

TOUGH ONE® Anchors

Application/Installation

	15,000 FT-LB. Large Hub (2.5") Anchor	10,000 FT-LB. Large Hub (2.5") Anchor	10,000 FT-LB. Small Hub (2.25") Anchor
Anchor Applications	For distribution and transmission guy loads, 3½ and 7 foot anchor rods are used.	For distribution and transmission guy loads, 3½ and 7 foot anchor rods are used.	For distribution and transmission guy loads, 3½ and 7 foot anchor rods are used.
Install in these Class Soils	Classes 1, 2, 3, 4 and 5 (300-1600 inch-pounds with the soil test probe)	Classes 2, 3, 4 and 5 (300-750 inch-pounds with the soil test probe)	Classes 2, 3, 4 and 5 (300-750 inch-pounds with the soil test probe)
Installing Equipment Required	Power digger and wrench assembly	Power digger and wrench assembly	Power digger and wrench assembly
Limitations on Use	Do not use beyond two extensions (14 feet). Maximum installation torque is 15,000 foot-pound.	Do not use beyond two extensions (14 feet). Maximum installation torque is 10,000 foot-pound.	Do not use beyond two extensions (14 feet). Maximum installation torque is 10,000 foot-pound.

How to use Power-Installed Screw Anchors

General Installation Considerations

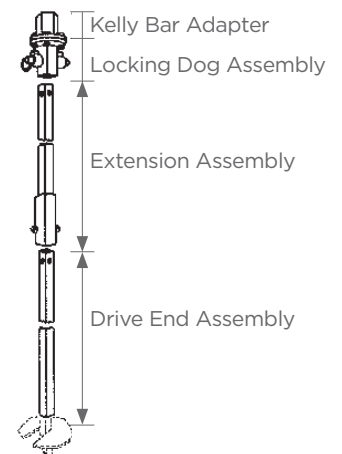
Four words summarize proper anchor installation technique: “proper alignment” and “down pressure.” The PISA® anchor wrench transmits torque from the digger’s Kelly bar to the anchor hub. (The anchor rod only has to be of sufficient diameter to support the guy load.) Always maintain adequate down pressure and keep the Kelly bar and the wrench aligned with the anchor. The right amount of down pressure keeps the anchor continuously advancing. Too much down pressure may bend or even break an anchor helix at torque loads far below the rating. Too little down pressure may result in “churning” the soil, damaging the wrench and possibly damaging the digger truck. Either extreme may result in wasted time, reduced holding capacity and damaged equipment.

For situations where overhead lines are not an obstruction.

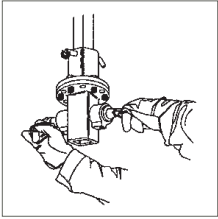
Step-By-Step Anchor Installation Procedure

Anchor Wrench

Kelly bar adapter is attached to digger’s Kelly bar by a bent arm pin (supplied with Kelly Bar Adapter). Locking dog assembly holds the drive end assembly. If anchor depth of one 7’ rod length is desired, drive end assembly is all that’s required. If anchor is to be installed deeper than one anchor rod length, the 3-1/2’ extension assembly is attached between drive end assembly and locking dog assembly to obtain added depth. PISA® anchors should not be installed beyond 14’ since wrench retrieval is difficult beyond this depth.

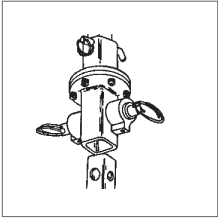


Step-By-Step Anchor Installation Procedure



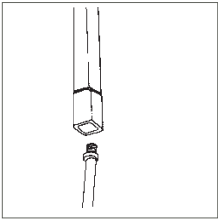
Step One - Open Locking Dogs

Before installing drive end assembly in locking dog assembly, open dogs by pulling outward and twisting to outside position. NOTE: Locking dog assembly has three ring positions. Middle position holds wrench drive end assembly. Inside ring position allows locking dogs to hold anchor rod. Outside position releases drive end assembly from locking dog assembly.



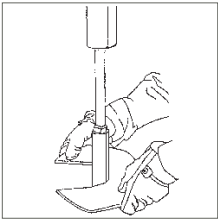
Step Two - Insert Drive End Assembly

With locking dog rings in outside position, insert drive end assembly into locking dog assembly. Rotate rings to middle position. Drive end assembly will be captured in locking dog assembly. Now rotate locking dogs to inside position to accept and capture anchor rod.



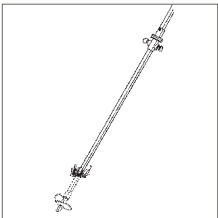
Step Three - Insert Anchor Rod in Drive End Assembly

Because locking dogs are now at inside position, assembly will hold anchor rod. Screw rod into the threads located in the hub of the anchor helix. Insert rod into drive end assembly with an upward thrust.



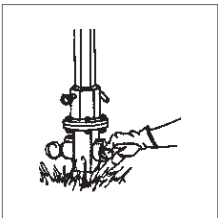
Step Four - Locking Anchor in Place

With strong upward motion, lock anchor into wrench. Locking dogs, properly closed to inside position, will hold anchor rod in wrench.



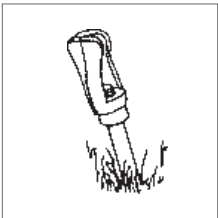
Step Five - Install Anchor

Begin anchor in near vertical position. When anchor has a good start, retract boom to correct anchor angle. Complete installation. During installation, truck outriggers should lift slightly. Avoid excessive uplift. When locking dogs reach ground level, stop installation.



Step Six - Retrieve Wrench

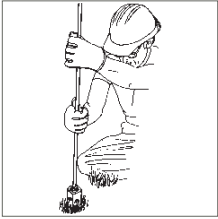
Position locking dog rings in middle position and withdraw wrench. Anchor rod will remain in ground.



Step Seven - Attach Anchor Eye Nut

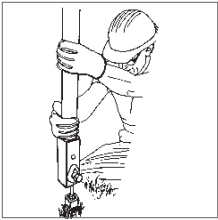
Alternative Anchor Installation Procedure

For an installation deeper than one anchor rod length, perform following steps.



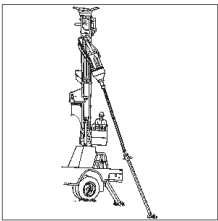
Step One - Remove Locking Dog Assembly at Ground Level

With strong upward motion, lock anchor into wrench. Locking dogs, properly closed to inside position, will hold anchor rod in wrench.



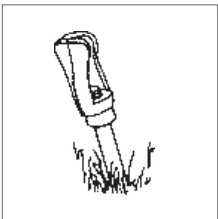
Step Two - Add Anchor Rod Extension

Add anchor extension rod to rod remaining in ground.



Step Three - Attach Wrench Assembly

With wrench extension bolted to drive end assembly in the ground and locked in position at the locking dogs, installation can proceed.



Step Four - Complete the Installation

When locking dogs reach ground level, position locking dogs in middle position and retrieve the drive end assembly and extension assembly. Attach anchor eye nut and the installation is complete.

Note: Always refer to the actual supplied tooling instructions before any installation as conditions may require a modification in practiced methods.