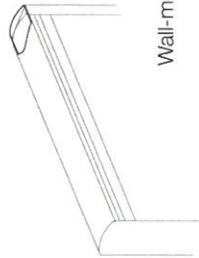
W	H	Segment	Model	Price
Adjustable Wall-Mount Channels				
3 3/8"	29 1/2"	2-high	36P2FCW	\$86
	42 1/8"	3-high	36P3FCW	89
	49"	3.5-high	36PH50FCW	92
	54 23/62"	4-high	36P4FCW	93
	67 5/16"	5-high	36P5FCW	97
	79 29/62"	6-high	36P6FCW	104
	92 1/2"	7-high	36P7FCW	109

Related Products:

Model	Description	Price
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Top Cap Splice for Curved Profile Top Caps

36PTCOMSP	Use to fill the gap between curved profile top caps in off-module and in-line applications or to cover the top of an adjustable wall-mount channel in wall-mount applications. Must be specified separately for in-line and wall mount applications. Included with off-module frames.	\$7
------------------	---	-----



Wall-mount

Specify top cap splice separately to cover the top of an adjustable wall-mount channel when using a curved profile top cap.

Specify top cap one size larger and field scribe to cover the adjustable wall-mount channel and frame when using a flat profile top cap.

Standard Includes

- U channel: painted steel

How to Specify

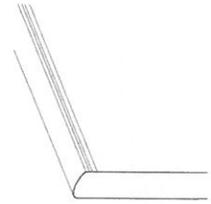
Wall-Mount Channel

- 1 Model
- 2 Finish type:
STD = Group 1
STD M = Group M (+10%)
 3 Finish designator

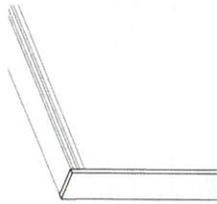
Top Cap Splice

- 1 Model
- 2 Finish designator:
 Paint color or
501 = Platinum Metallic (+10%)

H	Segment	Model	Flat Profile		Curved Profile	
			Wood (W)	Paint (P)	Wood (W)	Paint (P)
29 1/2"	2-high	36P2ETC	\$153	\$101	\$125	\$85
42 1/8"	3-high	36P3ETC	168	109	137	91
49 1/32"	3.5-high	36PH50ETC	185	115	153	94
54 23/32"	4-high	36P4ETC	202	119	166	97
67 5/16"	5-high	36P5ETC	220	125	181	102
79 29/32"	6-high	36P6ETC	262	143	215	119
92 1/2"	7-high	36P7ETC	288	159	234	131



Curved Profile



Flat Profile

Standard Includes

- End trim
- Attachment brackets

How to Specify

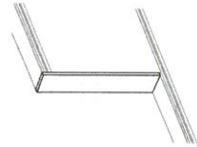
- 1 Model
- 2 Material:
W = Wood
P = Paint
- 3 Trim profile:
C = Curved
F = Flat
- 4 End trim finish type:
STD = Group 1
STD_M = Group M (+10%)
STD₂ = Group 2 (+20%)
- 5 End trim finish designator

Hi-Lo Vertical Trim

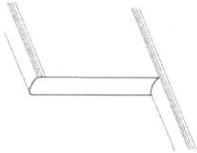
Panel-to-Panel

GSA SIN 711-1

Overview ▶ See page 116
 Product Information 128
 Application Guidelines 130
 Power & Data Overview 146



Flat Profile



Curved Profile

H	Segment	Model	Flat Profile		Curved Profile	
			Wood (W)	Paint (P)	Wood (W)	Paint (P)
For Use with 1-, 2-, 3-, 4-, and 5-High Frames						
12 ¹⁵ / ₁₆ "	1-high	36P1HSC	\$158	\$65	\$130	\$55
25 ¹ / ₂ "	2-high	36P2HSC	183	72	150	61
38 ¹ / ₈ "	3-high	36P3HSC	197	78	161	65
50 ¹ / ₁₆ "	4-high	36P4HSC	213	86	174	69
63 ³ / ₁₆ "	5-high	36P5HSC	232	91	190	72
For Use with 3.5-High Base Frames						
6"	from 3.5-high to 4-high	36PH06HSC	\$127	\$52	\$104	\$41
7 ⁵ / ₁₆ "	from 3.5-high to 3-high	36PH07HSC	127	52	104	41
18 ⁵ / ₈ "	from 3.5-high to 5-high	36PH18HSC	146	60	121	48
19 ⁷ / ₈ "	from 3.5-high to 2-high	36PH19HSC	146	60	121	48

Standard Includes

- One vertical trim: wood or paint

How to Specify

- 1 Model
- 2 Material:
W = Wood
P = Paint
- 3 Top cap:
C = Curved
F = Flat
- 4 End trim finish type:
STD = Group 1
STD_M = Group M (+10%)
STD₂ = Group 2 (+20%)
- 5 End trim finish designator

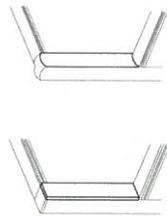
Hi-Lo Vertical Trim

Connector-to-Panel

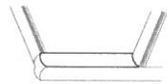
Pricing

GSA SIN 711-1

Overview [▶ See page 116](#)
 Product Information [128](#)
 Application Guidelines [130](#)
 Power & Data Overview [146](#)



Flat Profile



Curved Profile

H	Segment	Model	Flat Profile		Curved Profile	
			Wood (W)	Paint (P)	Wood (W)	Paint (P)
For Use with 1-, 2-, 3-, 4-, and 5-High Frames						
12 ¹⁵ / ₁₆ "	1-high	36P1HTC	\$159	\$65	\$131	\$55
25 ¹ / ₂ "	2-high	36P2HTC	184	72	151	61
38 ¹ / ₈ "	3-high	36P3HTC	199	78	164	65
50 ¹ / ₁₆ "	4-high	36P4HTC	215	87	176	70
63 ⁵ / ₁₆ "	5-high	36P5HTC	233	92	191	74
For Use with 3.5-High Base Frames						
6"	from 3.5-high to 4-high	36PH06HTC	\$128	\$52	\$105	\$41
7 ⁵ / ₁₆ "	from 3.5-high to 3-high	36PH07HTC	128	52	105	41
18 ⁵ / ₈ "	from 3.5-high to 5-high	36PH18HTC	148	60	122	48
19 ⁷ / ₈ "	from 3.5-high to 2-high	36PH19HTC	148	60	122	48

Standard Includes

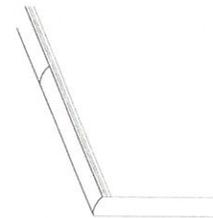
- One vertical trim: wood or paint

How to Specify

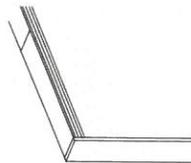
- 1 Model
- 2 Material:
W = Wood
P = Paint
- 3 Top cap:
C = Curved
F = Flat
- 4 End trim finish type:
STD = Group 1
STD M = Group M (+10%)
STD2 = Group 2 (+20%)
- 5 End trim finish designator

GSA SIN 711-1

H	Model	Flat Profile		Curved Profile	
		Wood (W)	Paint (P)	Wood (W)	Paint (P)
18"	36P18TC	\$94	\$24	\$58	\$15
24"	36P24TC	99	29	64	21
30"	36P30TC	110	33	74	24
36"	36P36TC	120	36	85	27
42"	36P42TC	127	40	91	30
48"	36P48TC	135	41	97	31
54"	36P54TC	139	52	101	36
60"	36P60TC	149	52	109	36
66"	36P66TC	160	61	120	44
72"	36P72TC	169	70	127	55
78"	36P78TC	175	70	132	55
84"	36P84TC	191	77	144	60
90"	36P90TC	203	77	155	60
96"	36P96TC	206	86	158	65



Curved Profile



Flat Profile

Standard Includes

- Top cap: wood or paint

How to Specify

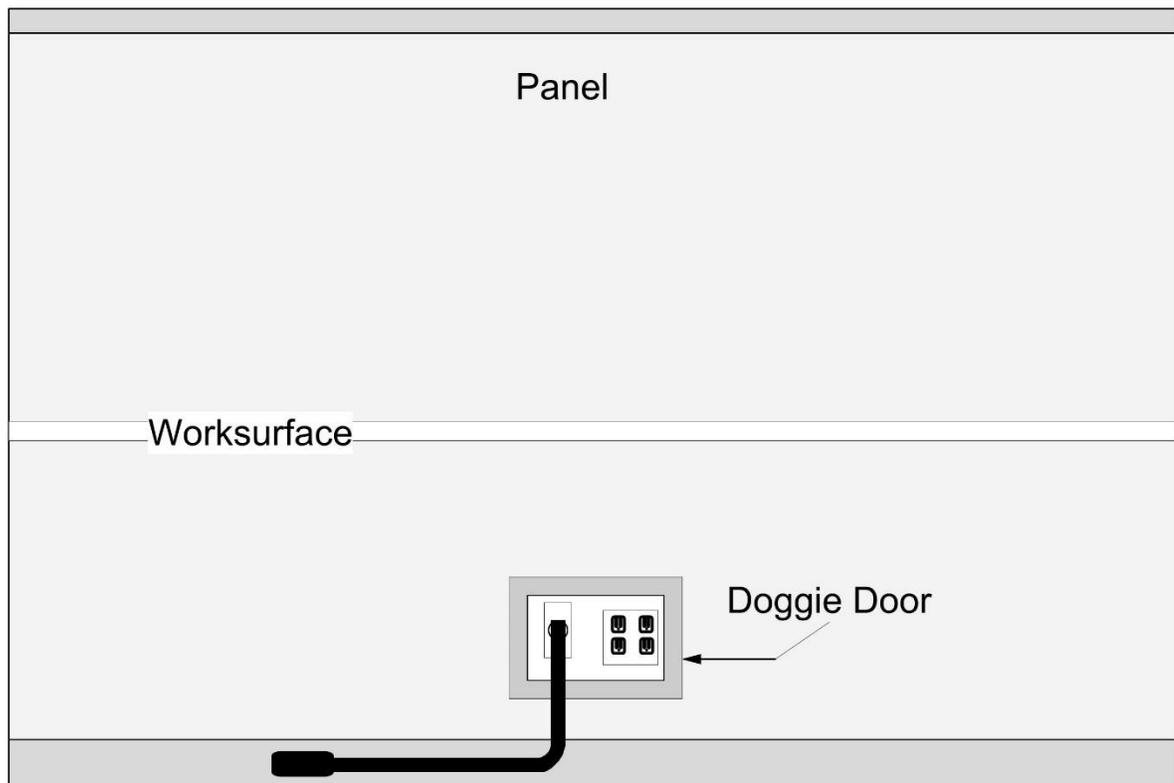
- 1 Model
- 2 Material:
W = Wood
P = Paint
- 3 Top cap profile:
C = Curved
F = Flat
- 4 Finish type:
STD = Group 1
STD M = Group M (+10%)
STD2 = Group 2 (+20%)
- 5 Finish designator

Additional widths in 3" increments not listed in the pricing table at left are available through electronic specification tools.

Top caps for use with frameless glass
▶ See page 197.

Chapter 4 Doggie Door

When cubicles or workstations are built against a wall or column, the power and data entry points are often blocked. To access the power and data, the designer will require a field cut of the panel, skin or tile. Another reason to have access is to hardwire an electrical feed (BPI). To give the access opening a finished look, the installation company will usually purchase a typical doggie door that people put in their homes.



Doggie doors come in several sizes and the size used will depend on the job. The flap of the door is removed and the frame is used to trim out or dress up the rough field cut. In order to cut the access hole for the doggie door, the cubicles first need to be in the proper location and leveled. If you cut the hole before leveling, the hole may not line up with the power or data points when it is leveled. The best modification of the panel, skin or tile will depend on which furniture system is being installed. If the system is a panel system, you will first need to build everything in place, then level it and then measure where the access hole will go. Next, take it back apart, or move it away from the wall or the column to cut the access hole.



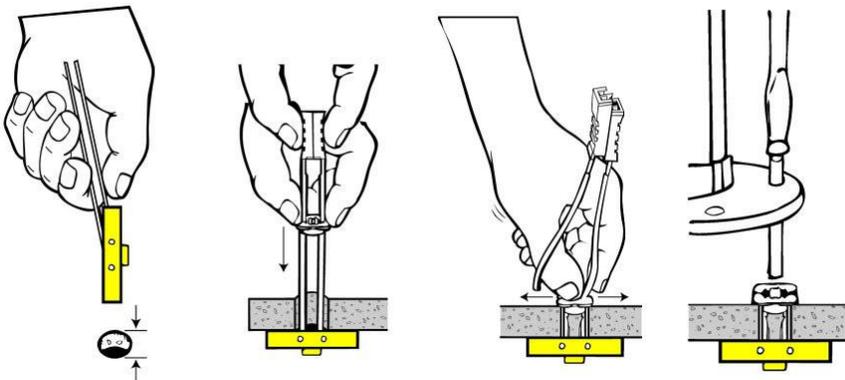
Finally, reinstall the panel with the doggie door installed. If the furniture system is a frame or a tile system, you will still need to assemble it in the proper place and level it, however, you might not need to take it apart, but you probably will need to move it away from the wall or column in order to have room to make the cuts and install the door.

The doggie door frame has a finished side and a side where the screws are exposed. The screw side will usually have a sliding cover that will hide the screws. The situation and location of the panel will determine which side will go against the wall and which side will be exposed. The doggie door is made to expand, however, in some cases, longer screws than those that are provided are required.

Chapter 5 Introduction to Wall Mounting

Wall mounting is a part of the industry that every apprentice should be knowledgeable about. In general, the term means anything that is attached to the wall. This could be shelving, overheads, white boards, tack boards, display cabinets and securing freestanding objects. The key to good installation is layout. Since you are attaching to the wall, you need to be in the right place the first time, otherwise, you will have exposed holes in the wall. The plan will generally show the height and location of the installation, however, if it does not, the installer needs to ask the dealer, project manager, or, if possible, the client. The layout must be plumb and level. Oftentimes the height may be adjusted to accommodate monitors and other equipment on the work surface.

A key element to wall mounting is the actual attachment to the wall. The mount could be a track, a cleat, a security attachment or even the end of a panel wall. The mounts run either vertical or horizontal. When the mounting is vertical, it is rare to find a stud where it is needed. If the location is known during the framing, backing can be inserted in the framing process. However, most of the time, you are securing to the wall with toggle bolts or other types of hollow wall anchors. Some are shown below.



The insert on the left is called a Zipit and they are generally used for mounting lighter items such as tack boards or white boards. They come in metal and vinyl and they require you to drill a hole the size of the tip (3/16" or 1/4"), then screw the anchor into the drywall. Put what you are mounting in place and tighten a screw (usually a #8 coarse thread) into the insert.

The other anchor shown is a snap toggle. A snap anchor can hold up to 285 pounds, and a 3/16" size is the most common. The procedure for installation is shown above; drill a hole, insert the anchor, slide the plastic washer down tight against the drywall, snap off the remaining plastic, position the item to be mounted, and screw it onto the wall, usually with a 2 1/2" screw.

If you need to attach to a stud, the first task is to find the stud. In commercial buildings, the studs are made of metal, so you can use a strong hand held magnet to locate the studs. You should put tape on the magnet so that it does not mar the surface when you pass it over the wall. Once the studs are found, a 2 1/2" self-drilling (self-tapping) coarse thread screw is used for the mounting. The reason that a 2 1/2" screw is used is because you do not know what is in the wall, for example, there may be a double layer of drywall, so that length will work regardless of what is in the wall. The tracks have predrilled holes in them, and it is important to fill all of the holes.

If the mounting is horizontal, for instance a cleat, it is easier because the track will usually span two or more studs. Most cleats do not have predrilled holes, so you can put your screws wherever they are needed.

As stated above, there are many types of wall mounted items. Most furniture manufacturers have some type of wall system. These systems usually involve tracks that are mounted on a wall and then various objects are hung from those tracks. Shown below are two types of these systems.



Most times the track will not extend all the way to the floor, if possible, have it at least above the base board. As seen, the track system allows for a lot of flexibility in the design, including shelving, storage and files. In addition, it saves floor space by being more compact than cubicles which make them more appropriate for office spaces.

The other types of wall mounted objects we will discuss are white boards, tack boards and securing bookcases and files to the wall.

White boards are commonly found in offices, conference room and hallways. Whiteboards are usually attached with a cleat or with L brackets, however, in some cases, you simply drill through the frame directly into the wall. The plans will show which wall the whiteboard will be on, but it does not generally give an elevation view of where on the wall it will be located. This means that you usually must ask the project manager or the client where to mount the board. The standard height of the mount is 3' to the bottom of the board, but, again this can vary per the client's wishes. Whiteboards are light, so they are usually anchored with zipits rather than toggles.



Tack boards are usually found in cubicles and are mounted under the overhangs. The mounting could be with a cleat, but most are attached with Velcro. Often the Velcro comes with adhesive on the back and that is attached to the wall and to the back of the board. The adhesive on the wall side can lose its adhesive, so adding staples to the strip will keep it in place.



Another type of wall anchoring is used with file and storage cabinets. Generally speaking, anything over 65" tall should be secured or braced to prevent tipping in an earthquake situation. The securing is done in two ways. One is to attach an L bracket on the wall and then screwing into the top of the file. This requires that the file be leveled and put into position, and the top is marked. The file is then pulled away from the wall and the bracket is installed. Finally, the file is put back into position and secured. The other method is to drill through the back of the inside of the cabinet and screwed to the wall with a long screw and a washer. A full file cabinet or bookcase can be quite dangerous if they tipped over, so you must be sure that the method of anchoring is sufficient.

As we have seen, wall mounting involves a large variety of products and types of anchoring. Careful layout and making sure items are secure are a must in these installs.

