NOTE: DO NOT deviate from these plans.

These plans are for constructing a QUEEN VERTICAL BED using PLYWOOD material

If you are missing any parts or have ANY questions pertaining to materials or construction please phone the manufacturer.

TOLL FREE 1-877-966-3852

TOOLS NEEDED:

Power Drill
  Drill Bits: 1/8", 1/4", 5/16", 1" Forstner Bit, 5/8" Forstner Bit
Power Saw, Table Saw or Circular Saw
Jigsaw or Coping Saw
Phillips-Head and Flat-Head Screwdrivers or Driver Bits for Drill
Tape Measure
  #4 Allen Wrench
Hammer
Clamps
Straight Edge or Framing Square
Household Iron for Veneer Tape and Utility Knife

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murphy bed mechanism
C.A.B., Inc. 2012
1800 Taylor Avenue Louisville, KY 40213
www.wallbed.com
TOLL FREE: 1-877-966-3852
Create-A-Bed®
C.A.B., Inc.
QUEEN VERTICAL (UPRIGHT) murphy bed mechanism
PLYWOOD CONSTRUCTION

Two (2) GAS SPRINGS

Four (4) BALL STUD PLATES with twelve (12) black #10 x 3/4" SCREWS and eight (8) "T" nuts with machine SCREWS

Two (2) pair of METAL PIVOTS with two (2) plastic spacers two (2) "E" CLIPS four (4) "T" nuts with MACHINE SCREWS twelve (12) #12 x 3/4" silver SCREWS

Two (2) BED STOPS with two (2) #10 x 3/4" black SCREWS

Two (2) Metal Pivoting Legs
Two (2) 1/4" x 2-1/2" Leg Support Rail SCREWS
Four (4) Black #10 x 3/4" SCREWS
Four (4) "T" Nuts with machine SCREWS

One (1) Green PLYWOOD CONSTRUCTION booklet
One (1) Orange PARTICLE BOARD CONSTRUCTION booklet
One (1) Purple ASSEMBLY AND INSTALLATION booklet
One (1) VERTICAL BED Construction, Assembly and Installation DVD

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May be covered by one or more U.S. Patents #5,033,134 & #5,978,988 & Patents Pending
Out-to-out dimensions of **VERTICAL STYLE** murphy bed cabinet constructed using the
**Create-A-Bed®** mechanism

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**OUTSIDE-EDGE TO OUTSIDE-EDGE FINISHED VERTICAL BED CABINET DIMENSIONS**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>PROJECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWIN</td>
<td>82-1/8&quot;</td>
<td>44-7/8&quot;</td>
<td>15-7/8&quot;</td>
<td>83&quot;</td>
</tr>
<tr>
<td>FULL</td>
<td>82-1/8&quot;</td>
<td>59-7/8&quot;</td>
<td>15-7/8&quot;</td>
<td>83&quot;</td>
</tr>
<tr>
<td>QUEEN</td>
<td>87-1/8&quot;</td>
<td>65-7/8&quot;</td>
<td>15-7/8&quot;</td>
<td>87&quot;</td>
</tr>
</tbody>
</table>
Some design options... or create your own!

- Basic Bed
- With crown and base molding
- With crown, base and full-length face panel molding
- With crown, base and split face panel molding
COMPONENTS OF FINISHED MURPHY BED

A. INNER WOOD BED FRAME
B. SIDE RAILS
C. FOOT RAIL
D. HEAD RAIL
E. BED FACE PANELS
F. BED HEADBOARD
G. BED CABINET VERTICALS
H. BED HEADER
I. LEG SUPPORT RAIL
J. 1/4" PLYWOOD MATTRESS SUPPORT
QUEEN Size Vertical Plywood Cutting Guide

Requires: 4 sheets of 3/4" x 4' x 8' and 2 sheets of 1/4" x 4' x 8'

NOTE: Refer to page 6 for the cutting dimensions.
QUEEN SIZE VERTICAL BED WITH 3/4" PLYWOOD FACE PANEL
BILL OF MATERIALS / CUT SHEET

- check off as completed

- A. INNER WOOD BED FRAME:
  *To be constructed of solid wood:
poplar, clear pine, maple, etc.
  FRAME STRUTS:  *Solid wood:  3/4" X 1-1/2" X 60-1/2"  10 pieces
  FRAME SIDES:  *Solid wood:  3/4" X 1-1/2" X 80"  2 pieces

<table>
<thead>
<tr>
<th>IMPORTANT: PLYWOOD MUST BE USED FOR THESE PIECES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. SIDE RAILS:  3/4&quot; X 5-7/8&quot; X 81-1/2&quot;  2 pieces</td>
</tr>
</tbody>
</table>

- C. FOOT RAIL:  3/4" X 3" X 62"  1 piece
- D. HEAD RAIL:  3/4" X 7-7/8" X 62"  1 piece
- E. BED FACE PANEL:  3/4" X 32" X 81-3/4"  2 pieces
- F. BED HEADBOARD:  3/4" X 15-7/8" X 64-3/8"  1 piece
- G. BED CABINET VERTICALS:  3/4" X 15-7/8" X 87-1/8"  2 pieces
- H. BED HEADER:
  HEADERBOARD:  3/4" X 14-3/8" X 64-3/8"  1 piece
  FRONT RAIL:  3/4" X 2-3/4" X 64-3/8"  1 piece
  REAR RAIL:  3/4" X 2-3/4" X 64-3/8"  1 piece
  MOUNTING CLEATS: *Solid wood:  3/4" X 1-1/2" X 14-3/8"  2 pieces
- I. Leg Support Rail (wood or metal):  3/4" X 3/4" X 60-1/4"  1 piece
- J. 1/4" PLYWOOD mattress support:  1/4" X 31" X 80"  2 pieces
- K. VENEER or MELAMINE TAPE:  13/16" X 80 feet
- L. WOOD GLUE:  One 8 ounce bottle
- M. CONSTRUCTION ADHESIVE:  One 10 ounce tube
( NOT NEEDED IF USING PLYWOOD INSTRUCTIONS)
- N. FINISH NAILS:  One box of 1-1/4"
  One box of 1-1/2"
- O. SCREWS:
  #8  1-1/4" coarse thread  Box of 100
  #8  1-1/2" coarse thread  30
  #8  2" coarse thread  40
- P. DESIRED CABINET HANDLES OR PULLS  2 HANDLES

- Q. INNERSPRING MATTRESS
  Weighing between 65-80 pounds

Your mattress dimensions must not exceed 60" x 80"
Mattress thickness CAN NOT exceed 12" in thickness – including pillow top.
A. INNER WOOD BED FRAME

See Bill of Materials / Cut Sheet (PART A) for Twin, Full or Queen size frame struts and frame sides dimensions.

**STEP 1:** Construction of five (5) frame struts.

Run a bead of wood glue along inside edge. Making sure ends are flush, drill pilot holes approximately 8" apart and nail with 1-1/2" finish nails, or you can use #8 x 1-1/2" screws.

**Step 2:** Position of frame struts between frame sides.

**STEP 3:** Mounting the frame struts between the frame sides. Using a 1/8" drill bit and countersink, drill pilot holes through the frame sides into each end of the "L" shaped frame struts. Screw #8 x 2" wood screw flush.
PART B. Side Rails: **(MUST BE MADE OF PLYWOOD)**
Why?.. This is where the stress takes place.
Plywood is stronger than solid wood.
YES EVEN SOLID OAK......

PART C. Foot Rail
PART D. Head Rail

SEE PAGES 10, 11, 12, 13
AND STEPS 7, 8, 9, 10 FOR
PLACEMENT OF PIVOTINGS
LEG BRACKET & TEMPLATES.

For a finished look, apply
wood veneer or melamine
edge banding tape to all
edges marked F

B. SIDE RAIL

Placement hole for the female pivot
(also shown on pages 15 and 16)
HARDWARE PLACEMENT FOR B. SIDE RAILS

**STEP 5:** See pages 14, 15, 16, 17 and steps 11, 12, & 13 for placement of female pivot and lower ball stud plates.

**STEP 4:** See pages 10, 11, 12, 13 and steps 7, 8, 9, 10 for placement of pivoting leg bracket & templates.

**STEP 6:** Part I. Leg support rail

See page 6 for cutting dimensions.

On each end of rail draw an X diagonally from each corner to find the center.

Next drill a 1/4" hole x 1-1/2" deep in each end of the rail.
Scanned templates
**NOT TO SCALE**

Leg Pivot Placement.
Drill a hole 5/8" diameter x 1/2" Deep.
Insert the pivot leg rod into the hole.

RIGHT SIDE RAIL TEMPLATE
B. RIGHT SIDE RAIL.

Step 7: Leg placement: From the top of the side rail measure down 2-1/2" and from the front measure in 3-1/8". Drill a 5/8" diameter hole 1/2" deep.

Step 8: Place the leg pivot into the 5/8" hole. With the pivot plate parallel to the top & bottom of the side rail. Drill a 1/4" hole through the bottom 2 (two) holes in the plate through the side Rails.

Note: To prevent tear out on the outside of the side rail, clamp a piece of scrap wood to the rail while drilling.

Screw 2 (two) black #10 x 3/4" screw through the top 2 holes.

Machine screws

WHEN COMPLETED REMOVE LEG HARDWARE
2 7/8" Radius

Scanned templates
NOT TO SCALE

LEFT SIDE RAIL TEMPLATE

Leg Pivot Placement.
Drill a hole 5/8" diameter x 1/2" Deep.
Insert the pivot leg rod into the hole.
B. LEFT SIDE RAIL.

Step 9: Leg placement: From the top of the side rail measure down 2-1/2" and from the front measure in 3-1/8". Drill a 5/8" diameter hole 1/2" deep.

Step 10: Place the leg pivot into the 5/8" hole. With the pivot plate parallel to the top & bottom of the side rail. Drill a 1/4" hole through the bottom 2 (two) holes in the plate through the side Rails.

Note: To prevent tear out on the outside of the side rail clamp a piece of scrap wood to the rail while drilling.

Screw 2 (two) black #10 x 3/4" screw through the top 2 holes.

Machine screws

WHEN COMPLETED
REMOVE LEG HARDWARE
This page pertains to the orientation and mounting positions of the lower ball stud plates and female pivots, USE WITH PAGES 15, 16, & 17

Lower ball stud plate:
Mount to the outside of the side rail.

Ball stud placement
To help you achieve this position, cut a piece of wood 5/16" thick and place it under the BALL ONLY while you screw the plate in place.

Female pivot:
Mount to the inside of side rail with bushing through the 1" hole.
**STEP 11:** Mounting the lower ball stud plate to the outside of the side rail PARTS B.

Mark and drill a 1/4" diameter hole through the side rail. Insert the two (2) T-nuts through the inside of the side rail. Screw the machine screws through the ball stud plate into the T-nuts.

Drill 1" diameter PIVOT HOLE

Mark and drill a 1/4" diameter hole through the side rail. Insert the T-nut through the inside of the side rail. Screw the machine screw through the ball stud plate into the T-nut.

**Scanned templates NOT TO SCALE**

**B. RIGHT SIDE RAIL**

**QUEEN VERTICAL (upright)**

**PLYWOOD CONSTRUCTION ONLY**

**PLEASE NOTE:** These mounting positions are different from those seen in the DVD...

**USE These Dimensions.**
STEP 12: Mounting the lower ball stud plate to the outside of the side rail PARTS B.

Mark and drill a 1/4" diameter hole through the side rail. Insert the two (2) T-nuts through the inside of the side rail. Screw the machine screws through the ball stud plate into the T-nuts.

Mark and drill a 1/4" diameter hole through the side rail. Insert the T-nut through the inside of the side rail. Screw the machine screw through the ball stud plate into the T-nut.

Drill 1" diameter PIVOT HOLE

OVERHANG

END OF SIDE RAIL (PART B)

Scanned templates NOT TO SCALE

B. LEFT SIDE RAIL
QUEEN VERTICAL (upright)
PLYWOOD CONSTRUCTION ONLY

PLEASE NOTE: These mounting positions are DIFFERENT from those seen in the DVD...
USE These Dimensions.
STEP 13: Mounting female PIVOT PLATES

Mount female pivot plate to inside of right and left side rails as shown. Press pivot into pivot hole. Using eight (8) #12 x 3/4" silver screws provided, screw plate flush to rail.
**STEP 14:**
Mounting the foot rail PART C and head rail D. Drill 1/8" pilot hole 1-1/4" deep through the inner wood bed frame into the foot rail. Drive #8 x 1-1/4" screws flush. Repeat on part D Head Rail.

**STEP 15:**
Mounting left and right side rails to inner wood bed frame. Using an 1/8" drill bit, drill two holes between each strut (total of 8 holes per rail) 1-1/4" deep through the frame side into the side rails. Drive #8 x 1-1/4" wood screws flush, snuggling inner wood bed frame to the side rail.

**Step 16:**
Mounting the side rails B to the foot rail Part C and head rail Part D.

Make sure sides and bottom are flush. Drill 1/8" pilot hole 2" deep through the side rails into the foot rail and head rail. Drive #8 x 2" screws flush.

**NOTE:** Remove Pivot Leg Hardware.
**STEP 17:**
NOTE: For a finished look, apply wood veneer or melamine edge tape to all edges marked \( F \).

**STEP 18:**
Turn face panels over. On back side, mark a \( 1/4'' \) line the full length of the panel along finished long edge.

**STEP 19:**
Position bed face panels on a flat surface good side down, and the \( 1/4'' \) pencil marks visible at outside finished edges.

Pick the best side of part E Face Panel for the front of the bed.
STEP 20:
Lay bed face panel with good side DOWN, and place assembled bed frame on top of bed face panel. Check to make sure the 1/4" lines are visible on both sides of the assembled bed frame.

Tip:
As a guide for the application of the adhesive, mark a pencil line on the face panels PARTS E around the inner wood bed frame. After marking, remove the assembled wood bed frame and apply adhesive inside the markings.

Face panel may extend approx. 1/4" at this end.

The face panel MUST extend 1/4" past edge of frame on long sides.

STEP 21:
Make sure face panel and foot rail are flush and that face panel extends 1/4" past edge of wood bed frame on long sides.

Using #8 x 1-1/4" screws, screw section marked "X" first. Keeping end flush, screw section marked "Y".

Making sure there is a 1/4" face panel overhang, screw section marked "Z". If out-of-square this procedure will aid in racking into square.

Screw remaining struts to face panel 6" apart.
Placement of cabinet handles for optimal leverage should be between 5' and 6' on face panel PART E.
PART G: BED CABINET VERTICALS (LEFT)
Measurements For QUEEN Vertical (Upright) ONLY Using 3/4" PLYWOOD Face Panel.

STEP 22:
BED STOP: Drill a hole 5/16" diameter x 1/2" deep. Insert the bed stop pin into hole and attach with a #10 x 3/4" black screw.

Note:
Ball stud nut fits in the hole.

STEP 23:
UPPER PISTON PLATE WITH BALL STUD:
Drill a hole 5/8" x 1/2" deep and insert nut into hole. Mount plate to the vertical with four (4) #10 x 3/4" black screws and one (1) "T" Nut and machine screw.

STEP 24:
MALE PIVOT PLATE: Drill a hole 5/8" diameter x 1/2" deep. Insert the 1/2" end of rod into hole. Drill two (2) holes 1/4" diameter through the vertical using the upper holes in the pivot plate as a guide. Tap "T" Nuts into two (2) upper holes from outside, then screw 1/4" machine screws through pivot plate into "T" Nuts. Screw two (2) #12 x 3/4" screws through pivot plate holes into vertical.

OPTION:
On left and right bed verticals, a cut can be made to accommodate existing base molding so cabinet will fit flush against the wall.
PART G: BED CABINET VERTICALS (RIGHT)
Measurements For QUEEN Vertical (Upright) ONLY Using 3/4" PLYWOOD Face Panel.

STEP 25:
BED STOP: Drill a hole 5/16" diameter x 1/2" deep. Insert the bed stop pin into hole and attach with a #10 x 3/4" black screw.

Note:
Ball stud nut fits in the hole.

STEP 26:
UPPER BALL STUD PLATE:
Drill a hole 5/8" x 1/2" deep and insert nut into hole. Mount plate to the vertical with four (4) #10 x 3/4" black screws and one (1) "T" Nut and machine screw.

STEP 27:
MALE PIVOT PLATE: Drill a hole 5/8" diameter x 1/2" deep. Insert the 1/2" end of rod into hole. Drill two (2) holes 1/4" diameter through the vertical using the upper holes in the pivot plate as a guide. Tap "T" Nuts into two (2) upper holes from outside, then screw 1/4" machine screws through pivot plate into "T" Nuts. Screw two (2) #12 x 3/4" screws through pivot plate holes into vertical.

OPTION:
On left and right bed verticals, a cut can be made to accommodate existing base molding so cabinet will fit flush against the wall.
PART F: BED HEADBOARD

STEP 28:
NOTE: For a finished look, apply wood veneer or melamine edge tape to all edges marked F.
PART H: BED HEADER COMPONENTS

NOTE: For a finished look, apply wood veneer or melamine edge tape to all edges marked F.

STEP 30:
Using 2" finish nails, glue and nail front rail to header board, maintaining a 1/2" lip on underside lip of header board.

NOTE: REAR RAIL MUST BE GLUED AND SCREWED TO HEADER BOARD.

STEP 29:
Using #8 x 2" screws, glue and screw rear rail to header board, maintaining a 1/2" lip on the underside of the header board.

STEP 31:
Using #8 x 2" screws, glue and screw mounting cleats to header board between front and rear rails as shown.

NOTE: Be sure to drill pilot holes and counter-sink screws flush with the wood.

STEP 32: Remove all Hardware, sand & finish all components!