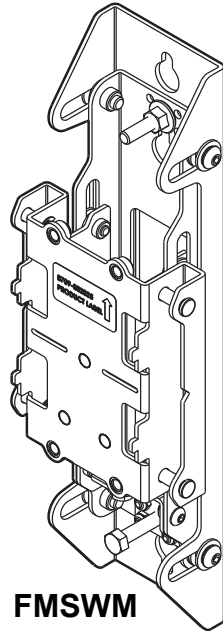
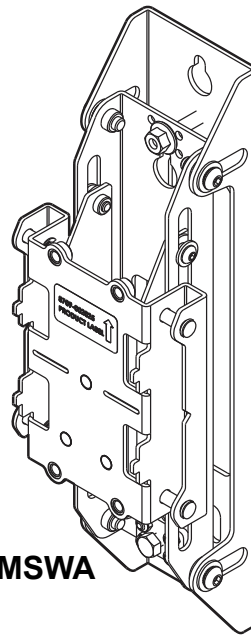

INSTALLATION INSTRUCTIONS



FMSWM



FMSWA

Fusion Modular Wall-Mounting Uprights

DISCLAIMER

Milestone AV Technologies and its affiliated corporations and subsidiaries (collectively "Milestone"), intend to make this manual accurate and complete. However, Milestone makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. Milestone makes no representation of warranty, expressed or implied, regarding the information contained herein. Milestone assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

Chief® is a registered trademark of Milestone AV Technologies. All rights reserved.


Snaptoggle® is a registered trademark of Mechanical Plastics Corp.


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 / accessories are properly assembled and installed using the instructions provided.


 **WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components attached to mounting system does not exceed the weight capacity listed in Table 1.

Table 1: Weight Capacities

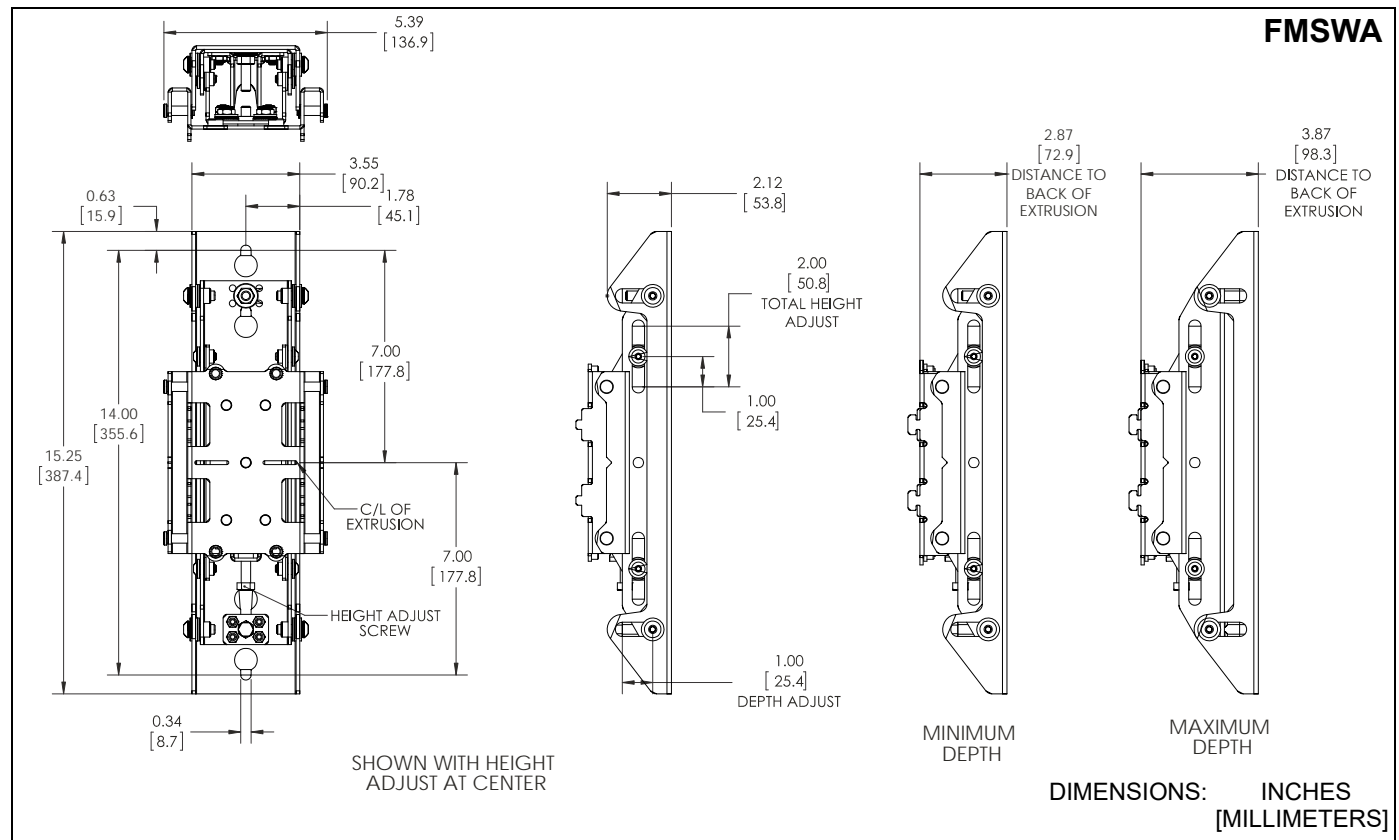
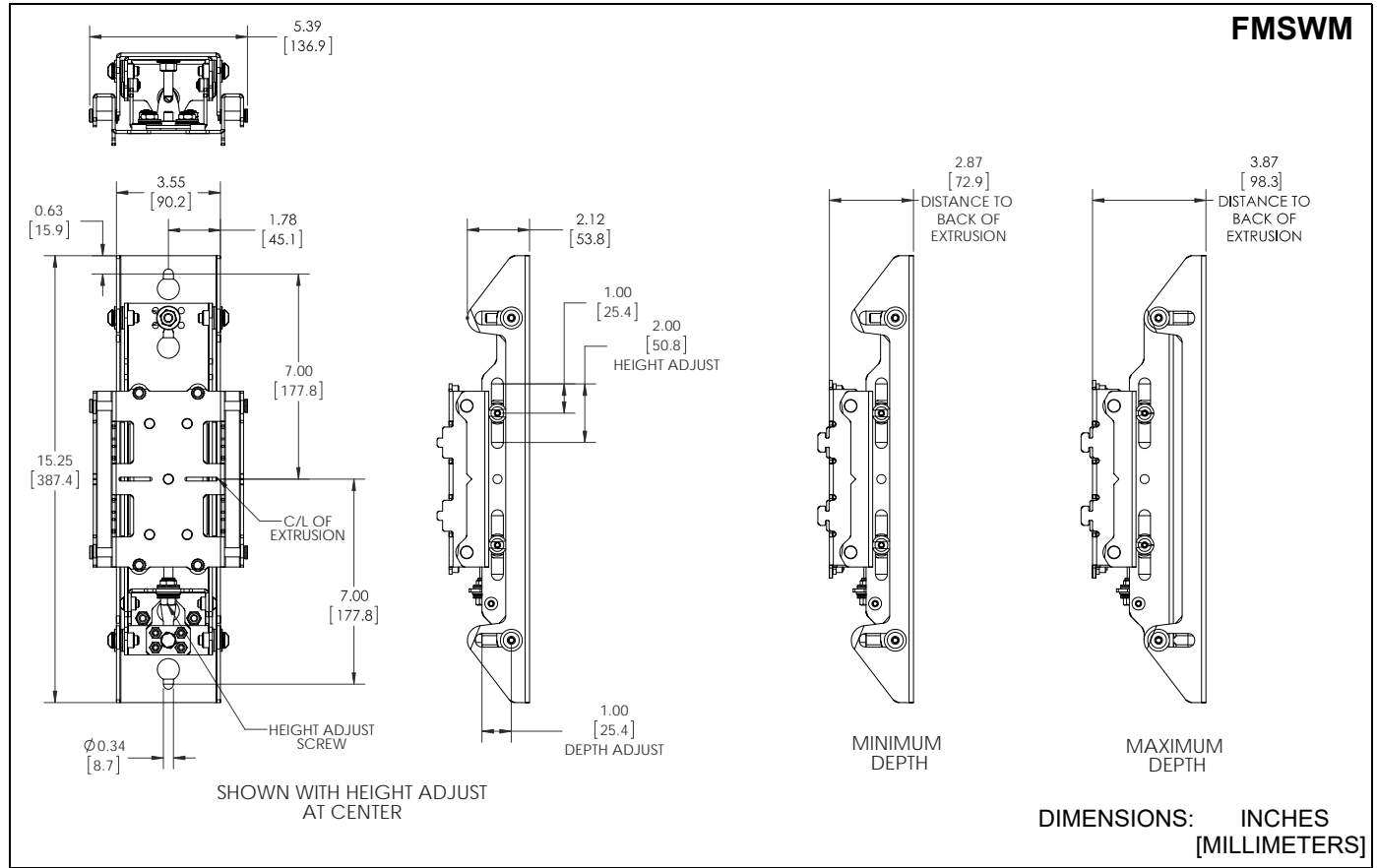
MODEL	Maximum Weight Allowed
FMSWM / FMSWA	200 lbs (90.7 kg) [16" on-center wood studs, or concrete installations]
	125 lbs (56.7 kg) [16" on-center steel or wood studs with 3/4" plywood overlay]
	75 lbs (34.0 kg) [16" on-center steel studs]

IMPORTANT ! : The FMSWM/FMSWA is designed to be mounted to a:

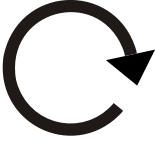


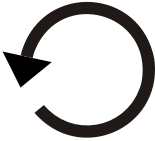


- bare 8" thick solid concrete wall;
- 3/4" CDX plywood-backed, 2" x 4" 25 ga minimum steel stud wall covered with 1/2" or 5/8" drywall;
- 2" x 4" 25 ga minimum steel stud wall covered with 1/2" or 5/8" drywall; or
- 2" x 4" wood stud (16" on-center) wall covered with drywall having a maximum thickness of 5/8".

--SAVE THESE INSTRUCTIONS--

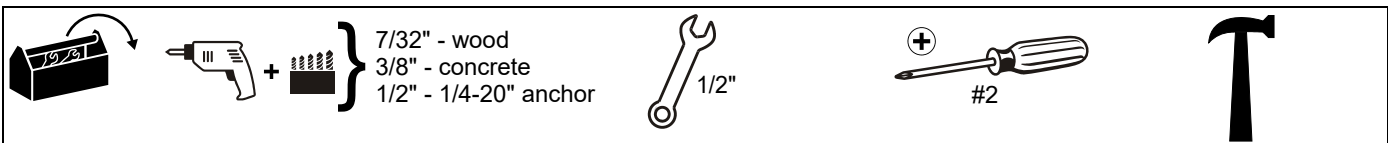
DIMENSIONS



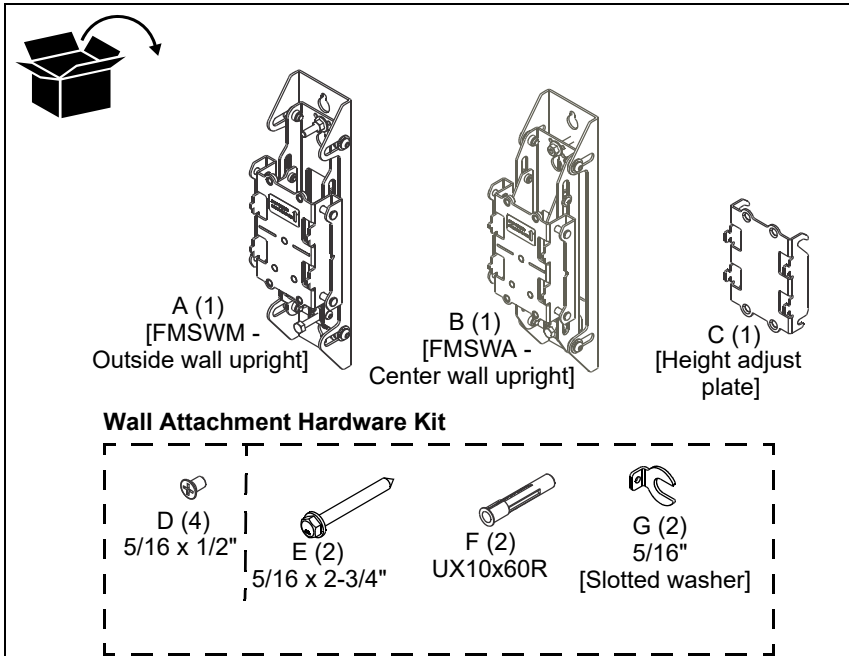
LEGEND

	Tighten Fastener		Pencil Mark
	Apretar elemento de fijación		Marcar con lápiz
	Befestigungsteil festziehen		Stiftmarkierung
	Apertar fixador		Marcar com lápiz
	Serrare il fissaggio		Segno a matita
	Bevestiging vastdraaien		Potloodmerkteken
Serrez les fixations	Marquage au crayon		Drill Hole
	Loosen Fastener		Perforar
	Aflojar elemento de fijación		Bohrloch
	Befestigungsteil lösen		Fazer furo
	Desapertar fixador		Praticare un foro
	Allentare il fissaggio		Gat boren
	Bevestiging losdraaien	Percez un trou	
	Phillips Screwdriver	Llave de boca	
	Destornillador Phillips	Gabelschlüssel	
	Kreuzschlitzschraubendreher	Chave de bocas	
	Chave de fendas Phillips	Chiave a punte aperte	
	Cacciavite a stella	Steeksleutel	
	Kruiskopschroevendraaier	Clé à fourche	
Tournevis à pointe cruciforme			

TOOLS REQUIRED FOR INSTALLATION



PARTS



Wall Attachment Hardware Kit

- D (4) 5/16 x 1/2"
- E (2) 5/16 x 2-3/4"
- F (2) UX10x60R
- G (2) 5/16" [Slotted washer]

Hardware required - not included*
(for steel stud walls)

Installing BETWEEN steel studs into 3/4" CDX plywood (covered in 1/2" or 5/8" drywall)

- 1/4-20 BB Snaptoggle® anchor** (Qty 2)

Installing into 3/4" CDX plywood (covered in 1/2" or 5/8" drywall) AND steel stud

- 1/4-20 BB Snaptoggle® anchor** (Qty 2)

Installing into steel stud covered with 1/2" minimum thickness drywall

- 1/4-20 BB Snaptoggle® anchor** (Qty 2)

* Installer may also purchase **Kit FCAT1**, which includes:

- 4--Snaptoggle BB
- 4--1/4-20 x 2-1/2" Grade 5 bolts
- 4--1/4" Grade 2 flat washers

** Use, at a minimum, a 2-1/2" long Grade 5 screw with each anchor.

INSTALLATION

NOTE: The FMSWM outside wall uprights (A) ship assembled to allow height adjustment from the bottom. The uprights may be changed to allow height adjustment from above the menu boards. See following instructions for changing the wall uprights.

If leaving wall uprights with height adjustment at the bottom, proceed to **ATTACH WALL UPRIGHTS** section.

Adjust Wall Uprights

If the installation requires height adjustment from **above** the menu boards, adjust the wall uprights (A) **BEFORE** attaching uprights to the wall.

IMPORTANT ! : Keep all hardware that is removed during this adjustment process.

1. Remove flanged nut and washer from top of wall upright. (A) (See Figure 1)
2. Remove hex head screw from bottom of wall upright.

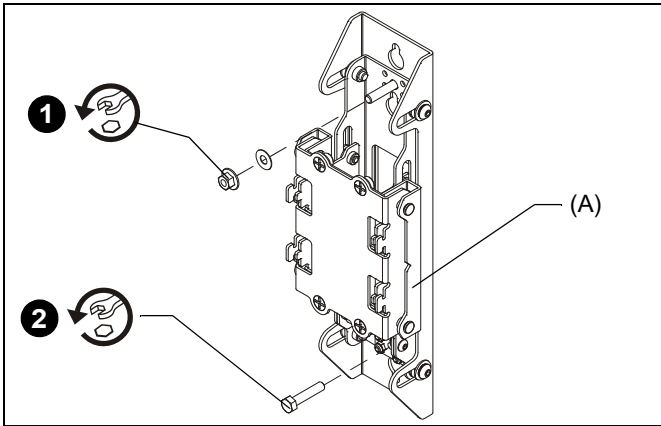


Figure 1

3. Remove one button head screw, spring washer and flat washer from four locations on side of wall upright. (See Figure 2)

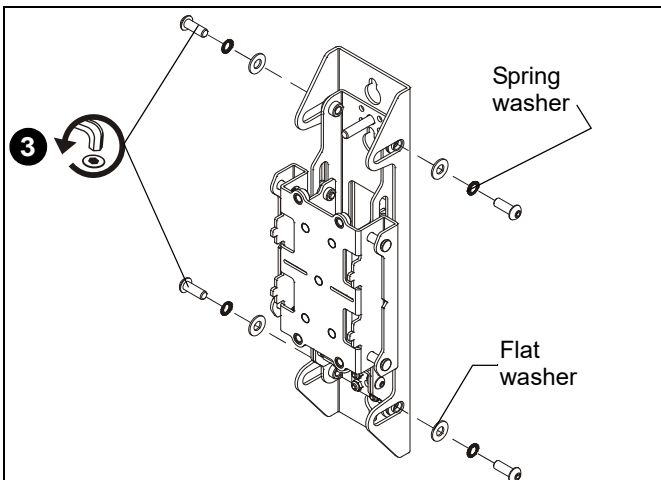


Figure 2

4. Remove wall upright assembly from outer bracket, while removing one shoulder washer and one steel washer from between outer bracket and wall upright assembly in four locations. (See Figure 3)

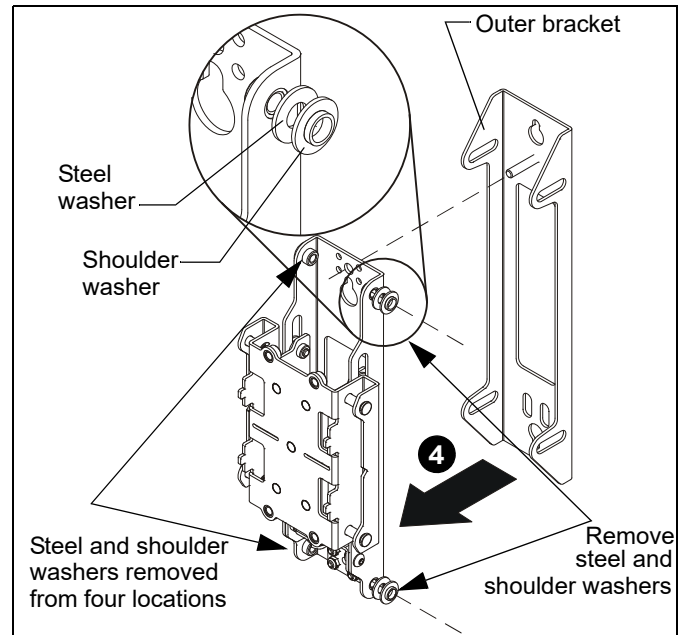


Figure 3

5. Remove four button head screws and nuts, and one small metal plate from lower side within wall upright. (See Figure 4)
6. Reinstall metal plate at top of wall upright using same hardware removed in Step 5. (See Figure 4)

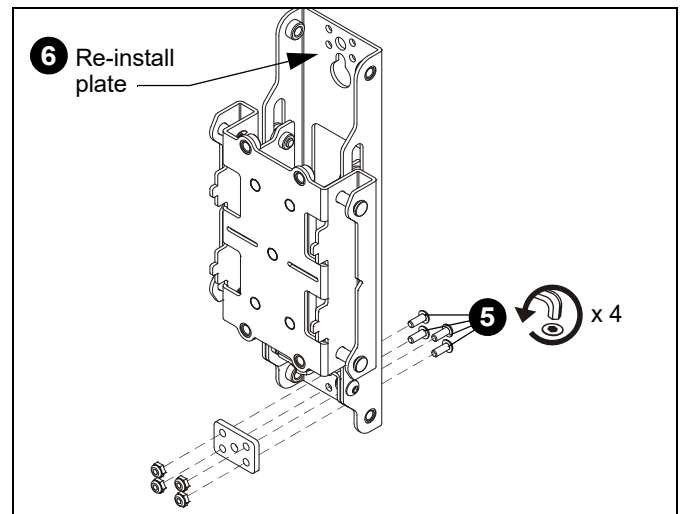


Figure 4

7. Rotate wall assembly so that height-adjust screw is at top of wall upright assembly. (See Figure 5)
8. Insert one shoulder washer and one steel washer between outer bracket and wall upright assembly in four locations.
9. Insert wall upright assembly into outer bracket by placing wall upright assembly onto threaded pem at top of outer bracket.

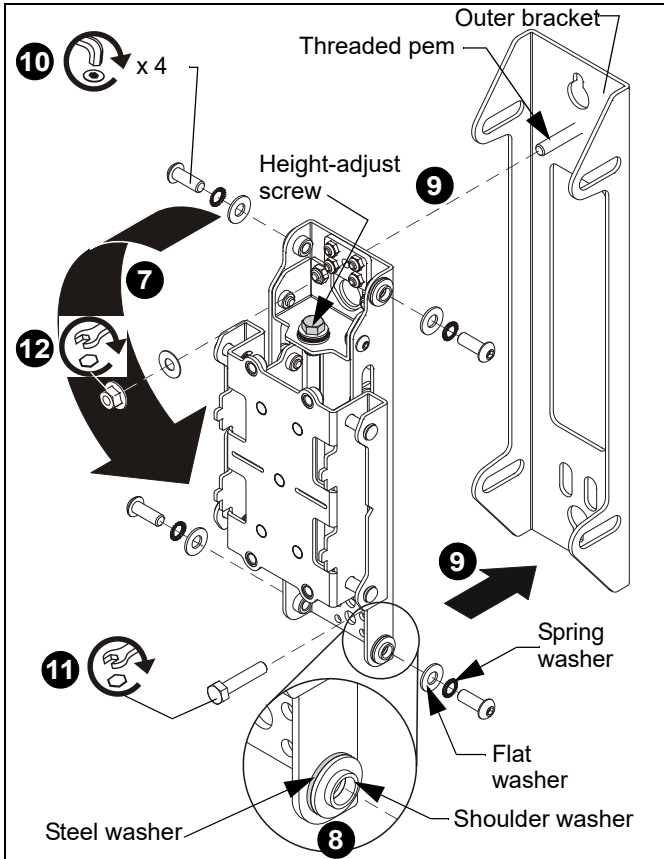


Figure 5

10. Fasten one button head screw, spring washer and flat washer into four locations on sides of wall upright.
11. Fasten hex head screw into bottom of wall upright.
12. Replace and tighten flanged nut and washer onto threaded pem at top of wall upright. (See Figure 5)

Attach Wall Uprights

1. Use the FMSWM outside wall upright (A) or FMSWA center wall upright (B) as a model to mark upper and lower pilot hole placement for 2 outside wall uprights (and center wall upright if required) following wall placement information in Modular Systems installation instructions.

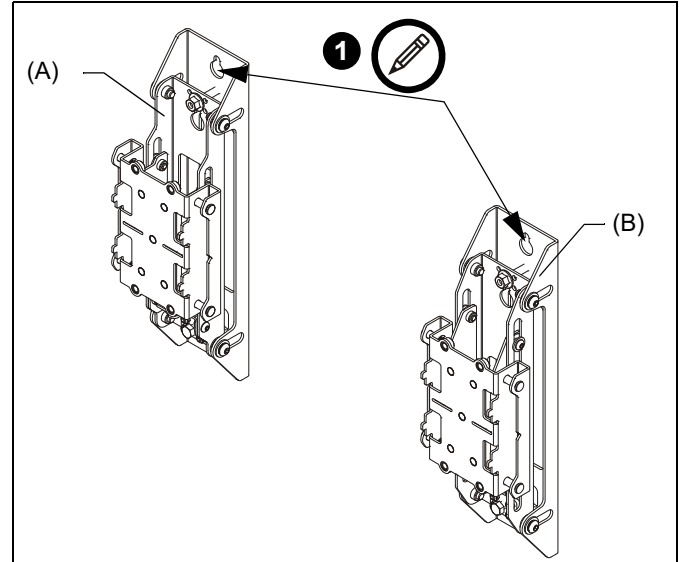


Figure 6

IMPORTANT ! : See Parts drawing, Table 2 and **Installing to Wood Stud Walls** section, **Installing to Concrete Walls** section, or **Installing to Steel Stud Walls** section for details on installing wall brackets.

Table 2: Fastener Information

WALL TYPE	PILOT HOLE	FASTENERS (see PARTS drawing)
Wood stud (2" x 4")	7/32" x 3"	5/16" x 2-3/4" hex head lag (E) & 5/16" slotted washer (G). Fasteners placed at stud locations.
Concrete	3/8" x 3"	5/16" x 2-3/4" hex head lag (E) & Fischer UX10x60 anchor (F).
Steel stud	1/2"	-- Installing BETWEEN steel studs into 3/4" CDX plywood (covered in 1/2" or 5/8" drywall) 1/4-20 BB Snaptoggle anchor* (2 ea)
	1/2"	-- Installing into 3/4" CDX plywood (covered in 1/2" or 5/8" drywall) AND steel stud 1/4-20 BB Snaptoggle anchor* (2 ea)
	1/2"	-- Installing into steel stud covered with 1/2" or 5/8" drywall 1/4-20 BB Snaptoggle anchor* (2 ea)
	1/2"	1/4-20 BB Snaptoggle anchor* (2 ea)

* Use, at a minimum, a 2-1/2" long Grade 5 screw with each anchor.
NOTE: Installer may also purchase Kit FCAT1 (1/4-20 Grade 5 Toggler Kit)

Installing to Wood Stud Walls

1. Drill one 7/32" (5.5mm) pilot hole in stud at upper mounting slot. (See Figure 7)
2. Partially install one 5/16 x 2-3/4" flanged lag bolt (E) into pilot hole but do not tighten to wall.
3. Hang outside wall upright (A) [or center wall upright (B)] aligning upper mounting slot over lag bolt and level upright.
4. Place one slotted washer (G) over flanged lag bolt. (See Figure 7)
5. Tighten lag bolt to secure wall upright (A or B) to wall at upper mounting slot. (See Figure 7)

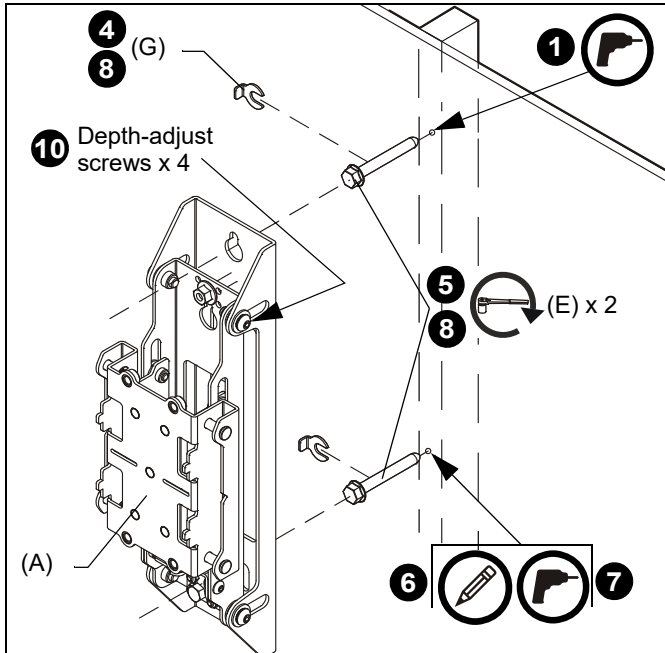


Figure 7

6. Mark the attachment point for the lower mounting slot, making sure the attachment point is located on the stud. (See Figure 7)
7. Drill 7/32" (5.5mm) pilot hole at marking for lower mounting hole. (See Figure 7)
8. Use one 5/16 x 2-3/4" flanged lag bolt (E) and one 5/16" slotted washer (G) to attach each wall upright to the wall through the lower mounting hole. (See Figure 7)
9. Repeat Steps 1 through 8 for remaining wall upright(s).
10. Adjust depth of wall uprights, if necessary, so that the face of the wall uprights are all in the same plane across the width of wall upright installation: (See Figure 7)
 - Loosen button head screws (4 places)
 - Adjust depth along depth-adjust slots.
 - Tighten button head screws.

IMPORTANT ! : Be sure to securely tighten depth-adjust screws after adjustment.

11. Proceed to **Mounting Rails** section.

Installing to Concrete Walls

1. Drill one 3/8" x 3-1/2" (9.5mm x 88.9mm) pilot hole at each marking. (See Figure 8)
2. Install one anchor (F) into each pilot hole using a hammer, making sure that the anchor is flush with the wall.
3. Partially install one 5/16 x 2-3/4" flanged lag bolt (E) into pilot hole but do not tighten to wall.
4. Hang outside wall upright (A) [or center wall upright (B)] aligning upper mounting slot over lag bolt and level upright.
5. Place one slotted washer (G) over each flanged lag bolt. (See Figure 8)
6. Tighten lag bolt to secure wall upright (A or B) to wall at upper mounting slot.

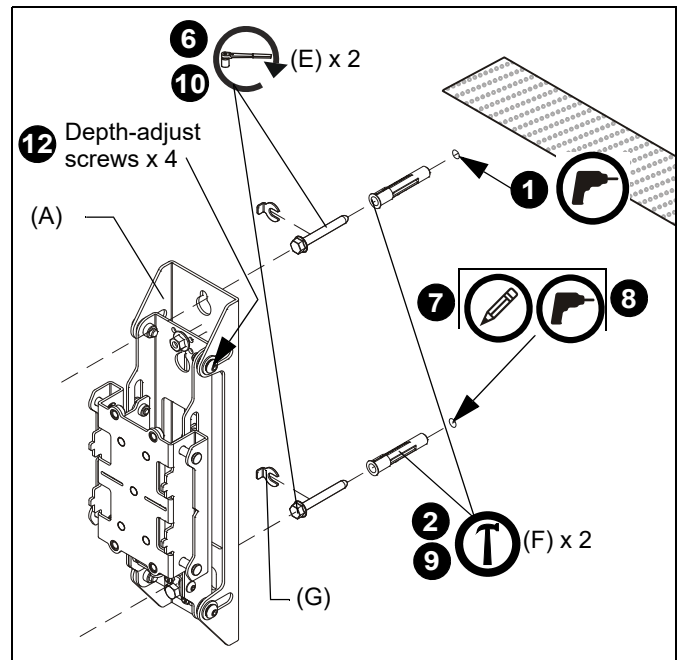


Figure 8

7. Mark the attachment point for the lower mounting slot. (See Figure 8)
8. Drill 3/8" x 3-1/2" (9.5mm x 88.9mm) pilot holes at marking for lower mounting hole. (See Figure 8)
9. Install an anchor (F) into each pilot hole using a hammer, making sure that the anchor is flush with the wall.
10. Use one 5/16 x 2-3/4" flanged lag bolt (E) and one 5/16" slotted washer (G) to attach the wall upright to the wall through the lower mounting hole. (See Figure 8)
11. Repeat Steps 1 through 10 for remaining wall upright(s).
12. Adjust depth of wall uprights, if necessary, so that the face of the wall uprights are all in the same plane across the width of wall upright installation: (See Figure 8)
 - Loosen button head screws (4 places)
 - Adjust depth along depth-adjust slots.
 - Tighten button head screws.

IMPORTANT ! : Be sure to securely tighten depth-adjust screws after adjustment.

13. Proceed to **Mounting Rails** section.

Installing to Steel Stud Walls

1. **Installing BETWEEN steel studs into 3/4" CDX plywood (covered in 1/2" or 5/8" drywall):** Use two 1/4-20 BB Snaptoggle anchors with two minimum 2-1/2" long, minimum Grade 5 screws through wall upright into plywood. (Hardware not included.) (See Figure 9)
2. **Installing into CDX plywood (covered in 1/2" or 5/8" drywall) AND steel stud:** Use two 1/4-20 BB Snaptoggle anchors with two minimum 2-1/2" long, minimum Grade 5 screws through wall upright and into plywood and steel stud. (Hardware not included.) (See Figure 9)
3. **Installing into steel stud (covered in 1/2" or 5/8" drywall):** Use two 1/4-20 BB Snaptoggle anchors with two minimum 2-1/2" long, minimum Grade 5 screws through wall upright and into drywall and steel stud. (Hardware not included.) (See Figure 9)

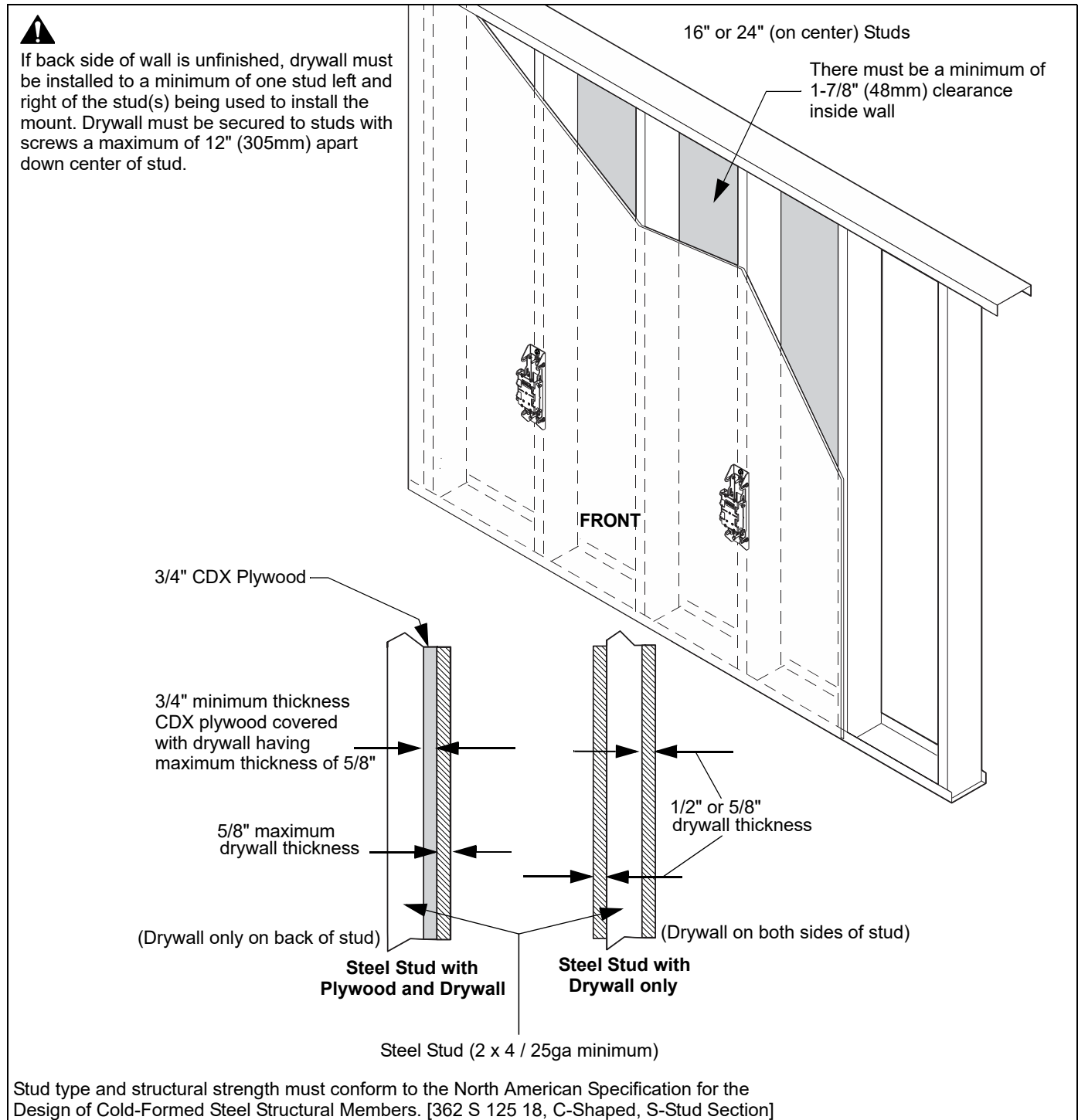


Figure 9

Installing in Steel Stud or in Wood Stud Walls Between Studs

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

1. Drill one 1/2" x 1" hole at marked location on wall. (See Figure 10)

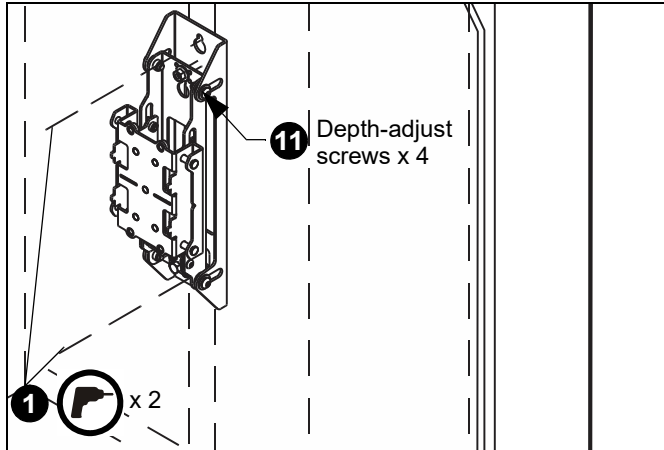


Figure 10

2. Hold metal channel on Toggler® 1/4-20 Snap-Toggle (not included) flat alongside plastic straps and slide channel through hole. (See Figure 11)

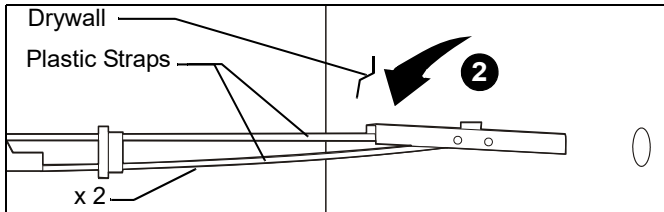


Figure 11

3. Holding plastic straps on anchor, pull anchor away from wall until channel rests flush behind wall making sure anchor channel is positioned vertically on steel stud (if present). (See Figure 12)
4. Slide plastic cap on anchor towards wall until flange of cap is flush with wall. (See Figure 12)

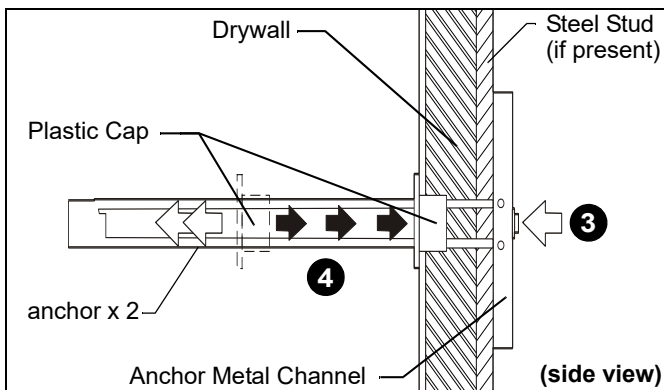


Figure 12

5. Snap off plastic straps on anchor at wall by pushing side to side, snapping off straps level with flange of plastic cap. (See Figure 13)

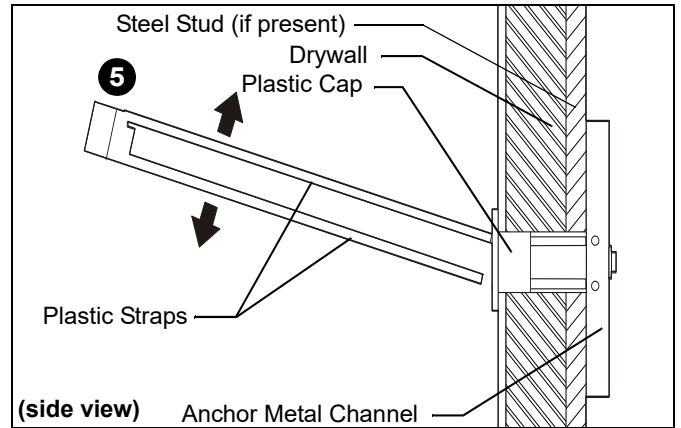


Figure 13

6. Place wall bracket over anchor and align mounting hole in wall bracket with hole in anchor. (See Figure 14)
7. Insert minimum Grade 5 minimum 2-1/2" long screw (not included) through Grade 2 or better 1/4" washer (not included), corresponding mounting hole on wall bracket and into Snap-Toggle (not included) and tighten until flush against mount. DO NOT over tighten! (See Figure 14)

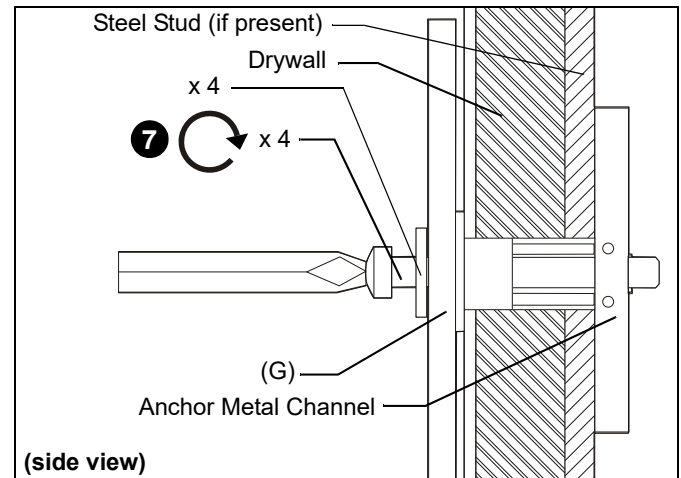


Figure 14

8. Level wall bracket using attached bubble level.
9. Make any necessary corrections to remaining mounting hole marking(s).
10. Repeat Steps 2 through 8 for remaining mounting hole(s).
11. Adjust depth of wall uprights, if necessary, so that the face of the wall uprights are all in the same plane across the width of wall upright installation: (See Figure 10)
 - Loosen button head screws (4 places)
 - Adjust depth along depth-adjust slots.
 - Tighten button head screws.

IMPORTANT ! : Be sure to securely tighten depth-adjust screws after adjustment.

12. Proceed to **Mounting Rails** section.

Mounting Rails

- Slide height adjust plates (C) into open end of mounting rail. (See Figure 15)

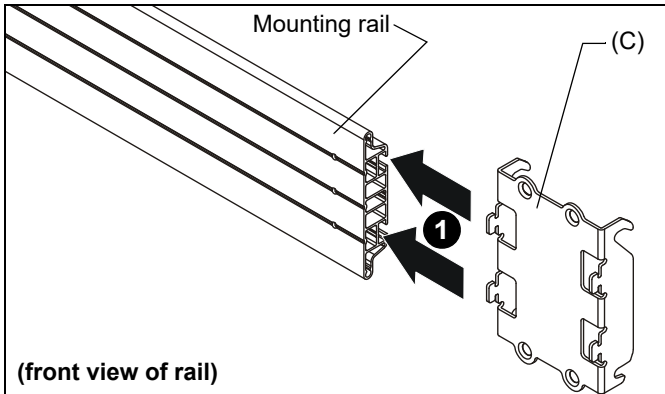


Figure 15

- Hook height adjust plates (C) over wall uprights (A or B). (See Figure 16)

NOTE: Hook all height adjust plates (C) over wall uprights (A or B), and approximately center mounting rail over the span of the wall uprights (A or B) **BEFORE** proceeding to next step.

- Fasten mounting rail to wall uprights using four 5/16 x 1/2" Phillips flat head screws (D) through height adjust plate (C) and into wall uprights (A or B) and tighten all screws. (See Figure 16)

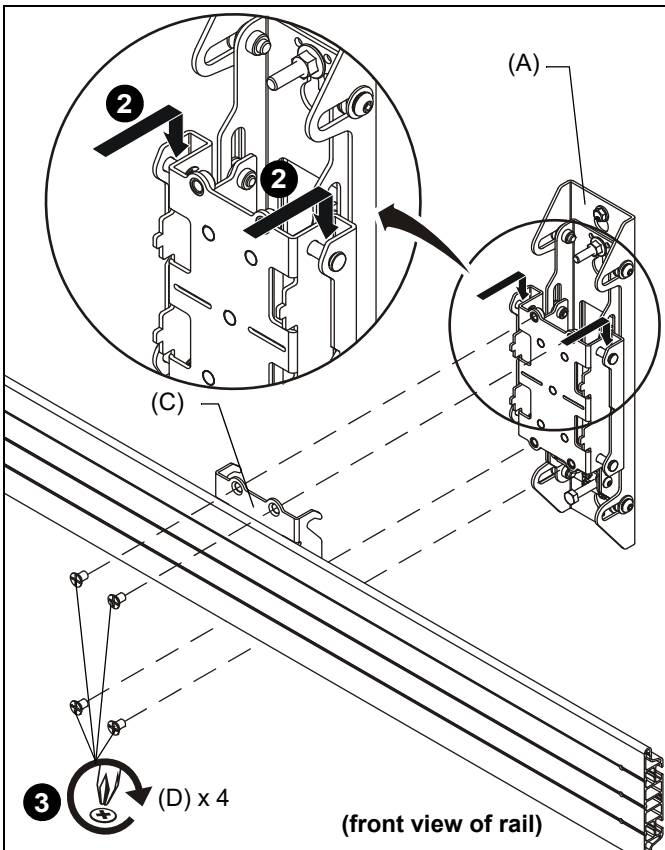


Figure 16

- Attach one remaining end cap following FMSECAP installation instructions.

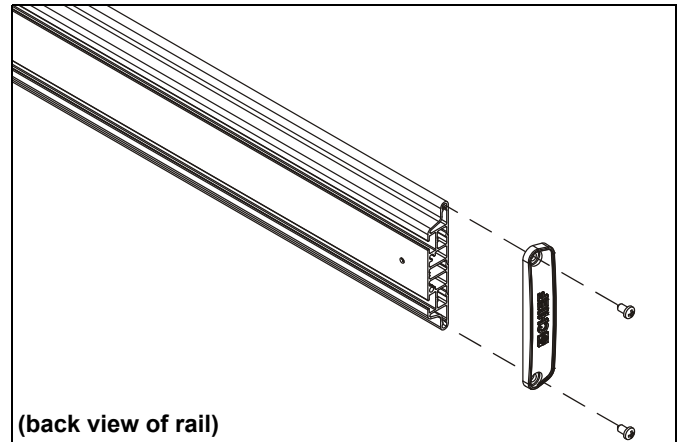


Figure 17

Adjust and Level Mounting Rail

- Adjust the height of the mounting rail via the wall upright, as necessary, to level the mounting rail on the wall. (See Figure 18)
 - Turn the wall upright height-adjust screw **clockwise** (viewed from bottom) to **raise** the mounting rail.
 - Turn the wall upright height-adjust screw **counter-clockwise** (viewed from bottom) to **lower** the mounting rail.
- Adjust the depth of the mounting rail via the wall upright, as necessary, to make the mounting rail distance from the wall consistent.
 - Loosen depth-adjust button head screws, and move mounting rail away from or toward the wall, as necessary.
 - Tighten depth-adjust button head screws.

IMPORTANT ! : Be sure to securely tighten depth-adjust screws after adjustment.

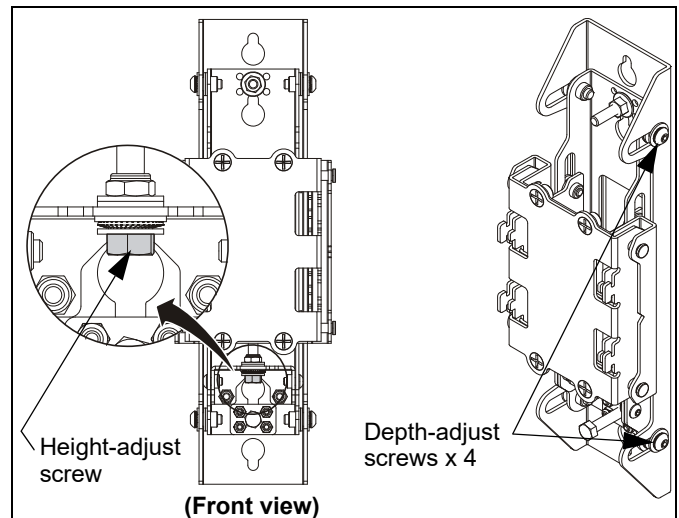


Figure 18



Our Mounts. **Your Vision.**

Chief, a products division of
Milestone AV Technologies

8800-003031 Rev00
©2018 Milestone AV Technologies
www.milestone.com
07/18

USA/International	A 6436 City West Parkway, Eden Prairie, MN 55344 P 800.582.6480 / 952.225.6000 F 877.894.6918 / 952.894.6918
Europe	A Franklinstraat 14, 6003 DK Weert, Netherlands P +31 (0) 495 580 852 F +31 (0) 495 580 845
Asia Pacific	A Office No. 918 on 9/F, Shatin Galleria 18-24 Shan Mei Street Fotan, Shatin, Hong Kong P 852 2145 4099 F 852 2145 4477

