

Installation Instructions for CHANCE® Dura-Grip® Wall Repair System

These products must be installed by Chance certified dealers trained to install CHANCE® Dura-Grip® Wall Repair System.

Note: To straighten a wall rather than just stabilize it against further movement, it may be necessary to excavate along the entire length and depth of the wall to relieve soil pressure. This is most easily done prior to driving the anchor rods through the wall.

1. Inside the wall, determine anchoring locations:

Anchoring locations inside the wall must be determined by qualified personnel on a job by job basis. You must use all your experience and knowledge to correctly analyze what is happening to the wall. The crack pattern will give some indication of whether there is a settlement or a pushing problem, or both. You can also use a string line to check whether the wall is straight or bowed along its length. Anchoring locations must be in the top half of the wall, but at a depth that is consistent with the intended anchor plate depth and rod inclination. The anchors should be placed below the depth of expected frost penetration to avoid frost jacking and also below the zone where soil properties may change due to seasonal changes in moisture content. At a 5 degree inclination, the rod will drop 1" (25 mm) for every 1 ft (300 mm) it is driven horizontally toward the anchor plate. Once you have determined where the anchor rods will come through the wall, mark these locations and make a drawing with dimensions from structural reference points such as corners, window openings, beam pockets, etc. that also will be visible from the outside.

2. Outside the wall, determine anchor locations:

Use the structural references to locate on the outside wall the anchor points marked inside. For each anchor point, measure away from the wall at a right angle the length of the rod to be used less the wall thickness. Mark each spot with a stake.

⚠ WARNING

Dura-Grip® Wall Repair System anchor installation may puncture underground utilities.

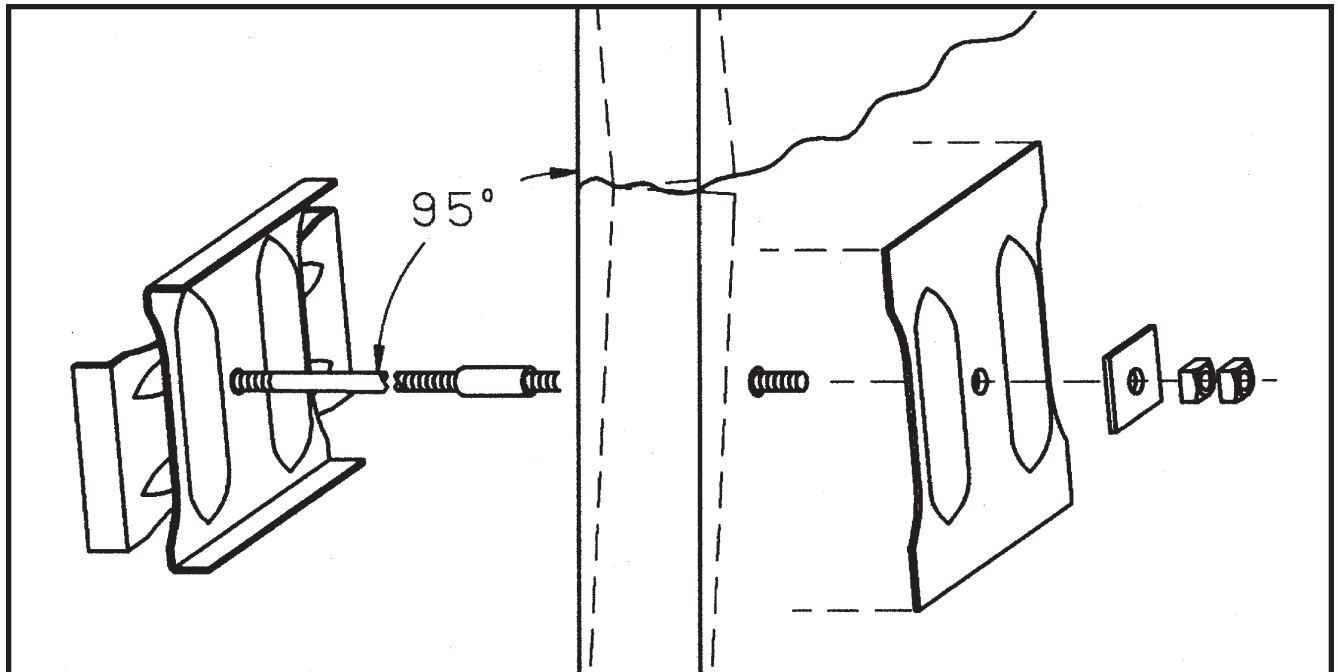
Can cause property damage, personal injury or death.

Locate and avoid all underground utility services before digging or installing an anchor.

3. Outside the wall, excavate anchor plate locations:

Begin excavating by carefully cutting out at each anchor plate location a piece of sod the same width and length as the hole to be dug. Place this plug out of the work area; it will be replaced in the final steps. Use an auger, trencher, posthole digger or spade to excavate

... continued on next page ...



Installation Instructions for Dura-Grip® Wall Repair System (continued)

a vertical hole to the depth determined for the anchor plate. Place spoils from the excavation on tarpaulins to maintain site cleanliness and safety. Use a spade to face the side of each hole that is closest to the wall so it is flat and at a 5 degree angle to accept the anchor. Use boards to cover up open holes when not actually working in them.

4. Inside the wall, install the anchor rods:

At each anchor point marked inside, core or drill a 1½" (30 mm) diameter hole at a 5° descending angle completely through the wall to the outside.

Insert the anchor rod into the hole. Onto the rod's exposed end, assemble a 1 to 2 ft (300 to 600 mm) long rod using a threaded coupler. This short rod serves to prevent the jackhammer from damaging the threads of the anchor rod. It can be made by cutting a 54" (1.4 m) extension (T150-0350) in two. Be sure to monitor the condition of this rod as repeated usage will eventually render it unusable. Do not jackhammer on the anchor rod as that may damage the threads and prevent assembly of the nuts later.

Note: While driving the rod, maintain the 5° descending angle by aligning with the hole in the wall. A crewmember sighting along the wall can monitor this alignment and direct any adjustments necessary to maintain it.

Drive the rod through the hole in the wall, into the outside soil to intersect the vertical anchor hole at the proper depth. Leave approximately 6" (150 mm) of rod inside the wall.

Adding rod extensions: If necessary for the rod to reach the vertical hole, add an extension rod with a threaded coupler. First put the coupler on the leading rod section by securing the rod with a pipewrench and tightening the coupler with another pipewrench. Then thread the extension rod into the coupler and use the pipewrenches to tighten the connection.

Driving rod extensions: Add the short drive tool rod to the exposed end of the extension and resume driving the rod. When the coupler joining the extension to the leading rod nears the hole in the wall, take care to align the driving angle to allow for the increased diameter of the coupler entering the hole. Continue

driving until the rod penetrates the vertical anchor hole. If the rod intersects the hole off center, a spade can be used to contour the hole to allow installation of the anchor. If the rod completely misses the anchor hole, consult the plan of repair or the engineer for appropriate action.

5. Outside the wall, attach the anchor plates:

Into each vertical anchor hole, insert a cross-plate anchor with its nut retainer facing away from the wall. Place the center hole of the anchor plate over the rod end and thread a nut onto the rod. Orient the anchor so the nut retainer flanges are horizontal.

6. Inside the wall, tighten the anchor rods:

At each anchor point, install a wall plate followed by a square washer and two nuts on the rod. Use two wrenches to jam the nuts against each other with only a thread or two showing outside the second nut so that the final projection of the rod out of the wall will be minimized. Use a torque wrench on only the outer nut to turn the rod clockwise, tightening to a torque of 90 ft-lb (122 Nm).

7. Outside the wall, observe the anchor plates:

As each rod is tightened, be sure the cross-plate anchor is pulled into the soil face nearer the wall. This requires the nut at the anchor plate end be between the retainer flanges so the nut cannot turn. The cross-plate anchor also must be kept oriented so that the top and bottom flanges on the vertical crossplate penetrate the hole face. Restrain the anchor from turning by using a shovel or similar tool to keep it properly oriented as the rod is tightened.

8. Outside the wall, backfill the anchor holes:

Backfill each anchor hole by filling and tamping in short lifts, allowing no voids. Use only the original spoils removed and replace the sod plug on top.

9. Inside the wall, seal holes and set final torque:

At each anchor point, remove the nut, washer and plate. Pack toilet-bowl sealing wax into the wall hole around the rod to form a water-tight plug in the wall. Replace the wall plate, washer and nut. Reset the final torque using a torque wrench, or load to 2,000 lb (8.9 kN) with a hollow-ram jack and lock off the nut.

NOTE: Because Hubbell has a policy of continuous product improvement, we reserve the right to change design and specifications without notice.



A.B. CHANCE is a Division
of Hubbell Power Systems, Inc.

Phone: 573-682-8414
Fax: 573-682-8660
www.abchance.com

© Copyright 2005 Hubbell, 210 N. Allen, Centralia, MO 65240 Printed in USA