MURPHY Wall Bed

Hardware COMPONENTS
Spring Power Boxes
with
Stiffening surround Steel Frame



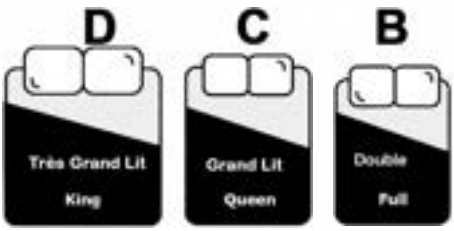
MODEL ZQVH B (54*75)
MODEL ZQVH C (60*80)

Murphy Beds for Wall or Floor Mounting





Steel Contour Reinforcement Frame



* * AVAILABLE SIZES (Optional)
* Single (Twin)
* Single Xtra long
* California King *

OPTIONAL

* Feet Height (STD 13") 11'' - 14 - 17''
* Linking Tube Width 77'' and 82''
* Reinforced Series of Balance Springs
* Adjustable Force power clusters
* Accessory Desks and Shelves

A universal bed frame for bed sizes in double, queen or king formats. Other sizes available on special order.

These frames can be mounted in vertical or horizontal modes

Carefully made and finished to contain overlapping cross- stiffeners and complemented by a pair of linked out-of-the-way rotating feet and steel covered Power Spring- boxes.

GARANTIE à vie
Lifetime WARRANTY
Limitée • Limited

ACompo

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 Plywood Core or Particle Board.

Handles to pull open the bed 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 these items are available

Steel Bed Frame and Mechanism Cabinet Components and Hardware
Necessary Tools

If you choose to build in a horizontal bed orientation, a separate cut list is provided and relevant assembly diagrams are on pages 5-8- and 19.

Steps to Complete Project

1. Prepare all wood or laminate cabinet components.
2. Prepare & assemble the Lift Mechanism.
3. Install springs in Lift Mechanisms.
4. Assemble the Bed Cabinet.
5. Attach Bed Cabinet to wall.
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

NOTICE

These drawings, dimensions and notes are offered to serve as a starting point in your initial product design. This aid is based on years of production and customers' experiences in this and other markets. Nevertheless, it remains your responsibility as manufacturer and woodworker to verify and see to the design and proper functioning which meets the user satisfaction and safety and for your products to conform to laws applicable for the jurisdictions you serve.

We, as the component seller, have no control on how the final product is configured, produced, and assembled and subsequently installed. We therefore cannot be held liable for damages resulting from poor design, misuse, improper installation, or manufacturing defect of the goods sold. In all other cases, this Seller's liability is limited to the replacement of parts or price of the initial goods sold.

Carton Contents

Note: Each Frame Carton contains one Single, Double, Queen 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	☐
2	Frame Side Sections	Identical, Right or Left	☐
3(5)	Stiffeners Bed Front (King Size)	Space evenly between Frame Sides	☐
2	Fold-away Legs	One Left - One Right	☐
1	Leg Connector Rod	Stabilizes and Eases Leg Operation	☐
2	PS-1 Frt panel bumper protectors	Protect the Bed Face	☐
	Hardware Card #3		
14	Bolt 10-24x1/2" (M6x12mm) Black	Bolt Frame corners	☐
2	Bolt 10-24x1 1/4" (M6 x 32mm) Black	Bolt Leg Stop Foot corners	☐
16	Nut 10-24 (M6) Black Nylock	Use with #1214 & #1213	☐
4	Angle 1"x1"x1 3/4" (25x25x44mm) Black	Use inside Frame corners	☐
2	1/2"x3/4" (13x19mm) Round Barrel sleeve	Use with #1213 as Leg Stop	☐
	Hardware Card #4		
2	1 1/2"x5/16" (T1.5x40mm) Black Washer	Secure Leg inside Frame	☐
2	1 1/2"x.765" (T2.5x40mm) Black Washer	Secure Leg inside Frame	☐
2	1 1/2"x.765" (T2.5x40mm) Black Nylon Washer	Between Leg & outside of Frame	☐
2	Nut 5/16" (M8) Black Nylock	Secure Leg inside Frame	☐
2	Bolt 1/4"-20 Black Hex Head	Attach Leg to Leg Rod	☐
2	Star Washer for #1210	Attach Leg to Leg Rod	☐
	Hardware Card #5		
1	Nylon Web Strap with Buckle	Secure Mattress to Bed Frame	☐
2	3/4"x1/4" (T1.5x25mm) Washer	Secure Nylon Web Strap to Bed Face Panel under Mattress	☐
2	#8x5/8" (M4x15mm) Wood Screw	Secure Nylon Web Strap	☐
	Hardware Card #7 - includes 1 bag (King size 2 bags)		
160	#8x5/8" (M4x15mm) Wood Screw	Attach Steel Bed Frame to Bed Face	☐

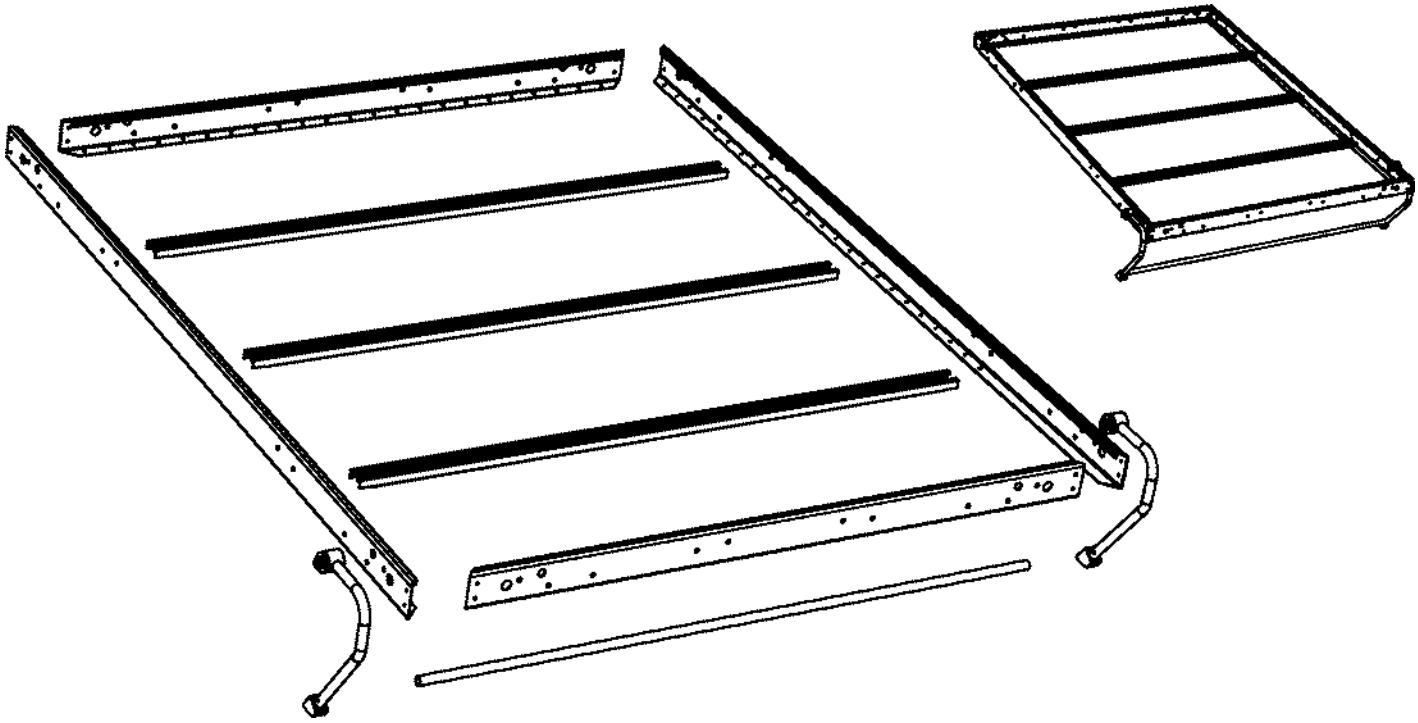
Qty.	Mechanism Carton Items	Comments	
1	Lift Mechanism - Right Side	Attach to Right Side Panel	☐
1	Lift Mechanism - Left Side	Attach to Left Side Panel	☐
2	#1 Bags containing 9 Springs each	Install correct number in each Mechanism	☐
1	13" Plastic Pipe Tension	Used to set the Lift Mechanisms	☐
	Hardware Card #2		
10	Flat- Hd Machine Bolt 5/16-18 x 1 1/4" (M8-32)	To attach Lift Mechanisms to Side Panels Attach	☐
4	Hex Head Bolt 5/16-18 x 3/4" (M8-20)	Mechanism to Frame Side section Stop & temp	☐
2	Allen Barrel Head Bolt 5/16-18 x 3/4"(M8-20)	Support for Sprg Bx arm to steel mattress frame	☐
16	Hex Head Nylock Nut	Tighten Bolts and permanently	☐
1	Allen Wrench 5/16" (M8)	For Allen Head bolts	☐

Component Layout

he frame is adaptable as vertical or hori ontal (side tilt) bed Frame has

mounting holes to use any of i Po er Packs
SBLM, SBLM A, ACBM, PLS

Frame laid out for assembly in the <u>Vertical orientation.</u>

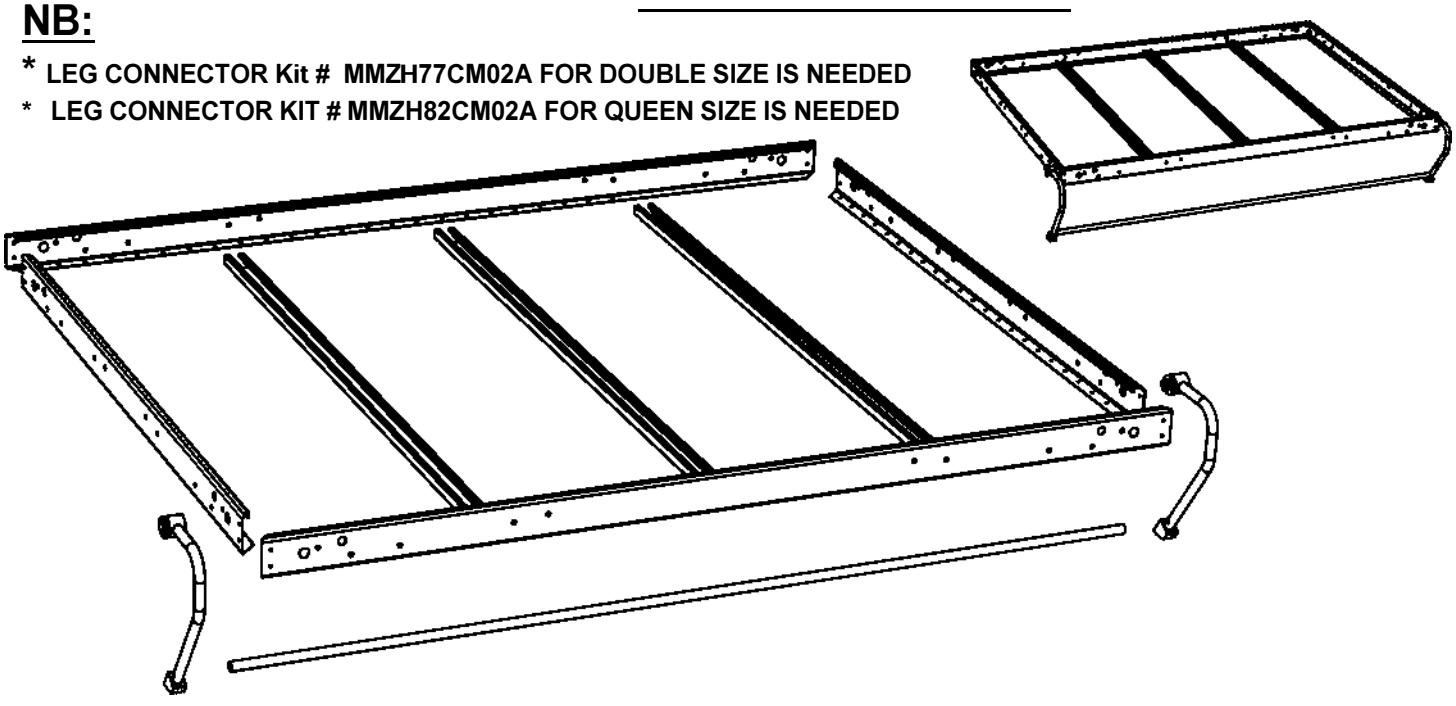


Frame laid out for assembly in the Horizontal orientation

<u>NB:</u>

*** LEG CONNECTOR Kit # MMZH77CM02A FOR DOUBLE SIZE IS NEEDED**

*** LEG CONNECTOR KIT # MMZH82CM02A FOR QUEEN SIZE IS NEEDED**



Cabinet Cut List (Vertical Orientation)

or se ith Li t Mechanisms: S LM

f f

Single / Twin Bed

Mattress size:

Overall Cabinet Dimensions:

Protrusion from wall:
Cabinet Material:

	ac a			s
	i a			s
	a a a			s
	f i Kick i			s
	a as			s
	Kick i f i			s

Double / Full Bed

Mattress size:

Overall Cabinet Dimensions:

Protrusion from wall:
Cabinet Material:

	ac a			s
	i a			s
	a a a			s
	f i Kick i			s
	a as			s
	Kick i f i			s

Queen Bed

Mattress size:

Overall Cabinet Dimensions:

Protrusion from wall:
Cabinet Material:

	ac a			s
	i a			s
	a a a			s
	f i Kick i			s
	a as			s
	Kick i f i			s

Cabinet Cut List (Vertical Orientation) - continued

For Use with Lift Mechanisms: SBLM

Numbers in parenthesis ( ) are millimeters.
For use with 13” (330) or 11“ (279) Leg Assemblies
Cabinets using 13” (330) Legs use a 2” (51) Facia and 4” (102) Kick. See page 11 for details.

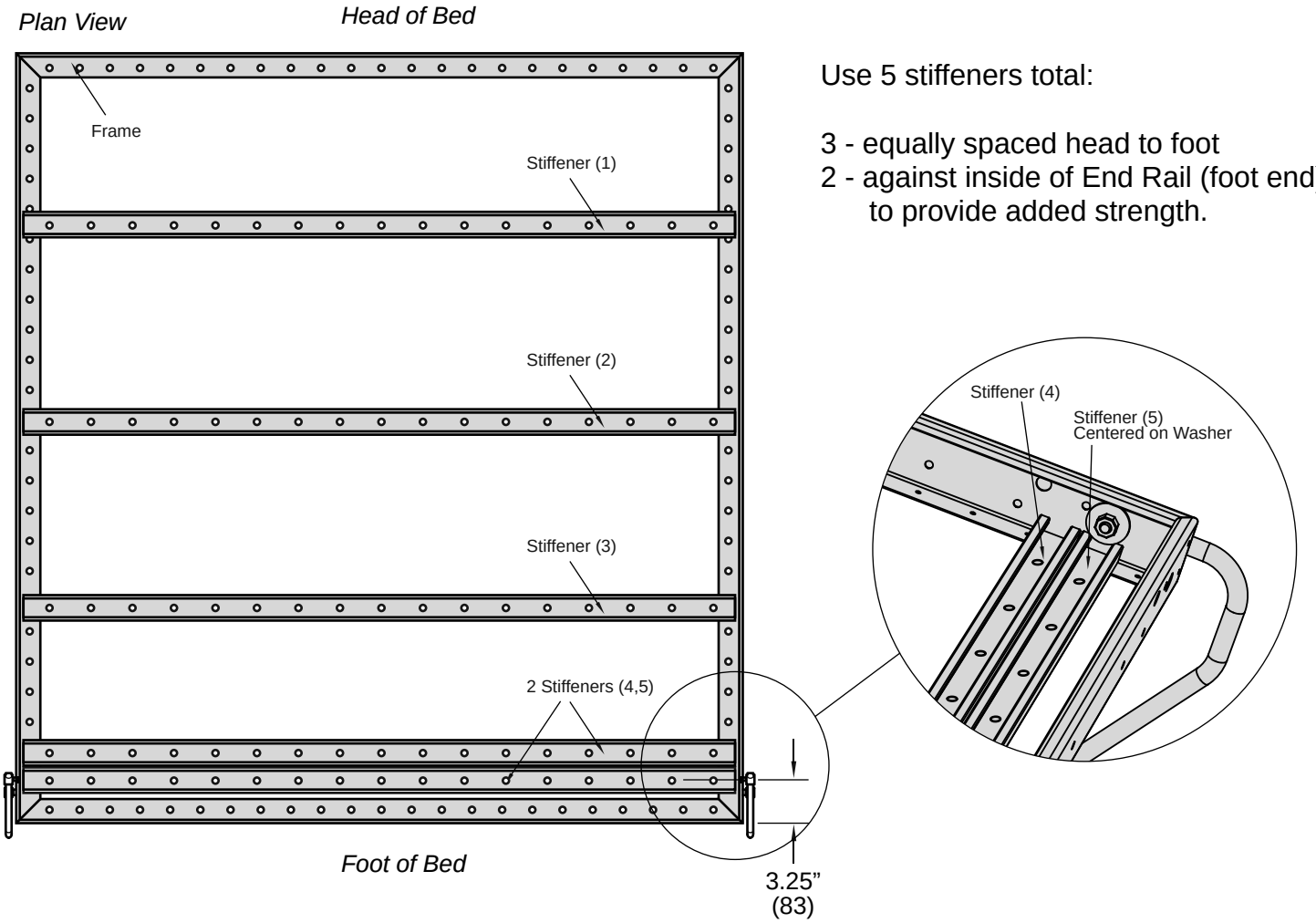
King Bed

Mattress size: 76”x80” (1930x2032)
12” (305) max thickness

Overall Cabinet Dimensions:
81 1/2”w x 88 1/4“h x 16”d (2070w x 2242h x 406d)
Protrusion from wall: 90” (2286)
Cabinet Material: 3/4“ (18) MDF or Plycore

Quantity	Description	Width	Length	Finish (Tape) Edges
4	Bed Face Panel	19 7/8” (505)	82 5/16” (2091)	4 Edges
2	Side Panel	16” (406)	88 1/4” (2242)	2 Long Edges
2	Headboard (1) & Top Panel (1)	14 1/4” (362)	80” (2032)	2 Long Edges
1	Top Facia with 13“ (330mm) Leg or Bottom Kick with 11“ (279mm) Leg	2” (51)	80” (2032)	2 Long Edges
1	Bottom Rear Base	6” (152)	80” (2032)	2 Long Edges
1	Bottom Kick with 13” (330mm) Leg or Top Facia with 11“ (279mm) Leg	4” (102)	80” (2032)	2 Long Edges

Recommended Stiffener Placement for King Beds



Use 5 stiffeners total:

3 - equally spaced head to foot
2 - against inside of End Rail (foot end) to provide added strength.

Cabinet Cut List (Horizontal Orientation)

Cabinet Components Description & Cut List (for both 11" & 13" legs). See pg. 18 for assembly.
Cabinet Material: 3 4" (19) F or lycore Numbers in parenthesis ( ) are millimeters.

	ty	escription	ingle	ouble	ueen	dge Band
1	2	Bed Face anel	39" 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 dges
2	2	ide anel for 11" (2 0) Leg	16" x 47 3/4" (40 1213)	16" x 62 3/4" (406 x 1594)	16" x 68 3/4" (406 x 1746)	2 Long dges
		ide anel 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 dges
3	1	Top anel	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 dges
4	1	Top fascia	2" x 78 1/2" (51 x 1994)	2" x 78 1/2" (51 x 1994)	2" x 83 1/2" (51 2121)	2 Long dges
5	1	Top Facia ti ener	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 dges
	2	Top ear ti ener (1), Bottom ear Base (1)	4" x 78 1/2" (102 x 1994)	4" x 78 1/2" (102 x 1994)	4" x 83 1/2" (102 2121)	2 Long dges
7	2	Kick Kick ti ener for 11" (2 0) Leg	2" x 78 1/2" (51 x 1994)	2" x 78 1/2" (51 x 1994)	2" x 83 1/2" (51 2121)	2 Long dges
		Kick Kick ti ener 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 2121)	2 Long dges
	1	ead 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 dges
9	1	ead Board ti ener	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 dges
10	1	anel onnector	3" x 37" (76 x 940)	3" x 52" (7 1321)	3" x 58" (7 1473)	0 dges



Cabinet Footprint Dimensions Protrusion Distance from Wall (Horizontal)
Numbers in parenthesis ( ) are millimeters.

	Single	**Double**	**Queen**
abinet i e (,W,)	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 1797)
ro ection from Wall	49" (1245)	4" (1 2)	70" (177)
a attress i e	39" x 75" (990 x 1905)	54" x 75" (1372 x 1905)	60" x 80" (1524 x 2032)
a attress Thickness	12" (305)	12" (305)	12" (305)

STEP Mo nt the Li t Mechanism to the Side Panels

efer to rawing 3. when using the 13″ (330 mm) Leg
efer to rawing 4. when using the 11″ (279mm) Leg

rill atterns in rawings 3 4 are only for the BL Li echanism
Numbers in parenthesis ( ) are millimeters.

1. actly mark the mounting holes on the inside of each side panel.

2. rill a 1 1 ″ (2mm) pilot hole for each mounting bolt. rill the final hole with a 5 1 ″ (mm) bit.

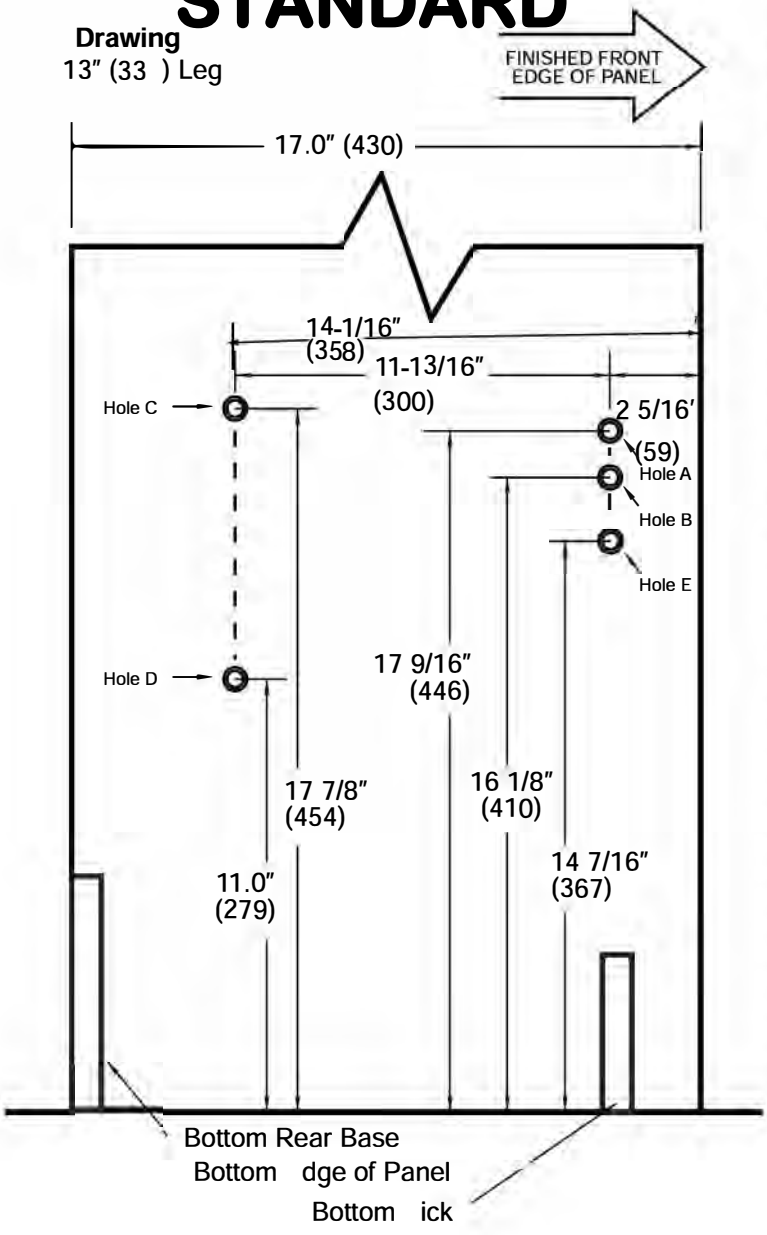
3. ounter sink 5 ″ (15mm) on the outside of the panels ust deep enough for the 5 1 ″ 1 1 4″ (32mm) achine crews.

4. ount the Li echanisms.

All location measurements are from the front edge of the abinet ide anels.
efer to rawings 3 4.

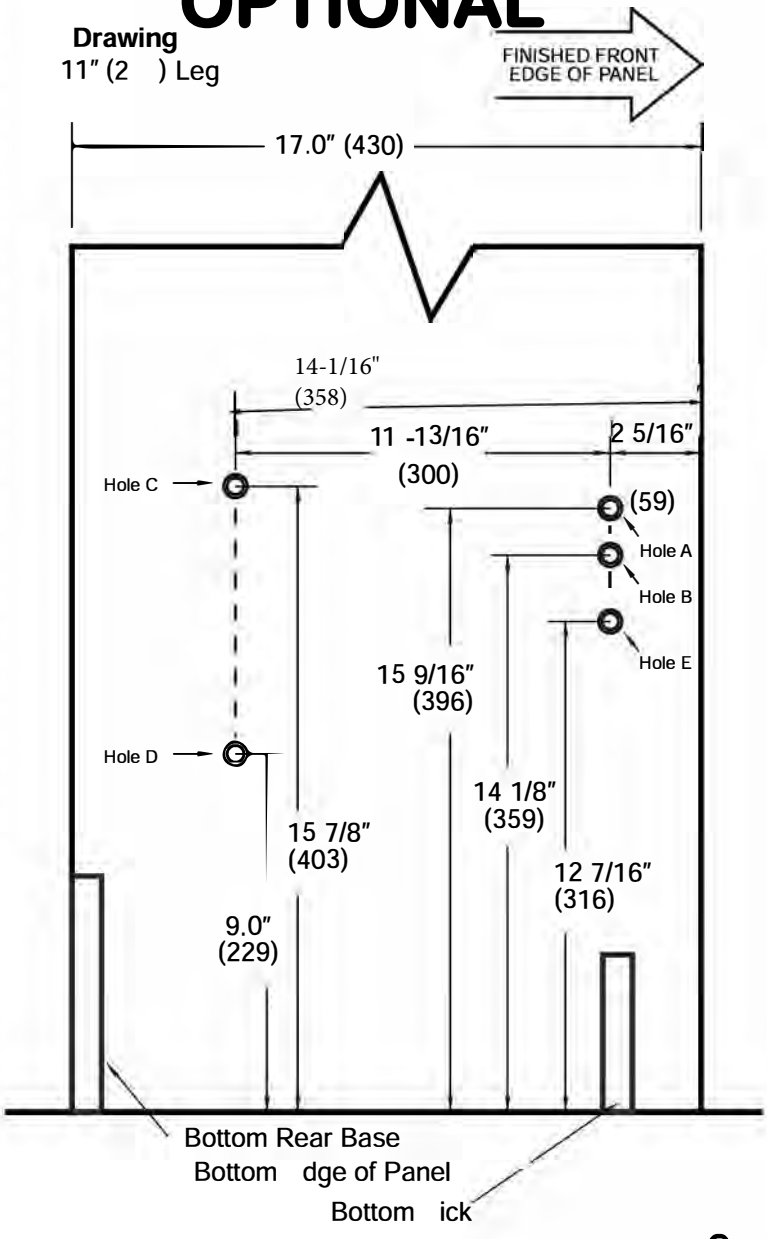
STANDARD

Drawing
13″ (33) Leg



OPTIONAL

Drawing
11″ (2) Leg



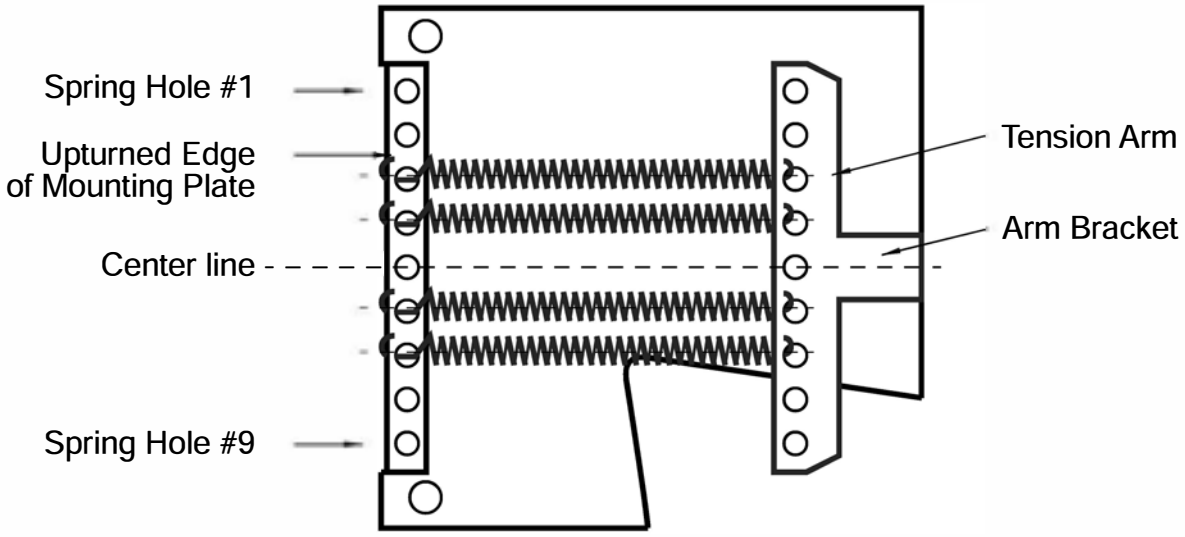
STEP : Install the s rings on the Li t Mechanisms

SP I PPLIC I CH T a hese are recommendations onl Actual number o springs re uired i l depend on the tota eight o the bed ace unit including the mattress and a l bedding		
	P woo ore	Par c e oar
e w	4 5 springs per side	5 6 springs per side
o e F	6 springs per side	8 springs per side
ee	8 springs per side	8 springs per side
	springs per side	not recommended
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 re uires an even number of springs, do not use the center hole (#5 from the top). If the bed re uires and 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 e ual number of springs on each side of the center hole.

se the same number of springs and the same layout on both the le and right mechanisms.



Drawing .

STEP : ssem le the ed Ca inet ertical rientation

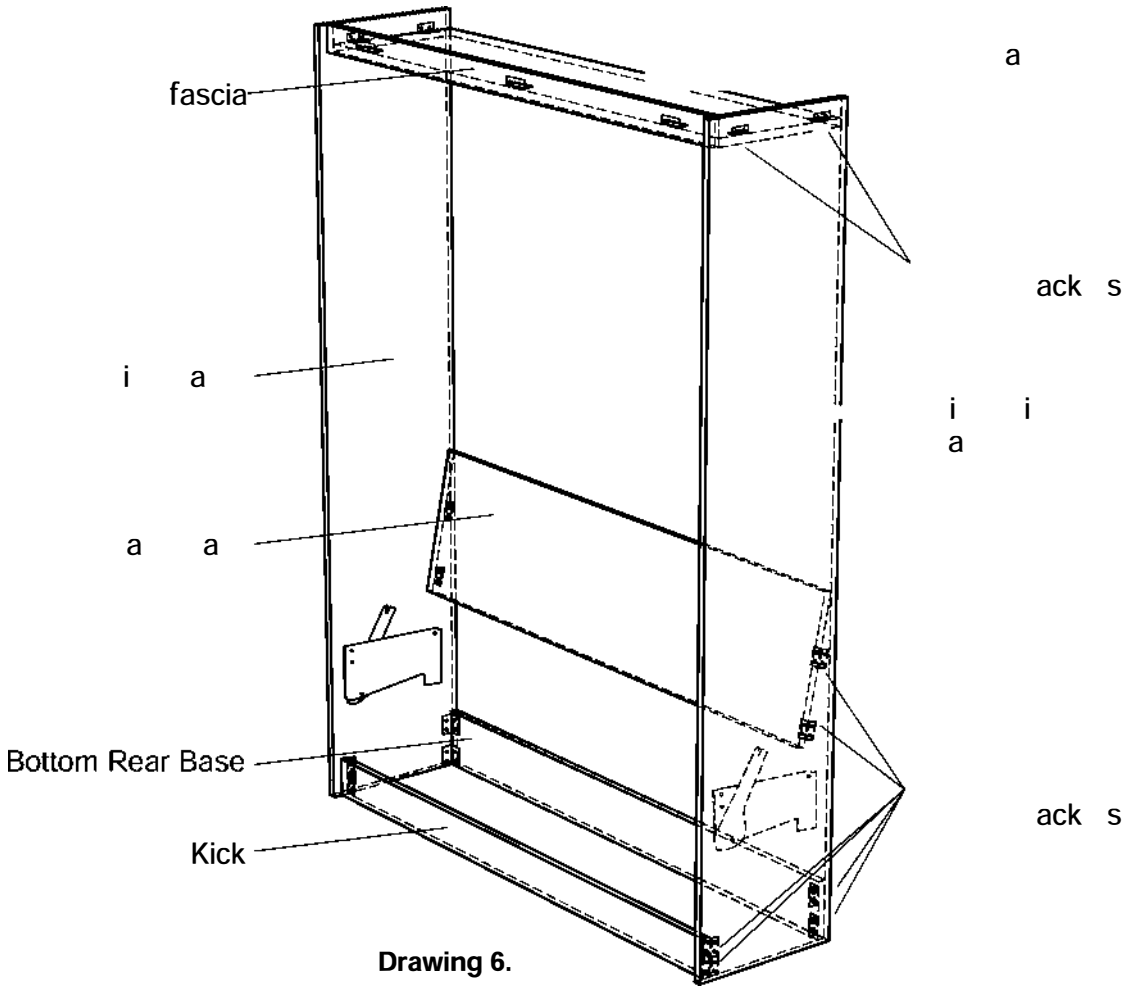
If possible, the Bed Cabinet should be assembled in the room where it will be used.

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″ (6mm) in from the back edge of the panels. Note from Drawings 6 that this mounts the bottom edge of the headboard out 3″ (6mm) from the back or wall edge of the Side Panels. se 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. se #8x3/4″ (M4x1 mm) Pan head Screws. The Headboard location may vary slightly; ust be sure it is secure and at the approximate 3‟ (6mm) distance from the back edge.

2. se Angle Brackets to assemble Bottom ear Base and Bottom ick in position shown in Drawings 6 . se two Angle Brackets on each end.

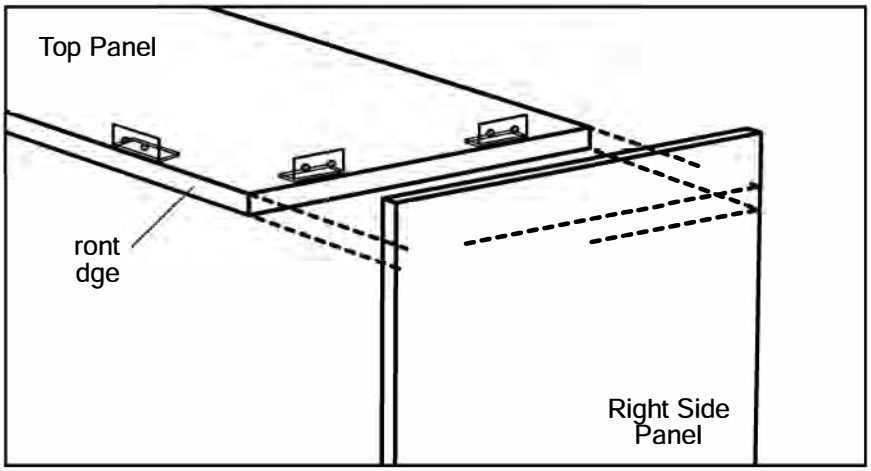
3. Attach Top Panel as shown in Drawings 6 . Be sure back edge of the Top Panel is flush with back of Side Panels and 1 1/4″ (32mm) down from the top of the Side Panels so it is flush with the bottom edge of the Top fascia. The Top fascia will cover the front edge of the Top Panel.



Drawing 6.

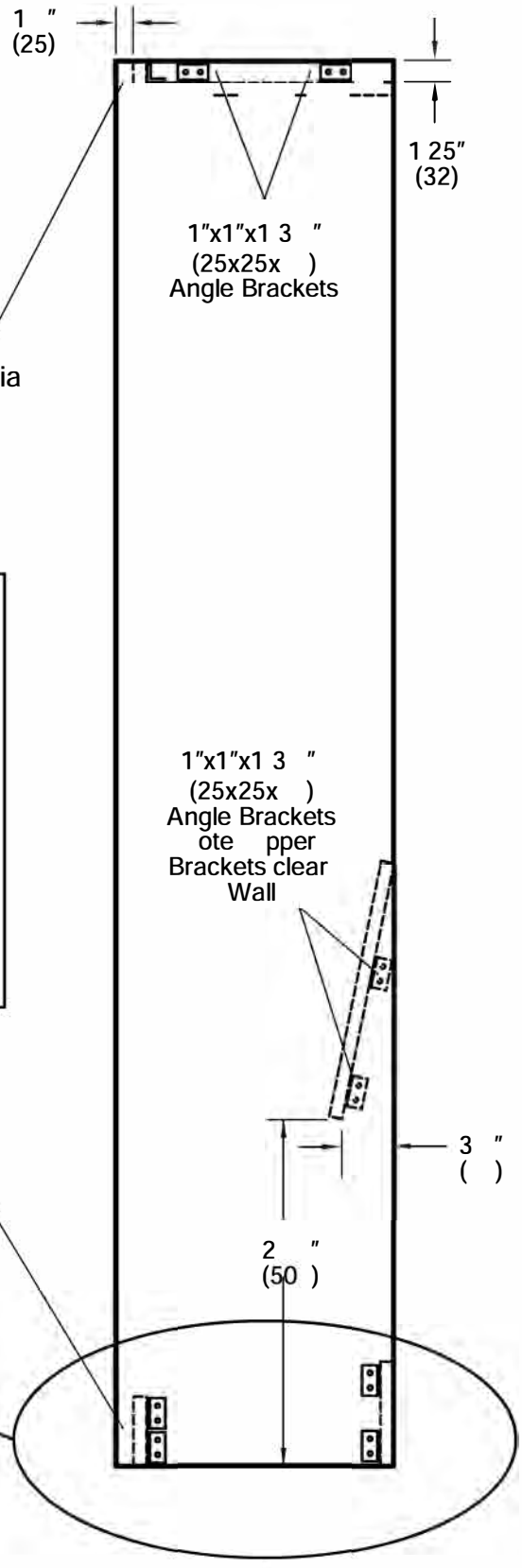
STEP : ssem le the ed Ca inet ertical rientation contin ed

Numbers in parenthesis ( ) are millimeters.



Drawing .





Drawing .

NOTE:

Top fascia and Bottom Kick cabinet parts are interchangeable for use with either the 11″ (279) Leg Assembly or the 13‟ (330) Leg Assembly. Follow these directions:

When using the 11″ (279) Bed Leg Assembly, use the 2″ (51) tall board as the Bottom Kick and the 4″ (102) board as the Top fascia.

When using the 13″ (330) Bed Leg Assembly, use the 4″ (102) tall board as the Bottom Kick and the 2″ (51) board as the Top fascia.

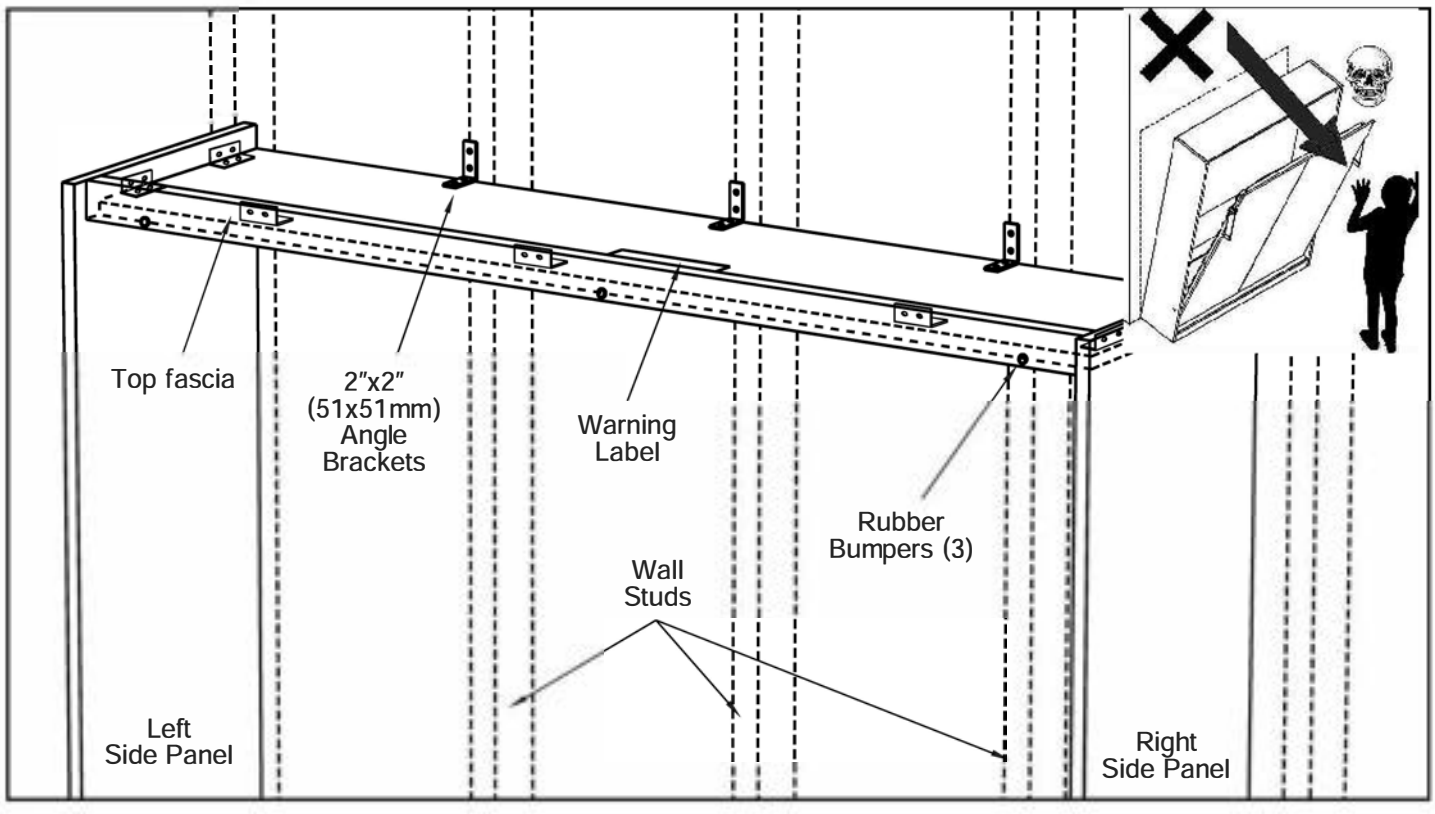
If the room is carpeted you may raise the kick up to 1/4" (mm) to clear the carpet. More than 1/4" (mm) will obstruct the operation of the bed.

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 s uare. Measure diagonally to be sure of s uare. Bed will not operate if cabinet is not s uare. Check also for s uare from front to back as well as side to side. se shims where necessary.

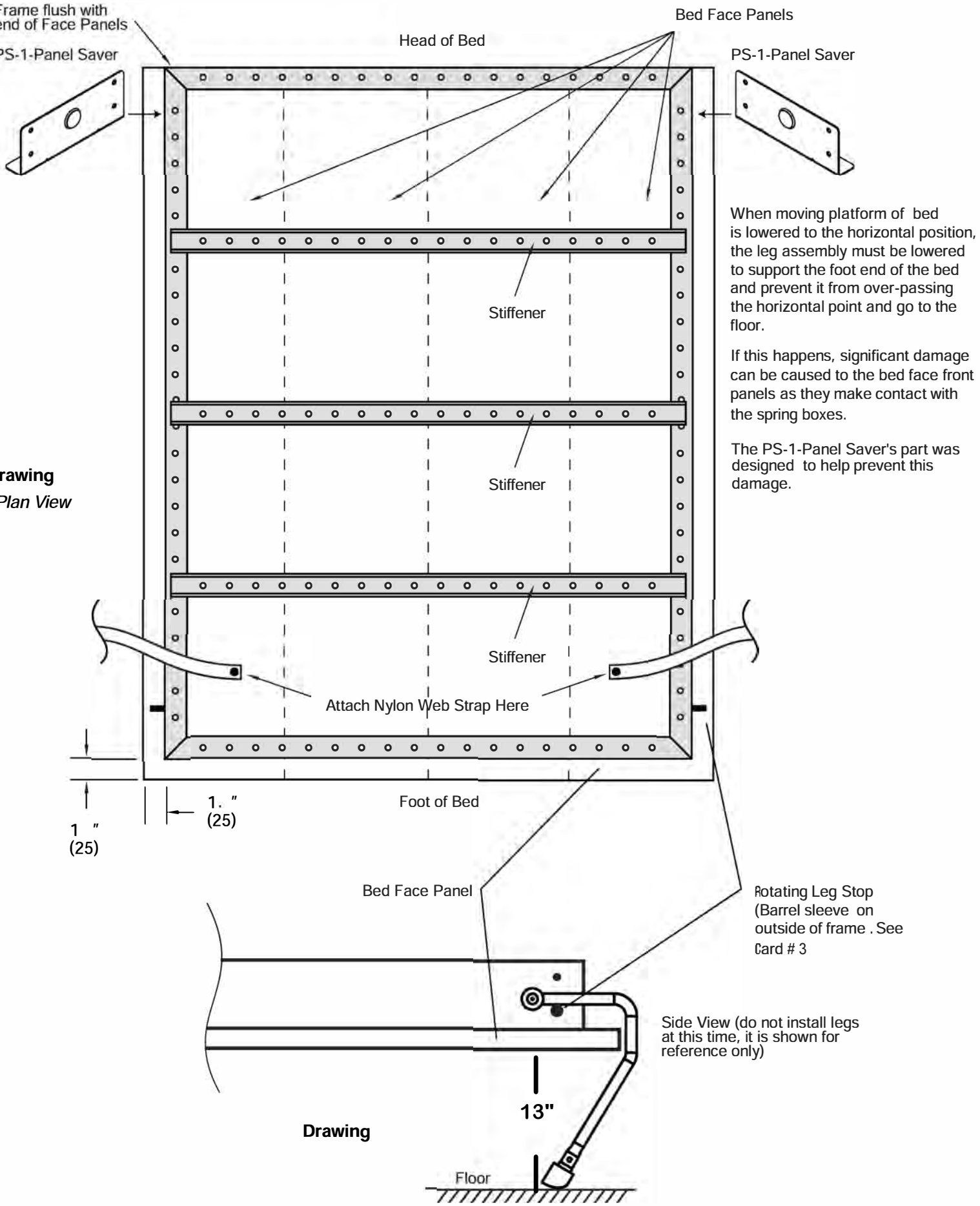
2. Prior to placing cabinet against the wall, locate 3 studs or other wall frame members at the level of the Top Panel (top of bed).
   er The cabinet must be secured to studs or other wall structural members using 2" x 2" (51x51mm) L Brackets. If the wall is not a wood stud wall, use metal stud screws, toggle bolts or concrete expansion bolts if necessary.

3. Now that the cabinet is s uare 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 .). e check s uare and plumb and then secure 2"x2" (51x51mm) L Brackets to Top Panel with #8 x 3/4" (M4x1 mm) wood screws. Attach warning label to top of cabinet. Attach three Bumper Buttons to bottom of the front edge of the Top f sci . These Bumpers allow the Bed Face Panel to close uietly.



Drawing 9.

STEP : ssem le Steel ed rame to ace Panels



Drawing

Plan View

When moving platform of bed is lowered to the horizontal position, the leg assembly must be lowered to support the foot end of the bed and prevent it from over-passing the horizontal point and go to the floor.

If this happens, significant damage can be caused to the bed face front panels as they make contact with the spring boxes.

The PS-1-Panel Saver's part was designed to help prevent this damage.

Side View (do not install legs at this time, it is shown for reference only)

Drawing

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.

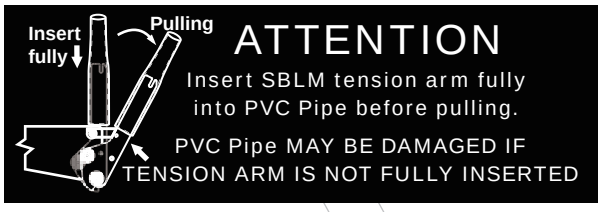
3: Position the bed frame on the bed face panels. With the Head Frame section flush with the head end of the Bed Face Panels. Refer to Drawing 10. Carefully attach the Bed Frame so it is centered on the Bed Face Panels; you will have approximately 15/16” (24mm) space from the bed frame to the panel edges 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.

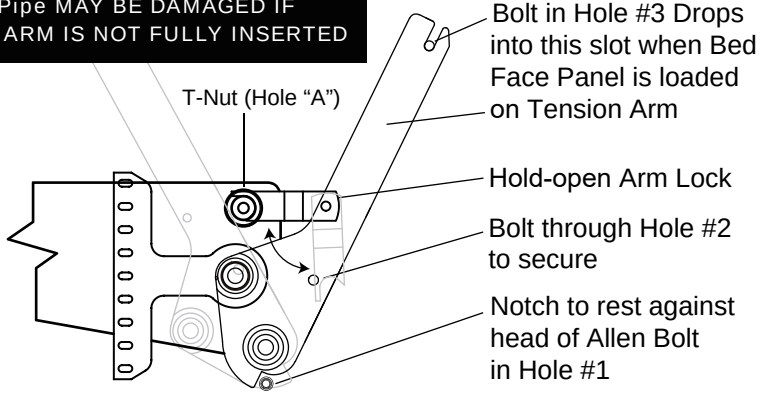
4: Three steel stiffeners are provided for all beds (5 for King). These notched stiffeners should be located and attached to divide the Bed Face length into four equal sections. Use caution not to damage raised panels by putting screws in recessed areas. Note: King Beds have 5 stiffeners (see diagram on pg. 6 for placement).

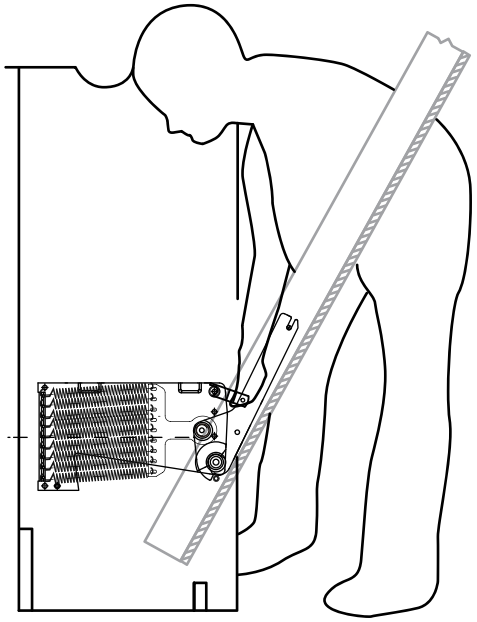
5: Attach the Nylon Web Strap approximately 18” (460mm) down from the foot of the bed and 6” (150mm) in from the sides, for tucking in sheets. The Straps help secure the mattress in the vertical position (see drawing 10).

STEP 6: Set the Lift Mechanism



Drawing 13.





Holding one foot against the bottom front edge of the side panel and using the supplied 14.5” (368mm) leverage tube, open 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.

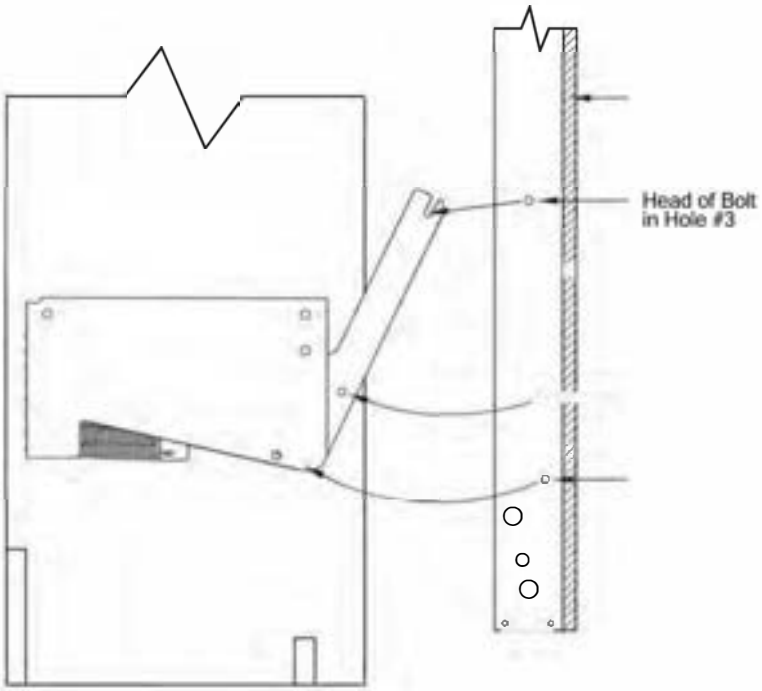
Caution:
Two capable adults are required to assist in the setting of the mechanism and loading of the bed face panel. DO NOT reach behind the tension arm when you are doing the setting procedure.

STEP : Install the ed ace Panel nit

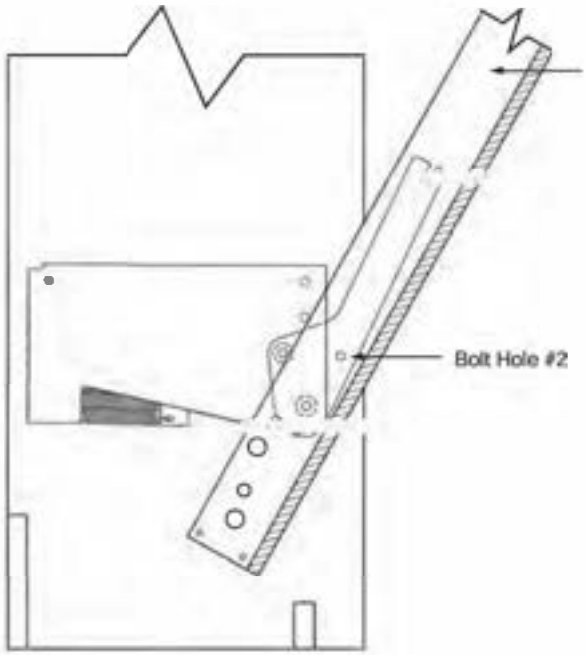
1. Insert Allen Head Bolts through Hole #1 (6 3/4″ from end of side frame) on both left and right side frames (see Drawing 14). Thread on 5/16″ (8mm) Nylock nuts and securely tighten.

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 1



Drawing 1

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.

a o

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

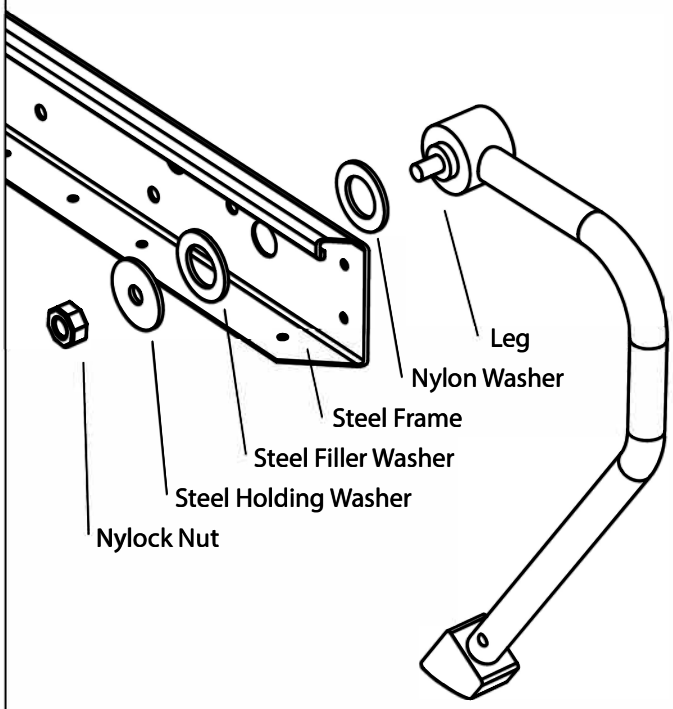
Leveling of the bed cabinet is essential. Check the level both side to side and front to back. Proper leveling will facilitate proper closure and exact sight lines of the fit of the Face Panel to the Cabinet.

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.

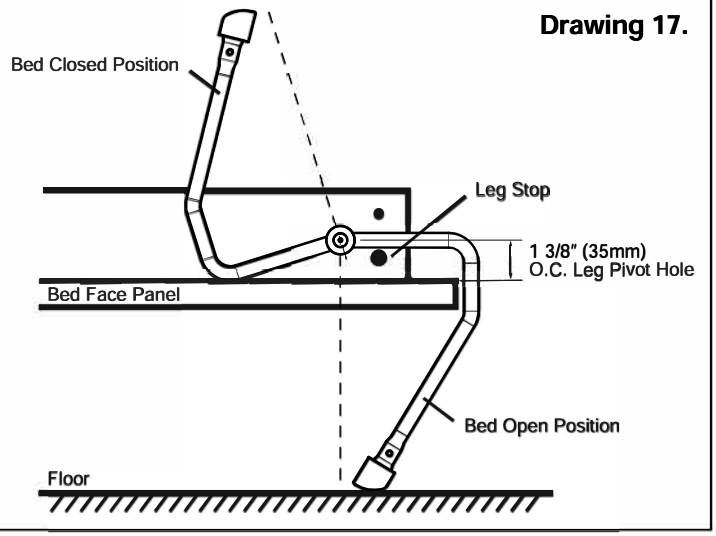
2. Install legs with the washers on the inside of the Rails and the Nylon washer on the outside. Tighten nut to have a small amount of friction when leg assembly is rotated from the up to down position.

Drawing 16.

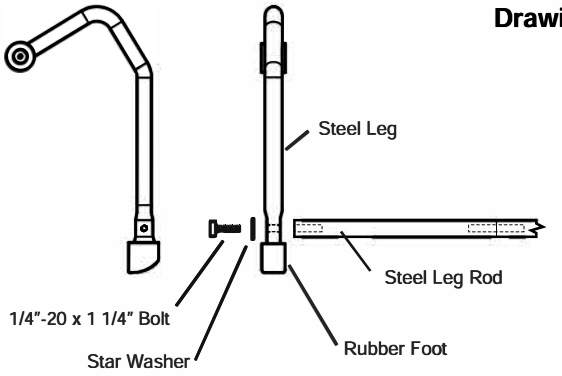


Leg Assembly

Drawing 17.



Drawing 18.



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.

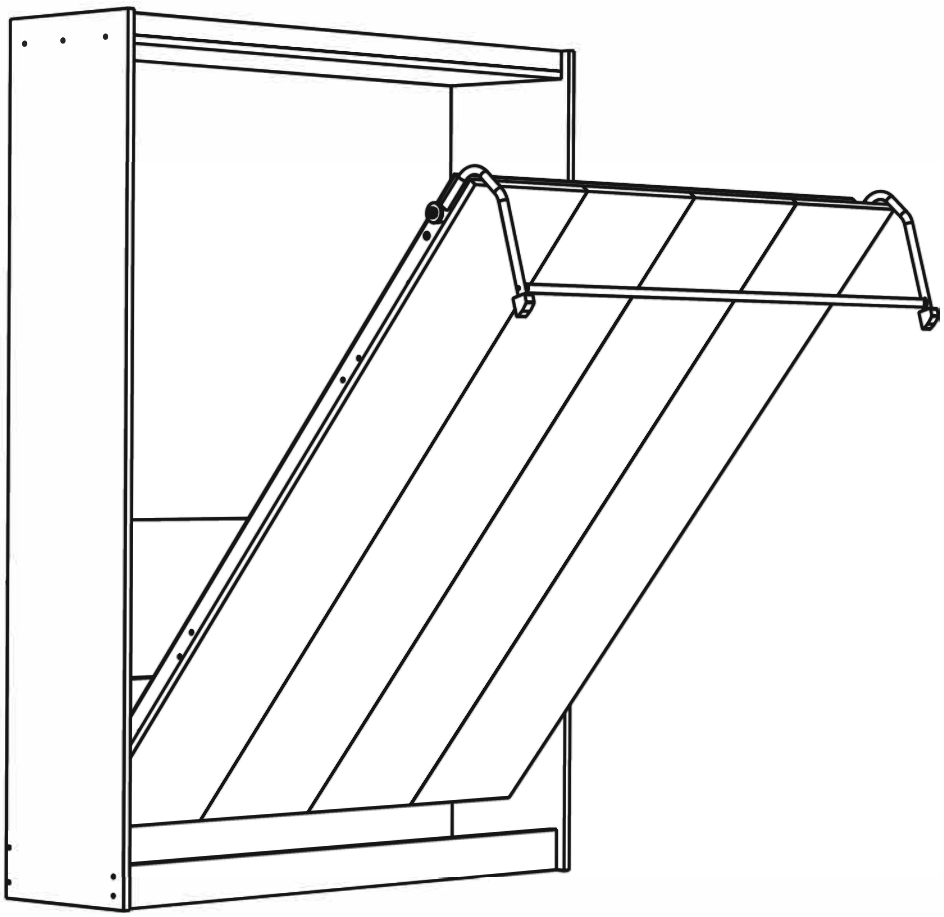
4. Install the mattress and secure with previously installed Nylon Straps.

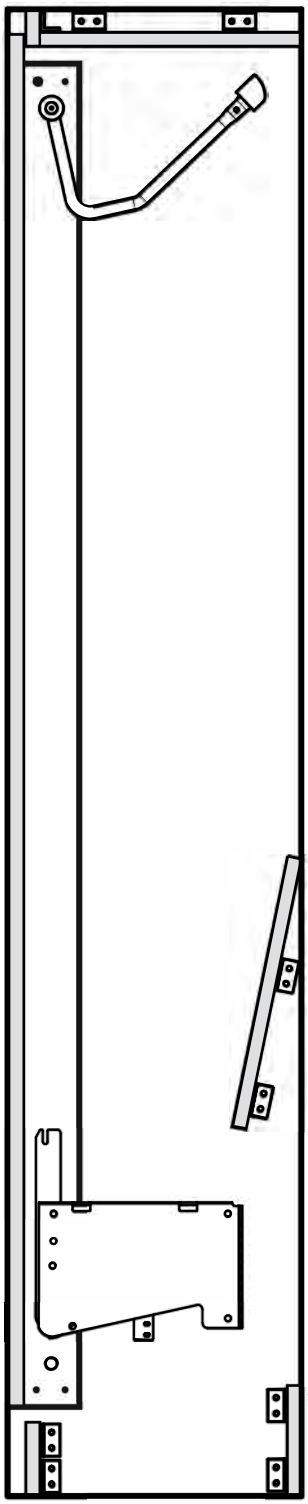
5. Snap the powder coated steel mechanism covers in place - secure with #8x1 1/4" (M4x32mm) black wood screws through the standoff on the backer plate.

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.





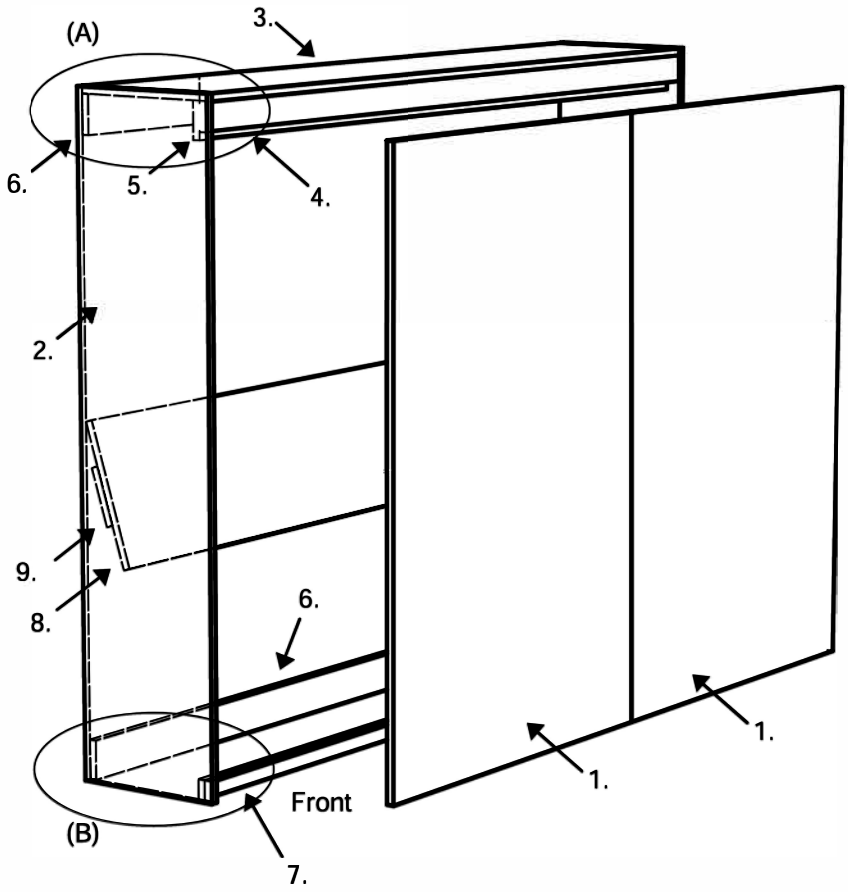
Right Side
Looking through Side Panel.

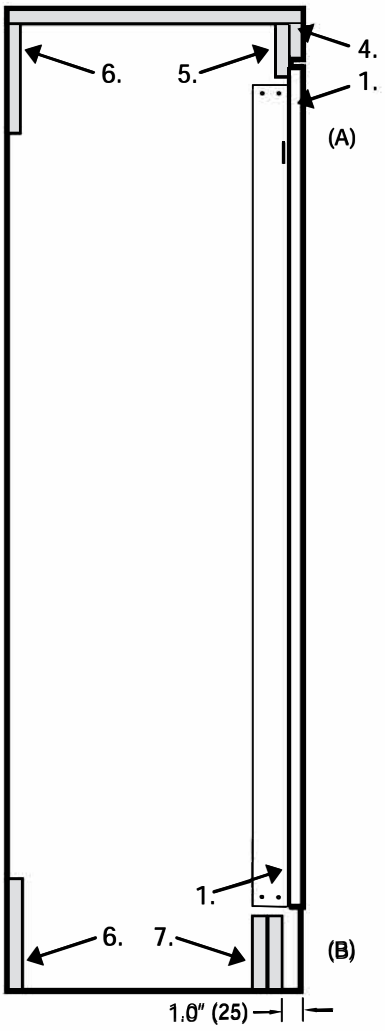
Bed Assembly (Horizontal Orientation)

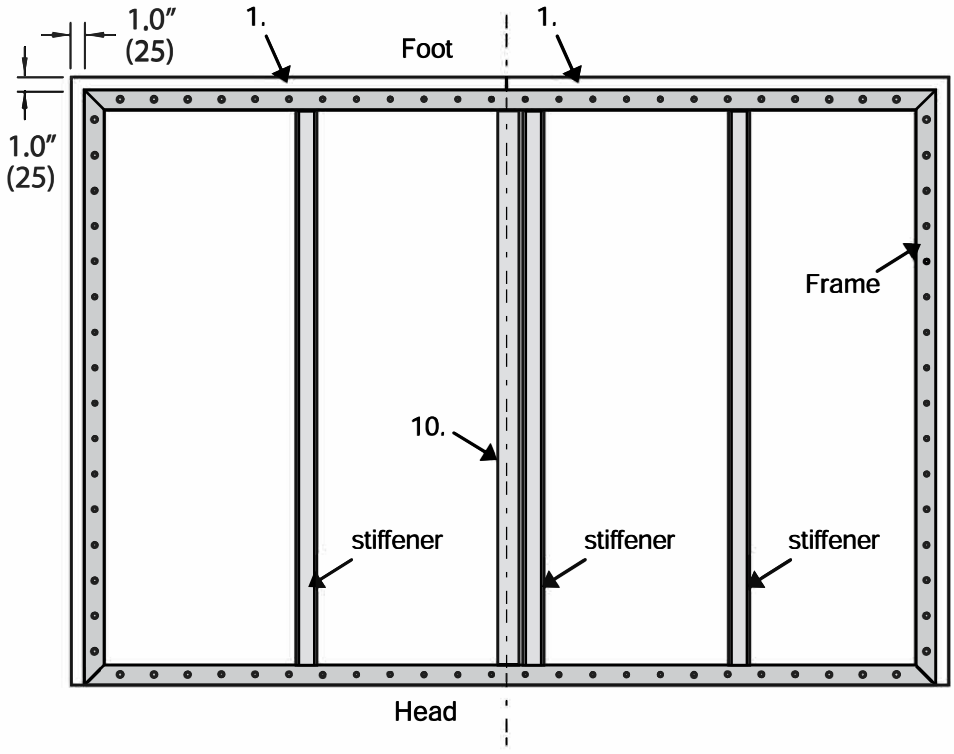
For Power Packs:

#SBLM:
Spring Balance Lift Mechanism

#SBLM-A:
Spring Balance Lift Mechanism Adjustable

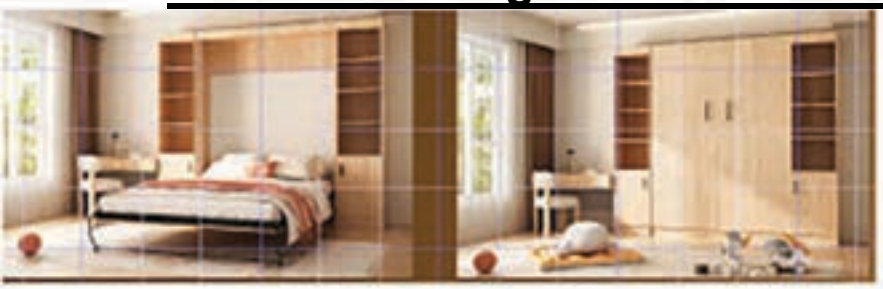






It is recommended to reinforce the vertical seam where the face panels meet with a 3/4"x3" (18x76mm) wood stiffener held in place with wood screws to the face panels. Use the steel stiffeners as well; one next to the wood stiffener and the other two equally spaced.

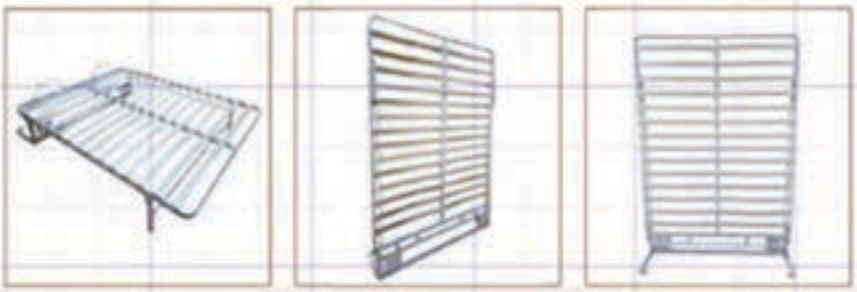
Customer Design / Our Hardware /Your CREATIONS/

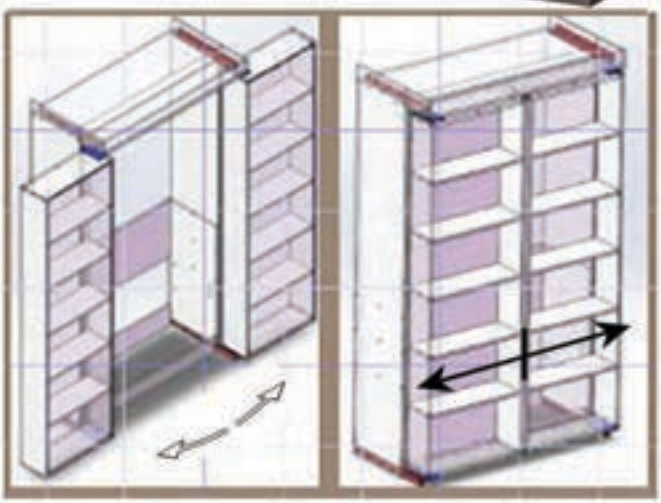












PRODUCTS

•3-1/4" (82mm) Steel Bed Frame with steel reinforcing cross rails and power spring clusters.
•3-1/4" (82mm) Steel Bed Frame with steel reinforcing cross rails and power spring clusters with folding Desk

•Square Bed Frame with supporting curved mattress slats and floor mounted power spring clusters.
•Square Bed Frame with supporting curved mattress slats and floor mounted power spring clusters with folding desk

•Heavy-Duty hardware for hinged opening - front furniture components
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