

S-200 Side Mount Murphy Bed Mechanism Cut List & Plans

Style: S-200 Side Mount (Metal Rails) Murphy Bed Mechanism

Orientation: Side Mount (Horizontal)

Size: Queen, Full, Twin

WARNING! ALL MURPHY/WALL BED SYSTEMS CONTAIN STORED ENERGY. FAILURE TO USE AND FOLLOW THESE INSTRUCTIONS DURING THE INSTALLATION PROCESS COULD RESULT IN SEVERE PERSONAL INJURY TO THE USER OR DAMAGE TO PRODUCT. PLEASE CONTACT CUSTOMER SERVICE AT 866-725-6401 FOR ANY QUESTIONS.



Steps to Complete Project

CABINET MATERIAL: IT IS STRONGLY RECOMMENDED TO CONSTRUCT

MURPHY BED CABINET USING 4 X 8 PLY CORE (FURNITURE GRADE) PANELS. MDF MAY BE USED BUT BED MAY BE HEAVY TO OPERATE. PARTICLE BOARD CANNOT BE USED FOR THIS PROJECT.

- CANNOT BE USED FOR THIS PROJECT.
- 1. Cut, Mill and Edge band all cabinetry parts as detailed in these instructions.
- 2. Apply finish as desired to all cabinet parts as indicated in these instructions.
- 3. Assemble cabinetry components in the room the Murphy Bed is to be used.
- 4. Anchor cabinetry to structural members (i.e. wood studs) in your wall.
- 5. Familiarize yourself with all of the mechanism components.
- 6. Install bed rails, and lift mechanism to the cabinetry parts as illustrated in these instructions.

Queen Size Cabinet Cut List (Horizontal Orientation)

FOR BEST RESULTS IT IS STRONGLY RECOMMENDED TO CONSTRUCT MURPHY BED CABINET USING 4 X 8 PLY CORE (FURNITURE GRADE) PANELS. MDF MAY BE USED. PARTICLE BOARD CANNOT BE USED FOR THIS PROJECT.

Queen Bed

Mattress Size: 60" x 80"

12" Max thickness

Qverall Cabinet Dimensions

85" w 70 3/4" h 16" d

Protrusion from wall: 70 1/2"

Cabinet Material: 3/4" Ply core or MDF

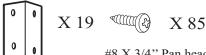
Quantity	Description	Width	Length	Edge Banding
2	Bed Face Panels	41 1/2"	62 3/4"	All 4 Edges
2	Side Boards	16"	70 3/4"	One long Edge (front)
1	Headboard	15"	83 1/2"	One Long Edge (top)
1	Bridge Board	15 1/4"	83 1/2"	One Long Edge (front)
1	Top Fascia	2"	83 1/2"	One Long Edge (bottom)
1	Top Fascia Stiffener	3"	83 1/2"	One Long Edge (bottom)
1	Rear Stretcher	4"	83 1/2"	One Long Edge (top)
1	Front Stretcher	4"	83 1/2"	Both Long Edges
1	Top Rear Stiffener	4"	83 1/2"	Both Long Edges
1	Panel Seam Connector	4"	58"	None

Optional Hardwood Cut List

2	Corner Blocks *	3/4"	3/4"	96"	Hardwood lengths to be cut to size during cabinet assembly.
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^{*} As an option you may choose to use hardwood corner blocks you cut yourself instead of using locally sourced corner brackets. See pages 14 & 15 for intended use.

Hardware to be sourced Locally:



#8 X 3/4" Pan head

#8 X 1.5" Wood Screw

#8 X 3" Wood Screw

#8 X 1.25" Wood Screw

Note: Corner bracket legs can be between .75" and

Length can be between 1.5% and 2" long



Full Cabinet Cut List (Horizantal Orientation)

FOR BEST RESULTS IT IS STRONGLY RECOMMENDED TO CONSTRUCT MURPHY BED CABINET USING 4 X 8 PLY CORE (FURNITURE GRADE) PANELS. MDF MAY BE USED. PARTICLE BOARD CANNOT BE USED FOR THIS PROJECT.

Full Bed

Mattress Size: 54" x 75"

12" Max thickness

Qverall Cabinet Dimensions

80" w 64 3/4" h 16"h

Protrusion from wall: 65 1/2"

Cabinet Material: 3/4" Ply core or MDF

Quantity	Description	Width	Length	Edge Banding
2	Bed Face Panels	39	56 3/4"	All 4 Edges
2	Side Boards	16	64 3/4"	One long Edge (front)
1	Headboard	15	78 1/2"	One Long Edge (top)
1	Bridge Board	15 1/4"	78 1/2"	One Long Edge (front)
1	Top Fascia	2"	78 1/2"	One Long Edge (bottom)
1	Top Fascia Stiffener	3"	78 1/2"	One Long Edge (bottom)
1	Rear Stretcher	4"	78 1/2"	One Long Edge (top)
1	Front Stretcher	4"	78 1/2"	One Long Edge (top)
1	Top Rear Stiffener	4"	78 1/2"	Both Long Edges
1	Panel Seam Connector	4"	52"	None

Optional Hardwood Cut List

2	Corner Blocks *	3/4"	3/4"	96"	Hardwood lengths to be cut to size during cabinet assembly.
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^{*} As an option you may choose to use hardwood corner blocks you cut yourself instead of using locally sourced corner brackets. See pages 14 & 15 for intended use.

Hardware to be sourced Locally:



Note: Corner bracket legs can be between .75" and

Length can be between 1.5% and 2" long



Twin Cabinet Cut List (Horizantal Orientation)

FOR BEST RESULTS IT IS STRONGLY RECOMMENDED TO CONSTRUCT MURPHY BED CABINET USING 4 X 8 PLY CORE (FURNITURE GRADE) PANELS. MDF MAY BE USED. PARTICLE BOARD CANNOT BE USED FOR THIS PROJECT.

Twin Bed

Mattress Size: 39" x 75"

12" Max thickness

Qverall Cabinet Dimensions

80" w 49 3/4" h 16" d Protrusion from wall: 49

Cabinet Material: 3/4" Ply core or MDF

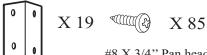
Quantity	Description	Width	Length	Edge Banding
2	Bed Face Panels	39	41 3/4"	All 4 Edges
2	Side Boards	16	49 3/4"	One long Edge (front) One short Edge (top)
1	Headboard	15	78 1/2"	One Long Edge (top)
1	Bridge Board	15 1/4"	78 1/2"	One Long Edge (front)
1	Top Fascia	2"	78 1/2"	One Long Edge (bottom)
1	Top Fascia Stiffener	3"	78 1/2"	One Long Edge (bottom)
1	Rear Stretcher	4"	78 1/2"	One Long Edge (top)
1	Front Stretcher	4"	78 1/2"	One Long Edge (top)
1	Top Rear Stiffener	4"	78 1/2"	Both Long Edges
1	Panel Seam Connector	4"	37"	None

Optional Hardwood Cut List

2	Corner Blocks *	3/4"	3/4"	96"	Hardwood lengths to be cut to size during cabinet assembly.
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^{*} As an option you may choose to use hardwood corner blocks you cut yourself instead of using locally sourced corner brackets. See pages 14 & 15 for intended use.

Hardware to be sourced Locally:



#8 X 3/4" Pan head Screw

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#8 X 1.5" Wood Screw

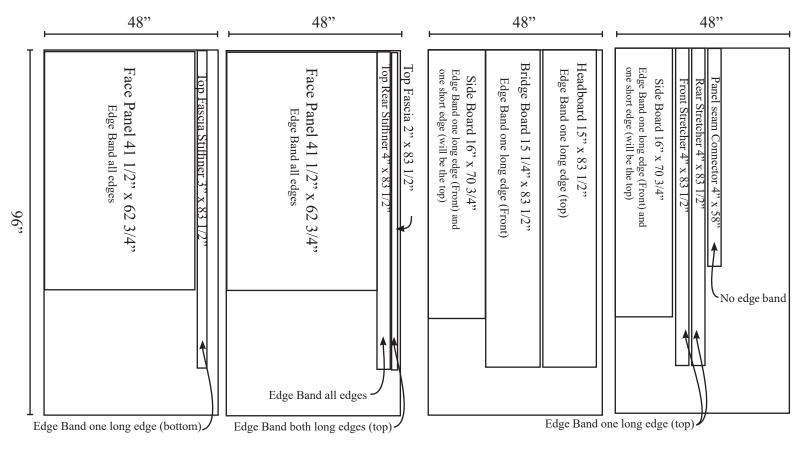
#8 X 3" Wood Screw

#8 X 1.25" Wood Screw

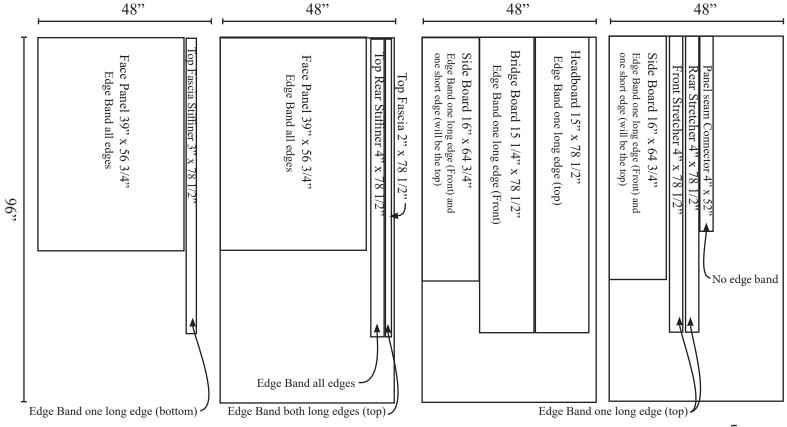
Note: Corner bracket legs can be between .75" and

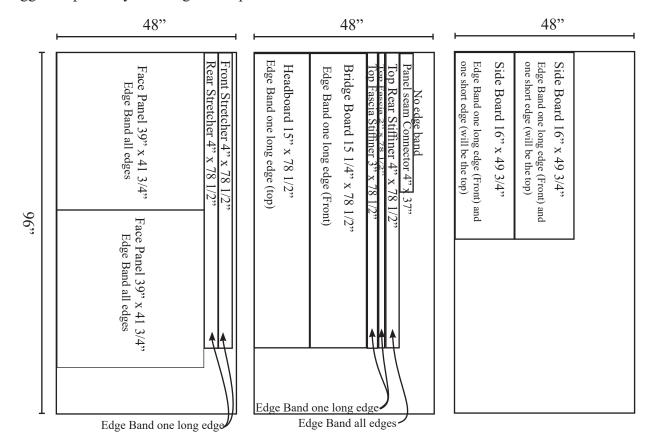
Length can be between 1.5% and 2" long





Full Size Bed Suggested panel layout using 4' x 8' panels

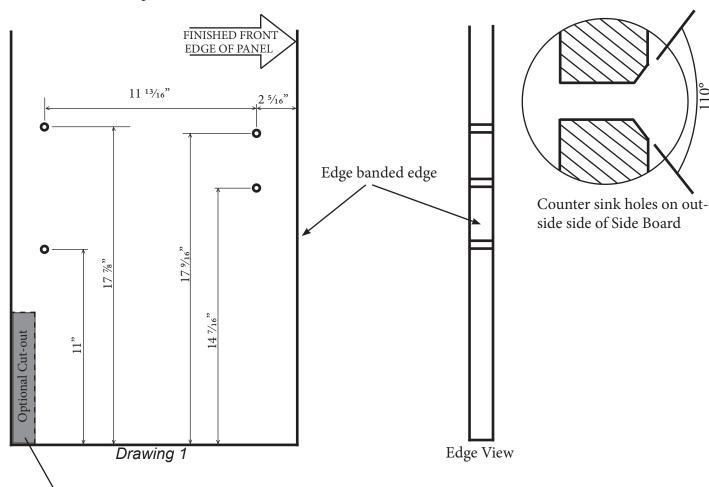




Step 1: Milling Side Boards for Lift Mechanisms

- -Drill holes for lift mechanisms in the Side Boards (<u>mirror holes for left and right Side Boards</u>) by marking exact hole location on the inside side of the Side Boards using illustration below.
- Drill a 1/16" pilot hole for each mounting bolt. Then drill the final hole with a 5/16" bit.
- Countersink 5/8" on the outside of the panels just deep enough for the 5/16" x 1.25" Machine screws. (Found in the Mechanism box Pack 2).

Right Side Board illustrated (Inside panel side)



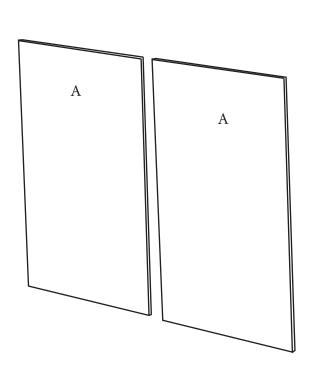
Optional Cut Out for Base Mold in Home

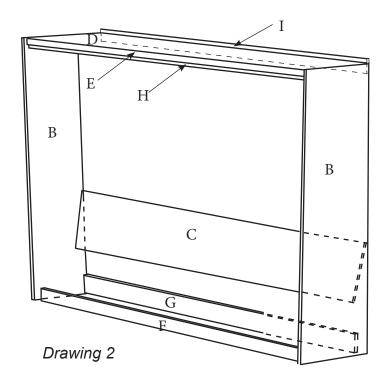
If there is a baseboard on the intended installation wall, there is a option to cut out the back bottom of the Side Board for easy installation. (Recommended)

Maximum cut out not to exceed 1" wide or 9" high. If base-board exceeds these dimensions baseboard, or baseboard shoe molding will need to be removed during installation process.

Step 2: Apply Stain, Paint and Finish as desired

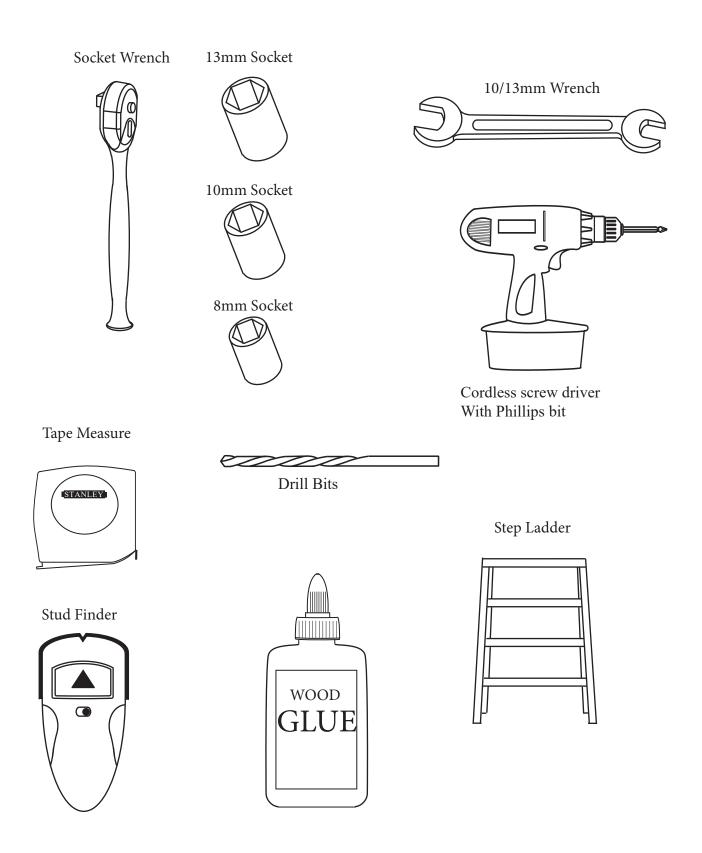
Finishing Diagram





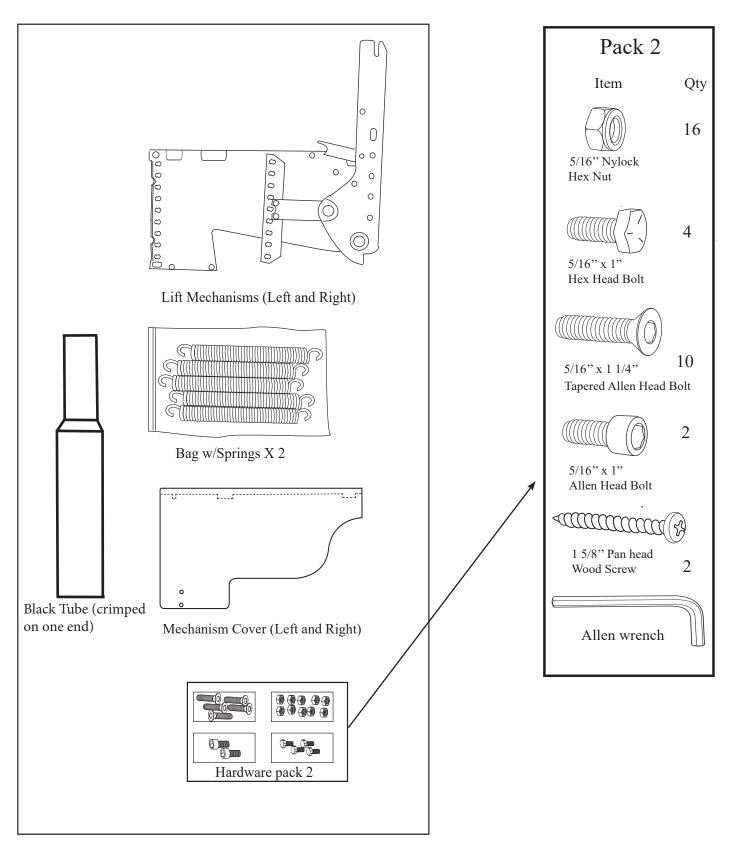
	Description	Finishing Notes
A	Face Panel	Face Panels are the front of the bed when it is closed. Apply finish to all face panel fronts, all edges (should be edge banded) and at least 2" around the parameter of each back panel (edge of the back are seen when the bed is being used).
В	Side Board	Side Boards should have finish applied to both sides and the front and top edge. (front edge and top edge should be edge banded).
С	Headboard	Headboard should have finish applied to one side, top edge (should be edge banded). Finish back if desired but won't be visible.
D	Bridge Board	Bridge Board should have finish applied to one side. Finish opposite side if desired, but is not typically seen.
Е	Top Fascia	Top Fascia should have finish applied to one side and edge banded edge. (should be edge banded on bottom edge).
F	Front Stretcher	Front Stretcher should have finish applied to one side and one edge. (should be edge banded).
G	Rear Stretcher	Rear Stretcher should have finish applied to one side and one edge. (should be edge banded).
Н	Top Fascia Stiffiner	Top Fasca Stiffener should have finish applied to both sides and the bottom edge. (should be edge banded).
I	Top Rear Stiffener	Top Rear Stiffener should have finish applied to one side and all edges. (All edges should be edge banded).

Tools Needed For Assembly and installation of Cabinet and Lift Mechanism.



Begin Assembling Murphy Bed

Locate Mechanism box (Labeled SBLM) including Hardware Pack 2



Hardware needed for next step:



(From box labeled SBLM)

Step 3: Installing the Springs

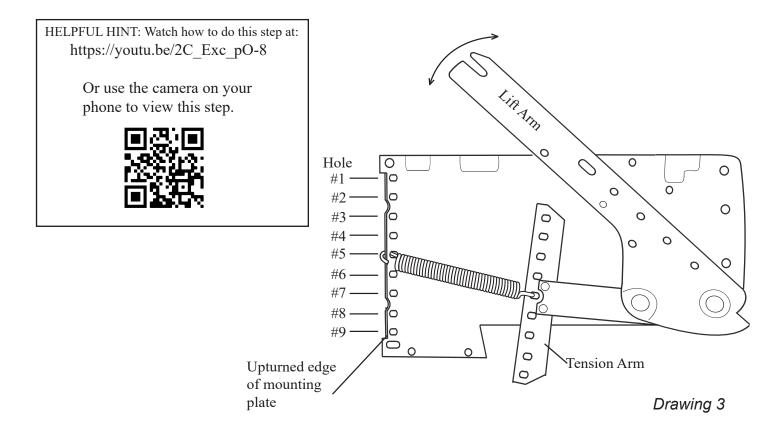
The required number of springs in the Lift Mechanisms varies with the different size Murphy Bed, material used and mattress weight. These values are approximate.

Bed Size	Number of Springs
Queen	5
Full/Double	3
Twin/Single	1

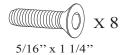
Queen Size Bed Install a spring into hole 5 by hooking one end of the spring into the hole on the Upturned edge of the mechanism plate first then manipulate the Lift Arm back and forth slightly while placing the other end of the spring in the Tension arm into the corresponding hole. Now place a spring into the following holes in this order 4, 3 then into holes 6, 7. You will need a total of 5 springs installed for a queen size bed.

Full Size Bed Install a spring into hole 5 by hooking one end of the spring into the hole on the Upturned edge of the mechanism plate first then manipulate the Lift Arm back and forth slightly while placing the other end of the spring in the Tension arm into the corresponding hole. Now place a spring into the following holes in this order 4, then into holes 6. You will need a total of 3 springs installed for a full size bed.

Twin Size Bed Install a spring into hole 5 by hooking one end of the spring into the hole on the Upturned edge of the mechanism plate first then manipulate the Lift Arm back and forth slightly while placing the other end of the spring in the Tension arm into the corresponding hole. You will need a total of 1 spring installed for a twin size bed.







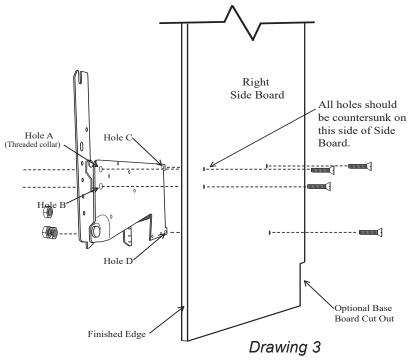
Tapered Allen Head Bolt

Step 4: Installing the Lift Mechanism

Install the Lift Mechanism to the Side Board first by inserting a 5/16 x 1 1/4" Tapered Allen Head Bolt through holes B, C and D from the outside (countersunk holes) of the Side Board. The bolts go through the corresponding holes of the Lift Mechanism. Now thread a bolt into hole A as illustrated. Thread on three 5/16" Nylock nuts and tighten hardware. Hole "A" has a threaded collar instead of a nut.

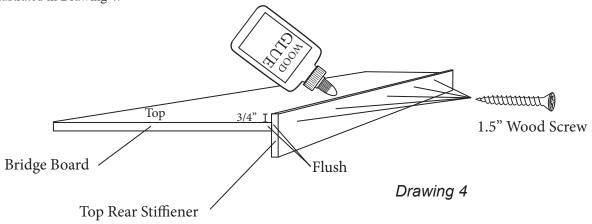
IMPORTANT! Over tightening the bolts will pull the head of the bolt too deeply into the Side Board. Tighten only until the head of the bolt is flush with the surface of the Side Board.

Repeat step 3 with the Left Side Board and Lift Mechanism.



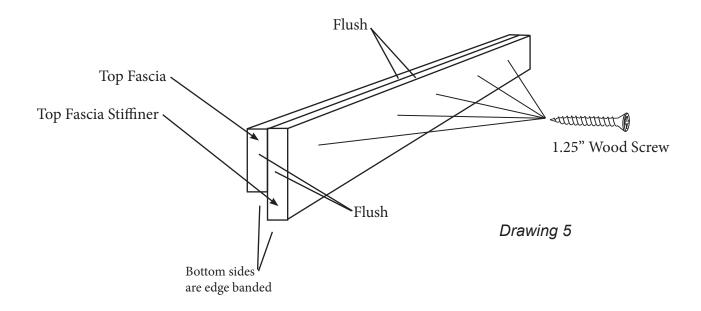
Step 5: Preparing the Bridge Board

Using Glue and 1 1/2 wood screws attach Top Rear Stiffiner to the back of the Bridge Board. Ensure the Top Rear Stiffiner protrudes 3/4" above the top of the Bridge Board as illustrated in Drawing 4.

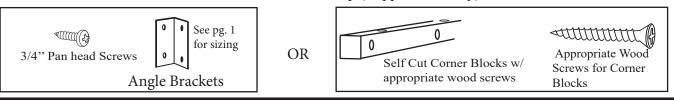


Step 6: Preparing Top Fascia

Using 1 1/4 wood screws attach Top Fascia and Top Fascia Stiffiner to together. Ensure the ends and top are flush, as illustrated in Drawing 5.

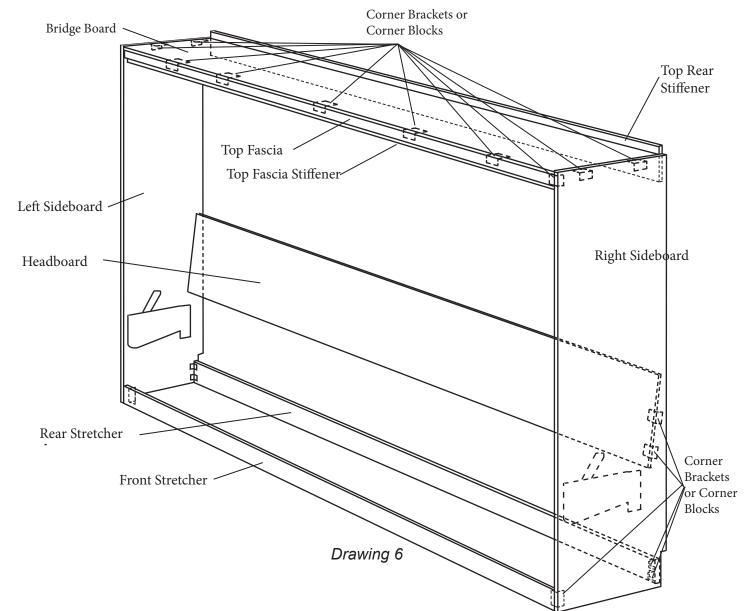


Hardware needed for next step (Supplied Locally)

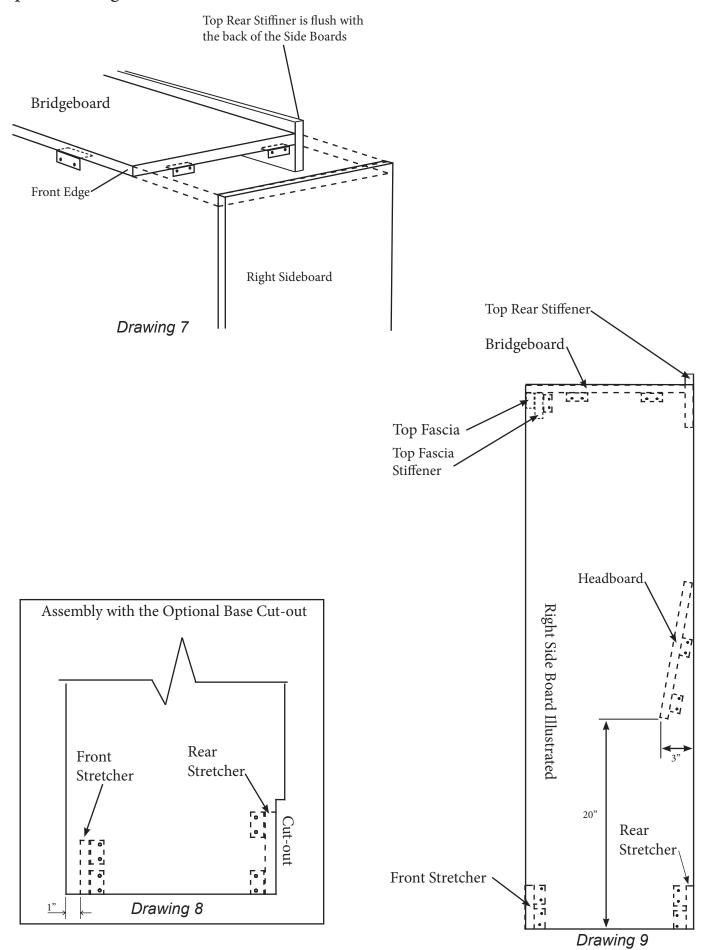


Step 7: Assembling the Bed Cabinet Surround (Should be assembled in the room it will be used)

- 1. Locate the mounting position of the Headboard marking the left and right Side Boards 20" from the floor and 3" in from the back edge of the Side Boards See Drawing 9. Note from Drawing 9 that the Headboard sits at an angle and the bottom edge of the Headboard is out 3" from the back of the Side Boards. Use Corner Brackets or Corner Blocks (supplied locally). Note that the Corner Bracket or Corner Block cannot protrude beyond the back of the Side Boards. The Headboard location may vary slightly; just be sure it is secure and at the approximate 3" distance from the back edge.
- 2. Use Corner Brackets or Corner Blocks to assemble Front and Back Stretchers in positions shown in Drawings 6, 8, & 9. Use two Corner Brackets or Corner Blocks on each end.
- 3. Attach Bridge Board as shown in Drawings 6,7 & 9. Be sure back edge of the Top Rear Stiffiner is flush with back of Side Boards.
- 4. Attach the Top Fascia and Top Fascia Stiffiner flush with the front edge of the Bridge Board using Angle Brackets or Corner Blocks as shown in Drawing 6 & 9.

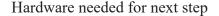


Step 7 Drawings Continued

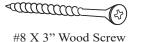


WARNING! THE NEXT STEP MAY REQUIRE PROFESSIONAL HELP.

IF YOUR WALLS ARE NOT TRADITIONAL WOOD FRAMING, YOU MAY NEED TO HIRE A HANDY MAN OR CONTRACTOR TO HELP IN ANCHORING THE BED TO YOUR WALL. FAILURE TO PROPERLY ANCHOR THE CABINET COULD CAUSE SEVERE PERSONAL INJURY. CALL TECHNICAL SUPPORT AT 866-725-6401 IF YOU HAVE ANY QUESTIONS.



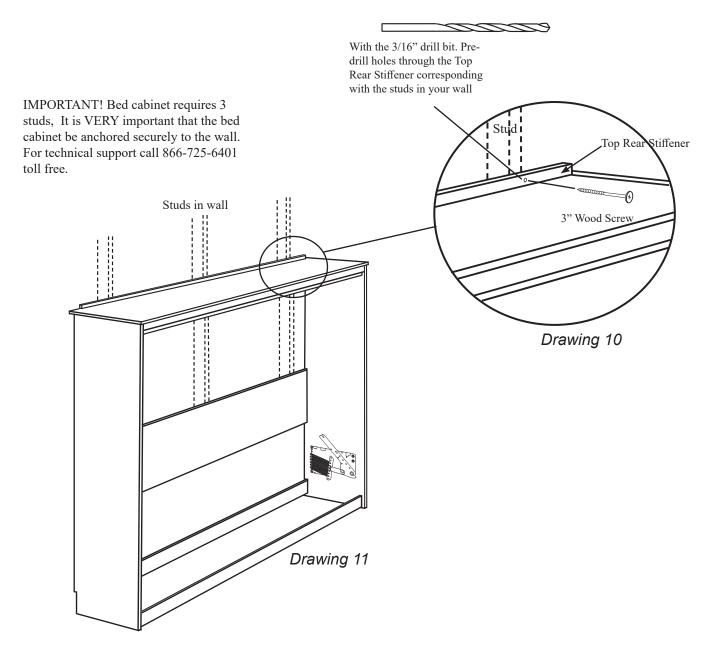




X 3

Step 8 Anchoring Cabinet to the wall

Using a Stud Finder locate and mark 3 studs in the wall behind the bed cabinet. Pre drill with a 3/16" drill bit through the Top Rear Stiffiner Board at the back of the Bridge Board corresponding with the studs in your wall see Drawing 10. Using the 3" Wood Screws anchor the bed cabinet to the wall through the pre drilled holes.

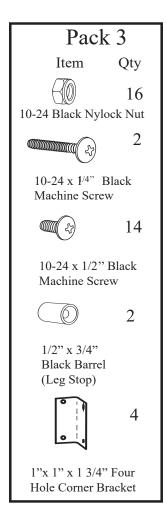


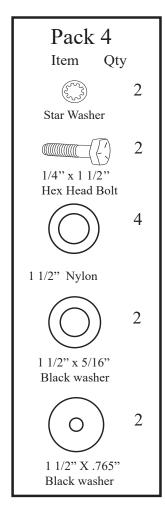
List of Contents from Rail Box

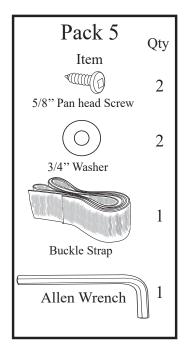
Labeled Panel Bed Steel Frame BED RAILS, STIFFENERS, AND LEGS LOCATED IN BOX:

Qty.	Frame Carton Items	Comments
2	Head(1) Foot(1) Rails	Identical Head & Foot Queen Length 61-7/16" Full Length 55-3/8" Twin Length 40-7/16"
2	Side Rails	Identical Right & Left (Longest rails) Queen Length 80-15/16" Full Length 75-15/16" Twin Length 75-15/16"
3	Stiffeners - Bed Face	U Shaped mental lengths 3 for Q,F,T size
2	Folding Legs	One Left - One Right
1	Leg Connector Bar	Round bar Stabilizes and Eases Leg Operation

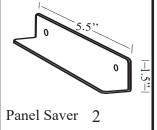
HARDWARE PACKS LOCATED IN BOX:







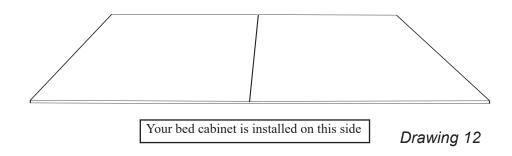




Important note: It is critical to orient the Bed Face panels and the Mattress Rails in the next 5 steps correctly. All of the renderings (drawings) in the next 5 steps assume that you are <u>looking away from the wall you just installed the Bed Cabinet against</u> in the previous step. There is a note under each of the following renderings indicating "your bed cabinet installed on this side" which indicates that is where the Bed Cabinet is in relation to the face panels and rails.

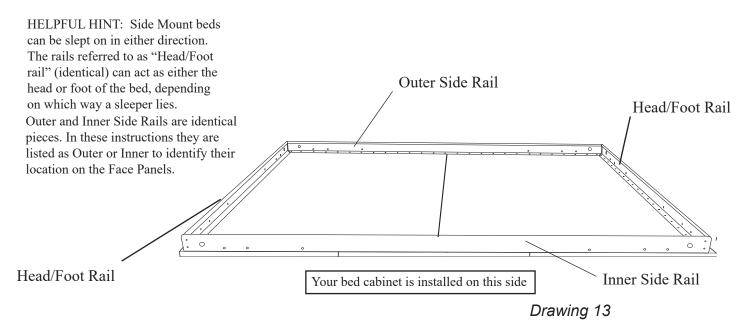
Step 9: Assembling the Bed Face

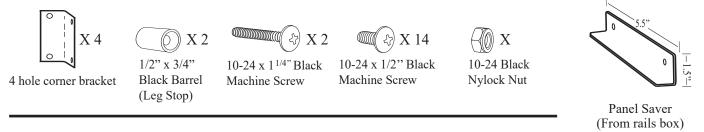
Lay the Front Panels on the floor FACE DOWN (finished side). Position them in front of where the Bed Cabinet was installed in the last step and leave enough room to work around them.



Step 10: Arranging Mattress Rails

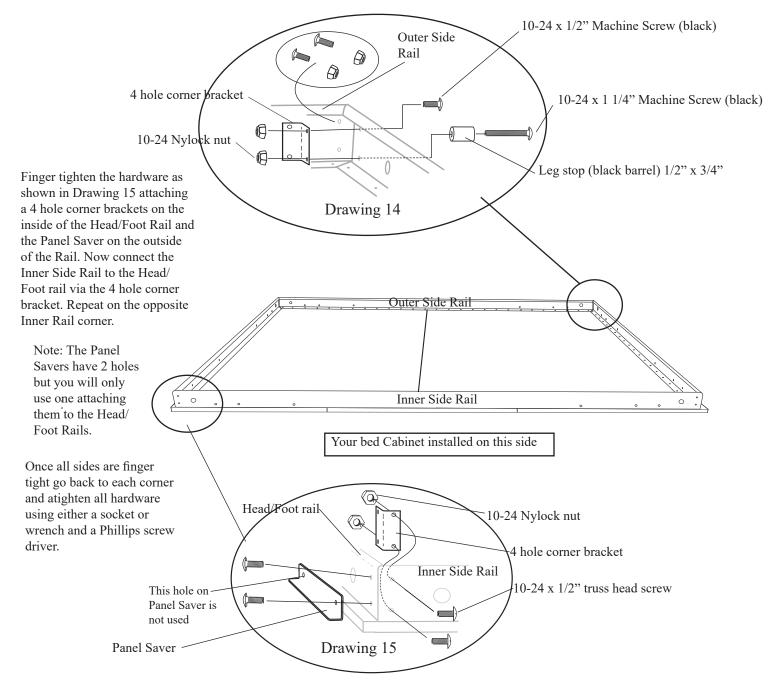
Arrange the Mattress Rails on the face panels as shown.





Step 11: Assembling the Bed Face (Continued)

From hardware pack 3 locate the hardware shown above. Finger tighten the hardware as shown in Drawing 14 connecting the Outer Side rail to a Head/Foot rail using a 4 hole corner bracket. Note the lower hole on each Head/Foot rail uses the Leg Stop with the longer screw (1 1/4" Machine screw). Repeat on the opposite side.



Hardware and parts needed for next steps

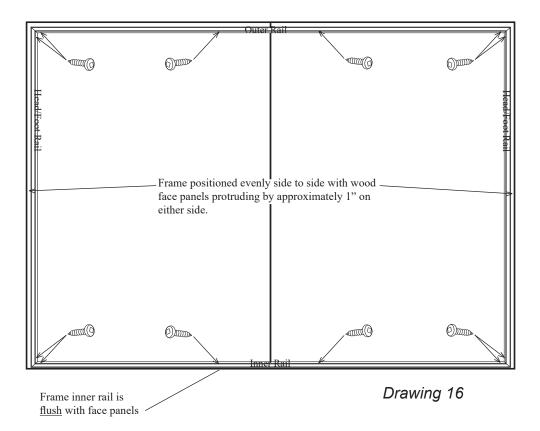
X Approx. 118

5/8" Pan head screw (Hardware pack #7)

Step 12: Assembling the Bed Face (Continued)

Center the assembled frame side to side on the Face Panels (leaving approximately 1" space on either side) and bring the **Inner Rail flush** to the end of the Face Panels. Once the frame is positioned correctly (panels and rails are even and square to each other) use two 5/8" screws in each corner, as well as one in each panel at the Inner and Outer rail to hold assembly in place. Now, Use the a 5/8" screws in ALL of the remaining holes around the frame.

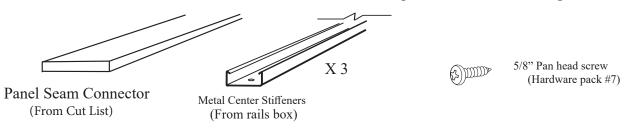
Caution: DO NOT STRIP SCREW!



BIRDS EYE (TOP) VIEW

QUEEN, FULL AND TWIN SIZE BEDS

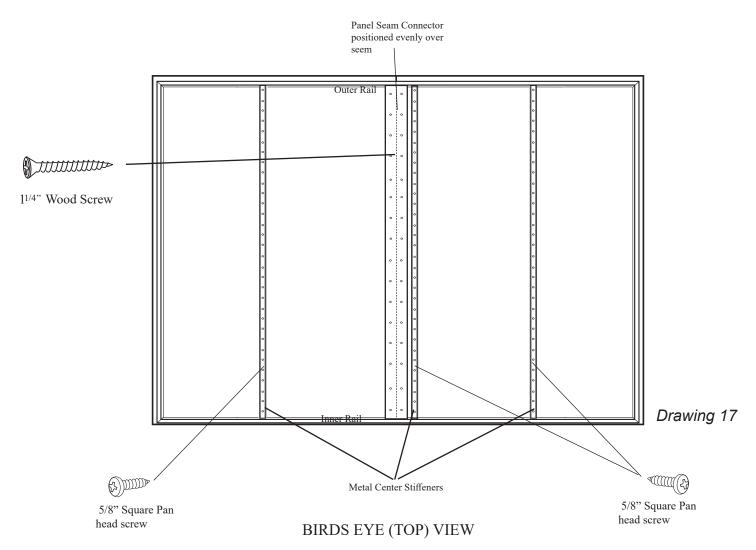
Hardware and parts needed for next steps

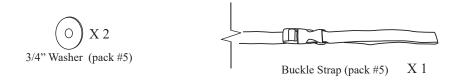


Step 13: Assembling the Bed Face Queen, Full and Twin (Continued)

Place the Panel Seam Connector over the seam in the Front Panels. Use 1 1/4 to mend the face panels together. It is recommended to pre drill hole in the Panel Seam Connector prior to placing it on the panels. Pre drill every few inches to gain maximum hold.

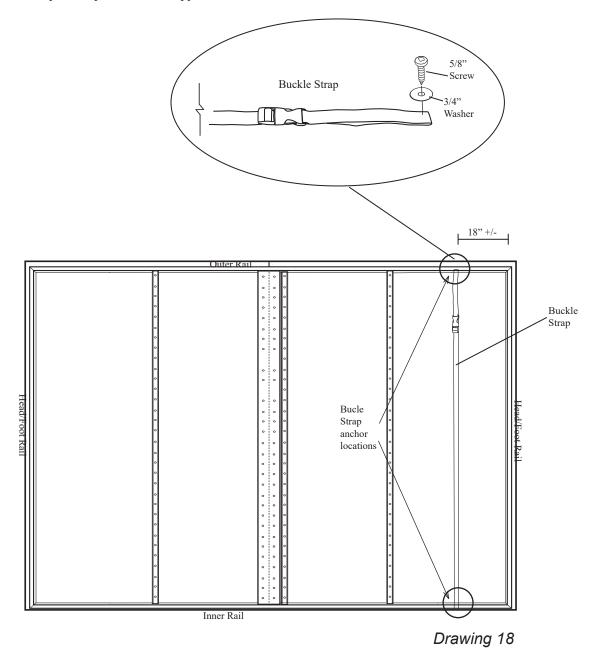
Position the 3 Metal Stiffeners evenly in the space provided between the Head and Foot Rails as illustrated below. Now use the 5/8" square drive screws to fasten the Stiffeners to the Face Panels using all provided holes in the Stiffeners. DO NOT STRIP SCREWS.





Step 14: Installing the Mattress Strap

Attach the Buckle Strap (used for holding the mattress in place when the bed is closed). First <u>remove</u> one of the 5/8" Pan head screws that attaches the rail to the Face Panels on each Side Rail of the frame at about 18" from the Foot Rail of the frame. Then put the removed screw through the 3/4" Washer. Position the end of the Strap over the vacated screw hole on the rail and drive the screw through the strap and back into the hole. Repeat the process on the opposite Side Rail.



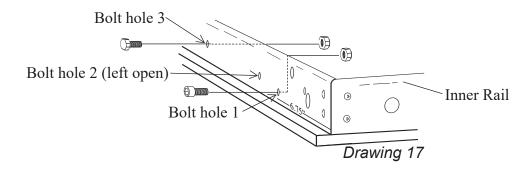




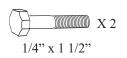


Step 15: Assembling the Bed Face (Continued)

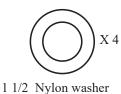
As illustrated below, insert the Allen Head Bolt through bolt hole # 1 and tighten it down securely using a Nylock Nut. Now insert a 5/16" x 1" Hex Head bolt through hole # 3 and thread the Nylock nut ONLY UNTIL THE NUT IS FLUSH WITH THE END OF THE BOLT. Bolt hole #2 will be used in a later step and is left open for now.



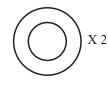
Hardware needed for next step from hardware pack #4









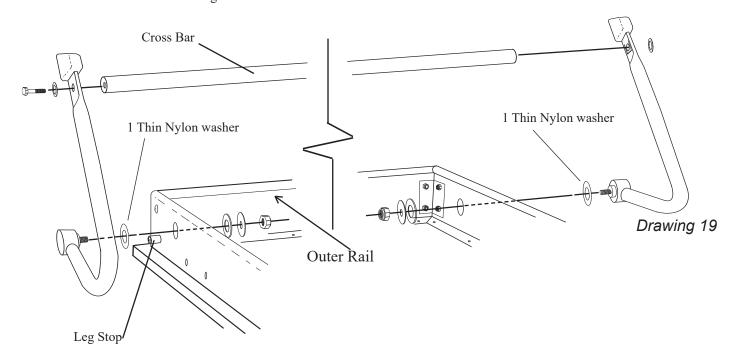


1 1/2" x 5/16" Black washer

Step 16: Installing the Legs

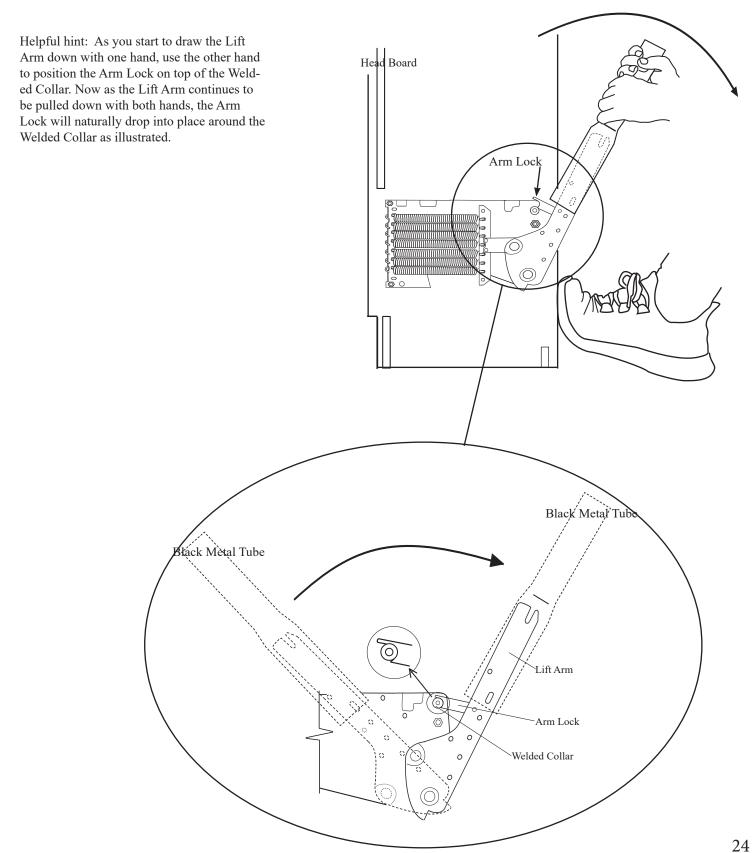
Attach the Leg Assembly to the OUTER RAIL side of the frame as illustrated below. Use 1 Nylon washers on the out side of the frame for proper spacing.

Position the Cross Bar between the Legs. Place the Star washer on one of the 1/4" X 1 1/2" Hex Head bolts.



Step 17: Loading the Lift Mechanism

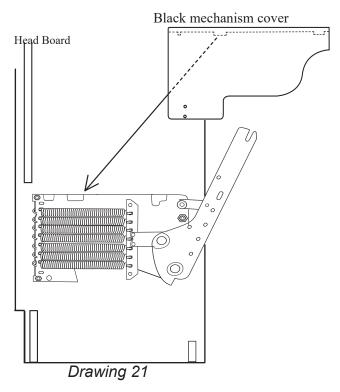
Brace one foot against the front edge of the Side Board and using the 14.5" black metal tubing provided in Mechanism Box, lever the Lift Mechanism's Lift Arm out and down until you can secure the Arm Lock onto the Welded Collar shown at right. BE SURE THAT THE LOCK IS SECURED AGAINST THE HEX NUT BEFORE RELEASING THE TENSION ON THE LIFT MECHANISM.



Step 18: Installing the Spring Cover

Slip the Mechanism Cover (from mechanism box) over the Mechanism so that the tabs on the cover fit into the notches provided. Line up the top hole with the barrel support and anchor in place using the 3/16" x 1 1/4" wood screw provided

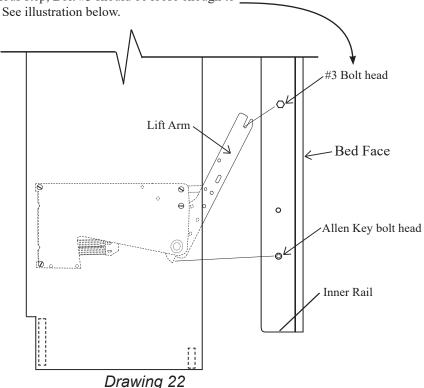




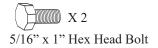
Step 19: Installing the Bed Face on the Lift Mechanism

IMPORTANT! As instructed in a previous step, Bolt #3 should be loose enough to slip into the notch at the end of the Lift Arm See illustration below.

Two person Step: Stand the Bed Face unit up on its Head Rail. Now with you and your assistant on either side of the Bed Face unit lift until the #3 bolt on the Side Rail is a few inches above the slotted end of the Lift Arm on both sides. Gently lower the Bed face unit between the Lift Arms and seat the #3 bolt into the slot at the end of the Lift Arms. Now start pulling the bed face unit down and away from the Bed Cabinet the Allen Head bolt will naturally seat into the notch at the lower end of the Lift Arms. Lower the bed unit down and extend the Legs so that they are on the floor. Someone will need to hold the bed unit down as it will want to rise.







Warning very important step!

Step 20: Installing the Bed Face on the Lift Mechanism (Continued)

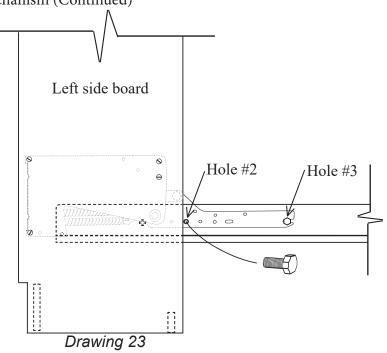
Insert a 5/16" x 1" Hex Head bolt through hole #2 and tighten a 5/16" Nylock nut onto the bolt. Now tighten the nut and bolt in hole #3.

Repeat step on the other side of the bed unit.

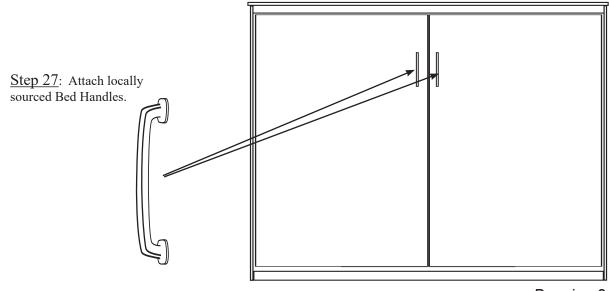
WARNING! Failure to insert and tighten

all the bolts in step 16 could result in SeVere per-

Sonal injury or damage to the lift mechanism. Lift mechanism damage caused by missing or loose hardware is not covered by warranty.



Step 21: Attaching Bed Hardware



Drawing 24

Step 22: Adjusting the Bed Face

When the bed is closed check to see if the gap on either side is the same. If it looks right skip this step. If the gap is not right, meaning that the Bed Face is too close to the Side Board or even touching it at the top on one side it will need to be adjusted. The procedure will require the bottom of the bed cabinet to be moved slightly to the left or right depending on which top corner is too close. If the Bed Face is too close on the top right side for instance, the right side (bottom) will need to be slid to the left slightly. Have one person push the bed at the bottom with his feet while the second person pulls at the opposite bottom side.

