

mediate**technologies**®

*Installation and Assembly
Instruction Guide*

BENCHMARK™

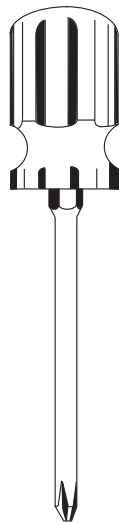
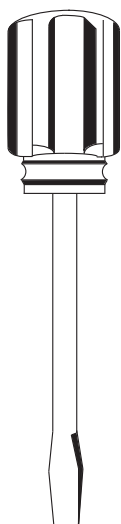


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Wood Frame Shelving

Single Faced

Bookcases - shelving per unit	
Dimension	# of shelves
30" H	1 adjustable
36" H	2 adjustable
42" H	2 adjustable
48" H	2 adjustable
60" H	3 adjustable
72" H	4 adjustable
84" H	5 adjustable
90" H	6 adjustable



Assemble units only as described in this guide.
All screws, nuts & bolts and other fasteners must
be tightened securely and checked regularly.
Failure to do so could cause instability and injury.

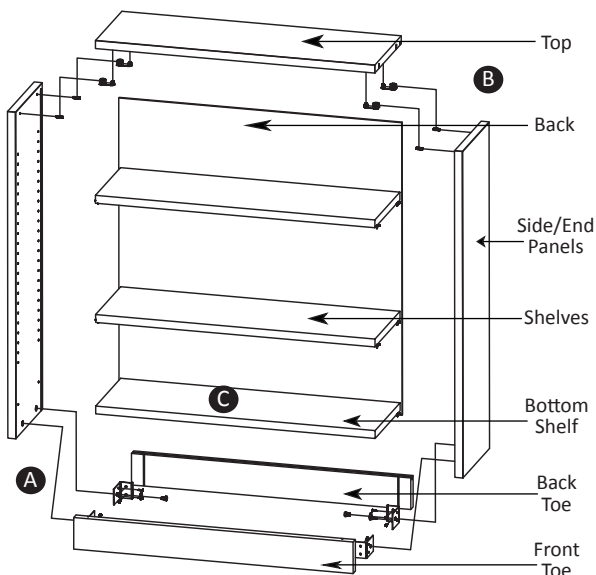
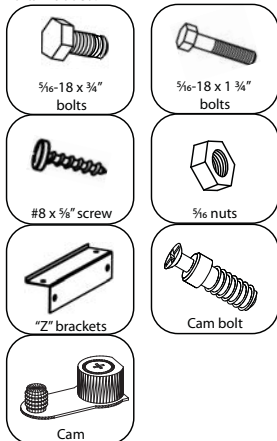
Wood Frame Shelving - Single Faced

General Assembly

Tools Required:

Two 5/16 Wrenches, Phillips Screwdriver

Parts Included:



ATTENTION: UNITS ARE ASSEMBLED STANDING UP

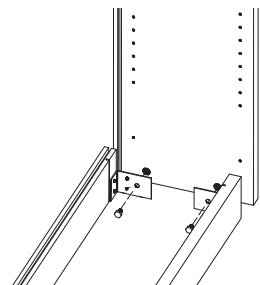
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STEP 1 - Attaching the toes to the sides

For Initial Bookshelf Unit:

Slide a z-bracket into the groove on the back toe and the front toe. Make sure bracket is flush with toe. Screw into both toes using #8 x 5/8" screws. **THEN** bolt z-brackets to end panel using 5/16-18 x 3/4" bolts. Finger tight for now.

- Position back toe with groove facing up and align with groove in side panel.
- Save second end panel for the end of run- if assembling stand alone unit attach second end panel now.

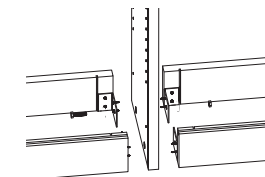


Special applications may require shelving unit be floor-anchored. Failure to do so could cause instability and injury.

For Adder Units:

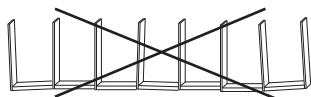
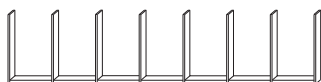
Attach z-bracket to toes and intermediate panel same as above. **THEN** bolt through one z-bracket, intermediate panel and next z-bracket with 5/16-18 x 1 3/4" bolts and nuts. Finger tight.

- Grooves on all initial and adder units should be installed toward the bookshelf back.



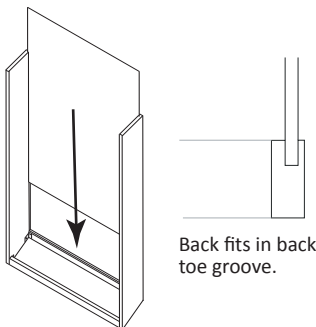
*Lay out all initial, adder and end units but **DO NOT** tighten bolts, yet.*

- All bottoms **must** be level relative to each other shim if necessary.



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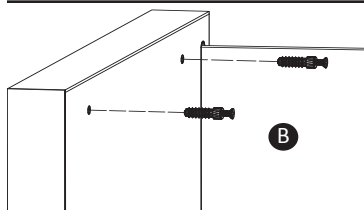
Wood Frame Shelving - Single Faced



STEP 2 - Attaching the backs

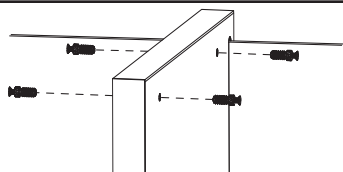
Slip the back into the grooves in the side panels and bottom frame. The side panels will push outward because the bolts on the bottom frame are not tightened.

- Start sliding the back into the groove at a height in which the width of the back will fit in the grooves so as not to scratch the side panels.



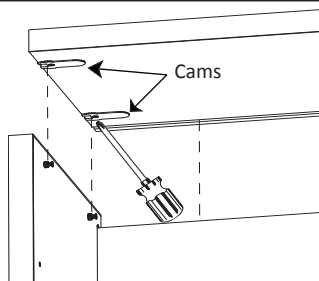
STEP 3 - Attaching the cams

Screw cam bolts into pre-bored holes in top of side panels.



For Adder Units:

Screw cam bolts into pre-bored holes in both sides of top of intermediate panels.



STEP 4 - Attaching the tops

Insert cams into pre-drilled holes in top, then align cams onto the studs and tighten about ¼ turn clockwise.

- A groove in the rear of a single-sided top captures the back panel.

**Do not use a screw gun!*

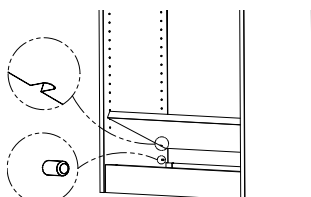


REMEMBER
STEP 5



STEP 5 - Now tighten all bolts!

Go back and tighten all bolts from steps 1 and 2.



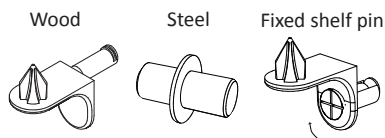
STEP 6 - Attaching the bottom shelf

Slip pin into the holes located near the bottom back side of each side panel (see illustration left). Lower shelf into place so pin fits into groove on underside of shelf. Front of shelf rests on toe.



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Wood Frame Shelving - Single Faced



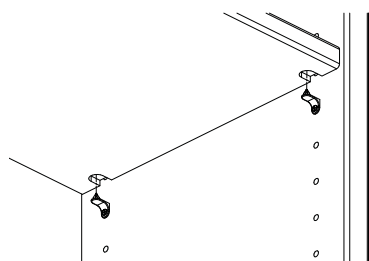
STEP 7 - Installing shelves

For wood shelves: Slip round pin of shelf clips into appropriate line holes in side panels and lower shelf into place so pointed portion of shelf clip is inserted into pre-drilled holes on underside of shelf.

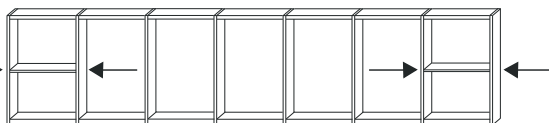
For steel shelves: Slip shouldered pins into aligned holes in side panels and install shelves (4 pins per shelf).

For fixed wood shelves on units 60" and taller:

On shelving units 60" and taller a fixed shelf will be installed at the beginning and end of the run (as shown below). Fixed shelves will receive (4) cams on the underside. Fixed shelves should be placed mid-height of bookcase and attached to the end and intermediate panels using short cam studs into the pre-drilled holes.



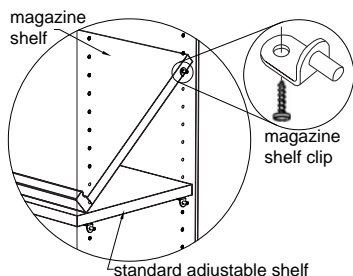
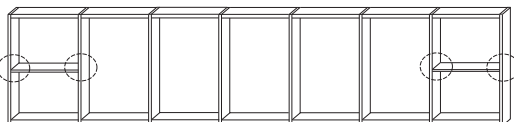
Locate fixed shelves mid-height on each end of shelving run and attach using (4) short cam studs per shelf



For fixed steel shelves on units 60" and taller:

Substitute (4) euro screws for standard steel shelf pins on a middle shelf of the book case at each end of a run

2 euro screws
on each end
of shelf



STEP 8 - Installing magazine shelves

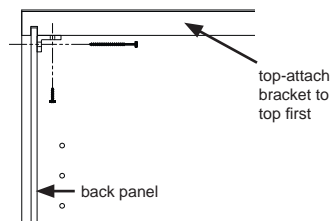
Note: There is one less magazine/standard shelf combo per face than on a similar height standard shelving unit.

Insert one shelf clip into pre-drilled hole in underside of magazine shelf far enough forward so that shelf can rotate freely and secure with a small screw (#8 X 5/8" or equiv.) Place post of shelf clip into appropriate line hole. Now place post of second shelf clip into appropriate line hole on other side and position shelf onto clip. Attach second clip to underside of shelf.

Attaching Single Face Units To Wall

NOTE FOR STABILITY:

For all single faced units, an angle bracket is provided for attaching the bookstack to a wall. **The bracket should be aligned to screw into a support or stud.** Next, position bracket with the longer tab against the underside of the top of the bookcase and make sure the shorter tab is flat against the back of the bookcase. Screw bracket into top of bookcase first using #8 X 5/8" PH screws, then screw into the wall through the back panel - using the appropriate anchor for the wall type.



Make sure bookstack is flat against wall from top to bottom.



Assemble units only as described in this guide. All screws, nuts & bolts and other fasteners must be tightened securely and checked regularly. Failure to do so could cause instability and injury.

Wood Frame Shelving

Double Faced

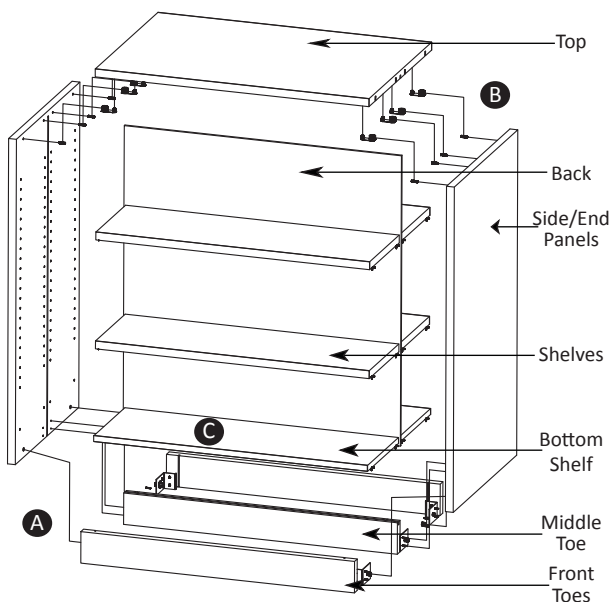
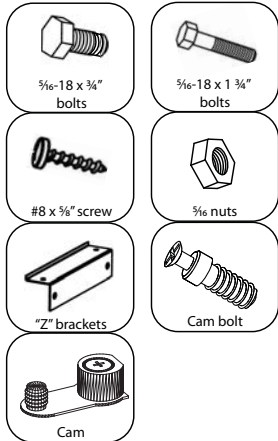


Assemble units only as described in this guide.
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Wood Frame Shelving - Double Faced

General Assembly

Parts Included:



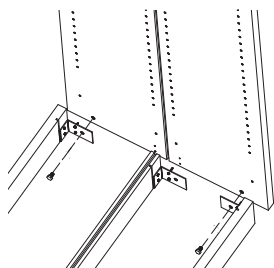
ATTENTION: UNITS ARE ASSEMBLED STANDING UP

STEP 1 - Attaching the toes to the sides

For Initial Bookshelf Unit:

Slide a z-bracket into the groove on each front toe and one side of the middle toe. Screw into all three toes and end panel using #8 x 5/8" pan head wood screws. **THEN** bolt both front toe z-brackets to end panel using 5/16-18 x 3/4" bolts. Finger tight for now. The middle toe has no bolt.

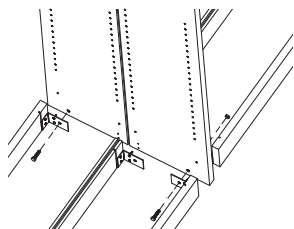
- Position middle toe with groove facing up and align with groove in side panel.
- Save second end panel for the end of run- if assembling stand alone unit attach second end panel now.



For Adder Units:

Attach z-bracket to toes and intermediate panel same as above. **THEN** bolt through one z-bracket, intermediate panel and next z-bracket with 5/16-18 x 1 3/4" bolts and nuts. Finger tight.

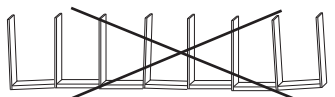
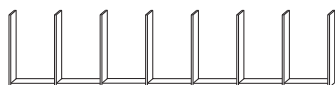
- Position middle toe with groove facing up and align with groove in side panel. Middle toe requires no bolt.



Special applications may require shelving unit be floor-anchored. Failure to do so could cause instability and injury.

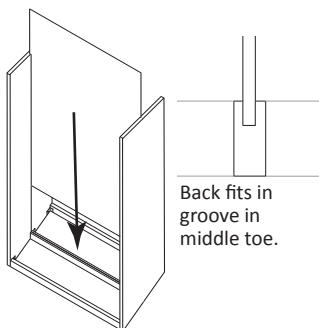
*Lay out all initial, adder and end units but **DO NOT** tighten bolts, yet.*

- All bottoms **must** be level relative to each other shim if necessary.



Assemble units only as described in this guide. All screws, nuts & bolts and other fasteners must be tightened securely and checked regularly. Failure to do so could cause instability and injury.

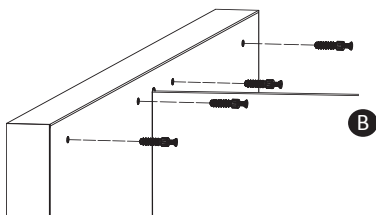
Wood Frame Shelving - Double Faced



STEP 2 - Attaching the backs

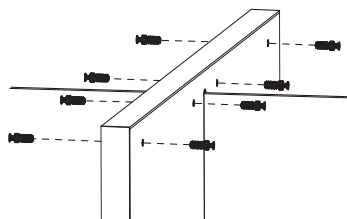
Slip the back into the grooves in the side panels and lower into the groove of the middle toe.

- The side panels will push outward because the bolts on the bottom frame are not tightened. Start sliding the back into the groove at a height in which the width of the back will fit in the grooves so as not to scratch the side panels.



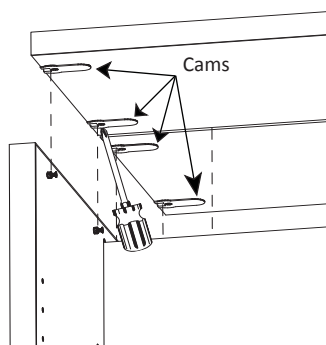
STEP 3 - Attaching the cams

Screw cam bolts into pre-bored holes in top of side panels.



For Adder Units:

Screw cam bolts into pre-bored holes in both sides of top of intermediate panels.



STEP 4 - Attaching the tops

Insert cams into pre-drilled holes in top, then align cams onto cam bolts. Tighten about ¼ turn clockwise.

- A groove in the middle of a double-sided top captures the back panel.

**Do not use a screw gun!*



**REMEMBER
STEP 5**

STEP 5 - Now tighten all bolts and brackets!



Assemble units only as described in this guide. All screws, nuts & bolts and other fasteners must be tightened securely and checked regularly. Failure to do so could cause instability and injury.

Wood Frame Shelving - Double Faced

STEP 6 - Attaching the bottom shelf

Slip pin into the holes located near the bottom back side of each side panel (see illustration left). Lower shelf into place so pin fits into groove on underside of shelf. Front of shelf rests on toe.

C

Step 7 – Installing Shelves

For wood shelves: Slip round pin of shelf clips into appropriate line holes in end panels and lower shelf into place so pointed portion of shelf clip is inserted into pre-drilled holes on underside of shelf.

For steel shelves: Slip shouldered pins into aligned holes in end panels and install shelves (4 pins per shelf).

Make sure shoulder is between shelf and end panel.

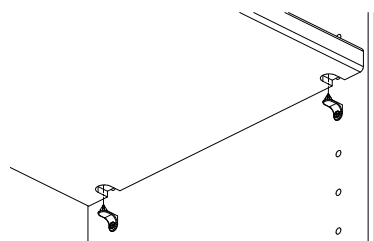
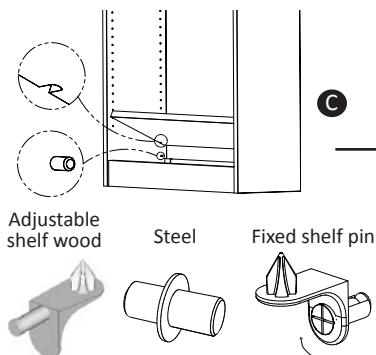
For fixed wood shelves on units 60" and taller:

On shelving units 60" and taller, a fixed shelf will be installed at the beginning and end of the run (as shown below). Fixed shelves will receive (4) fixed shelf supports per shelf that have a swing out cam. Fixed shelves should be placed mid-height of bookcase and attached to the end and intermediate panels. One fixed shelf should be used on each side of double faced units.

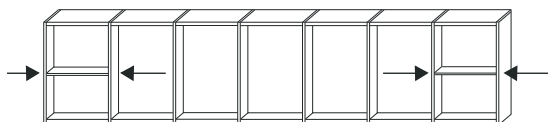
Locate fixed shelves mid-height on each end of shelving run and attach using (4) fixed shelf supports per shelf.

For fixed steel shelves on units 60" and taller:

Substitute (4) Varianta Screws for standard steel shelf pins on a middle shelf of the book case at each end of the run. One fixed shelf should be installed on each side of double unit. Install Varianta Screw w/ #2 Poz Drive.



Fixed adjustable shelf receives routed grooves to accept fixed shelf pin



Varianta Screw

Note: For fixed shelves on mobile units:

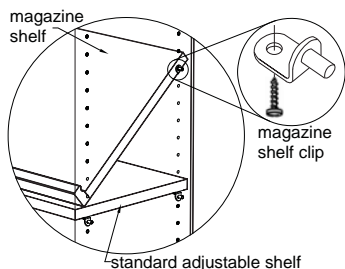
Install fixed wood or steel shelf as indicated above, One fixed shelf is required per mobile unit, not "at each end of the run" as required above.

End panels will bow if fixed shelves are not installed. Failure to install per instructions could result in void of warranty.

STEP 8 - Installing magazine shelves

Note: There is one less magazine/standard shelf combo per face than on a similar height standard shelving unit.

Insert one shelf clip into pre-drilled hole in underside of magazine shelf far enough forward so that shelf can rotate freely and secure with a small screw (#8 X 5/8" or equiv.) Place post of shelf clip into appropriate line hole. Now place post of second shelf clip into appropriate line hole on other side and position shelf onto clip. Attach second clip to underside of shelf.



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Steel Frame Shelving

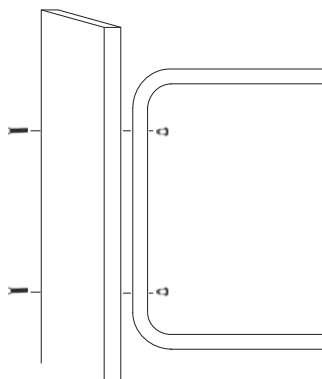
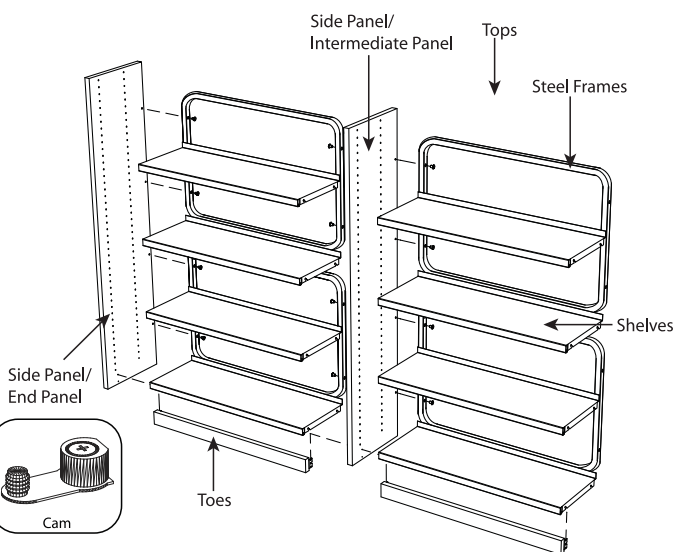
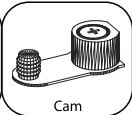
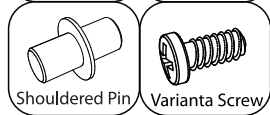
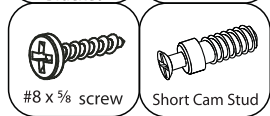
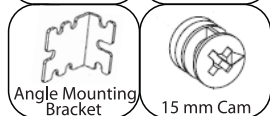
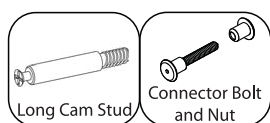
K31 Series



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Steel Frame Shelving

General Assembly:

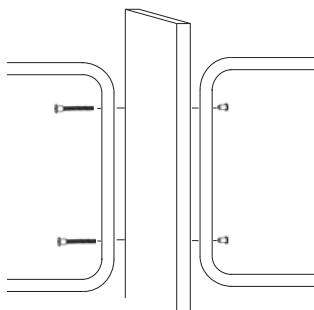


STEP 1 - Attaching side panels to steel frames

For Starter Units:

Attach the tubular steel frames to an end panel using the shorter (1 3/4") connector bolt and nut

- Make sure shelf pin hole lines face in towards shelves
- Single-sided units have specific right and left end panels
- Single and Double-sided units 48" and shorter use 1 tubular frame
- Single and Double-sided units over 48" use 2 tubular frames
- One person assembly can be started on the floor



For Adder Units:

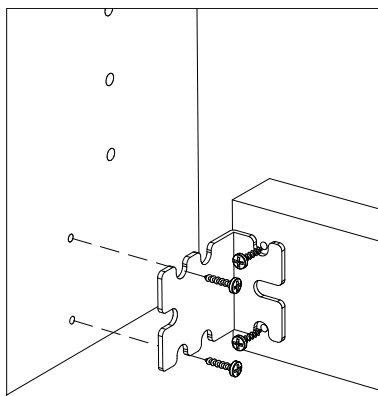
Bolt through one steel frame, then an intermediate panel, then the next steel frame with the longer (2 3/4") connector bolt and nut

- For easier one person assembly you can attach steel frame(s) to end panel and first intermediate panel on the floor. Next attach toes (next page) then stand unit upright before adding additional frames and panels



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Steel Frame Shelving

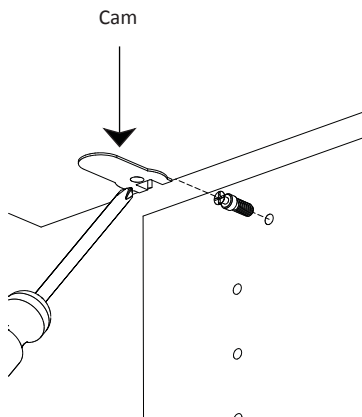


STEP 2 - Attaching the Toes

Attach the angle mounting brackets to either end of the rear face of the toes by screwing the #8 x $\frac{5}{8}$ " screws into the pre-bored holes.

Then screw the toe/bracket assembly to the side panels using more of the #8 x $\frac{5}{8}$ " screws.

- Toes will be offset to the inside of the front edge of the side panels but should be flush with the bottom of the panel.
- One toe is provided for single unit and two toes are provided for each double-sided unit



STEP 3 - Attaching the Tops

Screw the short cam studs into every* pre-bored 5mm holes at the top of each face of each side panel.

- *2 holes in a single end panel, 4 holes in a single intermediate panel or double-sided end panel, 8 holes in an double-sided intermediate panel

Insert cams into pre-drilled holes in top and align onto the studs. Tighten the cam about $\frac{1}{4}$ turn clockwise.

- Make sure the unfinished edge of a single top faces to the rear

****Do not use a screw gun!***



**Do Not Use
Screw Gun**



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Steel Frame Shelving



Varianta Screw

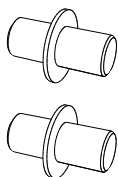
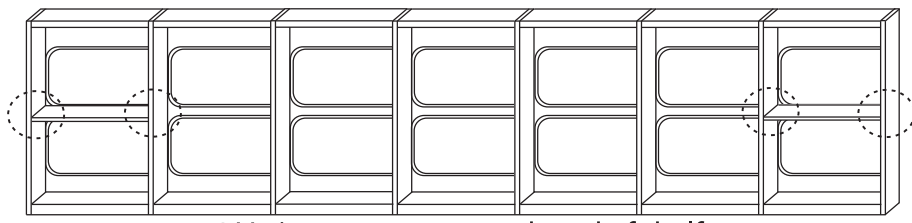
STEP 4 - Installing Fixed Shelves in units 60" and taller

- For Units shorter than 60" skip to STEP 5

VARIANTA SCREWS MUST BE INSTALLED ON TALLER UNITS

Shouldered pins must be replaced with varianta screws on mid-height shelves of the bookcases at both ends of a run

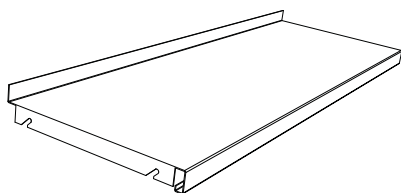
Note: Units not using the optional tops must also substitute euro screws for the top shelf at the beginning and end of a run.



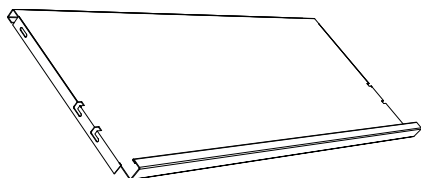
STEP 5 - Installing Shelves

Slip shouldered pins into aligned holes in side panels and install shelves (4 pins per shelf)

- Pins in bottom line holes will hold the bottom shelf just above the toe



Standard K31 Series Shelf



K31 Series Magazine Shelf



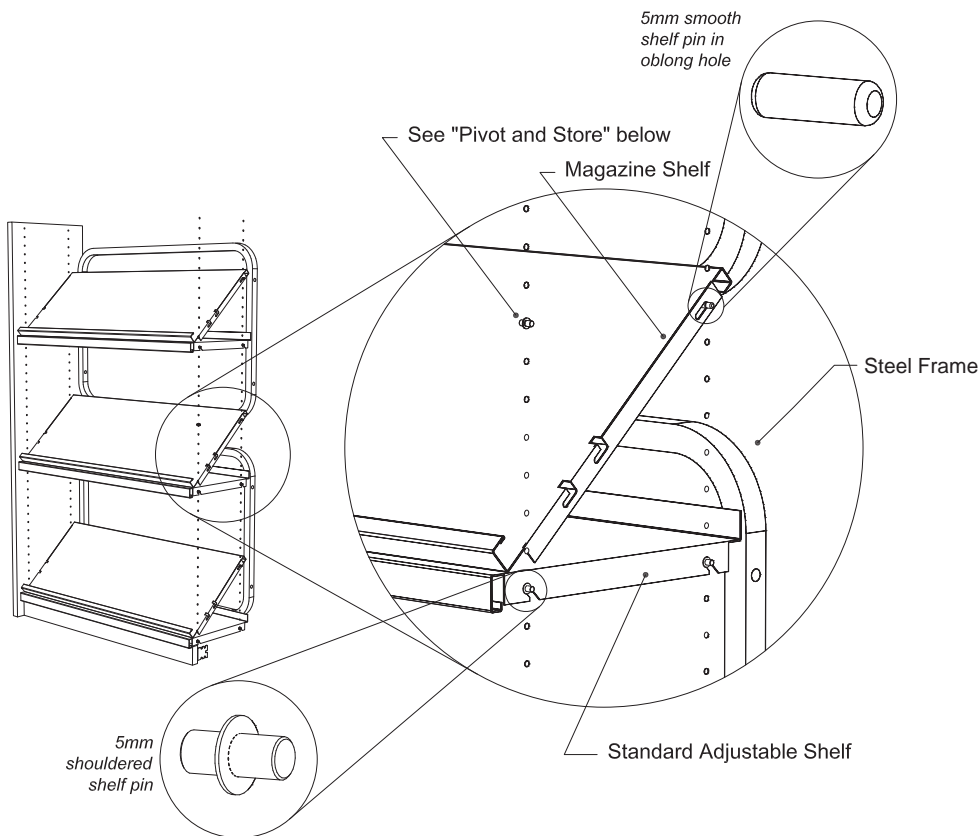
Assemble units only as described in this guide. All screws, nuts & bolts and other fasteners must be tightened securely and checked regularly. Failure to do so could cause instability and injury.

K31 Series Magazine Shelf

Installing magazine display shelf

Install standard adjustable shelf as usual and then rest magazine shelf on top of it.

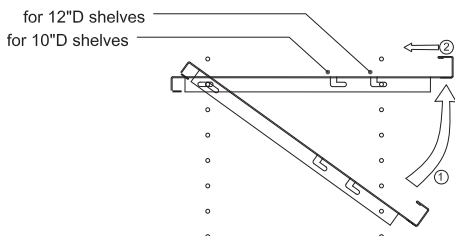
Lift rear of shelf to desired tilt angle and slip smooth 5mm shelf pins through the pivot slots in the rear of each side flange.



Pivot and Store Feature

To use the pivot and store feature, just place two shelf pins in the two line holes opposite the smooth shelf pins that act as pivots for the magazine shelf.

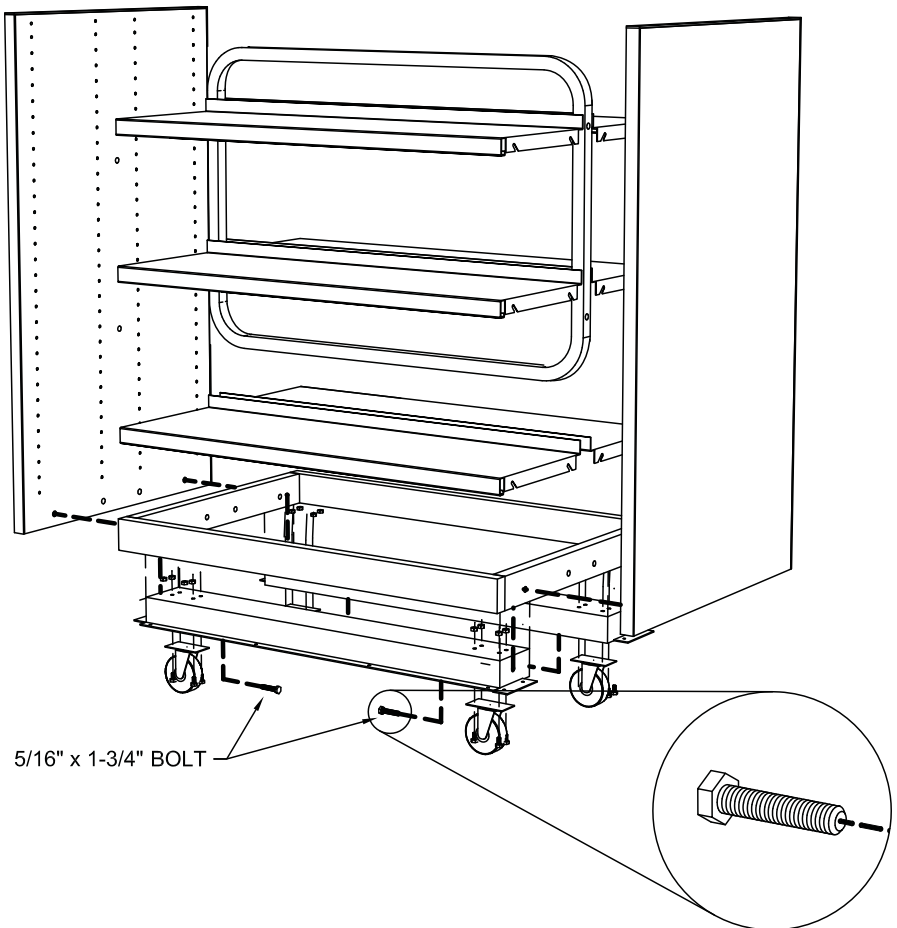
- (1) Swing the shelf up so the additional shelf pins slip through one of the "L" shaped slots in the side flanges
- (2) Push the shelf back to hold in place



Assemble units only as described in this guide.
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be tightened securely and checked regularly.
Failure to do so could cause instability and injury.

K31 Series Mobile Shelving

- Mobile K31 Series shelving is assembled in the same manner as standard, non-mobile K31 Series shelving with the exception of the toes.
- Individual toes and brackets are replaced by a toe frame, shipped assembled with casters and metal caster support frames.
- To assemble, simply bolt through the metal caster frame and toe frame into the threaded inserts at the bottom of the side panels using the 5/16" x 1-3/4" bolts provided.



Wood Tables

Benchmark Library

Half Hex Computer Table

Personal & 2 - Person Computer Table

Occasional Table



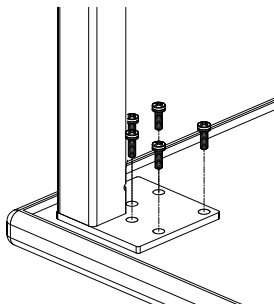
Assemble units only as described in this guide.
All screws, nuts & bolts and other fasteners must
be tightened securely and checked regularly.
Failure to do so could cause instability and injury.

Wood Table Leg, Apron & Support Keel

Tools Required:
5/16 Wrench
Phillips screwdriver

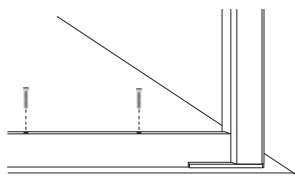
Attaching steel mounting plate and leg to table top

Attach leg plates (with attached legs) to table using the 5/16-18 x 1" Phillips pane head cap screws captive lock washers



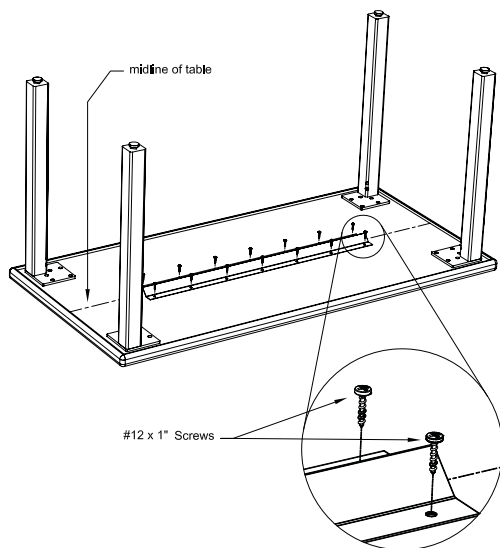
Attaching optional aprons

Align apron between the legs on the table. Position the face of the apron just behind the leg edge radius and attach with the #8 x 1-1/4" screws.



Attaching table support keel

Center keel along midline and equal distance from each end. Attach using #12 x 1" screws.



One screw for each hole!



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Steel Frame Tables

SST Tables

Vector Tables

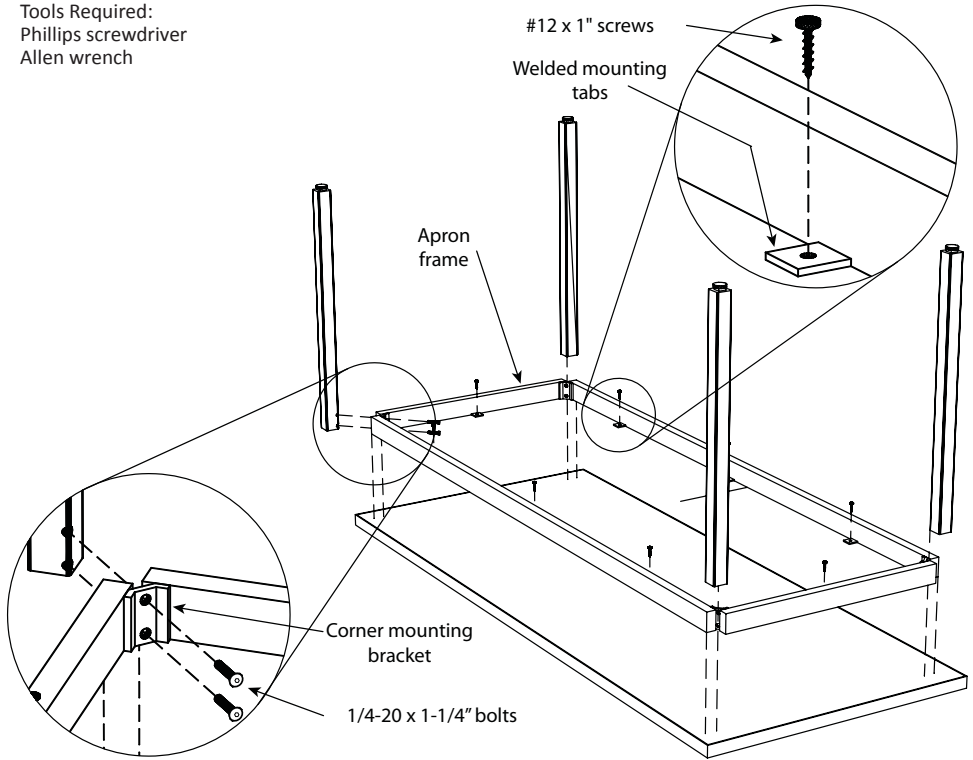
WCT Tables



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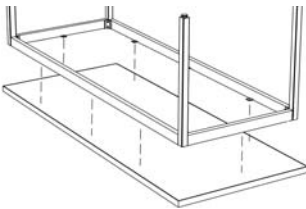
SST Table

Tools Required:
Phillips screwdriver
Allen wrench



STEP 1 - Attaching legs to apron

Attach each leg by bolting through a corner mounting bracket into welded threaded insert in leg with (2) 1/4-20 x 1-1/4" bolts.

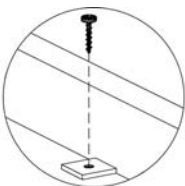


STEP 2 - Preparing top for assembly

Place top upside down on clean, padded surface.

Center welded apron frame on underside of top.

Drill 5/32" pilot holes into top through welded mounting tabs.



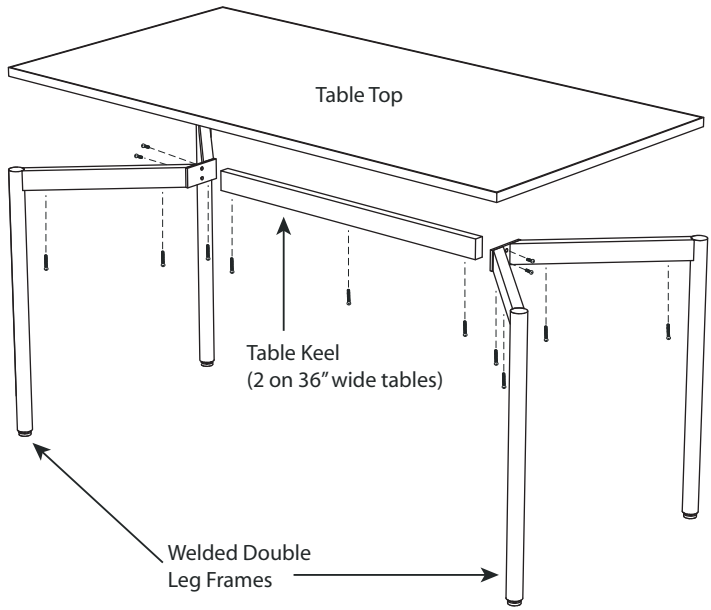
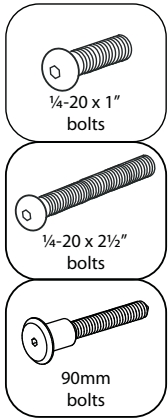
STEP 3 - Attaching apron frame to table top

Secure apron frame to table top with #12 x 1" screws through welded mounting tabs.



Vector Table

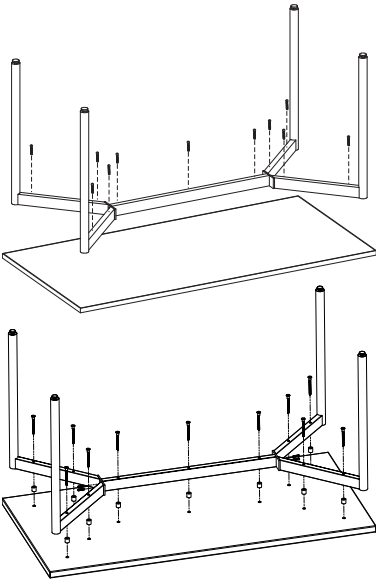
Tools Required:
Allen Wrench



STEP 1 - Attaching table tops to legs and keel

Lay table top upside down on a level clean padded surface.

Align leg frames and keel to predrilled holes in underside of worksurface and attach using 1/4-20 x 2-1/2" bolts. Finger tight only for now.



For Floating Vector Tables:

Follow same instructions from Step 1, but spacers will be aligned with the holes in between the leg frames and keel and the worksurface. Attach using 90mm (approx. 3-1/2") bolts. Finger tight only for now.

STEP 2 - Attaching leg frames to keel

Screw each of the two welded double leg frames to table keel using the 1/4-20 x 1" bolts.

Tighten bolts from Step 1.



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WCT, Steel Frame

Parts Included:



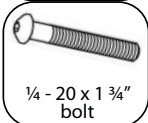
10-32 x 5/8" screw



#8 x 1" screw



Connector Bolt and Nut

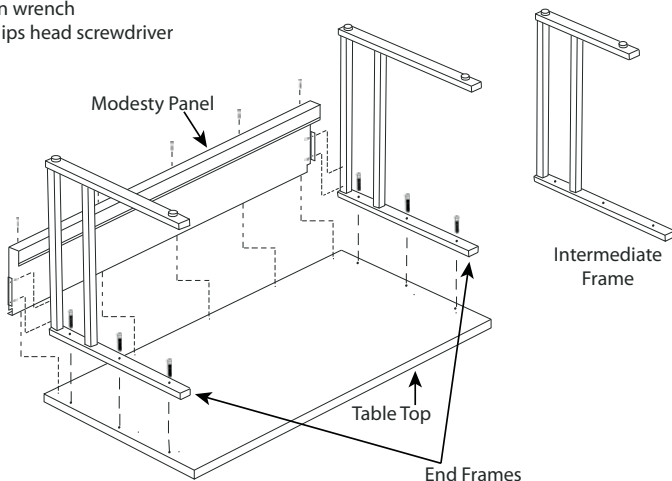


1/4 - 20 x 1 3/4" bolt

Tools Required:

Allen wrench

Phillips head screwdriver



STEP 1 - Attaching frames to table top

Assemble end or intermediate steel frames to underside of top using 1/4-20 x 1 3/4" bolts.

- Tighten finger tight only at this point.

NOTE:

Intermediate frames may mount either at ends or midspan, depending on configuration.

- Underside of top will have appropriate threaded inserts.
- Modesty panels will fit between each pair of support frames, end or intermediate.
- Assembly sequence is unchanged

STEP 2 - Attaching modesty panel to leg frames

Attach modesty/wire management panel to end or intermediate steel frames using connector bolt and nut.

- Flange faces out, wire management trough faces in.

STEP 3 - Securing modesty panel to top

Attach modesty panel to underside of top using #8 x 1" screws through flange of modesty panel.

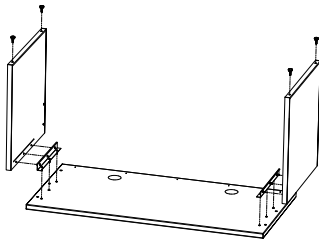
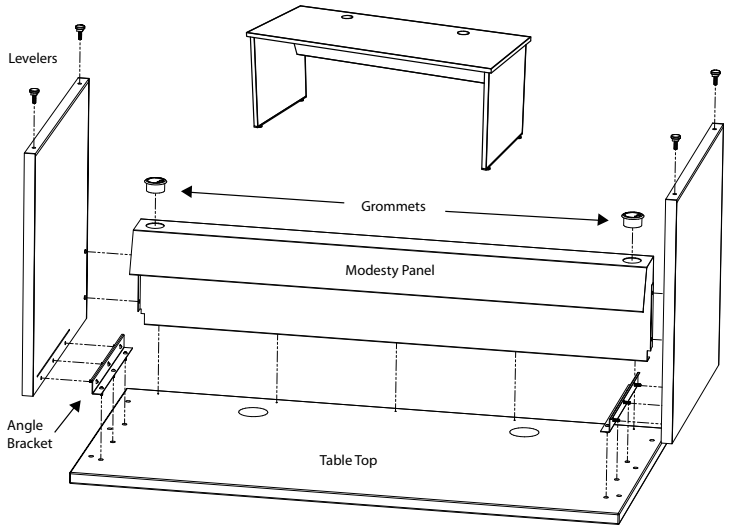
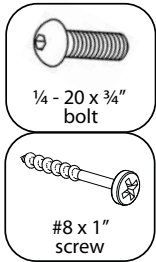
STEP 4 - Completing assembly

Finally, tighten buttonhead bolts attaching end/intermediate frames to top.



WCT, Panel End

Tools Required:
Phillips head screwdriver
Allen wrench



STEP 1 - Attaching panel ends to top

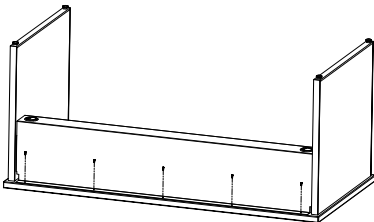
Screw panel ends to table top using (4) 1/4-20 x 3/4" bolt through each of 2 angle mounting brackets.

- Finger tight for now.
- Screw in levelers



STEP 2 - Inserting grommets into modesty panel

- Be sure to install grommets prior to attaching modesty panel.
- Insert grommets into holes from underside of modesty panel.



STEP 3 - Attaching modesty panel

- Screw modesty panel to panel ends using (4) 1/4-20 x 3/4" bolt
- Screw modesty panel to underside of table top using (5) #8 x 1" screws.

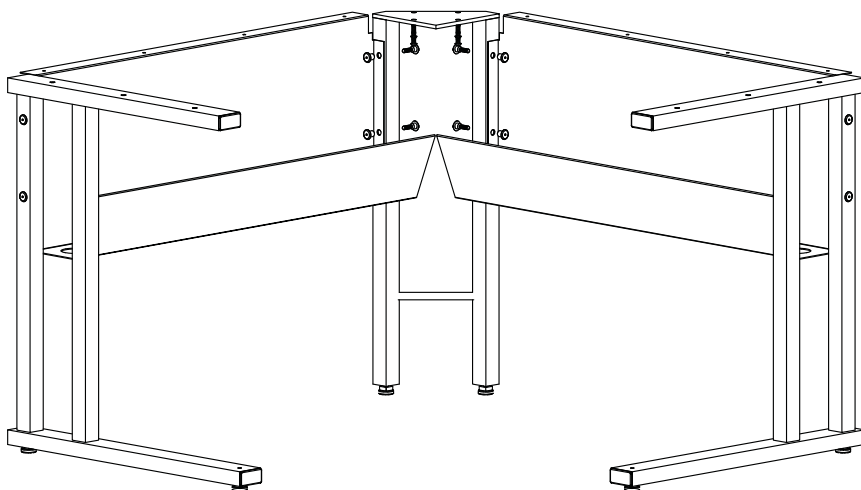
STEP 4 - Completing Assembly

Tighten all (8) 1/4-20 x 3/4" bolts.



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Corner WCT, Leg Base Frame Assembly



Step 1: Attach the Corner Leg/ End Leg to table top

Fasten WCT Corner Leg to underside of top using $\frac{1}{4}$ -20 x $\frac{3}{4}$ " BH Bolt into threaded insert. Fasten WCT end frame Leg to underside of top using $\frac{1}{4}$ -20 x 1-3/4" BH Bolt into threaded insert.

- Tighten finger tight only at this point

Step 2: Attach Modesty to leg frames

- Secure Modesty to end frame and corner leg using connector bolt and nut.
- Flange faces out, wire management trough faces in.

Step 3: Securing Modesty panel to top

- Attach Modesty panel to underside of top using #8 x 1" screws through flange of modesty panel.

Step 4: Completing assembly

- Finally, tighten BH Bolts attaching end/ corner frames to top.

