Please call us at 888-864-3463 or 801-785-3363 or fax your layouts to us at 888-221-1262 or 801-785-3316 for assistance with cantilever frame placement and/or cabinet design.

Installation is straight forward. Minor considerations are required as noted below (end panel, countertop overhang and chair spacing). The chairs are mounted to steel systems that are freestanding and mounted directly to the floor.

**CABINET DESIGN:**

To conceal the cantilever frame requires 3 1/2 to 4" of dead space between the cabinet box and finish panel. The cantilever frames can also be placed in the dead space between angled cabinet boxes. The dead space is not required when the cantilever is exposed in front of the finish panel. Exposing the frame works well on retrofit applications.

Make sure the end panel is extended to cover the dead space wall and meet the finish panel.

The counter/table top should also be extended to provide 15" overhang if possible.

**SAMPLE CABINET LAYOUTS:**
Inverted frames placed in natural dead space between cabinet boxes

Retrofit frames placed on the outside of the finish panel

YOUR SEATING SYSTEM

BAR SEATING FRAME DIMENSIONS:

(Custom Heights Available)

Drawings are not to scale
Note: Head assemblies can be adjusted to accommodate straight, 22.5 or 45 degree and radius countertops.

**BUILT-IN DESK DIMENSIONS:**

Note: When the desk has a pencil drawer, the suspension arm is shortened from 12" to 8".

**TABLE DIMENSIONS:**

- **Hexagon**
  - 6 Seat - 51"x51"

- **Round**
  - 4 Seat - 44" dia.
  - 6 Seat - 55" dia.
  - 8 Seat - 60" dia.

- **Oval**
  - 6 Seat - 48"x60"

- **Octagon**
  - 8 Seat - 60"x60"

- **Oblong**
  - 8 Seat - 44"x78"
CANTILEVER FRAME PLACEMENT:
(Installation time estimate - 10 minutes)

Position the cabinet box and secure to floor. Place the cantilever frame against cabinet and space according to design specifications.

Put the 5/8" washers under the carriage bolt heads on the frame to provide added contact surface area.

Note: The base of the cantilever frame can be used as a double or a single frame. Convert the frame to a single frame by sliding the cross bar right or left to position the cross bar under the chair and secure the set screws (see arrows below).

IMPORTANT: Make sure the set screws on the cantilever base are as tight as possible to avoid future instability.

LEVELING:
(Installation time estimate - 15 minutes)

Level the cantilever frames using the 5 carriage bolts. To simplify leveling, use carriage bolts A, B and C (above) to level. Once level, lower carriage bolts D and E to the floor. Tighten the carriage nut on each carriage bolt. The cantilever frame can be raised up approximately 1" to position the frame up with the cabinet top. (Caution: Make sure there is enough clearance between the top of the cantilever frame and the bottom of the countertop to insert the head assembly into the frame.)

IMPORTANT: Make sure the frame is raised to match the top of the cabinet box. (If countertop has a bull-nose edge - lower frame the length of the bull-nose edge to allow enough clearance to insert the head assembly.)
FOOTREST CONSTRUCTION:
(Installation time estimate - 45 minutes)

The footrest is built on-site by the installer and covers the base of the cantilever frame. Once completed, the footrest can be covered by the flooring contractor in hardwood, carpet, tile or vinyl.

SECURING TO FLOOR:
(Installation time estimate - 10 minutes)

To secure the cantilever frames to the floor, drill pilot holes and use the 3 1/2" lag screws to anchor the frame at the 4 points to the floor. For concrete, drill holes for anchors and fasten the frame to the floor.

Concrete Wedge Anchor Installation: (1) Always wear safety glasses; (2) Use only solid carbide-tipped bits meeting ANSI B212.15-1994 (3/8" drill bit for 3/8" anchor); (3) Drill hole perpendicular to the work surface—do not ream the hole or allow drill to wobble; (4) Drill the hole as deep as the full length of the anchor but not two anchor diameters from the bottom; (5) Clean the hole using compressed air; (6) Assemble the washer and nut on the anchor so the nut is recessed slightly below the head of the anchor; (7) Tap the anchor through the fixture and into the hole making sure the nut and washer rests solidly against the fixture; (8) Tighten the nut with a torque wrench to the proper torque range (25-30 ft. lbs for 3/8" anchor); (9) If spinning occurs, pull up on the anchor using the claw end of a hammer and then torque.

Concrete Titen HD® Anchor Installation: (1) Always wear safety glasses; (2) Use only solid carbide-tipped bits meeting ANSI B212.15-1994 (3/8" drill bit for 3/8" anchor); (3) Drill a hole in the base material to the specified embedment depth plus 1/4" to allow the thread tapping dust to settle, and blow it clean using compressed air (Alternatively, drill the hole deep enough to accommodate embedment depth and the dust from drilling and tapping). (4) Insert the anchor through the frame and into the hole. (5) Tighten the anchor into the base material until the hex-washer head contacts the frame. Caution: Use a Titen HD® screw anchor one time only — installing the anchor multiple times may result in excessive thread wear and reduce load capacity. Do not use impact wrenches to install into hollow CMU. Oversized holes in base material will reduce or eliminate the mechanical interlock of the threads with the base material and reduce the anchor’s load capacity.

Inverted Frame Installation: To install inverted frames, place the frame according to design specifications. Mark the cabinet box and notch to accommodate the inverted frame. Mark the position of the lag screw holes on the floor.

WARNING: Re-enforce the floor at the lag screw locations to prevent anchor slippage or release. Construction adhesive should also be used between floor and plate (inverted frames place high leverage forces on the lag screws). Shim the inverted frame if leveling adjustment is necessary. Lag the inverted frame to the floor. Construct the 4" dead space. Position the finish panel and install the head assembly and chair.
FINISH PANEL:
(Installation time estimate - 30 minutes)

Notch the finish panel according to the placement of the cantilever frames. The finish panel may need to be reinforced with a particle board sub panel for added strength.

Important: Make sure the notch in the finish panel provides 1/4" clearance around the cantilever frame to avoid contact if the floor/frame flexes during use.

HEAD ASSEMBLY AND CHAIR PLACEMENT:
(Installation time estimate - 20 minutes)

Slide the head assembly into the cantilever frame. Take care to not scratch the paint when the head assembly is placed into the cantilever. Place the head assembly cover 1/2" under the counter top edge.

First, tighten the corner set screws to position the head assembly. Next, tighten the side and bottom set screws to secure the head assembly.

Center the chair on the seat plate and screw the chair onto the seat plate. Offsetting the chair a maximum of 1" from center may be acceptable in accommodating chair spacing problems.
**ARM & SEAT ALIGNMENT**

**SUSPENSION ARM ALIGNMENT:**  
(Adjustment time estimate - 15 minutes)

In general, the suspension arm is positioned so the center of the seat plate is directly aligned with the edge of the countertop. The suspension arm can be positioned away from the countertop to provide added room for adults. The suspension arm can be positioned inward to provide more room to pass if the chair protrudes into a walkway.

The resting position of the suspension arm is preset at the factory for straight bars.

Note: Positioning the suspension arm inward may negate the effect of the seat plate stop that prevents the chair from colliding into the countertop.

To re-align the suspension arm, flex the cover outward and down to remove the cover.

Locate the lower collar and loosen the 4 set screws. Once the lower collar is loosened, the suspension arm can be rotated to the desired position and the set screws re-tightened.

Note: Place downward pressure on the chair while repositioning the suspension arm. The spring in the suspension arm will cause the arm to rise (pushing the lower collar down the arm) and will create added play or it may bind the mechanism.

Note: Check the full range of motion and clearance of the chair to avoid colliding with other chair.
**SEAT PLATE ALIGNMENT:**  
(Adjustment time estimate - 15 minutes)

The chair can be re-aligned by adjusting the seat plate rather than unscrewing the chair and re-positioning it on the seat plate. Loosen the 2 set screws on the seat plate collar. Rotate the chair/seat plate to the desired position and re-tighten the set screws.

![Diagram of seat plate alignment](image)

Note: Check the movement of the chair to make sure it does not collide with the countertop.

**RETURN SPRING ADJUSTMENT:**  
(Adjustment time estimate - 15 minutes)

The suspension arm and the seat plate are spring-loaded to return the chair to its resting position when not in use. If the chair does not return itself, the spring may need tightening.

![Diagram of return spring adjustment](image)

To tighten the spring in the suspension arm, loosen the set screws on the cantilever. Slide the head assembly back to clear the countertop. Take a pair of vise grips and grab the center of the torsion key. Carefully pull up on the spring-loaded torsion key and tighten 1/4 turn.

Slide the head assembly back into the cantilever frame and tighten the set screws. The suspension arm should now return to its resting position when pulled back.

To tighten the seat plate spring, take a pair of vise grips and grab the torsion key located under the seat plate. Carefully pull down on the spring-loaded torsion key and tighten 1/4 turn. The seat plate should now return to its resting position.

![Diagram of seat plate torsion key](image)

Note: To tighten a right seat plate, turn clockwise when looking down at the chair. A left seat plate is tightened by turning counter-clockwise.
**DESK INSTALLATION**

**DESK FRAME PLACEMENT:**
(Installation time estimate - 20 minutes)

Locate and mark the wall studs under the desk countertop. Place the mounting brackets up against the bottom of the desktop and anchor to the wall with the 2" lag screws.

![Desk Front View](image)

Note: If a second stud cannot be located, rotate the mounting bracket to the cabinet box.

**HEAD ASSEMBLY PLACEMENT:**
(Installation time estimate - 40 minutes)

Measure the distance from inside the mounting bracket to the countertop face. Carefully slide the desk head assembly onto the L-frame the measured distance (less 1/2" overhang) and tighten the head assembly corner set screws. Place the head assembly and L-frame into the mounting brackets. Hold the head assembly level and mark the shaft hole on the cabinet.

Remove the head assembly and L-frame and drill 5/8" hole on the cabinet at least 1/2" deep. Position the washer-collar over the 5/8" hole and anchor it to the cabinet with the #8 screws.

Place the head assembly and L-frame back into the mounting brackets. Slide the 5/8" shaft through the head assembly placing a collar on the shaft between the head assembly and the washer-collar mount. Push the shaft into the cabinet wall. Secure the collars against the head assembly.

Tighten the set screws on the head assembly as tight as possible.

Center the chair on the seat plate and screw the chair onto the seat plate.
**FOOT RAIL**

*Designing Foot Rail:*
(Design time estimate - 10 minutes)

Measure the sides of the bar where you will install the foot rail. Make sure to include the dimensions that brackets and fittings may add or subtract from the overall length of the tubing. To calculate the number of brackets, place a bracket 6 inches from tube ending then space them 36 to 48 inches apart.

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*Foot Rail Layout:*
(Layout time estimate - 15 minutes)

Mark the tube for the appropriate length for cutting. Keep in mind that the splicing joints should be concealed within a bracket. If the tubing is wrapped in a layer of plastic film, leave the film in place as long as possible to protect the metal finish.

Loosely assemble the foot rail by sliding the tubing through the brackets without adding the set screws. Mark the location of the brackets.

Note: The bracket requires a solid backing of at least 3/4 of an inch.

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*Foot Rail Installation:*
(Installation time estimate - 20 minutes)

Once you are satisfied with the "loose fit" assembly, begin to attach the brackets to the wall on the first straight section. If a corner occurs, first attach the elbow to the installed foot rail and then proceed to the next section of footrail. Use the setscrews to attach the tubing to the elbow. The tubing will also be attached to the brackets with setscrews.

To secure the finials or end caps, apply a bead of Loctite® or similar epoxy around the interior surface of one part and press and rotate it into its mate.

Once installation is complete, remove the protective film if present.

Note: When a wall flange is used, slide the flange onto the tube before securing the section of foot rail to the bar. A flange may replace a support bracket if mounted to a solid backing.