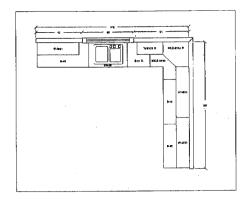
The *Mill* Horizons Series European-Style Frameless Cabinetry Installation Guide







The first step in the cabinetry installation process is to prepare yourself and the work area for the new cabinets. Begin by becoming familiar with the kitchen drawings. Make sure you know where each cabinet will be placed in the new kitchen and check them against your list to ensure you have each item. If you are remodeling the kitchen, prepare the work space by removing all existing appliances, cabinets, sinks and anything else which may be attached to the walls or floor. Be sure to turn off the water and electricity before removing the sinks and appliances. If you are planning on replacing the flooring, electrical or plumbing, or repairing and painting the walls, this work will be much easier if it is done prior to the cabinet installation. It is also important to protect the new floor with tarps or cardboard during installation of the cabinetry.

2. Subtract height of wall cabinets

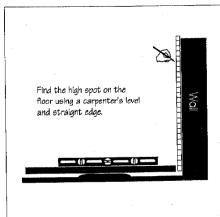
High spot

Wall Level Line

Shim under the level at the low spot. The high spot is at the opposite end of the level. Mark each high spot until

3. Strike the Wall

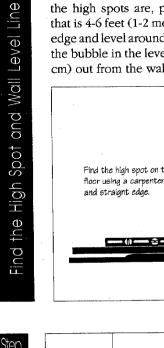
One of the most important steps in cabinetry installation is to begin with a level foundation for the cabinets. Since not all floors and walls were created with smooth, plumb surfaces, it is critical to locate the high spots. Once found, you may either level the spots to the low areas or shim the cabinets to make the installation plumb and square. To determine where the high spots are, place a carpenter's level on top of a straight edge that is 4-6 feet (1-2 meters) long. Beginning in a corner, move the straight edge and level around the room on the floor along the wall, marking where the bubble in the level indicates high areas. Repeat the procedure 21" (53 cm) out from the walls until you have found the highest spot.

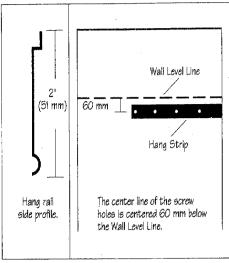


Important: If you will use moulding with the Wall Cabinets see Step 10 now. Subtract the wall cabinet height from the finished height of your tallest cabinet. Finished

height is the cabinet box length plus the 4-1/2" (114 mm) toe kick. Measure up the wall this distance from the high spot and strike a line. This is called the Wall Level Line. Level the wall cabinet bottoms to this line.

For wall cabinetry, it is also imperative to ensure a smooth base. Utilize the same method used in finding the high spot on the floor to check for unevenness in the walls. As you hang the cabinets, place shims behind the cabinet as necessary to level out the uneven wall.

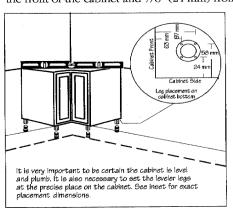




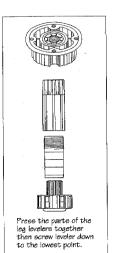
Important: if the Hang Rail System will not be used, proceed to Step 4. If you will use moulding with the Wall Cabinets, proceed to Step 10 now.

Wall cabinets can be installed with the Hang Rail system or by screwing through the cabinet back into the wall studs. The Hang Rail system uses adjustable brackets inside the cabinet with metal clips which extend through the back of the cabinet. These clips hook onto the Hang Rail. The cabinet is adjusted to the correct height from inside the cabinet (Step 8). To install the Hang Rail, measure the length of the run on and cut the Rail to that length. Cut off an additional 1-1/2" (38 mm) if finished end panels will be used. Measure down from the Wall Level Line 2-3/8" (60 mm). This is the center line of the holes in the Hang Rail. Attach the Rail to the wall in every other hole using the appropriate fixtures for the material used to construct the walls, i.e screws, toggle bolts, molly bolts, etc. Check the Hang Rail with a carpenter's level to ensure it is level. An ueven Hang Rail will affect the cabinet performance and may cause the doors to fit improperly.

Base cabinets are installed using either the Leg Leveler or Toe Box Foundation systems. Proceed to Step 5 for the Toe Box Foundation System. Remove the doors and drawers (see Step 10 for details) to eliminate marring during installation. Assemble the legs as shown at right. The cap and foot press onto the stems which are then screwed together until they reach the lowest point. Screw the legs to the corners of the base cabinets. The front screws of the leg must be 2-1/2" (63 mm) from the front of the cabinet and 7/8" (24 mm) from the cabinet side. The rear screws will be 3-13/16"



(97 mm) and 2-9/32" (58 mm) respectively. Starting with the cabinet located in the corner, unscrew (lengthen) the rear legs until the cabinet is level with the Base Level line. Place a carpenter's level onto the cabinet perpendicular to the cabinet face, and raise the front of the cabinet until it is level front to back. Next, turn the level so it is laying side to side across the cabinet and adjust the legs until the cabinet is level. Check each direction again with a carpenter's level. Screw the cabinet to the wall. Place the next cabinet beside the first and level it as you did the first. Remember the rule is to level front to back and then side to side. When the second cabinet is level, fasten it to the corner cabinet with



Cross members

Pre-drill screw holes, two for each cross-member

1-1/8" (29 mm) gripper screws or gang bolts (refer to Step 6 graphic for details) and the wall. Proceed along the floor plan until all base cabinets are secured and level.

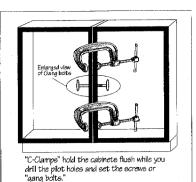
The Toe Box Foundation System is a method in which a level foundation is built on which the cabinets sit. The 3/4" (19 mm) toe box material must be assembled on the job site. To construct the toe box, measure the full run of cabinetry along one wall. This will be the length of the toe box. The width will be 3-1/4" (83 mm) less than the depth of the cabinet box. Cut the material to length, pre-drill screw holes and fasten together with "gripper" screws. Note: If you have finished end panels which do not extend to the floor (carcass caps), you must cut the toe box length short by 3-1/4" (83 mm). Place cross members at approximately 24" (610 mm) intervals. Be sure one cross-member is placed under each base cabinet. If the joint between two cabinets falls directly on the cross-member, move the cross-member to either side 4" (102 mm). Follow these instructions for each run of cabinetry until the toe boxes are fully assembled.

Lay the assembled toe boxes in place. Beginning at the high spot identified in Step Two, shim the low points of the toe box

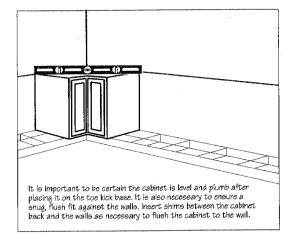
Build the toe kick boxes from material provided in the order. Place crose-members at 24" (610 mm) Intervals. Shim the toe box with wooden shims until the box is level. Check with a carpenter's level. After Installing cabinets, cut shims flush with the toe kick box and install the toe kick cover provided with the order.

until it is perfectly level. Fasten the toe box to the floor and walls with screws. Re-check it with a carpenter's level to ensure the toe box is level. Cut off the shims even with the toe kick base. This is the most critical step in the installation process. A level base will eliminate misalignment of doors and drawers due to racking (twisting) the cabinets.

Remove all doors and drawers from the cabinets (see the graphic in Step 11 for details) to eliminate marring the faces. Starting with the cabinet located in the corner, set it onto the toe box frame, snug in the corner. The cabinet should be perfectly level because the toe box is already level. However, check the cabinet with a carpenter's level to be certain it is level and plumb. If necessary, place shims between the cabinet and the wall to ensure a flush fit. Fasten the cabinet to the wall using 2-1/2" (64 mm) screws placed through the back side of the cabinet. Re-check the cabinet with a carpenter's level to make sure



it remains level while screwing it to the wall. Moving along either wall, place the next cabinet flush to the corner cabinet. Secure the cabinets togetherusing "C-clamps", making sure the cabinets

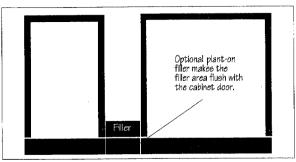


are flush both top and bottom as well as along the front. Drill pilot holes through the wall of second cabinet and into the first. Fasten the cabinets together using gang bolts or 1-1/8" (29 mm) gripper screws (screw caps are available). Place one screw at the top, middle and bottom of the cabinet. Secure the cabinet to the wall. Repeat this procedure following your floor plan until the cabinets are completely installed.



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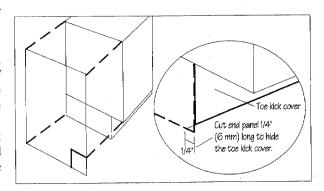
Toe Box Foundation System



Finished end panels are necessary to cover the exposed end of the cabinet. They may extend to the floor or be cut off at the top of the toe kick; it is your choice. To install, place the panel flush to the front edge of the cabinet (including the door). Each end panel is factory cut 1/4" (6 mm) wider than the actual width of the cabinet so that you may scribe (cut) the panel to match the wall thus eliminating any gaps caused by uneven walls. Cut the panel to match the wall. Next, cut the space for the toe kick. Allow an extra 1/4" (6 mm) to conceal the cut end of the toe kick cover. Fasten the end panel to the cabinet with screws drilled from the inside of the cabinet. Caps are available to hide the screw heads on the inside of the cabinet.

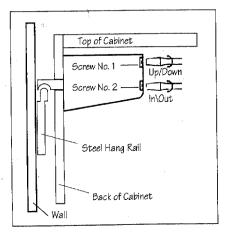
Standard fillers are set flush to the front of the cabinet box and are 3/4" (19 mm) thick. To install a standard filler, drill a pilot hole through the cabinet wall and attach it using 1-1/2" (40 mm) wood screws.

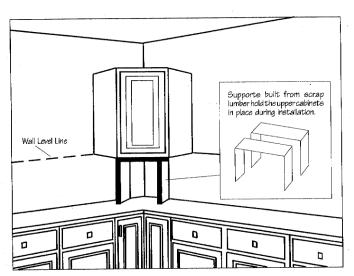
In addition to standard fillers, optional plant-on fillers are available. Plant-on fillers are screwed to the standard filler before installing and are designed to increase the depth of the filler to be flush with the outside edge of the door.



To install Wall Cabinets with Hang Rails, begin with the corner cabinet. Place the hooks on the back side of the cabinet over the edge of the Hang Rail (installed in Step 4). Tighten Screw No. 2 to snug the cabinet to the wall. Use a carpenter's level to determine how the cabinet should be adjusted so that is it level with the Wall Level Line. Adjust the cabinet up and down as necessary with Screw No. 1. Finish tightening Screw No. 2 to secure the cabinet to the wall. This will also raise and/or lower the front of the cabinet so be sure the cabinet remains level by rechecking it with a carpenter's level when finished. Place shims between the cabinet and wall as necessary to ensure a plumb fit.

Each successive cabinet should be placed onto the track, flush with the neighboring cabinet and levelled in the same manner. Screw the cabinets together using 1-1/8" (29 mm) gripper screws or gang bolts. Re-check all cabinets to ensure they are level and plumb after tightening the screws.

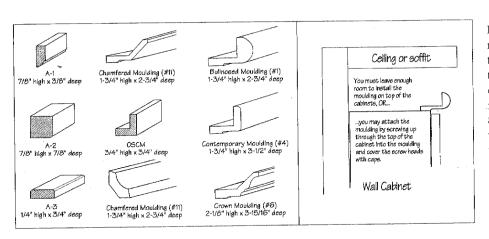




Note: The method in this Step cannot be used if the Hang Rail system is utilized. To install wall cabinets by the traditional method, construct cabinet supports from scrap material. These should the be same height as the distance from the top of your base cabinets to the Wall Level Line. Beginning in the corner, place the supports under the first cabinet. Use wooden shims to level and plumb the cabinet. Fasten the cabinet to the wall using 2-1/2" (64 mm) wood screws. As you tighten the screws, check the cabinet with a level to be sure the it is plumb and level. Place the next cabinet onto the supports, level it, then fasten it to the first with gripper screws or gang bolts. Each cabinet under 24" (610 mm) wide should receive four screws, two at the top and two at the bottom. Cabinets larger than 24" (610 mm) should receive two screws per stud.

Please note that if you are installing a single cabinet, or if there is only one wall stud located behind the cabinet, place at least two screws through the cabinet into the stud to ensure that the cabinet will have enough rigidity and will be attached to the wall with adequate strength. This is an important safety point.

Once your cabinets are installed, it is critical to check them once again with a carpenter's level to be sure they are level and plumb, and that the doors and drawers fit properly. If there are any tight drawers or doors which do not fit properly due to racking, loosen the screws holding the cabinet in place and adjust it using shims as necessary so the torque on the cabinet is eliminated.



In the Horizons line, the moulding is attached through the moulding into the tops of the cabinets or from inside the cabinet up through the top and into the moulding with 1-1/ 8" (29 mm) gripper screws. If your cabinets will fit tight to the ceiling or soffit, you must drop either the Wall Level Line or the Hang Rail down the height of the moulding to allow room for it when it is installed.



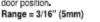
CLIP top series hinge adjustments Side adjustment Turn front screw to increase or decrease door overlay. Range = 3/32" (2mm)

Now that your cabinets are installed, the doors and drawer fronts must be adjusted to ensure perfect cabinetry lines. Beginning with the doors, loosen the appropriate screw, adjust the door into position and tighten the screw again. Repeat this until all doors are adjusted properly.

Depth adjustment



Turn rear sprial-tech cam screw to adjust door position.





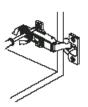
Height adjustment





Loosen screw (s) on the mounting plate. Adjust door to position and tighten screws.

Range = 5/32" (4mm)



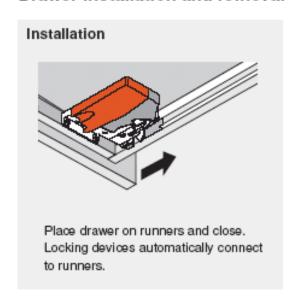
Next, align the drawer fronts.

The following pages will guide you through the proper alignment the two drawer systems offered by DeWils.

Wood Drawer Box Adjustments

Tandem Installation, removal and adjustment information

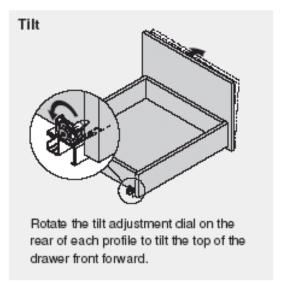
Drawer installation and removal





Adjustments



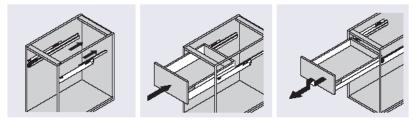


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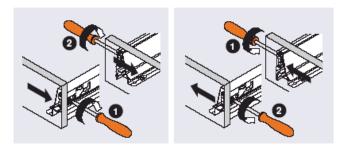
Stainless Steel Drawer Adjustments

Installation, removal and adjustment

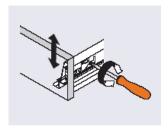
Drawer insertion and removal



Side Adjustment - Grey Plastic Cam - Turn both cams equally



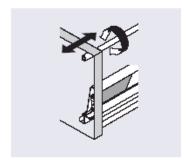
Cam Height Adjustment -Gold Color Screw - Loosen and move Drawer head, retighten



Tilt Adjustment For Larger Drawer Heads

Twist the chrome rods clock wise or counter clock

Note: drawer heads 8" and larger will have one rod per side. Drawer heads 12" and larger will have 2 rods per side



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