



Patent Pending

## TENSION BOLT ADAPTOR (2-BOLT)

### Applications

The GeoBasics Tension Bolt Adaptor (2-Bolt) is used inside the bore of a pile, pipe or tube to provide a tensioning mechanism for applying a tension capacity to the termination device located at the outside of the pile, pipe or tube.

#### *Helical Pile Applications:*

- *plate terminations for new construction*
- *tension/compression applications*
- *underpinning brackets for remedial construction*
- *elevated walkway connections*
- *solar panel fit up*

### System Components

**Tension Bolt Adaptor:** Provides the connection between the threaded rod and the helical pile or pipe joint connecting bolt.

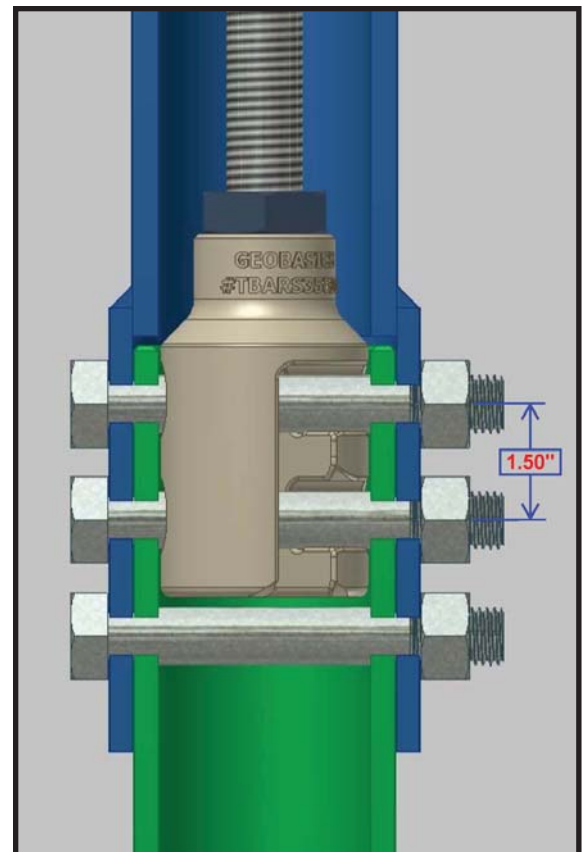
**Threaded Rod:** A length of 1" - 8 threaded rod (min. SAE Gr2) used between the Tension Bolt Adaptor and the termination device.

**Lock Nut:** A 1" - 8 hex jam nut used to lock the Tension Bolt Adaptor to the threaded rod.

**Helical Pile:** A foundation element consisting of a central shaft with at least one helix plate located on the shaft with its axis positioned parallel to the shaft's length. Helical piles can be used as anchors to withstand tensile loads or as deep foundations to withstand compressive loads or both simultaneously.

**Pile Joint Connecting Bolt:** A 3/4" diameter bolt used to connect the male and female ends of adjoining helical piles or pile extensions.

**Termination Device:** The device at the terminating end of the construction which requires a specified tension load. An example would be a plate or bracket in support of new or existing construction or for anchoring walls.





**Installation**

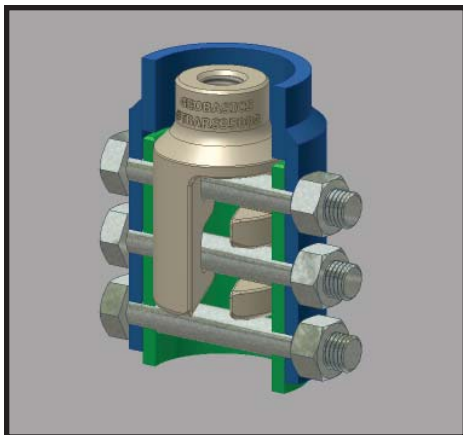
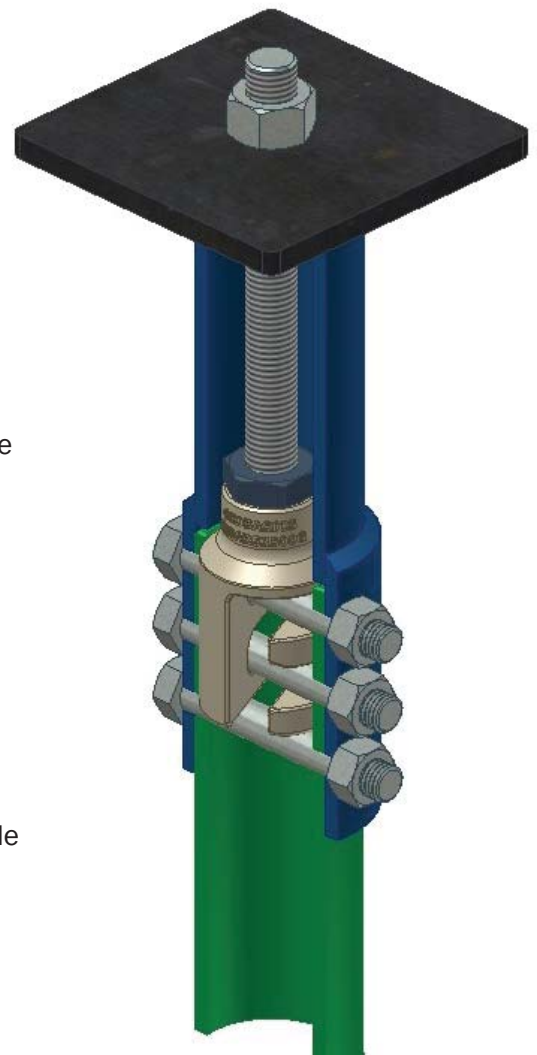
The Tension Bolt Adaptor is connected to a 1"- 8 threaded rod of appropriate strength and locked into place using a hex nut. The threaded rod is of suitable length to function in the desired design application.

In a typical 3.5" OD helical pile application, the Tension Bolt Adaptor is lowered into the pipe until it bottoms out over the two 3/4" diameter pile joint connecting bolts. It is then rotated approximately 25° until the hooks are under the bolts. The threaded rod is then tensioned against the terminating device, pulling the Tension Bolt Adaptor, placing the bolt into tension, and locking it in place against the pile connecting bolts

Once connected in this fashion, a predetermined tension load can be applied through the threaded rod from the pile connecting bolts to the required terminating device.

**Advantages:**

- easy installation mechanical connection
- field settable and adjustable
- durable component
- compatible with most helical pile foundation systems
- *NO WELDING, DRILLING, OR OTHER EXTERNAL EQUIPMENT REQUIRED FOR INSTALLATION*



**Product Specifications**

Part Number:	TBARS3500G
Finish:	Hot dip galvanize per ASTM A153 Class C
Mating Thread:	1" - 8 NC
Hook Width:	Clearance fit over 3/4" diameter bolt or rod
Outside Diameter:	2.75" (fits inside 3.50" OD x 0.300" wall)
Weight:	3.82 lb
Ultimate Tensile Strength:	59.5 kips (265 kN)
Rated Capacity:	50 kips (222 kN)

\*Rated per AC358

DISCLAIMER: The material presented in this datasheet is derived from generally accepted engineering practices. Specific application should be prepared by a local structural/geotechnical engineering firm familiar with conditions in that area. The possible effects of the local subsurface soil and conditions are beyond the scope of this datasheet and should be evaluated by others. The user is solely responsible for using these products in a safe and responsible manner. Conditions of use are beyond GeoBasics control, therefore, users are responsible to verify their own operating conditions to determine whether the product is suitable for their particular purposes and assume all risks of their use. GeoBasics has a policy of continuous product improvement; therefore we reserve the right to change design and specifications without notice.

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