Wall Bed Assembly Instructions
Pardo European Adjustable Fold Away Bed Systems For Casework
The SM Series Bed Mechanisms

• Vertical Descending
• Horizontal Descending
• Concealed Hardware
• Exposed Hardware
• End Opening
• Side Opening
• Shallow Wall Cabinets
• Thick Mattress Cabinets
• Nationwide Distribution

XSMVO Wall Bed Kit
1) Adjustable counter balance mechanisms
2) Pivot mounting mechanism plates
3) Pivoting legs
4) Hardware fasteners

Selby Furniture Hardware Co. Inc.
321 Rider Avenue, Bronx, NY 10451
Phone: 718-993-3700
FAX: 718-993-3143
mail to: info@selbyhardware.com
Technical support mail to:
techhelp@selbyhardware.com

rev 1/17
Before you start your project:

- Mattress size will determine the size of the bed frame and the weight capacity of the Pardo counter balance. Standard mattress sizes will vary +/- 1" in length and width.

- The Mattress thickness and height in the bed frame may determine the depth requirement of the wall cabinet. Top of the mattress on a opened bed frame should be 18" to 28" above the floor.

- Support the mattress on a platform or slats built into the bed frame. Avoid mattress contact with the back of the front panel. The combined height of frame components and mattress will effect the wall cabinet depth.

- You may choose concealed hardware or exposed hardware for aesthetic value or ease of access.

- The inside dimensions of the wall cabinet or space between side pier cabinets and the bed frame is critical. The bed frame, including counter balance mechanisms mounted on the outside of the bed frame, must be 60mm smaller than the inside of the wall cabinet.

- Material used for the construction of the bed frame will affect the Pardo counter balance weight capacity that is required.
Hole Locations for Hardware Mounting

Components are produced in Europe using metric dimensions.

Supplied countersink bushings are necessary to reduce stress when platform is in motion.

Metric Conversions

<table>
<thead>
<tr>
<th>Metric</th>
<th>Millimeter</th>
<th>Inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>5mm</td>
<td>0.196&quot;</td>
<td>64mm</td>
</tr>
<tr>
<td>7mm</td>
<td>0.276&quot;</td>
<td>96mm</td>
</tr>
<tr>
<td>11mm</td>
<td>0.433&quot;</td>
<td>100mm</td>
</tr>
<tr>
<td>12mm</td>
<td>0.472&quot;</td>
<td>112mm</td>
</tr>
<tr>
<td>19mm</td>
<td>0.748&quot;</td>
<td>150mm</td>
</tr>
<tr>
<td>20mm</td>
<td>0.787&quot;</td>
<td>237mm</td>
</tr>
<tr>
<td>30mm</td>
<td>1.181&quot;</td>
<td>271mm</td>
</tr>
<tr>
<td>35mm</td>
<td>1.378&quot;</td>
<td>303mm</td>
</tr>
<tr>
<td>56mm</td>
<td>2.205&quot;</td>
<td>350mm</td>
</tr>
</tbody>
</table>
The dimensions shown on this page are for the construction of cabinetry using Pardo brand wall bed mechanisms from Selby Furniture Hardware Company. This grid was produced based on use of 3/4" (.750") finished material. If the use of 13/16" or other thickness material for components is necessary, these dimensions must be adjusted. The inside width of the wall cabinet must be 60mm greater than the O/A width of the bed frame.

### Cabinetry Dimensions for End or Vertical Opening Wall Bed Construction

<table>
<thead>
<tr>
<th>INSIDE BED FRAME MECHANISM</th>
<th>OUTSIDE BED FRAME MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>XSMVO-</td>
</tr>
<tr>
<td>Design Weight</td>
<td>110#</td>
</tr>
<tr>
<td>Case Width</td>
<td></td>
</tr>
<tr>
<td>A- Inside Bed Frame</td>
<td>39&quot;</td>
</tr>
<tr>
<td>B- Outside Bed Frame</td>
<td>40-1/2&quot;</td>
</tr>
<tr>
<td>C- Outside Bed Frame &amp; Mechanism</td>
<td></td>
</tr>
<tr>
<td>D- Door Panel width*</td>
<td>42-3/8&quot;</td>
</tr>
<tr>
<td>G- Wall Cabinet Opening</td>
<td>42-7/8&quot;</td>
</tr>
<tr>
<td>H- Wall Cabinet O/A</td>
<td>44-3/8&quot;</td>
</tr>
</tbody>
</table>

**Wall Cabinetry Must be Securely Fastened to a Structural Wall!**

### Cabinetry Dimensions for Side or Horizontal Opening Wall Bed Construction

<table>
<thead>
<tr>
<th>Inside Bed Frame Mechanism</th>
<th>Outside Bed Frame Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>XSMHO</td>
</tr>
<tr>
<td>Design Weight</td>
<td>110#</td>
</tr>
<tr>
<td>Case Width</td>
<td></td>
</tr>
<tr>
<td>A- Inside Bed Frame</td>
<td>76&quot;</td>
</tr>
<tr>
<td>B- Outside Bed Frame</td>
<td>77-1/2&quot;</td>
</tr>
<tr>
<td>C- Outside Bed Frame &amp; Mechanism</td>
<td></td>
</tr>
<tr>
<td>G- Wall Cabinet Opening</td>
<td>79-7/8&quot;</td>
</tr>
<tr>
<td>H- Wall Cabinet O/A</td>
<td>81-3/8&quot;</td>
</tr>
</tbody>
</table>

**Wall Cabinetry Must be Securely Fastened to a Structural Wall!**

### Notes
- Mattress manufacturers produce nominal sized +/- 1". The dimensions in these instructions are nominal size + 1".
- Platform weight is inclusive of wood platform, mattress, foundation, etc. for the specified counter balance mechanism function.
- North American Standard King Nominal Mattress size is 76" x 80" long (shown) - California King is 72" x 84" long.
- 1/4" reveals used to allow maximum leveling adjustment. Increase door panel to reduce reveal gap.
Bed Frame Detail

Bull nose top of head board on bed frame flush to mattress

1" x 2" cleat support for slats or platform, if used

Head Board end only mattress retainer when closed

Concealed Hardware System

Exposed Hardware System
A 3/4" hardwood plywood cabinet back must be provided for cabinet integrity and attachment of the cabinet to a structural wall. The platform can weigh several hundred lbs, and will be in motion when opening or closing.

Lift door platform and bed frame on a 45° angle to clear all obstructions and lower the assembly into place with the square axels in the mount plate saddles in the cabinet.

Lower door and install the mattress on the bed frame in preparation for adjusting the balance of the platform.

Close and open the door panel to insure against obstruction of movement.

Open door to 15° and tighten tension sequentially, a few turns on one side and a few turns on the other until the door panel is balanced. The door panel is balanced when the door will stand at about 45° open. See FAQ page for detail.

Wall Cabinetry Must Be Secured to a Structural Wall before attempting to adjust platform!
Selby Pardo Wall Bed Installation and Adjustment

Adjust tension and balance the bed platform.

**Secure the cabinet and bed firmly to a structural wall of the building!**

To adjust the mechanism tension and balance the bed platform, place mattress in the bed frame and position the door at 15º open. This is the neutral position of the springs used to balance the bed weight.

The handles may be turned “hand tight”, after which they must be sequentially tightened with a 24mm socket wrench.

**Adjustment Procedure**

**Do not attempt to adjust the tension with the door panel in the full open position!**

1. With the cabinet secured to the wall, you may start the adjustment procedure.
2. Lower the panel door to an approximate 15º angle (from vertical) and tighten by hand. Turn both left and right tension handles until they stop turning without force.
3. Unwind the regulators an even 10 full turns each.
4. Lower the panel door and carefully install the chosen mattress. Carefully release the panel door to see if it will remain at this angle. With a foam mattress, the panel door may stay at this position, but a spring mattress may require further adjustment.
5. Bring the bed back up to the original 15º angle (from vertical). At this point, uniformly tighten the tensioning handles one side at a time in an equal number of turns in multiples of 8-10 turns. A ratchet wrench and 24mm socket is recommended to avoid damage to the tension adjusting handles.
6. Lower the panel door until bed is parallel to the floor. At this point, you may judge for yourself the weight of the bed. If you feel it is too heavy, tighten the regulators further (always tighten in the up-right position, sequentially, one side at a time) to obtain the perfect setting.
7. Your new Selby Wall Bed is now ready for use!

Selby Wall Beds can be relocated by reversing the procedures shown on this page. A professional installer is recommended.
FAQ

Countersink Bushings Required  Countersink bushings are supplied with the Selby wall bed system hardware and MUST be inserted in counter bores to attach the pivot mounting mechanism plate to the side wall of the cabinet or piers and to attach the counter balance mechanisms to the bed frame with appropriate machine screws and washers. The countersink bushings supply extra strength at high-tension points when operating the bed.

Baseboard Installation  Installation of angle iron brackets (not supplied) at wall cabinet base will require that the cabinet base is notched for clearance OR that the baseboard is cut away for a tight connection to the base plate in the wall.

Installation, Attaching the Wall Cabinet or Piers & Bridge to a structural wall  A minimum of ten 3” or larger wood screws must be placed through the connection rail of the wall cabinet(s) at every wall stud and installation must conform to all applicable building codes.

Tool Choice  Tension the counter balance units of the system using a 24mm socket wrench. The use of a flat wrench, adjustable wrench or open end wrench is not advised, and may damage the tensioning handle.

Selby 24mm socket and ratchet wrench are sold separately.

Mattress Support  The mattress used on a wall bed requires support. Placing the mattress directly on the backside of the front panel or door is not recommended! The three most common methods of supporting the mattress are:

A commercial foundation or innerspring, lowered into the bed frame.
A grid and Bunkie board built into the bed frame.
A platform or slats built onto the rails of the bed frames.

Mattress and support system thickness and placement will be related to wall cabinet depth. Selby Hardware offers a mattress support system of steamed curved beech slats and hard rubber retainers for sale.

Important Safety Information

The bed should only be operated by an adult.

Due to the risk of entrapment, children should not play with the bed in the sleeping or stored positions.

Ensure the bed cabinet is securely fixed to the wall (and adjoining units) before pulling the bed down.

Always manually control the bed by maintaining hand contact with the bed frame while in ascent and descent. Do not let the bed drop freely or slam when opening or closing.

Fasten your bedding to the mattress using the straps (sold separately), and secure to the bed before closing the cabinet. Insure that no bedding is protruding, as it may cause damage to the mechanism.

Do not remove the mattress while the bed is in the horizontal position, unless the bed frame is being held by another person.

Bed and cabinet should be checked regularly for signs of wear.

If you are relocating the bed, do not remove any of the fittings until the bed is in a vertical position. Bed relocation should be done by a qualified installer.

Adjustable mechanisms should not be tampered with unless by a qualified fabricator.

We employ a policy of continuous development and therefore reserve the right to alter specifications or illustrations in this manual at any time.