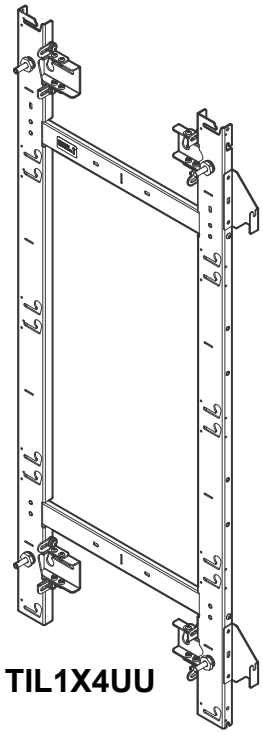
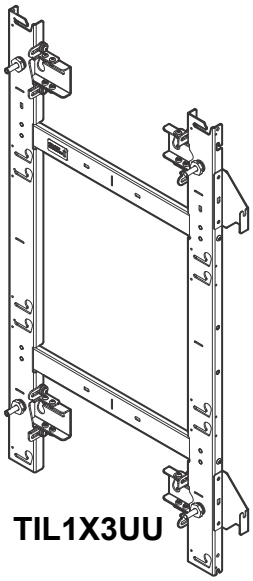
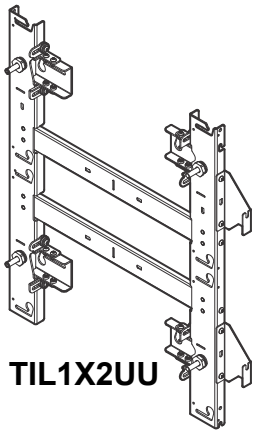
INSTALLATION INSTRUCTIONS



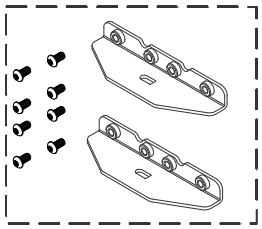
TIL1X4UU



TIL1X3UU



TIL1X2UU



TILVABUU
Accessory

UU Series LED Wall Mounts / Accessory

CHIEF®

A brand of legrand®

TIL1X2UU / TIL1X3UU / TIL1X4UU / TILVABUU

DISCLAIMER

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DEFINITIONS

MOUNTING SYSTEM: A MOUNTING SYSTEM is the primary Chief product to which an accessory and/or component is attached.

ACCESSORY: AN ACCESSORY is the secondary Chief product which is attached to a primary Chief product, and may have a component attached or setting on it.

COMPONENT: A COMPONENT is an audiovisual item designed to be attached or resting on an accessory or mounting system such as a video camera, CPU, screen, display, projector, etc.

WARNING: A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.

CAUTION: A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer’s responsibility to make sure all mounting systems are properly assembled and installed using the instructions provided.

WARNING: Failure to provide adequate structural strength for this mounting system can result in serious personal injury or damage to equipment! It is the installer’s responsibility to make sure the structure to which this mounting system is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the mounting system. The wall to which the mounting system / accessory is being attached may have a maximum drywall thickness of 5/8” (1.6cm). Do not install drywall anchors into the seam between drywall pieces.

WARNING: The TIL1X2UU / TIL1X3UU / TIL1X4UU LED wall mounts are designed for use with the Unilumins Upanel S Series LED only. Exceeding the weight capacity (listed) can result in serious personal injury or damage to equipment!

- TIL1X2UU: 40 lbs (18.1 kg) - 20 lbs (9.1 kg) per screen;
- TIL1X3UU: 60 lbs (27.2 kg) - 20 lbs (9.1 kg) per screen;
- TIL1X4UU: 80 lbs (36.3 kg) - 20 lbs (9.1 kg) per screen.

WARNING: Use this mounting system only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.

WARNING: Never operate this mounting system if it is damaged. Return the mounting system to a service center for examination and repair.

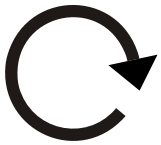
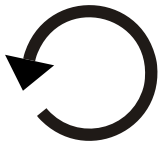
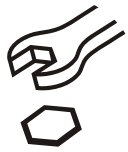
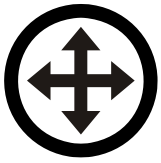
WARNING: Do not use this mounting system outdoors.

IMPORTANT ! : The TIL1X2UU / TIL1X3UU /TIL1X4UU (Unilumins Upanel S Series) LED wall mounts are designed to be mounted to:

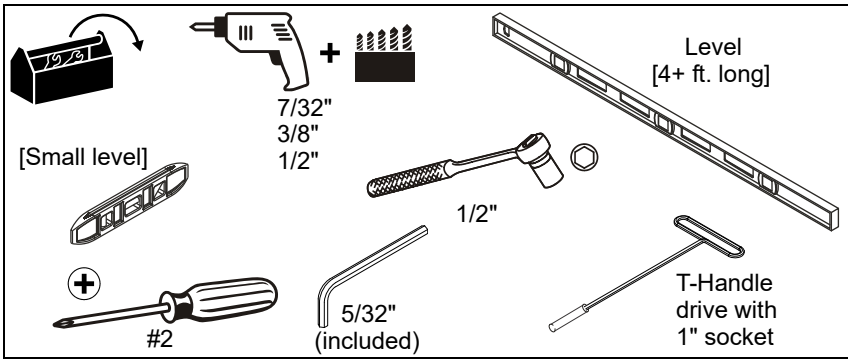
- a bare 8" concrete or 8"x8"x16" concrete block wall; or
- a 3/4" thickness plywood-backed, 2" x 4" wood studs (16" on center minimum) wall with a maximum drywall thickness of 5/8"; or
- a 3/4" thickness plywood-backed, steel stud wall covered with drywall having a maximum thickness of 5/8".

--SAVE THESE INSTRUCTIONS--

LEGEND

	Tighten Fastener Apretar elemento de fijación Befestigungsteil festziehen Apertar fixador Serrare il fissaggio Bevestiging vastdraaien Serrez les fixations
	Loosen Fastener Aflojar elemento de fijación Befestigungsteil lösen Desapertar fixador Allentare il fissaggio Bevestiging losdraaien Desserrez les fixations
	Phillips Screwdriver Destornillador Phillips Kreuzschlitzschraubendreher Chave de fendas Phillips Cacciavite a stella Kruiskopschroevendraaier Tournevis à pointe cruciforme
	Open-Ended Wrench Llave de boca Gabelschlüssel Chave de bocas Chiave a punte aperte Steeksleutel Clé à fourche
	By Hand A mano Von Hand Com a mão A mano Met de hand À la main
	Hex-Head Wrench Llave de cabeza hexagonal Sechskantschlüssel Chave de cabeça sextavada Chiave esagonale Zeskantsleutel Clé à tête hexagonale
	Pencil Mark Marcar con lápiz Stiftmarkierung Marcar com lápis Segno a matita Potloodmerkteken Marquage au crayon
	Drill Hole Perforar Bohrloch Fazer furo Praticare un foro Gat boren Percez un trou
	Adjust Ajustar Einstellen Ajustar Regolare Afstellen Ajuster
	Remove Quitar Entfernen Remover Rimuovere Verwijderen Retirez
	Optional Opcional Optional Opcional Opzionale Optie En option
	Security Wrench Llave de seguridad Sicherheitsschlüssel Chave de segurança Chiave di sicurezza Veiligheidssleutel Clé de sécurité

TOOLS REQUIRED FOR INSTALLATION

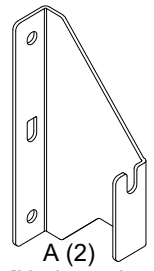


Hardware Required - not included
(for installation into steel stud walls)

1. Chief brand FCAT1 Toggler Kit; **OR**
2. Hardware for installation to steel stud wall:
   - 1/4-20 Toggler Snaptoggle BB (Qty 4)
   - 1/4-20 x 2-1/2" hex head bolt (Qty 4)
   - 1/4" washer (Qty 4)

PARTS

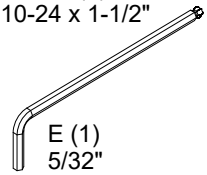
Horizontal Connector Kit


A (2)
[Horizontal connector]

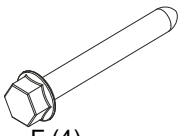
C (6)
08-32 x 1/2"

D (8)
10-24 x 1-1/2"

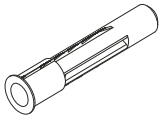
B (8)
1/4-20 x 1/2"


E (1)
5/32"

Mounting Hardware Kit

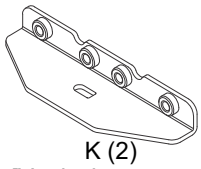

F (4)
5/16 x 2-1/2"

H (2)
[Installation washer]

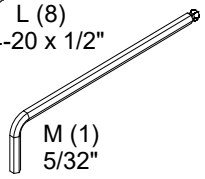

G (4)
UX10x60R

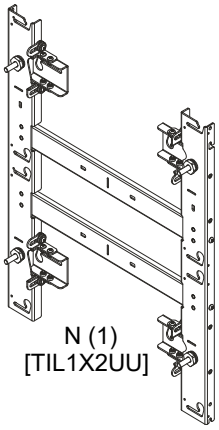
J (4)
5/16"

TILVABUU Vertical Connector Kit

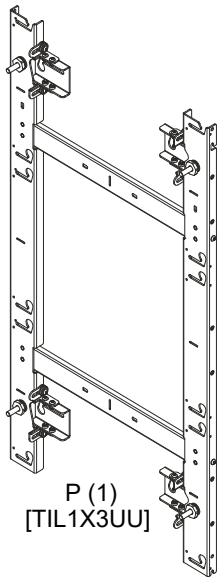

K (2)
[Vertical connector]

L (8)
1/4-20 x 1/2"

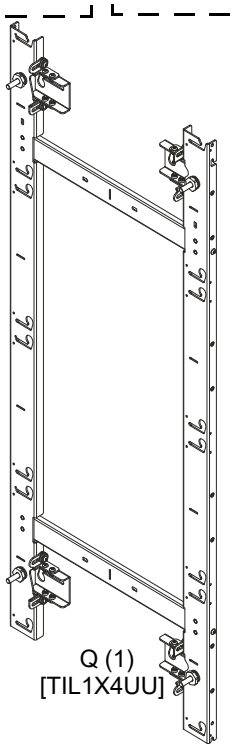

M (1)
5/32"


N (1)
[TIL1X2UU]

OR


P (1)
[TIL1X3UU]

OR


Q (1)
[TIL1X4UU]

INSTALLATION

Preinstallation

IMPORTANT ! : Reference the LED screen installation manual for specific instructions regarding care, handling, cabling and installation of the LED screens.

CAUTION: Handle the LED screens with care, being careful to not impact or drop the LED screen.

CAUTION: There is a magnetic surface on the front of the LED screen. To prevent damage ensure that no metallic object is pulled onto the LED screen.

NOTE: When planning the installation, remember the requirement to run power and signal to the video wall.

Determining Installation Site

IMPORTANT ! : The top of the LED screen is 4" above the center line of the mounting slots. (See Figure 1)

1. Determine location for the **top left** corner of the LED wall. (See Figure 1)
2. Make a mark 4" below the planned top left corner of the LED wall. (See Figure 1)
3. Using a level, mark a horizontal line across width of LED wall from the mark made in Step 2.

NOTE: This line will indicate the center line of the mounting slots for the top mount(s) in the video wall. (See Figure 1) and (See Figure 2)

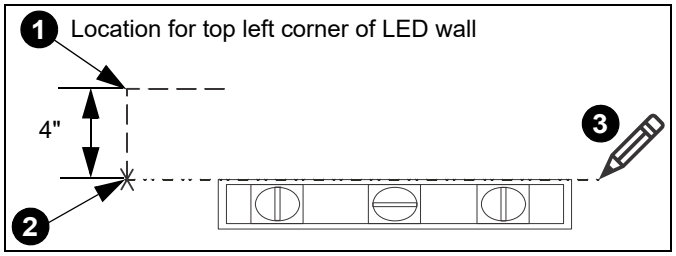


Figure 1

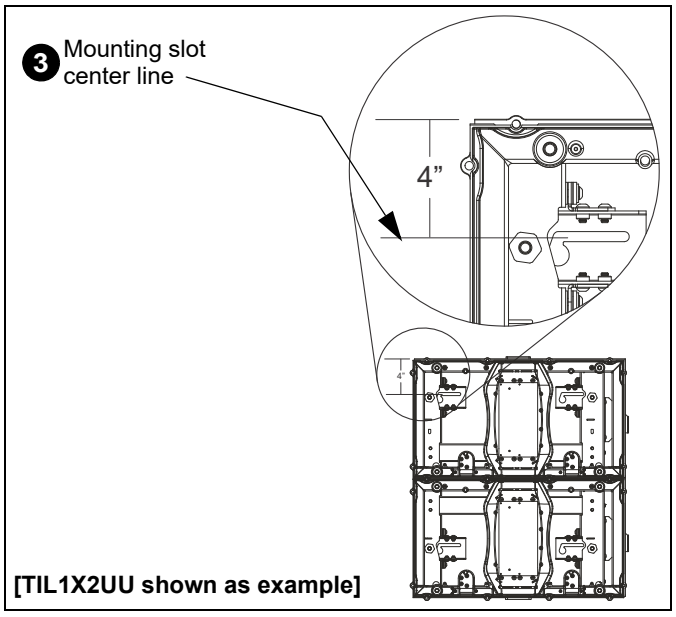


Figure 2

(OPTIONAL) Attaching Horizontal Connectors

NOTE: The horizontal connectors (A) must be attached if the LED wall will be wider than one mount.

NOTE: It will be easier to attach the connectors before installing the mount to the wall. However, the connectors may still be attached after the wall mount is already on the wall.

1. Lay mount on floor and place horizontal connectors (A) against right edge of wall mount. (See Figure 3)
2. Attach two connectors to each wall mount using two 1/4-20 x 1/2" button head cap screws (B) per horizontal connector. (See Figure 3)

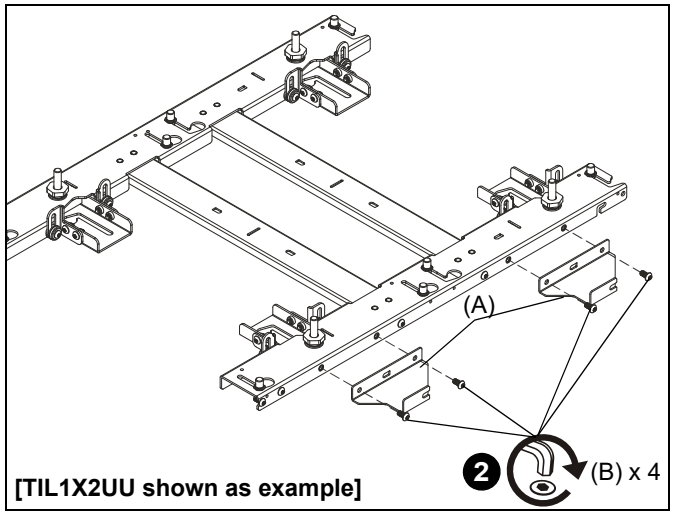


Figure 3

Installing First Mount

The TIL1X2UU / TIL1X3UU /TIL1X4UU (Unilumins Upanel S Series) LED wall mounts are designed to be mounted to:

- a bare 8" concrete wall or 8"x8"x16" concrete block wall; or
- a 3/4" thickness plywood-backed, 2" x 4" wood studs (16" on center minimum) wall with a maximum drywall thickness of 5/8"; or
- a 3/4" thickness plywood-backed, steel stud wall covered with drywall having a maximum thickness of 5/8".

Table 1: Fastener Information

WALL TYPE	PILOT HOLE	FASTENERS (see PARTS drawing)
Drywall attached to plywood-backed walls /Steel studs	1/2"	- 1/4-20 x 2-1/2" hex head lag (not included) - 1/4" washer (not included) - 1/4-20 Toggler Snaptoggle BB (not included)
Drywall attached to plywood-backed walls /Wood studs	7/32" x 3"	- 5/16 x 2-1/2" flanged hex head lag (**F**) - 5/16" washer (**J**) - Installation washer (**H**)
Concrete or concrete block	3/8" x 3"	- 5/16 x 2-1/2" flanged hex head lag (**F**) - 5/16" washer (**J**) - Installation washer (**H**) - Fischer Anchor UX10x60R **(G)**

1. Hold furthest left, top wall mount against wall ensuring that mounting slot is lined up with center line marked on the wall in **Determining Installation Site** section. Double-check with a level. (See Figure 4)
2. Mark mounting holes in two top mounting slots along the horizontal line marked in Step 3. (See Figure 4)

NOTE: The mounting holes are 14" apart on-center. (See Figure 4)

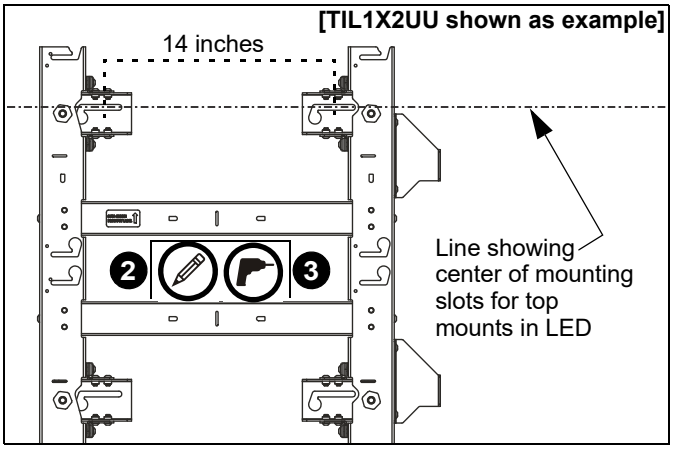


Figure 4

3. Drill two pilot holes (see Table 1 for size) at each location marked in Step 2 (See Figure 4) and follow fastener information (appropriate for wall type) located in Table 1.

IMPORTANT ! : Refer to **Fastener Installation Methods** (located in **Appendix** at end of Installation Instructions) for details on installing product into various wall types.

4. Partially install two fasteners into wall, but do NOT completely tighten to wall. (See Figure 5)

NOTE: Utilizing the two U-shaped installation washers (H) allows the installer to pre-install the top mounting fasteners and hang the mount from them utilizing the mount's teardrop slots. This allows the weight of the mount to be held by the mounting bolts and not the installer during installation.

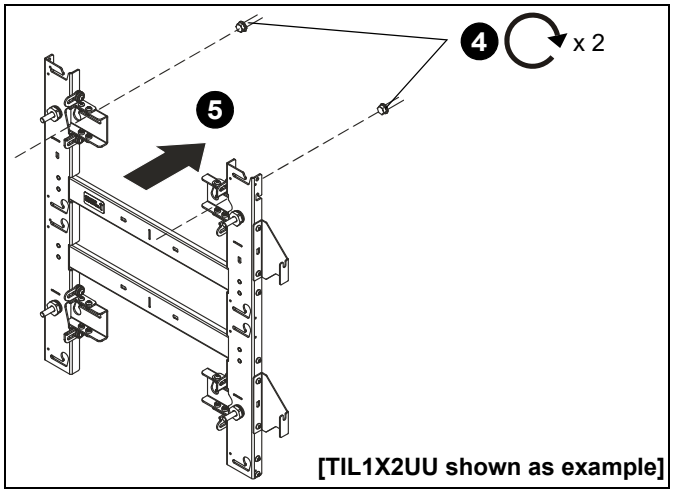


Figure 5

5. Hang wall mount, aligning upper teardrop slots over fasteners, and adjust side-to-side for proper location. (See Figure 5)

NOTE: The horizontal slots located along the vertical mount pieces (and vertical slots located along the horizontal mount pieces) are the center-of-screen indicators to illustrate where the center of each LED screen will be located, and can be used to hold a tape measure tab while measuring. (See Figure 6)

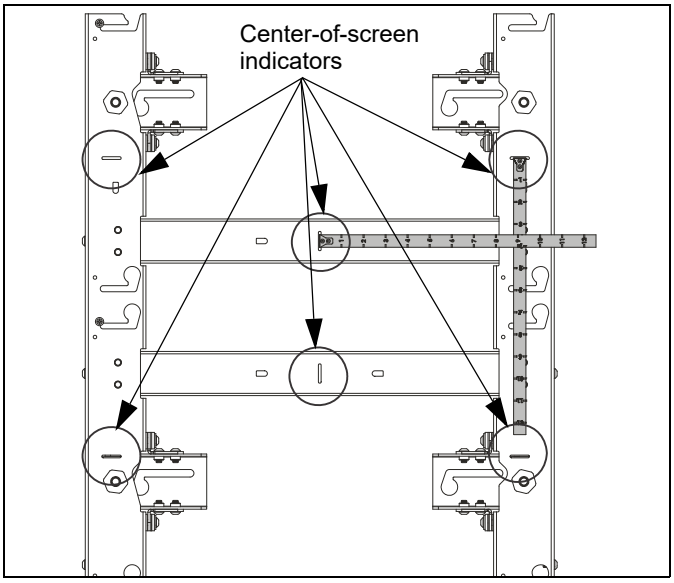


Figure 6

6. Lay levels across flat of the mounting holes and center-of-screen indicators, and vertically along side of mount to ensure wall mount is square and level. (See Figure 7)
7. Slide installation washers (H) behind head of fasteners and tighten mount in place. (See Figure 7)

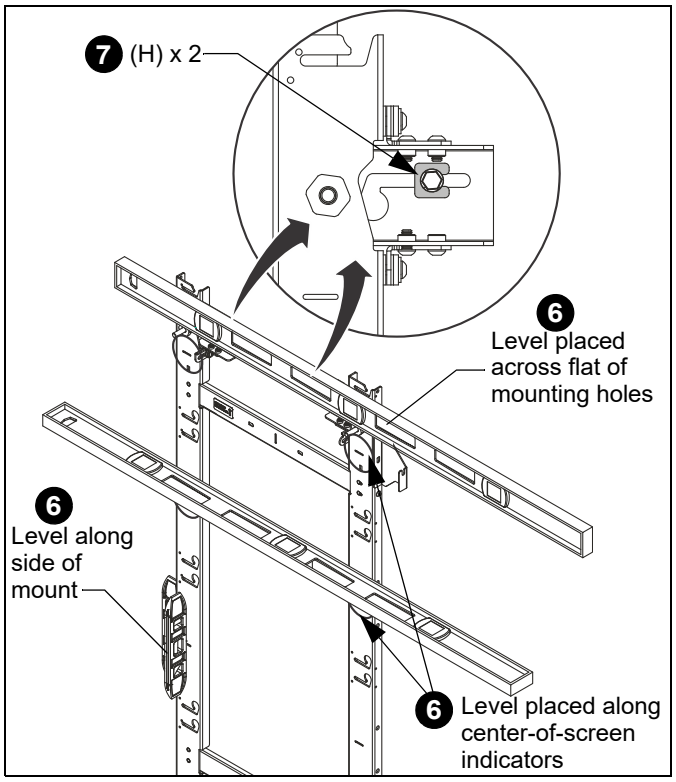


Figure 7

8. Drill lower pilot holes (see Table 1 for size) at attachment locations and follow fastener information (appropriate for wall type) located in Table 1. (See Figure 8)
9. Install two fasteners through lower part of mount and tighten. (See Figure 8)

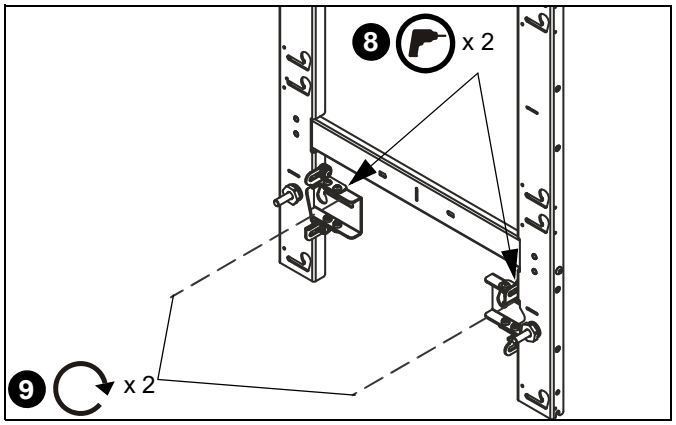


Figure 8

10. **(OPTIONAL)** If more LED screens need to be added to the top or bottom of the screen configuration, add TILVABUU vertical connector kit (not included) to top or bottom of wall mount. If you are NOT adding the TILVABUU connector kit, proceed to **Step 11**.
    - Add the vertical connector (K) to the top or bottom of the mount, and fasten with two 1/4-20 x 1/2" button head cap screws (L) per vertical connector. (See Figure 9)
    - Connect another wall mount to the other end of the vertical connector to lengthen the video wall.

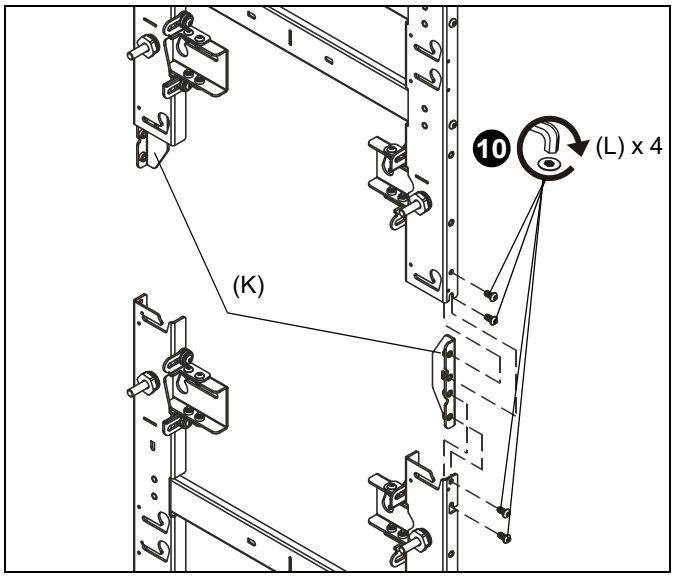


Figure 9

NOTE: When connecting a mount to the bottom of an installed mount, the lower mount may be hung by its open slot on the partially installed button head screw (L) before tightening the connection. (See Figure 10)

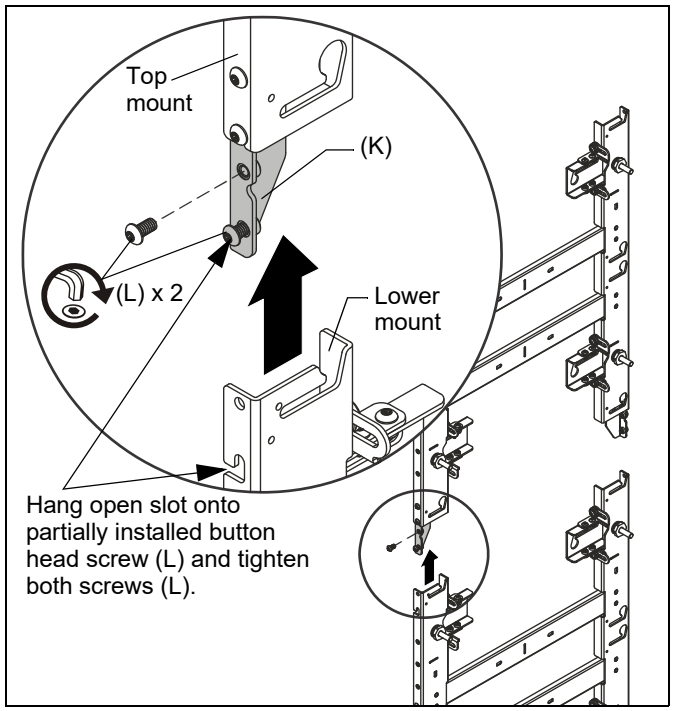


Figure 10

11. Using a level on the front of the mount in various places, use a 1" socket and T-handle driver to adjust the leveling feet on the mount until the mount is plumb. (See Figure 11)

CAUTION: Over-torquing may cause damage. Do NOT use a drill to make the depth adjustment.

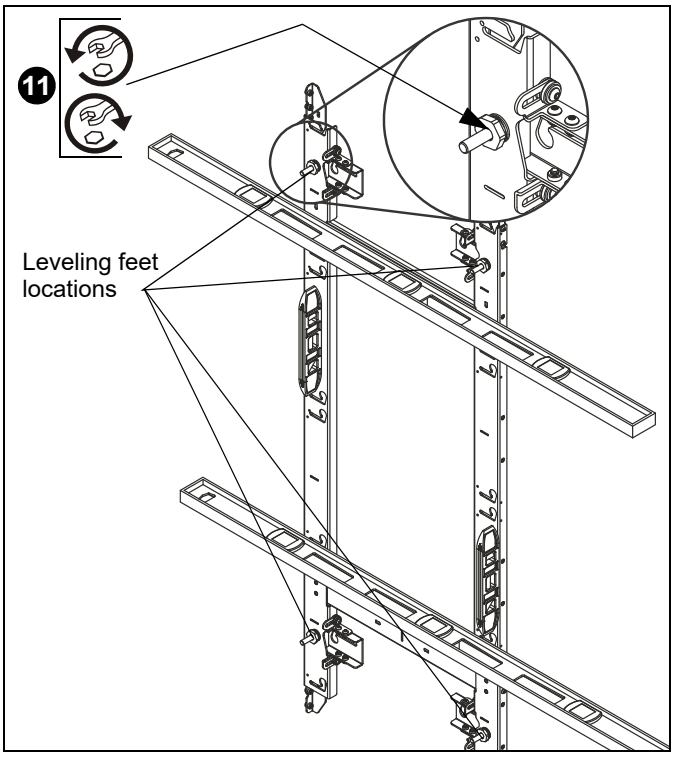
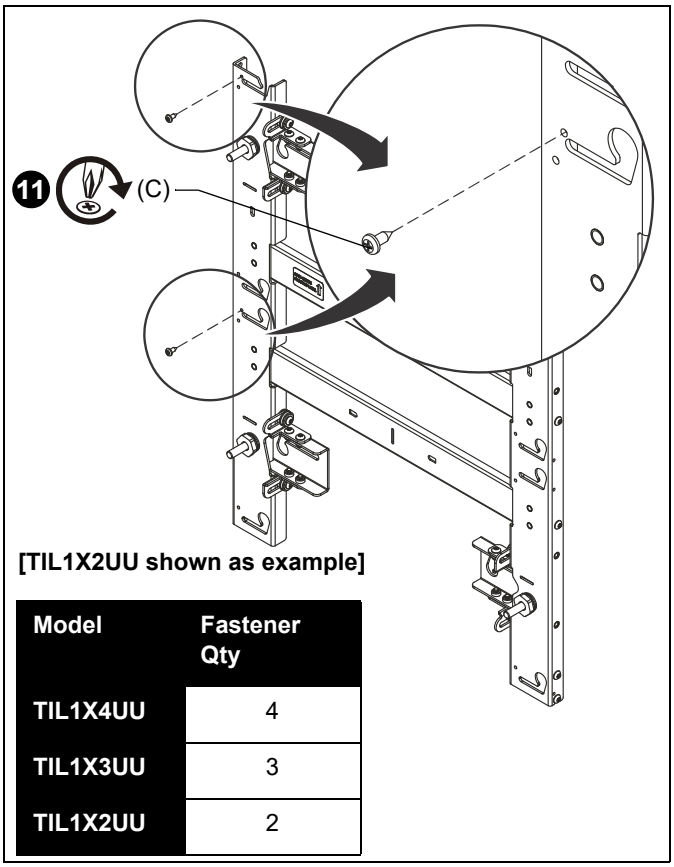


Figure 11

12. Install one 8-32 x 1/2" Phillips tapping screw (C) into left upper LED mounting button hole for <u>each</u> LED screen space. (See Figure 12)



[TIL1X2UU shown as example]

Model	Fastener Qty
TIL1X4UU	4
TIL1X3UU	3
TIL1X2UU	2

Figure 12

IMPORTANT ! : The tapping screws keep the LED screens centered on the mount, and are <u>ONLY</u> installed on the furthest left column of mounts.

NOTE: Using a drill driver makes installation of the tapping screws (C) easier.

Adding Additional Mounts

1. Partially install two 1/4-20 x 1/2" button head screws (B) into the left side of the next mount. (See Figure 13)

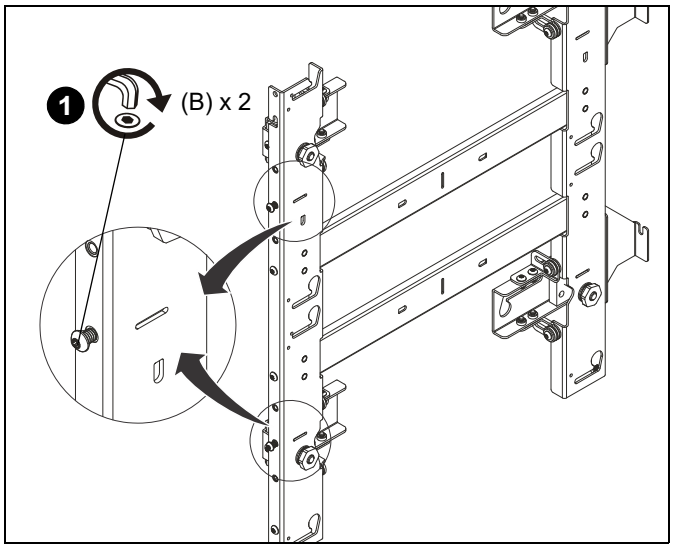


Figure 13

2. Connect second mount to the right side of the already installed mount hanging it by the 1/4-20 x 1/2" button head screws (B) onto each horizontal connector on the mounts right side. (See Figure 14)

NOTE: For larger LED walls it is helpful to check placement and alignment by putting a few housings in place during the installation, checking alignment before removing the housings, and then continuing the installation.

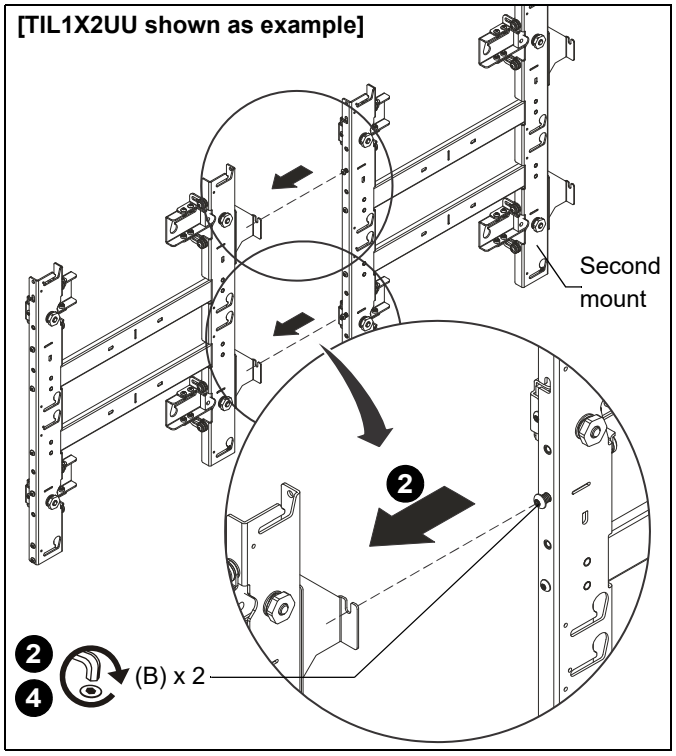


Figure 14

3. Use a level to align the second mount with the first mount.
4. Tighten both fasteners (where the second mount is hung on the first mount) to fasten two mounts together. (See Figure 14)
5. Drill pilot holes in the mounting slots and fasten the second wall mount to the wall following the same steps as used for the first wall mount.
6. Recheck the alignment and overall flatness of the wall mounts during the installation process.
7. Continue the installation process until all wall mounts are attached.
8. Install the 8-32 x 1/2" self-tapping screws (C) on the mount to attach string for alignment. (See Figure 15)

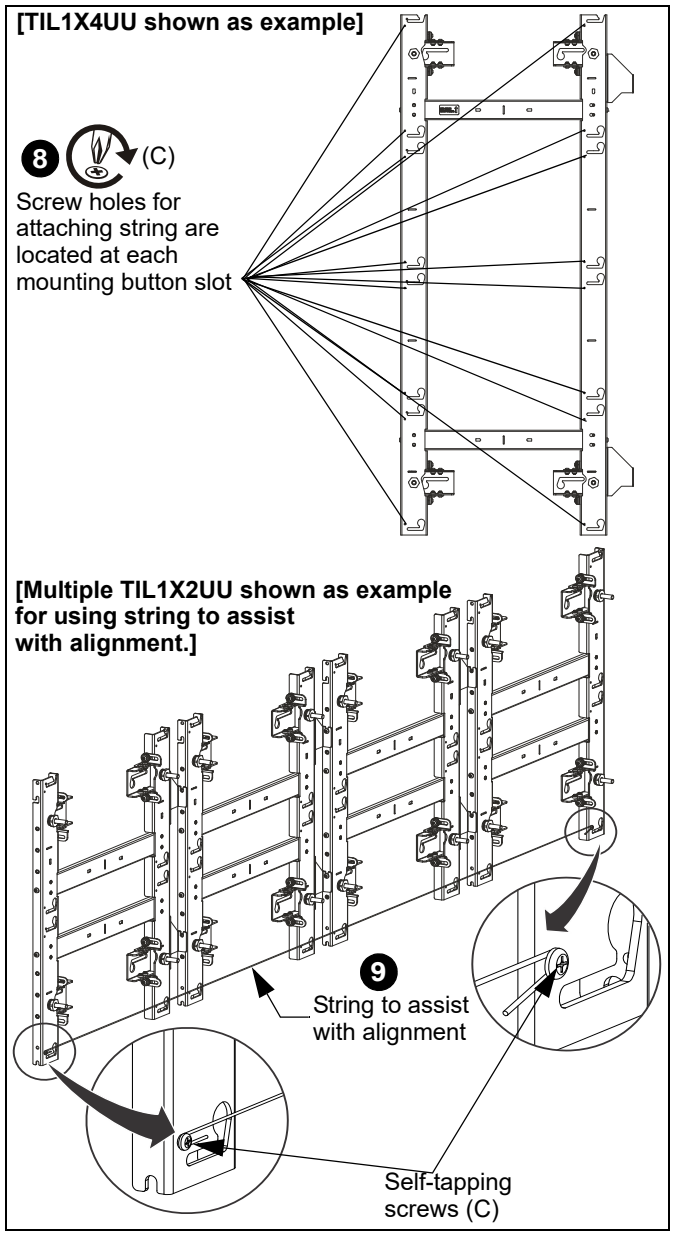


Figure 15

9. Run a string between the self-tapping screws installed in **Step 8** to assist with alignment across long sections of mounts. (See Figure 15)

Installing Housings and LED Screens

IMPORTANT ! : Reference the LED screen installation manual for specific instructions regarding care, handling, cabling and installation of the LED housings and screens.

NOTE: Begin the installation of the housings in the lower left corner of the video wall.

NOTE: One complete column of housings should be installed before proceeding to the next column.

1. Install the first LED housing in the lowest left-hand corner of the video wall by aligning mounting buttons on the housing with the mounting holes on the wall mount.
2. Move LED housing forward until all four mounting buttons are through mounting holes in wall mount.
3. Lower housing until contacting the bottom of mounting holes. (See Figure 16)

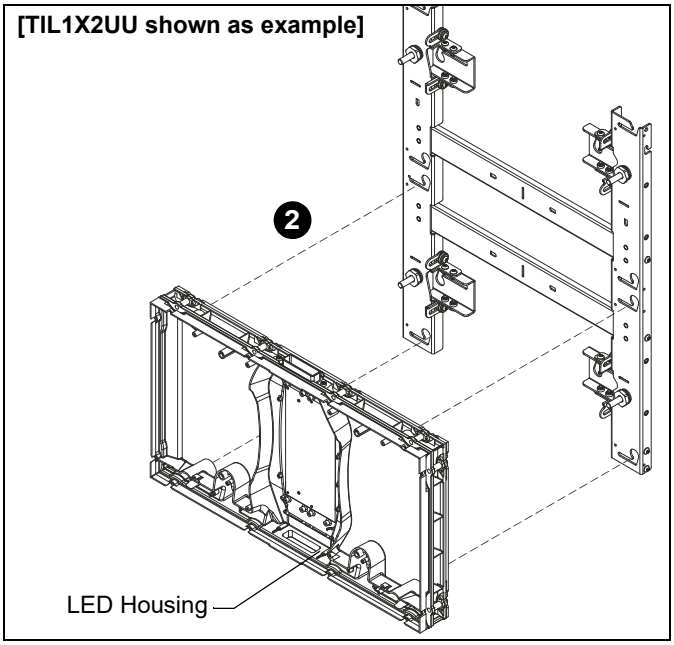


Figure 16

4. Continue with the next housing (directly above installed housing).

NOTE: Be sure to check the level and plumb of the housings occasionally during the housing installation.

5. **AFTER** the **entire** first column of housings are installed, slide the column to the left side so that the mounting buttons are against the tapping screws, and to allow clearance for installation of the second column.
6. After the second column is installed, push to the left until the first and second columns of housings are touching.
7. Repeat until all housings are installed.
8. Install two 10-24 x 1-1/2" Phillips head cap screws (D) **per housing** on far right column of mounts. (See Figure 17)

NOTE: The screws (D) are installed from the right side of the furthest right wall mount and can be used to push the housings to the left and to prevent removal of the LED screens. The screws can also be used to slightly level or align the housings by adjusting the amount of push at the bottom or top of the housing.

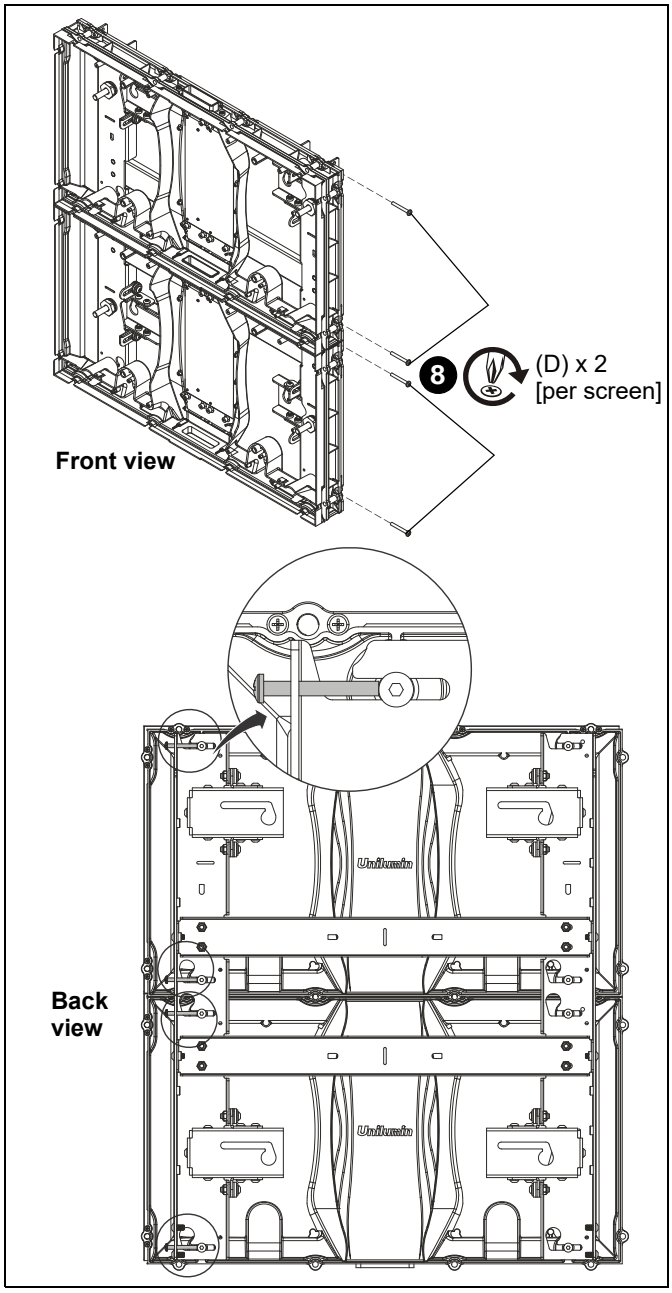


Figure 17

9. Using levels, check the level and plumb of the housings installed on the mounts and adjust as necessary following information in the **Adjustments** section.
10. Connect housings following instructions included with LED screens.
11. Install LED screens following instructions included with screens.

Adjustments

Depth Adjust

The depth of each wall mount section is controlled by the leveling feet.

1. Using a level on the front of the housings in various places, loosen or tighten the leveling feet adjust bolt (using a 1" socket and T-handle driver) to assist in leveling the LED housings across the various wall mounts until plumb. (See Figure 18)

CAUTION: Over-torquing may cause damage. Do NOT use a drill to make the depth adjustment.

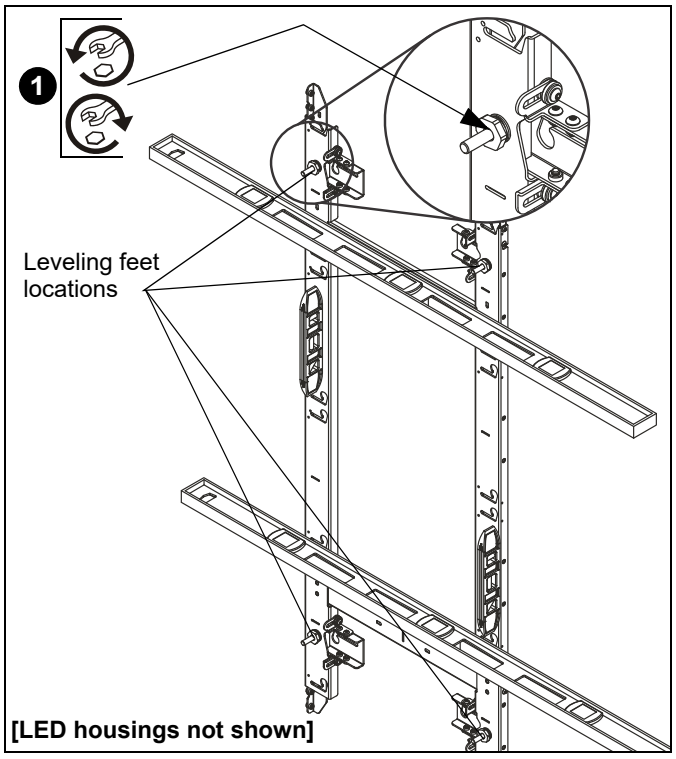


Figure 18

Fastener Installation Methods

IMPORTANT ! : See Table 1 for appropriate hardware and pilot hole sizes for various wall types.

IMPORTANT ! : The expanse of the LED wall will most likely mean that attachment of the wall mounts will not all be in studs. The attachment method will most likely vary throughout the installation, and more than one of the various methods outlined here will most likely be used.

Wood Stud

1. Use one 5/16" x 2-1/2" hex flange head lag bolt (F) and one 5/16" washer (J) through product and into pilot hole. (See Figure 19)
2. Repeat for remaining pilot holes.

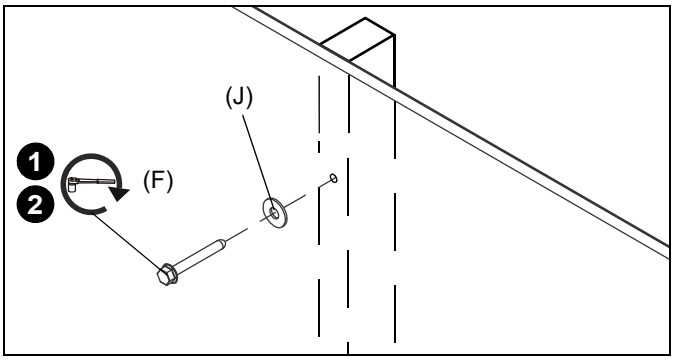


Figure 19

Concrete or Concrete Block

1. Install one UX10X60R anchor (G) into each pilot hole using a hammer, making sure that the anchor is flush with the wall. (See Figure 20)
2. Use one 5/16" x 2-1/2" hex flange head lag bolt (F) and one 5/16" washer (J) through product into each anchor in wall. (See Figure 20)
3. Repeat for remaining pilot holes.

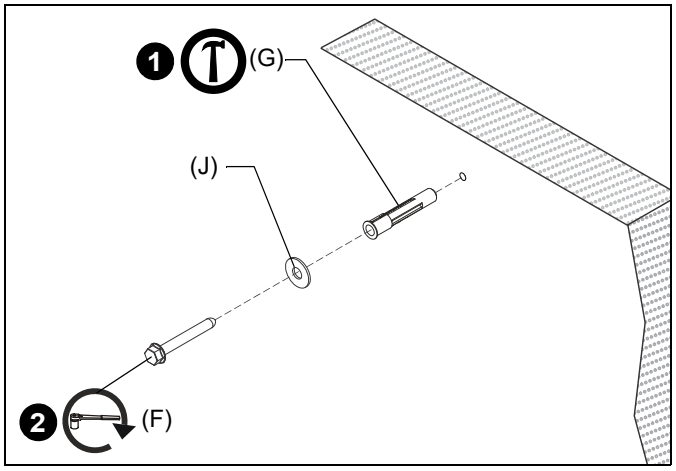


Figure 20

Steel Stud

IMPORTANT ! : See **Site Requirements for Steel Stud Installation** section before proceeding with Steel Studs installation to ensure installation site meets requirements! The drywall must have a minimum thickness of 1/2"!

1. Hold metal channel on anchor flat alongside plastic straps and slide channel through hole. (See Figure 21)

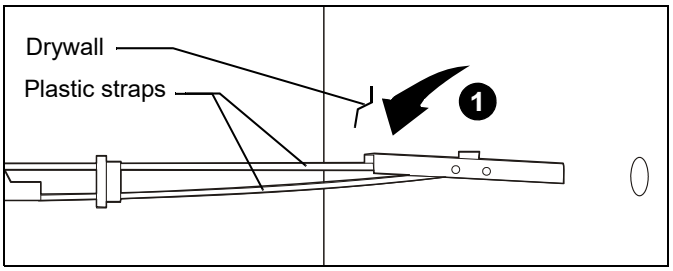


Figure 21

2. Holding plastic straps on anchor, pull anchor away from wall until channel rests flush behind wall making sure anchor channel is positioned vertically on drywall, or steel stud (if present). (See Figure 22)
3. Slide plastic cap on anchor towards wall until flange of cap is flush with wall. (See Figure 22)

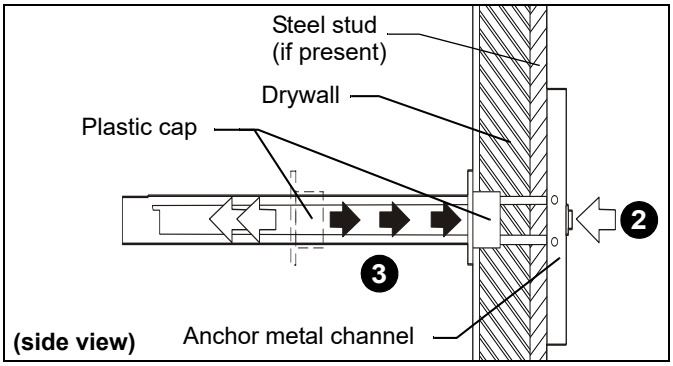


Figure 22

4. Snap off plastic straps on anchor at wall by pushing side to side, snapping off straps level with flange of plastic cap. (See Figure 23)

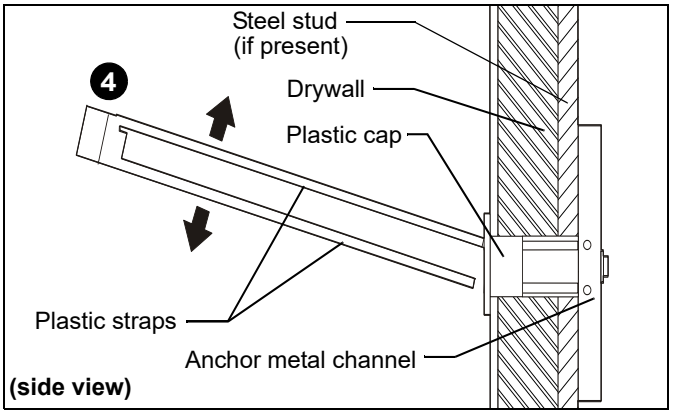


Figure 23

5. Line up anchor with attachment point.
6. Insert 1/4-20 x 1-3/4" Phillips pan head screw through 1/4" washer, corresponding mounting hole in wall bracket and into anchor, and tighten until flush against wall bracket. DO NOT over tighten! (See Figure 24)

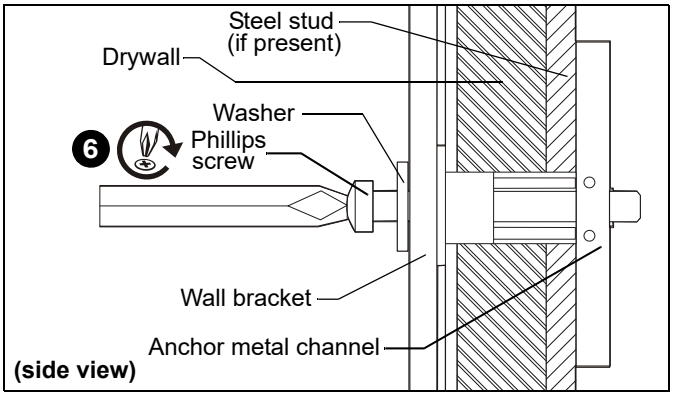
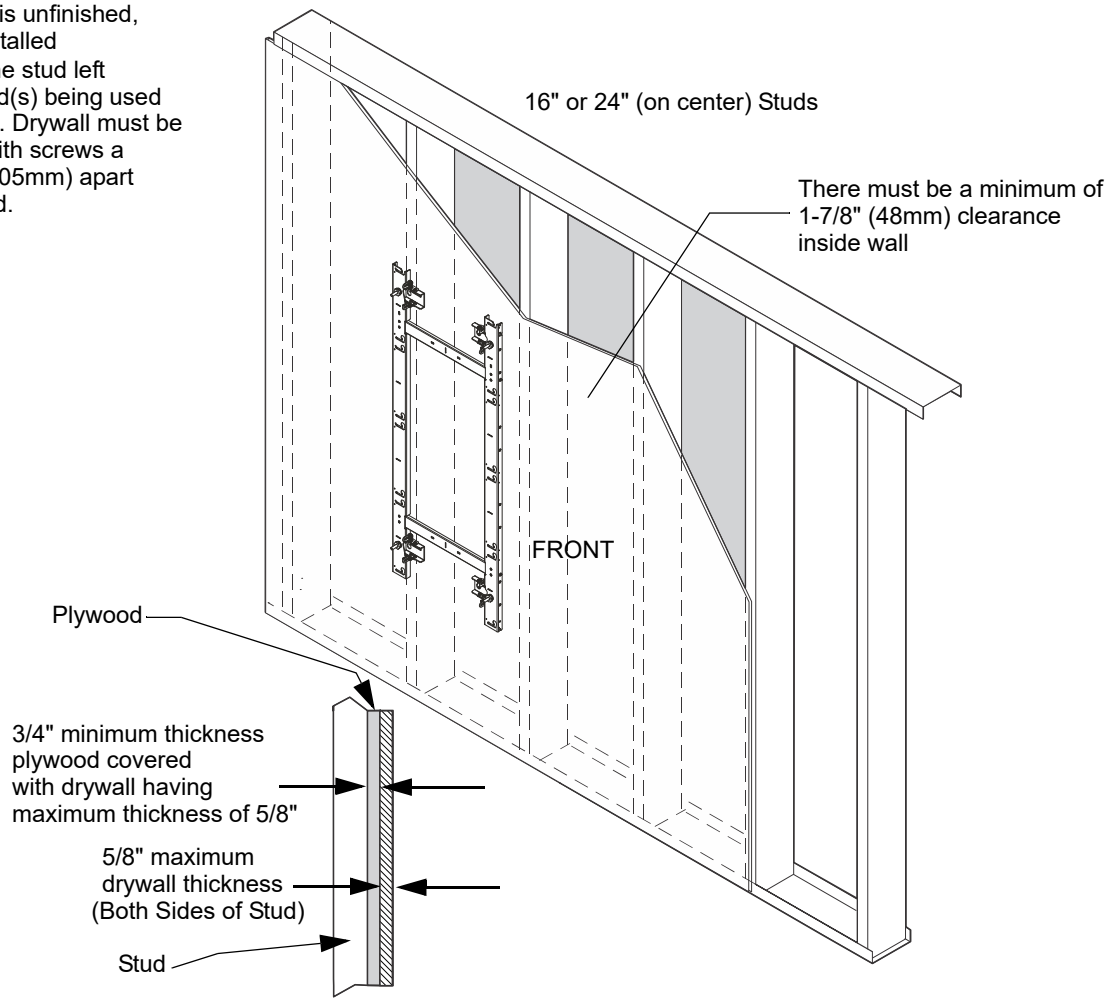


Figure 24

Site Requirements for Wood or Steel Stud Installation

If back side of wall is unfinished, drywall must be installed to a minimum of one stud left and right of the stud(s) being used to install the mount. Drywall must be secured to studs with screws a maximum of 12" (305mm) apart down center of stud.



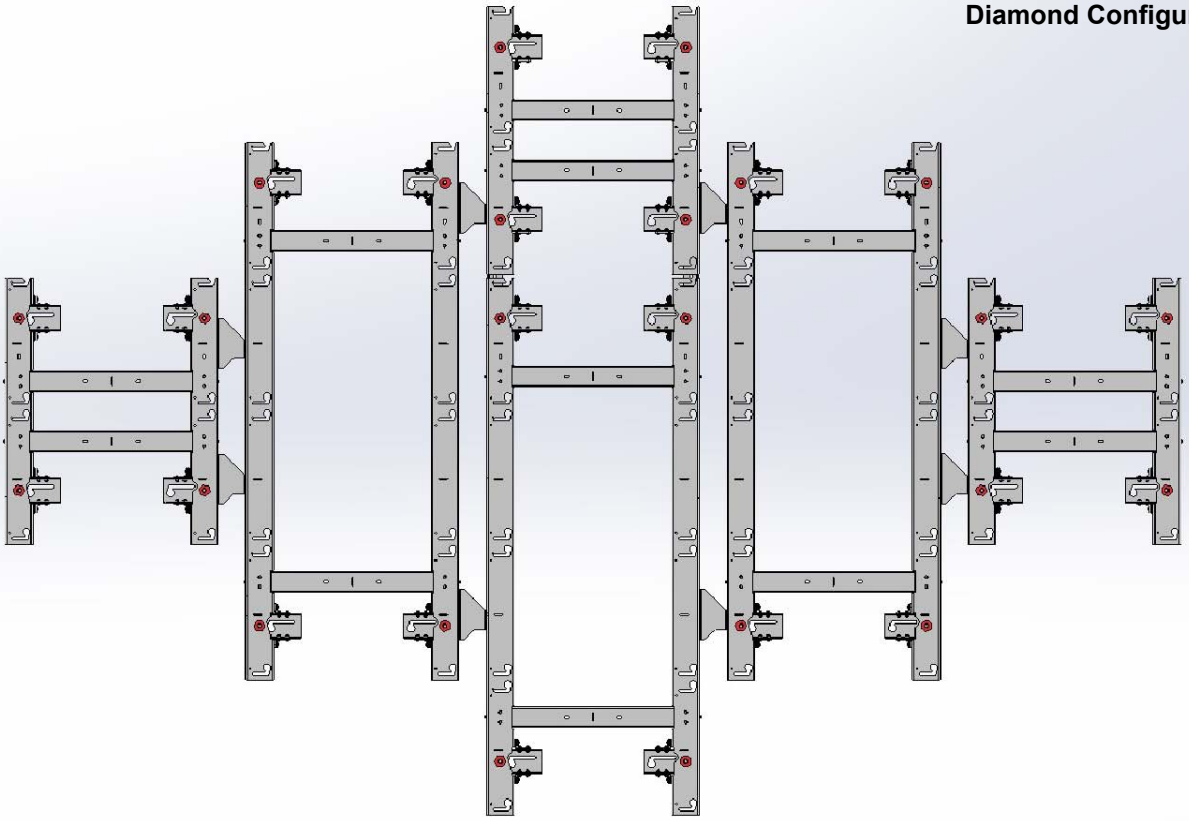
Steel Stud (2 x 4 / 25ga minimum)
Stud type and structural strength must conform to the North American Specification for the Design of Cold-Formed Steel Structural Members.
[362 S 125 18, C-Shaped, S-Stud Section]

Figure 25

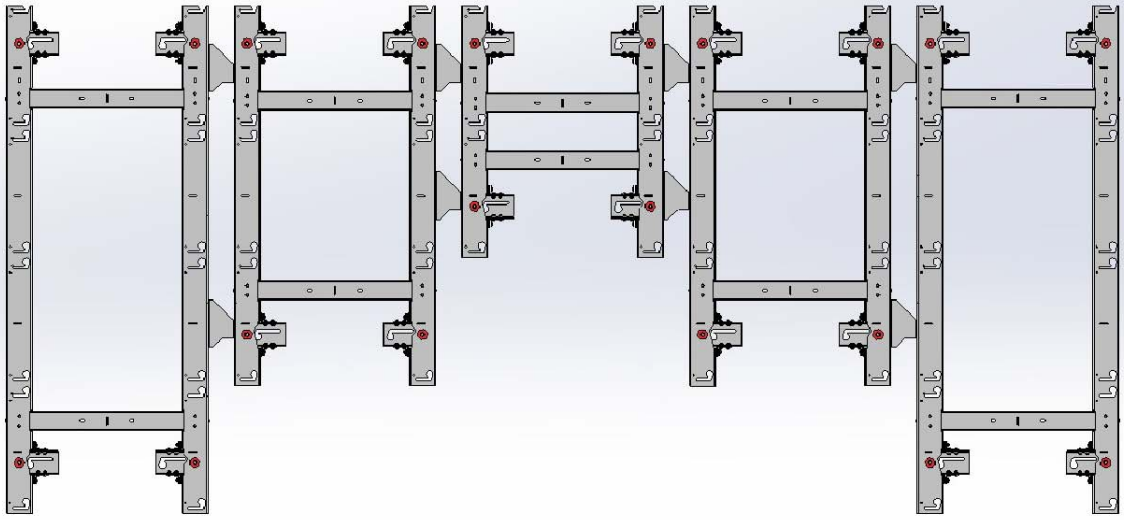
Configuration Examples

The following are just two examples of the many configurations which are possible with the UU Series wall mounts.

Diamond Configuration

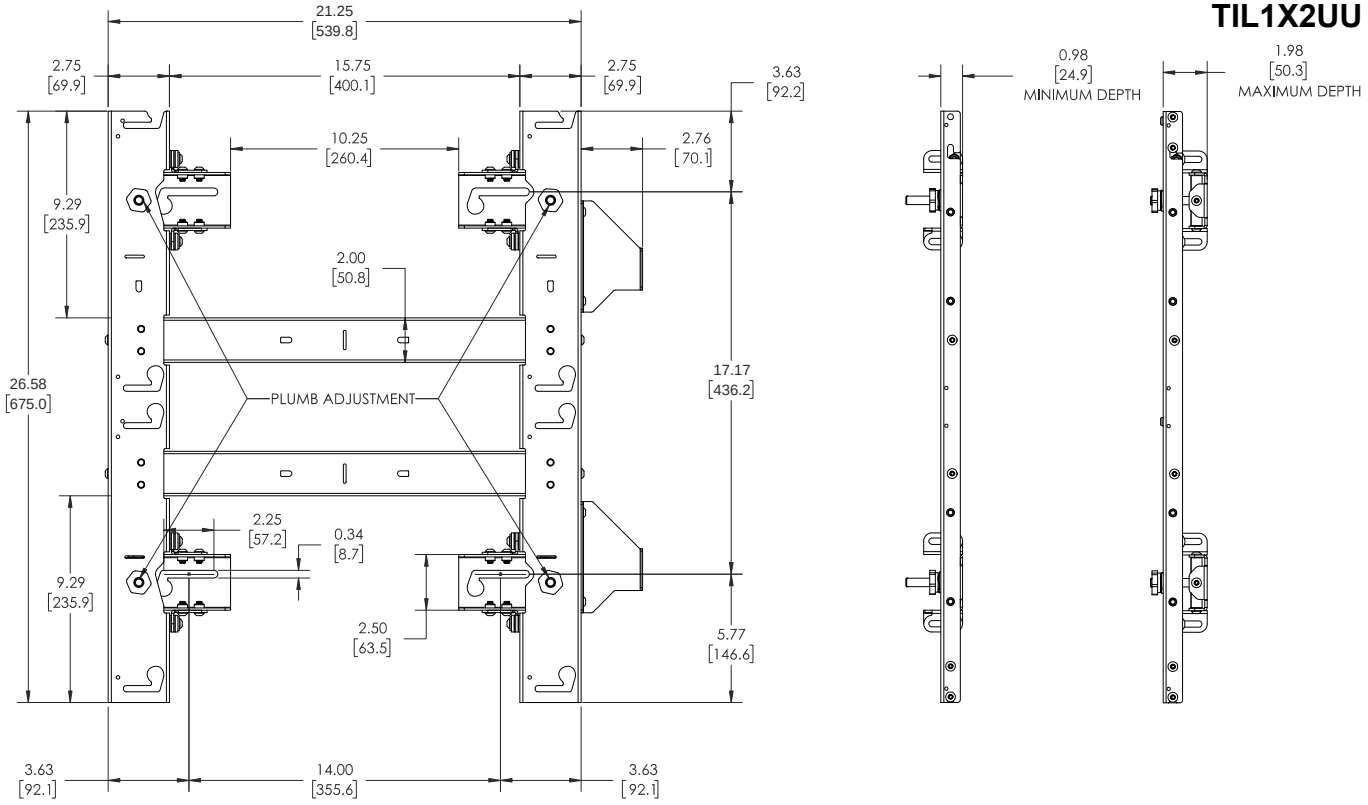


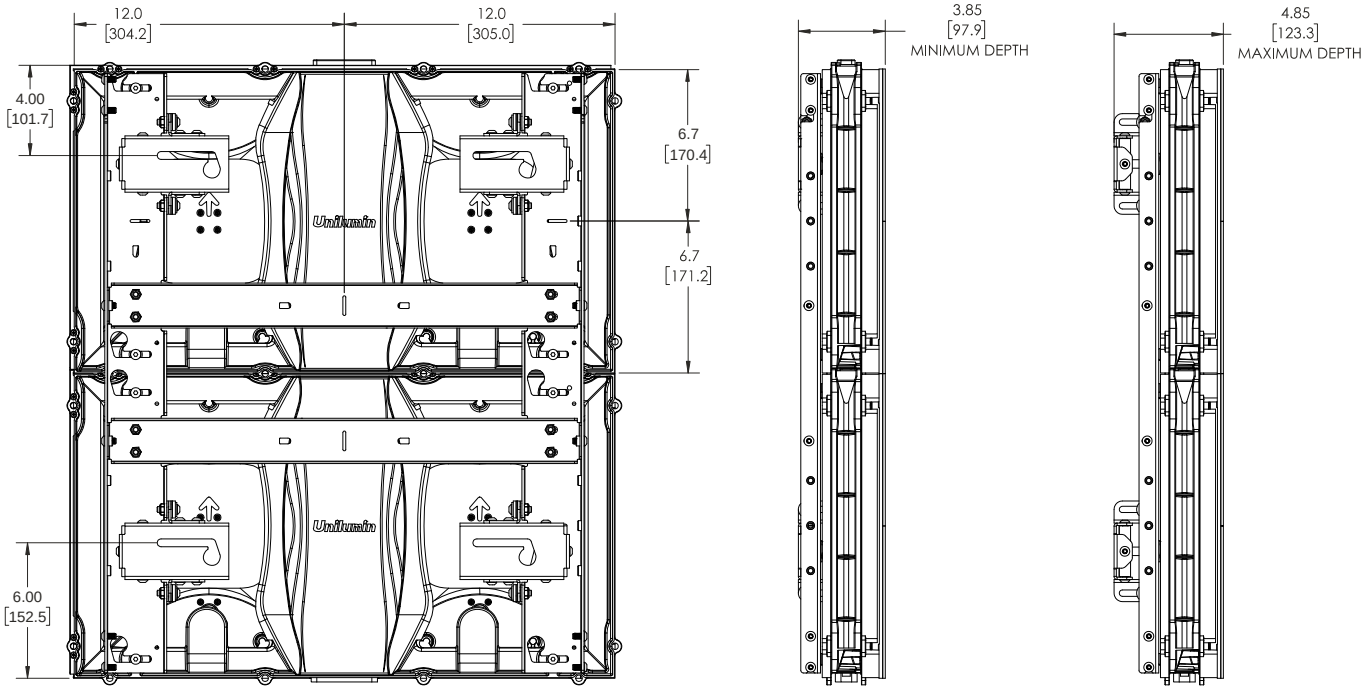
Sawtooth Configuration



DIMENSIONS

TIL1X2UU





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[MILLIMETERS]

DIMENSIONS...cont'd

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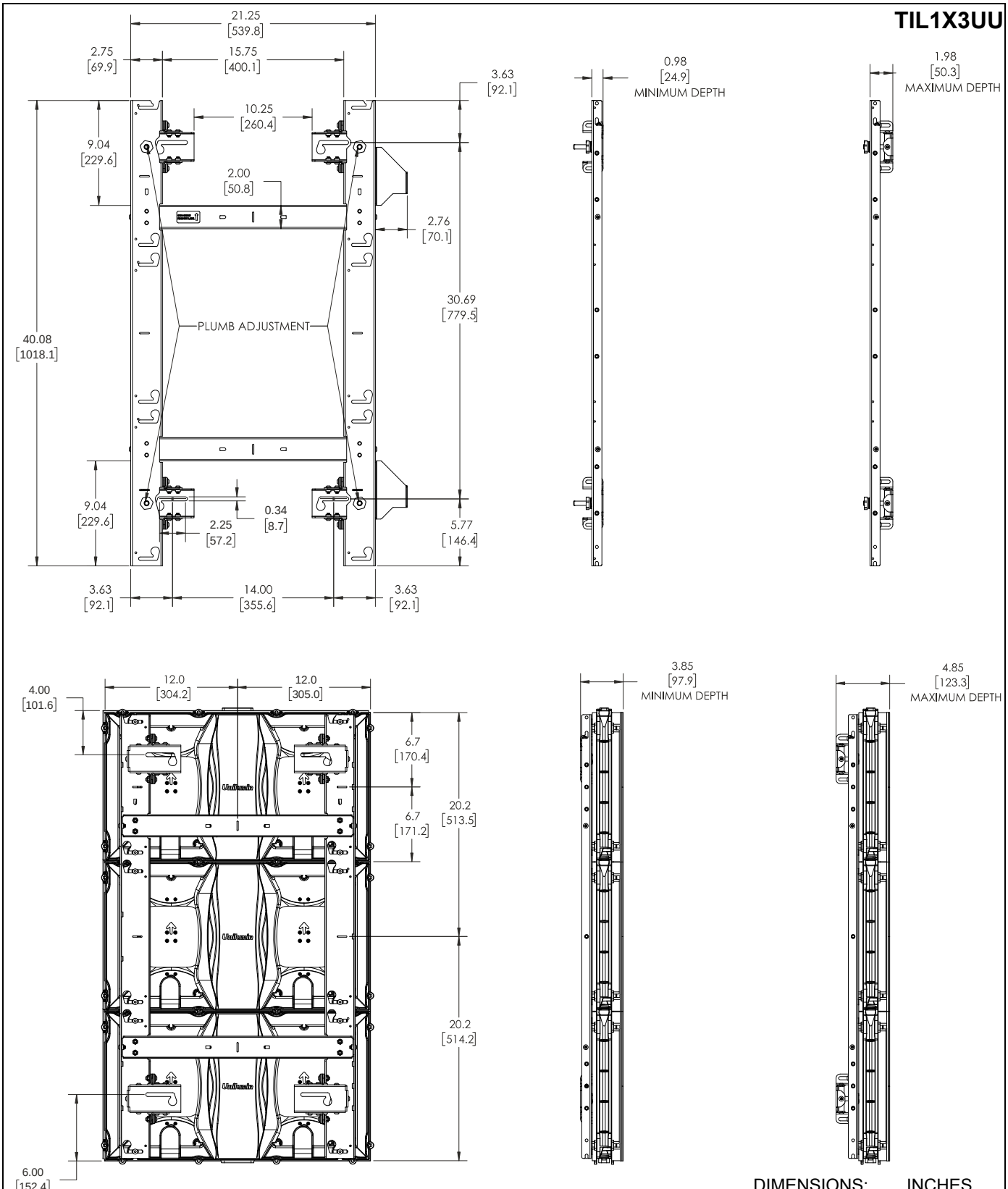

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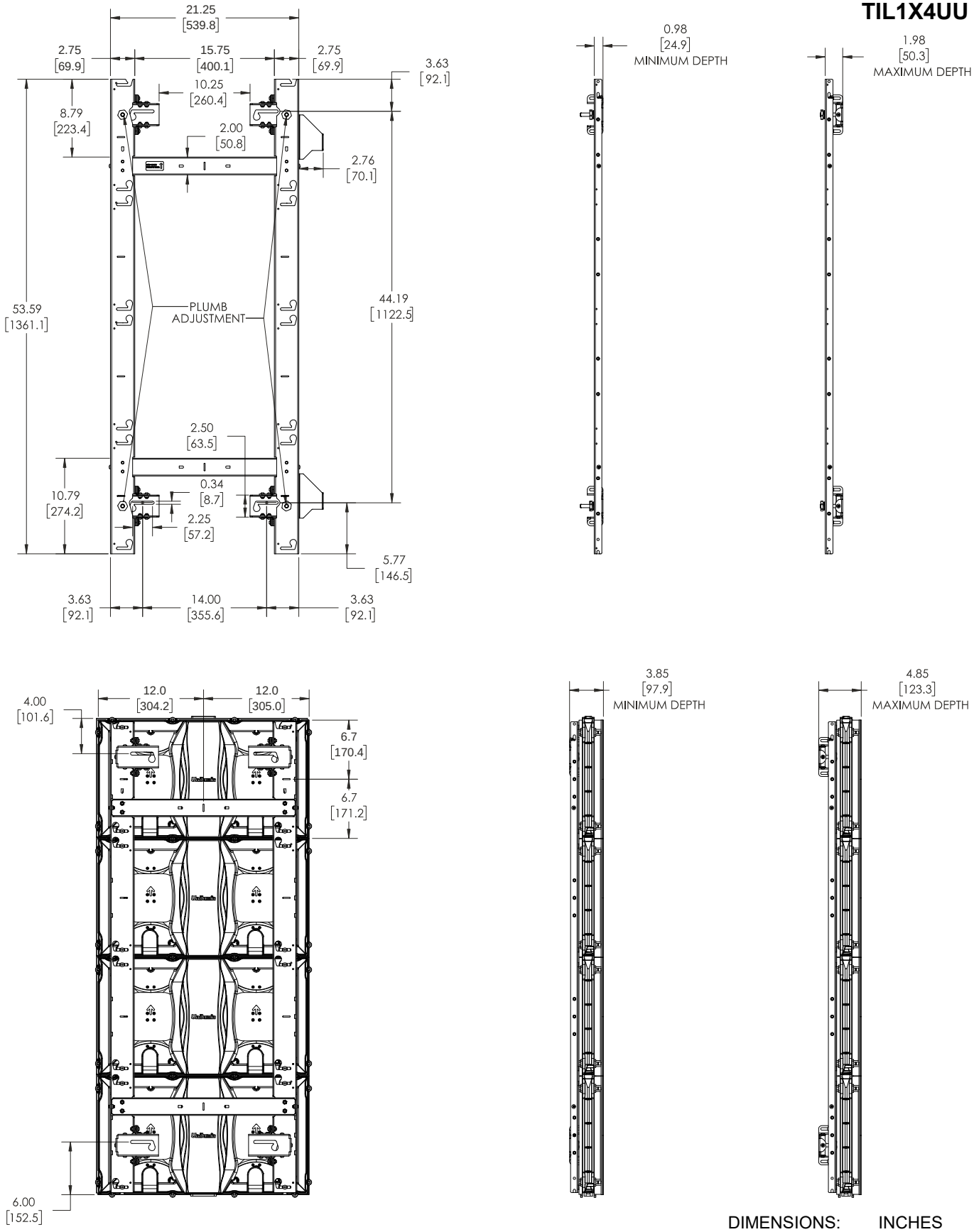

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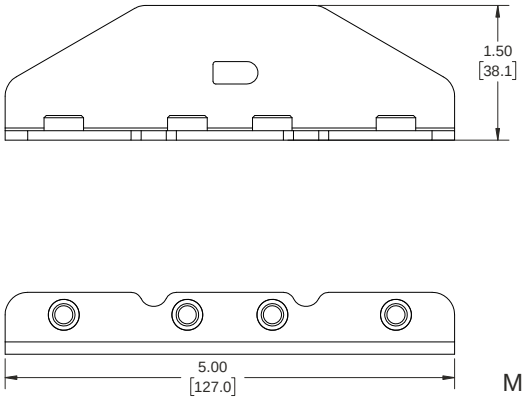
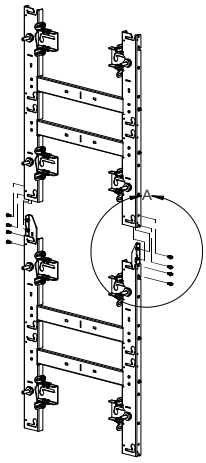
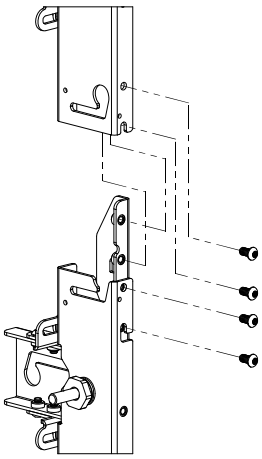
TILVABUU



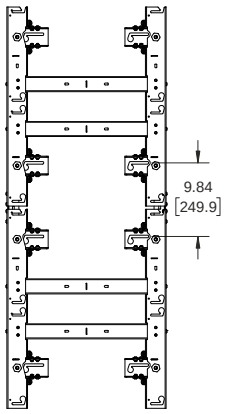
KIT INCLUDES TWO BRACKETS



MOUNTS SOLD SEPARATELY
SHOWN WITH TIL1X2UU



DETAIL A
SCALE 1 : 3



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[MILLIMETERS]

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