

3.2 SuperTie 50K™ Installation Guide

FORM ERECTION

1. This G50K Gripper has been shipped partially disassembled. It is necessary for you only to attach the base plate. The Gripper Body, Base Plate, and Mounting Screws are enclosed; to assemble, stand the Barrel on the Force Tube, align the base plate so that the holes line up as shown in the drawing, then insert and tighten the Mounting Screws. A 3/16" Allen Wrench is required (see Fig. 1).

2. Assemble concrete formwork, sheathing and support members. The SuperTie 50K Gripper must be securely attached directly to vertical or horizontal stiffening members. Use appropriate length $1\frac{1}{2}$ " "J" or "hook" bolts, or those furnished with certain slotted aluminum beam systems (see figure 2).

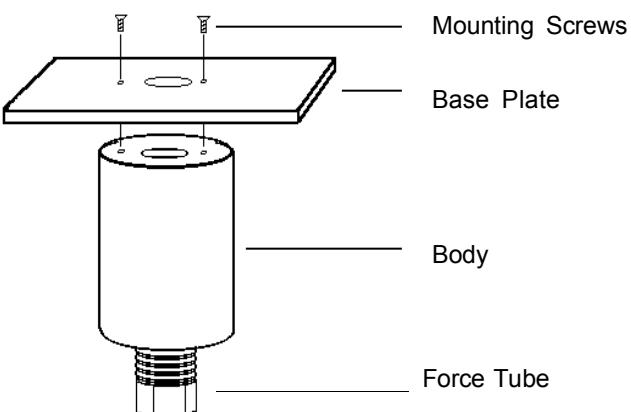
Drill $1\frac{1}{4}$ " diameter hole in sheathing, and ensure that the SuperTie 50K Gripper is lined up with the hole.

Ensure that the SuperTie 50K Gripper set/release device, the threaded Force Tube, is in a fully retracted (turned **counterclockwise**) position. After the Force Tube has reached the fully retracted position, turn it $\frac{1}{8}$ turn **clockwise** to allow free movement of the internal components.

Note: Standard industry practices are used to determine form tie spacing; a 2:1 safety factor, as is recommended by the American Concrete Institute, yields a 25,000-pound safe working load for this system.

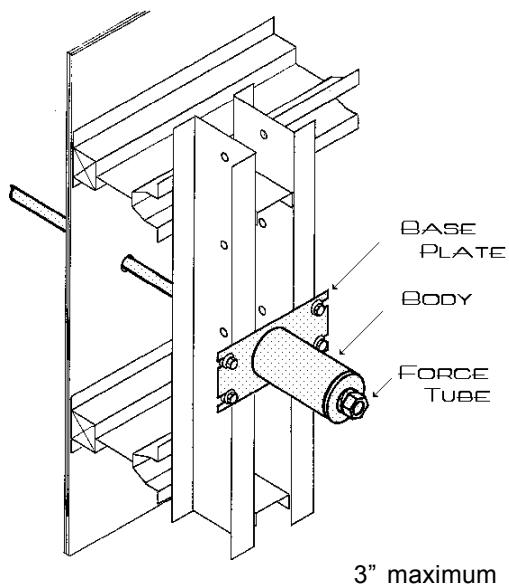
3. Erect, align, and brace forms. To tighten forms to desired width, or to an existing structure, or to align form tie holes, use $1\frac{1}{2}$ " or $3\frac{1}{4}$ " diameter threaded members, (temporarily) passed through the SuperTie 50K Grippers, then tighten threaded members to draw forms together. If desired, forms can be spread to proper distance apart with use of scrap pieces of SuperTie Rod (can use Rod from either 50K system (1" diameter) or 15K system ($1\frac{1}{2}$ " diameter).

Figure 1



Note: Mounting Screws must be securely attached.

Figure 2



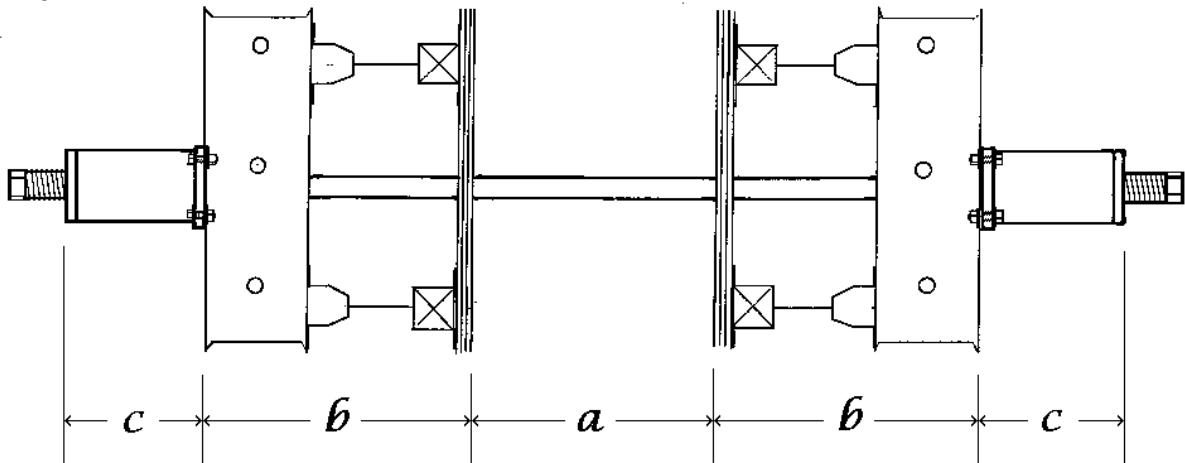
Note: The SuperTie 50K Gripper is shown in the horizontal position, but it may be rotated as necessary to fit project conditions. Ensure that uniform bearing exists between the formwork member and the base plate of the Gripper (gap between formwork members can be no more than 3 inches).

(Continued...)

3.2 SuperTie 50K Installation Guide (continued)

3. Cut fiberglass Rod to the lengths required, using an abrasive or diamond blade in a circular, or cut-off, saw. The Rod length required is determined by adding the width of the structure being built plus the width of the forms plus an additional 12" (6" per side). See figure 2.

Figure 2



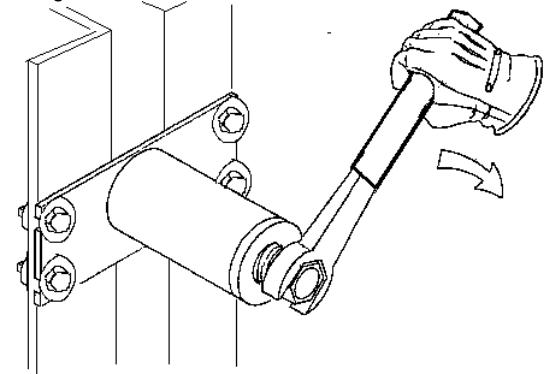
Length of Rod equals width of structure (*a*), plus width of forms (*b*), plus 12" for the Grippers (*c*).
Add 12" to one side if JD50K Jacking Device is to be used.

4. Slide Rod through the rear end of the Gripper, through the forms, and through the nose end of the Gripper on the opposite side. The ends of the Rod must extend at least to the outboard ends of the Gripper body. Using either a 3' or 4' long "cheater bar" on a 1½" pin wrench, turn the Force Tube **clockwise** to engage the Rod (see Fig. 3); tighten with a minimum force of 125 ft. lbs., maximum 200 ft. lbs. (good and snug).

5. Ensure that the forms are spread to the desired distance apart, then lock the Gripper on the opposite side in the same manner as described in step 4. The two locked G50K Grippers act as a positive spacing device. You can now place the concrete.

Note: As concrete is placed, the Force Tubes will become loose; **do not** retighten.

Figure 3



Turn clockwise to engage locking mechanism,
using a "cheater bar" to apply 125 to 200 ft. lbs. of
force to the Force Tube ("good and snug").
Note: The Base Plate must be securely
attached to the formwork.

(Continued...)

3.2 SuperTie 50K Installation Guide (continued)

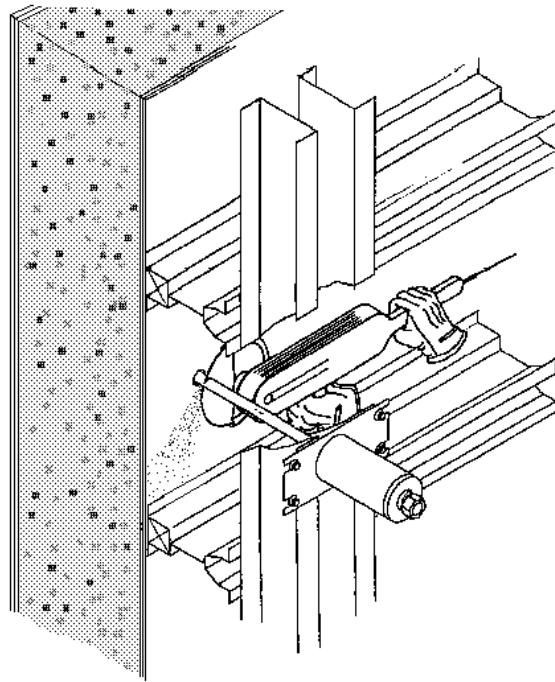
STRIPPING

1. Cut the Rod can between the Gripper and the sheathing by using a sabre saw or handheld grinder (see Fig. 4).
2. Loosen the Gripper with a $1\frac{1}{2}$ " pin wrench by turning **counterclockwise**, until the internal mechanism hits the rear cap.
3. The forms can now be removed from the structure by pulling them back until they are beyond the end of the Rods.

FINISHING

After the forms have been removed, use a circular grinder to grind the small stubs of Rod flush to the surface of the structure.

Figure 4

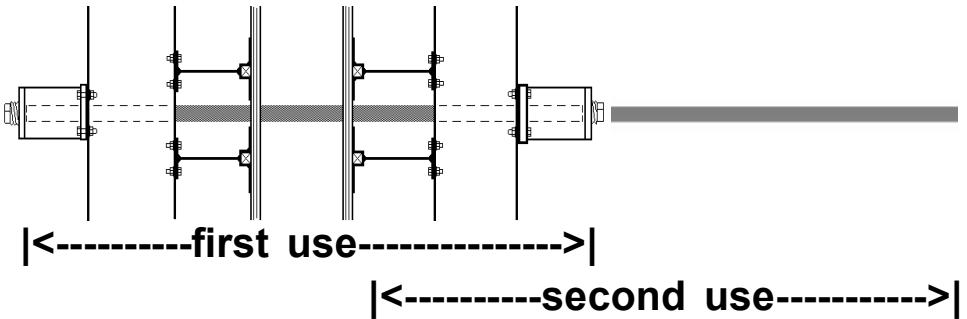


Use a grinder to cut the Rod, making removal of forms easier.

The illustrations used in this Installation Guide depict the SuperTie 50K system used in conjunction with a Symons' Steel Stiffback / Aluminum Beam Form System, however the SuperTie 50K system may be used with any form system which will allow hardware mounting.

To reduce costs, if space allows, the portion of Rod that is outside the structure (through the form and the Gripper), may be reused, by leaving an additional length out the side (see Fig. 5). Industry standards regarding loading of reusable form ties apply.

Figure 5



3.3.1 SuperTie 50K Installation Guide (Battered Walls)

Special Application: Erection of Battered Walls

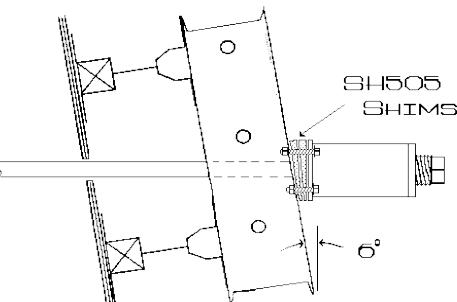
During the erection of a battered wall form with SuperTie 50K, special attention must be made to the installation of the SuperTie 50K Grippers, as the Rod must pass straight through the Grippers (not bent) when set up is complete.

1) Determine the angle of the batter (number of degrees from vertical). For each 3 degrees of batter (approximately $5/8$ " in 12"), add one each SH505 shim.

2) Position the Gripper on the beam so that the Rod, when passed through the Gripper, aligns with the hole in the sheathing.

3) Depending on the amount of angle of batter, the hole in the sheathing may have to be adjusted (enlarged) to accommodate the passing through of the Rod.

Figure 1



Mounting of Gripper on battered wall form (with Grippers mounted horizontal). Use one shim for each 3° of batter.

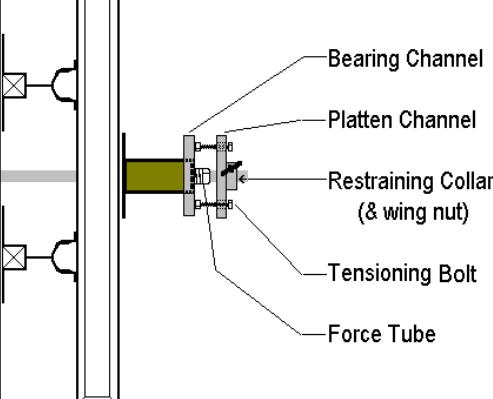
3.3.2 - Jacking Device

The JD50K Jacking Device is used when forms require substantial pressure to be applied to draw the opposing sides closer together. As this device is used externally, and attached to the SuperTie 50K Rod, the Rod must be cut to a longer lengths than would otherwise be necessary; at least 5" of Rod must protrude beyond the back of the Gripper where the Jacking Device is to be used.

USE GUIDE:

- 1) On the opposite side of the form, install and tighten Gripper as described in the SuperTie 50K Installation Guide. On the side where the Jacking Device is to be used, loosen the Gripper Force Tube by turning counter clockwise.
- 2) Loosen the wing nuts on the Restraining Collar (which is permanently attached to the Platten Channel).
- 3) Slide the Jacking Device over the Rod. The Bearing Channel must rest on the Gripper Body, and the Platten Channel must be close to the Bearing Channel.
- 4) Uniformly tighten the wing nuts on the Restraining Collar around the Rod.
- 5) Turn the Tensioning Bolts clockwise, evenly, until desired formwork alignment is achieved, then tighten the Gripper Force Tube. Do not retighten Force Tube in Gripper on opposite side.
- 6) Release the wing nuts on the Restraining Collar, and remove the Jacking Assembly.

Figure 1



Components of the Jacking Device, shown in-situ

NOTE: See page 36, paragraph 3 (3.2.3) for alternative method to draw form sides together.

50KJD08/98



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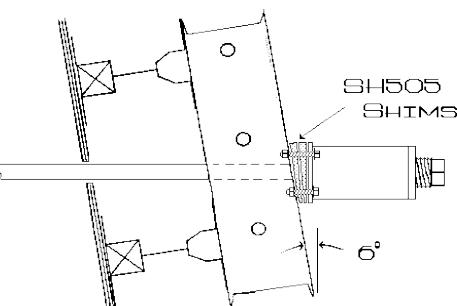
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