3form Solution Document/Installation Manual

Versa™

The *Versa* family from 3form is the perfect answer to movable and stationery partitions and room dividers, shelving, and hinged doors. This system is extremely versatile to meet nearly all installation requirements and aesthetic preferences, complementing the beautiful material from 3form. It is easily configured, easy to work with, and designed specifically to work with 3form materials.

Using this Installation Manual – because there are many components and possibilities with 3form *Versa* hardware, this manual is organized by individual component installation. Please see pages 29-33 for different installation components and applications, and follow the corresponding page # to find instructions for that particular element of the installation.

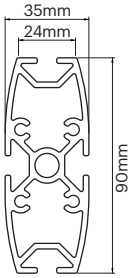
For more information, please visit 3-form.com or call 800.726.0126

Table of Contents

For Assembly Instructions Turn Directly To Page 29

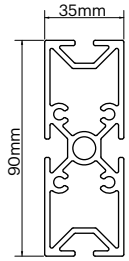
Overview
Profiles

As the foundation of the *Versa* system, multiple profiles are available for both installation versatility and aesthetic preference. Uses of these profiles will be outlined later in this document.



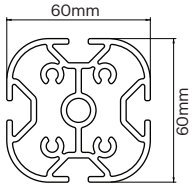
Blade

Available in max. 14'-0" length. Longer available by request.



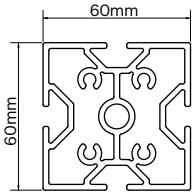
Beam

Available in max. 14'-0" length. Longer available by request.



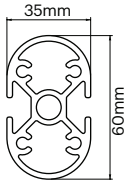
Square

Available in max. 10'-0" length. Longer available by request.



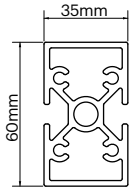
Block

Available in max. 10'-0" length. Longer available by request.



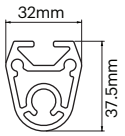
Oval

Available in max. 10'-0" length. Longer available by request.



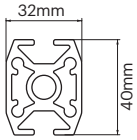
Bar

Available in max. 10'-0" length. Longer available by request.



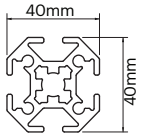
Slim One

Available in max. 10'-0" length.



Slim Two

Available in max. 10'-0" length.

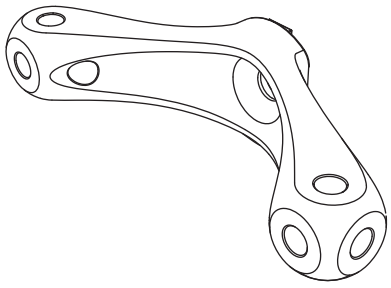


Slim Four

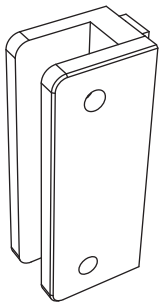
Available in max. 10'-0" length.

Platforms

Material is supported in all *Versa* applications using either *Spiders* with through holes or *Brackets* with pressure-fit set screws or brackets with through holes.



Spiders



Brackets

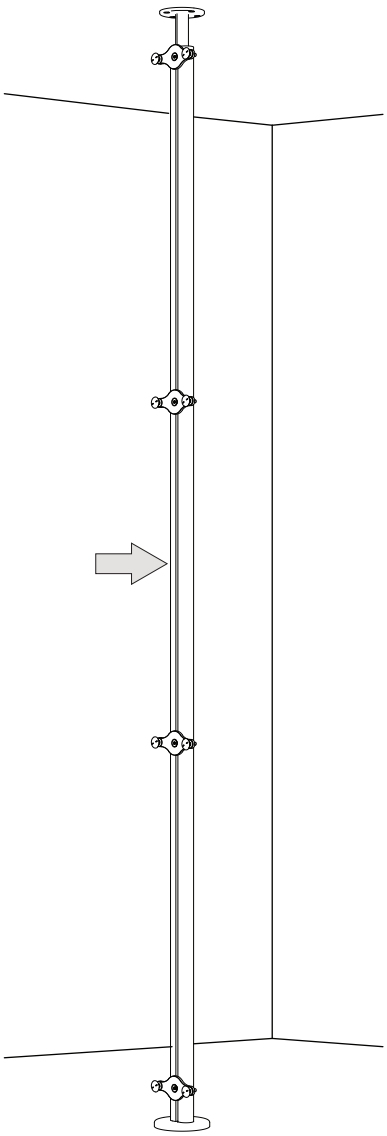
Overview

Recommended Length Floor to Ceiling Condition

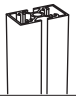
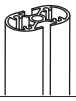
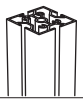
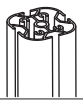
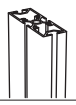
Concrete Floor

Use the following chart for deflection estimates and recommended maximum lengths by condition for floor to ceiling installations. This chart is based on L/240 deflection and forces being transferred on the *Versa* profile in its strong direction (the deepest dimension).

All calculations for this condition are based on the profile as show floor to ceiling anchored to concrete using the 2-Part Base Plate (3-15-6500-KC) and assumes the connection to the floor and ceiling is rigid. Other conditions such as the pressure fit assemble at the ceiling, rotating base at floor, or substandard substrate anchorate will create conditions where additional deflection can be anticipated.



Floor to Ceiling Condition

		Recommended allowable length for this condition to minimize deflection	Deflection anticipated at center span assuming 5 PSF force over max length × 4' width s.f. transferred to this post			
			4'-0"	6'-0"	8'-0"	10'-0"
	Slim One	4'-4"	3/32"	-	-	-
	Slim Two	5'-4"	1/16"	-	-	-
	Slim Four	5'-2"	1/16"	-	-	-
	Bar	8'-0"	1/32"	5/32"	3/8"	-
	Oval	8'-0"	1/32"	5/32"	3/8"	-
	Block	10'-0"	1/32"	3/32"	1/4"	3/8"
	Square	10'-0"	1/32"	3/32"	1/4"	3/8"
	Beam	10'-5"	0"	1/32"	1/8"	5/16"
	Blade	10'-5"	0"	1/32"	1/8"	5/16"

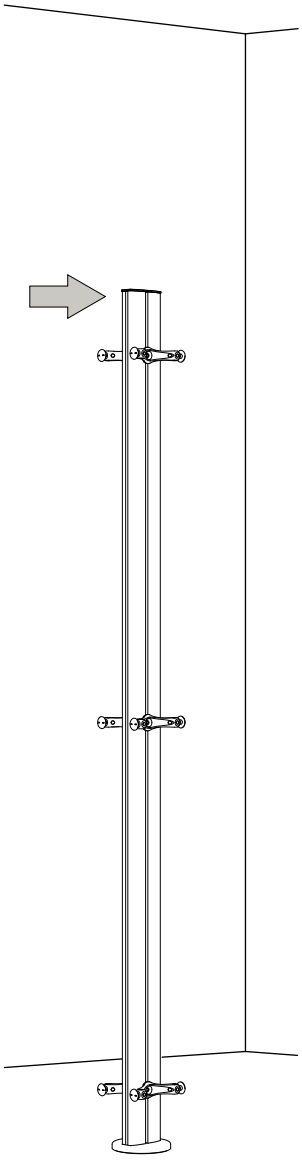
Overview

Recommended Length Cantilever Condition

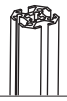
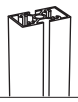
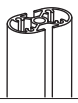
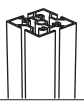
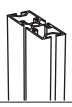
Concrete Floor

Use the following chart for deflection estimates and recommended maximum lengths by condition for floor to ceiling installations. This chart is based on L/180 deflection and forces being transferred on the *Versa* profile in its strong direction (the deepest dimension).

All calculations for this condition are based on the profile as show anchored to concrete floor using the 2-Part Base Plate (3-15-6500-KC) and assumes the connection to the floor is rigid. Other conditions such as the pressure fit assemble at the ceiling, rotating base at floor, or substandard substrate anchorate will create conditions where additional deflection can be anticipated.

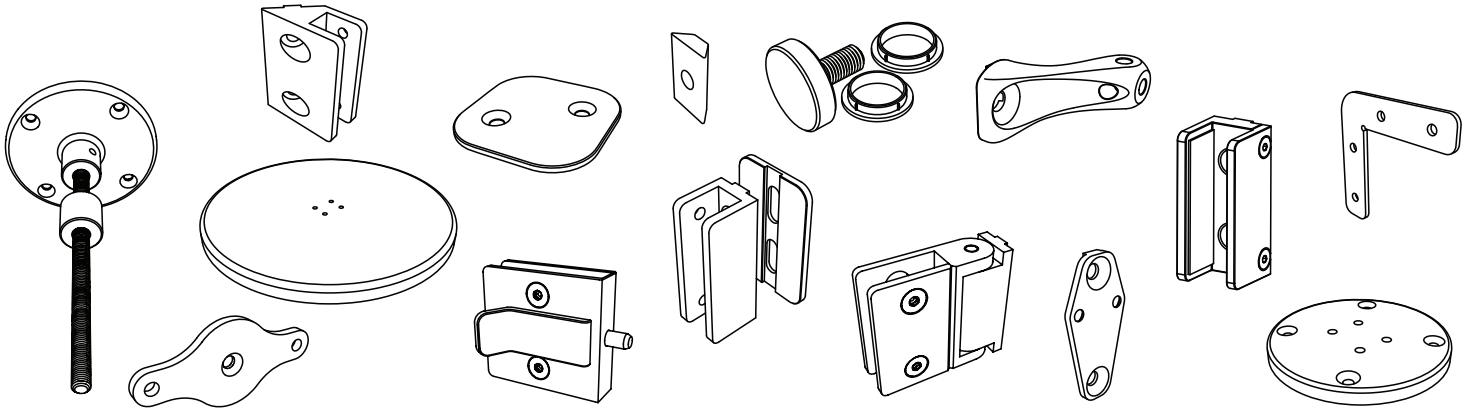


Cantilever Condition

		Recommended allowable length for this condition to minimize deflection	Deflection anticipated at center span assuming 5 PSF force over max length × 4' width s.f. transferred to this post						
			1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	8'-0"
	Slim One	2'-7"	0"	1/16"	-	-	-	-	-
	Slim Two	3'-2"	0"	1/32"	5/32"	-	-	-	-
	Slim Four	3'-1"	0"	1/32"	3/16"	-	-	-	-
	Bar	4'-0"	0"	1/32"	3/32"	1/4"	-	-	-
	Oval	4'-0"	0"	1/32"	3/32"	1/4"	-	-	-
	Block	4'-9"	0"	0"	1/16"	5/32"	5/16"	-	-
	Square	4'-9"	0"	0"	1/16"	5/32"	5/16"	-	-
	Beam	8'-0"	0"	0"	1/32"	1/16"	3/16"	3/8"	3/8"
	Blade	8'-0"	0"	0"	1/32"	1/16"	3/16"	3/8"	3/8"

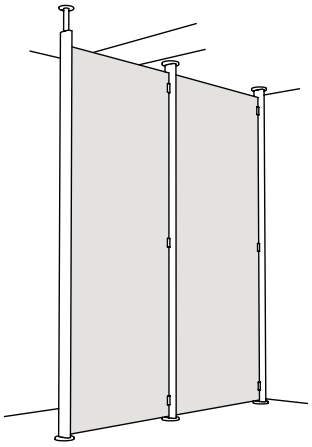
Overview
Accessories

Many different options are available depending on the installation requirements and preferences. Example solutions on the following pages will highlight these various capabilities and recommended material types and gauges for each solution.

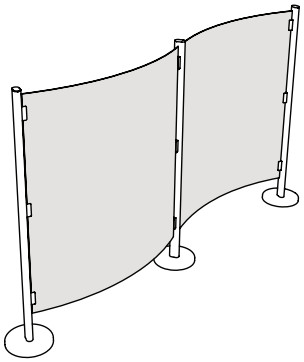


Applications

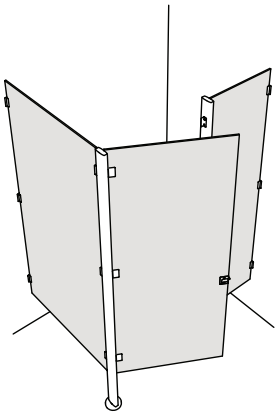
This system offers all the components you will need to create installations in the following categories.



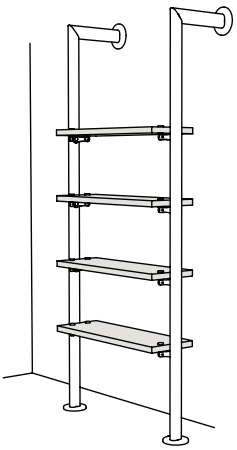
Partitions



Dividers



Doors



Shelving

Overview
Pressure Fit Assembly

The top pressure fit assembly is an integral part of most *Versa* installations (fig.1). It is composed of an adjustable top plate, a threaded rod, and a barrel nut. Once the top and bottom plates are in place and secure, threading the barrel nut against the *Versa Profile* extends the top plate firmly against the ceiling. The top adjustable plate can be attached to the ceiling with screws or can simply be secured with pressure using the barrel nut (fig. 2 & 3). The maximum extension of the threaded rod should be 6", please account for this when determining the profile lengths.

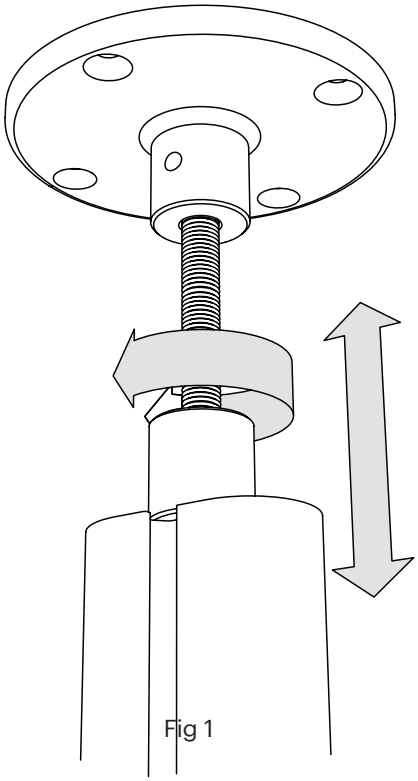


Fig 1

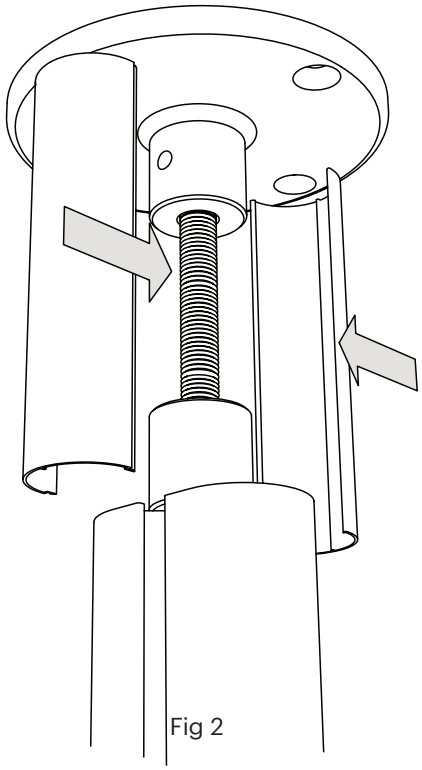


Fig 2

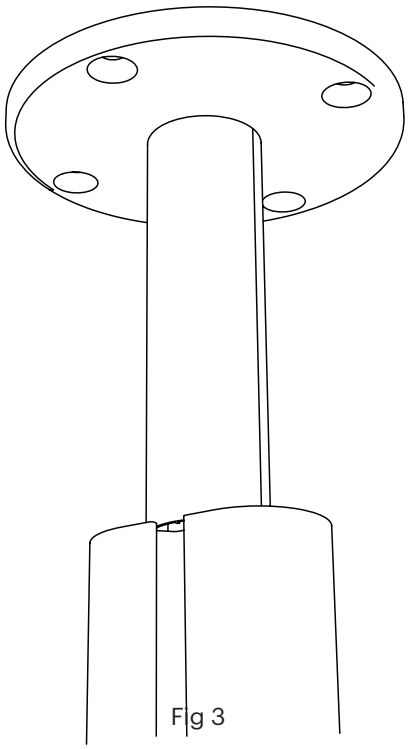


Fig 3

Overview
Panel Caps

Hardware shown in this document is for interior use only.

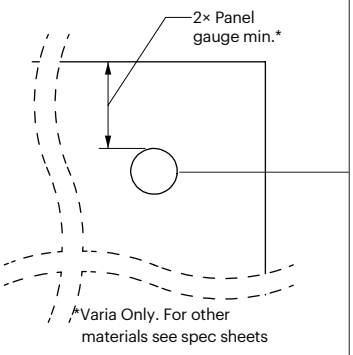
Material recommendations

Do not use cyanoacrylate or solvent type thread locking materials with *Varia*.

3form materials must be separated from metal at all times, especially threads. 1" diameter caps ship bundled with press-fit washers which press into a ⅝" diameter hole to stay in place during the installation process to protect the panel from any metal contact. ¾" diameter caps (3-15-0020-K) are meant only for *Varia* and cannot be used with other materials.

3-15-1705 Pressure Fit Washer ships together with 1" dia. caps

3form *Varia* and *Monolithic Glass* must be protected from metal at all times, refer to the next page for Instructions. See ***Versa Glass Integrator Solution Document*** for more information on glass.



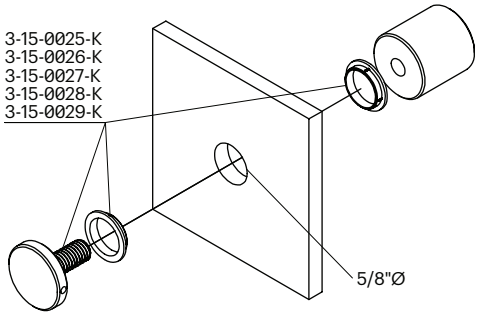
Part Number	Thread Size	Hole Size to Drill	Notes
3-15-0020-K	(3/4") 20mm × (3/4") 20mm M8 Thread	1/2"	use provided washer front and back of panel
3-15-0025-K	(1") 25mm × (3/4") 20mm M8 Thread	5/8"	use press fit washers as described next page
3-15-0026-K	(1") 25mm × (11/16") 17mm M8 Thread	5/8"	use press fit washers as described next page
3-15-0027-K	(1") 25mm × (3/8") 10mm M8 Thread	5/8"	use press fit washers as described next page
3-15-0028-K	(1") 25mm × (1") 25mm M8 Thread	5/8"	use press fit washers as described next page
3-15-0029-K	(1") 25mm × (1-1/4") 32mm M8 Thread	5/8"	use press fit washers as described next page
3-15-1716-K	(1") 25mm 2-part cap for thinner material M8 Thread	5/8"	use press fit washers as described next page
3-15-1717-K	(1") 25mm 2-part cap for thinner material M8 Thread	5/8"	use press fit washers as described next page
3-15-1719-K	(1") 25mm 2-part cap for thinner material M8 Thread	5/8"	use press fit washers as described next page
3-15-1720-K	(1") 25mm 2-part cap for thinner material M8 Thread	5/8"	use press fit washers as described next page

Installation

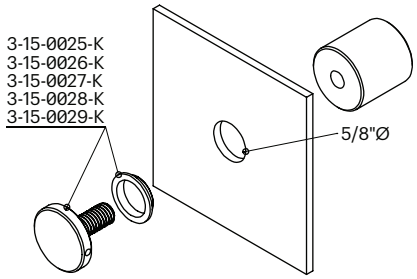
1 Piece Cap

For Thicker and Thinner Panels

Materials ¼" and Thicker



Materials 3⁄16" and Thinner



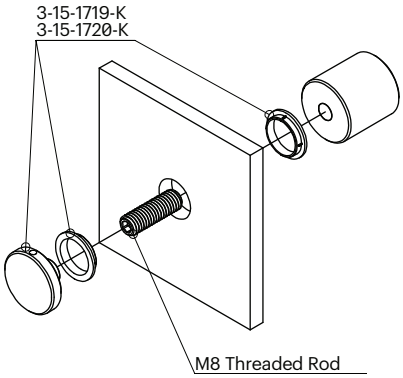
1. Press fit washers into ⅝" diameter hole (if drilled properly the washers should snap into place in the panel hole) front and back of panel, (back side only for thinner panels).

2. Carefully place panel in position, verify washers remain in place. Install caps through washers and panel to back hardware. Hand tightening with a subsequent partial tool tightening is appropriate. Caps do not need to be overtightened.

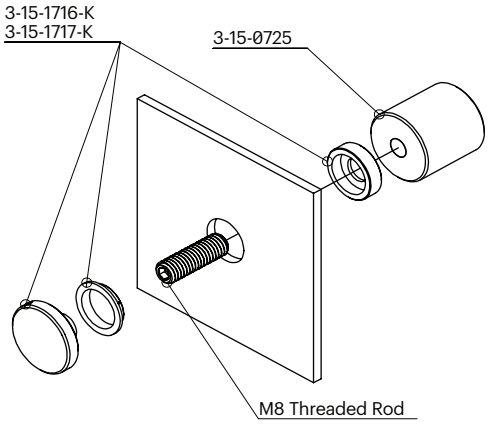
2 Piece Cap

For Thicker and Thinner Panels

Materials ¼" and Thicker
(Varia, Chroma, Koda, Stone and 100%)



Materials 3⁄16" and Thinner
(Varia only)



1. Install hardware at substrate and M8 Threaded rod into substrate hardware (barrel or other) so it is ready to receive cap and panel. For thinner panels place recessed white bushing onto threaded rod in preparation for panel installation.

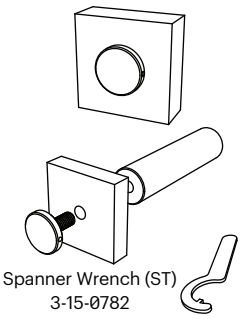
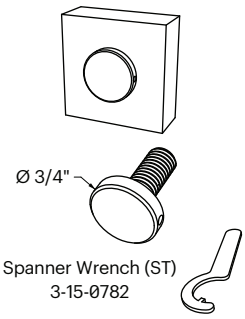
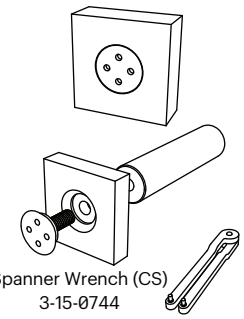
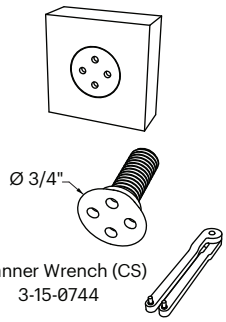
2. Press fit washers into ⅝" diameter hole (If drilled properly the washers should snap into place in the panel hole) front and back of panel, (back side only for thinner gauge panels).

3. Carefully place panel in place, verify washers remain in place. Install caps through washers and panel to back hardware. Hand tightening with a subsequent tool partial tightening is appropriate. Caps do not need to be overtightened.

Summary

1 Piece Cap Chart

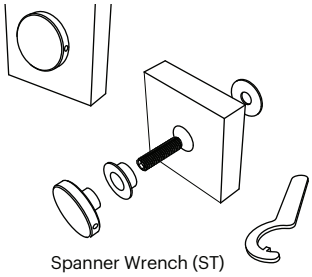
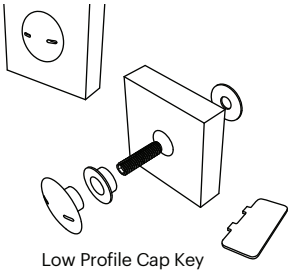
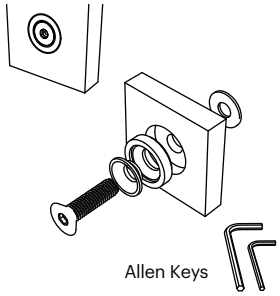
Another integral part of the *Versa* system regardless of application is the 1-piece threaded cap. The length of threading needs to be chosen based on the gauge of material. To select the best options for your installation, please follow the 2 steps outlined below. Your end result will be separate part numbers for each connection.

1 Choose the design >	1" Cap Threaded Rod	¾" Cap Threaded Rod	1" Countersunk	¾" Countersunk
				
2 Select the panel gauge V	Designed for: ***Varia*** ***Chroma*** ***Struttura*** ***Stone*** ***Pressed Glass**** ***100%***	Designed for: ***Varia*** ***Struttura*** ***100%***	Designed for: ***Varia*** ***100%***	Designed For: ***Varia*** ***100%***
1/16"	25mm(1") Cap w/ 10mm(3/8") threaded rod 3-15-0027	-	-	-
1/8"	25mm(1") Cap w/ 17mm threaded rod 3-15-0026	-	-	-
3/16"	25mm(1") Cap w/ 17mm threaded rod 3-15-0026	20mm(3/4") Cap w/ 20mm(3/4") threaded rod 3-15-0020	-	-
1/4"	25mm(1") Cap w/ 20mm(3/4") threaded rod 3-15-0025	20mm(3/4") Cap w/ 20mm(3/4") threaded rod 3-15-0020	25mm(1") Countersunk Cap w/ 10mm(3/8") threaded rod 3-15-0738	-
3/8"	25mm(1") Cap w/ 25mm(1") threaded rod 3-15-0028	-	25mm(1") Countersunk Cap w/ 17mm threaded rod 3-15-0737	20mm Countersunk Cap w/ 20mm (3/4") threaded rod 3-15-0732
1/2"	25mm(1") Cap w/ 25mm(1") threaded rod 3-15-0028	-	25mm(1") Countersunk Cap w/ 20mm(3/4") threaded rod 3-15-0736	20mm Countersunk Cap w/ 20mm (3/4") threaded rod 3-15-0732
3/4"	25mm(1") Cap w/ 32mm(1-1/4") threaded rod 3-15-0029	-	25mm(1") Countersunk Cap w/ 25mm(1") threaded rod 3-15-0739	-
1"	-	-	25mm(1") Countersunk Cap w/ 32mm(1-1/4") threaded rod 3-15-0740	-

Summary

2 Pieces Cap Chart

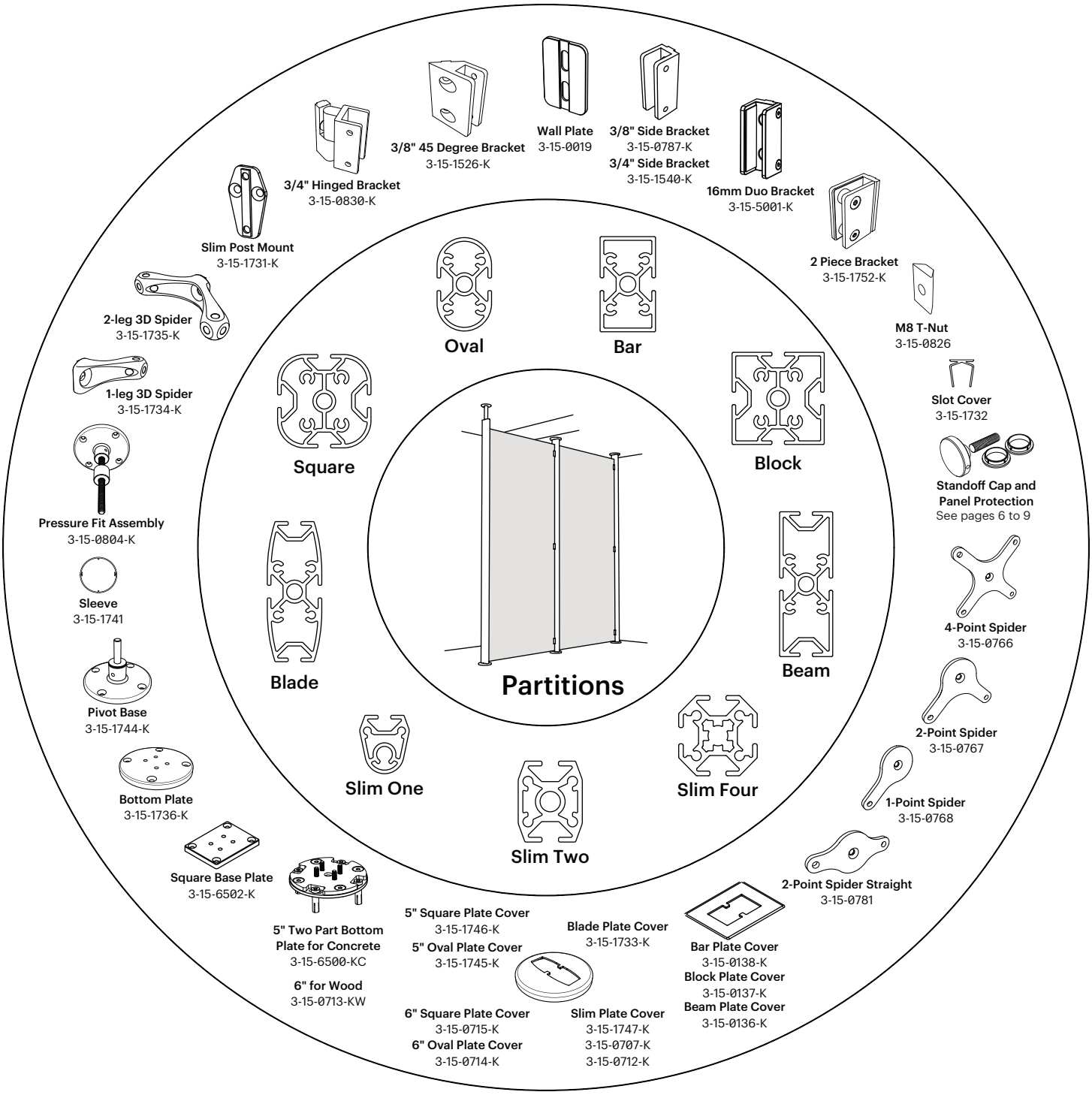
Another integral part of the *Versa* system regardless of application is the 2-piece cap. The length of rod needs to be chosen based on the gauge of material. This threaded rod is then capped using your choice of *standard*, *low profile*, *counter bore*, or *counter-sunk* caps. To select the best options for your installation, please follow the 2 steps outlined below. Your end result will be separate part numbers for each connection.

	1" Standard	1" Low Profile	1" Counterbore
1 Choose the design >	 Spanner Wrench (ST) 3-15-0782	 Low Profile Cap Key 3-15-1704	 Allen Keys
2 Select the panel gauge V	Designed for: ***Varia*** ***Chroma*** ***Struttura*** ***Stone*** ***100%***	Designed for: ***Varia*** ***Chroma*** ***Struttura*** ***Stone*** ***100%***	Designed for: ***Varia*** ***100%***
1/16"	Standard thinner gauge kit 3-15-1716-K + 3-15-1753	Low-profile thinner gauge kit 3-15-1717-K + 3-15-1753	-
1/8"	Standard thinner gauge kit 3-15-1716-K + 3-15-1753	Low-profile thinner gauge kit 3-15-1717-K + 3-15-1753	-
3/16"	Standard thinner gauge kit 3-15-1716-K + 3-15-1754	Low-profile thinner gauge kit 3-15-1717-K + 3-15-1754	-
1/4"	Standard thinner gauge kit 3-15-1716-K + 3-15-1754	Low-profile thinner gauge kit 3-15-1717-K + 3-15-1754	-
3/8"	Standard thinner gauge kit 3-15-1719-K + 3-15-3032	Low-profile thinner gauge kit 3-15-1720-K + 3-15-3032	-
1/2"	Standard thinner gauge kit 3-15-1719-K + 3-15-1755	Low-profile thinner gauge kit 3-15-1720-K + 3-15-1755	Countersunk assembly thicker gauge 3-15-1721-K + 3-15-1756
3/4"	Standard thinner gauge kit 3-15-1719-K + 3-15-3033	Low-profile thinner gauge kit 3-15-1720-K + 3-15-3033	Countersunk assembly thicker gauge 3-15-1721-K + 3-15-1757
1"	Standard thinner gauge kit 3-15-1719-K + 3-15-3032 A	Low-profile thinner gauge kit 3-15-1720-K + 3-15-3032 A	Countersunk assembly thicker gauge 3-15-1721-K + 3-15-1758

**Pressed Glass* in 5/16" and 3/4" gauges is compatible only when used with the *Glass Adapter* hardware, 3-15-0608-K or 3-15-0609-K

*See ***Versa Glass Integrator*** and ***Glass Adapter Solution Documents*** for more information

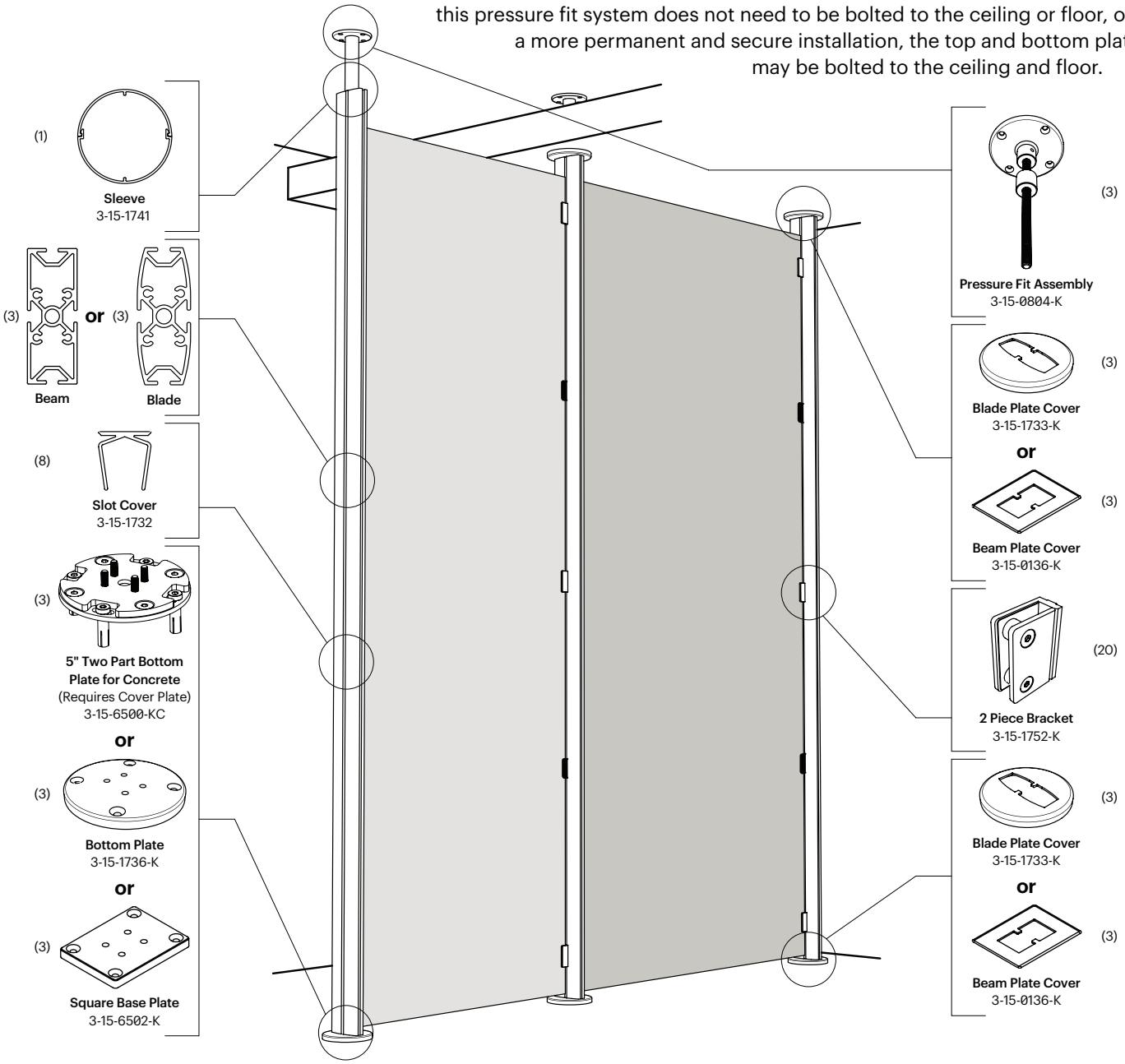
Solution 1
Partitions



Solution 1
Partitions *Example 1*

Pressure Fit Application With Side Bracket Attachments

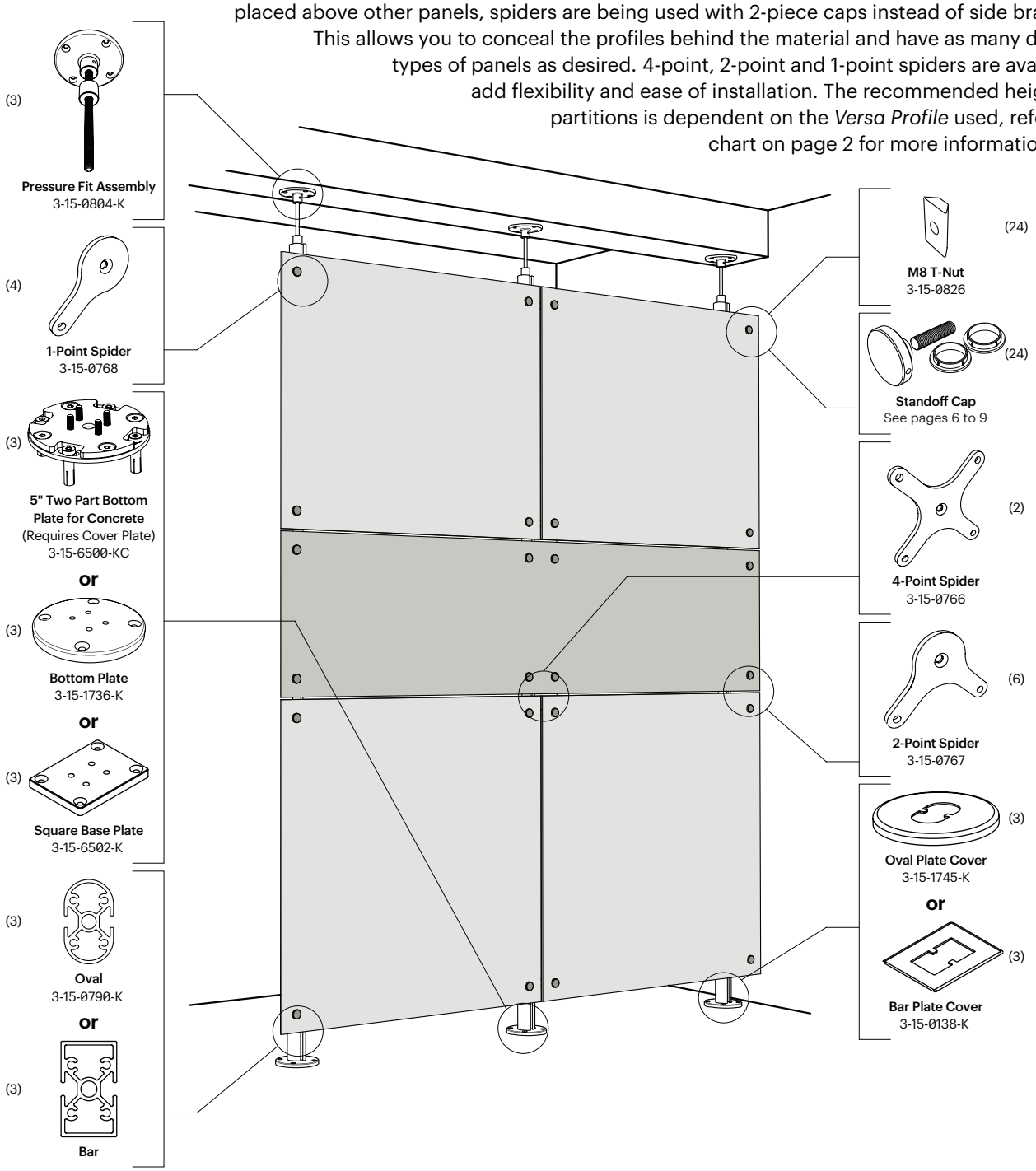
The top mounted *Pressure Fit Assembly* securely mounts each profile in place, where panels can be mounted using side bracket attachments. This pressure fit system easily adapts to the environment, whether you fasten the top directly to the ceiling, or put the rod through a drop ceiling tile while fastening the top to the substrate above. This can then be covered with the ceiling canopy on a drop ceiling. Or, you can use an alternate option of a drop ceiling clip to attach the top of the profile. The floor plate can be exposed or covered using the *Floor Plate Cover*. For temporary installations this pressure fit system does not need to be bolted to the ceiling or floor, or for a more permanent and secure installation, the top and bottom plates may be bolted to the ceiling and floor.



Solution 1
Partitions *Example 2*

Pressure Fit Application With Spider Attachments

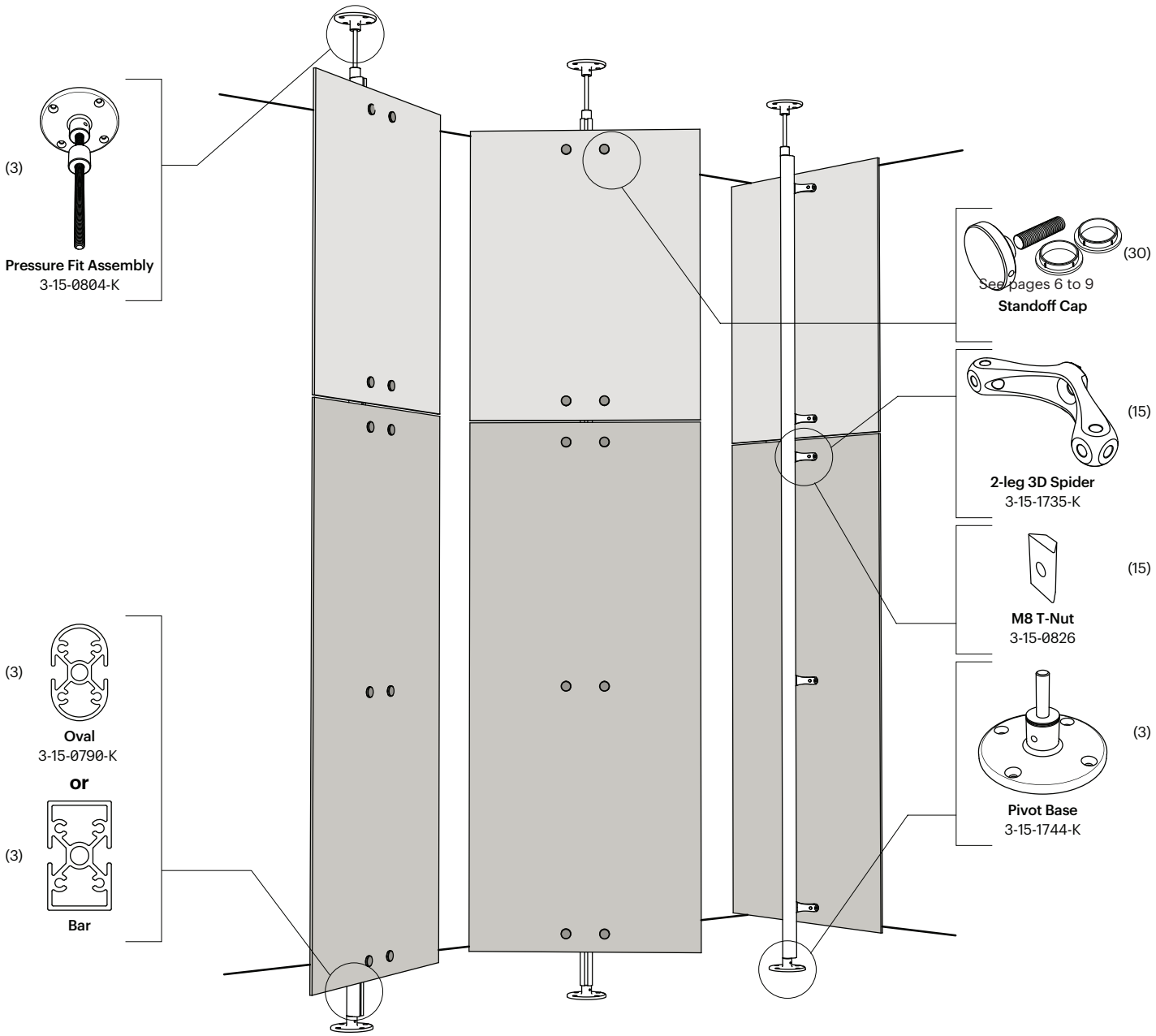
As in Example 1, the pressure fit system can be installed using different profiles. In this example, where the goal is to have panels placed above other panels, spiders are being used with 2-piece caps instead of side brackets. This allows you to conceal the profiles behind the material and have as many different types of panels as desired. 4-point, 2-point and 1-point spiders are available to add flexibility and ease of installation. The recommended height of the partitions is dependent on the *Versa Profile* used, refer to the chart on page 2 for more information.



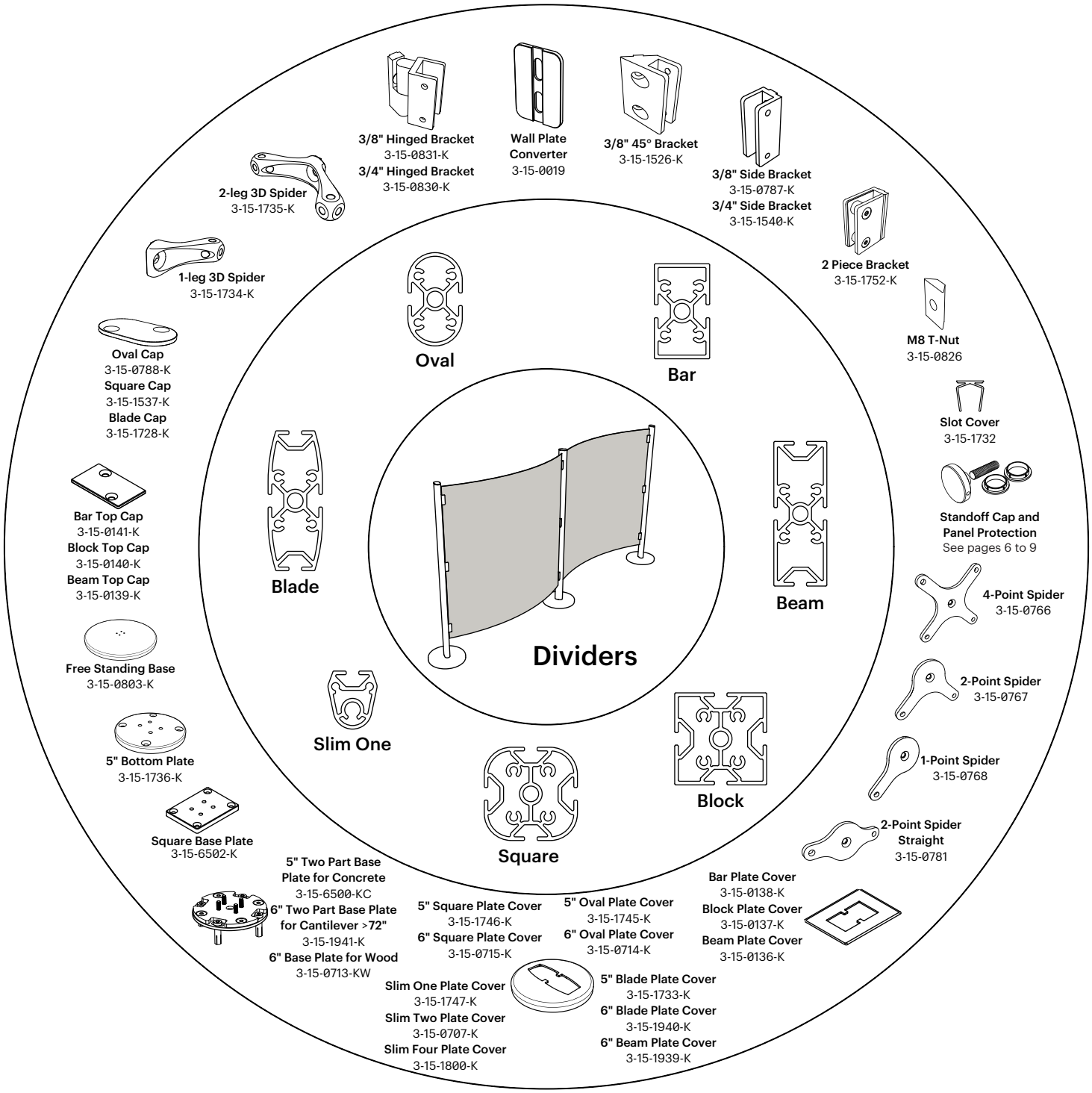
Solution 1
Partitions *Example 3*

Pressure Fit Pivoting Partitions

In this installation, the *Oval* or *Bar Profile* is being used with *Spiders* and the *Pivot Base* to create pivoting partitions that can divide or artistically complement a space. These partitions can turn to the closed position to create a separate part of a room, or can be opened for full use of the room. It is recommended that the maximum width of pivoting partitions is 38" each. For thicker gauges you will need more *Spiders* to support additional weight. The recommended height of the partitions is dependent on the *Versa Profile* used, refer to the chart on page 2 for more information.



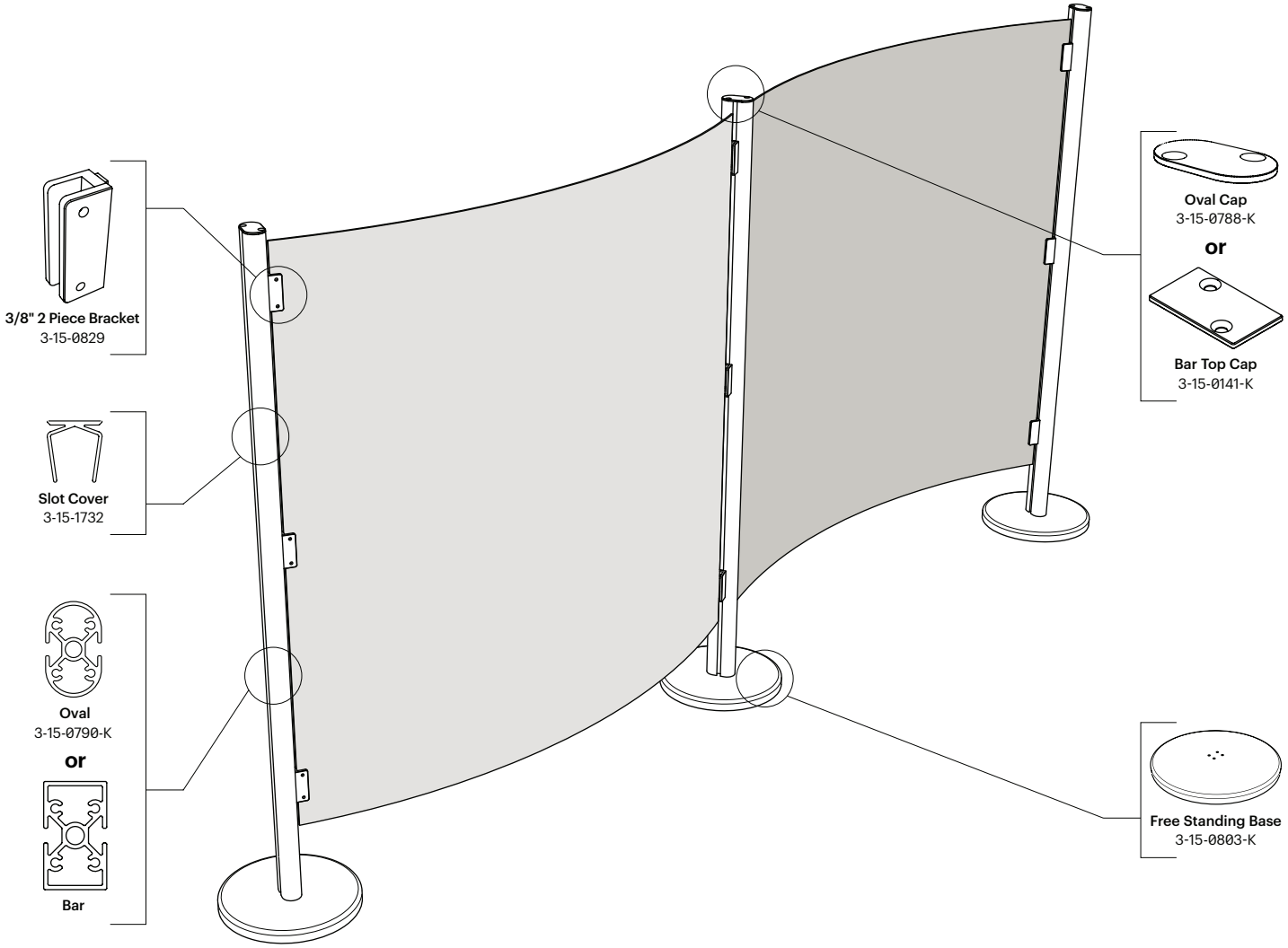
Solution 2
Dividers



Solution 2
Dividers *Example 1*

Free Standing Divider With Flexible Varia Panels

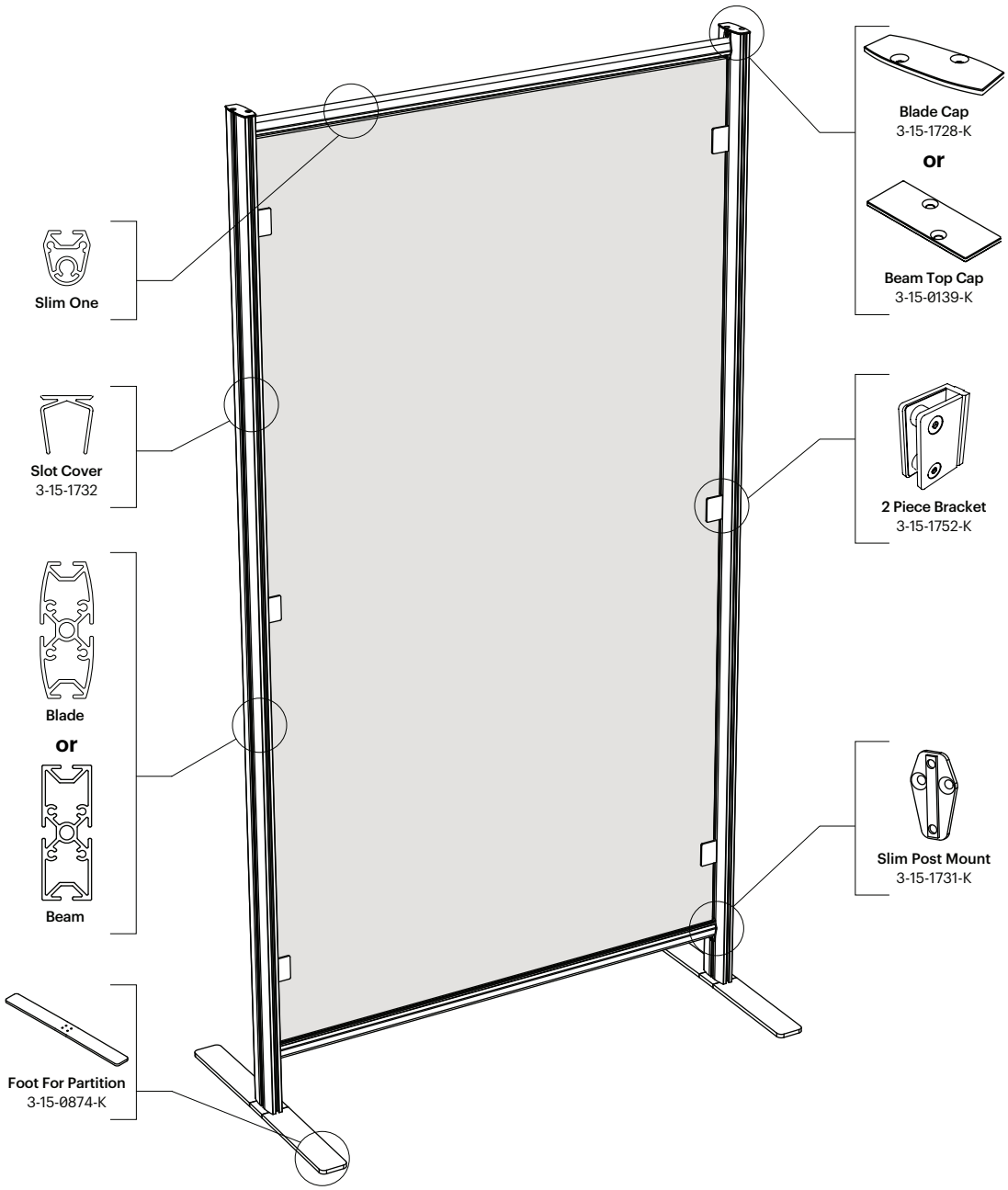
With the optional *Free Standing Base*, the 3form *Versa Divider* solution can create completely free-standing applications, serving as a movable partition or divider. When used with flexible *Varia* panels (1/8" gauge), the weight of the base can be used to cold form the panel, creating undulation without heat forming. *Caps* cover the tops of the profiles and *Slot Covers* conceal the exposed slots to create a very clean look as the *Side Brackets* hold the material between the profiles. It is recommended that these free-standing partitions be no taller than 4'.



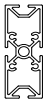
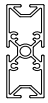
Solution 2
Dividers *Example 2*

Free Standing Divider With Rigid Varia Panel

As with Example 1, the 3form *Versa Divider* solution can create completely free-standing applications, serving as a movable partition or divider. Shown with clamping side brackets and 1/2" gauge *Varia*. Maximum 96" high side profiles. Maximum *Chroma* and *Varia* panel size is 48" wide × 93" high. Maximum glass size is 48" wide × 72" high.
See ***Versa Glass Integrator Solution Document*** for more information on glass.



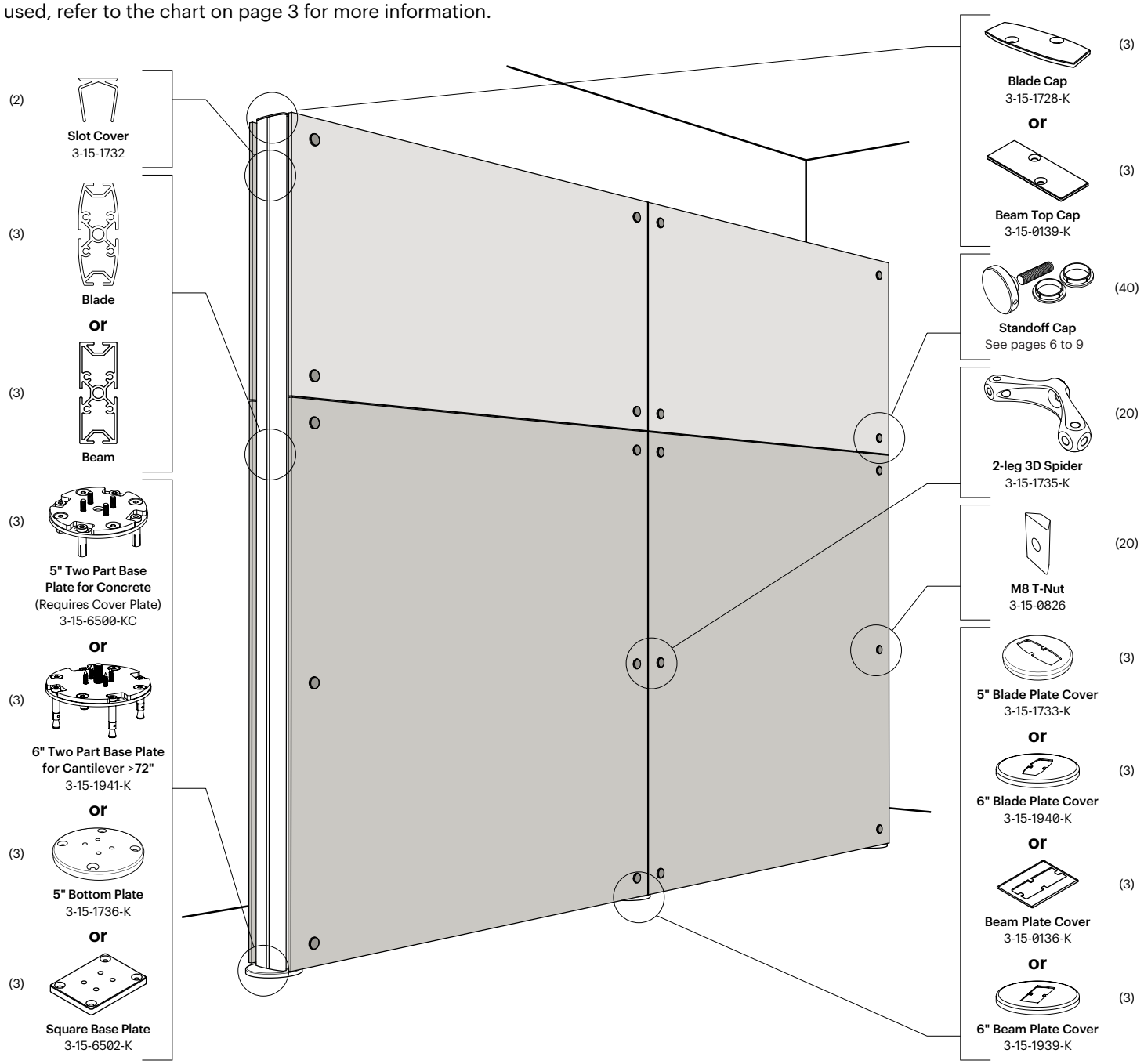
Solution 2
Versa Compatibility Chart for Free Standing Dividers

Versa Vertical Profile - 96" Length	Versa Horizontal Profile - 50" Length							
	 Blade 0-60-0120	 Beam 0-60-0127	 Square 0-60-0109	 Block 0-60-0131	 Oval 0-60-0107	 Bar 0-60-0135	 Slim 1 0-60-0135	 Slim 2 0-60-0103
 Blade 0-60-0120							X	X
 Beam 0-60-0127	X	X	X	X	X	X	X	X
 Square 0-60-0109							X	X
 Block 0-60-0131			X	X	X	X	X	X
 Oval 0-60-0107							X	X
 Bar 0-60-0135			X	X	X	X	X	X

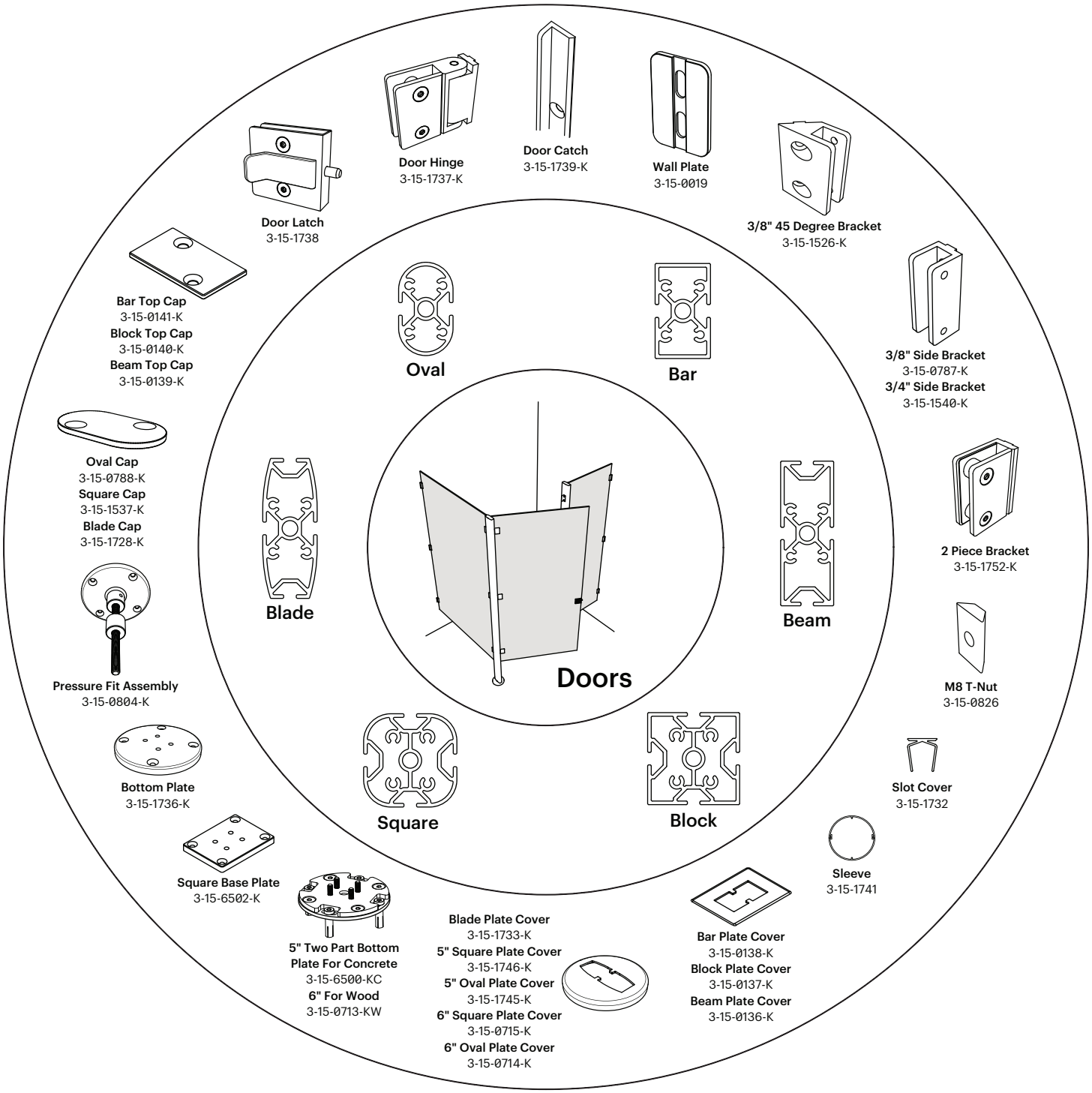
Solution 2
Dividers *Example 3*

Floor Bolted Free Standing Divider Application

In this example, the bottom plate is bolted to the floor, which can be covered using the *Bottom Plate Cover*, and *Slot Covers* conceal any exposed slots in the profile. The material is then suspended using *Spiders* with thru holes to hide the hardware behind the materials. When this free standing divider is bolted to the floor, the height of the divider is dependent on the *Versa Profile* used, refer to the chart on page 3 for more information.



Solution 3
Doors

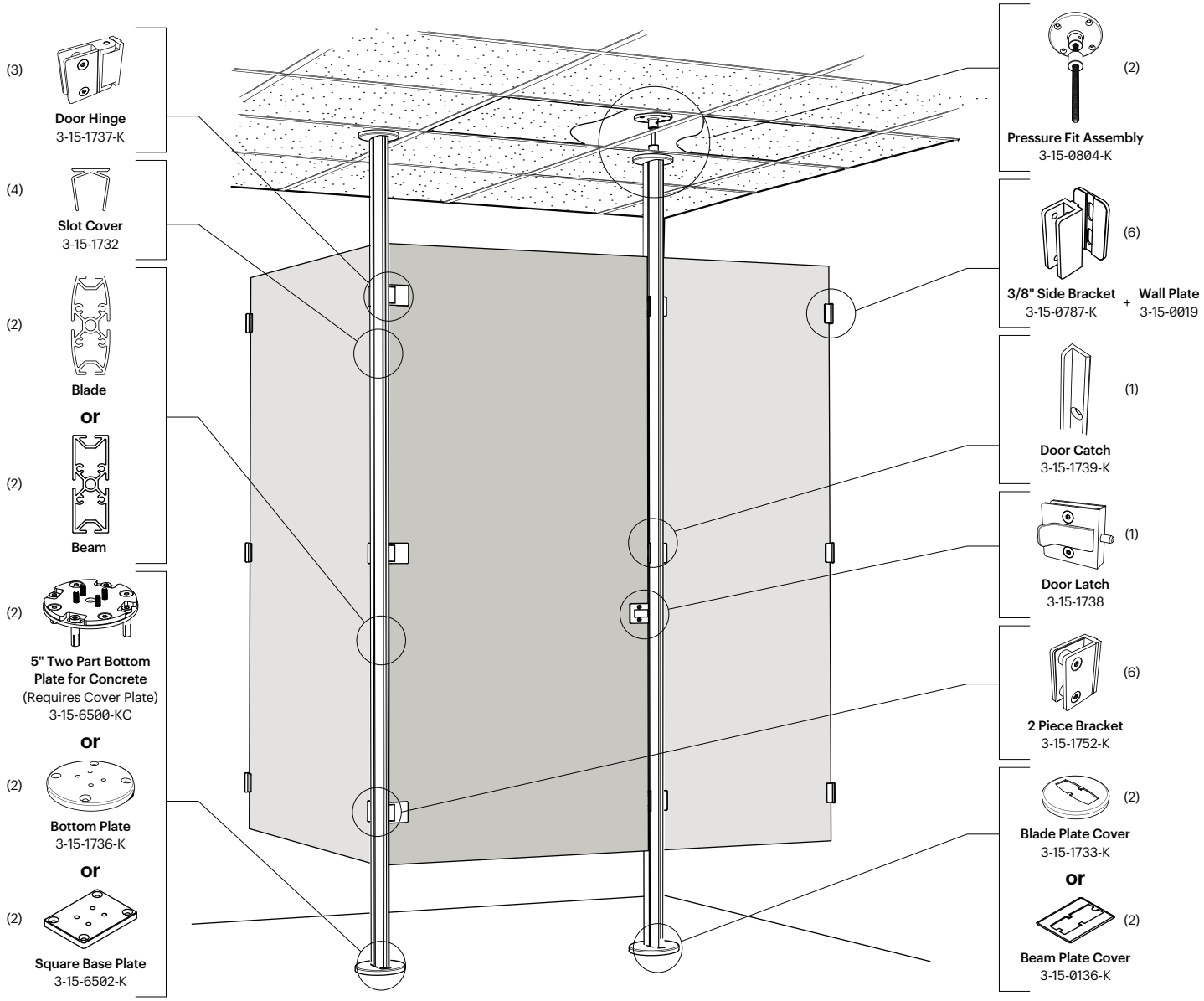


Solution 3
Doors *Example 1*

Drop Ceiling Privacy Divider with Hinged Door

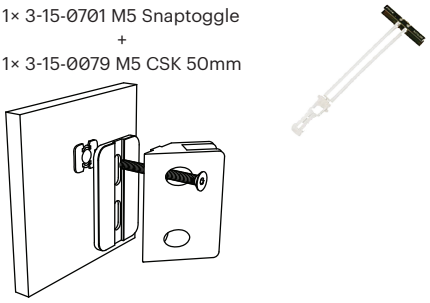
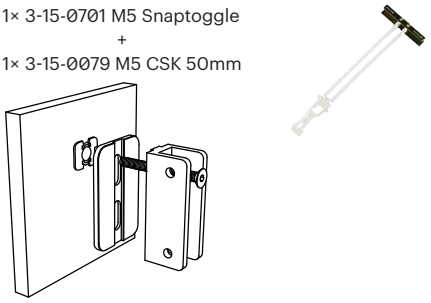
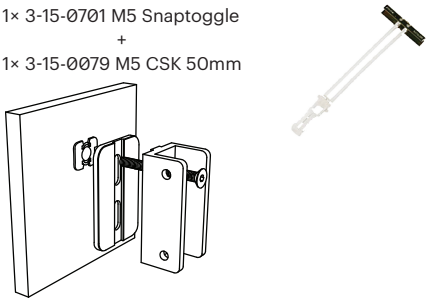
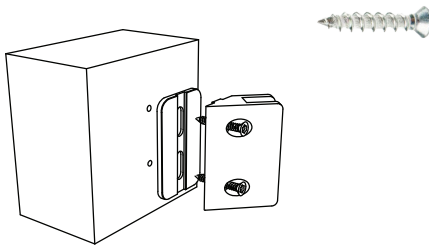
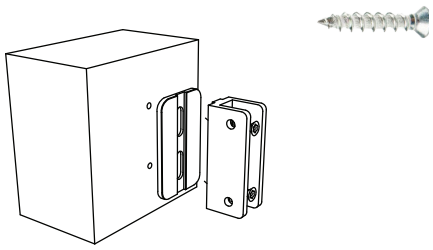
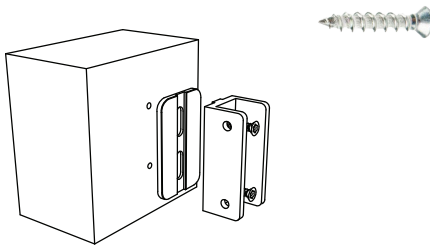
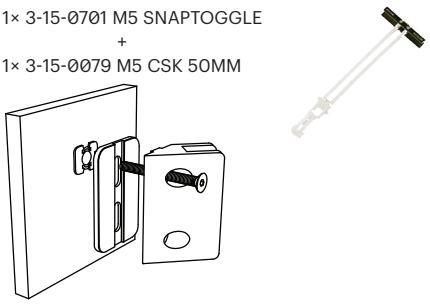
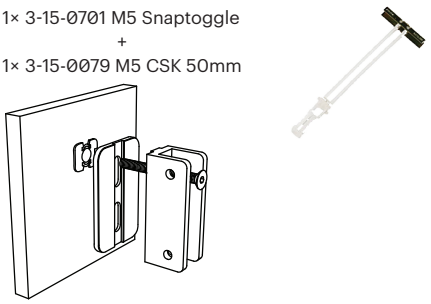
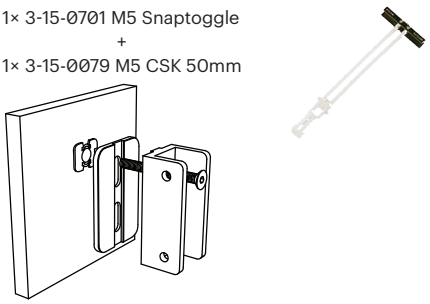
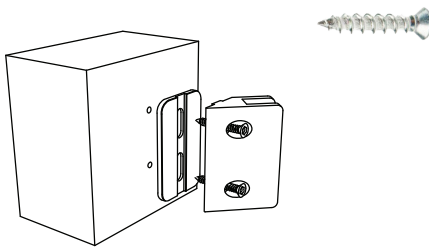
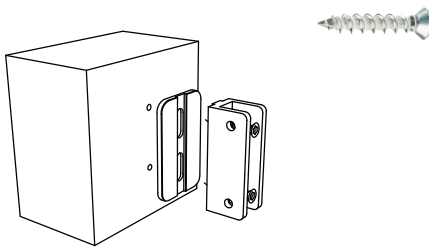
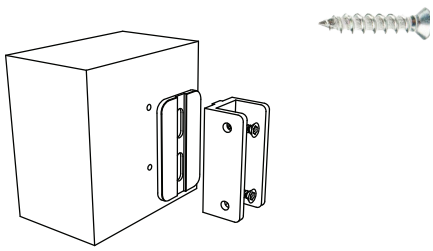
The *Versa* system is now more flexible than ever with the inclusion of hinged door hardware to create options for dressing room partitions and more. In this example, *Versa Brackets* are attached directly to the wall with profiles bolted to the floor using floor plates and attached to the structure above the drop ceiling using the *Pressure Fit Assembly*, which is then covered with the *Base Plate Cover*. These profiles are used to support the panels that are attached to the wall. A hinged door with a door latch is then used to close the door. Exposed slots in the profile are hidden using the *Slot Cover* and the *Floor Plate Cover* conceals the screws on the *Floor Plate*, creating a clean, simple partition system. It is recommended that doors be no more than 36" wide; otherwise the doors will be too flexible.

Note: *Versa Hinge and Latch Panel must be used with 1/2" gauge Varia.*



Solution 3
Wall Plate Adapter

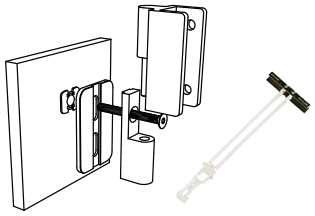
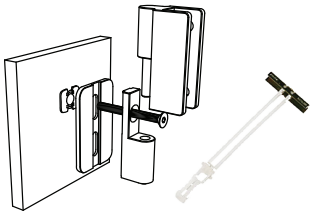
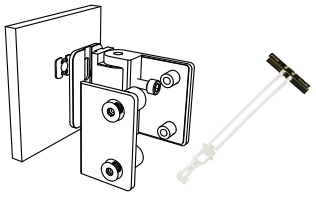
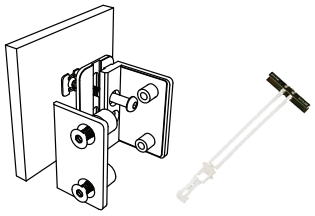
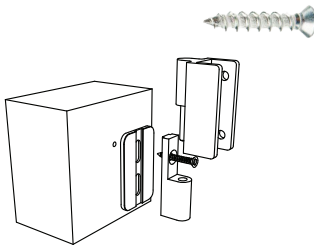
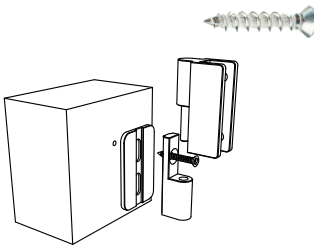
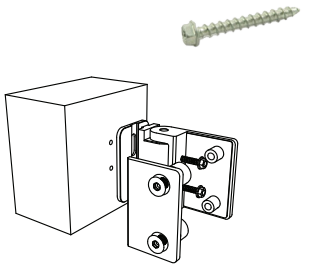
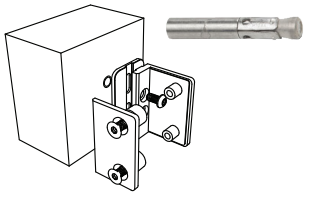
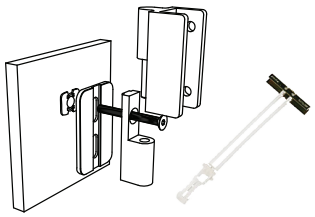
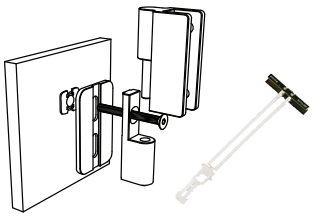
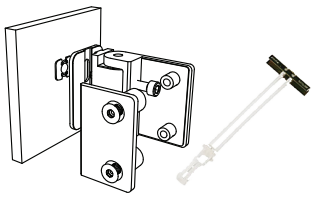
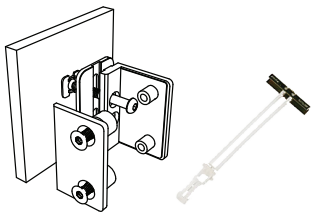
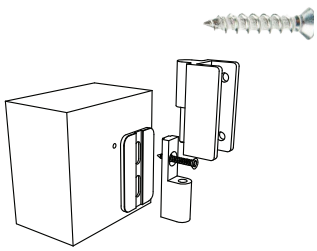
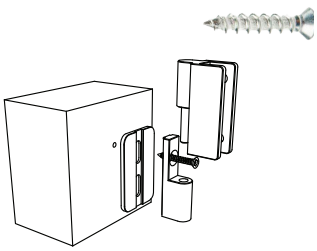
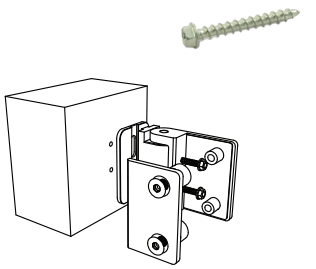
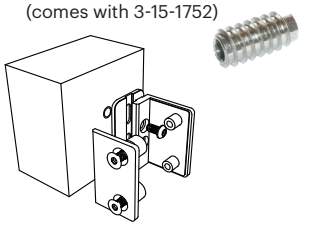
Anchoring Matrix 1

	45˚ Bracket 3-15-1526	⅜" Side Bracket 3-15-0787	¾" Side Bracket 3-15-1540
Drywall	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 
Concrete	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-0841 (with bracket holes drilled out to 1/4") 
Metal Stud	1× 3-15-0701 M5 SNAPTOGGLE + 1× 3-15-0079 M5 CSK 50MM 	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 
Wood	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-0841 (with bracket holes drilled out to 1/4") 

Notes: *M5 Snaptoggle* for 3/8" drywall estimated to be half of 1/2" drywall value for 3/16" thread --> 120 lbs for ultimate tensile and 125 lbs for ultimate shear.
Safety factor of 4 suggested --> 30 lbs tensile and 31 lbs for shear.
M6 Snaptoggle for 3/8" drywall estimated to be half of 1/2" drywall value for 1/4" thread --> 132 lbs for ultimate tensile and 120 lbs for ultimate shear.
Safety factor of 4 suggested --> 33 lbs tensile and 30 lbs for shear.

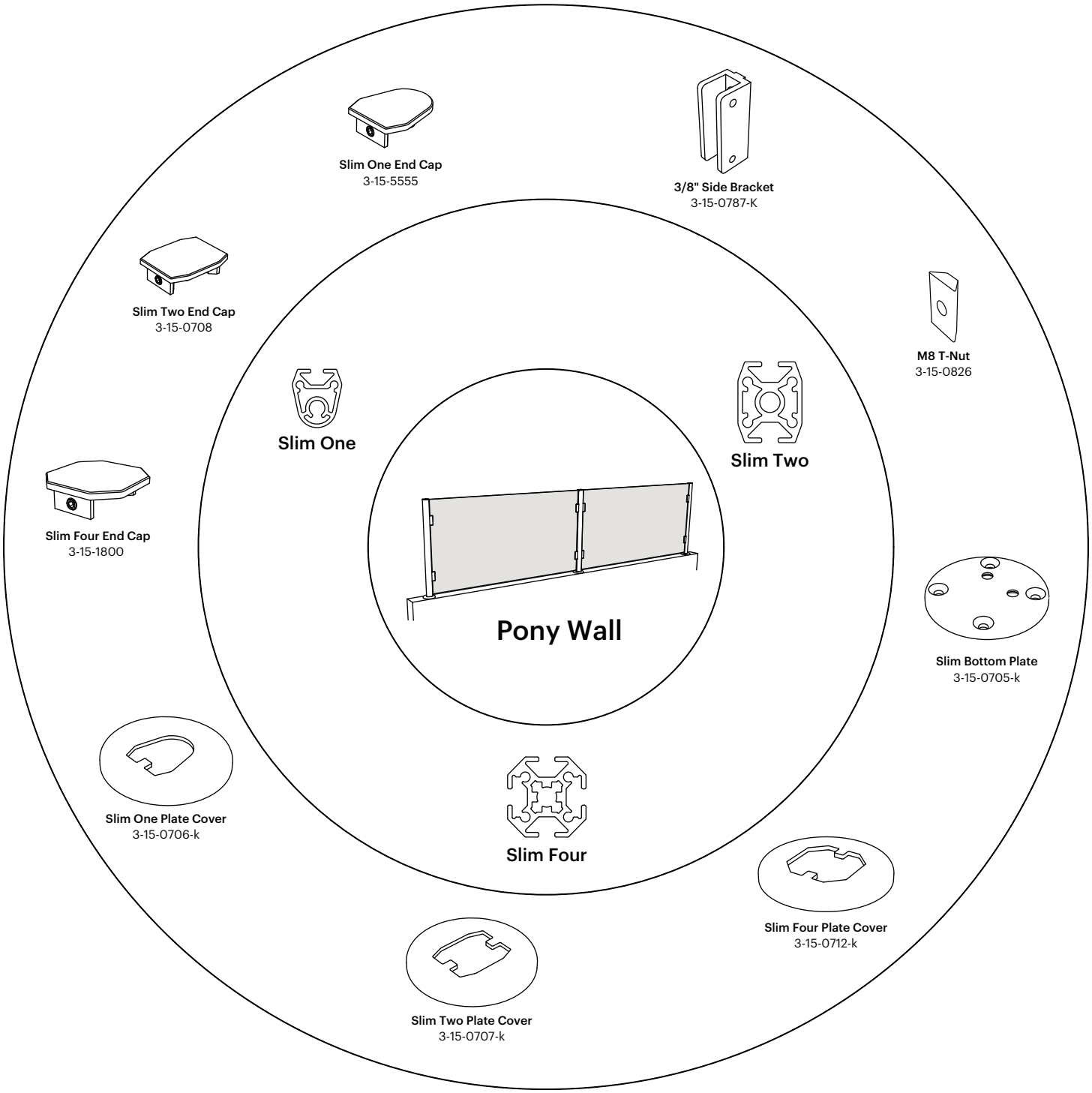
Solution 3
Wall Plate Adapter

Anchoring Matrix 2

	¾" Hinge Bracket 3-15-0830	⅜" Hinge Bracket 3-15-0831	Partition Door Hinge 3-15-1737	Clamping Bracket 3-15-1752
Drywall	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 	1× 3-15-0700 M6 Snaptoggle + 1× 3-15-0703 M6 Standard Head Screw 50mm 	1× 3-15-0700 M6 Snaptoggle + 1× 3-15-0702 M6 Button Head 50mmL 
Concrete	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-1607 	1× 3-15-3010 Anchor + 1× M6 Button Head 12mmL (comes with 3-15-1752) 
Metal Stud	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50MM 	1× 3-15-0701 M5 Snaptoggle + 1× 3-15-0079 M5 CSK 50mm 	1× 3-15-0700 M6 Snaptoggle + 1× 3-15-0703 M6 Standard Head Screw 50mm 	1× 3-15-0700 M6 Snaptoggle + 1× 3-15-0702 M6 Button Head 50mmL 
Wood	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-0841 (with bracket holes drilled out to 1/4") 	2× 3-15-1607 	1× 3-15-0762 M6 Rampa Screw + 1× M6 Button Head 12mmL (comes with 3-15-1752) 

Notes: *M5 Snaptoggle* for 3/8" drywall estimated to be half of 1/2" drywall value for 3/16" thread --> 120 lbs for ultimate tensile and 125 lbs for ultimate shear. Safety factor of 4 suggested --> 30 lbs tensile and 31 lbs for shear.
M6 Snaptoggle for 3/8" drywall estimated to be half of 1/2" drywall value for 1/4" thread --> 132 lbs for ultimate tensile and 120 lbs for ultimate shear. Safety factor of 4 suggested --> 33 lbs tensile and 30 lbs for shear.

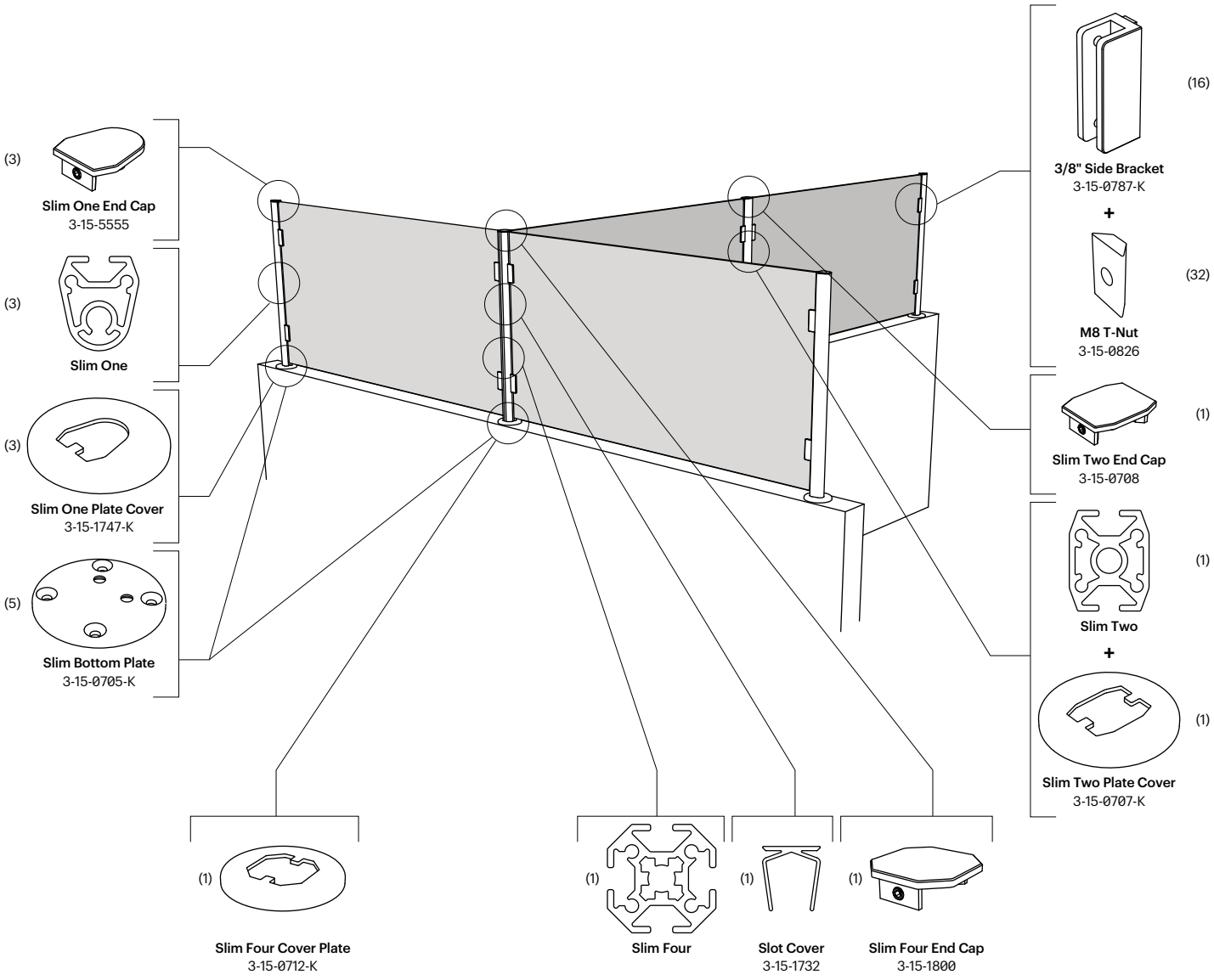
Solution 4
Pony Wall



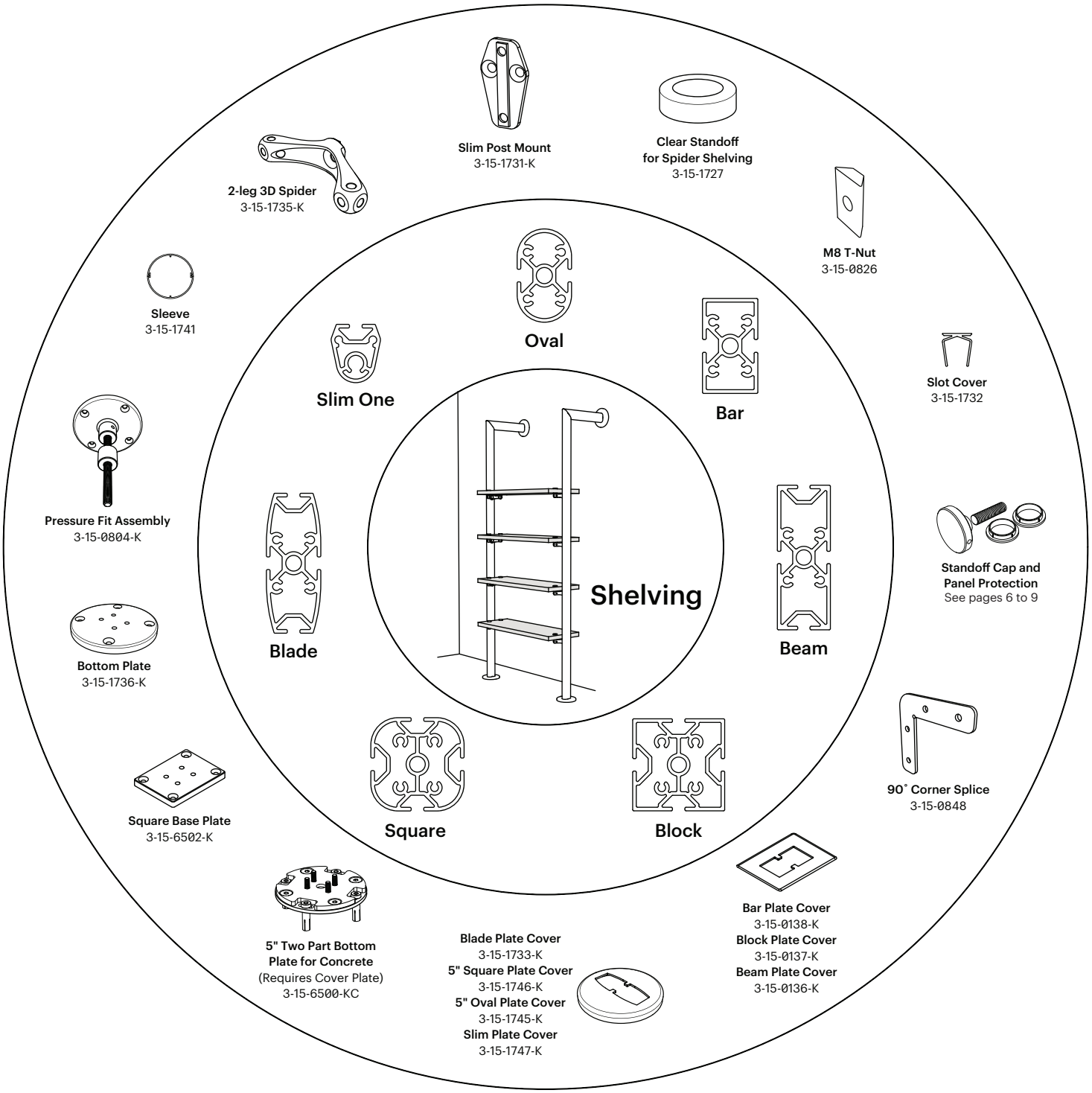
Solution 4
Pony Wall *Example 1*

Partition - Recommendations

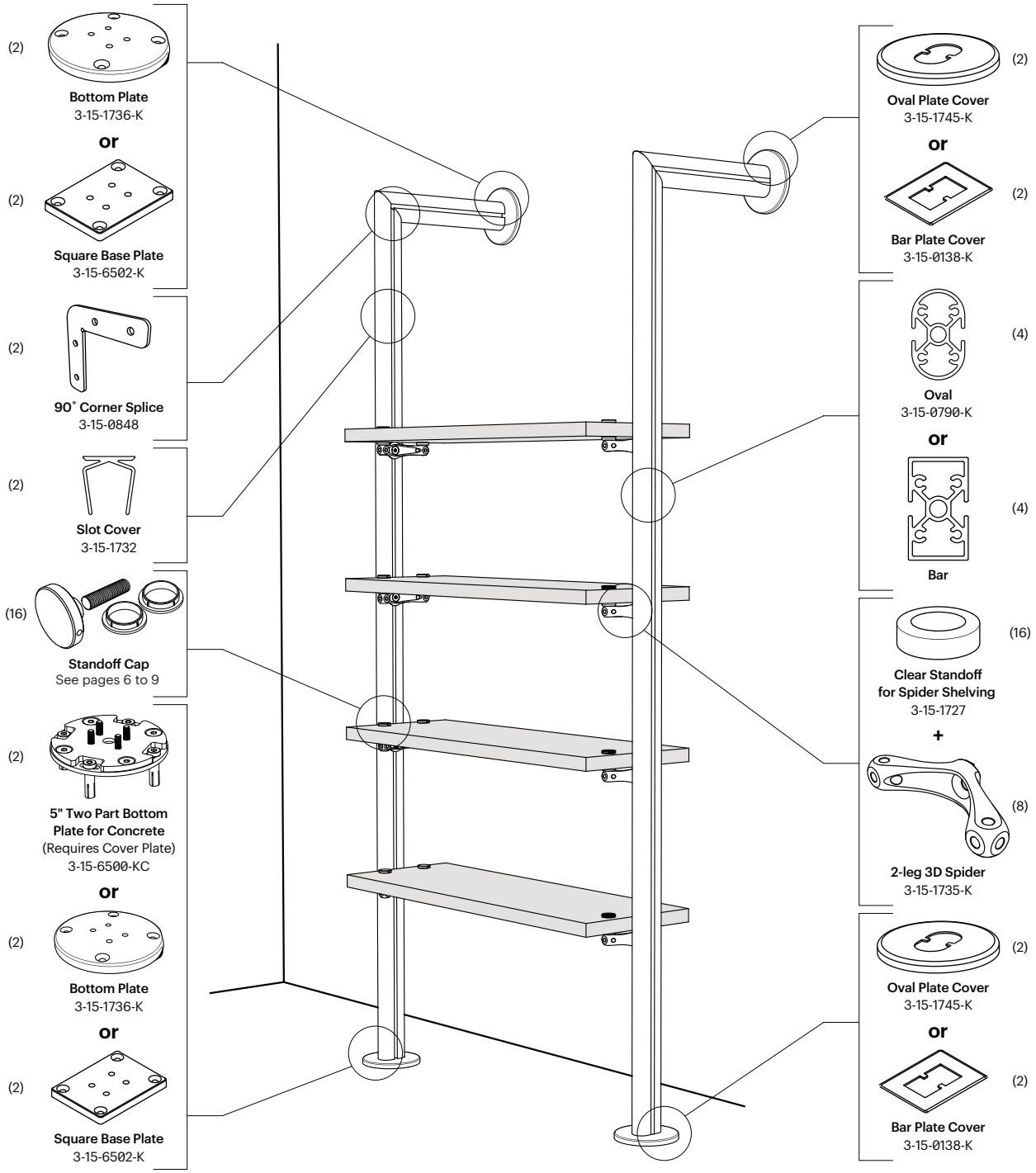
The *Versa Slim* system is designed specifically for wall header applications, with a 3" baseplate to fasten directly to the wall structure and add an elegant touch to any low wall or similar low application. *Slim Profiles* are ideally suited for low applications and the side brackets hold the *Varia Panel* without requiring hole fabrication.



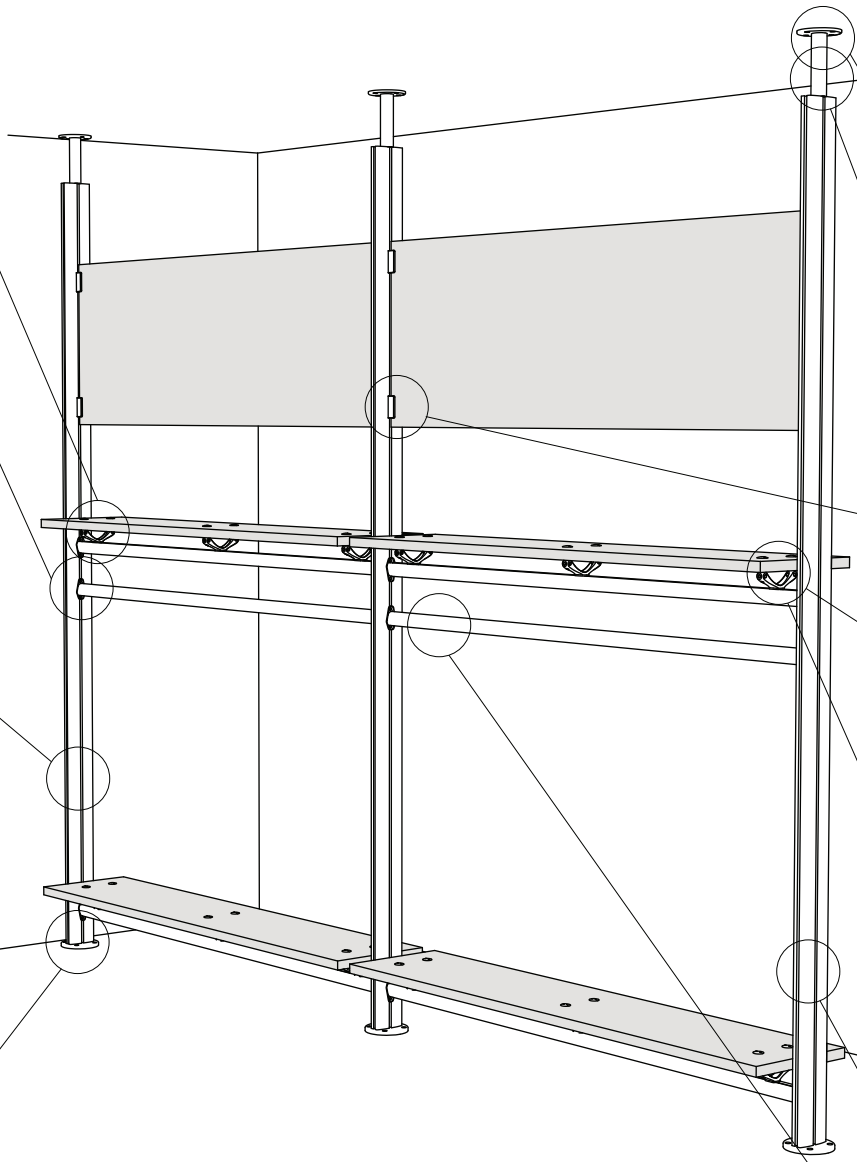
Solution 5
Shelving



Solution 5
Shelving *Example 1*
Versa Shelving 1



Solution 5
Shelving *Example 2*
Versa Shelving 2



(24)
Low Profile Cap
See pages 6 to 9

(12)
Slim Post Mount
3-15-1731-K

(3)
Blade

or

(3)
Beam

(3)
5" Two Part Bottom Plate for Concrete
(Requires Cover Plate)
3-15-6500-KC

or

(3)
Bottom Plate
3-15-1736-K

or

(3)
Square Base Plate
3-15-6502-K

(3)
Pressure Fit Assembly
3-15-0804-K

(3)
Sleeve
3-15-1741

(8)
2 Piece Bracket
3-15-1752-K

(52)
M8 T-Nut
3-15-0826

(24)
Clear Standoff for Spider Shelving
3-15-1727

+

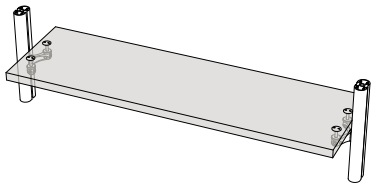
(12)
2-leg 3D Spider
3-15-1735-K

(8)
Slot Cover
3-15-1732

(6)
Slim One

Solution 5
Shelving

12" × 40"



(×2)

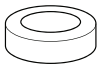
Versa Profile
Oval / Square / Blade

+

(×2)

2-leg 3D Spider
3-15-1735-K

(×4)

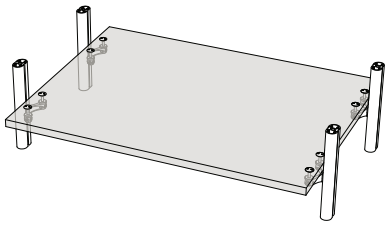


Clear Standoff
for Spider Shelving
3-15-1727

(×4)

Cap or 2 Pieces Cap
See pages 6 to 9

30" × 40"



(×4)

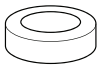
Versa Profile
Oval / Square / Blade

+

(×4)

2-leg 3D Spider
3-15-1735-K

(×8

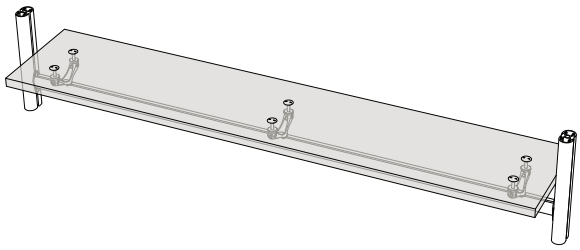


Clear Standoff
for Spider Shelving
3-15-1727

(×8)

Cap or 2 Pieces Cap
See pages 6 to 9

12" × 60"



(×2

Versa Profile
Oval / Square / Blade

+

(×1)

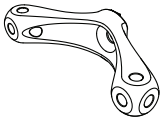
Slim One

(×2)

Slim Post Mount
3-15-1731-K

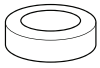
+

(×3)



2-leg 3D Spider
3-15-1735-K

(×6)

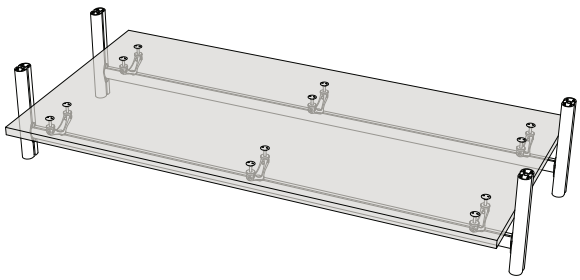


Clear Standoff
for Spider Shelving
3-15-1727

(×6)

Cap or 2 Pieces Cap
See pages 6 to 9

30" × 60"



(×4)

Versa Profile
Oval / Square / Blade

+

(×2)

Slim One

(×4)

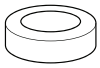
Slim Post Mount
3-15-1731-K

+

(×6)

2-leg 3D Spider
3-15-1735-K

(×12)



Clear Standoff
for Spider Shelving
3-15-1727

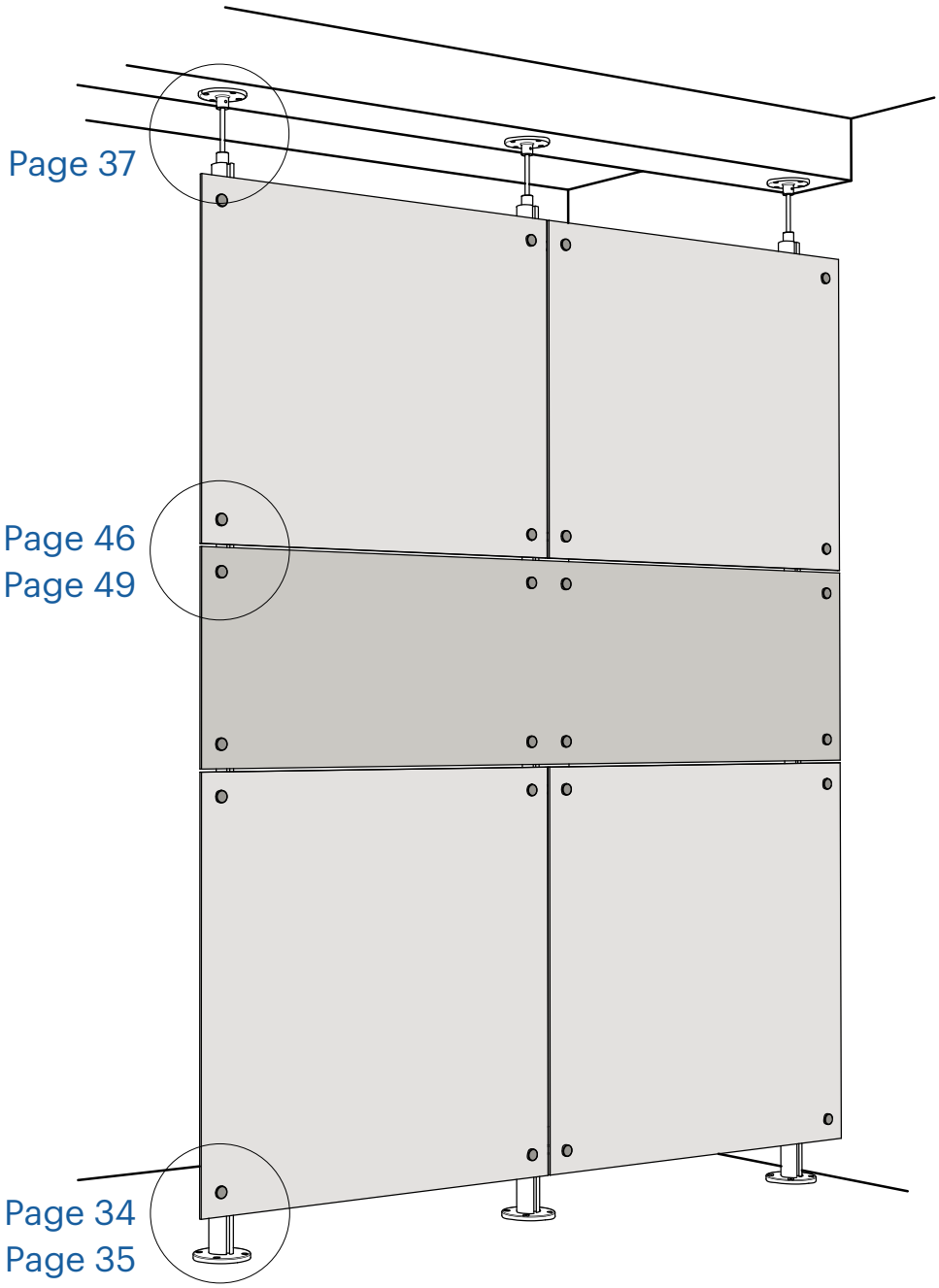
(×12)

Cap or 2 Pieces Cap
See pages 6 to 9

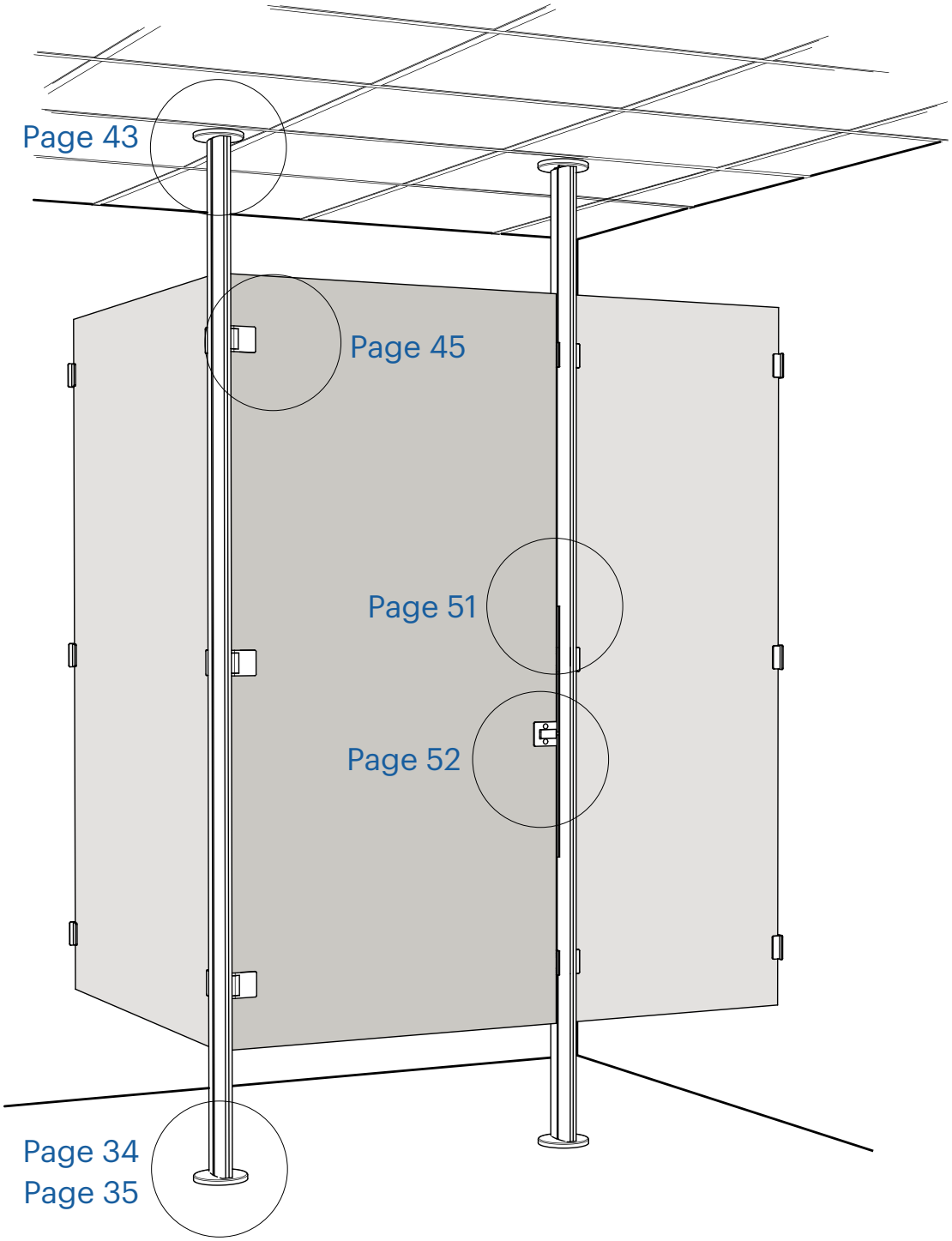
Using This Installation Manual

Because there are many components and possibilities with 3form *Versa* hardware, this manual is organized by individual component installation. Please see pages 29 to 33 for different installation components and applications, and follow the corresponding page # to find instructions for that particular element of the installation.

Installation
Partition Floor to Ceiling

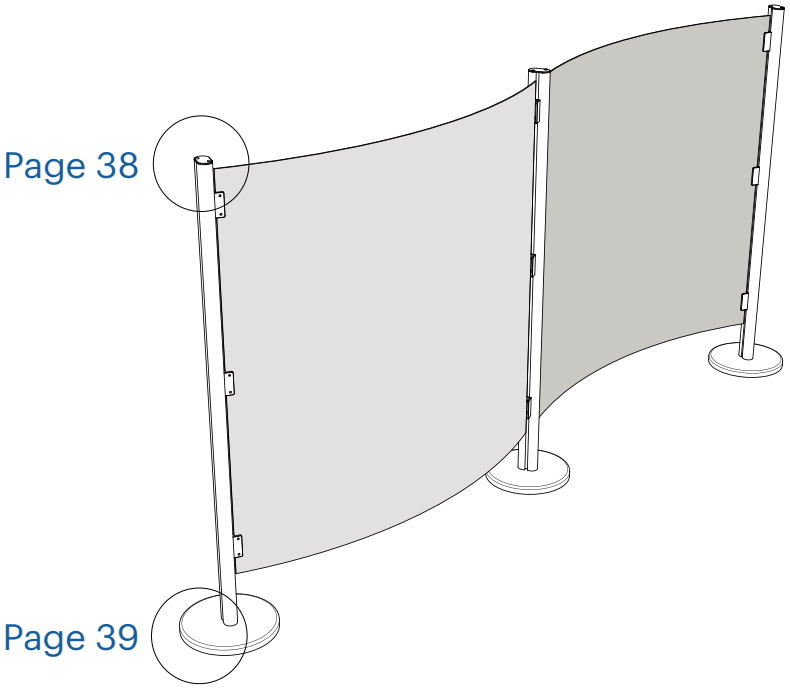


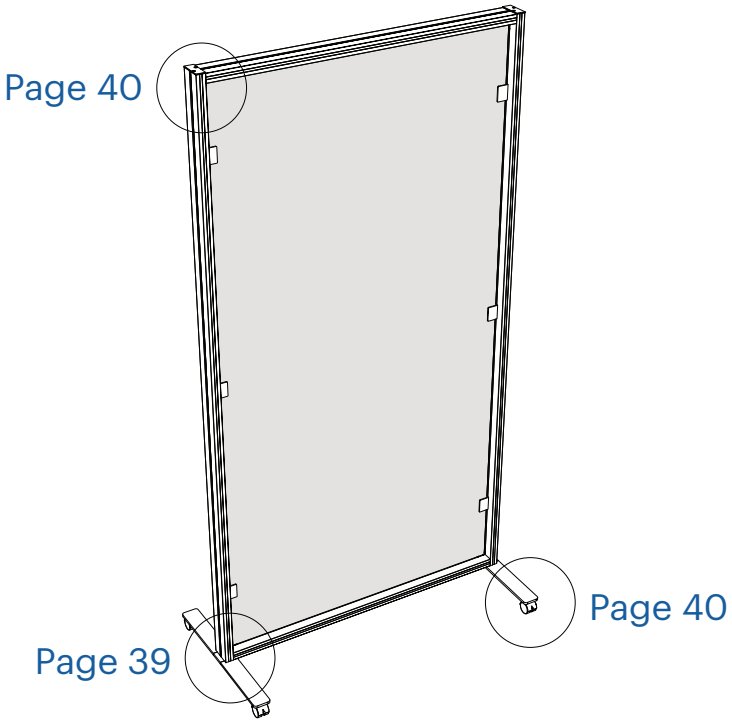
Installation
Partition Floor through Drop Ceiling, Hinged Door



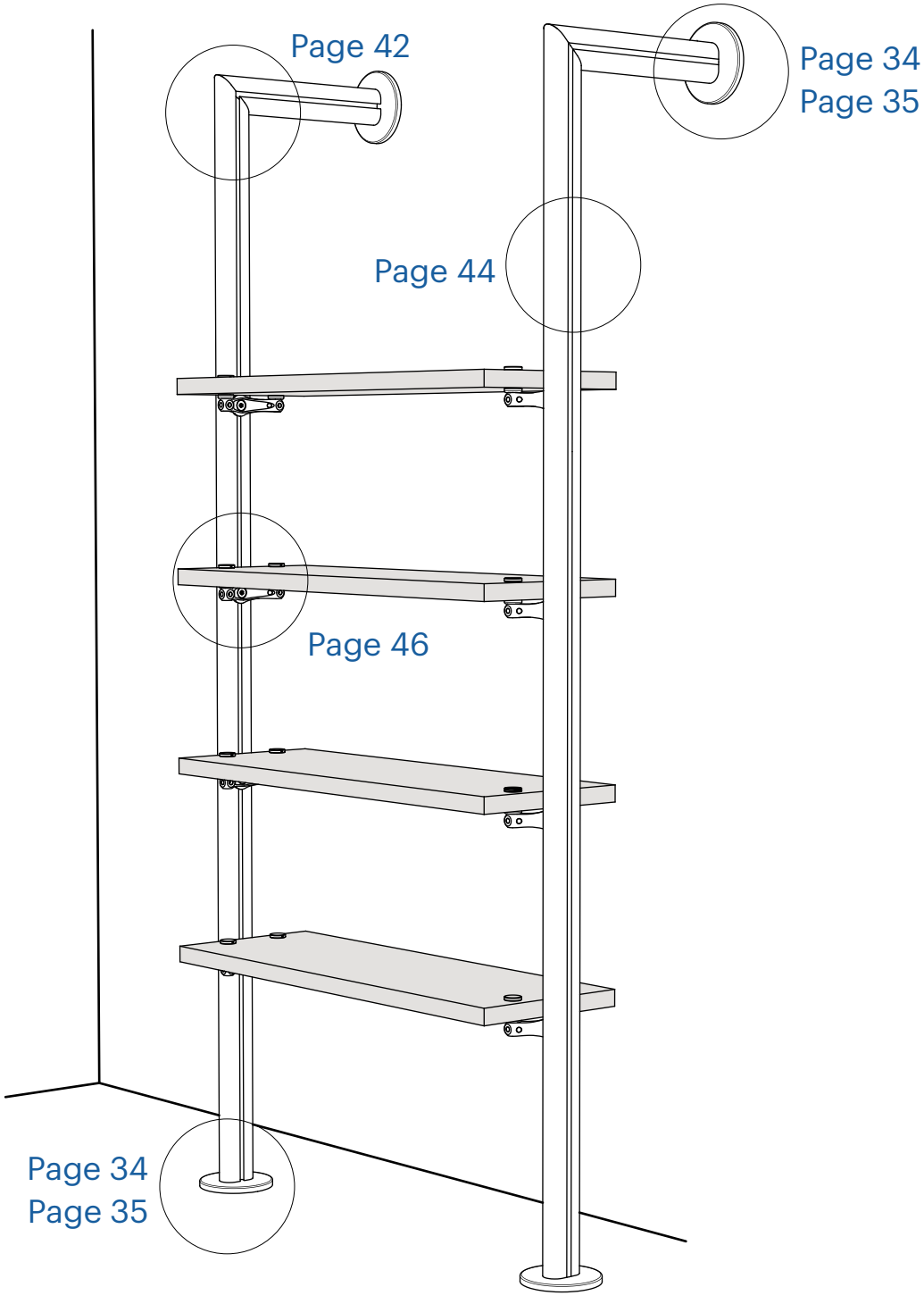
Installation

Free Standing Partition





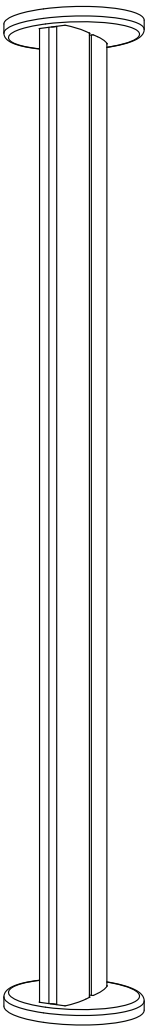
Installation
Shelving



Installation

Versa Post Options

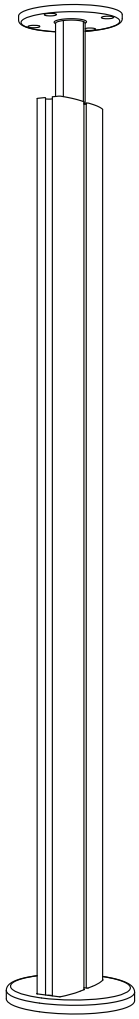
Below are the different possibilities for installing the *Versa Posts*, which are the foundation for this easily-configured system. Follow the recommended page numbers below to find installation details for these scenarios.



Page 34
Page 35

Floor To Ceiling Bolted Post

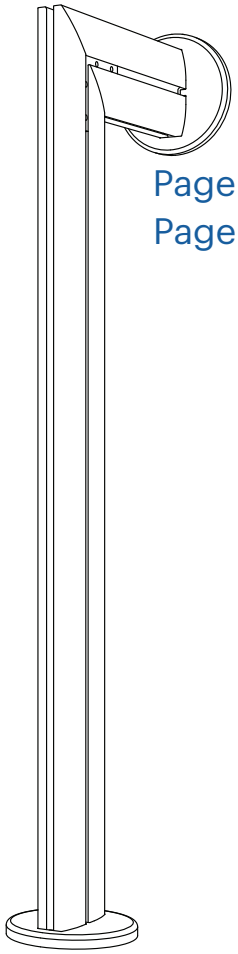
Page 34
Page 35



Page 37

Floor To Ceiling Pressure Fit Post

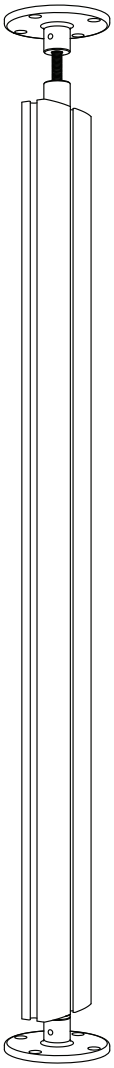
Page 34
Page 35



Page 42

Floor To Wall Bolted Post

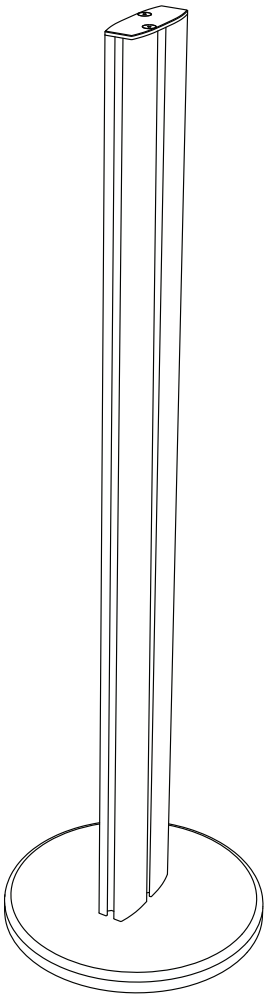
Page 34
Page 35



Page 37

Floor To Ceiling Pivot Post

Page 41



Page 38

Free Standing Post

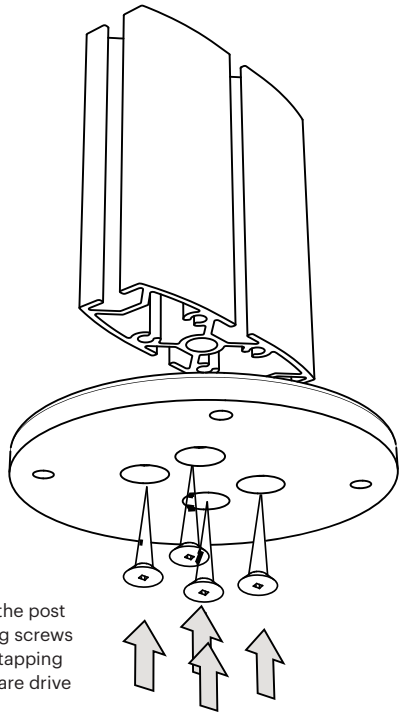
Page 39

If using the 2 Part Base Plate skip this page and refer to the next page, the 2 Part Base Plate is recommended for cantilever applications.

Installation

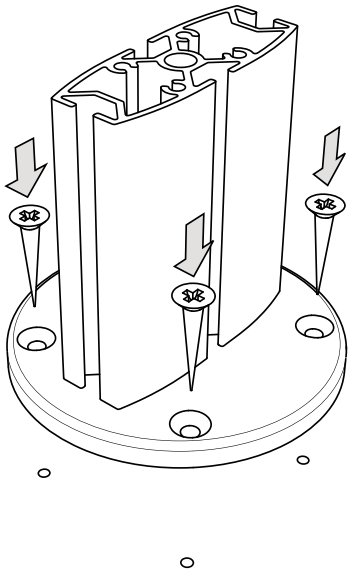
Base Plate with Cover

1

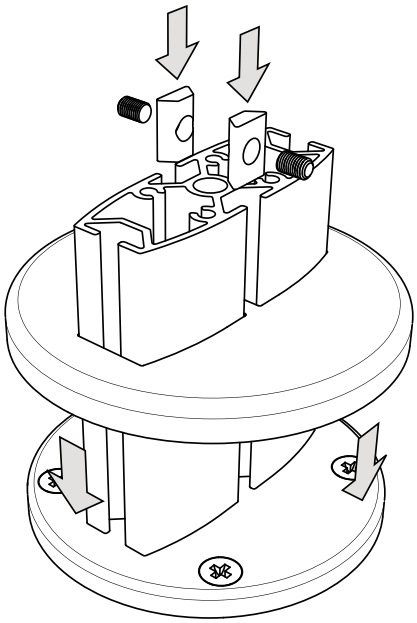


Attach bottom plate to the post using (4) #12 self-tapping screws (3-15-0869). These self-tapping screws require a #3 square drive bit for installation.

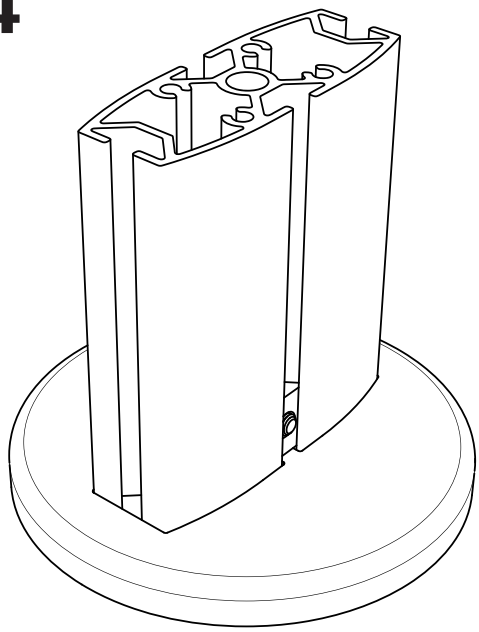
2 Mark holes on the floor and use appropriate screws and anchors for the floor substrate, which should be supplied by the installer. Attach bottom plate with attached post to the floor.



3



4

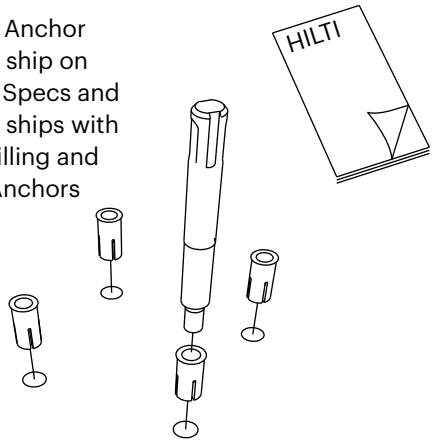


Installation

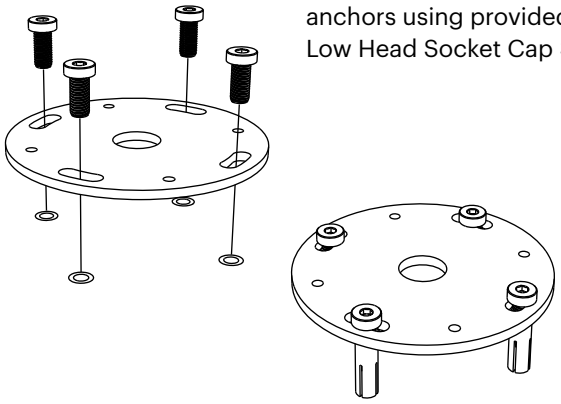
2 Part Base Plate with Cover

If using the *2 Part Baseplate* (3-15-6500-KC) for concrete substrate please follow these instructions. Use of the *2 Part Baseplate* can ease installation of *Versa Posts* where a large quantity of posts are ordered as they allow multiple installers to work simultaneously. The *2 Part Baseplate* is also recommended for cantilever applications as the anchor into the concrete is more robust than the single part baseplate.

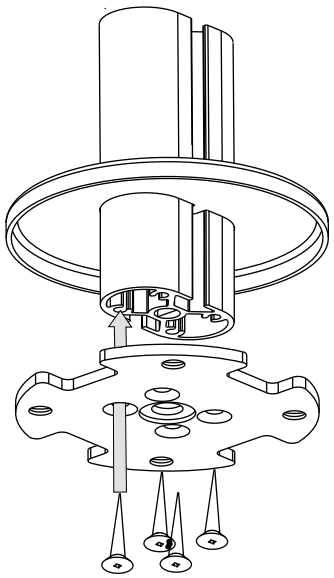
1 Refer to the Hilti Anchor Instructions that ship on 3form Technical Specs and Downloads (also ships with hardware) for drilling and inserting Flush Anchors into concrete.



2 Fasten steel portion of two part baseplate to flush anchors using provided M8 Low Head Socket Cap Screws.

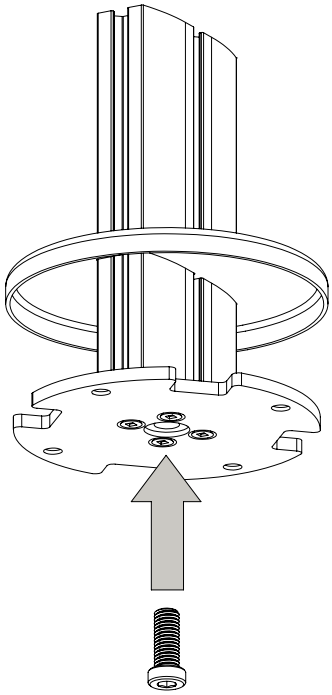


3 Install cover plate prior to attaching aluminum portion of *2 Part Baseplate* to *Versa Post* using provided #12 self-tapping screws (3-15-0869). These self-tapping screws require a #3 square drive bit for installation.



For installations greater than 72", attach base plate to the end of the extrusion that has the tapped center hole.

3a ***For cantilever installations above 72" only.***
Once #12 self-tapping screws are in place, attach the SHCS Low Profile M12 × 30m (3-15-1938) into the center hole of the extrusion.



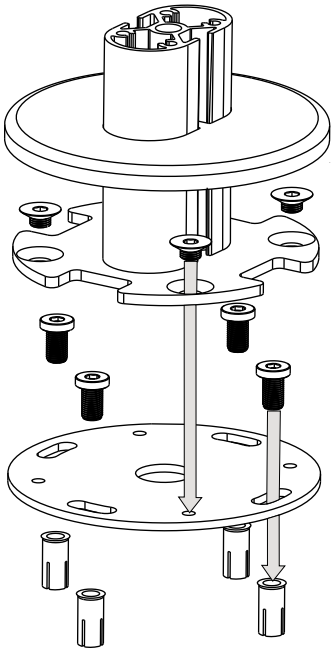
Installation

2 Part Base Plate with Cover

4a

5" 2 Part Baseplate for concrete (3-15-6500-KC)
or
6" 2 Part Baseplate for concrete (3-15-1941-K)

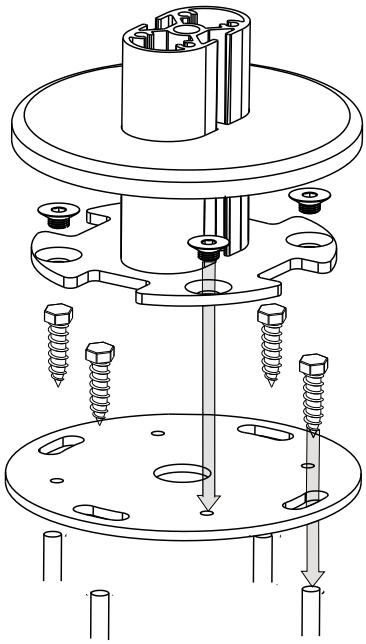
Fasten post assembly to prior installed steel part base plate using provided M8 countersunk screws, drop cover over assembly.



4b

6" 2 Part Baseplate for wood (3-15-0713-KW)

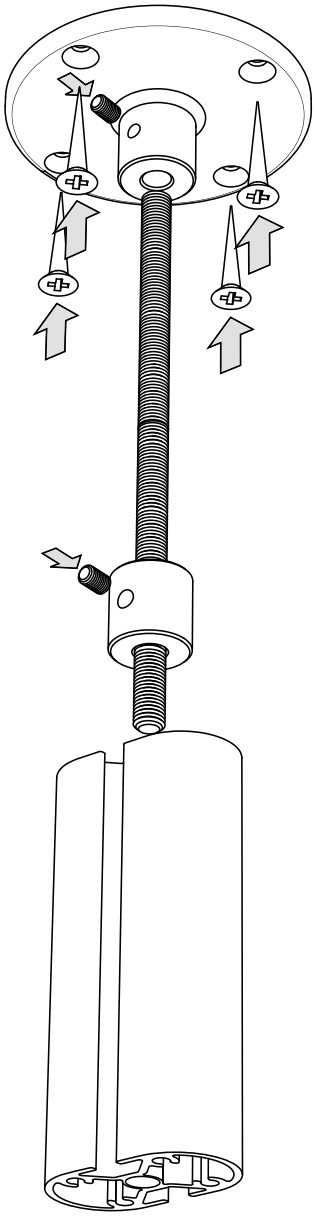
Fasten post assembly to prior installed steel part base plate using provided M8 countersunk screws, drop cover over assembly.



Installation

Pressure Fit Ceiling Assembly

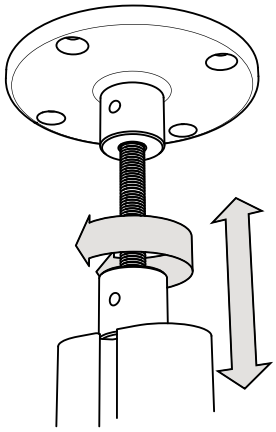
1



Optional

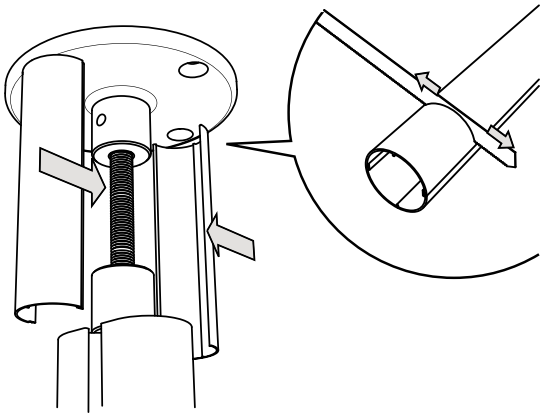
Mark and drill locations in the ceiling for the top anchors, and use appropriate screws and anchors for the substrate. In a temporary installation anchoring screws are not required, as the post can be held up by tightening the barrel nut against the post. If the installation will be more permanent, mark holes on the floor and ceiling first, ensuring the post is vertical, then drill and set anchors. Finally, put the post in place completely prior to screwing into the anchors. Also, loosely place the set screw in the barrel nut at this time.

2



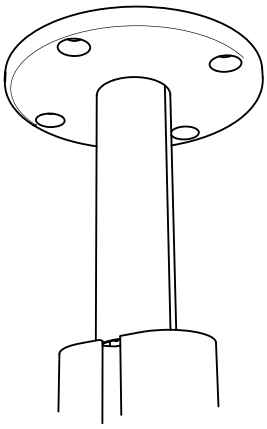
Once the top plate is in place, tighten the barrel nut against the post and tighten the set screw in the barrel nut.

3



Measure the distance from the top of the post to the receiving nut portion of the *Top Pressure Fit Plate*. Then use an appropriate saw for cutting aluminum to cut the *Pressure Fit Sleeve* to this same length. Then, simply snap the 2 sides of the *Pressure Fit Sleeve* over the barrel nut and *Top Pressure Fit Plate*.

4



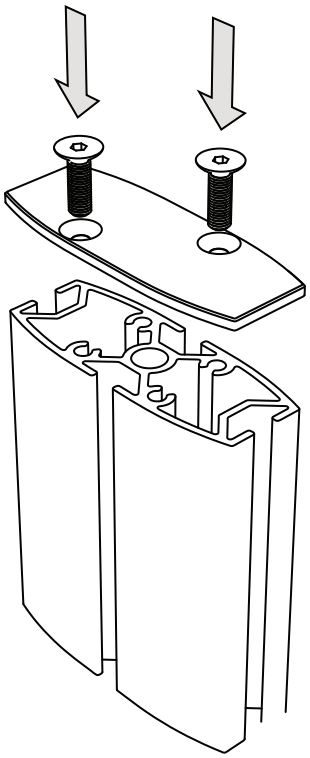
If the fit of the *Pressure Fit Sleeve* is too tight to snap together by hand you may need to mechanically snap it together. Wrap a pair of pliers or a clamp in towels so you do not scratch the sleeve and put equal pressure on each side of the sleeve to cause it to snap together. This part is designed to be intentionally tight, so if you are using a very short piece it may be too tight to fasten by hand.

Installation

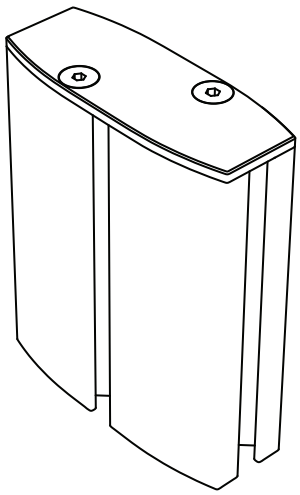
Profile End Cap

1

Attach the post cap to any exposed edge of the post by using provided #12 self-tapping screws (3-15-0869). These self-tapping screws require a #3 square drive bit for installation.



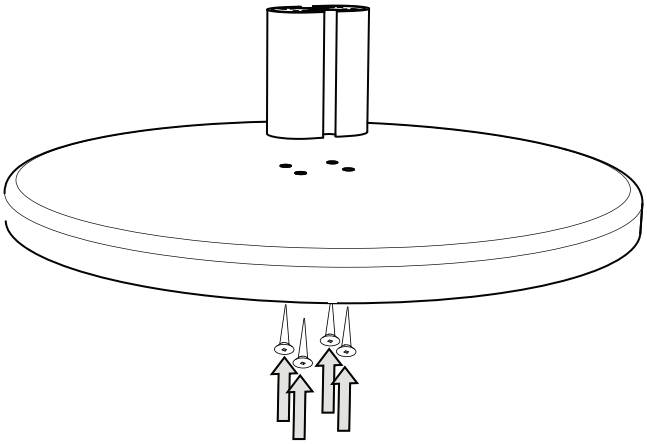
2



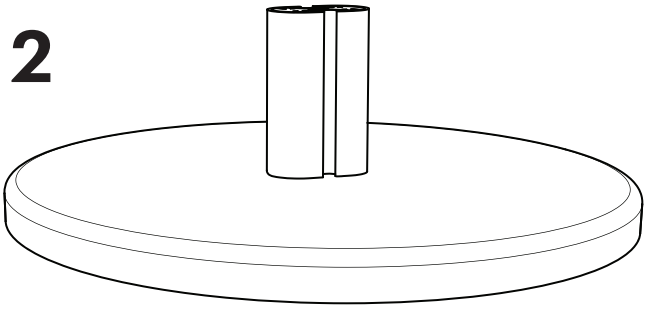
Installation

Free Standing Base

1



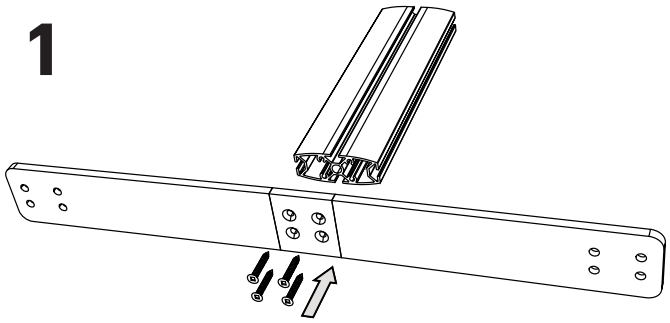
2



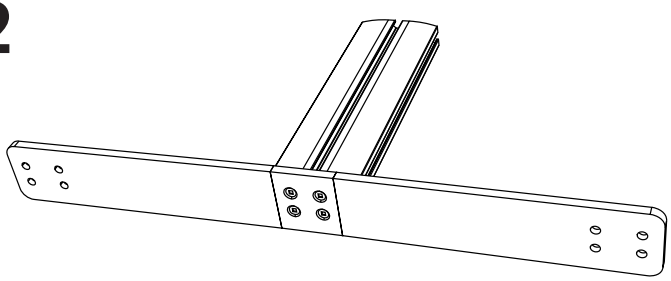
Use (4) provided #12 self-tapping screws (3-15-0869) to attach the post to the free standing base. These self-tapping screws require a #3 square drive bit for installation to the free standing base.

Free Standing Foot

1



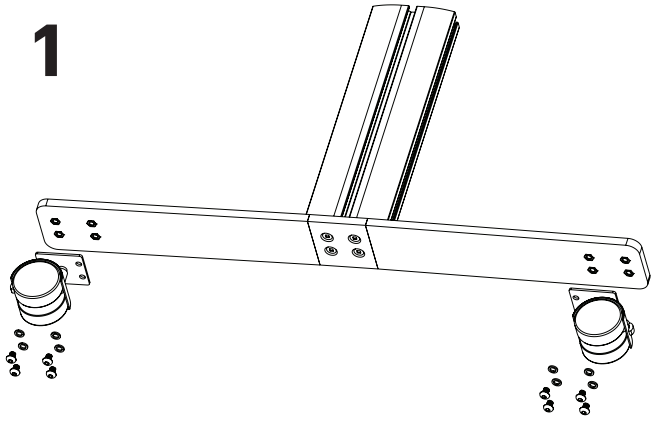
2



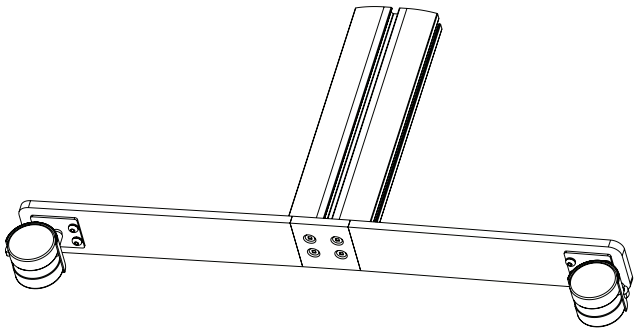
Installation

Casters for Free Standing Foot

1

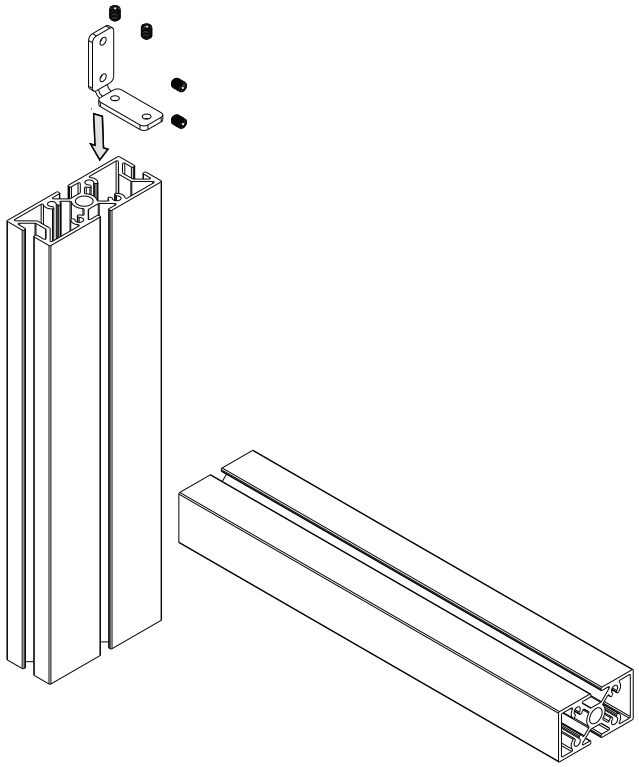


2

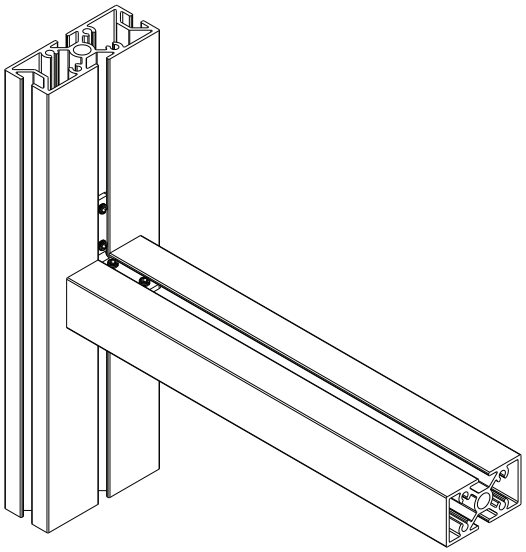


Versa Profile Perpendicular Attachment

1



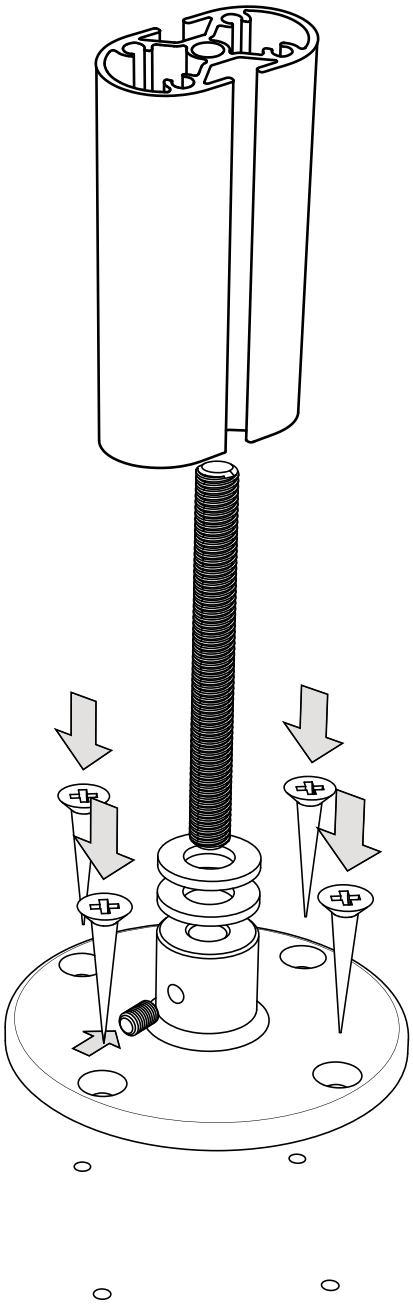
2



Installation

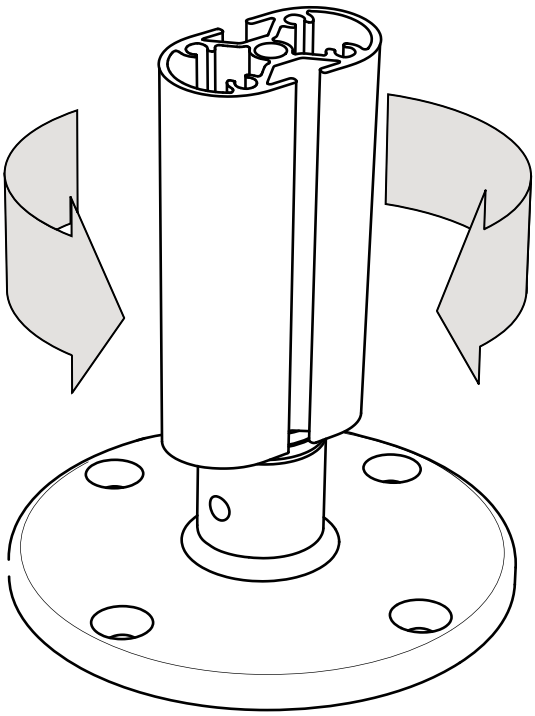
Pivoting Base

1



Mark holes on the floor and use appropriate screws and anchors for the floor substrate, which should be supplied by the installer. Attach bottom plate with attached post to the floor. Screw the threaded rod into the base and insert the set screw so the threaded rod won't turn. Then place the included washers over the threaded rod and place the hollow section of the post over the threaded rod. The post should turn and the threaded rod should not. This installation should be duplicated on the ceiling, using the same washers.

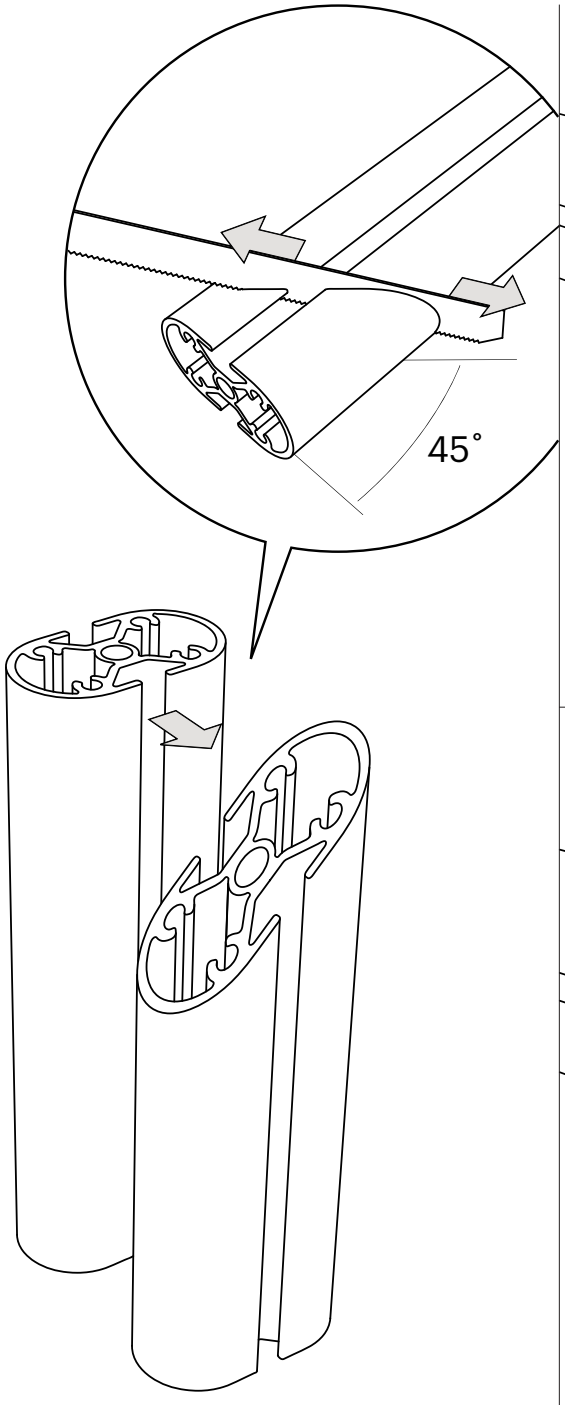
2



Installation

Mitered Corner Splice

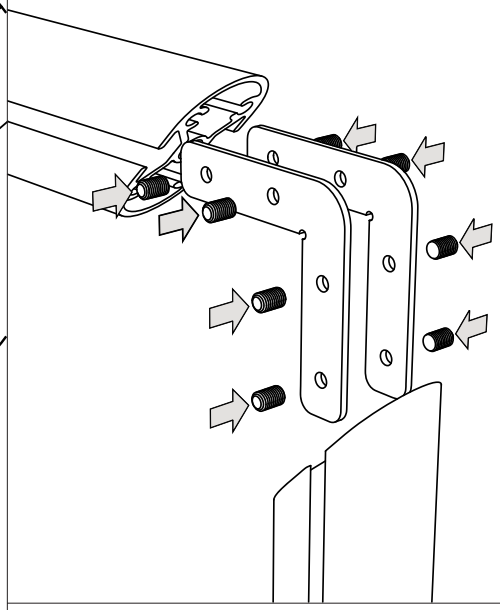
1



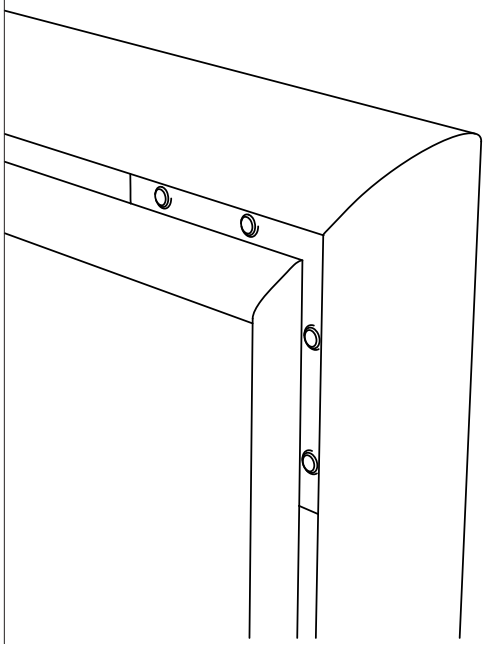
Determine the appropriate height of the post. The higher side of the cut edge will be the height of the post. Use an appropriate miter saw to cut the post to a 45-degree angle.

2

A Corner Splice should be used on each side of the post. Tightly insert the Corner Splice into each side of the post, and set it in place using 4 set screws for each Corner Splice.



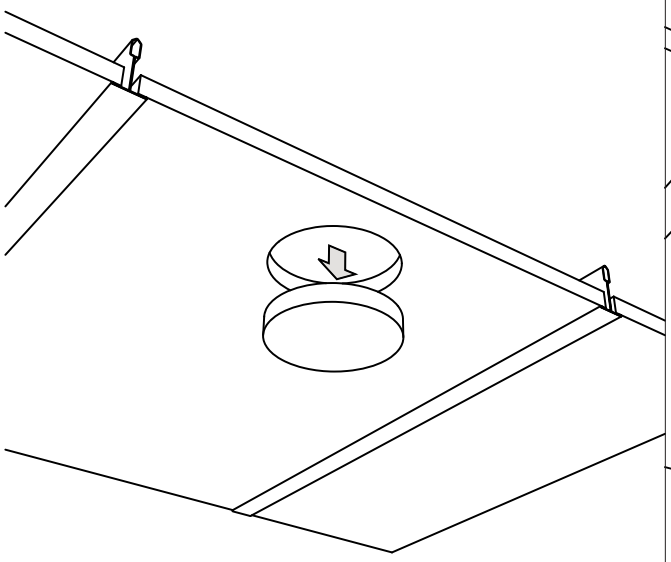
3



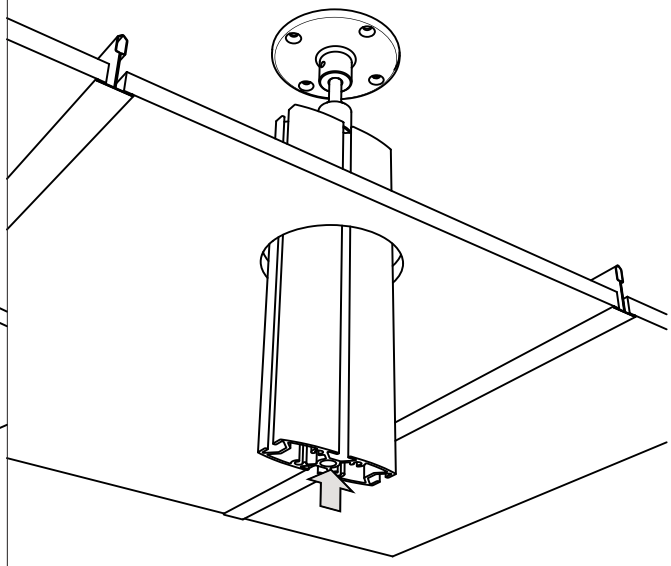
Installation

Drop Ceiling Condition

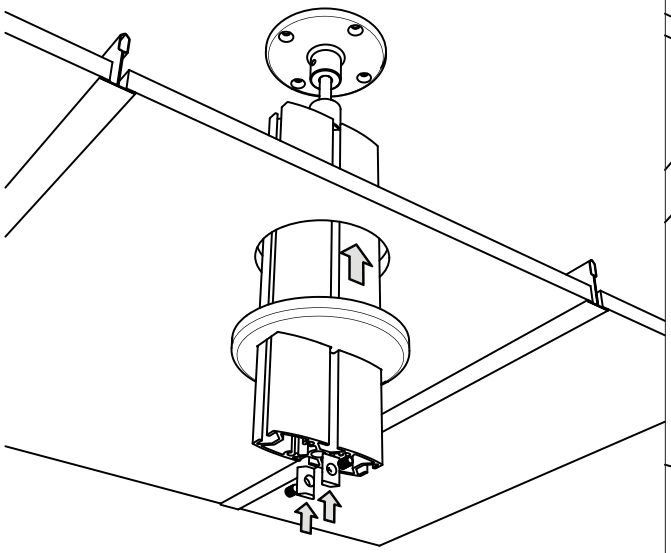
1 Cut out a section of the ceiling tile appropriate for the size of the post you are using, but not to exceed 4" in diameter.



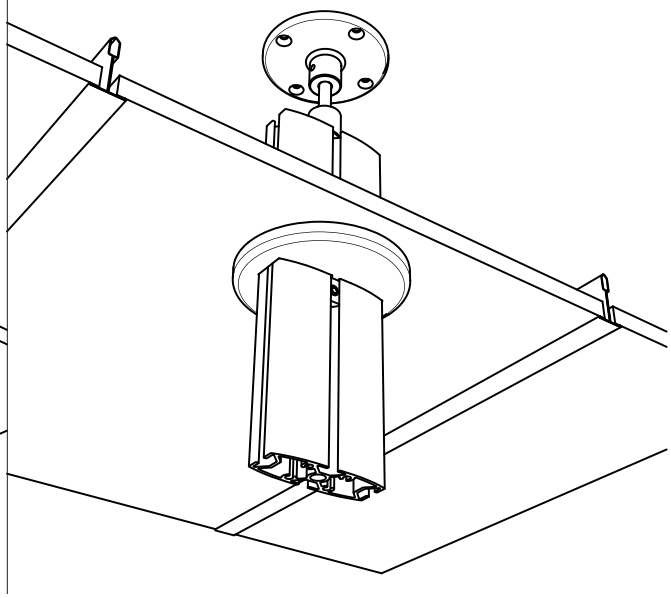
2 Run the post through the hole in the ceiling tile, attaching to the substrate above using the *Pressure Fit Assembly* (instructions on page 37).



3



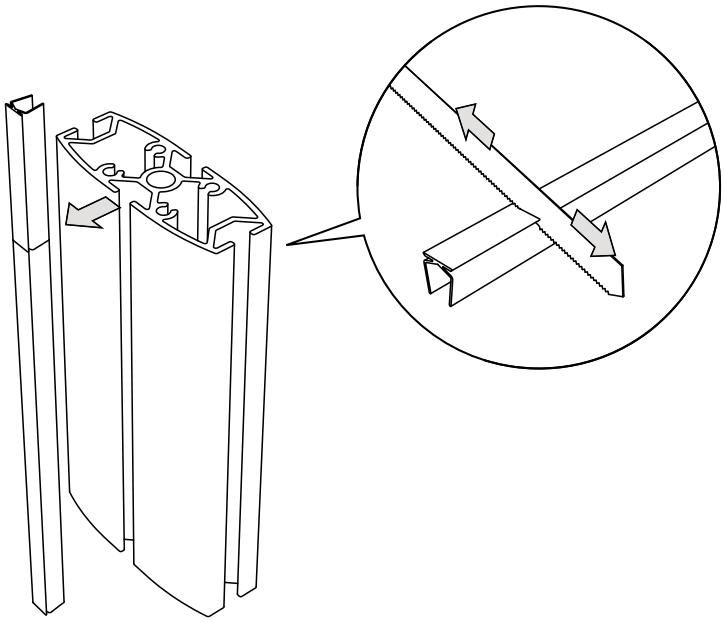
4



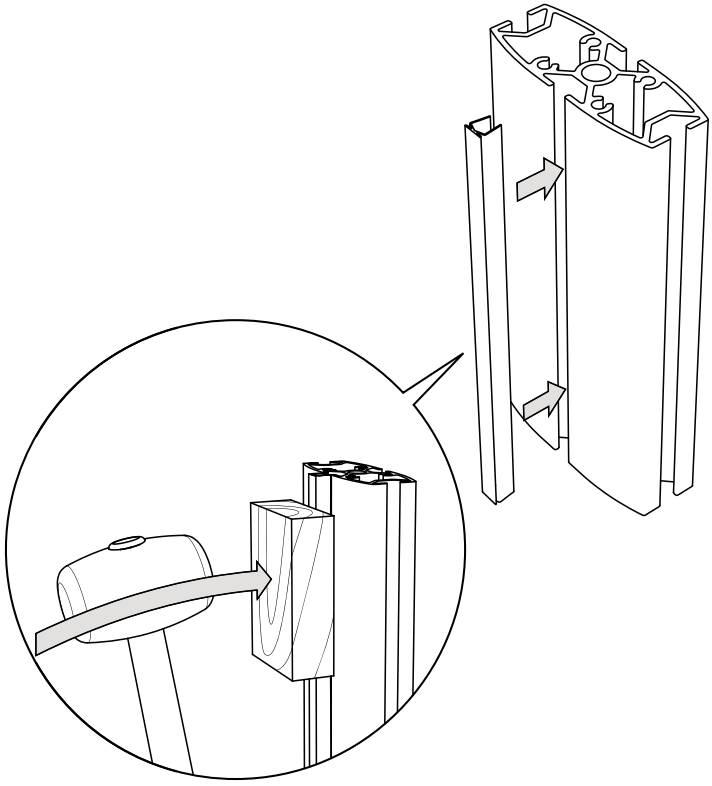
Installation

Versa Slot Cover

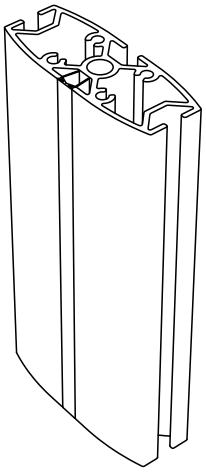
1



2



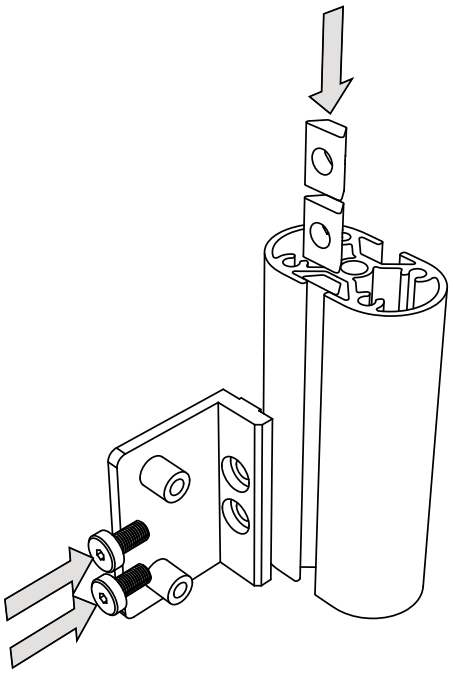
3



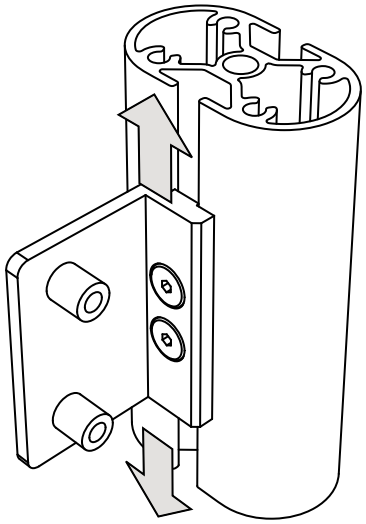
Installation

Side Brackets and T-Nuts

1

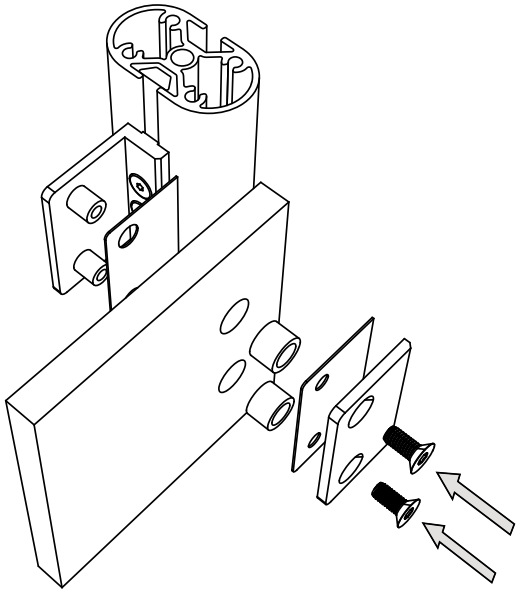


2



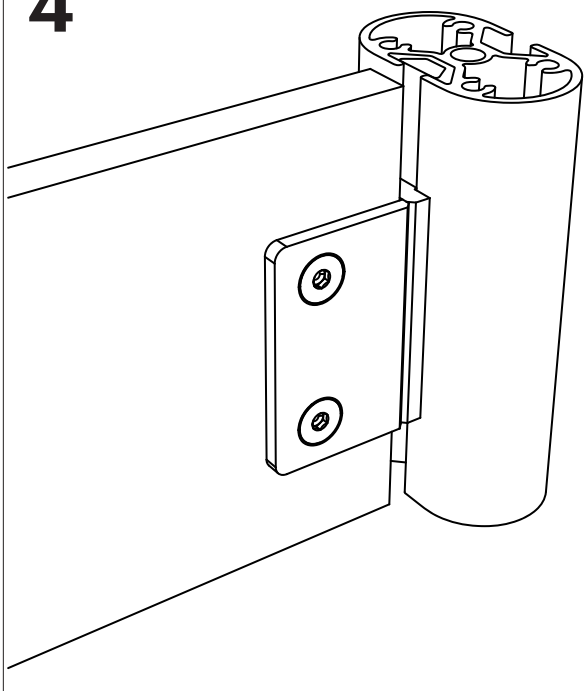
Slide the bracket into the desired location, then tighten down the screws into the T-Nuts.

3



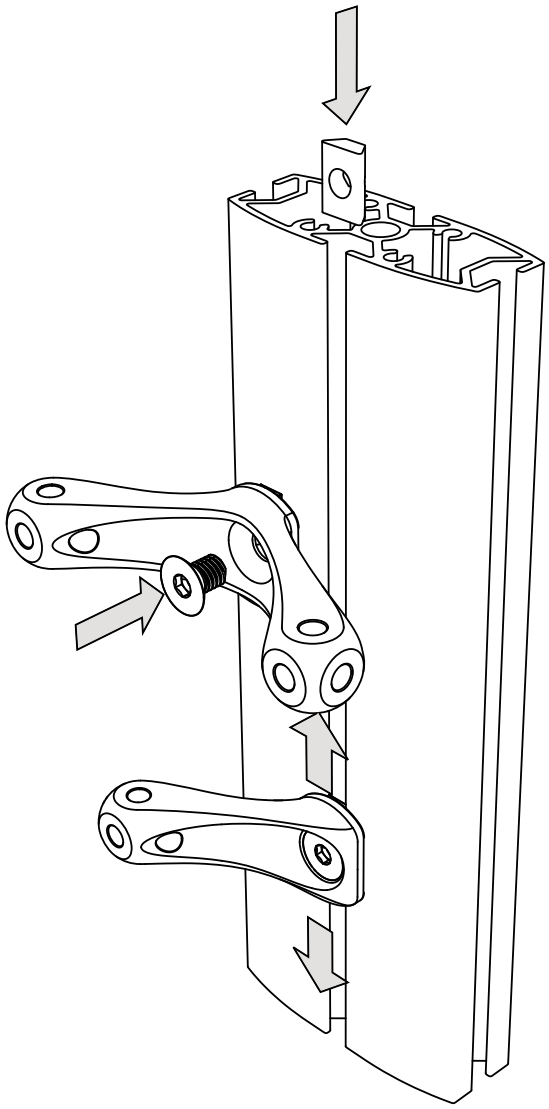
Ensure that the bushings are in the appropriate order with the panel and use the countersunk screws to attach the back side of the bracket, through the panel, and into the front side of the bracket.

4



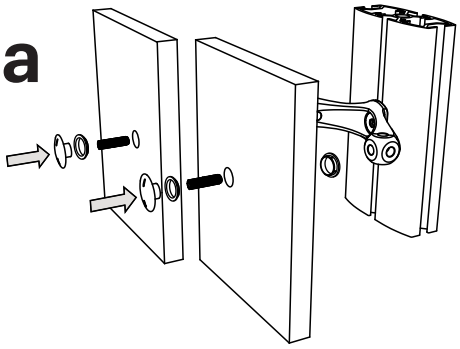
Installation
3D Spider

1



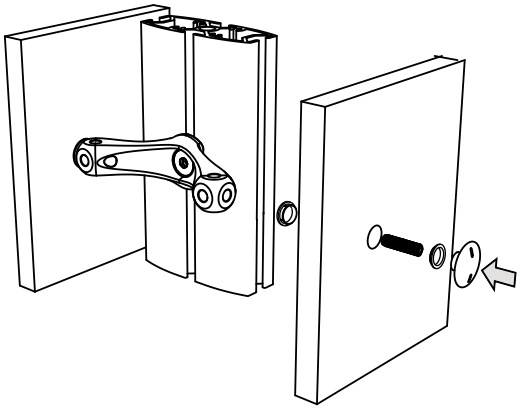
Slide the T-Nut into the post slot. Then use the screw provided to go through the *3D Spider* and into the T-Nuts. Thread the screws into the T-Nuts without completely tightening them. Slide the *Spider* into position, then tighten down the screw.

2a

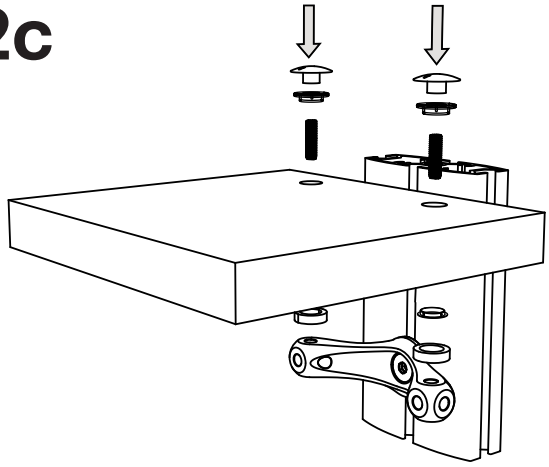


Decide which part of the *3D Spider* you want to receive the threaded rod. Then, using all of the appropriate bushings that came with the *2-Piece Cap* (see pages 9 and 47), attach the panel to the *3D Spider*.

2b



2c

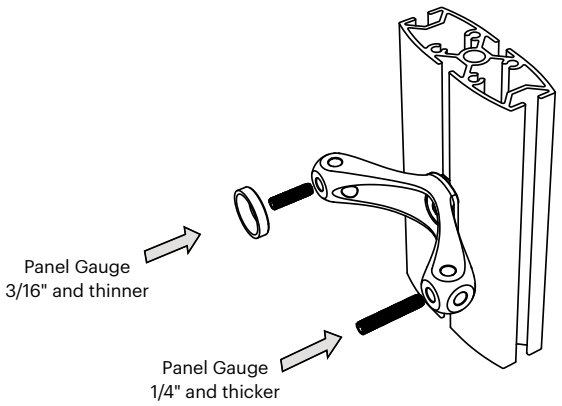


Installation

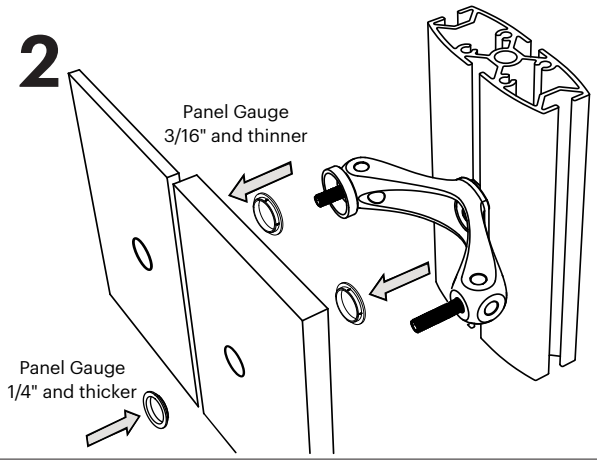
2 Piece Standoff

Depending on the gauge of material you are using there are different bushing configurations that come with the *2-Piece Caps*. You can find specific detail on the parts to order in the *Versa Solutions Document*. Please also see page 9 for the attachment requirements for different sizes and gauges of panels. Please use all of the appropriate bushings and washers, and the appropriate number of attachment points for your installation. Follow the illustrations below for the appropriate order of bushings and washers.

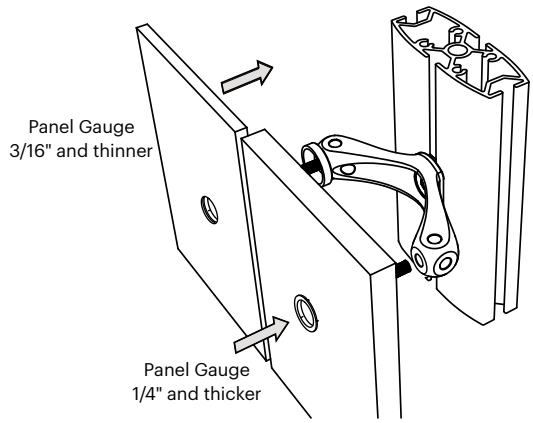
1



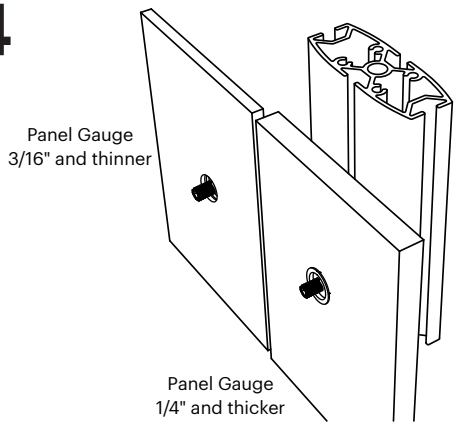
2



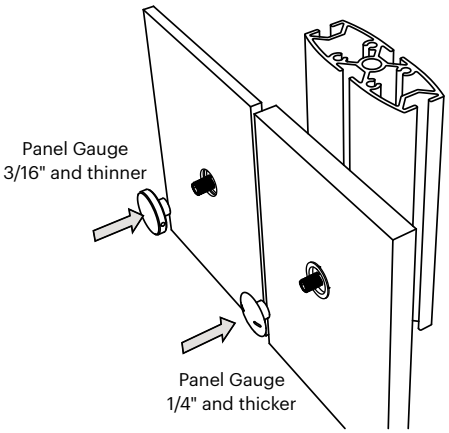
3



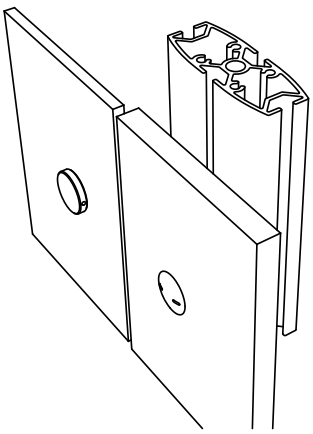
4



5

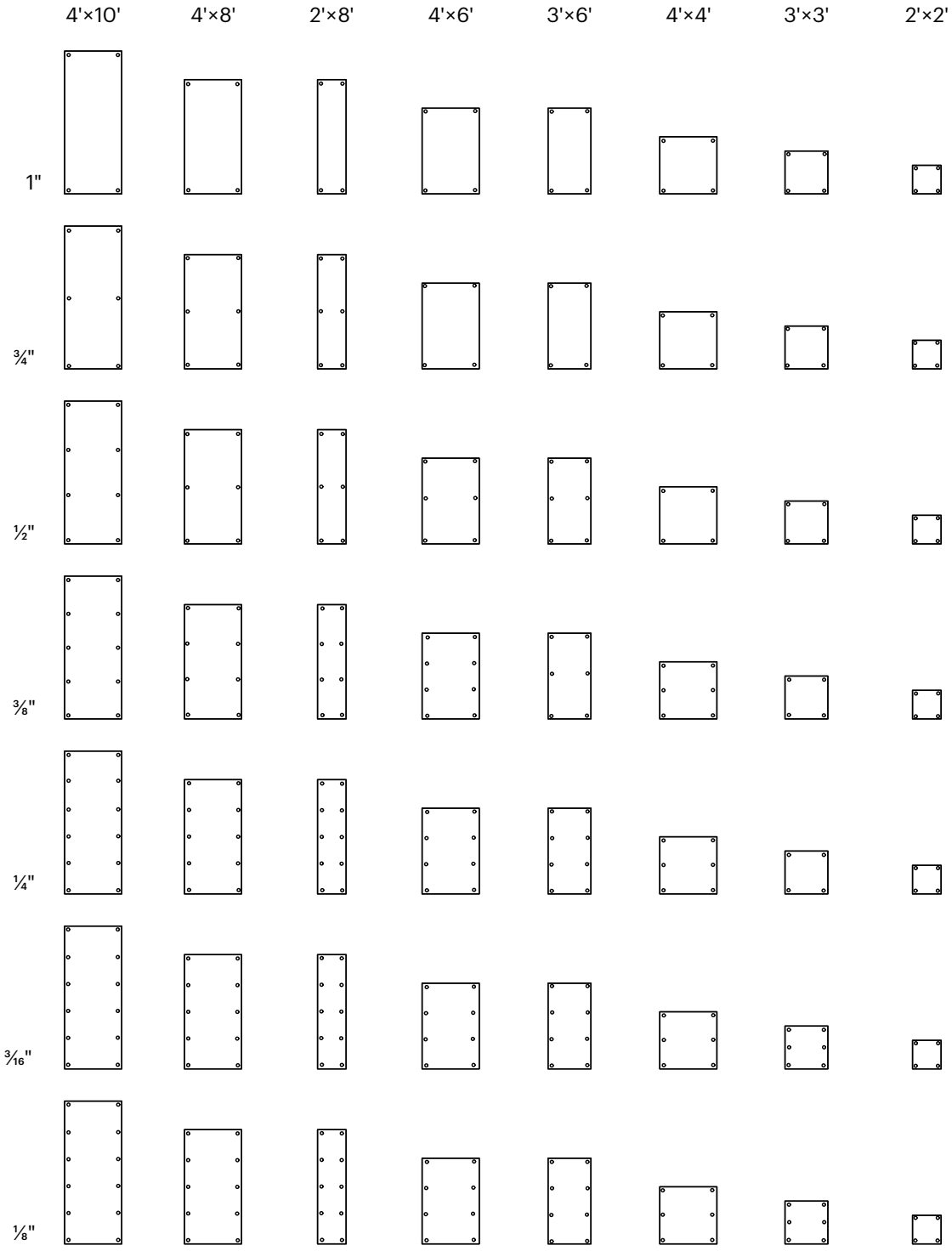


6



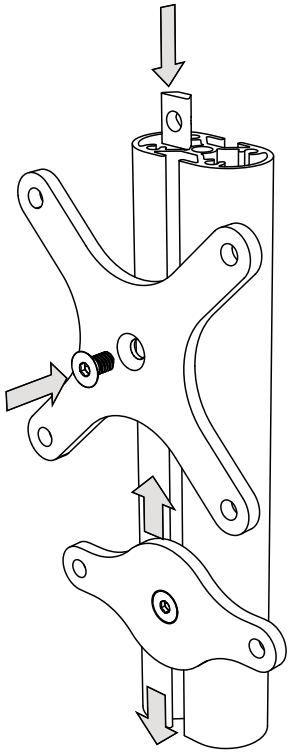
Installation

Panel Size and Gauge Attachment Chart



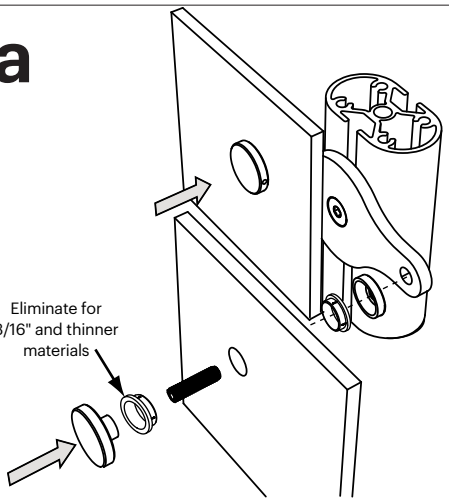
Installation
Flat Spider

1

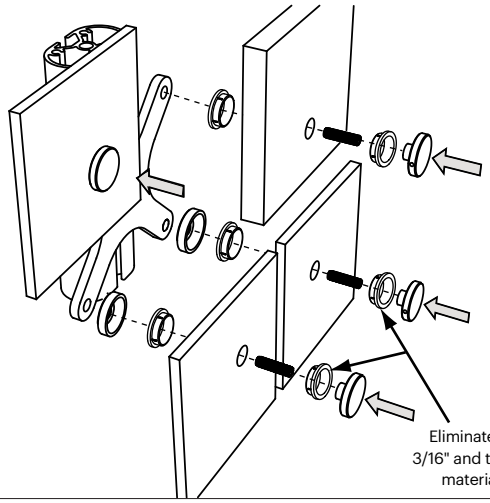


Slide the *T-Nut* into the post slot. Then use the screw provided to go through the *Spider* and into the *T-Nut*. Thread the screw into the *T-Nut* without completely tightening it. Slide the *Spider* into position, then tighten down the screw. Also, if you need to keep the *Spider* from turning in the post you can use the provided screw to put into the back of the *Spider*, which will go into the slot and keep the *Spider* from turning.

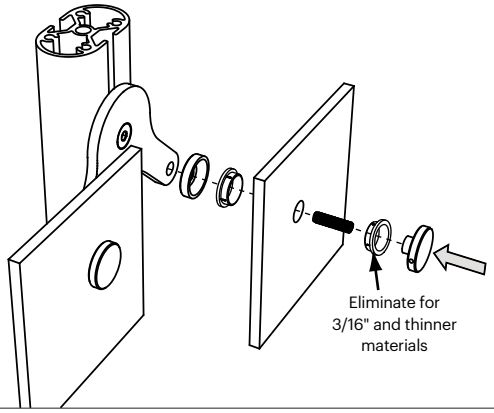
2a



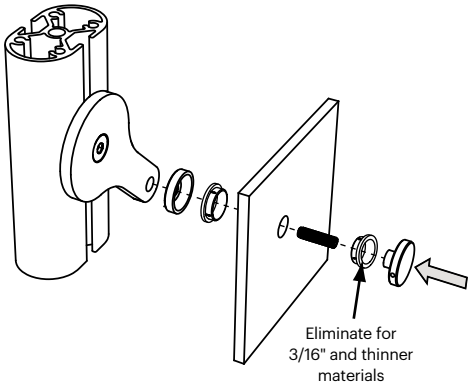
2b



2c



2d

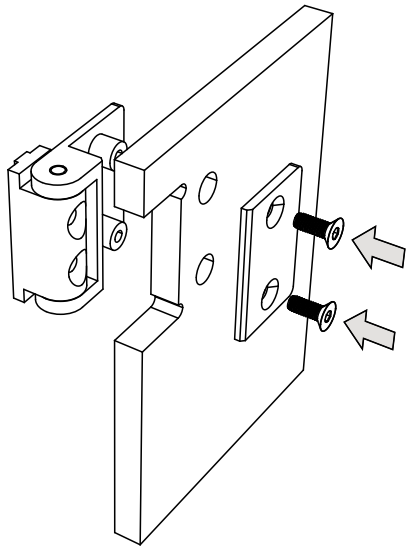


Installation

Components

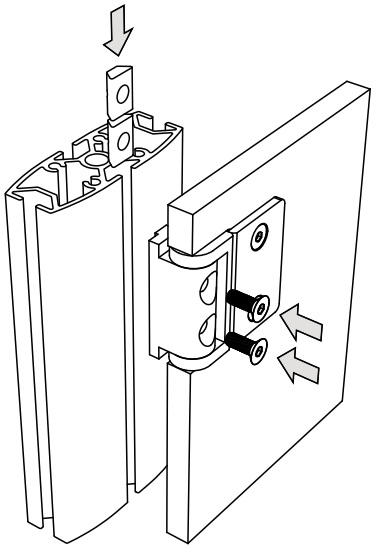
Door Hinge must be used with ½" gauge Varia

1

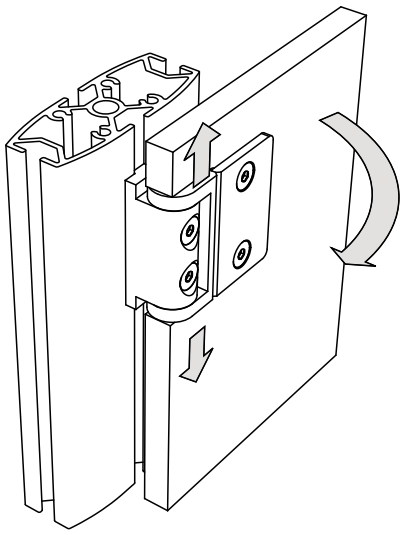


Use the countersunk screws to attach the back side of the bracket through the panel and into the front side of the bracket. Repeat this step for all brackets in the hinged door.

2

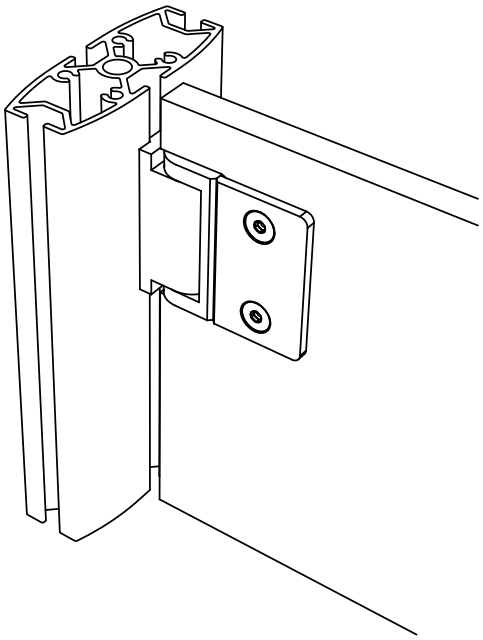


3



Slide the entire door into position, then tighten down all screws.

4

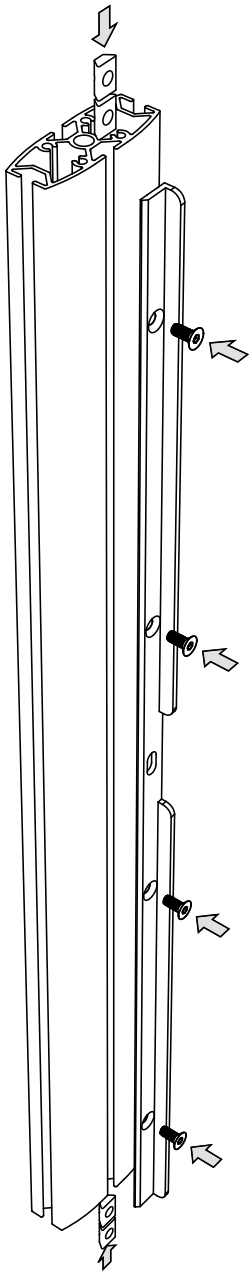


Installation

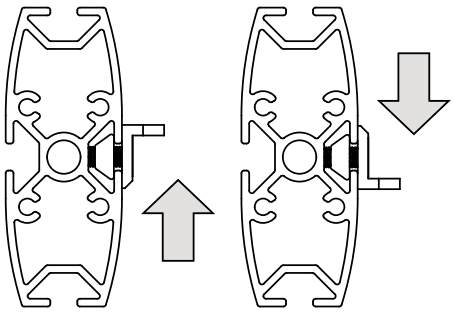
Components

Door Catch

2

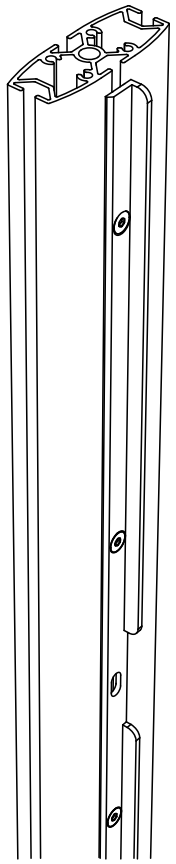


1



Slide the *T-Nuts* for all 4 attachment points into the post slot. Then use the countersunk screws provided to go through the *Door Catch* into the *T-Nuts*. Thread the screws into the *T-Nuts* without completely tightening them. Then line up the opening in the *Door Catch* with the *Door Latch* on the door and tighten the screws.

3



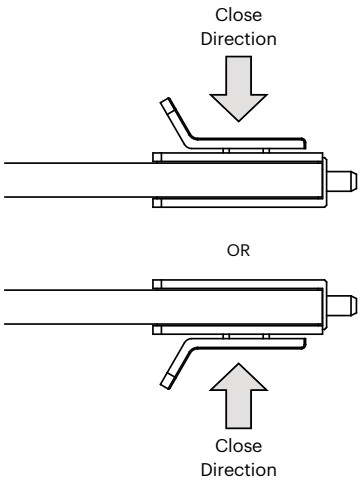
Installation

Components

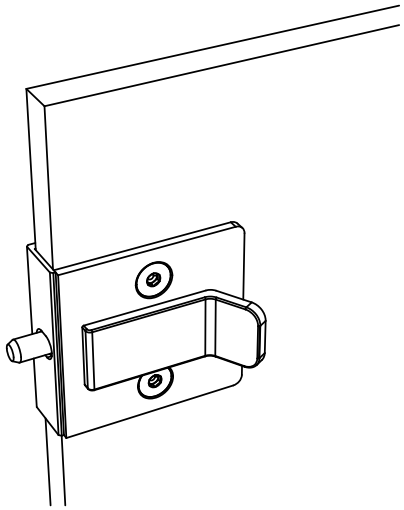
Door Latch must be used with ½" gauge Resinart

1

Determine on which side of the door you want the door to latch closed. The latch will ship with the close direction on the outside (so, if you were standing in a dressing room, you would push the door closed and latch it from that side, rather than pulling the door closed toward you).

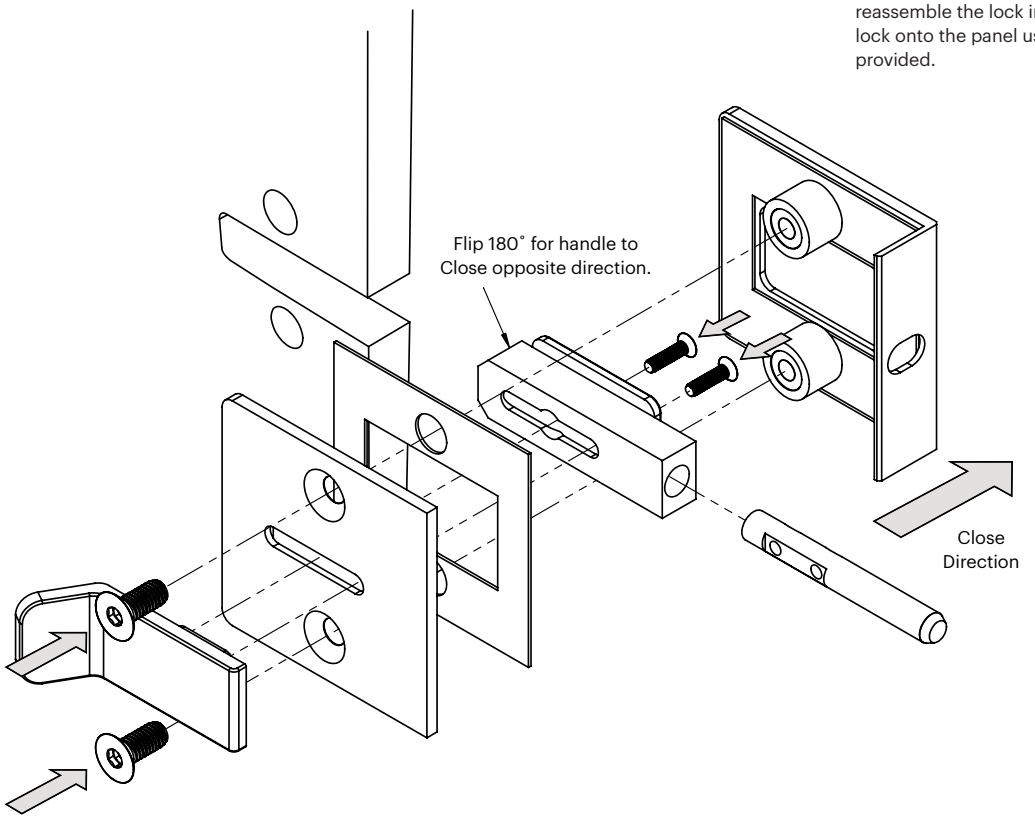


3



2

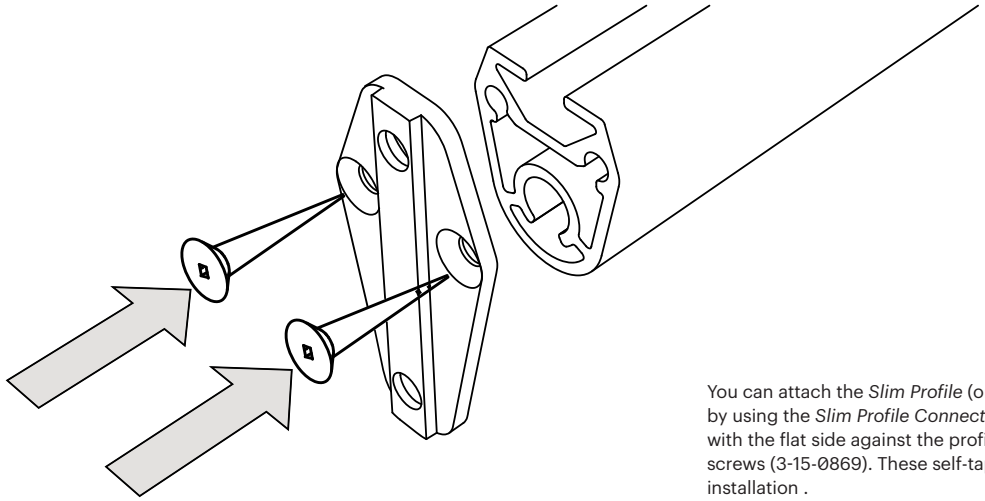
If you desire the door to be pulled into the closed position from the latching side of the door, you will need to disassemble the lock and flip the innermost plastic block 180-degrees, as shown above, then reassemble the lock in this fashion. Assemble the lock onto the panel using the 2 countersunk screws provided.



Installation

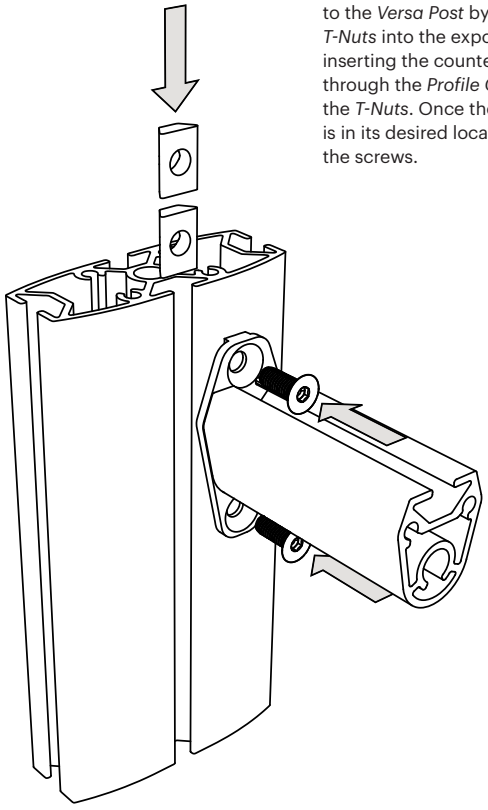
Slim Profile Connection

1



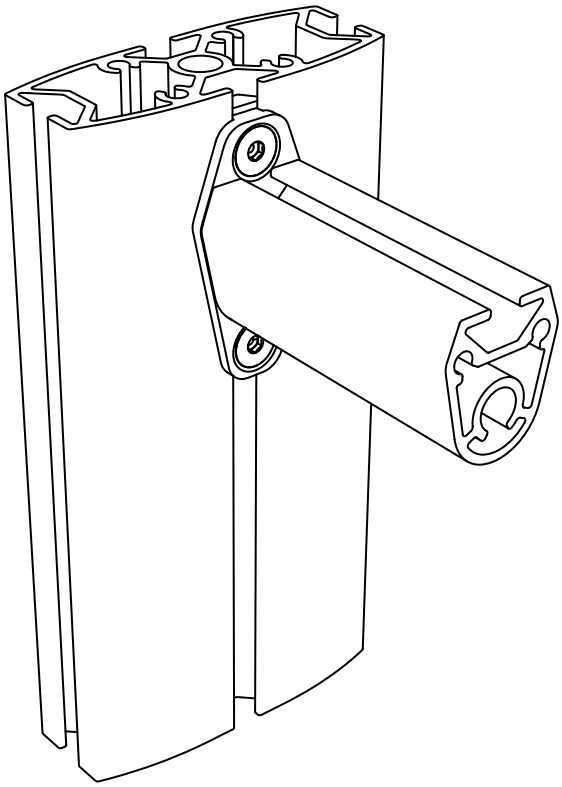
You can attach the *Slim Profile* (or post) to other *Versa Posts* perpendicularly by using the *Slim Profile Connector*. Attach the *Profile Connector* to the profile with the flat side against the profile using the (2) provided #12 self-tapping screws (3-15-Ø869). These self-tapping screws require a #3 square drive bit for installation .

2



Attach the *Profile Connector* to the *Versa Post* by sliding the *T-Nuts* into the exposed slot and inserting the countersunk screws through the *Profile Connector* into the *T-Nuts*. Once the *Slim Profile* is in its desired location, tighten the screws.

3



Specifications

General specifications

	Part Numbers	Material	Finish	Recommended Use	MSDS Information
Aluminum Extrusions*	Slim One Slim Two Slim Four Oval Square Blade Bar Block Beam	6063 T6	Clear (Satin) Anodize Architectural Type II Class I Powdercoating Available	Interior Only	Recycled content min. 70% 56% Post Industrial 14% Post consumer
Die Cast Aluminum	3-15-1734-K 3-15-1735-K	Die Cast Alloy Aluminum	Factory Powdercoating Available	Interior Only	Recycled content typically between 25% - 35% Post Industrial 5% Post Consumer
Milled Aluminum	3-15-0019 3-15-0136-K 3-15-0137-K 3-15-0138-K 3-15-0139-K 3-15-0140-K 3-15-0141-K 3-15-0705-K 3-15-0706-K 3-15-0707-K 3-15-0708 3-15-0766 3-15-0767 3-15-0768 3-15-0781 3-15-0848-K 3-15-0787-K 3-15-0830-K 3-15-0831-K 3-15-1501-K 3-15-1521-K 3-15-1526-K 3-15-1540-K 3-15-1728-K 3-15-1731-K 3-15-1733-K 3-15-1736-K 3-15-1737-K 3-15-1744-K 3-15-1738 3-15-1752-K 3-15-5555	6061 T6 or 6063 T6	Clear (Satin) Anodize Architectural Type II Class I Powdercoating Available, (may not be feasible for all parts)	Interior Only	Recycled content typically between 25% - 35% Post Industrial 5% Post consumer
Stamped Aluminum	3-15-0788-K 3-15-1537-K 3-15-1745-K 3-15-1746-K	Aluminum 5052-H32 or H34	Satin Clear Anodize Powdercoating Available	Interior Only	NA
Milled Stainless Steel	3-15-1716-K 3-15-1717-K 3-15-1719-K 3-15-1720-K 3-15-1721-K	Stainless Steel 303 or 304 Mill Finish	Mill Finish Powdercoating Available	Interior Only	NA
Fasteners & Miscellaneous	-	Fasteners are Plated Mild Steel 18-8 Stainless Steel or 304/305 Stainless Steel	Plain Finish	Interior Only	Recycled content typically approx. 60% 35% Post Industrial 25% Post Consumer

*Aluminum Extrusions are available in 96.5" lengths, see deflection chart on pages 2 and 3.

2010 Recycled Content Declaration

Hydro's Extrusion Americas unit sources billet for its North American extrusion facilities from its own network of 3 casthouses. These casthouses, in St. Augustine, FL, Monett, MO, and Phoenix, AZ utilize state-of-the-art proprietary Hydro technology to produce primary quality extrusion billet with high recycled content. All are ISO 9001 certified.

In 2009, these facilities consumed nearly 208 million pounds of recycled aluminum. Approximately 14% of the total represented post-consumer material, with the remainder post-industrial scrap from Hydro's extrusion facilities, our customers, and other extruders.

In 2009, the scrap content of 6000 series alloy billet produced in the EA casthouses, and consumed in the EA extrusion facilities exceeded 70%, as it did in 2007 and 2008.