2.4.4 RockGrip™ Anchor System (Light and Medium Systems)

RockGrip is a mechanism that allows SuperTie to be used in single-sided forming applications. It is mechanical in nature, needing to be "set" by the use of the "RockGrip Setting Tool," which can be used in either the "Power" version (driven by a Roto-Hammer) or "Manual" version (driven by hand).

Installation Guide:

1) Select locations where RockGrip is to be installed(1), and determine the tie spacing pattern by referring to "Form Tie Load Determination Chart" in Section 4.2(2). Using an electrically operated Roto-Hammer, with a 1" diameter drill bit (3) (1-1/4" diameter for Medium system), drill to a depth of at least 2 3/4 inches (4) (3 3/4" for Medium system (5)). Clean out the debris from the hole with compressed air or a handheld aspirator.

Notes:

(1) A minimum of 18 square inches of sound material must surround each RockGrip installation. If less is available, on-site testing should be done to determine suitability.

(2) SuperTie with RG6000 RockGrip has an ultimate tensile strength of 6,000 pounds; the ACI recommended 2:1 safety factor yields a safe working load of 3,000 pounds.

(3) The drill bit must conform with ANSI B94.12 (diameter 1.042 to 1.030 for Light system, or diameter 1.300 to 1.285 For Medium system).

(4) Light system: Testing was done in material with compressive strengths of 2,200 pounds or more. If job-site material is of lesser compressive strength, on-site testing will be required to determine the depth of the hole needed to develop sufficient hold (if more than 7 inches, a special RGPST-B will be needed).

(5) Medium system: If the compressive strength of imbed material is at least 3,000 pounds, a hole depth of at least 3 3/4" is sufficient. If it is 2,200 pounds, drill at least 4 1/2" deep; if imbed material is less than 2,200 psi, on-site testing must be done to find the depth required (if more than 7 inches, a special RGPST-C will be needed).

Figure 1

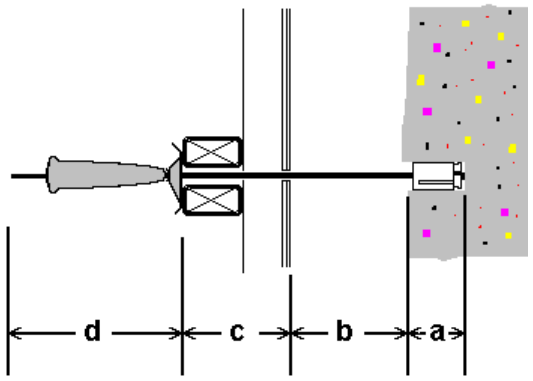
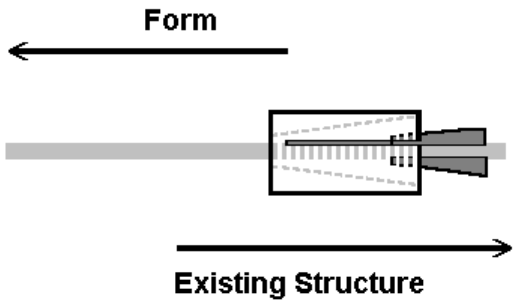


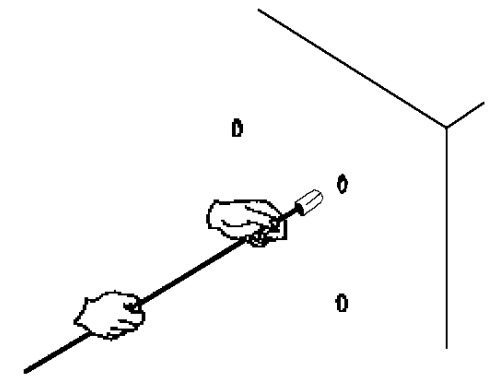
Figure 2



2) Determine the length of Rod required for the installation. Rod length is "depth of hole (a), plus width of structure (b), plus width of form (c), plus 8" for the Gripper (9" for Medium system Gripper). See Figure 1.

3) Assemble RockGrip onto Rod; the RockGrip unit will be positioned so that the back end of the jaw cluster will enter the hole before the shell (See Fig. 2). Then slide the assembly into the hole that was drilled in step 1 (see Fig. 3). Tap on the free end of the Rod to ensure that it has reached the bottom of the hole. (Continued...)

Figure 3



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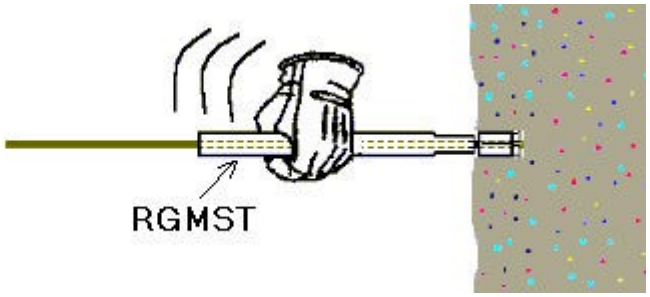
4) Setting the RockGrip can be either “manual” (see Fig. 4) or “power-driven” (see Fig. 5), depending on your preference. Employing a Roto-Hammer is particularly useful if there is reinforcing bar that has already been placed, which might hinder manual setting.

5a) If using a “manual” Setting Tool, slide it over the Rod with substantial force, striking the RockGrip unit. Do this several times. The RockGrip is set when the shell is split (see step 6).

Figure 4



Manual operation of Setting Tool (DO NOT hit tool with a hammer)

5b) If use of a Roto-Hammer is preferred, the RockGrip Power Setting Tool (RGPST) components can be used. Assemble a sufficient number of components of the RockGrip Power Setting Tool to fit over the entire length of Rod being used. Part A fits into an SDS Max Roto-Hammer chuck; use B for Light (6,000-pound system) RockGrip; use C for Medium (15,000-pound system) RockGrip; then as many 18” and/or 24” extensions as required.

Part Number	Description	Rod Covered
RGPST-A	Driven End	0"
RGPST-B	6K Driver	12"
RGPST-C	15K Driver	12”
RGPST-D1	18" Extension	18"
RGPST-D2	24" Extension	24"

Using "hammer" selection, hold Setting Tool assembly firmly against the RockGrip shell (as in Fig. 5) and apply power for approximately 30 seconds. The RockGrip is set when the shell is split (see step 6).

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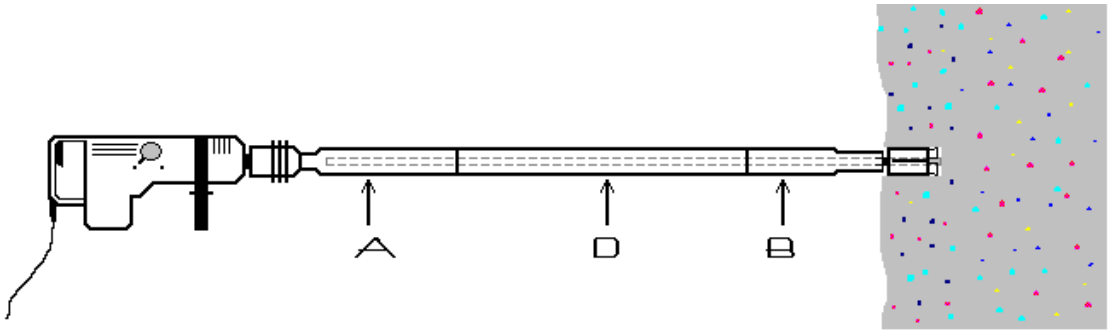
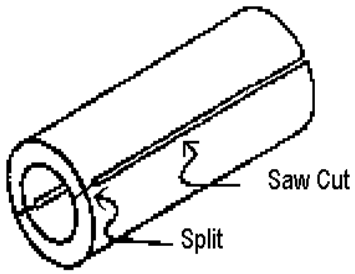
Figure 5



Operation of Setting Tool, using Roto-Hammer. Use part C in lieu of B for Medium system.

6) Pull the Setting Tool away from the RockGrip a few inches to allow visual inspection of the RockGrip shell. It should be split, indicating that the unit is adequately set (see Fig. 6). If no split is visible, repeat step 5.

Figure 6



Unit set when split is visible.

7) An additional piece of Rod may be used to provide a method of aligning the form. Using a 5/16" drill bit (1/2” for Medium system), make holes about 2" deep, into which the "spreader" can be inserted (see Fig. 7). Cut these "spreader Rods" to an appropriate length so that the form will be aligned when touching them.

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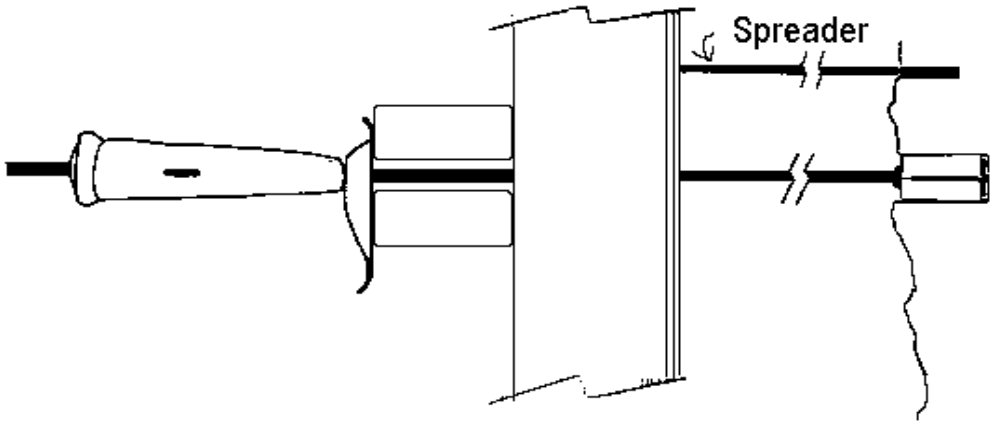
Figure *7*



Completed assembly, ready for placement of concrete.
Note: Gripper must rest on flat, upper point of Wedge (see Fig. 6, page 18).

8) Slide form panels onto the anchored ties, up against the "spreader Rods," then assemble Grippers and Wedges as described in "SuperTie Installation Guide." Place concrete.