

## Assembly Instruction

### **WARNING**

**Serious or fatal crushing injuries can occur from furniture tipover. To reduce the risk of tipover:**

- ALWAYS install all tipover restraints provided.
- Do not install any modules onto frame until frame is permanently anchored.
- Place heaviest items in the lowest shelves and drawers.
- NEVER open more than one drawer at a time.
- NEVER set TVs or other heavy objects on top of this product.
- NEVER allow children to climb or hang on furniture.
- Failure to detach restraints before moving furniture may result in injury or damage.

**Use of tipover restraints may only reduce, but not eliminate, the risk of tipover.**

**LOCHLYN  
FREESTANDING FRAME  
BUILD**

**All** frame units from three (3) tiers through six (6) tiers are **required to be permanently anchored** to the floor (see Floor Anchoring Method pgs. 7 - 8; steps F1-F7) or wall (see Wall Anchoring Method pgs. 9 - 12; steps W1-W9), regardless of configuration, usage, or if multiple units are ganged together.

**Read these instructions before using this product. Failure to follow the instructions and safety precautions in this manual can result in injury or damage to equipment.**

**KEEP THIS MANUAL IN A SAFE PLACE  
FOR FUTURE REFERENCE**

If you have any questions concerning these instructions, please call National Customer Service 800.482.1717.

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## Assembly Instruction

**1** Unpack frame sub-assembly sections and spread out for access and identification in the later steps of assembly (**Figure A**).

Model Assembly Instruction Sheet ("Model AI Sheet") includes frame dimension references and parts list for specific model.

**2** Select a frame sub-assembly and move to work area. Lay the assembly horizontally on the worksurface. Note the 3-hole pattern features (**Figure B**) at the different levels. Retrieve the junction blocks (**Figure C**) and position one at each 3-hole pattern so that the protruding features (bosses) engage the upper and lower hole of each pattern (**Figure D**). The protruding (boss) features will be a press fit into the holes.

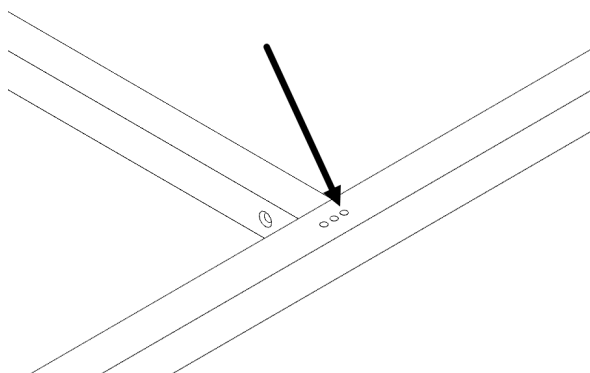


FIGURE B

**3** Retrieve the pack of screws from the hardware kit. At each junction block, start and tighten a screw through the cavity in the junction block (**Figure D**) and into the frame. This will secure the block to the vertical frame section.

**CAUTION:** An impact driver may be used but excessive driving can strip the threads in the frame. Stop driving immediately after there's audible impacts to avoid stripping the screws. If a drill driver is used, a lower clutch setting should be used to avoid stripping the screws.

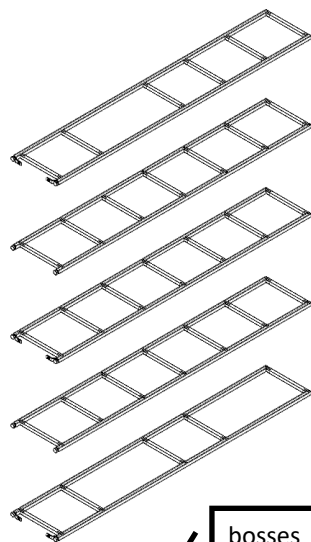


FIGURE A

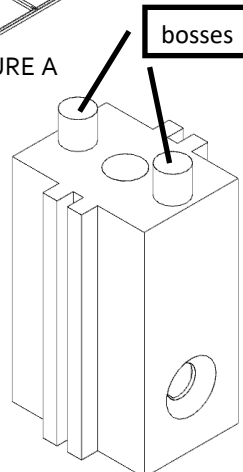


FIGURE C

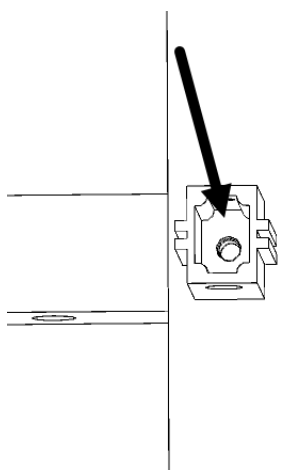


FIGURE D

### LOCHLYN FREESTANDING FRAME BUILD

#### TOOLS REQUIRED

IMPACT DRIVER OR DRILL DRIVER  
#2 PHILLIPS BIT

#### TOOLS REQ. (FLOOR ANCHORING)

HAMMER DRILL  
DRILL DRIVER

#### TOOLS REQ. (WALL ANCHORING)

IMPACT DRIVER OR DRILL DRIVER  
9/64" DRILL BIT

#### HARDWARE

M4 X 12MM THREAD FORMING  
SCREWS

QTY VARIES BY MODEL

#### JUNCTION BLOCKS

QTY VARIES BY MODEL

#### PLASTIC CAPS

QTY VARIES BY MODEL

#### HARDWARE (FLOOR ANCHORING)

SEE PG. 8 FOR RECOMMENDATIONS

#### HARDWARE (WALL ANCHORING)

M4 X 12MM THREAD FORMING  
SCREWS

QTY VARIES BY MODEL

#### STEEL 90 DEGREE BRACKETS

QTY VARIES BY MODEL

#### 3/16" X 11" FLAT NYLON STRAP

QTY VARIES BY MODEL

SEE PG. 10 FOR WALL FASTENER  
RECOMMENDATIONS

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- 4** If applicable, flip over frame section (**Figure E**) and repeat steps 2 & 3 for any 3 hole patterns on the 2nd side (**Figure F**).

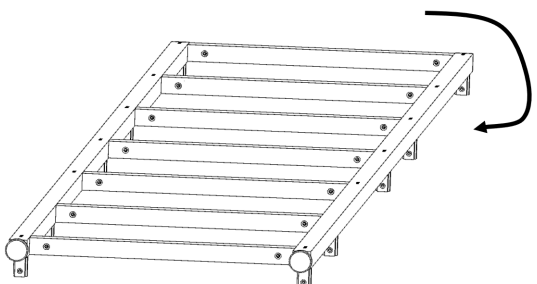


FIGURE E

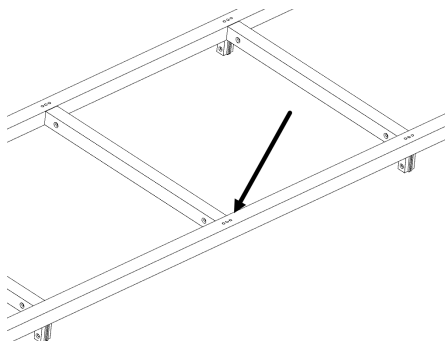


FIGURE F

- 5** Repeat steps 2-4 on remaining frame sections. All three-hole patterns must have a junction box screwed in as noted in step 3. There shouldn't be any remaining junction blocks from the hardware bag or open 3 hole patterns after these steps are complete (**Figure G**).

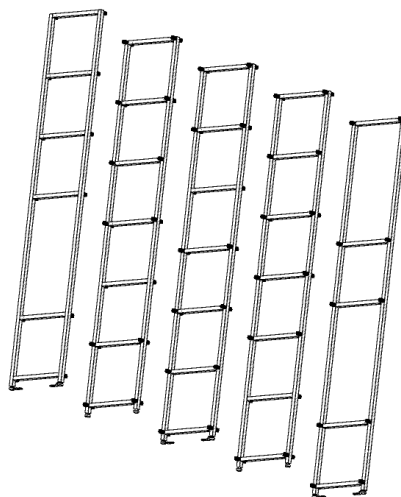


FIGURE G

- 6** Retrieve the Model A1 Sheet with image of assembled unit. Use this to identify the position of each sub-assembly with respect to the finished unit. Arrange the sub-assemblies in that order on the ground to facilitate assembly of the horizontal bars (**Figure H**).

**Note 1:** End assemblies only have junction blocks on one side.

**Note 2:** For each horizontal frame section, there will be a matched pair of junction blocks on either side of the frame.

**Note 3:** The sub-assemblies should be oriented so that the glides will be at the bottom of the assembled unit.

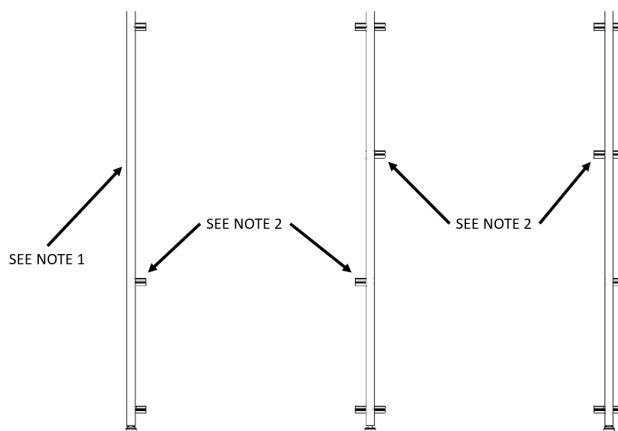


FIGURE H

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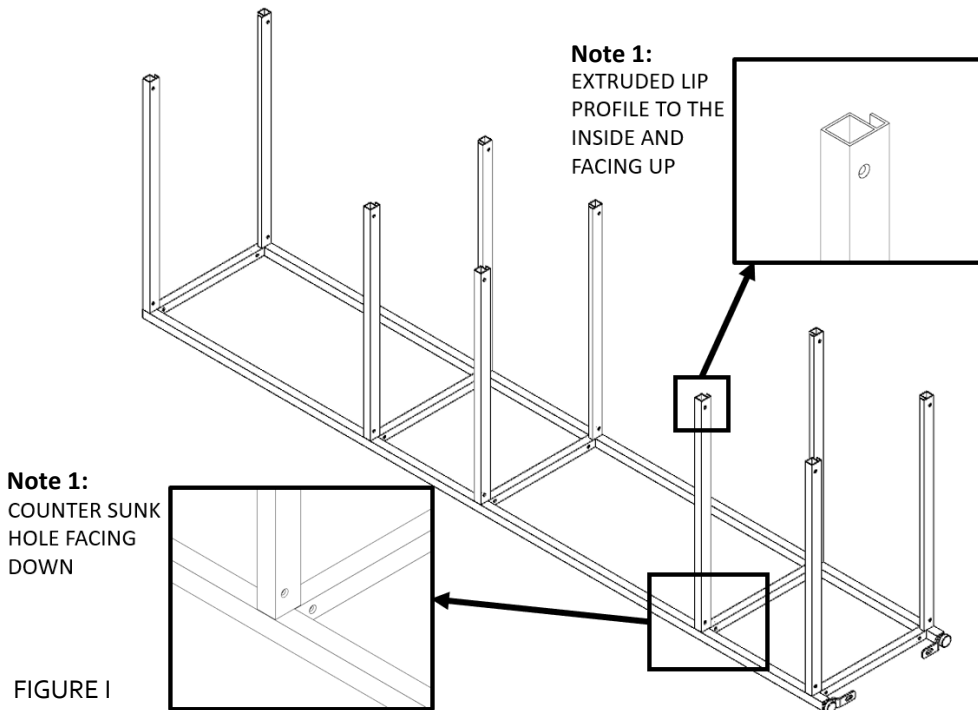
## Assembly Instruction

**7** Begin with one of the end frame sections and place the appropriate horizontal bars over the junction blocks (**Figure I**).

**Note 1:** Ensure the horizontal bars are aligned properly. The extruded lip (if applicable) should face the interior of the frame section and the counter sunk holes should face down towards the glides.

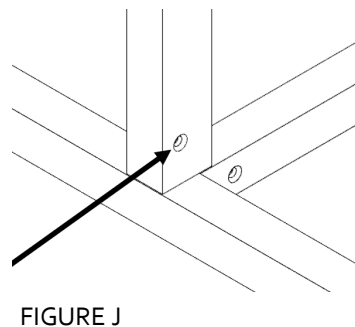
**Note 2:** On some frame units, there are different length horizontal bars from one column to the next. Reference the Model AI Sheet to determine which length bar is correct.

**⚠ CAUTION:** Do not deviate from the provided Model AI Sheet and install different frame lengths to different columns. This will cause issues with installation of modules and shelves and will make the unit unstable.



**8** Start and tighten a screw through the horizontal bar into the junction block to secure the bar to the frame (**Figure J**). Install all bars to this sub-assembly section.

**⚠ CAUTION:** An impact driver may be used but excessive driving can strip the threads in the block. Stop driving immediately after there is audible impacts. If a drill driver is used, a lower clutch setting is recommended. Stripping the threads in the junction blocks will render the unit unstable.



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**9** Lay the next section of frame overtop of the horizontal bars of the previous section. Starting from one end, push the horizontal bars around until the protruding (boss) features of the junction blocks are fully inserted into the holes of the horizontal bars. Work your way down the levels until all junction blocks are fully secured to the horizontal bars of the frame. The vertical sub-assembly should be flush with the horizontal bars of the frame (**Figure K**).

**Note:** While assistance is helpful and advisable for building frame units, once the frame section to be installed is positioned on top of the horizontal members, it is easier if only one person adjusts the bars to seat the blocks into the frame. During this step, others helping should act as spotters.

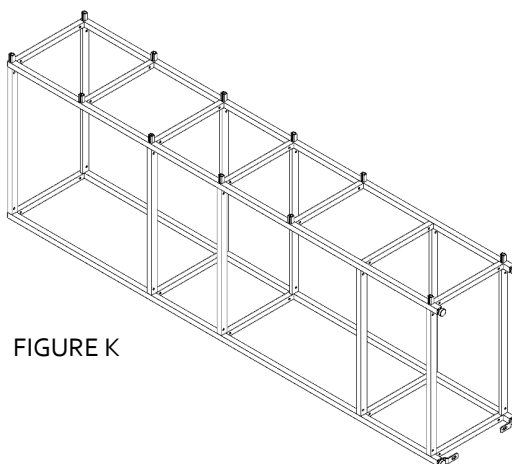


FIGURE K

**10** Install screws at each of the junction blocks to secure the sub-assembly to the frame (**Figure L**).

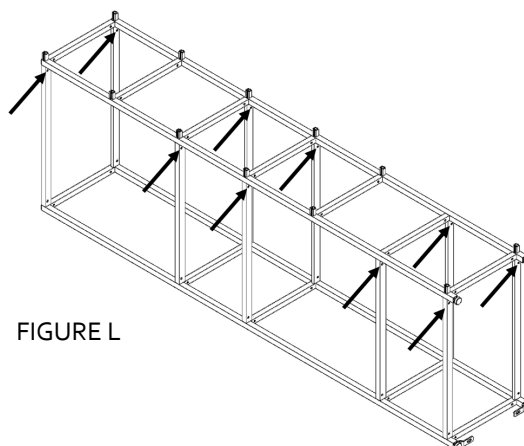


FIGURE L

**11** Repeat steps 7-10 until all horizontal bars and sub-assembly sections are installed. Ensure all horizontal bars and sub-assembly sections are in correct alignment (**Figure M**).

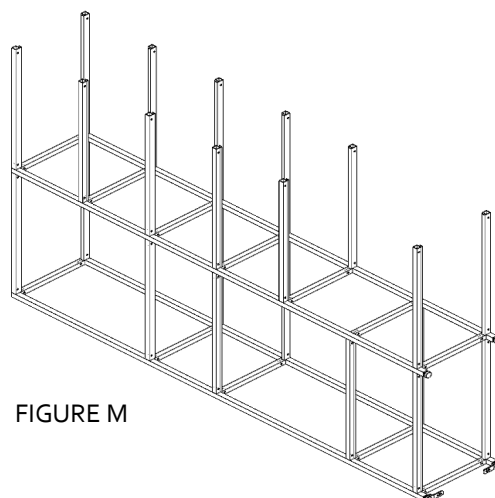


FIGURE M

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- 12** With all frame sections installed, carefully stand the frame assembly upright onto its glides (**Figure N**).

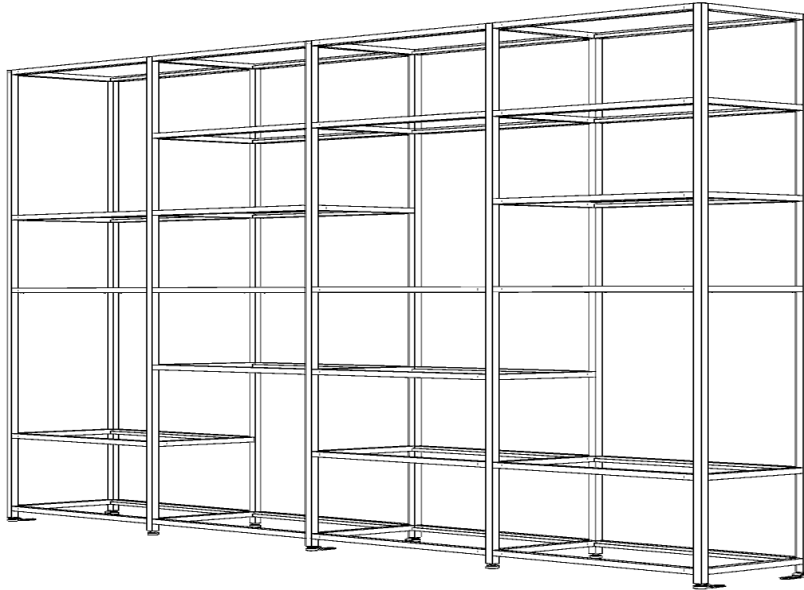


FIGURE N

- 13** Install plastic caps from hardware bag on the top of each vertical section (**Figure O**).

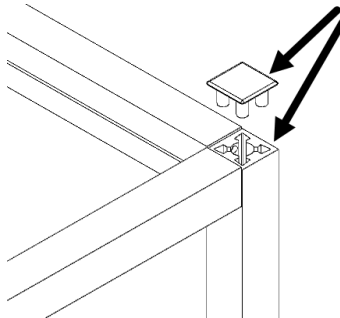


FIGURE O

- 14** Position frame unit in final installation location and level the unit with the glides by extending them no further than their midpoint.

**⚠ CAUTION:** Do not extend glides beyond 13mm (0.5in) from the glide's fully retracted position. Extending glides more than 13mm (0.5 in) can make the shelving unit unstable.

If installing a **one (1) or two (2)** tier unit, this completes installation of the frame. If installing a **three (3) through six (6)** tier unit, continue to Anchoring Requirements.

**All** frame units from three (3) tiers through six (6) tiers are **required to be permanently anchored** to the floor (see Floor Anchoring Method pgs. 7 - 8; steps F1-F7) or wall (see Wall Anchoring Method pgs. 9 - 12; steps W1-W9), regardless of configuration, usage, or if multiple units are ganged together.

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## ANCHORING REQUIREMENTS

## Assembly Instruction


### WARNING

Serious or fatal crushing injuries can occur from furniture tipover. To reduce the risk of tipover:

- ALWAYS install all tipover restraints provided.
  - Do not install any modules onto frame until frame is permanently anchored.
  - Place heaviest items in the lowest shelves and drawers.
  - NEVER open more than one drawer at a time.
  - NEVER set TVs or other heavy objects on top of this product.
  - NEVER allow children to climb or hang on furniture.
  - Failure to detach restraints before moving furniture may result in injury or damage.
- Use of tipover restraints may only reduce, but not eliminate, the risk of tipover.**

Wall anchors are only to be used when unit is parallel to the wall. Floor anchoring must be used for perpendicular layouts. If choosing the wall anchoring method, the floor anchor plates can be removed from the unit.

All frame units from three (3) tiers through six (6) tiers are **required to be permanently anchored** to the wall (see Wall Anchoring Method) or floor (see Floor Anchoring Method) regardless of configuration, usage, or if multiple units are ganged together.

 **WARNING: Tip Over Hazard.** **Do not** install drawer modules above the third (3rd) tier. Installation of drawers above three (3) tiers can lead to instability and injury from unit tipping over.

### Floor Anchoring Method

All frames will have at least four (4) anchor plates mounted to the floor glides on both end frame sections. 90" and 96" units **must** have six (6) floor anchor plates total.

90" units have two (2) additional floor anchor plates on the interior sections. One (1) on each section that are mounted on the opposite sides from the other (**Figure P**). If both plates are on the same side. Uninstall one (1) plate and re-install it to the glide on the opposite side. 96" units have two (2) additional floor anchor plates; both are mounted on the middle section (**Figure Q**). See Model AI Sheet for reference on anchor plate.

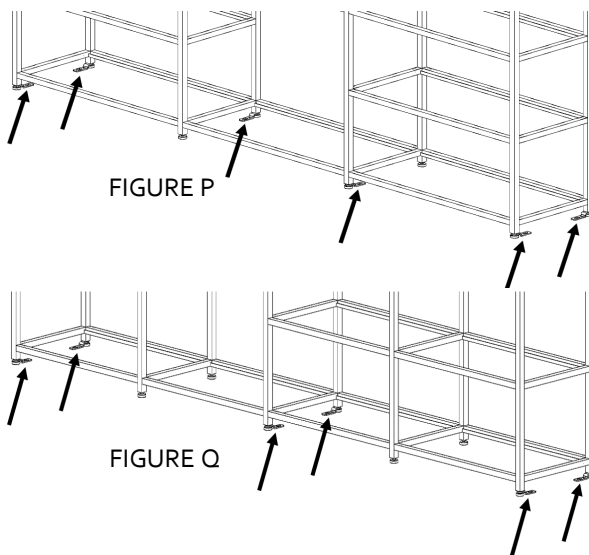
Contact Customer Service if anchor plates are missing or damaged. **Do not** install frames with less than the required number of plates.

### WARNING:

**Tip Over Hazard.** **Do not** install shelves, modules, or tops onto the frame until it is leveled and permanently anchored.

Installation before permanent anchoring can lead to instability and injury from unit tipping over.

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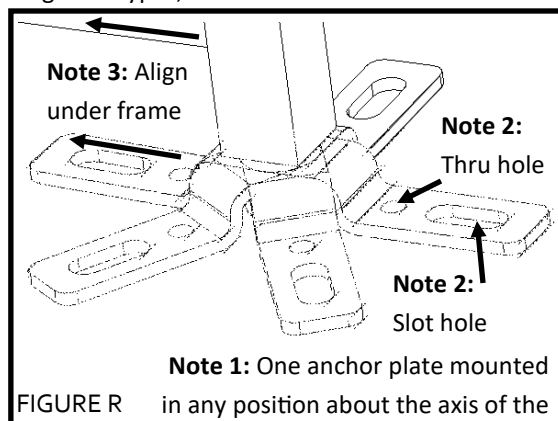


## Assembly Instruction

**F1** Anchor plates can be mounted with either a bolt or screw depending on the sub-floor. See table (Figure S) for recommended hardware for various floor types. If there are any questions concerning floor types, consult an architect or structural engineer.

**Note 1:** Anchor plates can be mounted in any position about the glide to which they are attached.

**Note 2:** There are two mounting locations on the anchor plate. The thru hole is sized for #8 screws and the slot is sized for 1/4" bolts and screws, as described in the recommended fastener table below.



**Note 3:** To minimize visual impact of required anchors, align the anchor plate in-line and directly underneath the cross-bar of the sub-assembly frame section, that runs front to back. A bolt is required in this scenario as there is wrench access only.

RECOMMENDED FASTENER		
FLOOR TYP. / FASTENER DESCRIPTION	SIZE	MODEL #
WOOD		
PAN HEAD SHEET METAL SCREW	#8 X 2 1/4" PHP	
NUT AND BOLT (THRU FLOOR)	1/4"	

CONCRETE		
CROWN BOLT W/ LAG SHIELD	1/4" X 2 1/4"	
BUILDEX TAPCON CONCRETE ANCHOR SCREW	1/4" X 2 3/4"	24385

FIGURE S

**F2** With frame in final installed location, position the anchor plates where they are to be installed.

**Note:** If joining multiple units with a ganging kit, build and position all frames in their final location, then install ganging kits prior to anchoring.

**F3** Mark locations to drill out pilot holes for each of the anchor plates.

**F4** Move frame out of the way and drill appropriate pilot holes for the fastener selected. (If applicable) start concrete anchors into pilot holes.

**F5** Reposition frame back into final installation location. Check that the frame is still level and adjust if necessary.

**F6** Install anchor fasteners to clamp down anchor plates and finish the installation. The frame is ready for use at this point.

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## Assembly Instruction

### Wall Anchoring Method

**⚠ WARNING: Tip Over Hazard.** Do not install shelves, modules, or tops onto the frame until it is leveled and permanently anchored. Installation before permanent anchoring can lead to instability and injury from unit tipping over.

Wall anchors are only to be used when unit is parallel to the wall. Floor anchoring must be used for perpendicular layouts. If choosing the wall anchoring method, the floor anchor plates can be removed from the unit.

**All** frame units from three (3) tiers through six (6) tiers are **required to be permanently anchored** to the floor (see Floor Anchoring Method pgs. 7 - 8; steps F1-F7) or wall (see Wall Anchoring Method pgs. 9 - 12; steps W1-W9) regardless of configuration, usage, or if multiple units are ganged together.

**Note 1:** National defines a structural wall as a load-bearing wall constructed of materials such as: poured concrete, concrete block, or studs. Wood studs must be a nominal 2" x 4" size minimum. Metal studs must be "C" channel, 20-gauge thick minimum. Metal or wood studs must be on centers no greater than 24" and have maximum height of 14' restrained at floor and ceiling. Interior walls shall be designed to resist not less than a force of 5 lbs. per square foot applied perpendicular to wall. The deflection of such wall under a load of 5 lbs. per square foot shall not exceed 1/240 of the span for walls with brittle finishes, and 1/120 of the span for walls with flexible finishes (per uniform building code section 2390B). If you have any questions concerning your load-bearing structures, please consult your architect or structural engineer.

All frames will have one (1) wall anchor hardware set per vertical upright frame section, included in the hardware kit. All wall anchor sets must be attached to a stud, or drywall or concrete anchors.

**Note 2:** If joining multiple units with a ganging kit, build and position all frames in their final location, then install ganging kits prior to anchoring.

Contact Customer Service if wall anchor hardware is missing or damaged. Do not install frames with less than the required number of anchors.

**Note 3:** Align the wall anchor plates behind the vertical frame members (Figure T) to reduce visibility. However, if necessary to attach an anchor properly to a wall stud, the wall anchor brackets can be installed horizontally (Figure U), where a small portion of the bracket will be visible.

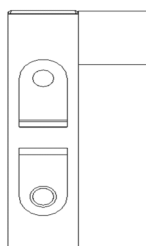


FIGURE T

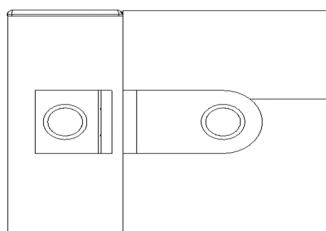


FIGURE U

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## Assembly Instruction

**W1** Reference fastener table (**Figure V**) for recommended hardware for various wall construction types. Select the hardware and install to the wall using all of the wall anchors provided following the next steps.

HARDWARE RECOMMENDATION		
WALL/FASTENER DESCRIPTION	SIZE	MODEL #
<b>Steel Stud:</b> (1/2" to 3/4" drywall)		
Hilti HTB-2 Anchor equivalent	3/16" X 2 1/2" Grade 5, or Grade 5 equivalent bolt with minimum head height of 0.134"	3588749
<b>Wood Stud:</b> (1/4" to 1/2" drywall) (meets or exceeds ANSI/ASME B18.6.4 and SAE J933)		
Panhead sheet metal screw	#10-2" PHP	
<b>Dry Wall:</b> (1/2" to 3/4" drywall)		
Hilti HTB-2 Anchor equivalent	3/16" X 2 1/2" Grade 5, or Grade 5 equivalent bolt with minimum head height of 0.134"	3588749
<b>Solid Masonry:</b>		
Buildex Tapcon concrete anchor equivalent	3/16" X 2 1/4"	24360
<b>Masonry Block:</b>		
Hilti HTB-2 Anchor equivalent	3/16" X 2 1/2" Grade 5, or Grade 5 equivalent bolt with minimum head height of 0.134"	3588749
Buildex Tapcon concrete anchor equivalent	3/16" X 2 1/4"	24360

FIGURE V

**W2** Attach one (1) bracket to **each** aluminum vertical frame section on the back of the unit, one (1) inch from the top of the vertical tubing (**Figure W**), by drilling a 9/64" pilot hole into the vertical frame. Fasten the mounting bracket to the frame using the M4x12mm screw provided.

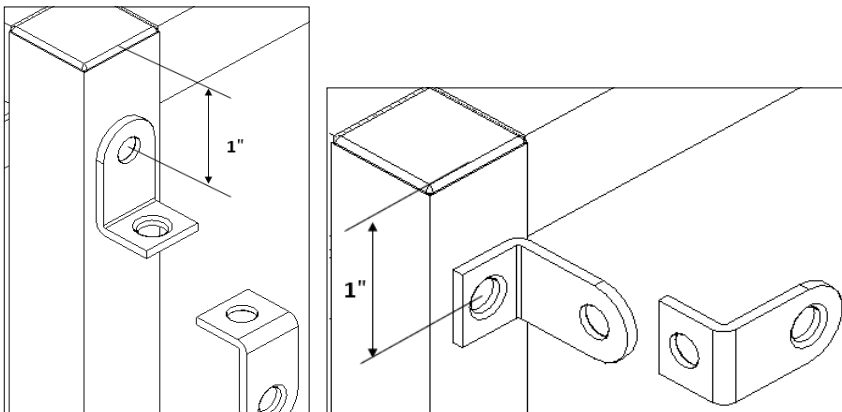


FIGURE W

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**W3** Carefully orient the freestanding frame unit with the frame-back towards the wall and position in the approximate installed location. Level the unit while adjusting to the final install position.

**W4** Mark the wall to locate the wall brackets vertically in line with the frame tubing, or horizontally where necessary to reach a stud.

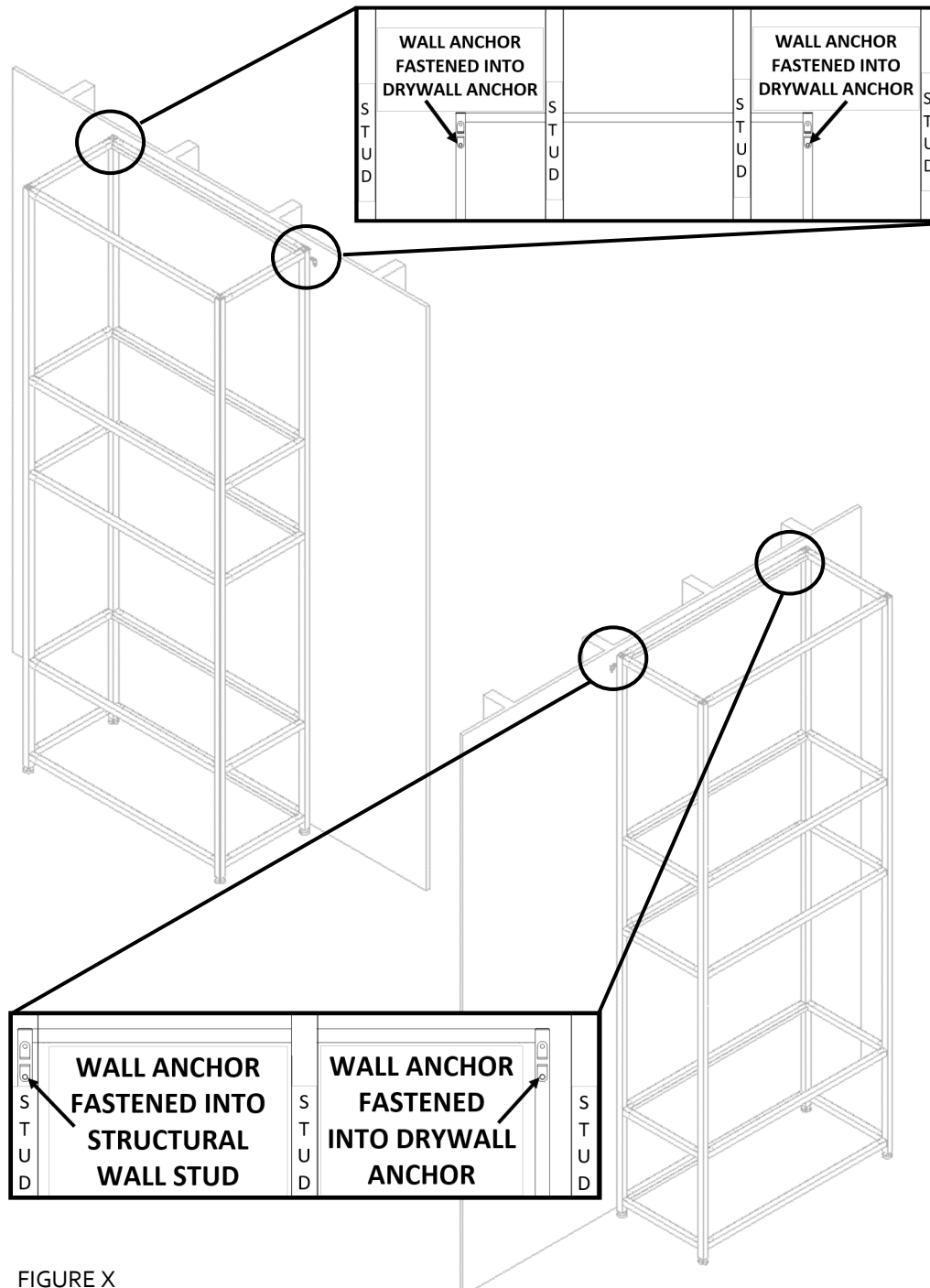


FIGURE X

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**W5** Attach the wall anchor bracket to the wall using the wall fastener selected (with reference to the hardware recommendation in section W1), 1 3/4" from the mounting bracket fastener that is secured to the back of the unit (**Figure Y**).

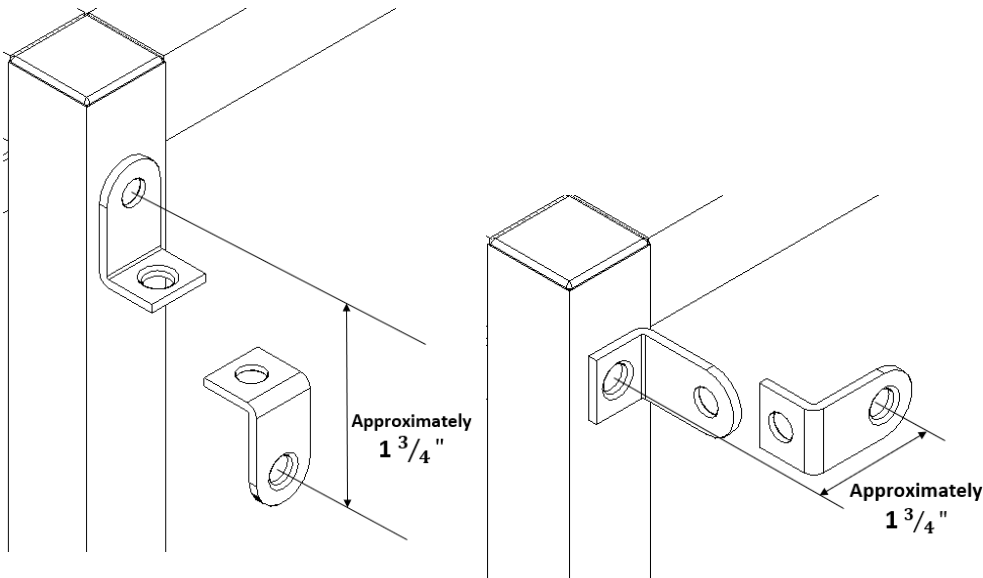


FIGURE Y

**W6** Reposition the freestanding frame into the final installation position so all mounting brackets are in line vertically, or horizontally, based on required installation orientation. Check that the frame is still level and wall anchor brackets align and adjust if necessary.

**Note:** The unit shall be **no greater** than three (3) inches from the wall to properly lace and lock the restraint strap.

**W7** Insert the end of the wall anchor restraint strap through the hole on the end of both brackets. Bring both ends of restraint strap together and slide the flat end through the locked end with smooth strap surface facing outward (**Figure Z**) and pull it through until all slack is removed.



FIGURE Z

**W8** Confirm restraint strap is securely laced and locked and finish the installation. The frame is ready for use at this point.

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