HELI-PILE®

Modular Helical Pile and Tieback
(U.S. Pat. 6,817,810)

...The Next Generation
ALWAYS have the right helical on the job
MODULAR:

- Every pile or anchor can be quickly field configured to match site conditions
- Easy and economical to inventory the RIGHT material
- Eliminates ALL the disadvantages of previous systems
  - No more “fixed length” or “fixed helix” problems
    - Simplifies transportation and storage
    - Developed, tested, proven and patented by experienced engineering contractors
    - Over ten years in research and development
  - Eliminates the loose “weak link” bolted coupling concerns of all other systems
  - Promote reliability and economy by ALWAYS installing the correct pile or anchor
  - Load transfer becomes simple in tension and compression

HELI-PILE®

Modular Components
• Load transfer hardware designed specifically for HELI-PILE®

• Provides a complete patented system for new construction or retrofit

• Unlimited sizes and capacities for all commercial and residential applications

• All helix modules use 1/2” thick high strength (80 ksi) steel

• All helix leading edges sharpened and rock cut

• All components are zinc coated per ASTM B633

The modular HELI-PILE® uses shaft modules, helix modules, coupling modules and termination modules that allow the contractor to adapt HELI-PILE® to soil conditions. No “wrong material” delays nor “compromise” installations

HELIPILE® is totally compatible with conventional extensions

Conventional extension with HELIPILE® lead shaft option

HELI-PILE® Shaft Coupling Module

HELI-PILE® termination with conventional extension option
HELI-PILE® installation techniques are the same as with all helical screw piles and anchors, tractor or hand carried: same drive heads, same drive tools and the same torque indicators.
HELI-PILE® is the perfect answer for tiebacks.
Eliminates the need for threaded adapters thus simplifying tieback termination.

Eliminates the loose “weak link” bolted coupling concerns of other systems.

HELI-PILE® Tieback

Helical Tieback Project
IMR Proprietary Engineered Shoring Panels

Page 5
The UP-150 series underpinning brackets (U.S. Patent 5,800,094)

- Easy to install
- No special jacking tools
- Low profile, no protrusions
- 100,000 lbs minimum ultimate capacity

HELI-PILE® Termination Options

UP-150 Underpinning Bracket
New Construction Rebar Cap
New Construction Plate Cap
### Heli-Pile® Modular Helical Pile

**EASY DESIGN AND ORDER GUIDE**

#### STEP 1: SELECT LEAD SHAFT

<table>
<thead>
<tr>
<th>If the ultimate load* is:</th>
<th>Select Lead Shaft</th>
<th>Cat. No.</th>
<th>Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 55,000 lbs</td>
<td>1.5 inch high strength steel</td>
<td>HPL-15</td>
<td>3 ft, 5 ft, 7 ft</td>
</tr>
<tr>
<td>0 to 70,000 lbs</td>
<td>1.5 inch extra-high strength steel</td>
<td>HPL-15X</td>
<td>3 ft, 5 ft, 7 ft</td>
</tr>
<tr>
<td>0 to 100,000 lbs</td>
<td>1.75 inch extra-high strength steel</td>
<td>HPL-175</td>
<td>3 ft, 5 ft, 7 ft</td>
</tr>
</tbody>
</table>

*The ultimate load is the design load multiplied by the factor of safety, usually 2.

#### STEP 2: SELECT EXTENSION SHAFT

<table>
<thead>
<tr>
<th>If the ultimate load* is:</th>
<th>Select Extension Shaft</th>
<th>Cat. No.</th>
<th>Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 55,000 lbs</td>
<td>1.5 inch high strength steel</td>
<td>HPE-15</td>
<td>3 ft, 5 ft, 7 ft</td>
</tr>
<tr>
<td>0 to 70,000 lbs</td>
<td>1.5 inch extra-high strength steel</td>
<td>HPE-15X</td>
<td>3 ft, 5 ft, 7 ft</td>
</tr>
<tr>
<td>0 to 100,000 lbs</td>
<td>1.75 inch extra-high strength steel</td>
<td>HPE-175</td>
<td>3 ft, 5 ft, 7 ft</td>
</tr>
</tbody>
</table>

*The ultimate load is the design load multiplied by the factor of safety, usually 2.

#### STEP 3: SELECT NUMBER OF HELICES

- 1.5 inch high strength shaft: 0 to 55,000 lb ultimate load, use 1 helix minimum.
- 1.5 inch extra-high strength shaft: 0 to 70,000 lb ultimate load, use 1 helix minimum.
- 1.75 inch extra-high strength shaft: 0 to 70,000 lb ultimate load, use 1 helix minimum. 70,000 to 100,000 lb ultimate load, use 2 helices.

Select Helix Catalog Numbers from this chart:

<table>
<thead>
<tr>
<th>Helix Diameters (All helices ( \frac{1}{2} ) inch thick)</th>
<th>Helix Catalog Numbers For Either 1.5 Inch Shaft</th>
<th>Helix Catalog Numbers For 1.75 Inch Shaft</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 inch</td>
<td>HPH-15X-06</td>
<td>HPH-175-06</td>
</tr>
<tr>
<td>8 inch</td>
<td>HPH-15X-08</td>
<td>HPH-175-08</td>
</tr>
<tr>
<td>10 inch</td>
<td>HPH-15X-10</td>
<td>HPH-175-10</td>
</tr>
<tr>
<td>12 inch</td>
<td>HPH-15X-12</td>
<td>HPH-175-12</td>
</tr>
<tr>
<td>14 inch</td>
<td>HPH-15X-14</td>
<td>HPH-175-14</td>
</tr>
</tbody>
</table>

(4 keys are included with each helix.)

#### STEP 4: SELECT LOAD TRANSFER HARDWARE

<table>
<thead>
<tr>
<th>Load Transfer Hardware</th>
<th>Catalog Numbers 1.5 inch Shaft</th>
<th>Catalog Numbers 1.75 inch Shaft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebar Cap</td>
<td>HP-15X-RC</td>
<td>HP-175-RC</td>
</tr>
<tr>
<td>Plate Cap</td>
<td>HP-15X-PC</td>
<td>HP-175-PC</td>
</tr>
<tr>
<td>Underpinning Bracket</td>
<td>UP-150</td>
<td>UP-175</td>
</tr>
</tbody>
</table>

#### STEP 5: SELECT COUPLINGS

For either 1.5 inch shaft: Select HPC-15X (4 keys are included with each coupling)
For 1.75 inch shaft: Select HPC-175

#### STEP 6: ORDER

1. Call us at **(303) 423-0591**
2. Fax order to **(303) 423-9155**

**Questions? Need Help? Want us to figure your order?**

Call us at **(303) 423-0591**
Email us: **[info@helipile.com]**

Page 7