

# alpha bed™

## [Model #SBF: Steel Bed Frame] Assembly Instructions



- |             |  |
|-------------|--|
| Stocked in: | <ul style="list-style-type: none"><li>○ Single</li><li>○ Double</li><li>○ King</li></ul> |
|-------------|--|

One universal bed frame for each of Single, Double, or King wall beds.  
May be mounted in either vertical or horizontal modes.

Alightweight, universal, structural steel bed frame with double overlap steel stiffeners, completed with fold-away leg system. Designed to exceed the strength of wood or aluminum as well as residential and commercial specifications.

Designed to Exceed International ISO 9002  
Standards for residential specifications

Modified: 15/02/13, 28/03/13, 22/04/13 S

Baker

Modified: 13/07/17, M Downton

Modified: 19/09/19 S Baker

## Project Start-Up

- Familiarize yourself with all of the components in the Steel Bed Frame and mechanism cartons, as well as thoroughly study this manual so you may plan the steps required to complete this project.
- Study all illustrations and plan drawings. Make sure that the space available is adequate for the specified dimensions of the bed cabinet, both in the open and closed positions (see cut list pages to cross check dimensions).
- Cabinet Panels may be constructed of Ply Core or Particle Board.
- Handles to pull the bed open are not provided. Select these from your local decorative hardware supplier. Have them on site at the time of assembly.
- Check to be sure that all items are available
  - Steel Bed Frame and Mechanism
  - Cabinet Components and Hardware
  - Necessary Tools
- If you choose a horizontal bed orientation, a separate cut list is provided on page 7 and assembly diagrams are on page 18.

## Steps to Complete Project

1. Prepare all wood or laminate cabinet components.
2. Mount Lift Mechanism.
3. Install springs in Lift Mechanisms.
4. Assemble the Bed Cabinet.
5. Attach Bed Cabinet to wall and floor.
6. Assemble Steel Bed Frame to Bed Face Panels.
7. Install the Bed Face Panel in Cabinet.
8. Install Handles, Leg Assembly, Mechanism Covers, Mattress



Note: it is essential that the bed assembly is securely fixed to the wall with correct fixings. Do not try to pull the bed down into the horizontal position unless it is fixed. Risk of injury or death may occur if wall bed and / or cabinet is not correctly secured. All wall beds and cabinets must be securely fixed to the wall and fixations regularly checked.

# Carton Contents for **alpha bed™**

Note: Each Frame Carton contains one Single, Double or King Steel Bed Frame complete with leg assembly and necessary hardware. Mechanism components are in separate carton.

Qty.	Frame Carton Items	Comments	✓
2	Frame End Sections	Identical Head & Foot	<input type="checkbox"/>
2	Frame Side Sections	Identical, Right or Left	<input type="checkbox"/>
3	Stiffeners - Bed Face	Space evenly between Frame Sides	<input type="checkbox"/>
2	Fold-away Legs	One Left - One Right	<input type="checkbox"/>
1	Leg Connector Rod	Stabilizes and Eases Leg Operation	<input type="checkbox"/>
<b>Hardware Card #3</b>			
14	Bolt 10-24x1/2" (M6x12mm) Black	Bolt Frame corners	<input type="checkbox"/>
2	Bolt 10-24x1 1/4" (M6 x 32mm) Black	Bolt Leg Stop Foot corners	<input type="checkbox"/>
16	Nut 10-24 (M6) Black Nylock	Use with #1214 & #1213	<input type="checkbox"/>
4	Angle 1"x1"x1 3/4" (25x25x44mm) Black	Use inside Frame corners	<input type="checkbox"/>
2	1/2"x3/4" (13x19mm) Round Black Cylinder	Use with #1213 as Leg Stop	<input type="checkbox"/>
<b>Hardware Card #4</b>			
2	1 1/2"x5/16" (T1.5x40mm) Black Washer	Secure Leg inside Frame	<input type="checkbox"/>
2	1 1/2"x.765" (T2.5x40mm) Black Washer	Secure Leg inside Frame	<input type="checkbox"/>
2	1 1/2"x.765" (T2.5x40mm) Black Nylon Washer	Between Leg & outside of Frame	<input type="checkbox"/>
2	Nut 5/16" (M8) Black Nylock	Secure Leg inside Frame	<input type="checkbox"/>
2	Bolt 1/4"-20 Black Hex Head	Attach Leg to Leg Rod	<input type="checkbox"/>
2	Star Washer for #1210	Attach Leg to Leg Rod	<input type="checkbox"/>
<b>Hardware Card #5</b>			
1	Nylon Web Strap with Buckle	Secure Mattress to Bed Frame	<input type="checkbox"/>
2	3/4"x1/4" (T1.5x25mm) Washer	Secure Nylon Web Strap to Bed Face Panel under Mattress	<input type="checkbox"/>
2	#8x5/8" (M4x15mm) Wood Screw	Secure Nylon Web Strap	<input type="checkbox"/>
<b>Hardware Card #7</b>			
110	#8x5/8" (M4x15mm) Wood Screw	Attach Steel Bed Frame to Bed Face	<input type="checkbox"/>

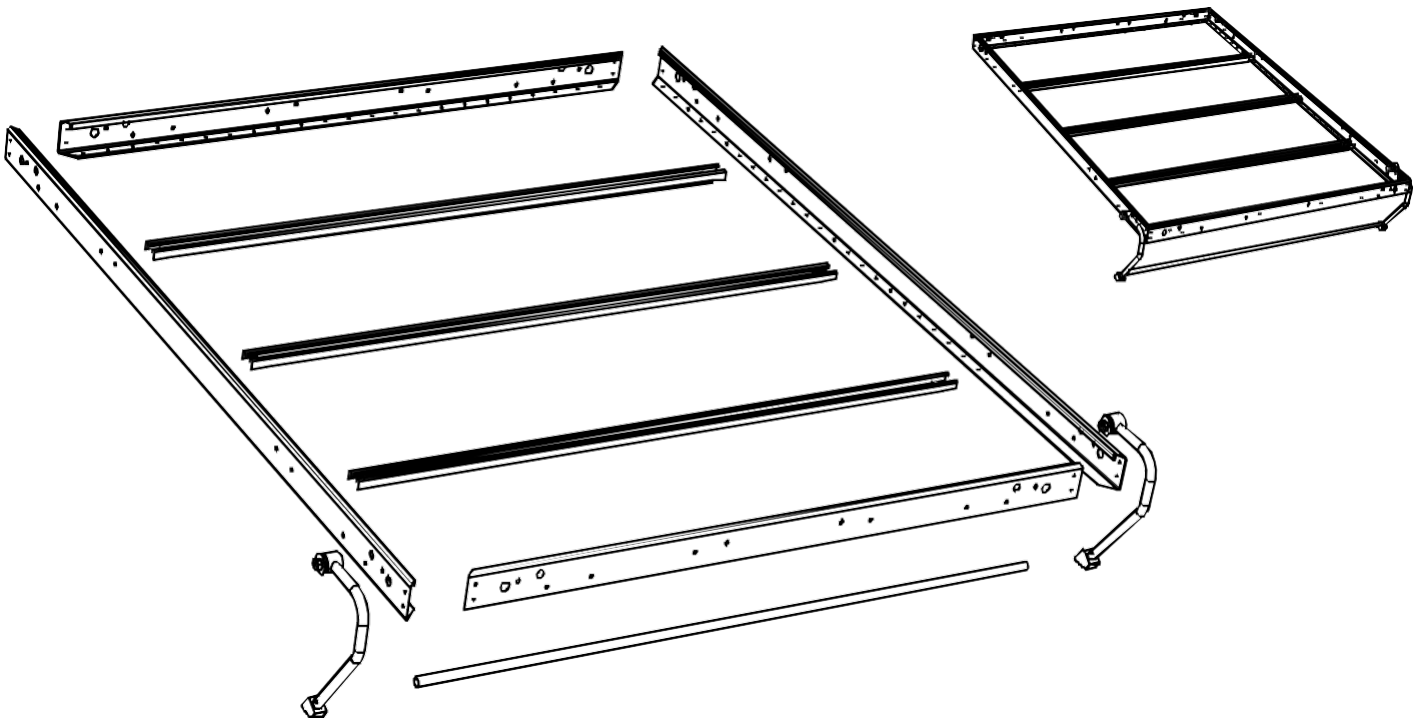
Qty.	Mechanism Carton Items	Comments	
1	Lift Mechanism - Right Side	Attach to Right Side Panel	<input type="checkbox"/>
1	Lift Mechanism - Left Side	Attach to Left Side Panel	<input type="checkbox"/>
2	#1 Bags containing 9 Springs each	Install correct number in each Mechanism	<input type="checkbox"/>
1	13" Plastic Pipe	Used to set the Lift Mechanisms	<input type="checkbox"/>
<b>Hardware Card #2</b>			
10	Machine Screw 5/16-18 x 1 1/4"	To attach Lift Mechanisms to Side Panels	<input type="checkbox"/>
4	Hex Head Bolt 5/16-18 x 1"	Attach Mechanism to Frame Side section	<input type="checkbox"/>
2	Allen Head Bolt 5/16-18 x 1"	Position Mechanism Arm on Frame Side section	<input type="checkbox"/>
16	Hex Head Nylock Nut	Secure Bolts and Screws	<input type="checkbox"/>
1	Allen Wrench 5/16"	For Allen Head bolts	<input type="checkbox"/>

# Component Layout

- The frame is adaptable as vertical or horizontal (side tilt) bed.
- Frame has mounting holes to use any of 4 Power Packs:  
SBLM, SBLM-A, ACBM, GPLS

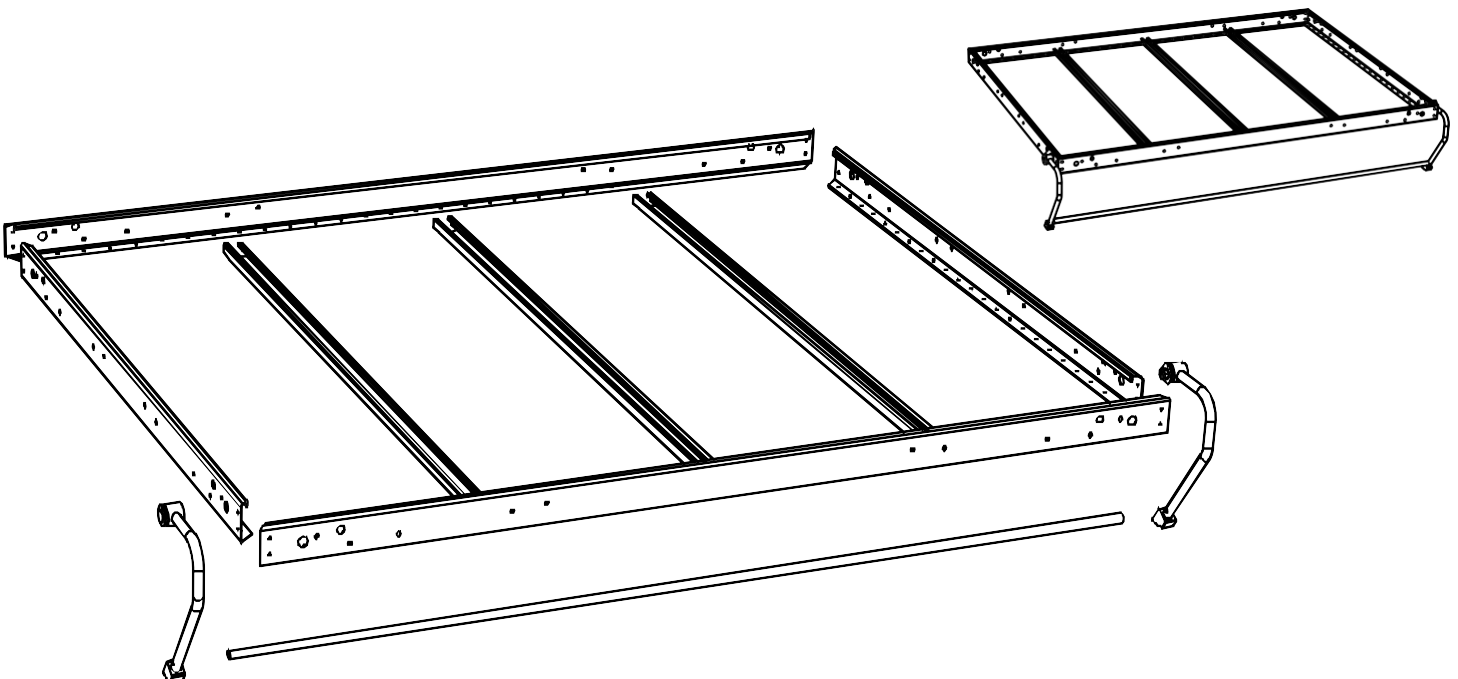
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**Frame laid out for assembly in the Vertical orientation.**



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**Frame laid out for assembly in the Horizontal orientation.**



# Cabinet Cut List (Vertical Orientation)

## For Use with Lift Mechanisms: SBLM

Numbers in parenthesis ( ) are millimeters.

For use with 13" (330) Leg Assemblies

Cabinets using 13" (330) Legs use a 2" (51) Facia and 4" (102) Kick. See page 12 for details.

<p><b>Single</b></p> <p><b>Mattress size:</b> 39"x75" (990x1905) 12" (305) max thickness</p>	<p><b>Overall Cabinet Dimensions:</b> 44 1/2"w x 83 1/4"h x 16"d (1130w x 2115h x 406d) <b>Protrusion from wall:</b> 85" (2146) <b>Cabinet Material:</b> 3/4" (19) MDF or Plycore</p>
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Quantity	Description	Width	Length	Finish (Tape) Edges
2	Bed Face Panel	21 1/4" (540)	77 5/16" (1964)	4 Edges
2	Side Panel	16" (406)	83 1/4" (2115)	2 Long Edges
2	Headboard (1) & Top Panel (1)	14 1/4" (362)	43" (1092)	2 Long Edges
1	Top Facia with 13" (330mm) Leg	2" (51)	43" (1092)	2 Long Edges
1	Bottom Rear Base	6" (152)	43" (1092)	2 Long Edges
1	Bottom Kick with 13" (330mm) Leg	4" (102)	43" (1092)	2 Long Edges

<p><b>Double</b></p> <p><b>Mattress size:</b> 54"x75" (1372x1905) 12" (305) max thickness</p>	<p><b>Overall Cabinet Dimensions:</b> 59 1/2"w x 83 1/4"h x 16"d (1511w x 2115h x 406d) <b>Protrusion from wall:</b> 85" (2146) <b>Cabinet Material:</b> 3/4" (19) MDF or Plycore</p>
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Quantity	Description	Width	Length	Finish (Tape) Edges
4	Bed Face Panel	14 3/8" (365)	77 5/16" (1964)	4 Edges
2	Side Panel	16" (406)	83 1/4" (2115)	2 Long Edges
2	Headboard (1) & Top Panel (1)	14 1/4" (362)	58" (1473)	2 Long Edges
1	Top Facia with 13" (330mm) Leg	2" (51)	58" (1473)	2 Long Edges
1	Bottom Rear Base	6" (152)	58" (1473)	2 Long Edges
1	Bottom Kick with 13" (330mm) Leg	4" (102)	58" (1473)	2 Long Edges

<p><b>King</b></p> <p><b>Mattress size:</b> 60"x80" (1524x2032) 12" (305) max thickness</p>	<p><b>Overall Cabinet Dimensions:</b> 65 1/2"w x 88 1/4"h x 16"d (1664w x 2242h x 406d) <b>Protrusion from wall:</b> 90" (2273) <b>Cabinet Material:</b> 3/4" (19) MDF or Plycore</p>
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Quantity	Description	Width	Length	Finish (Tape) Edges
4	Bed Face Panel	15 7/8" (403)	82 5/16" (2090)	4 Edges
2	Side Panel	16" (406)	88 1/4" (2242)	2 Long Edges
2	Headboard (1) & Top Panel (1)	14 1/4" (362)	64" (1626)	2 Long Edges
1	Top Facia with 13" (330mm) Leg	2" (51)	64" (1626)	2 Long Edges
1	Bottom Rear Base	6" (152)	64" (1626)	2 Long Edges
1	Bottom Kick with 13" (330mm) Leg	4" (102)	64" (1626)	2 Long Edges

# Cabinet Cut List (Horizontal Orientation)

**Cabinet Components Description & Cut List. See pg. 18 for assembly.**

**Cabinet Material:** 3/4" (19) MDF or Plycore      Numbers in parenthesis ( ) are millimeters.

#	Qty	Description	Single	Double	King	Edge Band
1	2	Bed Face Panel	39" x 41 3/4" (990 x 1060)	39" x 56 3/4" (990 x 1441)	41 1/2" x 62 3/4" (1054 x 1594)	4 Edges
2	2	Side Panel for 13" (330) Leg	16" x 49 3/4" (406 x 1264)	16" x 64 3/4" (406 x 1645)	16" x 70 3/4" (406 x 1797)	2 Long Edges
3	1	Top Panel	16" x 78 1/2" (406 x 1994)	16" x 78 1/2" (406 x 1994)	16" x 83 1/2" (406 x 2121)	2 Long Edges
4	1	Top Facia	2" x 78 1/2" (51 x 1994)	2" x 78 1/2" (51 x 1994)	2" x 83 1/2" (51 x 2121)	2 Long Edges
5	1	Top Facia Stiffener	3" x 78 1/2" (76 x 1994)	3" x 78 1/2" (76 x 1994)	3" x 83 1/2" (76 x 2121)	2 Long Edges
6	2	Top Rear Stiffener (1), Bottom Rear Base (1)	4" x 78 1/2" (102 x 1994)	4" x 78 1/2" (102 x 1994)	4" x 83 1/2" (102 x 2121)	2 Long Edges
7	2	Kick & Kick Stiffener for 13" (330) Leg	4" x 78 1/2" (102 x 1994)	4" x 78 1/2" (102 x 1994)	4" x 83 1/2" (102 x 2121)	2 Long Edges
8	1	Head Board	15" x 78 1/2" (381 x 1994)	15" x 78 1/2" (381 x 1994)	15" x 83 1/2" (381 x 2121)	2 Long Edges
9	1	Head Board Stiffener	6" x 78 1/2" (152 x 1994)	6" x 78 1/2" (152 x 1994)	6" x 83 1/2" (152 x 2121)	0 Edges
10	1	Panel Connector	3" x 37" (76 x 940)	3" x 52" (76 x 1321)	3" x 58" (76 x 1473)	0 Edges



## **Cabinet Footprint Dimensions & Protrusion Distance from Wall (Horizontal)**

Numbers in parenthesis ( ) are millimeters.

	Single	Double	King
Cabinet Size (D,W,H)	16" x 80" x 49 3/4" (406 x 2032 x 1264)	16" x 80" x 64 3/4" (406 x 2032 x 1645)	16" x 85" x 70 3/4" (406 x 2159 x 1747)
Projection from Wall	49" (1245)	64" (1626)	70" (1778)
Max Mattress Size	39" x 75" (990 x 1905)	54" x 75" (1372 x 1905)	60" x 80" (1524 x 2032)
Max Mattress Thickness	12" (305)	12" (305)	12" (305)

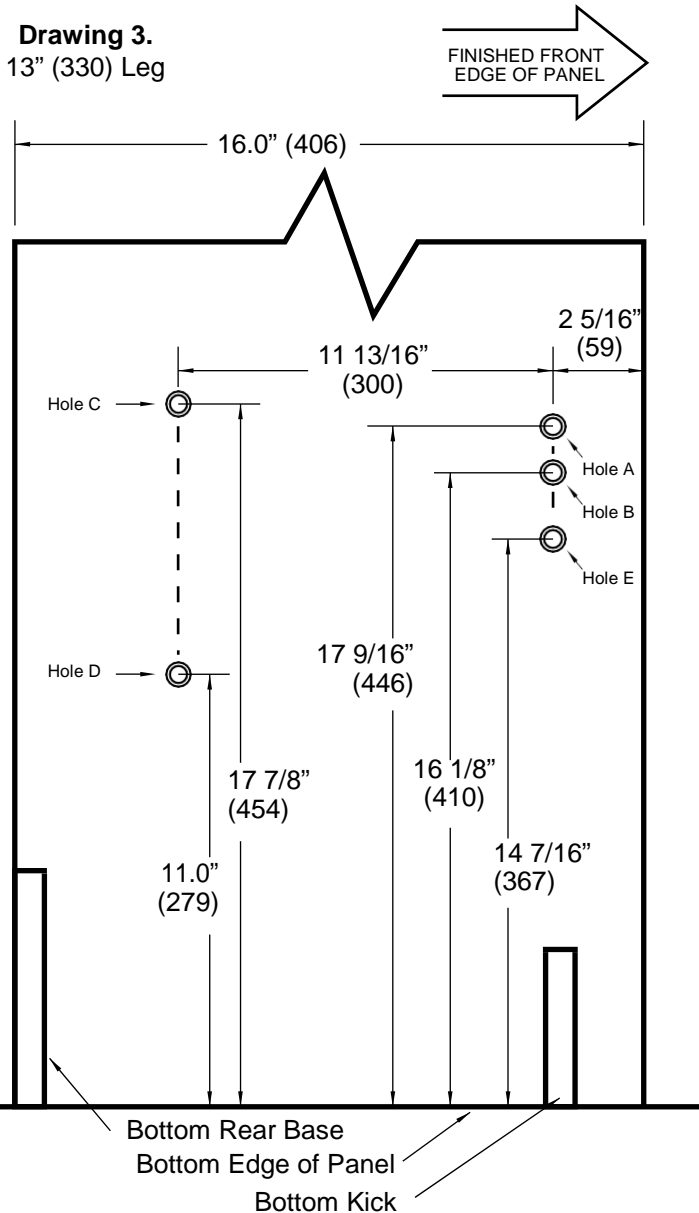
# Step by Step Instructions

## STEP 1: Mount the Lift Mechanism to the Side Panels

Drill Patterns in Drawing is only for the SBLM Lift Mechanism  
Numbers in parenthesis ( ) are millimeters.

1. Exactly mark the mounting holes on the inside of each side panel.
2. Drill a 1/16" (2mm) pilot hole for each mounting bolt. Drill the final hole with a 5/16" (8mm) bit.
3. Counter sink 5/8" (15mm) on the outside of the panels just deep enough for the 5/16" x 1 1/4" (8x32mm) Machine Screws.
4. Mount the Lift Mechanisms.

**NOTE:** All location measurements are from the front edge of the Cabinet Side Panels.  
Refer to Drawings 3 & 4.



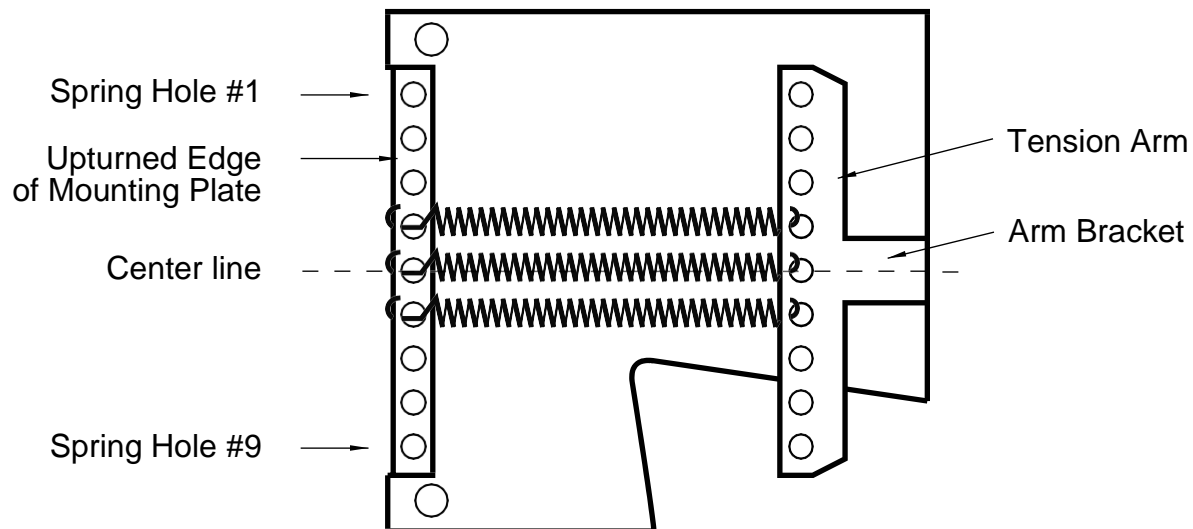
## STEP 2: Install the springs on the Lift Mechanisms

<b>SPRING APPLICATION CHART</b>		
<b>Please Note:</b> These are recommendations only. Actual number of springs required will depend on the total weight of the bed-face unit including the mattress and all bedding.		
<b>BED SIZE</b>	<b>BED PANEL MATERIAL</b>	
	<b>Plywood Core</b>	<b>Particle Board</b>
<b>Single</b>	2-3 springs per side	3-4 springs per side
<b>Double</b>	4-6 springs per side	5-6 springs per side
<b>King</b>	5-6 springs per side	6-7 springs per side
After you have completed installing and checking the operation of your bed, you may find it necessary to add or remove springs to achieve the correct lift effort of between 5 to 10 pounds.		

There are nine locations for springs. If the bed requires an even number of springs, do not use the center hole (#5 from the top). If the bed requires an odd number of springs, start with the center hole (#5 from the top) and work outward in both directions evenly.

Hook the springs so the open ends are facing outward. You may have to gently pry up the tension arm and slide the spring under and snap them into place in the proper hole, matching the same numbered hole from the top of the mechanism back plate. You should have an equal number of springs on each side of the center hole.

Use the same number of springs and the same layout on both the left and right mechanisms.

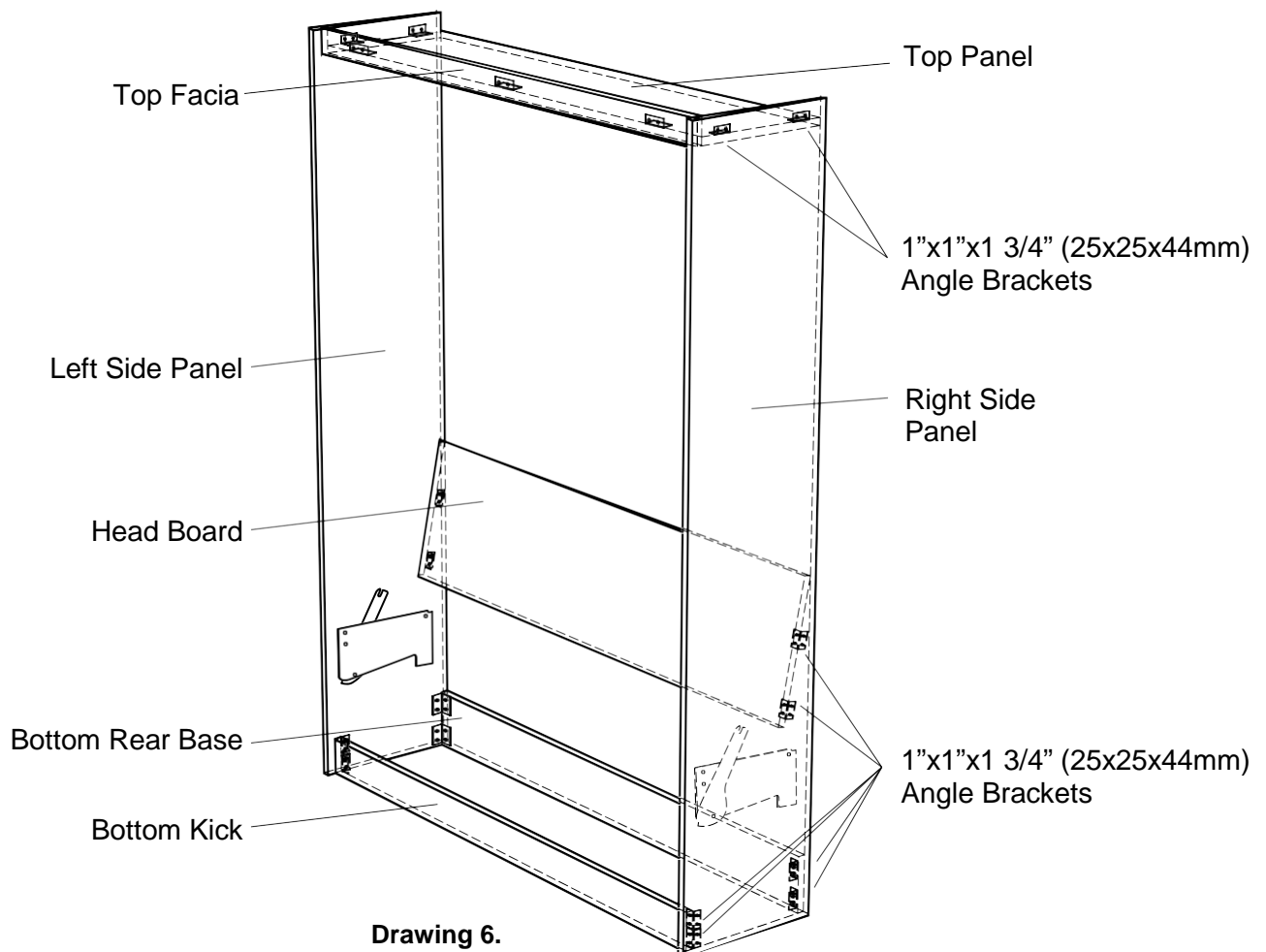


Drawing 5.



### **STEP 3: Assemble the Bed Cabinet (Vertical Orientation)**

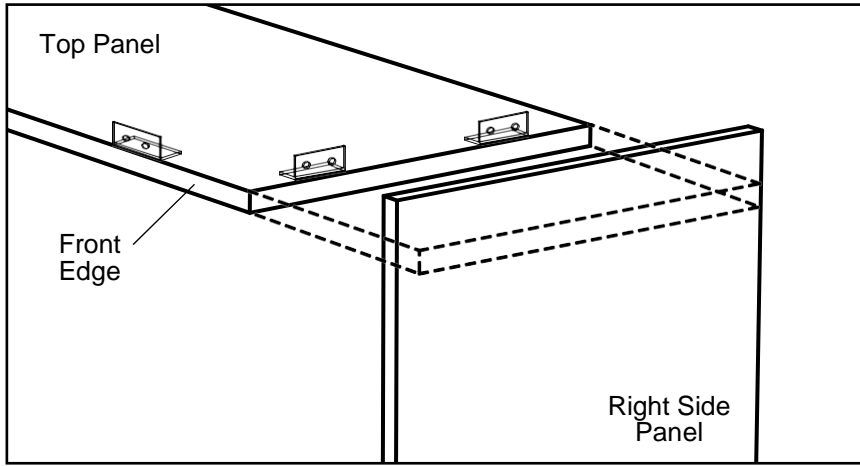
- If possible, the Bed Cabinet should be assembled in the room where it will be used.
  - Be sure Lift Mechanisms are securely installed.
1. Locate the mounting position of the headboard marking the left and right side panels 20" (508mm) from the floor and 3" (76mm) in from the back edge of the panels. Note from Drawings 6 & 7 that this mounts the bottom edge of the headboard out 3" (76mm) from the back or wall edge of the Side Panels. Use the 1"x1"x1 3/4" (25x25x44mm) mounting brackets (2 each side). Be sure the top bracket is set low enough not to protrude beyond the back of the cabinet. Use #8x3/4" (M4x19mm) Pan head Screws. The Headboard location may vary slightly; just be sure it is secure and at the approximate 3" (76mm) distance from the back edge.
  2. Use Angle Brackets to assemble Bottom Rear Base and Bottom Kick in position shown in Drawings 6 & 7. Use two Angle Brackets on each end.
  3. Attach Top Panel as shown in Drawings 6 & 7. Be sure back edge of the Top Panel is flush with back of Side Panels and 1 1/4" (32mm) down from the top of the Side Panels so it is flush with the bottom edge of the Top Facia. The Top Facia will cover the front edge of the Top Panel.



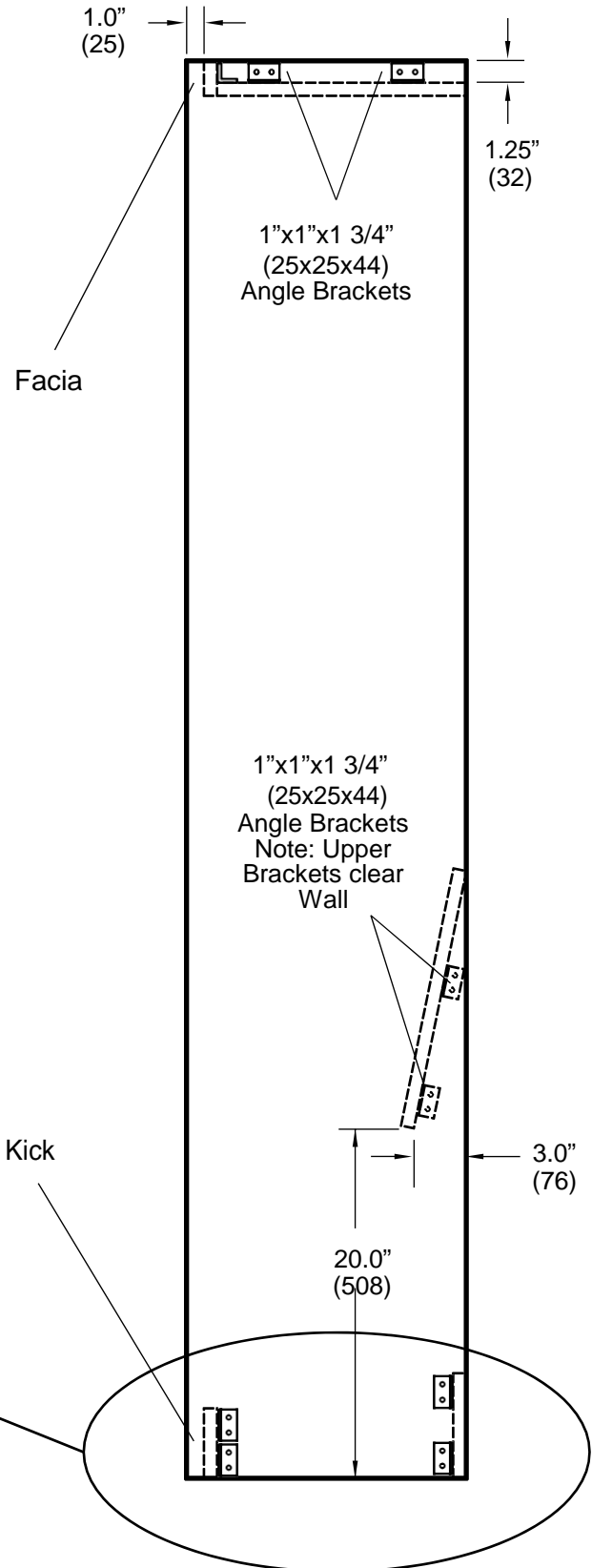
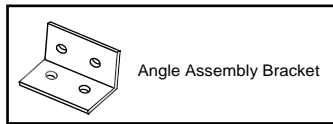
**Drawing 6.**

# STEP 3: Assemble the Bed Cabinet (Vertical Orientation) continued

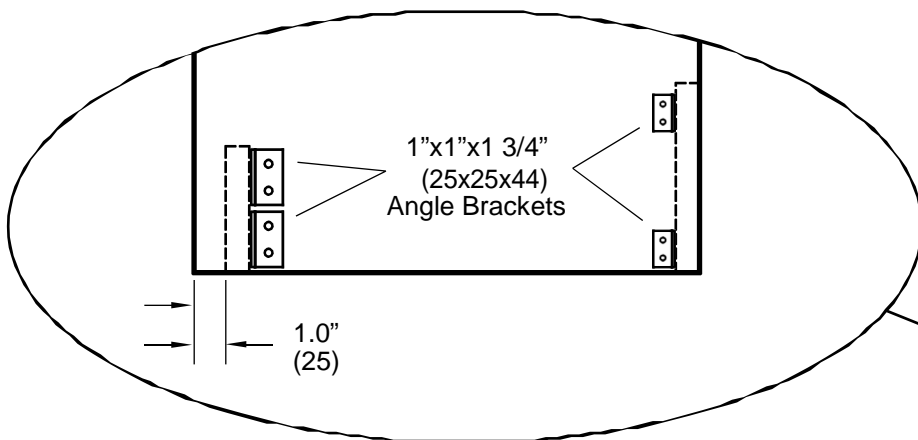
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Drawing 8.



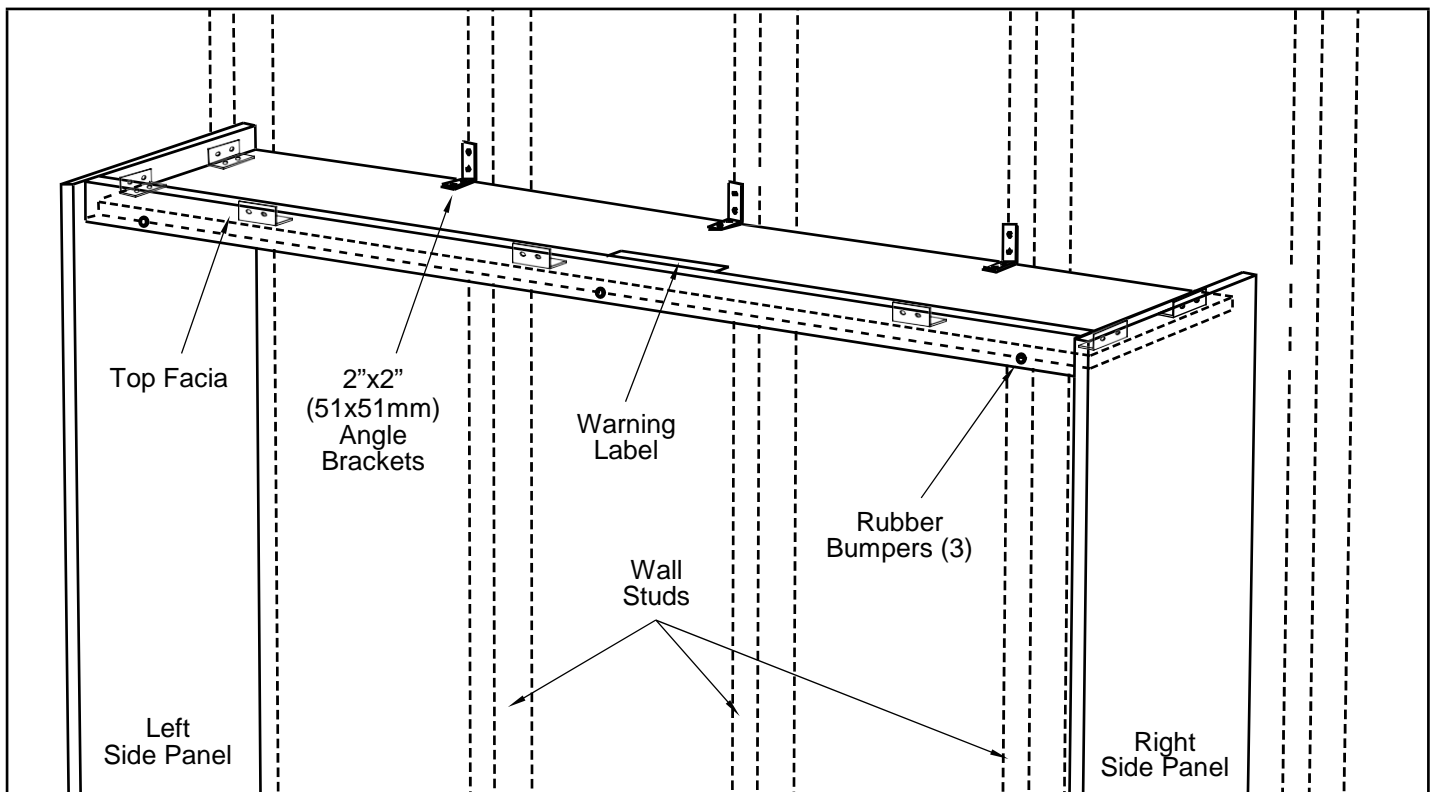
Drawing 7.



## STEP 4: Attach Bed Cabinet Securely to Wall

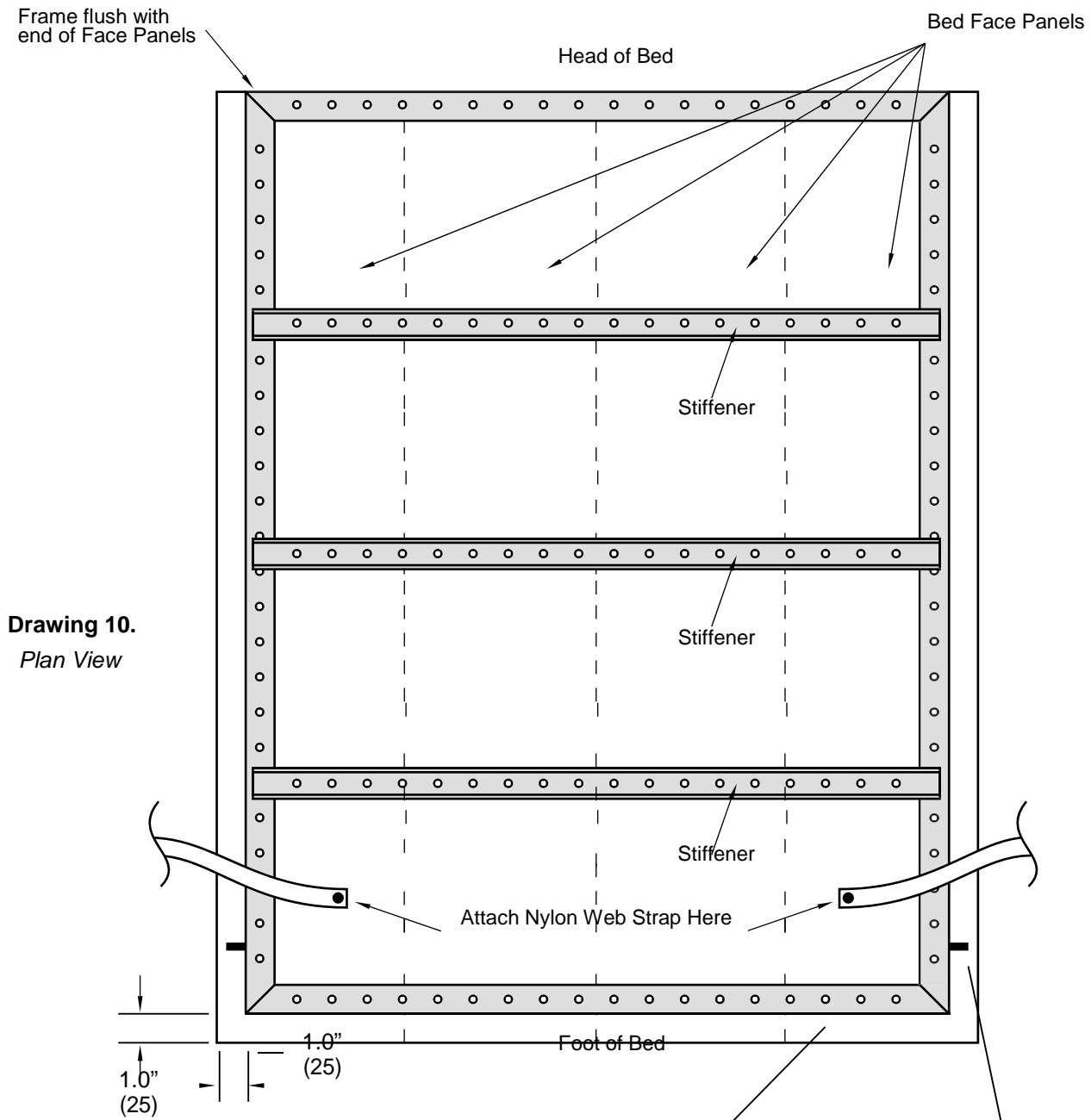
**Hints:** If the room is carpeted you may raise the kick up to 1/4" (7mm) to clear the carpet. More than 1/4" (7mm) will obstruct the operation of the bed.

- You may or may not wish to remove the Base Board to allow the Bed Cabinet to fit flush against the wall. If you do remove the Base Board, save for later trim and replacement. If you do not wish to remove the Base Board, you may use a shim or filler strip of the same thickness at the top between the cabinet and the wall.
1. Place cabinet against wall. Make sure the cabinet is level and square. Measure diagonally to be sure of square. Bed will not operate if cabinet is not square. Check also for square from front to back as well as side to side. Use shims where necessary.
  2. Prior to placing cabinet against the wall, locate 3 studs or other wall frame members at the level of the Top Panel (top of bed).  
**Alert:** The cabinet must be secured to studs or other wall structural members using 2" x 2" (51x51mm) L-Brackets. If the wall is not a wood stud wall, use metal stud screws, toggle bolts or concrete expansion bolts if necessary.
  3. Now that the cabinet is square and plumb, use two #8x2" (M4x51mm) flat head wood screws in each of three 2"x2" (51x51mm) brackets to attach to studs at the top level of the Top Panel (see Drawing 9.). Re-check square and plumb and then secure 2"x2" (51x51mm) L-Brackets to Top Panel with #8 x 3/4" (M4x19mm) wood screws. Attach warning label to top of cabinet. Attach three Bumper Buttons to bottom of the front edge of the Top Facia. These Bumpers allow the Bed Face Panel to close quietly.

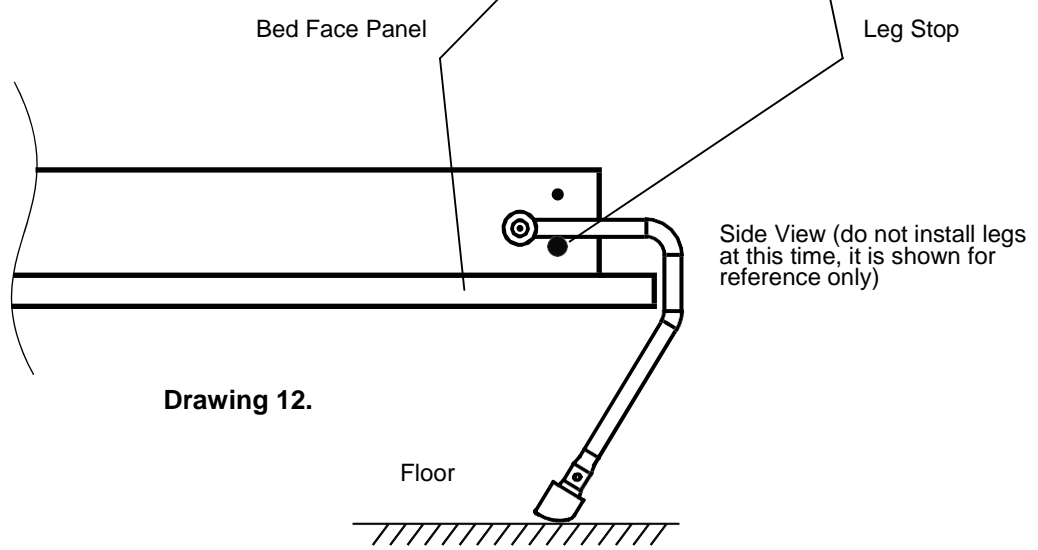


Drawing 9.

# STEP 5: Assemble Steel Bed Frame to Face Panels



Drawing 10.  
Plan View



Drawing 12.

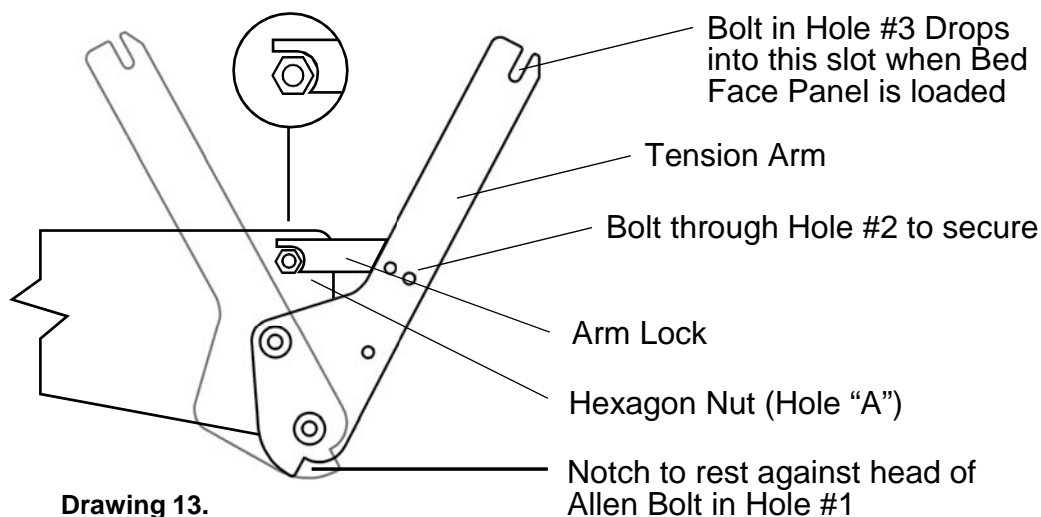
## **STEP 5: Assemble Steel Bed Frame to Face Panels, continued**

- 1: Lay the Bed Face Panels down on a non-scratch surface such as a carpet or blanket.
- 2: Completely assemble the 4 Frame Sections with the corner brackets and the 3/16"x1/2" (M5x12mm) black bolts provided. Refer to Drawing 12 to properly place the leg stops at outer right and left bottom holes at the foot of the bed frame.
- 3: Position the bed frame on the bed face panels. With the Head Frame section flush with the head end of the Bed Face Panels. Refer to Drawing 10. Carefully attach the Bed Frame so it is centered on the Bed Face Panels; you will have approximately 15/16" (24mm) space from the bed frame to the panel edges right and left and at the bed foot.

Note: It is very important to have the Bed Frame centered on the Bed Face Panels. Any error will be noticed in the vertical sight lines when the bed is closed.

- 4: Three steel stiffeners are provided for all beds. These notched stiffeners should be located and attached to divide the Bed Face length into four equal sections. Use caution not to damage raised panels by putting screws in recessed areas.
- 5: Attach the Nylon Web Strap approximately 18" (460mm) down from the foot of the bed and 6" (150mm) in from the sides, for tucking in sheets. The Straps help secure the mattress in the vertical position (see drawing 10).

## **STEP 6: Set the Lift Mechanism**



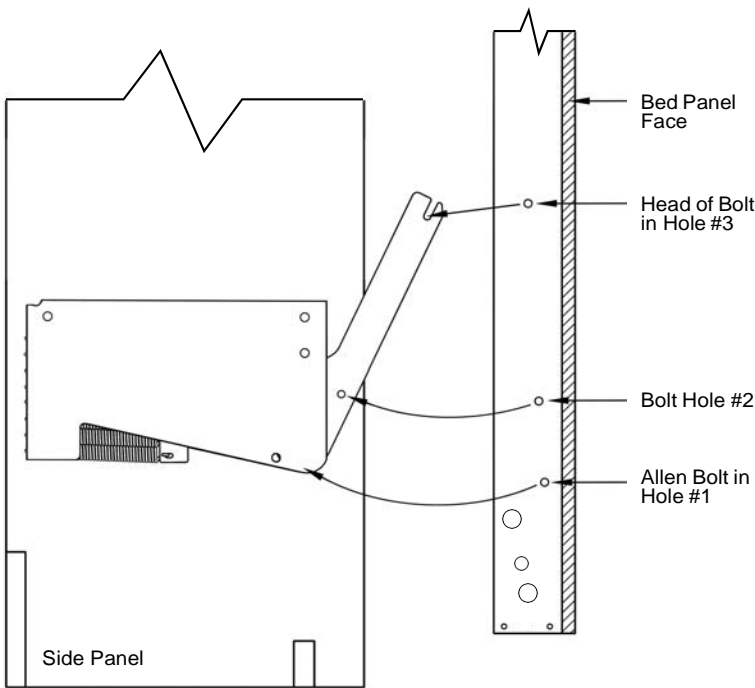
Holding one foot against the bottom front edge of the side panel and using the 13" (330mm) PVC tube, lever the tension arm out until you can set the arm lock to the hex nut at the hole A (see drawing 13.). This is the hex nut at the top front corner of the mechanism.

### **Caution:**

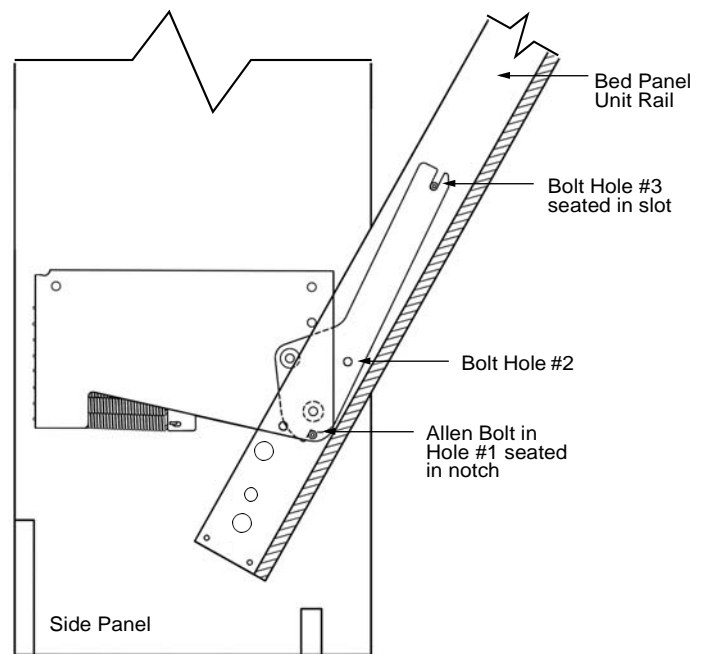
If possible have a helper assist in the setting of the mechanism and loading of the bed face panel. DO NOT reach behind the tension arm when you are doing the setting procedure.

## **STEP 7: Install the Bed Face Panel Unit**

1. Insert Allen Head Bolts through Hole #1 (6 3/4" from end of side frame) on both left and right side frames (see Drawing 14). Thread on 5/16" (8mm) Nylock nuts and securely tighten.
2. Insert two 5/16" (M8x20mm) Hex Head Bolts from the outside of the frame through Hole #3 and put 5/16" (8mm) Nylock Nuts on these bolts only finger tight at this time.
3. Stand the Bed Face Panel in vertical position between the tension arms, lift evenly until the bolt in Hole #3 drops in the slotted end of each tension arm. Gently tilt the bed face toward you until the Allen Bolts in Hole #1 are completely seated in the bottom notch of the tension arms. Insert the remaining 5/16" (8mm) Hex Head Bolts through tension arms into Holes #2 and fasten with 5/16" (8mm) Nylock Nuts; securely tighten these and the nuts on Hole #3.



**Drawing 14.**



**Drawing 15.**

4. When all bolts are securely tightened, you may tilt the panel outward to approximately 45 degrees to release the arm locks. You will hear a click as they disengage.

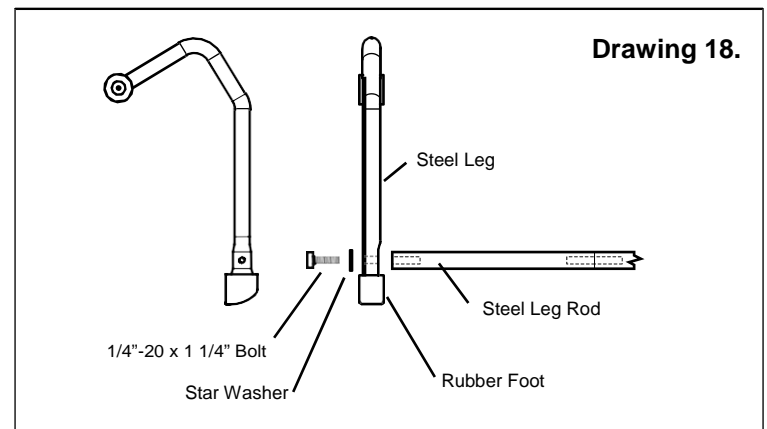
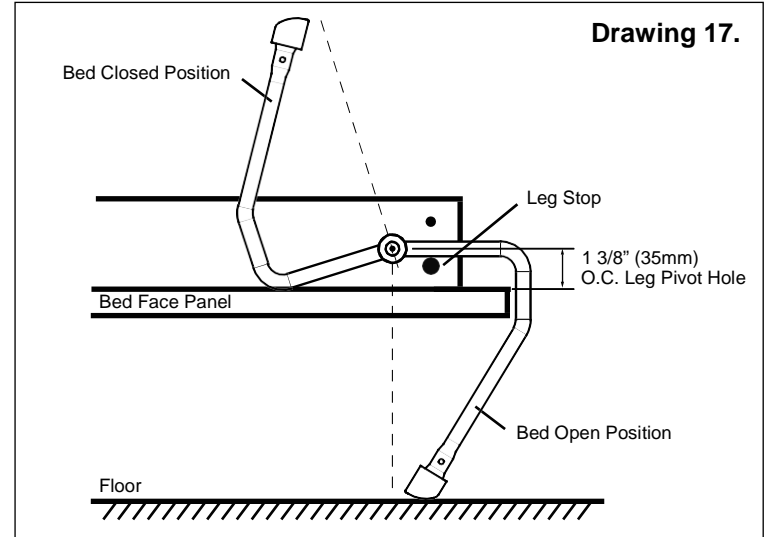
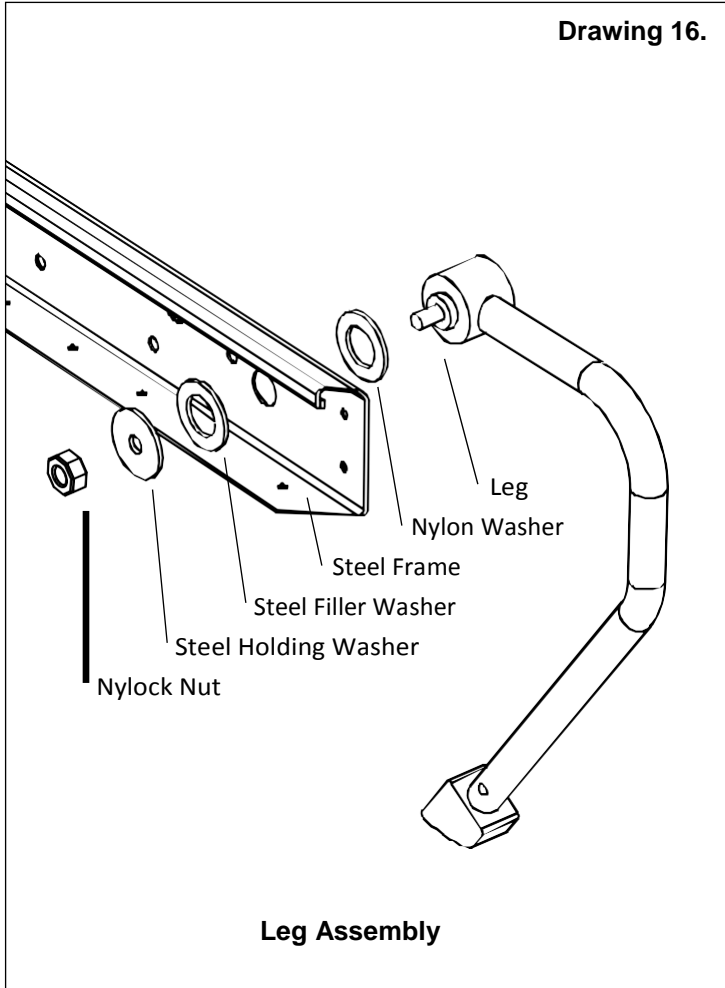
### **Caution:**

Hold the Face Panel securely, Do Not let it slam shut. Balance is not achieved until the mattress is loaded in the bed.

Leveling of the bed cabinet is essential. Check the level both side to side and front to back. Proper leveling will facilitate proper closure and exact sight lines of the fit of the Face Panel to the Cabinet.

## **STEP 8: Install Handles - Legs - Mechanism Covers - Mattress**

1. Position and secure handles for ease of operation. Measure down approximately 36" (914mm) from the panel top to the top of the handles.
2. Install legs with the washers on the inside of the Rails and the Nylon washer on the outside. Tighten nut to have a small amount of friction when leg assembly is rotated from the up to down position.

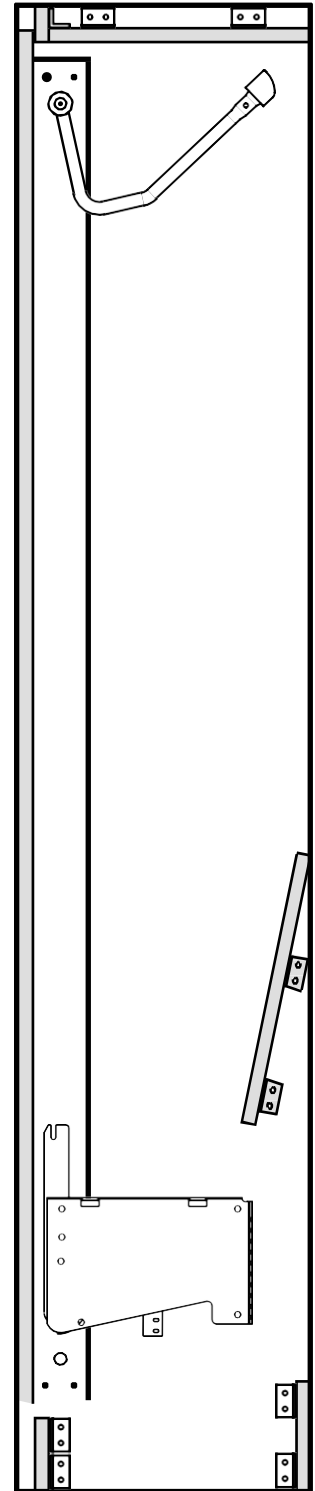
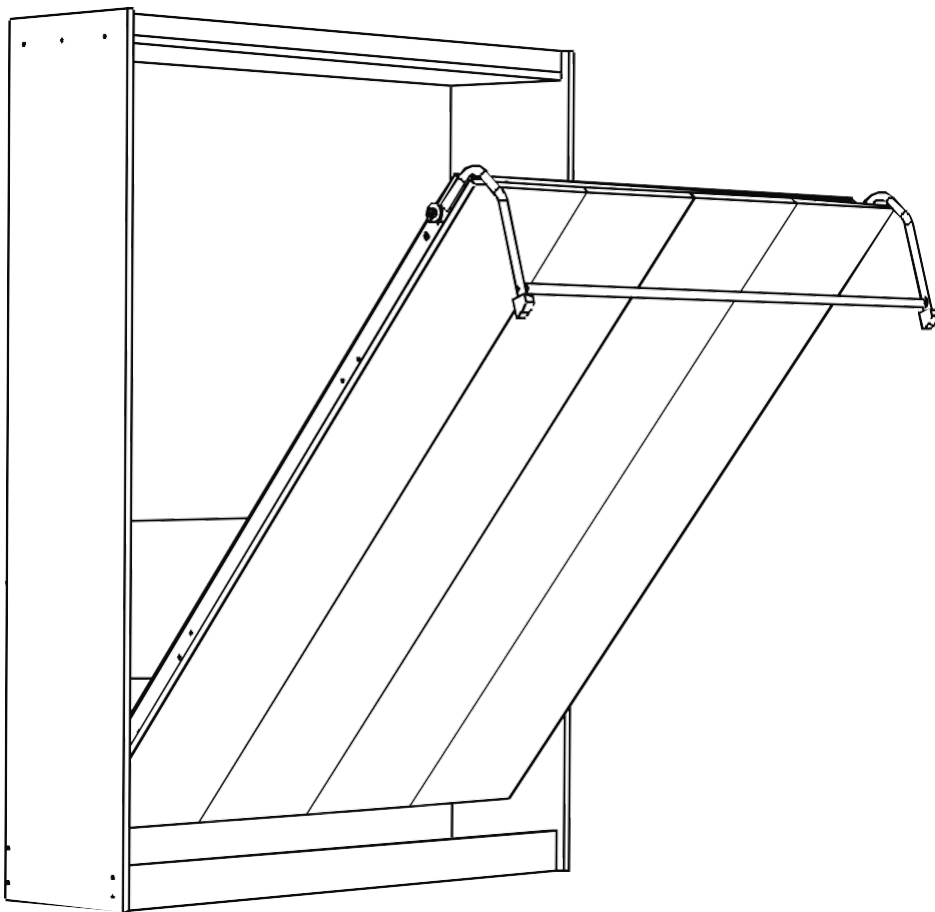


3. Install leg connector rod between legs and secure with 1/4"x1 1/4" (M4x32mm) Hex head bolts and star washers. Be sure they are securely tightened so not to become loose.
4. Install the mattress and secure with previously installed Nylon Straps.
5. Snap the powder coated steel mechanism covers in place - secure with #8x1 1/4" (M4x32mm) black wood screws through the standoff on the backer plate.

# Complete Bed Assembly

## Follow up to Initial Assembly

Check that the Bed Cabinet is level and square so the Bed Face has equal clearance of the Cabinet on both sides, top to bottom. If the Cabinet is leaning to one side, nudge it at the floor level. If the top is uneven, place shims under the Side Panels. If bed is too heavy to operate easily or slams shut, remove the Bed Face Panel and add or subtract springs. At this time, you may decide to use one more or less spring(s) on the left or right side Lift Mechanism.

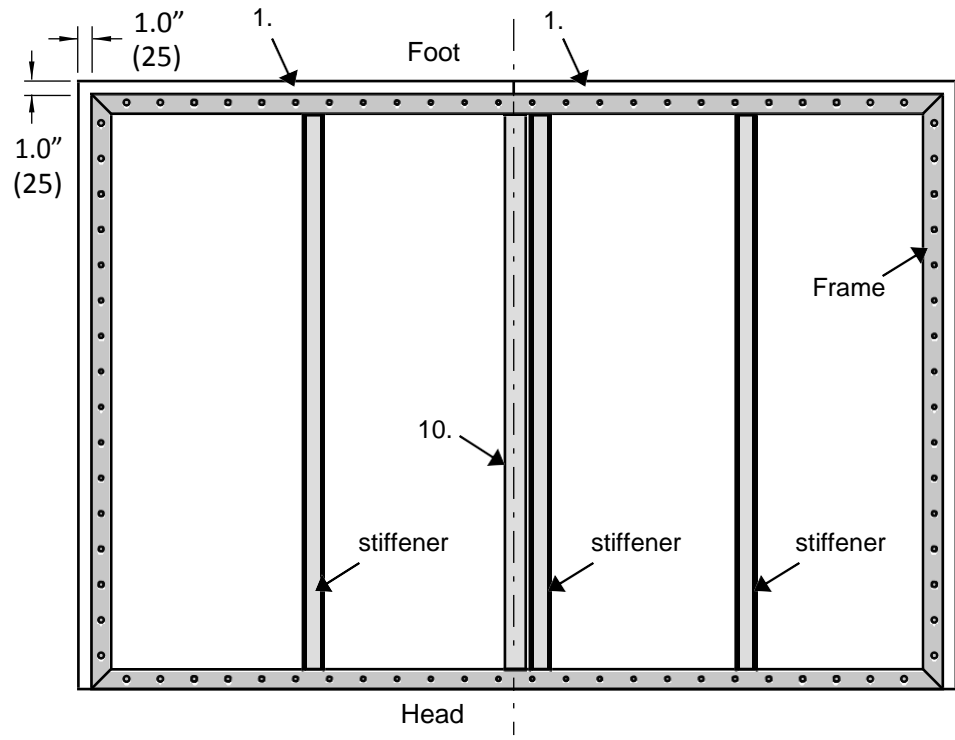
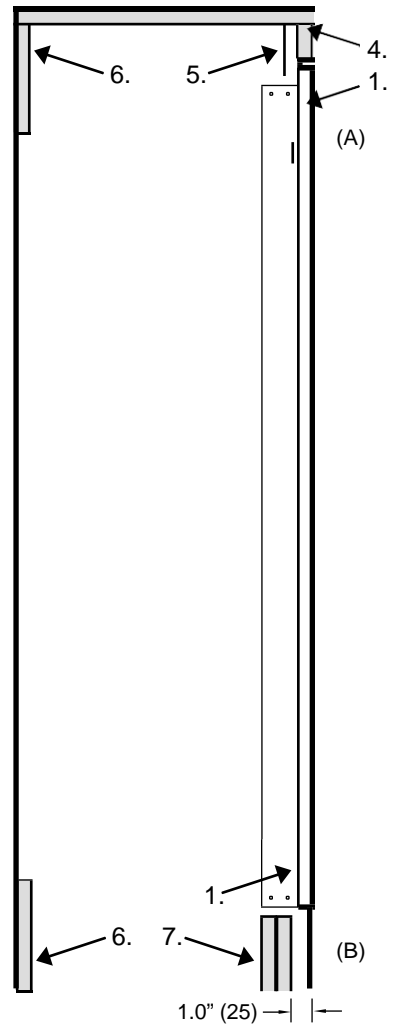
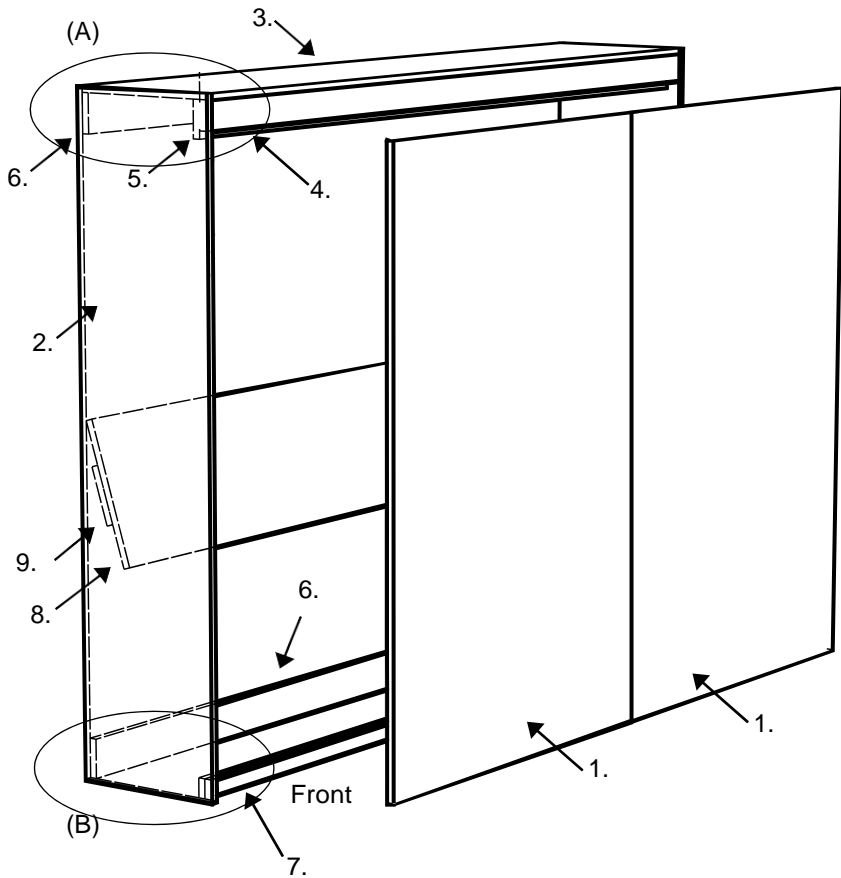


**Right Side  
Looking through Side Panel.**



# Bed Assembly (Horizontal Orientation)

**For Power Packs:**  
**#SBLM:**  
 Spring Balance Lift Mechanism  
**#SBLM-A:**  
 Spring Balance Lift Mechanism Adjustable



It is recommended to reinforce the vertical seam where the face panels meet with a 3/4"x3" (19 x76mm) wood stiffener held in place with wood screws to the face panels. Use the steel stiffeners as well; one next to the wood stiffener and the other two equally spaced.