

Required tool list

In order to assemble Queenax products, the following tools are required:

- Hammer Drill or Concrete Drill
 - masonry bits appropriately sized for anchor types



Note: Follow manufacturer guidelines when selecting a bit for use when drilling an anchor.

- ½" Drive Battery Impact Driver
- Battery Angle Grinder
 - Cutting disc and abrasive disc
- Oscillating Tool (for cutting flooring)
 - Wood and scraper blades
- Metric combination wrenches (13mm, 17mm, 19mm, and 22mm)
- ½" drive ratchet
- ½" and torque wrench (up to 100 ft-lbs)
- Metric Allen keys
- 3/8" or ½" metric Allen sockets from (6mm – 10mm)
 - 1 short set and 1 long set with ball end
- ½" metric hex sockets (13mm, 17mm, 19mm, and 22mm)
- ½" metric deep sockets (19mm and 22mm)
- ½" universal joint
- ½" to 3/8" socket adapter (for 3/8" Allen sockets)
- ½" short and long extensions
- Tape measure (with metric measurements)
- Laser measure
- Utility knife
- Multi-bit
- Tap driver
 - 10mm and 12mm thread cutting tap
- Rubber Mallet
- Hammer
- Ladder(s)
- Vacuum



Note: One set of hand and power tools per tech is recommended.

Safety Equipment

- | | | |
|---------------|------------|------------------|
| • Safety vest | • Gloves | • Respirator |
| • Hard hat | • Earplugs | • Safety glasses |
| • Work boots | | |

Torque specifications

The following torques should be used on the diameter bolts indicated:

Frame

- 34 ft-lb (46 Nm) for nuts of \varnothing 10mm
- 55ft-lb (75 Nm) for \varnothing 12mm nuts on rubberized bar plastic blocks
- 58 ft-lb (79 Nm) for nuts of \varnothing 12mm
- 94 ft-lb (127 Nm) for nuts of \varnothing 14mm

Floor mounting

- 40 ft-lb (54 Nm)

Floor bolting

Expansion anchors will be the most commonly used concrete anchors for floor bolting. Precor specifies Hilti 387512 KB-TZ 1/2-in x 3-3/4-in expansion anchors for Queenax installations without spacers. These anchors are available from Precor in 20-piece boxes (Q40821-201) or 4-piece kits (Q40821-101).

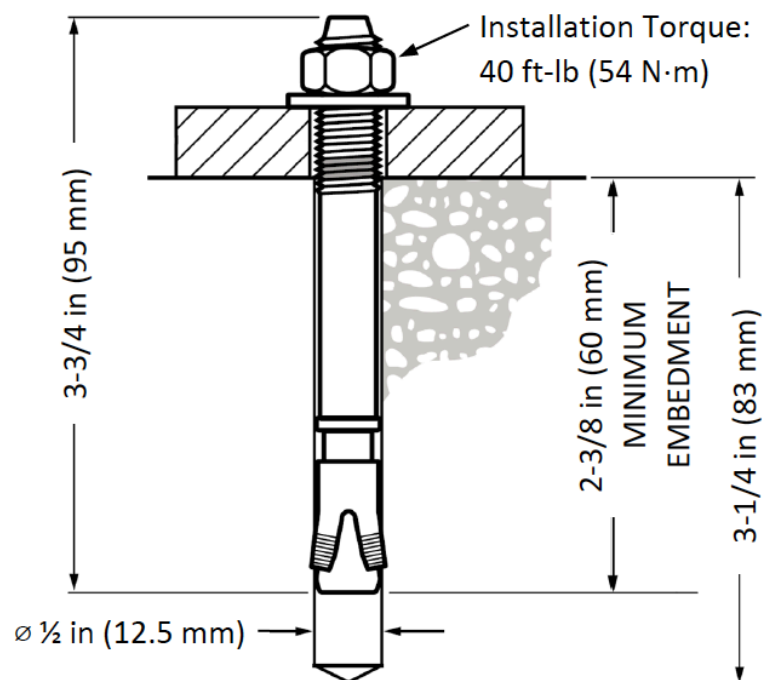
Anchors must be installed according to the manufacturer's instructions (available online at www.hilti.com).

Hole dimensions and tightening torque shown here are for reference only.

Proper hole cleaning is important for expansion anchor performance.

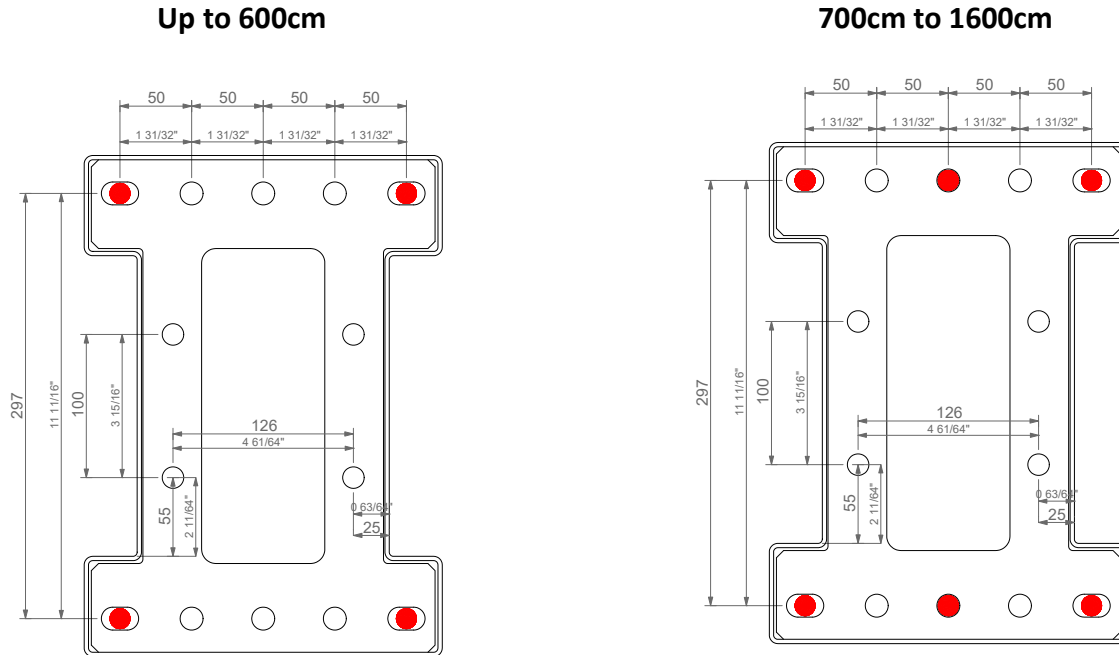
Use of a wet/dry vacuum cleaner is recommended. Recommended drill hole depth: 3 1/4 in (83 mm) DO NOT drill through the slab.

Procedures and parts exist for raising a unit as necessary with spacers if the floor thickness is greater than 5/16" (8mm). Contact Precor Installation or see "**Queenax Floor Anchor Requirements**" for guidance in these situations.

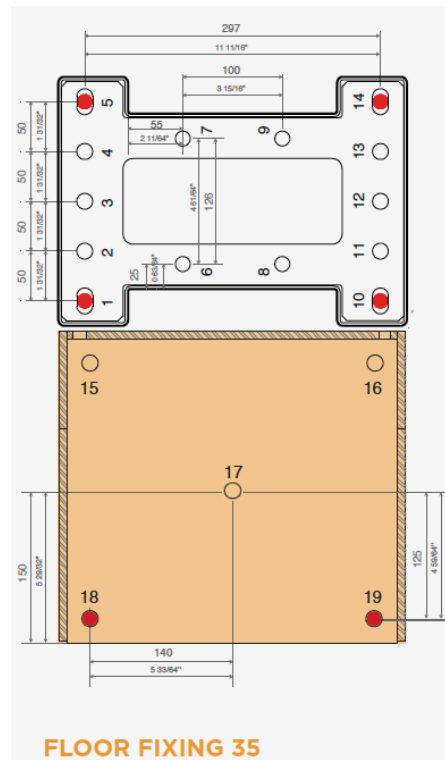
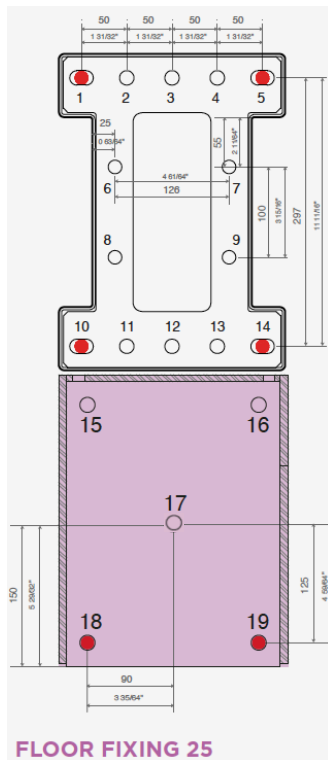


Bolt patterns

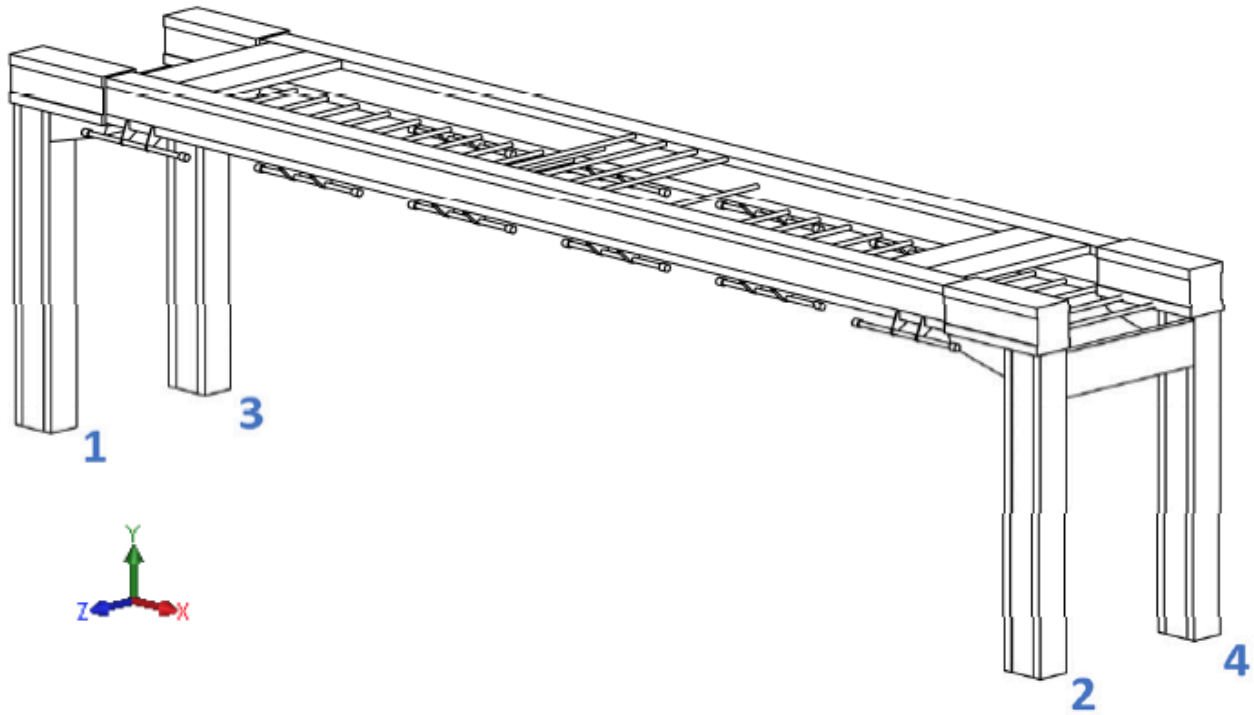
For the varying length of a unit, the following bolt fastening points should be used:



When used, floor fixing kits should be fixed as follows:

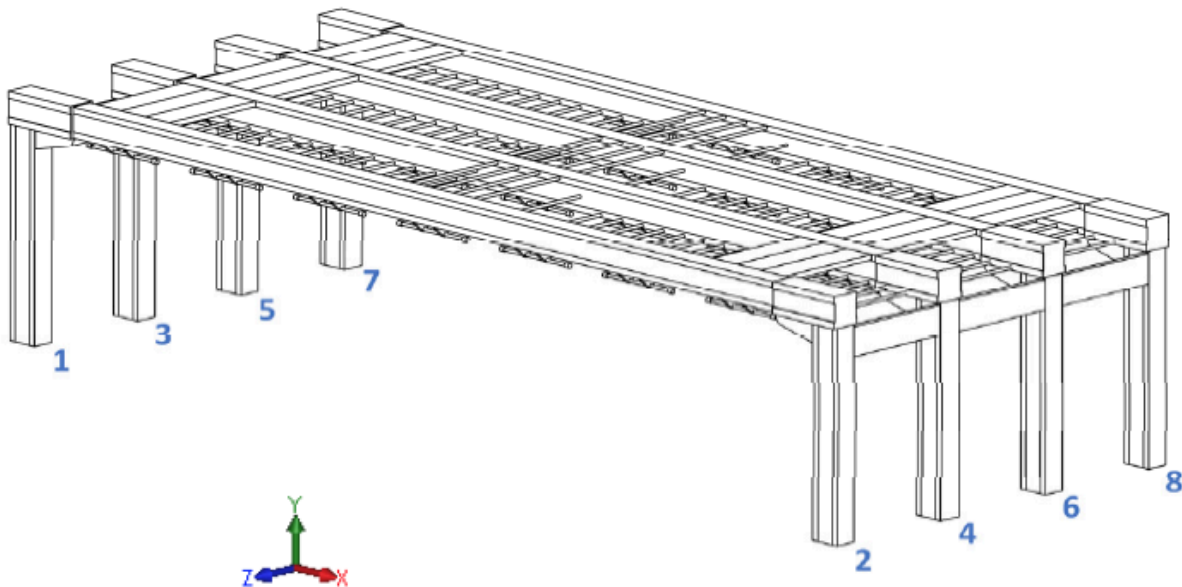


Long unit configuration 1000cm



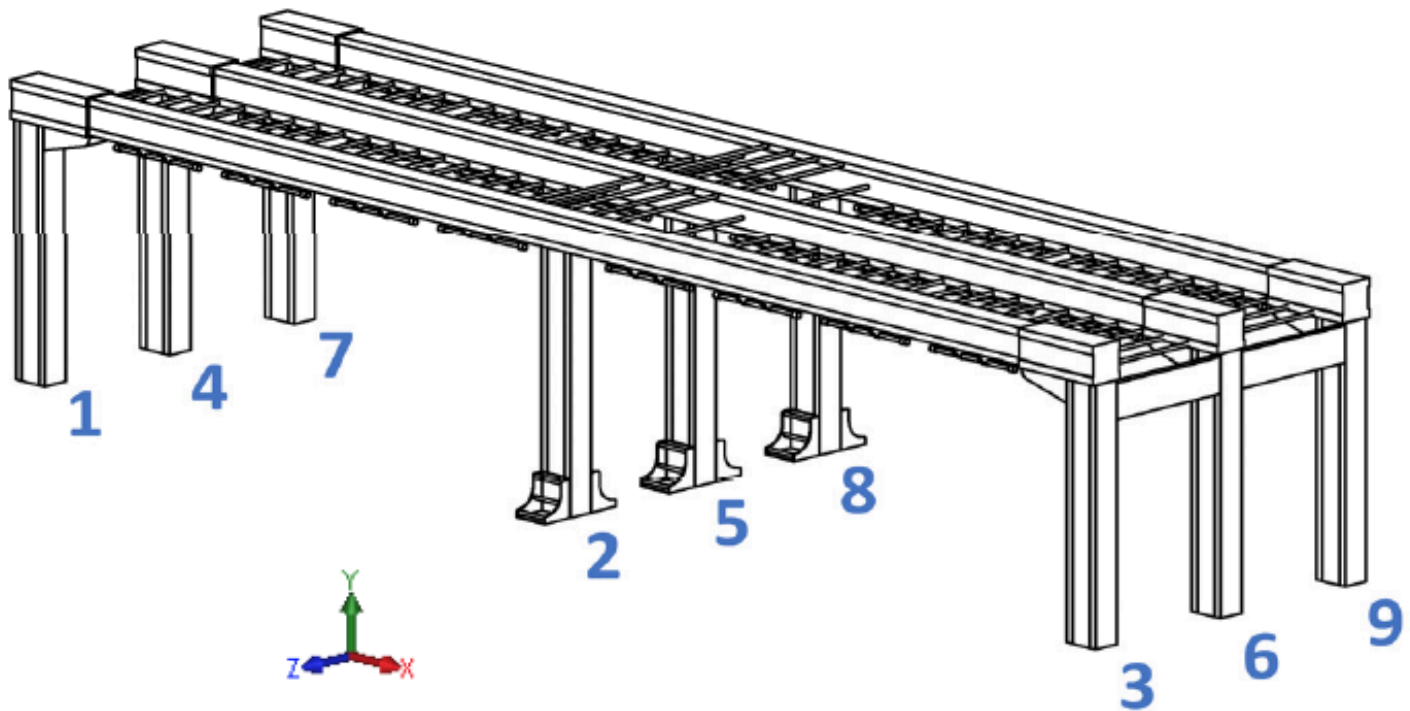
Note the addition of two K-Winds installed horizontally between the beams at each end. See “**Queenax Bridge Lateral Stiffener Modification**” assembly bulletin for installation detail.

Long unit configuration 1100 – 1200cm



Note the addition of three K-Winds installed horizontally between the beams at each end. See “**Queenax Bridge Lateral Stiffener Modification**” assembly bulletin for installation detail.

Long unit configuration 1300 – 1600cm



Note the addition of a column mounted at the center of each beam. Floor fixing kits should be installed on both sides of the center columns. Follow the anchor pattern for units 700cm and above for the outside columns. Follow the anchor pattern for Floor Fixing Kit 35 for the center columns.

Beam weights

A Genie lift or similar is required for units with overhead beams.

Queenax beams come in two standard lengths – 200cm (78-3/4”) and 250cm (98-7/16”). Their maximum weights are as follows:

- 200cm – 175lbs (79kg)
- 250cm – 205lbs (93kg)

When considering a lift for raising the beams, take the length and figure the overall weight accordingly.

- Ex. The “X2 Fixed 450” has a beam length of 450cm. So, one 200cm beam and one 250cm beam will be used. 175lbs + 205lbs = 380lbs. So, a lift capable of supporting 400lbs minimum should be used.



Warning: One lift is required for 500cm beams or less. Two lifts are required for 500cm – 1000cm beams. Three lifts are required for 1000cm+ beams.