

Reinforcement Alignment for Deep
Foundations and Earth Retention

SIMPSON
Strong-Tie

PIERESARCH

**Quick-Lock® —
rebar alignment
made easy**

(800) 999-5099
strongtie.com



Reinforcement Alignment for Deep Foundations and Earth Retention

Simpson Strong-Tie provides a range of innovative products for the deep foundation and earth retention industries. Delivered by Pieresearch, a subsidiary of Simpson Strong-Tie, our solutions are designed for rebar reinforcement alignment and centralizer applications in commercial, industrial, highway, educational, governmental, sports and entertainment, retail, food and beverage, marine, energy and power production, and transportation sectors.

Pieresearch has led the industry in rebar reinforcement alignment products, specializing in noncorrosive plastic rebar alignment and centralizer products for drilled shafts, soil nails, rebar-reinforced earth retention anchors and more. Our Unibar® Centralizer products are specifically designed for the installation of soil nails and related earth retention elements.

Rigorously tested and proven for reliability, these products are manufactured in the USA to meet the highest quality standards. Like other solutions from Simpson Strong-Tie, these rebar alignment and centralizer products are widely available and backed by our expert service and technical support.

Together, Simpson Strong-Tie and Pieresearch provide a total solution that adds more value for concrete construction professionals in the deep foundation and earth retention industries.

To learn more, visit strongtie.com/RA or call (800) 999-5099.

Quality Products.
Honest Service.
Great Value.

Choose Simpson Strong-Tie for all your rebar and rebar cage alignment products.

Our reinforcement alignment products include unique one-piece designs made of noncorrosive plastic. They install in seconds and are built tough!

Durable. Economical.
Reliable. Proven.



Quick-Lock HD® Heavy-Duty Pier Wheel

Quick-Lock HD Pier Wheel is designed to properly position a reinforcing steel cage in a drilled shaft. Without proper alignment, the rebar cage cannot perform the function for which it was designed. And installation is a snap.

Quick-Lock HD Pier Wheels are made of durable, noncorrosive plastic and fit #3-#7 rebar ties. They are also perfect for a variety of other applications where concrete cover must be maintained.



Reinforcement Alignment for Deep Foundations and Earth Retention

Recommended Quick-Lock HD® Wheels per Reinforcing Cage

The table illustrates the recommended number of Quick-Lock HD wheels to be used on a per shaft basis.

The actual number can vary subject to the number of vertical bars of the reinforcing steel cage.

The structural engineer is the governing authority. When in doubt, please check with the structural engineer.

Pier Shaft Depth (ft.)	Pier Shaft Diameter (in.)			
	Up to 48	49 to 72	73 to 96	97 to 120
0 to 12	8	12	16	20
13 to 24	12	18	24	30
25 to 36	16	24	32	40
37 to 48	24	36	48	60
49 to 60	28	42	56	70
61 to 72	36	54	72	90
73 to 84	40	60	80	100
85 to 96	48	72	96	120
97 to 108	52	78	104	130
109 to 120	60	90	120	150
121 to 132	64	96	128	160
133 to 144	72	108	144	180

Quick-Lock HD Pier Wheel

Part No.	Cover in. (mm)	Outer Dia. in. (mm)	Inner Dia. in. (mm)	Rebar Bar Size (mm)	Pc. Per Box	Boxes Per Pallet
4QLHD	2 (50.8)	5 (127.0)	1 (25.4)	#3-#7 (9.5-22.2)	80	25
6QLHD	2½ (63.5)	6 (152.4)	1 (25.4)	#3-#7 (9.5-22.2)	50	25
7QLHD	3 (76.2)	6¾ (174.6)	1 (25.4)	#3-#7 (9.5-22.2)	38	25
8QLHD	3½ (88.9)	8 (203.2)	1 (25.4)	#3-#7 (9.5-22.2)	30	25
12QLHD	4¾ (123.8)	10¾ (273.1)	1 (25.4)	#3-#7 (9.5-22.2)	16	25

Quick-Lock® Pier Wheel

Quick-Lock Pier Wheel is designed to properly position a reinforcing steel cage in a drilled shaft. Without proper alignment, the rebar cage cannot perform the function for which it was designed. And installation is a snap.

Quick-Lock Pier Wheels are made of durable, noncorrosive plastic and fit #3-#7 rebar ties. They are also perfect for a variety of other applications where concrete cover must be maintained.



Recommended Quick-Lock® Wheels per Reinforcing Cage

The table illustrates the recommended number of Quick-Lock Pier Wheels to be used on a per shaft basis.

The actual number can vary subject to the number of vertical bars of the reinforcing steel cage.

The structural engineer is the governing authority. When in doubt, please check with the structural engineer.

Pier Shaft Depth (ft.)	Pier Shaft Diameter (in.)				
	Under 30	31 to 48	49 to 72	73 to 96	97 to 120
0 to 12	9	12	18	24	30
13 to 24	14	18	27	36	45
25 to 36	18	24	36	48	45
37 to 48	23	30	45	60	75
49 to 60	27	36	54	72	90
61 to 72	32	42	63	84	105
73 to 84	36	48	72	96	120
85 to 96	41	54	81	108	135
97 to 108	45	60	90	120	150
109 to 120	54	72	108	144	180
121 to 132	59	78	117	156	195
133 to 144	63	84	126	168	210

Quick-Lock Pier Wheel

Part No.	Cover in. (mm)	Outer Dia. in. (mm)	Inner Dia. in. (mm)	Rebar Bar Size (mm)	Pc. Per Box	Boxes Per Pallet
4QLPW	2 (50.8)	5 (127.0)	1 (25.4)	#3-#7 (9.5-22.2)	90	25
6QLPW	3 (76.2)	6 $\frac{1}{2}$ (168.3)	$\frac{3}{4}$ (19.1)	#3-#5 (9.5-15.9)	50	25
8QLPW	4 (101.6)	8 $\frac{7}{8}$ (225.4)	1 (25.4)	#3-#7 (9.5-22.2)	30	25

Quick-Lock Pier Boot® and Quick-Zip Bar Booster®

Quick-Lock Pier Boot® is designed to support a reinforcing steel cage off the floor of a bored/drilled shaft. Installation is accomplished in seconds by simply pushing the Quick-Lock Pier Boot onto the end of a vertical bar of the rebar cage.

Quick-Lock Pier Boot and Quick-Zip Bar Booster

Part No.	Cover in. (mm)	Rebar Bar Size (mm)	Pc. Per Box	Boxes Per Pallet
3PB	3 (76.2)	#5-#18 (15.9-57.3)	50	24
6PB	6 (152.4)	#6-#18 (19.1-57.3)	24	30
3BB	3 (76.2)	#3-#14 (9.5-43.0)	50	30

Quick-Lock Pier Boot



Quick-Zip Bar Booster



Quick-Zip Bar Booster[®] is designed to support a reinforcing steel cage within a bored/drilled shaft with a 3" concrete cover requirement. Attach the Bar Booster to rebar sizes #3 through #14. The zip tie used for attachment is made of 170 pound tensile strength resin. Installation is accomplished in seconds by simply positioning the Quick-Zip Bar Booster on the end of a vertical bar of the cage and pulling the zip tie taut.

The recommended spacing for installation of the Pier Boot[®] and Bar Booster is one on every other vertical bar for piers under 48" in diameter or one on every vertical bar for piers 48" in diameter and over.



The New, Revolutionary Quick-Lock[®] and Adjustable Quick-Lock Unibar[®] Centralizers

Soil Nailing — Tendon/Rebar Alignment Support

Quick-Lock and Adjustable Quick-Lock Unibar Centralizers

The answer to uniform reinforcement steel spacing requirements in single-bar foundation/tieback elements. To achieve proper design strength in any drilled and grouted/concreted hole, the tendon/rebar or anchor material must be centered in the shaft to allow the required minimum cover throughout the length of the element.

Application

Quick-Lock and Adjustable Quick-Lock Unibar Centralizers are designed to keep the tendon/bar centered in the bore/drill hole to allow for the required minimum grout/concrete cover and do not impede flow of grout within bore/drill hole and around tendon. They are made of durable noncorrosive plastic and consisting of two identical halves that are fast and easy to snap together. Quick-Lock and Adjustable Quick-Lock Unibar Centralizers will accommodate Single Bar, Multi-Bar/Strand Anchors, Encapsulated (DCP) Anchors, and Steel or Plastic Pipe Applications. They are ideal for Soil Nails, Rock/Soil Anchors, Micro-Piles, and Auger-Cast Piles with single tension bars.

Placement

The lowest Quick-Lock and Adjustable Quick-Lock Unibar Centralizer should be installed approximately 1' from the end of the tendon/bar material. Each successive Unibar Centralizer should be placed at no greater than 10-foot intervals. The upper Unibar Centralizer should be approximately 1' below grout/concrete surface.

Advantages

- Two identical halves
- Easy to snap together
- Made of durable noncorrosive plastic
- Can be attached with zip ties or tie wire
- Offset to fit between rebar threads
- Keeps single tendon/bar centered within a drill hole
- Ideal for soil nail applications
- No nuts or bolts required
- Lightweight and economical

Assembly

Quickly assemble the Quick-Lock and Adjustable Quick-Lock Unibar Centralizer by easily snapping the two identical halves together over the tendon/rebar and tying it on with tie wire.



Quick-Lock Unibar Centralizer



Adjustable Quick-Lock Unibar Centralizer

Quick-Lock® Unibar® Centralizer

Part No.	Outer Dia. in. (mm)	Inner Dia. in. (mm)	Rebar Size (mm)	Pc. Per Box	Boxes Per Pallet
4-6UBC	4 (101.6)	7/8 (22.2)	#5-#6 (15.9-19.1)	100	20
4-8UBC	4 (101.6)	1 1/8 (28.6)	#7-#8 (22.2-25.4)	100	20
6-6UBC	5 1/2 (139.7)	7/8 (22.2)	#5-#6 (15.9-19.1)	60	25
6-8UBC	5 1/2 (139.7)	1 1/8 (28.6)	#7-#8 (22.2-25.4)	60	25

Part No.	Outer Dia. in. (mm)	Inner Dia. in. (mm)	Pc. Per Box	Boxes Per Pallet
4-1.5IN-UBC	4 (101.6)	1 1/2 (38.1)	70	25
4-2IN-UBC	4 (101.6)	2 (50.8)	50	25
4-2.5IN-UBC	4 (101.6)	2 1/2 (63.5)	50	25
6-1.5IN-UBC	5 1/2 (139.7)	1 1/2 (38.1)	55	25
6-2IN-UBC	5 1/2 (139.7)	2 (50.8)	42	25
6-2.5IN-UBC	5 1/2 (139.7)	2 1/2 (63.5)	42	25

Adjustable Quick-Lock Unibar Centralizer

Part No.	Rebar Size (mm)	Outer Dia. in. (mm)	Inner Dia. in. (mm)	Pc. Per Box	Boxes Per Pallet
8-6-11-UBC	#6 (19.1)	7 3/8 (187.3)	7/8 (22.2)	24	25
	#7 (22.2)	7 1/2 (190.5)	1 (25.4)		
	#8 (25.4)	7 5/8 (193.7)	1 1/8 (28.6)		
	#9 (28.7)	7 3/4 (196.9)	1 1/4 (31.8)		
	#10 (32.3)	7 7/8 (200.0)	1 3/8 (34.9)		
1011-6-18-UBC	#11 (35.8)	8 (203.2)	1 1/2 (38.1)	16	12
	#6 (19.1)	10 1/4 (260.4)	7/8 (22.2)		
	#7 (22.2)	10 1/8 (262.5)	1 (25.4)		
	#8 (25.4)	10 3/8 (263.5)	1 1/8 (28.6)		
	#9 (28.7)	10 1/2 (266.7)	1 1/4 (31.8)		
	#10 (32.3)	10 5/8 (269.9)	1 1/2 (38.1)		
	#11 (35.8)	10 3/4 (273.1)	1 5/8 (39.7)		
1415-6-18-UBC	#14 (43.0)	11 (279.4)	1 7/8 (47.6)	14	12
	#18 (57.3)	11 3/8 (288.9)	2 3/8 (60.3)		
	#6 (19.1)	14 (355.6)	7/8 (22.2)		
	#7 (22.2)	14 1/8 (358.8)	1 (25.4)		
	#8 (25.4)	14 1/4 (362.0)	1 1/8 (28.6)		
	#9 (28.7)	14 3/8 (365.1)	1 1/4 (31.8)		
	#10 (32.3)	14 1/2 (368.3)	1 1/2 (38.1)		
1617-6-18-UBC	#11 (35.8)	14 5/8 (371.5)	1 5/8 (39.7)	12	12
	#14 (43.0)	14 3/4 (374.7)	1 7/8 (47.6)		
	#18 (57.3)	15 1/4 (387.4)	2 3/8 (60.3)		
	#6 (19.1)	16 1/8 (409.6)	7/8 (22.2)		
	#7 (22.2)	16 3/16 (411.2)	1 (25.4)		
	#8 (25.4)	16 1/4 (412.8)	1 1/8 (28.6)		
	#9 (28.7)	16 7/16 (417.5)	1 1/4 (31.8)		
#10 (32.3)	16 5/8 (422.3)	1 1/2 (38.1)			
#11 (35.8)	16 1 1/16 (423.9)	1 5/8 (39.7)			
#14 (43.0)	16 7/8 (428.6)	1 7/8 (47.6)			
#18 (57.3)	17 3/8 (441.3)	2 3/8 (60.3)			