

**CIVIL CONSTRUCTION  
PRODUCT CATALOG**

**VOL. I**



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## **DISCLAIMER**

The information in this manual is provided as a guide to assist you with your design and in writing your own specifications. Installation conditions, including soil and structure conditions, vary widely from location to location and from point to point on a site.

Independent engineering analysis and consulting state and local building codes and authorities should be conducted prior to any installation to ascertain and verify compliance to relevant rules, regulations and requirements.

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# CHANCE® HELICAL ANCHORS/PILES

## INTRODUCTION

A helical anchor/pile is a segmented deep foundation system with helical bearing plates welded to a central steel shaft. Load is transferred from the shaft to the soil through these bearing plates. Central steel shafts are available in either Type SS (Square Shaft) series or Type RS (Round Shaft) series. The Type SS series are available in 1¼" to 2¼" square sizes. The Type RS series are available in 2⅞" to 4½" diameter sizes. Type SS-RS combinations are also available for compression applications in soil conditions where dense/hard soils must be penetrated with softer/loose soils above the bearing strata. The Helical Pulldown® Micropile series is also used in applications similar to those requiring the use of the Type SS-RS combinations.

Please refer to the CHANCE Technical Design Manual for:

- Complete list of mechanical rating and section properties of the central steel shafts
- Product Feasibility
- Installation Methodology for guidelines on the proper shaft section based on application, soil conditions, site accessibility, etc....

Segments or sections are joined with bolted couplings. Installation depth is limited only by soil density and practicality based on economics. A helical bearing plate or helix is one pitch of a screw thread. All helices, regardless of their diameter, have a standard 3" pitch. Being a true helical shape, the helices do not auger into the soil but rather screw into it with minimal soil disturbance. Helical plates are spaced at distances far enough apart that they function independently as individual bearing elements; consequently, the capacity of a particular helix on a helical anchor/pile shaft is not influenced by the helix above or below it.

## Lead Section and Extensions

The first section or lead section contains the helical plates. This lead section can consist of a single helix or up to four helices. Additional helices can be added, if required, with the use of helical extensions. Standard helix sizes are shown in Table 1. The helices are arranged on the shaft such that their diameters increase as they get farther from the pilot point. The practical limits on the number of helices per anchor/pile is four to five if placed in a cohesive soil and six if placed in a cohesionless or granular soil.

Plain extensions are then added in standard lengths of 3, 5, 7 and 10 feet until the lead section penetrates into the bearing strata. Standard helix configurations are provided in the product series tables in this section. Note that lead time will be significantly reduced if a standard helix configuration is selected.

### STANDARD HELIX SIZES

Table 1

LEAD SECTION AND EXTENSIONS	
DIAMETER in (cm)	AREA ft <sup>2</sup> (m <sup>2</sup> )
6 (15)	0.185 (0.0172)
8 (20)	0.336 (0.0312)
10 (25)	0.531 (0.0493)
12 (30)	0.771 (0.0716)
14 (35)	1.049 (0.0974)
16 (40)	1.385 (0.1286)



## **CHANCE® HELICAL ROUND CORNER SQUARE SHAFT PRODUCTS**

### **CHANCE® Square Shaft (SS) Helical Product Ratings**

**Table 2**

Product Series	Torque Rating ft-lbs (Nm)	Ultimate Tension Strength* kip (kN)	Uplift/Compression Capacity Limit** kip (kN)
SS125	4,000 (5 400)	60 (267)	40 (178)
SS5	5,500 (7 500)	70 (312)	55 (245)
SS150	7,000 (9 500)	70 (312)	70 (312)
SS175	11,000 (14 900)	100 (445)	110 (489)
SS200	16,000 (21 700)	150 (668)	150 (668) ***
SS225	23,000 (31 200)	200 (890)	200 (890) ***

\* Based on Mechanical Strength of Coupling

\*\* Based on Torque Rating – Uplift/Compression Capacity Limit = Torque Rating x Kt.

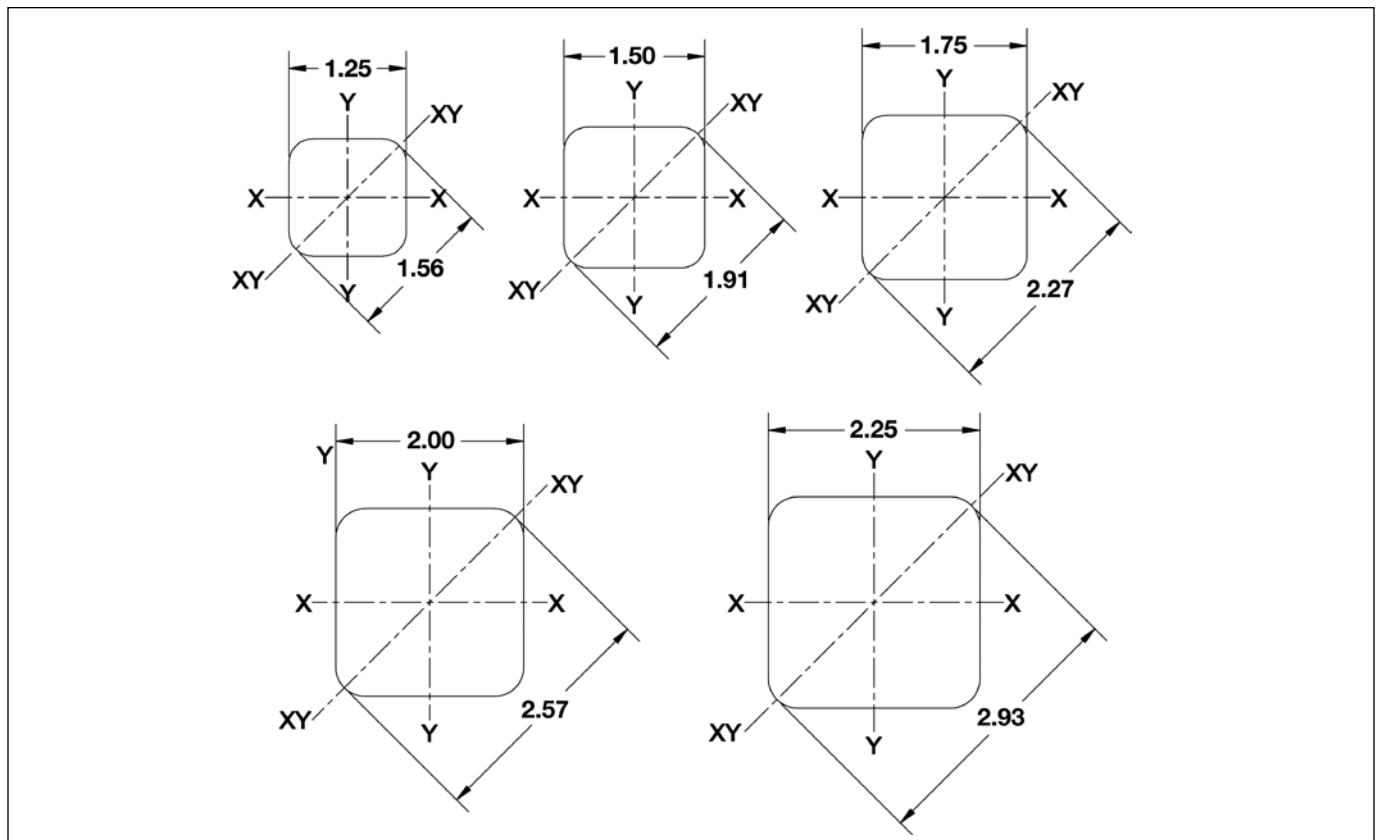
“Default” Kt for Type SS = 10 ft-1 (33 m-1)

\*\*\* Based on Mechanical Strength of Coupling Bolt

Higher Compression Capacities Available with Helical Pulldown® Micropile

### **CHANCE® Square Shaft Helical Cross Sections**

**Figure 1**



## CHANCE® Square Shaft (SS) Helical Section Properties

Table 3

Product Series	Shaft Size in (mm)	Wall Thickness in (mm)	Metal Area in <sup>2</sup> (cm <sup>2</sup> )	Perimeter in (cm)	Moment of Inertia in <sup>4</sup> (cm <sup>4</sup> ) <i>I<sub>x-x</sub>, I<sub>y-y</sub>, I<sub>x-y</sub></i>	Section Modulus in <sup>3</sup> (cm <sup>3</sup> )	
						<i>S<sub>x-x</sub></i>	<i>S<sub>y-y</sub></i>
SS125	1.25 (32)	solid	1.55 (10.0)	4.79 (12.17)	0.20 (8.3)	0.32 (5.3)	0.24 (3.9)
SS5	1.5 (38)	solid	2.2 (14.2)	5.6 (14.2)	0.40 (16.5)	0.53 (8.7)	0.42 (6.9)
SS150	1.5 (38)	solid	2.2 (14.2)	5.6 (14.2)	0.40 (16.5)	0.53 (8.7)	0.42 (6.9)
SS175	1.75 (44)	solid	3.1 (19.4)	6.6 (16.7)	0.75 (31.1)	0.85 (13.9)	0.66 (10.8)
SS200	2 (51)	solid	3.9 (25.3)	7.5 (18.9)	1.26 (52.4)	1.26 (20.6)	0.98 (16.1)
SS225	2.25 (57)	solid	5.0 (32.1)	8.5 (21.5)	2.04 (84.9)	1.81 (29.7)	1.40 (22.9)

A

## CHANCE® Square Shaft (SS) Helix Thickness and Mechanical Strength

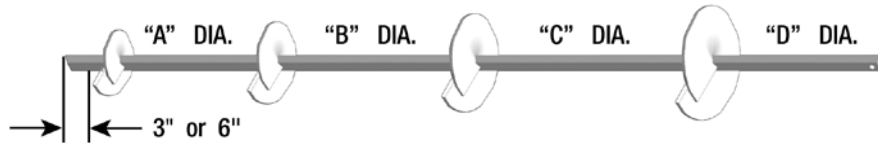
Table 4

DEFAULT (STANDARD)				OPTIONS		
Product Series	Helix Grade ksi (mPa)	Thickness in (mm)	Mechanical Strength kip (kN)	Helix Grade ksi (mPa)	Thickness in (mm)	Mechanical Strength kip (kN)
SS125	50 (345)	3/8" (9.5)	30 (133)	50 (345)	1/2" (13)	35 (156)
SS5	50 (345)	3/8" (9.5)	40 (178)	50 (345)	1/2" (13)	45 (200)
				80 (552)	3/8" (9.5)	40 (178)
				80 (552)	1/2" (13)	50 (222)
SS150	80 (552)	3/8" (9.5)	40 (178)	50 (345)	1/2" (13)	45 (200)
SS175	80 (552)	3/8" (9.5)	50 (222)	80 (552)	1/2" (13)	60 (267)
SS200	80 (552)	1/2" (13)	60 (267)	---	---	---
SS225	80 (552)	1/2" (13)	60 (267)	---	---	---

The mechanical strength ratings in Table 4 are minimum values. The helix diameter, grade, and thickness along with the shaft series to which an individual helix is connected effect the mechanical strength rating of a helix. A higher mechanical strength rating of an individual helix is possible depending on the combination of these variables.

## CHANCE® HELICAL 1¼" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS125 SERIES)

### COMMON LEAD CONFIGURATIONS



Catalog Number	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Wt (lbs)	Helix Grade	Coating
	A	B	C	D					
C150-0550	6	8	10	-	5	60.0	42	50	GALV
C150-0564	8	-	-	-	1	5.9	10	50	GALV
C150-0564SS	8	-	-	-	1	5.9	10	50 /SEA SHELL	GALV
C150-0564SSNG	8	-	-	-	1	5.9	9	50 /SEA SHELL	NON GALV
C150-0545	8	-	-	-	5	60.0	33	50	GALV
C150-0548	8	10	-	-	5	60.0	41	50	GALV
C150-0551	8	10	12	-	5	60.1	55	50	GALV
C150-0565	10	-	-	-	1	5.9	13	50	GALV
C150-0565SS	10	-	-	-	1	5.9	13	50 /SEA SHELL	GALV
C150-0565SSNG	10	-	-	-	1	5.9	12	50 /SEA SHELL	NON GALV
C150-0546	10	-	-	-	5	60.0	36	50	GALV
C150-0549	10	12	-	-	5	60.0	48	50	GALV
C150-0552	10	12	14	-	5	79.0	57	50	GALV
C150-0566	12	-	-	-	1	5.9	17	50	GALV
C1500566SS	12	-	-	-	1	5.9	17	50 /SEA SHELL	GALV
C150-0566SSNG	12	-	-	-	1	5.9	16	50 /SEA SHELL	NON GALV
C150-0547	12	-	-	-	5	60.0	40	50	GALV
C150-0567	14	-	-	-	1	6.9	21	50	GALV
C150-0567SS	14	-	-	-	1	5.9	21	50 /SEA SHELL	GALV
C150-0567SSNG	14	-	-	-	1	5.9	21	50 /SEA SHELL	NON GALV
C150-0601	14				5	60.0	---	50	GALV

\*Effective length: from leading edge of bottom helix to center of bolt hole.

# CHANCE® HELICAL 1¼" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS125 SERIES)

## COMMON EXTENSION CONFIGURATIONS

**A**

### Plain Extension

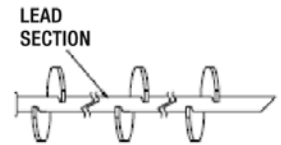


Catalog Number	Plate Diameter		Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Coating
	A	B				
C150-0553	-	-	3	38.0	21	GALV
C150-0554	-	-	5	57.8	30	GALV
C150-0555	-	-	7	80.8	39	GALV
C150-0556	-	-	10	117.3	57	GALV
C150-0705	10	-	3.5	38.0	30	NON GALV
C150-0706	10	14	3.5	38.0	31	NON GALV
C150-0707	12	-	3.5	38.0	57	NON GALV

\* Effective length: from bolt hole to bolt hole. Contact factory for Non-galvanized.

### CHANCE® Helical 1¼" Soil Nail Lead Sections

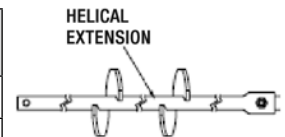
Catalog Number	Helix Size	Number of Helix	Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
C150-0581	6	2	5	57.3	34	50	GALV
C150-0582	8	2	5	57.3	38	50	GALV
C150-0583	6	3	7	76.3	48	50	GALV
C150-0584	8	3	7	76.3	52	50	GALV



\* Effective length: from bolt hole to bolt hole. Contact Factory for Non-Galvanized

### CHANCE® Helical 1¼" Soil Nail Extensions

Catalog Number	Helix Size	Number of Helix	Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
C150-0585	6	2	5	57.8	36	50	GALV
C150-0586	8	2	5	57.8	40	50	GALV
C150-0587	6	3	7	80.8	50	50	GALV
C150-0588	8	3	7	80.8	54	50	GALV



\* Effective length: from bolt hole to bolt hole. Contact Factory for Non-Galvanized

### CHANCE® Helical 1¼" Accessories

Catalog Number	Product Description	Weight (lbs)	Coating
C150-0580	1¼" Thread Rod Adapter 20" long	11	GALV
PSA15710	1¼" Transition to Williams Form # 7 Rod	3	GALV

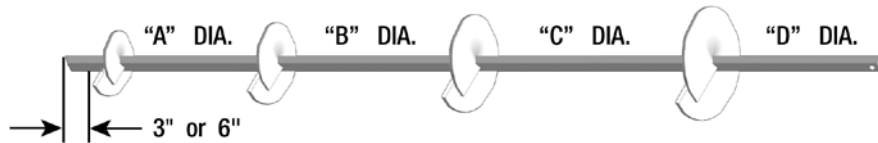
### CHANCE® Helical 1¼" Tooling

Catalog Number	Product Description	Weight (lbs)	Coating
C303-1502	1¼" Cast Drive Tool	8	PAINTED



## CHANCE® HELICAL 1½" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS5 SERIES)

### COMMON LEAD CONFIGURATIONS



Catalog Number (See Notes Page 15)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C	D				
PSAT1500495	6T	-	-	-	5	55.9	41	80
PSAT1500497	6	-	-	-	5	55.9	50	80
T150-0086	6	6	-	-	3	29.7	50	50
C150-0030	6	8	-	-	7	76.2	64	50
C150-0244	6	8	-	-	3	29.7	50	50
C150-0001	8	-	-	-	7	76.2	56	50
T150-0269	8	-	-	-	7	79.2	58	80
T150-0304	8T	-	-	-	7	79.2	59	80
C150-0002	8	-	-	-	5	52.9	44	50
T150-0268	8	-	-	-	5	55.9	55	80
T150-0305	8T	-	-	-	5	55.9	45	80
T150-0469	8	-	-	-	3	38.9	33	80
C150-0006	8	10	-	-	7	76.2	70	50
T150-0265	8	10	-	-	7	79.2	68	80
T150-0443	8	10	-	-	5	52.9	52	80
T150-0444	8T	10T	-	-	5	52.9	55	80
C150-0160	8	10	-	-	3	32.7	39	50
T110-0720	8	10	-	-	5	59.9	55	50
C150-0031	8	10	-	-	10	116.9	81	50
C150-0397*	8	10	12	-	7	76.2	79	50
T150-0000	8	10	12	-	7	79.2	80	50
C150-0007	8	10	12	-	5	60.2	67	50
012642-AEJN	8	10	12	14	10	116.9	109	50
C150-0003	10	-	-	-	7	76.2	62	50
T150-0326	10	-	-	-	7	79.2	61	80
C150-0058	10	-	-	-	5	52.9	47	50
T150-0267	10	-	-	-	5	55.8	47	80
C150-0051	10	12	-	-	7	76.2	77	50
T150-0442	10	12	-	-	5	52.9	60	80
C150-0161	10	12	-	-	3	38.9	55	50
C150-0489	10	12	14	-	7	76.2	63	50
C150-0398*	10	12	14	-	10	116.9	119	50
012642-EJNS	10	12	14	14	10	116.9	131	50
C150-0004	12	-	-	-	7	76.2	68	50
T150-0266	12	-	-	-	7	79.2	66	80
C150-0242	12	-	-	-	5	52.9	52	50
C150-0399*	12	14	16	-	10	116.9	140	50
C150-0005	14	-	-	-	7	76.2	72	50
C150-0243	14	-	-	-	5	52.9	55	50
T110-0607	14	14	-	-	7	76.2	95	50

\*Effective length: from leading edge of bottom helix to center of bolt hole.

"T" after plate diameter means ½" thick helix.

# CHANCE® HELICAL 1½" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS5 SERIES)

## COMMON EXTENSION CONFIGURATIONS



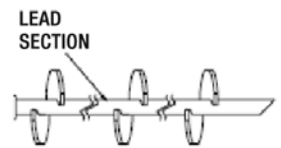
### Plain Extension

Catalog Number (See Notes Page 15)	Plate Diameter		Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
	A	B					
C150-0047	-	-	3	37.4	28	---	GALV
C150-0008	-	-	5	57.2	40	---	GALV
C150-0009	-	-	7	80.2	57	---	GALV
C150-0048	-	-	10	119.7	78	---	GALV
C150-0158	10	-	5	57.2	51	50	GALV
C150-0159	12	-	5	57.2	54	50	GALV
C150-0166	14	-	3	37.4	55	80	GALV
T150-0440	14	-	5	57.2	60	80	GALV
T150-0440-2001	16	-	5	57.2	88	---	GALV
C150-0008-1601	-	-	5	57.2	38	---	NON GALV
C150-0009-1601	-	-	7	80.2	54	---	NON GALV
C150-0048-1601	-	-	10	119.7	77	---	NON GALV

\* Effective length: from bolt hole to bolt hole.

### CHANCE® Helical 1½" Soil Nail Lead Sections

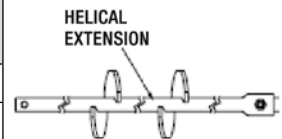
Catalog Number	Helix Size	Number of Helix	Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
C110-0692	8	2	5	52.9	49	50	GALV
C110-0691	8	3	7	77.9	69	50	GALV
C110-0691NG	8	3	7	77.9	67	50	NON GALV



\* Effective length: from bolt hole to bolt hole. Contact Factory for Non-Galvanized

### CHANCE® Helical 1½" Soil Nail Extensions

Catalog Number	Helix Size	Number of Helix	Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
C110-0690	8	2	5	57.2	51	50	GALV
C110-0689	8	3	7	80.4	71	50	GALV
C110-0689NG	8	3	7	80.4	71	50	NON GALV



\* Effective length: from bolt hole to bolt hole. Contact Factory for Non-Galvanized

### CHANCE® Helical 1½" Accessories

Catalog Number	Product Description	Weight (lbs)	Coating
C110-0026	Anchor, SS/RR: Threaded Stud Adapter	11	GALV
C110-0041	Anchor, SS/RR: Ovaley Attachment	11	GALV

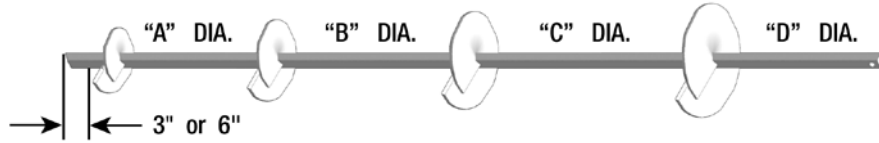
### CHANCE® Helical 1½" Tooling

Catalog Number	Product Description	Weight (lbs)	Coating
639001	Drive Tool	7	PAINTED

# CHANCE® HELICAL 1½" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS150 SERIES)

A

## COMMON LEAD CONFIGURATIONS



Catalog Number (See Notes Page 15)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C	D				
T110-0513	4	8	10	-	5	57.2	58	36
C150-0400*	6	8	10	-	7	76.2	70	80
PSA1500498	8T	-	-	-	5	60.2	46	80
C150-0168	8	10	-	-	3	29.7	39	80
C150-0472	8	10	-	-	5	57.2	57	80
C150-0490	8	10	-	-	7	76.2	68	80
C150-0169	8	10	12	-	5	60.2	70	80
T110-0521	8	10	12	14	10	116.9	127	80
C150-0163	10	12	14	-	7	76.2	96	80
C150-0165	10	12	14	14	10	116.9	143	80
C150-0167	14	-	-	-	5	57.2	83	80
C150-0170	14	14	14	-	10	116.9	135	80

\*Effective length: from leading edge of bottom helix to center of bolt hole.  
"T" after plate diameter means ½" thick helix.

## COMMON EXTENSION CONFIGURATIONS

### EXTENSION WITH HELICAL PLATE



### PLAIN EXTENSION

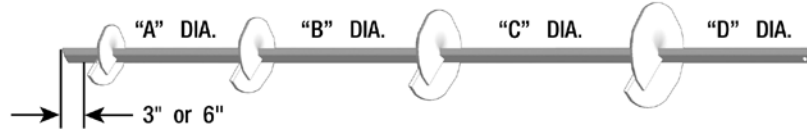


Catalog Number (See Notes Page 15)	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C				
C150-0144	-	-	-	3	37.4	27	---
C150-0145	-	-	-	5	57.2	41	---
C150-0146	-	-	-	7	80.2	54	---
C150-0175	-	-	-	10	127.2	81	---
C150-0176	14	-	-	5	44.9	28	80
C150-0177	14	14	-	7	80.2	93	80
C150-0178	14	14	14	10	122.2	142	80

\* Effective length: from bolt hole to bolt hole.

## CHANCE® HELICAL 1 3/4" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS175 SERIES)

COMMON LEAD CONFIGURATIONS



A

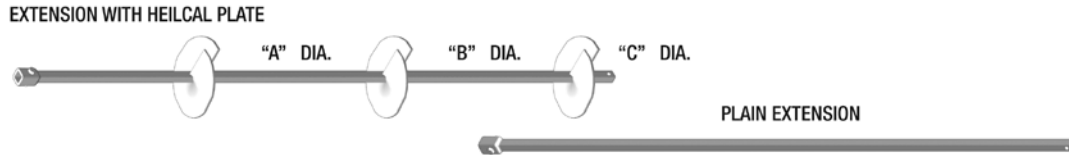
Catalog Number (See Notes Page 15)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C	D				
T150-0496	6T	-	-	-	5	57.8	60	80
C150-0010	8	-	-	-	5	57.8	60	80
T150-0264	8T	-	-	-	5	57.8	63	80
C150-0012	8	10	-	-	5	57.8	73	80
C150-0493	8	10	-	-	7	76.3	88	80
C150-0179	8	10	-	-	3	30.1	51	80
C150-0180	8	10	12	-	5	57.8	82	80
T150-0262	8T	10T	-	-	5	57.8	75	80
T150-0261	8T	10T	12T	-	5	57.8	93	80
C150-0401*	8	10	12	-	7	76.3	101	80
C110-0247	8	10	12	14	10	122.3	149	80
C150-0011	10	-	-	-	5	57.8	66	80
T150-0263	10T	-	-	-	5	57.8	67	80
C150-0093	10	12	-	-	5	57.8	80	80
C150-0402*	10	12	14	-	10	122.3	156	80
T110-0674	10	12	14	-	7	76.3	116	80
C150-0181	14	14	14	-	10	122.3	158	80
T110-0730	14	14	-	-	7	76.3	114	80
C150-0577	8T	10T	12T	-	7	84.0	102	80
PSC150-0515	6	8	10	-	6	76.3	92	80

\*Effective length: from leading edge of bottom helix to center of bolt hole.  
"T" after plate diameter means 1/2" thick helix.

# CHANCE® HELICAL 1 3/4" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS175 SERIES)

A

## COMMON EXTENSION CONFIGURATIONS

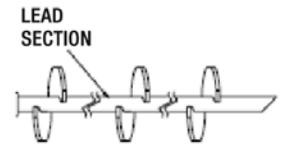


Catalog Number (See Notes Page 15)	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C				
C150-0183	-	-	-	3	36.8	35	---
C150-0013	-	-	-	5	58.3	56	---
C150-0014	-	-	-	7	79.8	76	---
C150-0184	-	-	-	10	123.1	112	---
C150-0185	14	-	-	3	45.6	66	80
T150-0260	14T	-	-	3	45.6	65	80
C150-0470	14	-	-	5	58.3	80	80
C150-0186	14	14	-	7	79.8	116	80
C110-0476	14	14	14	10	123.1	168	80

\* Effective length: from bolt hole to bolt hole.

## CHANCE® Helical 1 3/4" Soil Nail Lead Sections

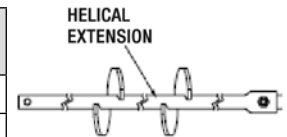
Catalog Number	Helix Size	Number of Helix	Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
C110-0235-0301	6	2	5	55.6	64	80	GALV
T110-0674-0301	6	3	7	76.3	83	80	GALV
T110-0674-0302	8	3	7	76.3	90	80	GALV



\* Effective length: from bolt hole to bolt hole. Contact Factory for Non-Galvanized

## CHANCE® Helical 1 3/4" Soil Nail Extensions

Catalog Number	Helix Size	Number of Helix	Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Coating
C110-0450-0301	6	3	7	79.8	81	80	GALV
C110-0450-0302	8	3	7	79.8	87	80	GALV
T110-0855	8	2	5	58.3	72	80	GALV



\* Effective length: from bolt hole to bolt hole. Contact Factory for Non-Galvanized

## CHANCE® Helical 1 3/4" Accessories

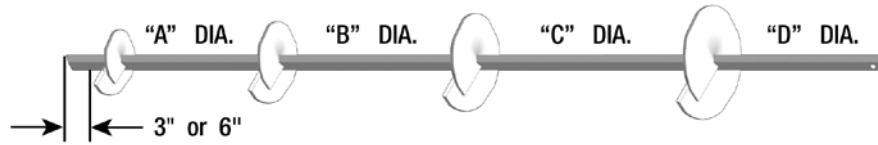
Catalog Number	Product Description	Weight (lbs)	Coating
C110-0514	SS175 Square Shaft Threaded Stud Adapter	12	GALV
T110-0134	Chain Shackle	7	GALV

## CHANCE® Helical 1 3/4" Tooling

Catalog Number	Product Description	Weight (lbs)	Coating
C303-0195	SS175 Drive Tool	18	PAINTED

## CHANCE® HELICAL 2" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS200 SERIES)

### COMMON LEAD CONFIGURATIONS



A

Catalog Number (See Notes Page 15)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C	D				
C110-0569	6T	8T	10T	-	5	59.2	97	80
C110-0571	6T	8T	10T	12T	7	78.9	136	80
C150-0403*	8T	10T	12T	-	8	78.9	135	80
C110-0570	8T	10T	12T	-	5	59.2	120	80
C110-0573	8T	10T	12T	14T	10	125.2	213	80
C150-0404*	10T	12T	14T	-	10	125.2	212	80
C110-0572	14T	14T	14T	-	10	125.2	228	80

\*Effective length: from leading edge of bottom helix to center of bolt hole.

### COMMON EXTENSION CONFIGURATIONS

#### EXTENSION WITH HELICAL PLATE



#### PLAIN EXTENSION



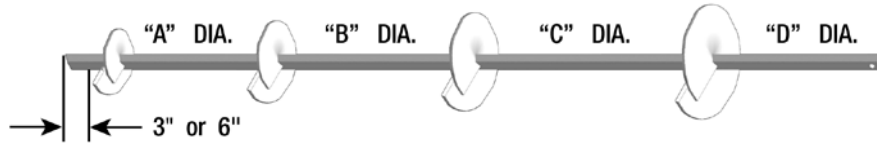
Catalog Number (See Notes Page 15)	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C				
C110-0563	-	-	-	3	36.6	50	---
C110-0564	-	-	-	5	58.6	75	---
C110-0565	-	-	-	7	80.1	100	---
C110-0566	-	-	-	10	123.2	150	---
C110-0577	14T	-	-	3	45.6	78	80
C110-0581	14T	14T	-	7	80.1	152	80
C110-0586	14T	14T	14T	10	123.1	225	80

\* Effective length: from bolt hole to bolt hole.

## CHANCE® HELICAL 2¼" ROUND CORNER SQUARE SHAFT PRODUCTS (TYPE SS225 SERIES)

A

### COMMON LEAD CONFIGURATIONS

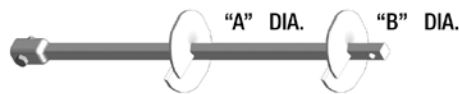


Catalog Number (See Notes Page 15)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C	D				
C110-0543	6T	8T	10T	-	5	52.3	108	80
C110-0544	8T	10T	12T	-	7	72.5	146	80
C110-0591	8T	10T	12T	14T	10	112.8	142	80
C110-0545	14T	14T	14T	-	10	142.8	250	80

\*Effective length: from leading edge of bottom helix to center of bolt hole.

### COMMON EXTENSION CONFIGURATIONS

#### EXTENSION WITH HELICAL PLATE



#### PLAIN EXTENSION

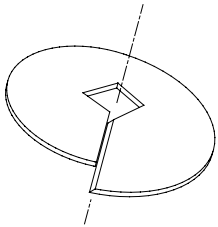
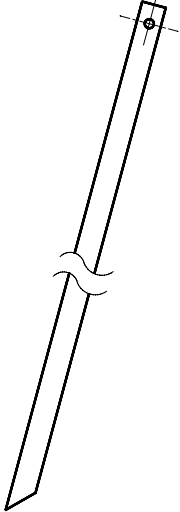


Catalog Number (See Notes Page 15)	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C				
C110-0646	-	-	-	5	52.1	88	---
C110-0647	-	-	-	7	72.1	116	---
C110-0650	14T	-	-	5	52.1	79	80
C110-0652	14T	14T	-	7	72.1	170	80

\* Effective length: from bolt hole to bolt hole.

---

## NOTES: 1¼" to 2¼" SQUARE BAR PRODUCTS



1. Included Connection Hardware:  
SS125 1¼" Material: ⅝" diameter bolt per ASTM A325 Type 1 and nut.  
SS5 and SS150 1½" Material: ¾" diameter bolt per ASTM A325 Type 1 and nut.  
SS175 1¾" Material: ⅞" diameter bolt per ASTM A193 Grade B7 and nut.  
SS200 2" Material: 1⅞" diameter bolt per ASTM A193 Grade B7 and nut.  
SS225 2¼" Material: 1¼" diameter bolt per ASTM A193 Grade B7 and nut.
2. Catalog numbers with an \* after the number are lead sections that have been designed with a longer shaft above the top helix for the Helical Pulldown<sup>®</sup> Micropile.
3. The letter "T" after the helix diameter stands for ½" thick helix material.
4. All helices are spaced 3 times the diameter of the preceding helix unless otherwise specified by the customer.
5. The standard helix has a sharpened leading edge.
6. All products are hot dip galvanized per ASTM A153.
7. For plain steel and/or special order items contact your area CHANCE<sup>®</sup> Civil Construction Distributor for availability.

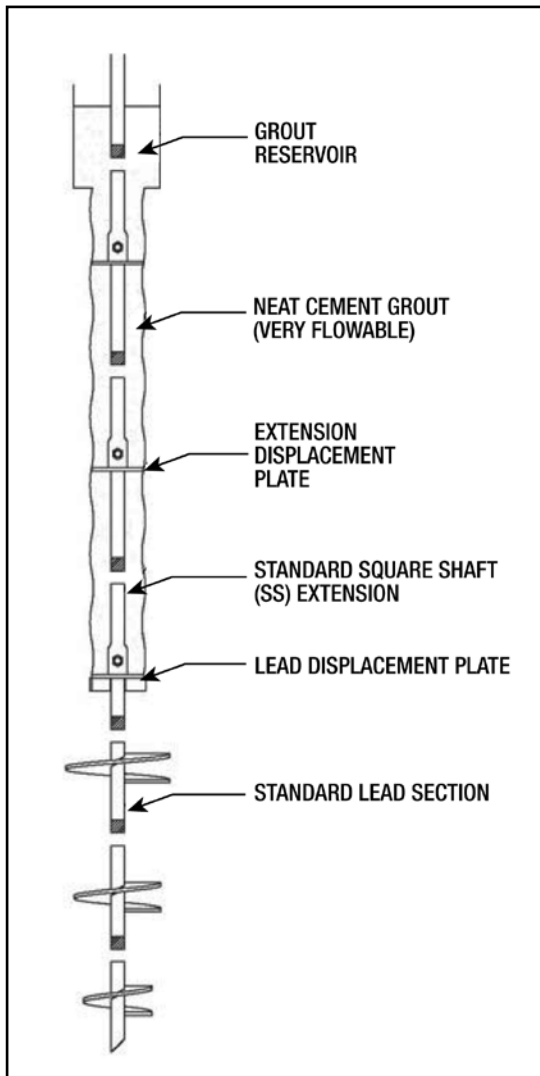


## HELICAL PULLDOWN® MICROPILES

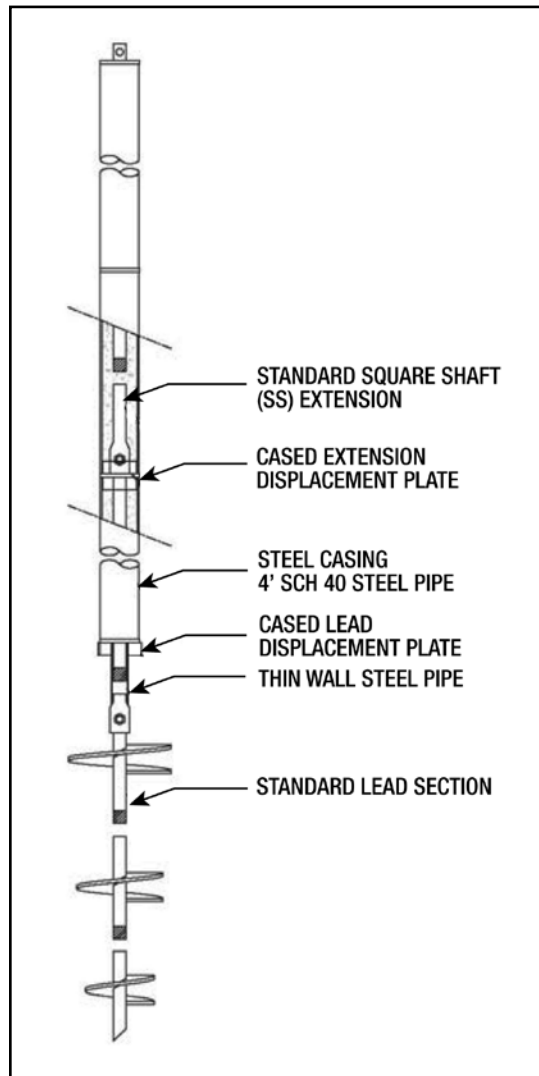
The Helical Pulldown® Micropile is a method used to form a grout column around the shaft of a standard helical anchor/pile. The installation process can employ grout only (see Figure 2) or grout in combination with either steel or PVC casing (see Figure 3).

To begin the process, a helical anchor/pile is placed into the soil by applying torque to the shaft. The helical shape of the bearing plates creates a significant downward force that keeps the foundation advancing into the soil. After the Lead Section with the helical plates penetrates the soil, a Lead Displacement Plate and Extension are placed onto the shaft. Resuming torque on the assembly advances the helical plates and pulls the displacement plate downward, forcing soil outward to create a cylindrical void around the shaft. From a reservoir at the surface, a flowable grout immediately fills this void surrounding the shaft. Additional extensions and displacement plates are added until the helical bearing plates reach the minimum depth required or competent load-bearing soil. This displacement pile system does not require removing spoils from the site.

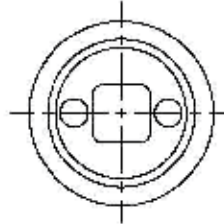
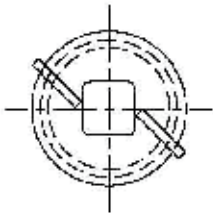
**Uncased Helical Pulldown® Micropile  
 Figure 2**



**Cased Helical Pulldown® Micropile  
 Figure 3**



## Displacement Plates for Cased Ground Columns



A

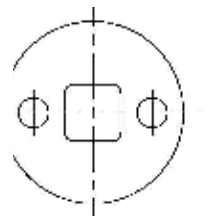
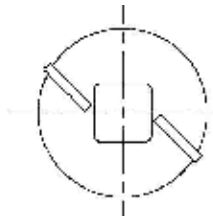
### Lead Displacement Plates

Catalog Number	Plate Dia (in)	Casing Dia (in)	Product Series
T150-0339	5	4	SS5/SS150
C150-0424	7	6	SS175
C150-0425	7	6	SS200

### Extension Displacement Plates

Catalog Number	Plate Dia (in)	Casing Dia (in)	Product Series
T150-0338	5	4	SS5/SS150
C150-0426	7	6	SS175
C150-0427	7	6	SS200

## Displacement Plates for Un-Cased Ground Columns



### Lead Displacement Plates

Catalog Number	Plate Dia (in)	Product Series
T150-0334	5	SS5/SS150
T150-0335	7	SS5/SS150
C150-0383	5	SS175
C150-0387	7	SS175
C150-0389	8½	SS175
C150-0391	7	SS200
C150-0393	8½	SS200
C150-0395	10	SS200
C150-0405	10	SS175
T150-0448	8½	SS225
T150-0449	10	SS225

### Extension Displacement Plates

Catalog Number	Plate Dia (in)	Helical Connection
T150-0330	5	SS5/SS150
T150-0331	7	SS5/SS150
C150-0282	3 <sup>29</sup> / <sub>32</sub>	SS5/SS150
C150-0384	5	SS175
C150-0386	5 <sup>29</sup> / <sub>32</sub>	SS175
C150-0388	7	SS175
C150-0390	7 <sup>29</sup> / <sub>32</sub>	SS175
C150-0392	5 <sup>29</sup> / <sub>32</sub>	SS200
C150-0394	7 <sup>29</sup> / <sub>32</sub>	SS200
C150-0396	10	SS200
C150-0406	10	SS175
T150-0450	8	SS225
T150-0451	10	SS225

## CHANCE® HELICAL ROUND SHAFT PRODUCTS

### CHANCE® Round Shaft (RS) Helical Product Ratings

**Table 5**

Catalog Number	Torque Rating ft-lbs (Nm)	Ultimate Tension Strength* kip (kN)	Uplift/Compression Capacity Limit** kip (kN)
RS2875.203	5,500 (7 500)	60 (267)	49.5 (220)
RS2875.276	8,000 (10 846)	90 (400)	72 (320)
RS3500.300	13,000 (17 600)	120 (534)	91 (405)
RS4500.337	23,000 (31 200)	140 (623)	138 (614)
RS6625.280	40,000 (54 233)	200 (890)	200 (890)
RS8625.250	60,000 (81 349)	300 (1 334)	300 (1 334)

\* Based on Mechanical Strength of Coupling

\*\* Based on Torque Rating – Uplift/Compression Capacity Limit = Torque Rating x  $K_t$

“Default”  $K_t$  for Type RS2875 Series = 9 ft<sup>-1</sup> (30 m<sup>-1</sup>); for Type RS3500.300 = 7 ft<sup>-1</sup> (23 m<sup>-1</sup>);

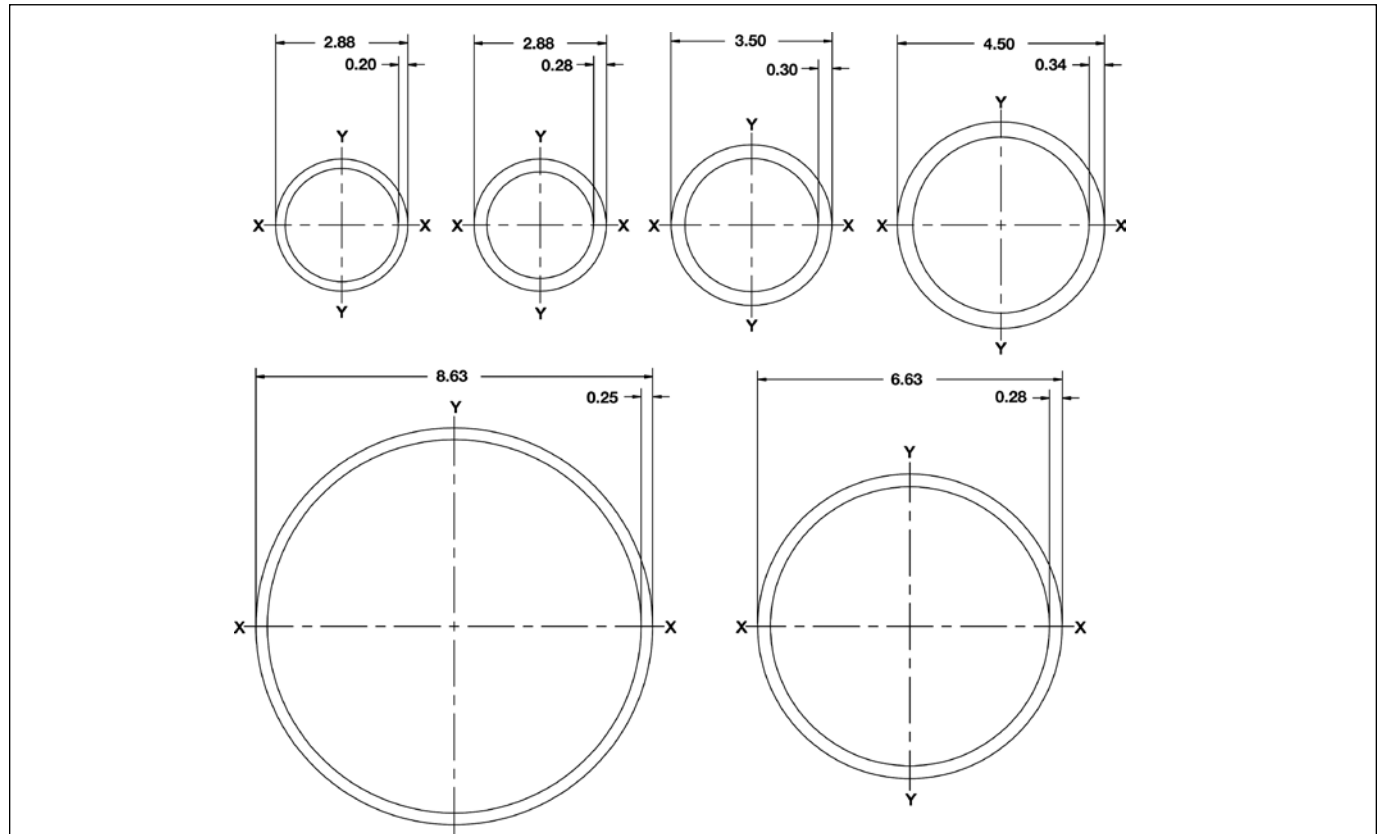
for Type RS4500.337 = 6 ft<sup>-1</sup> (20 m<sup>-1</sup>);

for Type RS6625.280 = 4 ft<sup>-1</sup> (13 m<sup>-1</sup>);

for Type RS8624.250 = 5 ft<sup>-1</sup> (13 m<sup>-1</sup>);

### CHANCE® Round Shaft Helical Cross Sections

**Figure 4**



## CHANCE® Round Shaft (RS) Helical Section Properties

Table 6

Product Series	Shaft Size in (mm)	Wall Thickness in (mm)	Metal Area in <sup>2</sup> (cm <sup>2</sup> )	Perimeter in (cm)	Moment of Inertia in <sup>4</sup> (cm <sup>4</sup> ) <i>I<sub>x-x</sub>, I<sub>y-y</sub>, I<sub>x-y</sub></i>	Section Modulus in <sup>3</sup> (cm <sup>3</sup> )	
						<i>S<sub>x-x</sub></i> <i>S<sub>y-y</sub></i>	<i>S<sub>x-y</sub></i>
RS2875.165	2.875 (73)	0.165 (4.2)	1.4 (9.0)	9.0 (22.9)	1.29 (53.7)	0.90 (14.7)	0.90 (14.7)
RS2875.203	2.875(73)	0.203 (5.2)	1.7 (11.0)	9.0 (22.9)	1.53 (63.7)	1.06 (17.4)	1.06 (17.4)
RS2875.276	2.875 (73)	0.276 (7.0)	2.3 (14.8)	9.0 (22.9)	1.92 (79.4)	1.34 (22.0)	1.34 (22.0)
RS3500.300	3.5 (89)	0.300 (7.6)	3.0 (19.5)	11.0 (27.9)	3.89 (162)	2.23 (36.5)	2.23 (36.5)
RS4500.337	4.5 (114)	0.337 (8.6)	4.4 (28.4)	14.1 (35.9)	9.61 (400.0)	4.27 (70.0)	4.27 (70.0)
RS6625.280	6.625 (168)	0.28 (7)	5.58 (36.0)	20.8 (52.8)	28.1 (1,168)	8.5 (139)	8.5 (139)
RS8625.250	8.625 (219)	0.25 (6)	6.58 (42.5)	27.1 (68.8)	57.7 (2,400)	13.38 (219)	13.38 (219)

B

## CHANCE® Round Shaft (RS) Helix Thickness and Mechanical Strength

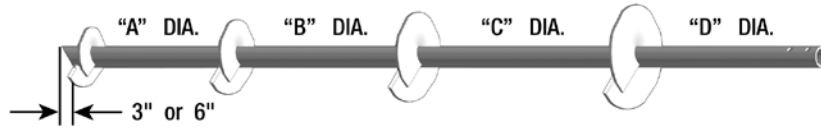
Table 7

DEFAULT (STANDARD)				OPTIONS		
Product Series	Helix Grade ksi (mPa)	Thickness in (mm)	Mechanical Strength kip (kN)	Helix Grade ksi (mPa)	Thickness in (mm)	Mechanical Strength kip (kN)
RS2875.165	50 (345)	⅜ (9.5)	40 (178)	50 (345)	½ (13)	50 (222)
RS2875.203	50 (345)	⅜ (9.5)	40 (178)	50 (345)	½ (13)	50 (222)
RS2875.276	80 (552)	⅜ (9.5)	60 (267)	50 (345)	½ (13)	50 (222)
RS3500.300	50 (345)	½ (13)	60 (267)	50 (345)	⅜ (9.5)	50 (222)
RS4500.337	80 (552)	½ (13)	60 (267)	50 (345)	½ (13)	60 (267)

The mechanical strength ratings in Table 7 are minimum values. The helix diameter, grade, and thickness along with the shaft series to which an individual helix is connected effect the mechanical strength rating of a helix. A higher mechanical strength rating of an individual helix is possible depending on the combination of these variables.

## CHANCE® HELICAL 2<sup>7</sup>/<sub>8</sub>" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS2875.203 SERIES)

### COMMON LEAD CONFIGURATIONS

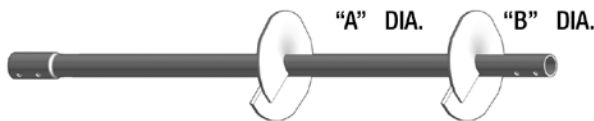


Catalog Number (See Notes Page 27)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Helix Edge
	A	B	C	D					
C278-4512	8	10	-	-	5	56.5	45	50	SLE
C278-4513	8	10	-	-	7	78.3	57	50	SLE
C278-4514	8	10	12	-	5	56.5	53	50	SLE
C278-4510	10	-	-	-	5	58.0	36	36	SLE
C278-4504	10	-	-	-	5	56.5	40	50	SLE
C278-4519	10	-	-	-	7	76.3	48	50	SLE
C278-4505	10	12	-	-	5	56.5	53	50	SLE
C278-4506	10	12	-	-	7	76.3	60	50	SLE
C278-4507	10	12	14	-	7	76.3	78	50	SLE
C278-4508	10	12	14	-	10	188.3	122	50	SLE
C278-4503	12	-	-	-	5	56.5	46	50	SLE
C278-4509	12	-	-	-	7	76.3	54	50	SLE
C278-4511	14	-	-	-	7	76.3	57	50	SLE
C278-4515	14	-	-	-	10	118.3	100	50	SLE

\*Effective length: from leading edge of bottom helix to center of bolt hole.

### COMMON EXTENSION CONFIGURATIONS

#### EXTENSION WITH HELICAL PLATE



#### PLAIN EXTENSION

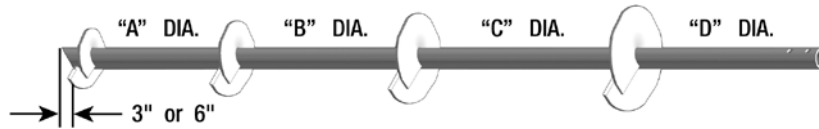


Catalog Number (See Notes Page 27)	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Helix Edge
	A	B	C					
C278-4300	-	-	-	3	36.0	19	---	---
C278-4500	-	-	-	5	57.0	32	---	---
C278-4700	-	-	-	7'	78.3	42	---	---
C278-41000	-	-	-	10	120	64	---	---
C278-4502	14	14	-	7	78.0	75	50	SLE
C278-4501	14	-	-	5	57.0	70	50	SLE

\* Effective length: from bolt hole to bolt hole.

## CHANCE® HELICAL 2<sup>7</sup>/<sub>8</sub>" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS2875.276 SERIES)

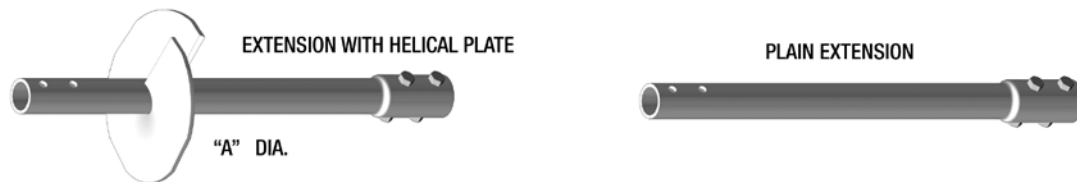
### COMMON LEAD CONFIGURATIONS



Catalog Number	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	*Helix Edge
	A	B	C	D					
C278-8001	10	-	-	-	7	76.3	68	80	SLE
C278-8002	10	-	-	-	5	56.3	53	80	SLE
C278-8003	10	12	-	-	5	56.3	62	80	SLE
C278-8004	8	10	12	-	7	76.3	80	80	SLE
C278-8005	10	12	14	-	7	76.3	92	80	SLE
C278-8006	8	10	12	14	10	118.3	123	80	SLE
C278-8007	8	10	-	-	5	56.3	56	80	SLE
C278-8008	8	-	-	-	7	76.3	55	80	SS
C278-8009	10	12	-	-	7	76.3	71	80	SLE
C278-8179	10	12	14	14	10	118.3	135	80	SLE
C278-8184	10	-	-	-	7	76.3	48	80	SS
C278-8188	8	-	-	-	3.5	34.3	32	80	SS
C278-8191	12	-	-	-	5	56.3	63	80	SS

\*Effective length: from leading edge of bottom helix to center of bolt hole.

### COMMON EXTENSION CONFIGURATIONS



Catalog Number	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	*Helix Edge
	A	B	C					
C278-8300	-	-	-	3	36.0	37	---	---
C278-8500	-	-	-	5	57.0	52	---	---
C278-8700	-	-	-	7	78.0	56	---	---
C278-81000	-	-	-	10	120.0	93	---	---
C278-8314	14	-	-	3	36.0	52	50	SLE
C278-8187	10	-	-	3	36.0	44	50	SLE

\* Effective length: from bolt hole to bolt hole.

B

## CHANCE® HELICAL 3½" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS3500.300 SERIES)

### COMMON LEAD CONFIGURATIONS



Catalog Number (See Notes Page 27)	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C	D				
C107-0560	8T	10T	-	-	3	33.3	6	50
C107-0566	8T	10T	12T	14T	10	117.3	145	50
C107-0563	8T	10T	12T	-	7	74.5	73	50
T107-0813	10T	10T	-	-	7	74.5	78	50
C150-0023	10T	12T	-	-	7	74.5	91	50
C107-0561	10T	12	-	-	5	41.3	65	50
T107-0812	10T	12T	-	-	10	117.3	121	50
C150-0024	10T	12T	14T	-	7	74.5	106	50
C107-0567	10T	12T	14T	14T	10	117.3	164	50
C107-0562	12T	14T	-	-	5	41.3	73	50
C107-0565	12T	14T	14T	-	10	117.3	158	50
C107-0568	12T	14T	14T	14T	10	117.3	105	50

\*Effective length: from leading edge of bottom helix to center of bolt hole.

### COMMON EXTENSION CONFIGURATIONS

#### EXTENSION WITH HELICAL PLATE



#### PLAIN EXTENSION



Catalog Number (See Notes Page 27)	Plate Diameter			Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade
	A	B	C				
C150-0025	-	-	-	5	56.0	60	---
C150-0026	-	-	-	7	77.0	77	---
C150-0216	-	-	-	10	119.0	115	---
C107-0578	12T	14T	-	7	77.0	105	50
C150-0217	14T	-	-	3	43.5	72	50
C107-0579	14T	14T	-	7	77.0	114	50
C107-0580	14T	14T	14T	10	119.0	173	50

\* Effective length: from bolt hole to bolt hole.  
"T" after plate diameter means ½" thick helix.

## CHANCE® HELICAL 4½" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS4500.337 SERIES)

### COMMON LEAD CONFIGURATIONS



Catalog Number	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Helix Edge
	A	B	C	D					
C107-0917	8T	-	-	-	7	74.5	112	80	SLE
C107-0916	8T	-	-	-	10	115.5	169.5	80	SLE
C107-0980	8T	8T	-	-	10	115.5	171.5	80	SLE
C107-0889	8T	10T	12T	-	7	74.5	136	80	SLE
C107-0893	8T	10T	10T	-	7	74.5	134	80	SLE
C107-0890	8T	10T	12T	14T	10	115.5	208	80	SLE
C107-0892	10T	12T	14T	14T	10	115.5	220	80	SLE
C107-0943	10T	12T	14T	-	10	115.5	200	80	SLE
C107-0915	14T	-	-	-	10	74.5	177	80	SLE
C107-0954	12T	-	-	-	15	169.5	238	80	SLE

\*Effective length: from leading edge of bottom helix to center of bolt hole.

### COMMON EXTENSION CONFIGURATIONS

#### EXTENSION WITH HELICAL PLATE



#### PLAIN EXTENSION



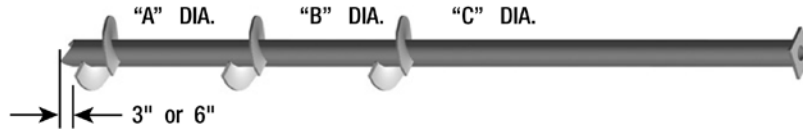
Catalog Number	Plate Diameter				Nominal Length (ft)	Effective Length (in)*	Weight (lbs)	Helix Grade	Helix Edge
	A	B	C	D					
C107-0885	-	-	-	-	3	36.0	53	---	---
C107-0887	-	-	-	-	5	57.0	78	---	---
C107-0888	-	-	-	-	7	78.0	105	---	---
C107-0910	-	-	-	-	10	120.0	158	---	---
C107-0895	10T	12T	14T	14T	10	120.0	219	80	SLE
C107-0894	12T	12T	14T	-	7	78.0	150	80	SLE
C107-0886	14T	-	-	-	5	57.0	97	80	SLE
C107-0909	14T	-	-	-	7	78.0	124	80	SLE

\* Effective length: from bolt hole to bolt hole.  
"T" after plate diameter means ½" thick helix.



## CHANCE® HELICAL 6<sup>5</sup>/<sub>8</sub>" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS6625.280 SERIES)

### COMMON LEAD CONFIGURATIONS



Catalog Number	Description	Plate Diameter				Nominal Length (ft)	Weight	Helix Grade	Helix Edge	Coating
		A	B	C	D					
C107-0970	ANCHOR, LEAD, LDPP (1) 12" x 7', 6" PIPE	12	-	-	-	7	141	80	SLE	GALV
C107-0926	ANCHOR, LEAD, LDPP (1) 14" x 15', 6" PIPE	14	-	-	-	15	297	80	SLE	NON GALV
C107-0928	ANCHOR, LEAD, LDPP (1) 14" x 15', 6" PIPE	14	-	-	-	15	297	80	SLE	GALV
C107-0974	ANCHOR, LEAD, LDPP (1) 16" x 10', 6" PIPE	16	-	-	-	10	240	80	SLE	GALV
C303-1521	ANCHOR, INSTALLING TOOL, LDPP, 6"	-	-	-	-	18		---	---	PAINTED

\* Effective length: from bolt hole to end of shaft.

### COMMON EXTENSION CONFIGURATIONS

#### PLAIN EXTENSION

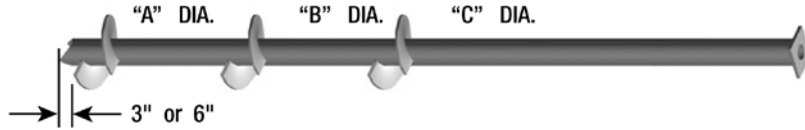


Catalog Number	Description	Plate Diameter				Nominal Length (ft)	Weight	Coating
		A	B	C	D			
C107-0969	ANCHOR, EXT, LDPP, 5', 6" PIPE, GALV	-	-	-	-	5	95	GALV
C107-0968	ANCHOR, EXT, LDPP, 7', 6" PIPE, GALV	-	-	-	-	7	132.9	GALV
C107-0973	ANCHOR, EXT, LDPP, 10' x 6" PIPE, GALV	-	-	-	-	10	245	GALV

\* Effective length: from bolt hole to bolt hole.

## CHANCE® HELICAL 8<sup>5</sup>/<sub>8</sub>" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS8625.250 SERIES)

### COMMON LEAD CONFIGURATIONS



B

Catalog Number	Description	Plate Diameter				Nominal Length (ft)	Weight	Helix Grade	Helix Edge	Coating
		A	B	C	D					
C107-0907	ANCHOR, LEAD, LDPP, 10" x 12" x 14", 10', 8"	10	12	14	-	10	266	80	SLE	NON GALV
C107-0908	ANCHOR, LEAD, LDPP, 10" x 12" x 14", 10', 8"	10	12	14	-	10	266	80	SLE	GALV
C107-0971	ANCHOR, LEAD, LDPP (1) 14" x 7', 8" PIPE	14	-	-	-	7	167	80	SLE	GALV
C107-0927	ANCHOR, LEAD, LDPP (1) 16" x 15', 8" PIPE	16	-	-	-	15	356	80	SLE	NON GALV
C107-0929	ANCHOR, LEAD, LDPP (1) 16" x 15', 8" PIPE	16	-	-	-	15	356	80	SLE	GALV
C107-0948	ANCHOR, LEAD, LDPP (2) 16" x 10', 8" .188	16	-	-	-	10	198	80	SLE	NON GALV
C107-0919	ANCHOR, LEAD, LDPP (3) 16" x 10', 8" PIPE	16	-	-	-	10	255	80	SLE	GALV
C107-0945	ANCHOR, LEAD, LDPP (3) 16" x 10', 8" PIPE	16	-	-	-	10	255	80	SLE	GALV
C107-0865	ANCHOR, LEAD, LDPP (3) 16" x 10', 8" PIPE	16	-	-	-	10	255	80	SLE	NON GALV
C107-0862	ANCHOR, LEAD, LDPP (3) 16" x 20', 8" PIPE	16	-	-	-	20	468	80	SLE	NON GALV
C107-0861	ANCHOR, LEAD, LDPP 24" x 20', 8" PIPE	24	-	-	-	20	529	50	SLE	NON GALV
C107-0866	ANCHOR, LEAD, LDPP 16", 18" x 10', 8" PIPE	16	18	-	-	10	278	80	SLE	NON GALV
C107-0863	ANCHOR LEAD, LDPP 16", 18" x 20', 8" PIPE	16	18	-	-	20	502	80	SLE	NON GALV
C107-0864	ANCHOR, LEAD, LDPP 24" x 10', 8" PIPE	24	-	-	-	10	305	50	SLE	NON GALV

\* Effective length: from bolt hole to end of shaft.

## CHANCE® HELICAL 8<sup>5</sup>/<sub>8</sub>" DIAMETER ROUND SHAFT PRODUCTS (TYPE RS8625.250 SERIES)

### COMMON EXTENSION CONFIGURATIONS

EXTENSION WITH HELICAL PLATE



B

Catalog Number	Description	Plate Diameter				Nominal Length (ft)	Weight	Helix Grade	Helix Edge	Coating
		A	B	C	D					
C107-0918	ANCHOR, EXT, LDPP (1) 16" x 10', 8" PIPE	-	-	-	-	10	233	---	---	GALV
C107-0946	ANCHOR, EXT, LDPP (1) 16" x 10', 8" PIPE	-	-	-	-	10	233	---	---	GALV
C107-0857	ANCHOR, EXT, LDPP 10', 8" PIPE, GALV	16	16	-	-	10	369	80	SLE	GALV
C107-0867	ANCHOR, EXT, LDPP 10', 8" PIPE NON GALV	-	-	-	-	10	255	---	---	NON GALV
C107-0947	ANCHOR, EXT, LDPP 20', 8" PIPE GALV	-	-	-	-	20	448	---	---	GALV
C107-0896	ANCHOR, EXT, LDPP 20', 8" NON GALV	-	-	-	-	20	484	---	---	NON GALV
C107-0956	ANCHOR, EXT, LDPP 5', 8" PIPE, GALV	-	-	-	-	5	117	---	---	GALV
C107-0966	ANCHOR, EXT, LDPP 7', 8" PIPE, GALV	-	-	-	-	7	157	---	---	GALV
C107-0868	ANCHOR, EXT, LDPP (1) 16" x 10', 8" PIPE	16	-	-	-	10		80	SLE	NON GALV
C303-1508	ANCHOR, INSTALLING TOOL, LDPP 8"	-	-	-	-	15	96	---	---	PAINTED

\* Effective length: from bolt hole to bolt hole.

## NOTES: 2<sup>7</sup>/<sub>8</sub>" to 8<sup>5</sup>/<sub>8</sub>" OD ROUND (PIPE) SHAFT PRODUCTS

1. Included Connection Hardware:

RS2875.203 2<sup>7</sup>/<sub>8</sub>" Diameter Material: (2) ¾" x 4¼" bolt per SAE J429 Grade 5 and nuts.

RS2875.276 2<sup>7</sup>/<sub>8</sub>" Diameter Material: (2) ¾" x 4¼" bolt per SAE J429 Grade 5 and nuts.

RS3500.300 3½" Diameter Material: (3) ¾" x 5¾" bolt per SAE J429 Grade 5 and nuts.

RS4500.337 4½" Diameter Material: (2) 1" x 5½" bolt per SAE J429 Grade 8 and nuts.

RS6625.280 6" Diameter Material: (4) 1" x 8" Threaded Stud and nuts.

RS8625.250 8" Diameter Material: (4) 1¼" x 10½" Threaded Stud and nuts.

2. The letter "T" after the helix diameter stands for ½" thick helix material.
3. All helices are spaced 3 times the diameter of the preceding helix unless otherwise specified by the Customer.
4. All products are Hot Dip Galvanize per ASTM A153.
5. For plain steel and/or special order items contact your area CHANCE® Civil Construction Distributor for availability.

## CHANCE® HELICAL SQUARE AND ROUND SHAFT COMBINATIONS

### TYPE SS/RS COMBINATION HELICAL PILES

#### CHANCE® Helical Transition Coupler

##### Adapts Type SS to Type RS Pile Shafts

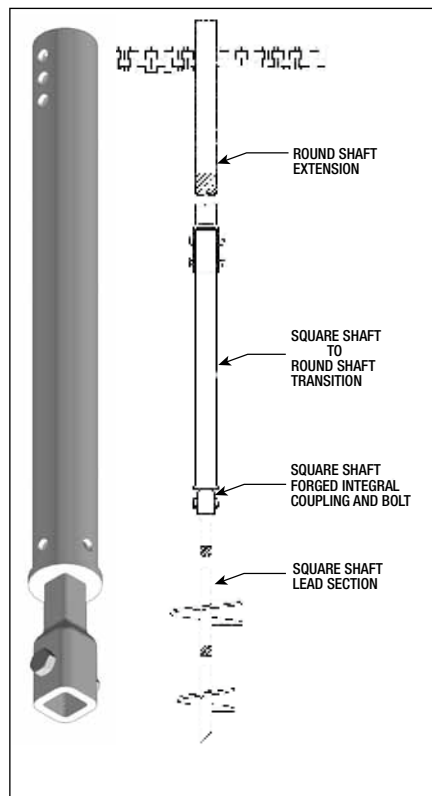
The Type SS/RS Combination Pile is used mainly in compression applications in areas where soft/loose soils are located above the bearing strata (hard/dense soils) for the helices. The Type RS material with a much greater section modulus will resist columnar buckling in the soft/loose soil. The Type SS material will allow adequate penetration of the helices into the hard/dense material without “spin-out”, i.e., loss of thrust of the helices in the soft/loose material.

The transition section (see Figure 5) adapts Type SS helical lead sections to Type RS plain extensions. Installation of this combination pile is the same as a standard helical pile. Table 8 provides the various standard transition couplers that are available along with their ratings. Special transition couplers, such as RS2875 to RS4500, are also available. Please contact your area CHANCE® Civil Construction Distributor for availability and delivery times.

The design should be prepared by a Registered Professional Engineer with suitable soil information.

#### Pile Assembly with RS Transition Coupler

Figure 5

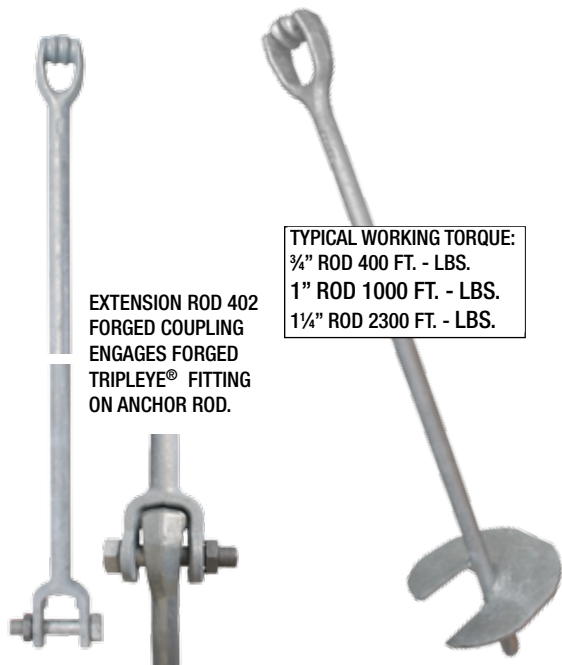


#### Transition Couplers

Table 8

Catalog Number	Description	Torque Ratings
C278-0150	SS5/SS150 square shaft to a RS2875.203 round shaft	5,500 ft-lbs
T107-0808	SS175 square shaft to a RS3500.300 dia round shaft	11,000 ft-lbs
T107-0809	SS200 square shaft to a RS3500.300 dia round shaft	13,000 ft-lbs
C278-0004	SS5/SS150 square shaft to a RS2875.276 dia round shaft	7,000 ft-lbs

## NO-WRENCH SCREW ANCHOR



EXTENSION ROD 402 FORGED COUPLING ENGAGES FORGED TRIPLEYE® FITTING ON ANCHOR ROD.

TYPICAL WORKING TORQUE:  
¾" ROD 400 FT. - LBS.  
1" ROD 1000 FT. - LBS.  
1¼" ROD 2300 FT. - LBS.

### For Hand or Machine Installation

CHANCE® No-Wrench Screw Anchors may be installed by hand or machine. The Thimbleye® eye or Tripleye® eye on the rod has a large opening to admit a turning bar for screwing the anchor down. The eye will also fit into an adapter available from most hole-boring machine manufacturers so the anchor may be power-installed. The No-Wrench Screw Anchor consists of a drop-forged steel Thimbleye® eye or Tripleye® eye rod welded to a steel helix. The entire anchor is hot-dip galvanized for long resistance to rust.

No-Wrench Screw Anchors can be installed to a greater depth to reach a firmer soil by using an extension rod, available in three lengths below. Maximum installing torque is 2300 ft.-lbs. for 1¼" diameter rod.

Catalog numbers 4345, 6346 and PS816 may be ordered with a forged Thimbleye® rod rather than the standard Tripleye® rod. To order a Thimbleye® rod simply add "1" to the suffix of the catalog number. Example: Catalog No. 63461.

### CHANCE® No Wrench Screw Anchor

Catalog Number	Description	Anchor Size Dia. (in)	Rod Dia. & Length (in)	Std Pak/Pallet	Holding Capacity - (lbs) vs. Soil Class		
					Class 5	Class 6	Class 7
4345	Tripleye®	4	¾ x 54	1/100	4,500	3,000	1,500
6346*	Tripleye®	6	¾ x 66	1/100	6,500	5,000	2,500
PS816	Tripleye®	8	1 x 66	1/60	11,000	9,000	6,000
10146	Tripleye®	10	1¼ x 66	1/20	13,000	10,000	7,000
10148	Tripleye®	10	1¼ x 96	1/20	13,000	10,000	7,000
12537	Tripleye®	14	1¼ x 96	1/20	16,000	15,000	12,000
43451	Thimbleye®	4	¾ x 54	1/100	4,500	3,000	1,500
63461	Thimbleye®	6	¾ x 66	1/100	6,500	5,000	2,500
8161	Thimbleye®	8	1 x 66	1/60	11,000	9,000	6,000
T110-0769	Ovaleye	4	¾ x 30	1/100	4,500	3,000	1,500

\* RUS Accepted.

### Extension Rod

402	Thimbleye®	N/A	1¼ x 72	1/50	N/A	N/A	N/A
-----	------------	-----	---------	------	-----	-----	-----

Note: If hand installed, holding capacity may be reduced by as much as 10% to 20%.

Capacity ratings apply to properly installed anchors only.

Failure to install within 5° of alignment with the guy load will significantly lower strength.

D

## NO-WRENCH POWER INSTALLATION TOOL



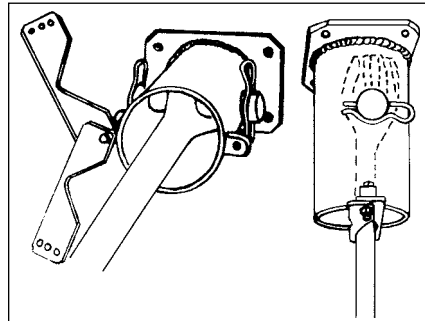
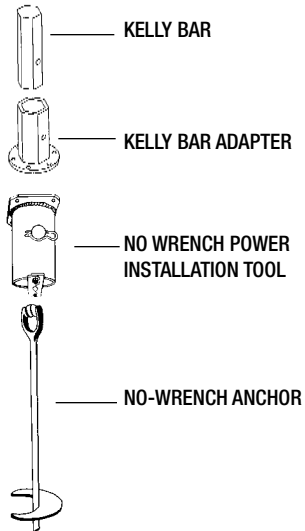
Especially designed for use with the CHANCE® portable anchor installer. This tool bolts directly to the installer's output flange or appropriate Kelly bar adapter. Adjustable pivot plates accept rods from 3/4" to 1 1/4" diameter. Through-pin with retainer clip passes through the eyenut.

Has (four) holes on a 5 1/4" bolt circle for attachment. Includes (four) 1/2" x 1 1/2" bolts, nuts and lockwasher.

Note: Can be attached to any Chance Torque Indicator

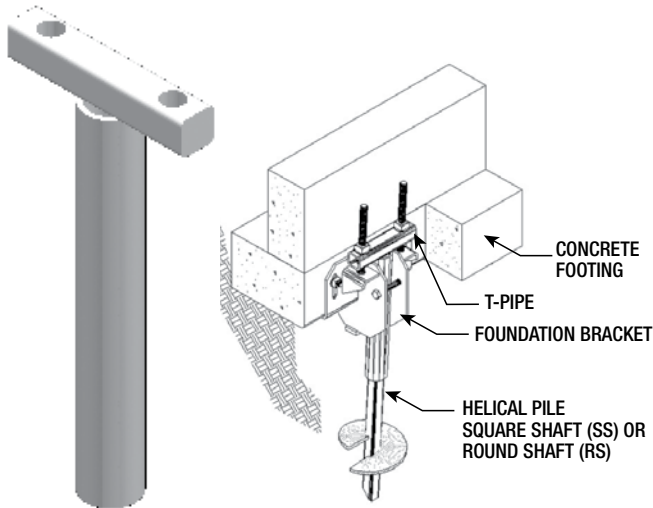
Catalog Number	Weight (lbs)
E3030255	9

### "NO WRENCH" TYPICAL DRIVE STRING



**REMEDIAL REPAIR BRACKETS for CHANCE® HELICAL PIERS**

**CHANCE® HELICAL SIDE JACK C150-0121  
STANDARD BRACKET AND T-PIPE SYSTEM**



- Use for lifts up to 4" (10 cm)
- All C150-0121 Standard Systems include:
  - Foundation bracket
  - T-pipe
  - Hardware

Order separately: Two 5/8" (16 mm) diameter anchor bolts per pier as required.

Standard finish is galvanized per ASTM A153.

Ultimate mechanical strength of bracket body is 80,000 lbs (356 kN). Working mechanical strength of bracket body is 40,000 lbs (178kN).

See table below for system (bracket/pile shaft) ratings.

**CHANCE® Helical C150-0121 Standard Bracket and T-Pipe Ratings**

T-Pipe Catalog Numbers for the C150-0121 Bracket	Ultimate Mechanical Strength <sup>1,3</sup> lbs (kN)	Pile Size in (mm)	Product Series	Max Working Capacity <sup>2,3</sup> based on Product Series lbs (kN)	Features
C150-0486 <sup>4</sup>	40,000 (178)	1½ (38) Square	SS5 SS150	20,000 (89) 20,000 (89)	Lowest cost with square shaft.
C150-0487 <sup>4</sup>	80,000 (356)	1½ (38) Square	SS5 SS150	20,000 (89) 25,000 (111)	Higher capacity with SS150.
C278-0001	40,000 (178)	2¾ (73) Round	RS2875.203	20,000 (89)	Lowest cost with round shaft.
C278-0002	80,000 (356)	2¾ (73) Round	RS2875.203	25,000 (111)	
C278-8012	40,000 (178)	2¾ (73) Round	RS2875.276	20,000 (89)	
C278-8011	80,000 (356)	2¾ (73) Round	RS2875.276	30,000 (133)	

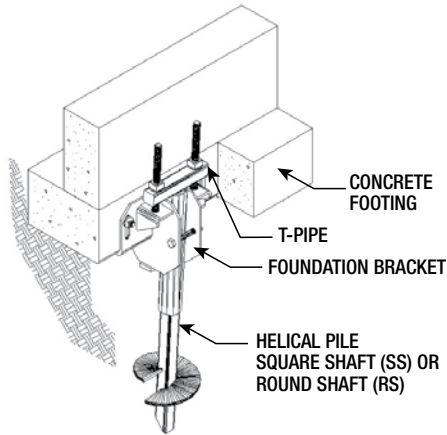
Notes:

1. Ultimate mechanical strength is for the Bracket Body and T-Pipe combination.
2. The capacity of CHANCE® Helical Pile Systems is a function of many individual elements, including the capacity of the foundation, bracket, pile shaft, helix plate and bearing stratum, as well as the strength of the foundation-to-bracket connection, and the quality of the helical pile installation. The fifth column shows typical working capacities of the CHANCE® Helical Pile System based upon maximum shaft exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. Actual capacities could be higher or lower depending on the above factors.
3. The ultimate capacity of the system, i.e., bracket, T-pipe, and pile shaft, can be increased to the pile shaft compression capacity limit as shown in the Technical Design Manual, provided the pile shaft is reinforced using a pipe sleeve or grout column. The maximum working capacity shall not be greater than one half the ultimate mechanical strength of the bracket and T-pipe combination given above.
4. These products comply with the 1997 Uniform Building Code, the 1999 BOCA National Code, and the 1999 SBCCI Standard Code subject to the conditions as listed in the Legacy Reports in Appendix C.





## CHANCE® HELICAL SIDE JACK C150-0299 STANDARD BRACKET AND T-PIPE SYSTEM



- Use for lifts up to 4" (10 cm)
- All C150-0299 Standard Systems include:
  - Foundation bracket
  - T-pipe
  - Hardware

Order separately: Two 5/8" (16 mm) diameter anchor bolts per pier as required

Standard finish is galvanized per ASTM A153

Ultimate mechanical strength of bracket body is 80,000 lbs (356 kN). Working mechanical strength of bracket body is 40,000 lbs (178kN).

See table below for system (bracket/pile shaft) ratings.

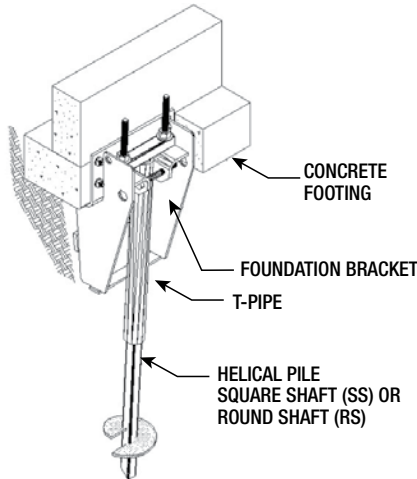
### CHANCE® Helical C150-0299 Standard Bracket and T-Pipe Ratings

T-Pipe Catalog Numbers for the C150-0299 Bracket	Ultimate Mechanical Strength <sup>1,3</sup> lbs (kN)	Pile Size in (mm)	Product Series	Max Working Capacity <sup>2,3</sup> based on Product Series lbs (kN)	Features
C150-0488	80,000 (356)	1 3/4 (44) Square	SS175	30,000 (133)	Lowest cost with Type SS175 Product Series.

Notes:

1. Ultimate mechanical strength is for the Bracket Body and T-Pipe combination.
2. The capacity of CHANCE® Helical Pile Systems is a function of many individual elements, including the capacity of the foundation, bracket, pile shaft, helix plate and bearing stratum, as well as the strength of the foundation-to-bracket connection, and the quality of the helical pile installation. The fifth column shows typical working capacities of the CHANCE® Helical Pile System based upon maximum shaft exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. Actual capacities could be higher or lower depending on the above factors.
3. The ultimate capacity of the system, i.e., bracket, T-pipe, and pile shaft, can be increased to the pile shaft compression capacity limit as shown in the Technical Design Manual, provided the pile shaft is reinforced using a pipe sleeve or grout column. The maximum working capacity shall not be greater than one half the ultimate mechanical strength of the bracket and T-pipe combination given above.
4. These products comply with the 1997 Uniform Building Code, the 1999 BOCA National Code, and the 1999 SBCCI Standard Code subject to the conditions as listed in the Legacy Reports in Appendix C.

## CHANCE® HELICAL SIDE JACK C150-0147 HEAVY DUTY BRACKET AND T-PIPE SYSTEM



- Use for lifts up to 4" (10 cm).
- All C150-0147 Standard Systems include:
  - Foundation bracket
  - T-pipe
  - Hardware

Order separately: Four 5/8" (16 mm) diameter anchor bolts per pier as required.

Standard finish is galvanized per ASTM A153.

Ultimate mechanical strength of bracket body is 120,000 lbs (534 kN). Working mechanical strength of bracket body is 60,000 lbs (267 kN).

See table below for system (bracket/pile shaft) ratings.

### CHANCE® Helical C150-0147 Standard Bracket and T-Pipe Ratings

T-Pipe Catalog Numbers for the C150-0147 Bracket	Ultimate Mechanical Strength <sup>1,3</sup> lbs (kN)	Pile Size in (mm)	Product Series	Max Working Capacity <sup>2,3</sup> based on Product Series lbs (kN)	Features
C150-0474	120,000 (534)	1¼ (44) Square	SS175	40,000 (178)	Lowest cost with square shaft.
C150-0475	120,000 (534)	3½ (89) Round	RS3500.300	50,000 (222)	Higher capacity with RS3500.300.
C150-0508	120,000 (534)	2 (51) Square	SS200	50,000 (222)	Highest capacity with square shaft.

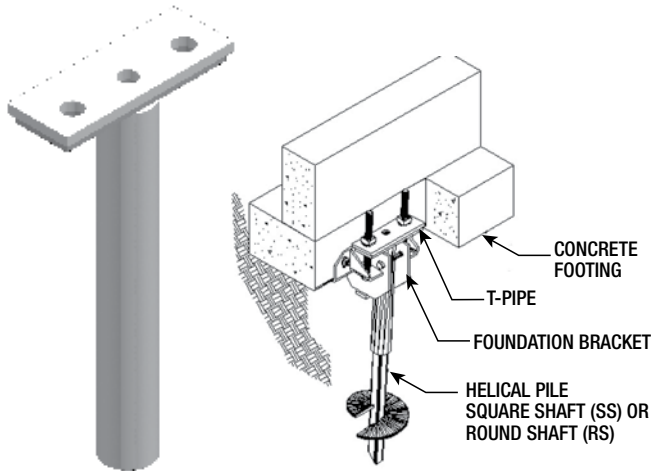
Notes:

1. Ultimate mechanical strength is for the Bracket Body and T-Pipe combination.
2. The capacity of CHANCE® Helical Pile Systems is a function of many individual elements, including the capacity of the foundation, bracket, pile shaft, helix plate and bearing stratum, as well as the strength of the foundation-to-bracket connection, and the quality of the helical pile installation. The fifth column shows typical working capacities of the CHANCE® Helical Pile System based upon maximum shaft exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. Actual capacities could be higher or lower depending on the above factors.
3. The ultimate capacity of the system, i.e., bracket, T-pipe, and pile shaft, can be increased to the pile shaft compression capacity limit as shown in the Technical Design Manual, provided the pile shaft is reinforced using a pipe sleeve or grout column. The maximum working capacity shall not be greater than one half the ultimate mechanical strength of the bracket and T-pipe combination given above.

[This page Rev. Apr/2007]



## CHANCE® HELICAL SIDE JACK PSAC1500499 LOW PROFILE BRACKET AND T-PIPE SYSTEM



- Use for lifts up to 4" (10 cm)
- All PSAC1500499 Standard Systems include:
  - Foundation bracket
  - T-pipe
  - Hardware

Order separately: Two ½" (13 mm) diameter anchor bolts per pier as required.

Standard finish is galvanized per ASTM A153.

Ultimate mechanical strength of bracket body is 30,000 lbs (133 kN). Working mechanical strength of bracket body is 15,000 lbs (67 kN).

See table below for system (bracket/pile shaft) ratings.

E

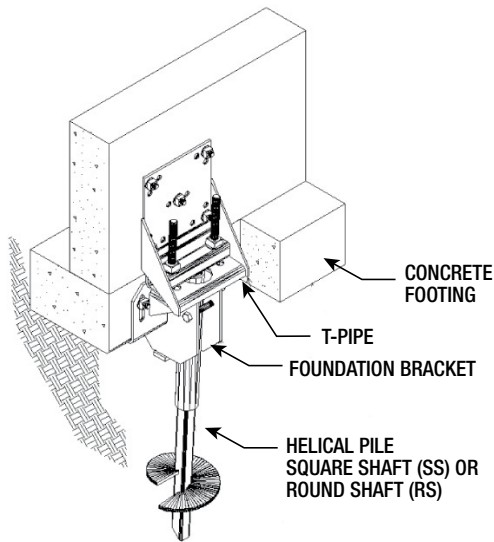
### CHANCE® Helical PSAC1500499 Low Profile Bracket and T-Pipe Ratings

T-Pipe Catalog Numbers for the PSA1500499 Bracket	Ultimate Mechanical Strength <sup>1,3</sup> lbs (kN)	Pile Size in (mm)	Product Series	Max Working Capacity <sup>2,3</sup> based on Product Series lbs (kN)	Features
PSAC1500503	30,000 (133)	1½" (38) Square	SS5 SS150	15,000 (67)	Lowest cost with Type SS5 Product Series
PSAC2780003	30,000 (133)	2⅞" (73) Round	RS2875.203	15,000 (67)	

Notes:

1. Ultimate mechanical strength is for the Bracket Body and T-Pipe combination.
2. The capacity of CHANCE® Helical Pile Systems is a function of many individual elements, including the capacity of the foundation, bracket, pile shaft, helix plate and bearing stratum, as well as the strength of the foundation-to-bracket connection, and the quality of the helical pile installation. The fifth column shows typical working capacities of the CHANCE® Helical Pile System based upon maximum shaft exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. Actual capacities could be higher or lower depending on the above factors.
3. The ultimate capacity of the system, i.e., bracket, T-pipe, and pile shaft, can be increased to the pile shaft compression capacity limit as shown in the Technical Design Manual, provided the pile shaft is reinforced using a pipe sleeve or grout column. The maximum working capacity shall not be greater than one half the ultimate mechanical strength of the bracket and T-pipe combination given above.

## CHANCE® HELICAL SIDE JACK UPLIFT RESTRAINT BRACKET WITH C150-0227 BRACKET AND T-PIPE SYSTEM



- Designed to be used with CHANCE® Helical Pile Foundation Systems.
- All C150-0227 Uplift Restraint Systems include:
  - Uplift bracket
  - Epoxy kit

Order separately: 5/8" (16 mm) diameter anchor bolts per pier as required.

Standard finish is galvanized per ASTM A153.

Ultimate mechanical strength of Uplift Restraint Bracket body is 15,000 lbs (67 kN). Working mechanical strength of Uplift Restraint Bracket body is 7,500 lbs (33 kN).

**For C150-0121** bracket and T-pipe ratings refer to page 31.

**For C150-0299** bracket and T-pipe ratings refer to page 32.

- Used in conjunction with Underpinning Brackets C150-0121 and C150-0299 to resist both settlement and uplift forces.
- Designed as an add-on component. Will not interfere with the lifting or stabilization features of the brackets.
- Two phase installation:
  - Phase 1 – Lift or stabilize the structure using one of the CHANCE® Helical Pile Foundation systems.
  - Phase 2 – Install the Uplift Restraint Bracket and bolt it to the foundation to resist uplift forces.
- Uplift Restraint Bracket is designed to be bolted flush against concrete foundations. Requires between 20-24 inches (51-61 cm) of free vertical length above the bottom of the foundation.
- This bracket is not intended to resist uplift forces resulting from frost or an expansive soil condition acting on the base of the grade beam.

## CHANCE® DIRECT JACK UNDERPINNING BRACKETS C150-0733 / C150-0738



C1500738 may be used with only SS5 and SS150 (1½" square shaft) piers.

C1500733 may be used with only SS175 (1¾" square shaft) piers. Always use the correct bracket and T-pipe forth size of anchors to be installed.

Standard Finish is Hot Dipped Galvanized per ASTM A153

Material Specifications:

Bracket Body: ½" thick steel per ASTM A36 latest rev.

T-pipe Pipe: Steel pipe per ASTM A500 latest rev.

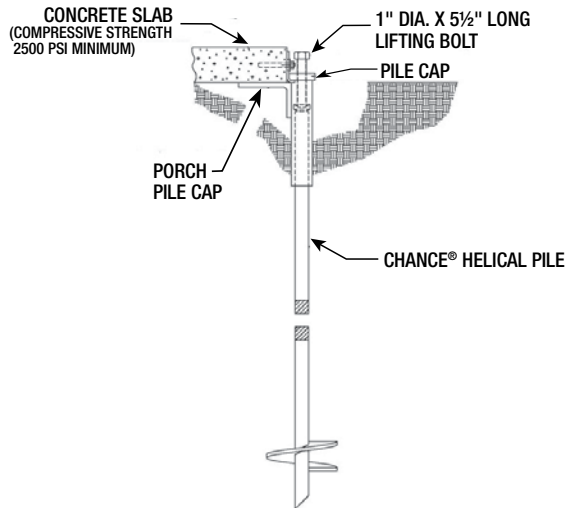
Lifting Studs: Williams form #11 Grade 90.

### CHANCE® Direct Jack Underpinning Brackets

Product Number	Shaft Size	Minimum Ultimate Strength (lbs)	Working Loads (lbs)
C150-0738	SS150/SS5	70,000	35,000
C150-0733	SS175	100,000	50,000

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## DIRECT JACK PORCH PILE CAP ASSEMBLIES



This assembly is used to raise the concrete slab edge or non-load bearing wall using a screw lift system. The assembly consists of porch pile cap assembly and helical pile.

Ultimate mechanical strength = 10,000 lbs (44 kN)

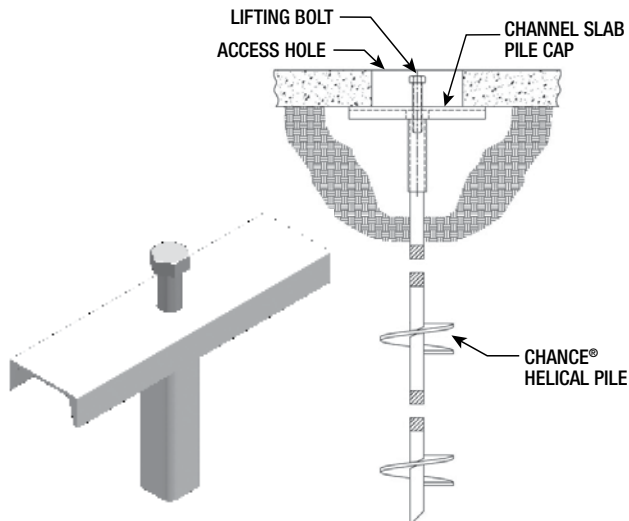
Maximum working capacity = 5,000 lbs (22 kN)

FITS STANDARD PILE SIZES:

**C150-0239** (1½" square shaft)

Standard Finish is Hot Dip Galvanized

## DIRECT JACK CHANNEL SLAB PILE CAP ASSEMBLIES



This assembly is used to raise the concrete slab using a screw lift system through the slab. It consists of screw lift slab pile assembly and helical pile. (Order helical pile Separately.)

Ultimate mechanical strength = 10,000 lbs (44kN)

Maximum working capacity = 5,000 lbs (22 kN)

Maximum lifting capacity = 7,500 lbs (33 kN)

STANDARD PILE SIZES:

**T150-0085** (1½" square shaft)

Standard Finish is Hot Dip Galvanized

This product complies with ICC Evaluation Services, Inc. Evaluation Report #ER-5110

NOTE: Standard access hole: 6"-8" dia. for square shaft piles.

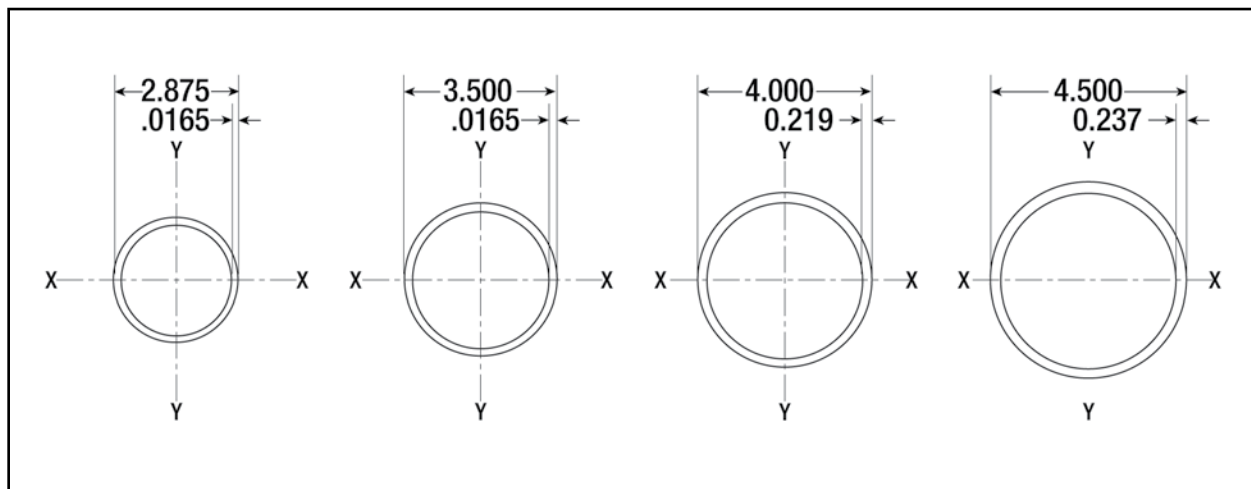
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## ATLAS RESISTANCE® PIERS

The Atlas Resistance® Pier is an assembly of structural steel components that includes a steel bracket assembly attached to the foundation or slab, which is then mounted on a steel pier that is installed to bedrock or firm bearing stratum. The lead pier starter section includes a unique friction reduction collar that tends to reduce skin friction on the pier pipe during installation. CHANCE® Civil Construction offers a broad range of pier pipe sizes and remedial repair brackets for both foundation underpinning and slab underpinning applications. This section will discuss those products in detail along with their capacity ratings.

### PIER PIPE SHAFTS

**Figure 6: Atlas Resistance® Pier Cross Section Drawings**



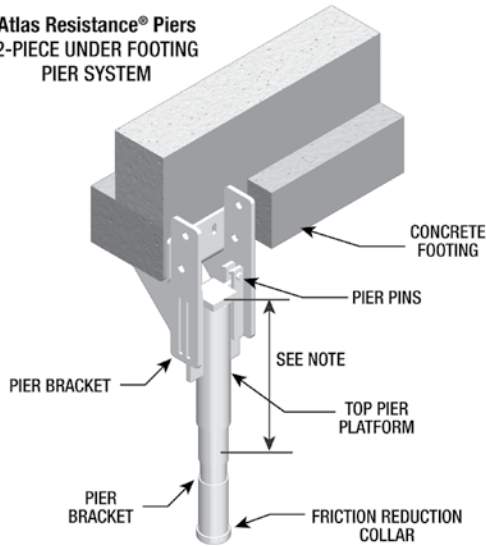
### Atlas Resistance® Pier Section Properties

**Table 9**

PRODUCT SERIES	SHAFT SIZE in (mm)	WALL THICKNESS in (mm)	METAL AREA in <sup>2</sup> (cm <sup>2</sup> )	PERIMETER in (cm)	MOMENT OF INERTIA in <sup>4</sup> (cm <sup>4</sup> ) I <sub>x-x</sub> , I <sub>y-y</sub> , I <sub>x-y</sub>	SECTION MODULUS in <sup>3</sup> (cm <sup>3</sup> )	
						S <sub>x-x</sub>	S <sub>y-y</sub>
RS2875.165	2.875 (73)	0.165 (4.2)	1.4 (9.0)	9.0 (22.9)	1.29 (53.7)	0.90 (14.7)	0.90 (14.7)
RS3500.165	3.5 (89)	0.165 (4.2)	1.7 (11.0)	11.0 (27.9)	2.41 (100.3)	1.38 (22.6)	1.38 (22.6)
RS4000.219	4.0 (101)	0.219 (5.6)	2.6 (16.8)	12.6 (32.0)	4.66 (194.0)	2.33 (38.2)	2.33 (38.2)
RS4500.237	4.5 (114)	0.237 (6.0)	3.2 (20.6)	14.1 (35.9)	7.23 (301.0)	3.21 (52.6)	3.21 (52.6)

## ATLAS RESISTANCE® STANDARD AND MODIFIED 2-PIECE SYSTEMS

Atlas Resistance® Piers  
2-PIECE UNDER FOOTING  
PIER SYSTEM



- Use for lifts up to 4".
- All 2-piece pier systems include:
  - Pier bracket .
  - Top pier platform.
  - 14 linear feet of pier pipe (including the starter section).
  - "M" designates one modified sleeve included.
- Order Separately: Two pier pins (two Grade 8 bolts for 4½" pier) and pier shims. Each pier requires a minimum of four anchor bolts. **NOTE:** Anchor bolts not supplied by CHANCE® Civil Construction
- Standard finish is all mill steel (except AP-2-UF-3500[PA] series, which has "Flow Coat" corrosion protection on the pier pipe, standard). Specify finish within brackets [\*] when ordering. See **Note 3** at bottom of table for available finishes.

### Atlas Resistance® Standard and Modified 2-Piece Pier Designators

Pier Designation NOTE: Specify finish in area marked [*]	Ultimate Capacity <sup>1</sup>	Max Working Capacity <sup>1</sup>	Pier Dia	Catalog Number			
				Plain "P"	Plain w/ F.C. Pipe "PA"	H.D.G. w/ F.C. Pipe "GA"	H.D.G. "G"
AP-2-UF-2875.165[*][14'-0]	60,000#	30,000#	2⅞"	PSA1033	PSA1847	PSA3936	PSA1054
AP-2-UF-2875.165M[*][14'-0]	70,000#	35,000#	2⅞"	PSA4797	PSA4798	PSA4799	PSA4800
AP-2-UF-3500.165[*][14'-0]	85,000#	42,500#	3½"	N/A	PSA1000N	PSA1051N	N/A
AP-2-UF-3500.165[*][14'-0] (1)	85,000#	42,500#	3½"	N/A	PSA1000	PSA1051	N/A
AP-2-UFVL-3500.165[*][14'-0]	86,000#	43,000#	3½"	N/A	PSA1024N	PSA2032N	N/A
AP-2-UF-3500.165[*][14'-0] (1) (4" Dia. Sleeve at top of Pier)	91,000#	45,500#	3½"	N/A	PSA1094	PSA1104	N/A
AP-2-UF-3500.165M[*][14'-0]	91,000#	45,500#	3½"	N/A	PSA1094N	PSA1104N	N/A
AP-2-UFVL-3500.165M [*][14'-0]	91,000#	45,500#	3½"	N/A	PSA2291N	PSA2290N	N/A
AP-2-UF-4000.219[*][14'-0]	98,000#	49,000#	4"	PSA1213N	N/A	N/A	PSA2977
AP-2-UFVL-4000.219[*][14'-0]	110,000#	55,000#	4"	PSA2576N	N/A	N/A	PSA2577N
AP-2-UF-4500.237[*][14'-0]	141,000#	70,500#	4½"	PSA2270	N/A	N/A	PSA2998

**Notes:**

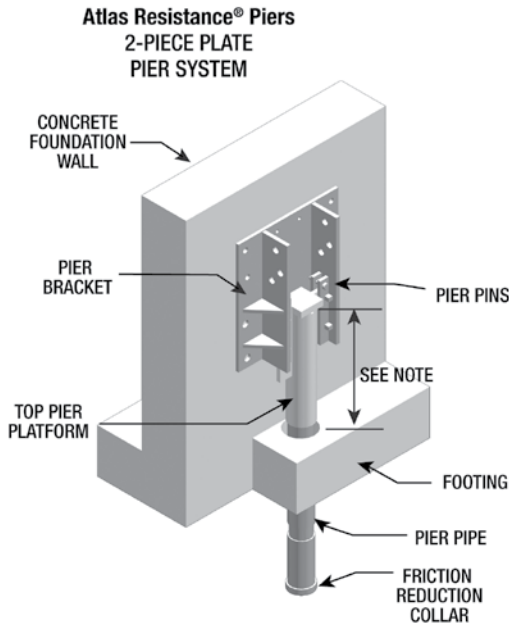
1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. The capacities are based on a pier depth to fixity of 5'-6.
2. Complies with the structural provisions of the most recent editions of BOCA National Code, ICBO Uniform Code, SBCCI Standard Code and 2000 International Building and Residential Code (2002 Accumulative Supplement). (See Appendix C.)
3. Specify letter for available finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.

(1) Design used in ICC Legacy Report NER-579.





## ATLAS RESISTANCE® 2-PIECE PLATE PIER SYSTEMS



- Easy surface mount installation.
- May be used for round columns (custom manufactured - see information below).
- Use for lifts up to 4".
- All plate pier systems include:
  - Pier bracket.
  - Top pier platform.
  - 14 feet of pier pipe (including starter section).

Order separately: Two pier pins (two Grade 8 bolts for 4½" pier) and pier shims. Eight anchor bolts per pier are required (see Technical Design Manual, Appendix C for anchor bolt specifications). **NOTE:** Anchor bolts not supplied by CHANCE® Civil Construction.

Standard finish is mill steel (except AP2-PP-3500.165[PA], which has "Flow Coat" corrosion protection on the pier pipe standard). Specify finish within brackets [\*] when ordering. See **Note 3** at bottom of table for available finishes.

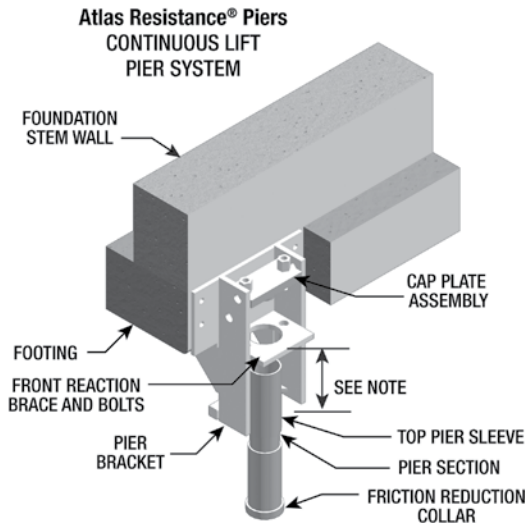
### Atlas Resistance® 2-Piece Pier Plate Pier Designators

Pier Designation NOTE: Specify finish in area marked [*]	Ultimate Capacity <sup>1</sup> 60,000#	Max Working Capacity <sup>1</sup>	Pier Dia	Catalog Number			
				Plain "P"	Plain w/ F.C. Pipe "PA"	H.D.G. w/ F.C. Pipe "GA"	H.D.G. "G"
AP-2-PP-2875.165[*][14'-0]	60,000#	30,000#	2⅞"	PSA4048	PSA4809	PSA4484	PSA4812
AP-2-PP-3500.165[*][14'-0]	86,000#	43,000#	3½"	N/A	PSA4037	PSA4479	N/A
AP-2-PP-4000.219[*][14'-0]	103,000#	51,500#	4"	PSA1214	N/A	N/A	PSA4478
AP-2-PP-4500.237[*][14'-0]	112,000#	56,000#	4½"	PSA3512	N/A	N/A	PSA3513

Notes:

1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. The capacities are based on a pier depth to fixity of 5'-6.
2. Mounting distance from bottom of stem wall to bottom of plate pier bracket must be greater than 5".
3. Specify letter for available finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.

## ATLAS RESISTANCE® CONTINUOUS LIFT PIER SYSTEMS



- Use for lifts exceeding 4".
- Exceptional, extended lift capabilities.
- All Continuous Lift Pier Systems include:
  - Continuous lift pier bracket assembly.
  - Cap plate assembly.
  - Top pier sleeve. (Not applicable on AP-CL-UF-4000.219).
  - Front reaction brace and hardware.
  - 14 linear feet of pier pipe (including the starter section).
  - Order separately: Re-useable lift head, continuous thread rebar, nuts, and 6 anchor bolts.

Standard finish is mill steel (except AP-CLP-3500.165[PA], which has "Flow Coat" corrosion protection on the pier pipe standard).

Specify finish when ordering. See **Note 2** at bottom of table for available finishes.

### Atlas Resistance® Continuous Lift Pier Designators

Pier Designation Specify finish in area marked [*]	Ultimate Capacity <sup>1</sup>	Max Working Capacity <sup>1</sup>	Pier Dia.	Catalog Number			
				Plain "P"	Plain w/ F.C. Pipe "PA"	H.D.G. w/ F.C. Pipe "GA"	H.D.G. "G"
AP-CL-UF-2875.165[*][14'-0]	40,000#	20,000#	2 7/8"	PSA2697	PSA4555	PSA3240	Special Order
AP-CL-UF-3500.165[*][14'-0]	61,000#	30,500#	3 1/2"	N/A	PSA1138	PSA1139	N/A
AP-CL-UF-4000.219[*][14'-0] (Similar to illustration)	100,000#	50,000#	4"	PSA4486	N/A	N/A	PSA4478

Notes:

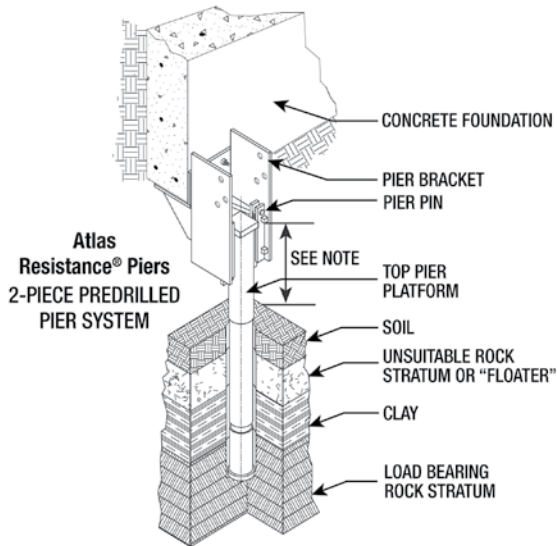
1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. The capacities are based on a pier depth to fixity of 5'-6.
2. Specify letter for available finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.

### Atlas Resistance® Continuous Lift Plate Pier Designators (Special Order-Not Shown)

AP-CL-PP-2875.165[*][14'-0]	40,000#	20,000#	2 7/8"	Lowest cost.
AP-CL-PP-3500.165[*][14'-0]	61,000#	30,500#	3 1/2"	"Flow Coat" pier pipe standard.
AP-CL-PP-4000.219[*][14'-0]	100,000#	50,000#	4"	Higher Capacity.

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## ATLAS RESISTANCE® 2-PIECE PREDRILLED PIER SYSTEMS



- Use for lifts up to 4".
- Drilled pier access hole required where unsuitable rock is near surface.
- Use where designer requires penetration into bearing rock.
- Eccentricity from wall to C-L pipe is 6¾".
- All pre-drilled piers include:
  - Pier bracket .
  - Top pier platform.
  - 14 linear feet of pier pipe (including the starter section).

Order separately: Two pier pins and four anchor bolts per pier, and shims as required.

Specify finish when ordering. See Note 2 at bottom of table for available finishes.

Standard finish is mill steel (Except AP-2-UFPD-3500.165M [PA], which has "Flow Coat" corrosion protection on the pier pipe standard).

### Atlas Resistance® 2-Piece Predrilled Pier Designators

Pier Designation Specify finish in area marked [*]	Ultimate Capacity <sup>1</sup>	Max Working Capacity <sup>1</sup>	Pier Dia	Catalog Number			
				Plain "p"	Plain w/ F.C. Pipe "PA"	H.D.G. w/ F.C. Pipe "GA"	H.D.G. "G"
AP-2-UFPDVL-2875.165M[*][14'-0]	58,000#	29,000#	2⅞"	PSA4859	PSA4862	PSA4863	
AP-2-UFPDVL-3500.165M[*][14'-0]	62,000#	31,000#	3½"	N/A	PSA4864	PSA4865	N/A
AP-2-UFPDVL-4000.219[*][14'-0]	76,000#	38,000#	4"	PSA3926	N/A	N/A	PSA3927
AP-2-UFPD-4500.237[*][14'-0]	92,000#	46,000#	4½"	PSA4860	N/A	N/A	PSA4861

Notes:

1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Blow Count (SPT) of 4. The capacities are based on a pier depth to fixity of 5'-6.
2. Specify letter for available finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.

### Atlas Resistance® 2-Piece Predrilled Plate Pier Designators (Special Order-Not Shown)

Note: Mounting distance from bottom of stem wall to bottom of plate pier bracket must be greater than 5".

AP-2-PPPD-3500.165[*][14'-0]	76,000#	38,000#	3½"	Lowest cost. Corrosion resistant. "Flow Coat" pier pipe standard.
AP-2-PPPD-3500.165M[*][14'-0]	80,000#	40,000#	3½"	Low cost. Corrosion resistant. "Flow Coat" pier pipe standard.
AP-2-PPPD-4000.219[*][14'-0]	83,000#	41,500#	4"	Higher capacity.
AP-2-PPPD-4500.237[*][14'-0]	95,000#	47,500#	4½"	Highest capacity. Commercial and industrial applications.

## ACCESSORIES FOR ATLAS RESISTANCE® PIERS

### Extension Pier Section:



### PIER SECTIONS

(Includes Coupling – Section Length 3' - 6')

Product Designation	Pier Dia. (in.)	Weight (lb.)	Price/Catalog Number		
			Plain "P"	Flow Coat "A"	H.D.G. "G"
AP-EPS-2875.165[*]	2 $\frac{7}{8}$ "	18.5	PSA1036	PSA1341	PSA1057
AP-EPS-3500.165[A]	3 $\frac{1}{2}$ "	24	N/A with this finish	PSA1003	N/A with this finish
AP-EPS-4000.219[*]	4"	37	PSA1107	N/A with this finish	PSA1152
AP-EPS-4500.237[*]	4 $\frac{1}{2}$ "	45	PSA1260		PSA2981

### Pier Sleeving:



### PIER SLEEVE

(Section Length 3' - 6')

Product Designation See "Fits Pier Dia."	Fits Pier Dia. (in.)	Weight (lb.)	Price/Catalog Number	
			Plain "P"	H.D.G. "G"
AP-PPS-3500.216[*] (Sleeve for 2-7/8" Piers)	2 $\frac{7}{8}$ "	28	PSA4843	PSA4844
AP-PPS-4000.219[*] (Sleeve for 3-1/2" Piers)	3 $\frac{1}{2}$ "	33	PSA1821	PSA1216
AP-PPS-4500.237[*] (Sleeve for 4" Piers)	4"	40	PSA1353	PSA3592

### Modified Top Pier Sleeve:



AP-MPS-3500.216[\*] – 3 $\frac{1}{2}$ " OD x 0.216" wall x 42" long with internal ring.  
Fits under top pier platform - 2 $\frac{7}{8}$ " diameter pier system (modified piers).

GALV = **PSA4461**  
PLAIN = **PSA2700**  
GALV = **PSA1106**  
PLAIN = **PSA1096**

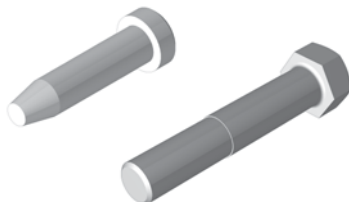
AP-MPS-4000.219[\*] – 4" diameter x 0.219" wall x 42" long with internal ring.  
Fits under top pier platform – 3 $\frac{1}{2}$ " diameter pier system (modified piers).

**NOTE:** This item included as part of the MODIFIED Pier Systems.

**# SPECIFY ACCESSORY FINISH**

(Designation "A" – "Flow Coat" corrosion finish not available on pier sleeving).

### Pier Pins and Lock Off Bolts:



HDW-PIN-5/8[G][0'-3]

**Catalog Number PSA1030**

- Tapered pier pin  $\frac{5}{8}$ " diameter by 3" long - galvanized.
- Pier pin fits all Atlas 2-piece piers except 4 $\frac{1}{2}$ " diameter pier systems.

HDW-BOLT-3/4-10[G][0'-4] Grade8

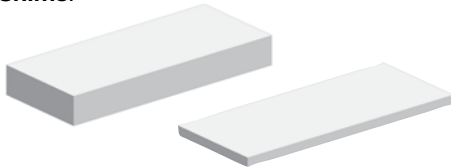
**Catalog Number PSA5281**

- Hex bolt -  $\frac{3}{4}$ " diameter by 4" long.
- Lock off bolt fits 4 $\frac{1}{2}$ " diameter 2-piece pier systems only.

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## ACCESSORIES FOR ATLAS RESISTANCE® PIERS

**Shims:**



HDW-SHIM-7GA[G][ $\frac{7}{8}$  x 1½] **Catalog Number PSA1031**

•  $\frac{3}{16}$ " (nominal) thick pier shim (thick shim) – galvanized.

HDW-SHIM-16GA[G][ $\frac{1}{2}$  x 1½] **Catalog Number PSA1032**

•  $\frac{1}{16}$ " (nominal) thick pier shim (thin shim) – galvanized.

**NOTE:** Shims are for all piers except continuous lift piers and slab piers.

**Continuous Thread Bar:**



**STRUCTURAL LIFT TO ALL-THREAD BAR LENGTH**

LIFT REQUIRED	BAR LENGTH
6"	2' – 0"
12"	2' – 6"
18"	3' – 0"
30"	4' – 0"
42"	5' – 0"
54"	6' – 0"
Uncut	10' – 0"

**HDW-ATRB-WF#[G][Length]**

**NOTE:** Order length based upon desired lift.

Specify plain or galvanized finish.

**Sizes:**

WF6 - FITS: ( $\frac{7}{8}$ " nominal dia)  
AP-CL-UF-2875.165, (Qty 2)  
AP-CL-PP-2875.165, (Qty 2)

WF7 - FITS: (1" nominal dia)  
AP-CL-UF-3500.165, (Qty 2)  
AP-CL-UF-4000.219, (Qty 2)  
AP-CL-PP-3500.165, (Qty 2)  
AP-CL-PP-4000.219, (Qty 2)

Catalog Number	Description
C150-0635	HDW-ATRB-WF10[G][10'0]
C150-0636	HDW-ATRB-WF10[G][2'0] LHT
C150-0637	HDW-ATRB-WF10[G][3'0]
C150-0638	HDW-ATRB-WF10[G][4'0] LHT
C150-0639	HDW-ATRB-WF10[G][6'0]
C150-0640	HDW-ATRB-WF11[G][10'0]
C150-0641	HDW-ATRB-WF11[G][4'0] LHT
C150-0642	HDW-ATRB-WF14[G][10'0]
C150-0643	HDW-ATRB-WF6[G][10'0]
C150-0644	HDW-ATRB-WF6[G][2'0]
C150-0645	HDW-ATRB-WF6[G][3'0]
C150-0646	HDW-ATRB-WF6[G][4'0]
C150-0647	HDW-ATRB-WF6[G][6'0]
C150-0653	HDW-ATRB-WF7[G][10'0]
C150-0654	HDW-ATRB-WF7[G][2'0]
C150-0655	HDW-ATRB-WF7[G][3'0]
C150-0656	HDW-ATRB-WF7[G][4'0]
C150-0657	HDW-ATRB-WF7[G][6'0]
C150-0664	HDW-ATRB-WF8[G][10'0]
C150-0665	HDW-ATRB-WF8[G][2'0]
C150-0666	HDW-ATRB-WF8[G][3'0]
C150-0667	HDW-ATRB-WF8[G][4'0]
C150-0668	HDW-ATRB-WF8[G][5'0]
C150-0669	HDW-ATRB-WF8[G][6'0]

F

## ACCESSORIES FOR ATLAS RESISTANCE® PIERS

### Plate Pier Bracket:



AP-2-UFB-2875[\*] – Pier bracket (only) that is designed to accept a 2 $\frac{7}{8}$ " OD pier shaft. Specify finish. (Similar to illustration)

AP-2-UFB-3500-4000[\*] – Pier bracket (only) that is designed to accept 3 $\frac{1}{2}$ " and 4" OD shafts. Specify finish.

AP-2-UFB-4500[\*] – Pier bracket (only) that is designed to accept 4 $\frac{1}{2}$ " OD shaft. Specify finish. (Similar to illustration – requires special installation equipment).

### BRACKET ASSEMBLIES

Description	Product Designation	Wt (lb.)	Plain	Galv.
2-Piece Bracket	AP-2-UFB-2875.165[*]	57	PSA1034	PSA1055
2-Piece Bracket	AP-2-UFB-3500-4000[*]	72	PSA1001	PSA1052
2-PC Brkt - Mod VL	AP-2-UFVLB-3500-4000[*]	75	PSA1086	PSA2027
2-Piece Bracket	AP-2-UFB-4500[*]	83	PSA2269	PSA2979

### Plate Pier Bracket:



AP-2-PPB-2875[\*] – Plate pier bracket (only) that is designed to accept a 2 $\frac{7}{8}$ " OD pier shaft. Specify finish. (Similar to illustration)

AP-2-PPB-3500-4000[\*] – Plate pier bracket (only) that is designed to accept 3 $\frac{1}{2}$ " and 4" OD shafts. Specify finish.

AP-2-PPB-4500[\*] – Plate pier bracket (only) that is designed to accept 4 $\frac{1}{2}$ " OD shaft. Specify finish. (Similar to illustration - requires special installation equipment).

### BRACKET ASSEMBLIES

Description	Product Designation	Wt (lb.)	Plain	Galv.
Plate Pier Bracket	AP-2-PPB-2875[*]	63	PSA3991	PSA4483
Plate Pier Bracket	AP-2-PPB-3500-4000[*]	100	PSA4036	PSA4477

### Continuous Lift Bracket:



AP-CL-UFB-2875[\*] – Continuous lift bracket (only) that is designed to accept a 2 $\frac{7}{8}$ " OD pier shaft. Specify finish. (Similar to illustration)

AP-CL-UFB-3500[\*] – Continuous lift pier bracket (only) that is designed to accept 3 $\frac{1}{2}$ " OD shaft. Specify finish.

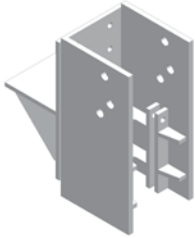
AP-CL-UFB-4000[\*] – Continuous lift pier bracket (only) that is designed to accept 4" OD shaft. Specify finish. (Similar to illustration)

### BRACKET ASSEMBLIES

Description	Product Designation	Wt (lb.)	Plain	Galv.
Cont. Lift Bracket	AP-CL-UFB-2875[*]	84	PSA2698	PSA3239
Cont. Lift Bracket	AP-CL-UFB-3500-4000[*]	109	PSA1194	PSA1195

## ACCESSORIES FOR ATLAS RESISTANCE® PIERS

### Pre-Drill Bracket:



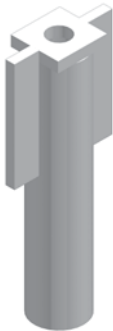
AP-2-UFPDB-2875[\*] – Pier bracket (only) that is designed to accept a 2 $\frac{7}{8}$ " OD pier shaft. Specify finish. (Similar to illustration)

AP-2-UFPDB-3500-4000[\*] – Pier bracket (only) that is designed to accept from 3 $\frac{1}{2}$ " up to 4" OD shafts. Specify finish.

### BRACKET ASSEMBLIES

Description	Product Designation	Wt (lb.)	Plain	Galv.
Pre-Drill Bracket	AP-2-UFPDB-2875[*]	84	PSA4836	PSA4838
Pre-Drill Bracket	AP-2-UFP-DB-3500-4000-4500[*]	134	PSA3924	PSA3925

### Top Pier Platform:



### USE WITH 2-PIECE, PLATE PIER and PRE-DRILLED BRACKETS

AP2-TPP-2875[\*] – Top pier platform that is designed to accept a 2 $\frac{7}{8}$ " OD pier shaft. (16 $\frac{5}{8}$ " long sleeve). Specify finish.

AP2-TPP-2875M[\*] – Top pier platform that is designed to accept a 2 $\frac{7}{8}$ " modified pier shaft. (16 $\frac{5}{8}$ " long sleeve). Specify finish.

AP2-TPP-3500[\*] – Top pier platform that is designed to accept a 3 $\frac{1}{2}$ " OD standard pier shaft. (17 $\frac{3}{4}$ " long sleeve). Specify finish.

AP2-TPP-4000[\*] – Top pier platform that is designed to accept a 4" OD standard pier shaft or 3 $\frac{1}{2}$ " modified pier shaft. (17 $\frac{3}{4}$ " long). Specify finish.

AP2-TPP-4500[\*] – Top pier platform that is designed to accept a 4 $\frac{1}{2}$ " OD standard pier shaft. (17 $\frac{3}{4}$ " long sleeve) Specify finish. (Similar to illustration)

### TOP PIER PLATFORMS

Designation	Fits Pier Size	Length	Wt (lb.)	Plain	Galv.
AP-2-TPP-2875[*]	2 $\frac{7}{8}$ " Std.	16 $\frac{5}{8}$ "	19	PSA1035	PSA1056
AP-2-TPP-2875M[*]	2 $\frac{7}{8}$ " Mod.		22	PSA4839	PSA4840
AP-2-TPP-3500[*]	3 $\frac{1}{2}$ " Std.	17 $\frac{3}{4}$ "	26	PSA1002	PSA1053
AP-2-TPP-4000[*]	3 $\frac{1}{2}$ " Mod.		28	PSA1095	PSA1105
AP-2-TPP-4000[*]	4" Std.		28	PSA1095	PSA1105
AP-2-TPP-4000M[*]	4 Mod.	41 $\frac{1}{4}$ "	52	PSA4739	PSA4740
AP-2-TPP-4500[*]	4 $\frac{1}{2}$ " Std.	17 $\frac{3}{4}$ "	37	PSA2210	PSA2980

\* SPECIFY LETTER FOR FINISHES AVAILABLE: P = Mill Finish G = Hot Dip Galvanized



## FOUNDATIONS FOR LIGHTING AND SIGNAGE (FLS)

### BOLLARD FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0620	3'	4" - 8"	1	27

### 4" PARKING, AREA, & SITE LIGHTING FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0693	7'	6" - 14"	1	103
T112-0393		¾" Hardware for T112-0693		4

### 6" PARKING, AREA, & SITE LIGHTING FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0563	5'	8" - 14"	1	132
T112-0564	8'	8" - 14"	1	192
T112-0565	10'	8" - 14"	1	225

### 8" PARKING, AREA, & SITE LIGHTING FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0566	5'	9½" - 14"	1	162
T112-0567	8'	9½" - 14"	1	219
T112-0568	10'	9½" - 14"	1	264

### 3½" DECORATIVE LIGHTING FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0143	5'	5¼" - 8½"	1	71
T112-0142	5'	5¼" - 8"	1	80
T112-0302	64.5"	5" - 11¼"	1	103

### 4" DECORATIVE LIGHTING FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0338	56"	6" - 8¼"	1	66
T112-0905	56"	6" - 8¼" (3 Bolt Pattern)	1	73
T112-0514	56"	6" - 14"	1	80
T112-0393	¾" Hardware for T112-0514, T112-0338		1	4
T112-0392	¾" Hardware for T112-0905		1	2
C112-0466	1" Retainer Washers (set of 4)		1	1
T112-0632	1" Hardware for T112-0626, T112-0629		6	10
T112-0633	¾" Hardware for T112-0627, T112-0645		6	6
T112-0639	¾" Hardware (includes retaining washers)		10	3



G



## FOUNDATIONS FOR LIGHTING AND SIGNAGE (FLS)

### 6" STREETLIGHT FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0359	4'	8" - 14"	1	105
T112-0672	4'	8½" - 14"	1	109
T112-0363	4'	9½"	1	94
T112-0690	4'	Rd. 12"	1	155
T112-0268	4'	15"	1	150
T112-0679	4'	Rd. 7½" - 12"	1	116
T112-0291	5'	10½"	1	142
T112-0292	5'	11½"	1	140
T112-0296	5'	9" - 17"	1	162
T112-0361	5'	9" - 15"	1	163
T112-0575	5'	8" - 14"		131
T112-0671	5'	8" - 14"	1	133
T112-0160	5'	9" - 14"	1	146
C11232JG4VL	5'	9" - 14"	1	137
C11232JG4TL	5'	11½"	1	160
T112-0508	5'	11"	1	144
C11232JG4TJ	5'	10½"	1	148
T112-0438	5'	8½" - 15"	1	160
T112-0645	5'	Rd. 7" - 15"	1	154
T112-0627	5'	Rd. 7" - 15"	1	166
T112-0647	5'	8"	1	140
T112-0648	6'	8"	1	158
T112-0649	7'	8"	1	160
T112-0262	7'	9" - 14"	1	180



## FOUNDATIONS FOR LIGHTING AND SIGNAGE (FLS)

### 8" STREETLIGHT FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
T112-0212	5'	11"	1	155
T112-0293	5'	11½"	1	159
T112-0294	5'	14½"	1	193
T112-0444	5'	Rd. 12' - 16"	1	207
T112-0462	5'	15"	1	175
C112-45NW4TH	5'	10"	1	158
C112-42NG4TK	5'	11"	1	160
C112-42NQ4TK	5'	11"	1	164
C112-42NG4TL	5'	11½"	1	166
T112-0703	5'	10½"	1	166
C112-42NG4VP	5'	11" - 17"	1	187
T112-0626	5'	8¾" - 17"	1	187
C112-42NG4TU	5'	15"	1	201
C112-42NG4TJ	5'	10½"	1	166
C112-42NG4TM	5'	12"	1	158
T112-0271	5'	7" - 14'	1	163
T112-0394	5'	11" - 17'	1	181
T112-0699	6'	8" - 15"	1	181
T112-0509	6'	15"	1	215
T112-0644	6'	7" - 14"	1	165
T112-0426	6'	15"	1	194
T112-0353	6'	11" - 14"	1	194
C112-42QG4VP	7'	11" - 17"	1	227
T112-0424	7'	15"	1	224
T112-0629	8'	10" - 17"	1	249



### 10" STREETLIGHT FOUNDATIONS

Catalog Number	Length	Bolt Circle	Pkg Qty.	Wt (lb.)
C112-52SG4TU	5'	15"	1	201
T112-0592	5'	13½" - 17"	1	218
T112-0284	6'	15"	1	278
T112-0510	6'	15"	1	249
T112-0642	7'	11½"	1	258
T112-0590	7'	13½" - 17"	1	280
T112-0463	7'	17¼"	1	280
T112-0591	10'	13" - 17"	1	362
T112-0673	10'	15"	1	372

## FOUNDATIONS FOR LIGHTING AND SIGNAGE (FLS)

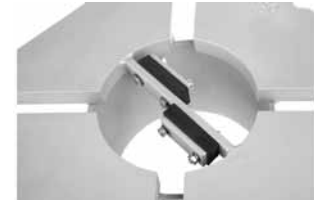
### FOUNDATION WITH ANTI-THEFT DEVICE

The CHANCE® anti-theft lighting foundation — or “AT Foundation” — is a device designed to stop thieves in their tracks, protecting both the public and private sectors from the high cost and intrinsic dangers of wire theft.

Catalog Number	Description
C11232JG4VL-AT	6" Streetlight Foundation with Anti-Theft Device
C11242NG4VP-AT	8" Streetlight Foundation with Anti-Theft Device



WITH ANTI-THEFT DEVICE



CLOSE-UP VIEW

### INSTALLING TOOLS

Catalog Number	Description	Pkg Qty.	Wt (lb.)
C130-0010	Flange Drive Adapter for Kelly Bar Attachment	1	10
C130-0013	Flange Drive Adapter for Locking Dog Attachment	1	12
C303-0139	Streetlight Foundation Drive Tool (10,000 Ft.-Lb.)	1	20
C303-0684	Streetlight Foundation Drive Tool (20,000 Ft.-Lb.)	1	49
T303-0247	Decorative Lighting Foundation Drive Tool	1	16
C303-0737	Bumper Post Tool, Kelly Bar Adapter Attachment	1	11
C303-0739	Bumper Post Tool, Locking Dog Attachment	1	2
C303-1230	5/4" Bolt Circle Adapter for C303-1180	1	8
C303-0115	Adapter for 3" x 1/2" Kelly Bar Adapter	1	11
T303-0166	Adapter with 5/4" & 7/8" Bolt Circle	1	11
630013	Kelly Bar Adapter, 10,000 Ft-Lb 2" Hex Kelly Bar	1	10
630016	Kelly Bar Adapter, 10,000 Ft-Lb 2 1/4" Square Kelly Bar	1	10
630017	Kelly Bar Adapter, 10,000 Ft-Lb 2 1/2" Square Kelly Bar	1	9
630011HD	Kelly Bar Adapter, 10,000 Ft-Lb 2 1/2" Hex Kelly Bar	1	18
630012HD	Kelly Bar Adapter, 10,000 Ft-Lb 2 5/8" Hex Kelly Bar	1	18
C303-0936	Kelly Bar Adapter, 15,000 Ft-Lb 2 1/2" Hex Kelly Bar	1	26
C303-0937	Kelly Bar Adapter, 15,000 Ft-Lb 2 5/8" Hex Kelly Bar	1	26
C303-0940	Kelly Bar Adapter, 15,000 Ft-Lb 3" Hex Kelly Bar	1	32
C303-0955	Kelly Bar Adapter, 15,000 Ft-Lb 2 1/2" Square Kelly Bar	1	25
C303-0958	Kelly Bar Adapter, 15,000 Ft-Lb 3" Square Kelly Bar	1	28
C303-0044	Shear Pin Torque Indicator	1	54
C303-0045	One Carton Shear Pins (Approx. 1,700 Pins)	1	50
C303-1340	Mechanical Dial Torque Indicator	1	65

## WALL ANCHORS AND ACCESSORIES

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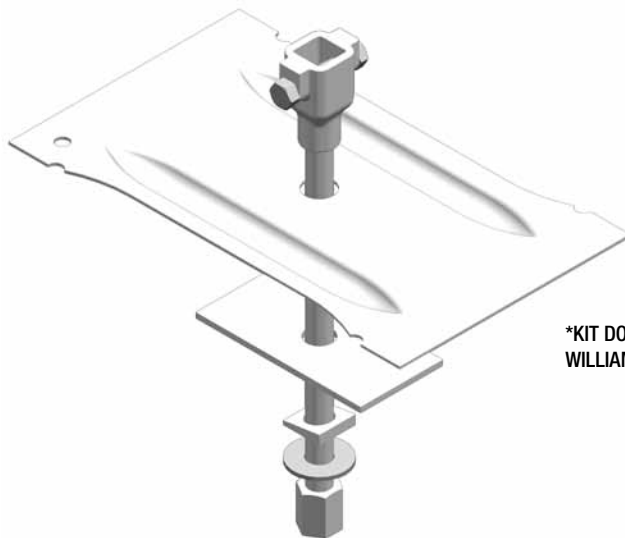
### Plate Washers

Catalog Number HDG	Designation	Hole Dia	Weight (lbs)
C150-0623	PW[*]1¼[¼x4x8]	1¼"	2.4
C150-0629	PW[*]2½[¾x4x4]	2½"	1.8
C150-0624	PW[*]1½[½x2½x2½]	1½"	1.0
C150-0630	PW[*]¾[½x3x3]	¾"	1.3
C150-0625	PW[*]1½[½x3x3]	1½"	1.3
C150-0621	PW[*]1½[½x3x3]	1½"	1.3
C150-0622	PW[*]1¼[½x6x8]	1¼"	7.0
C150-0627	PW[*]1¾[½x6x8]	1¾"	7.0
C150-0628	PW[*]1⅝[¾x6x6]	1⅝"	7.9
C150-0626	PW[*]1⅜[1x8x12]	1⅜"	28.1



### Wall Plate and Transition Kits (Available only in HDG)

Catalog No.	Description	Weight (lbs)	Item No
C150-0633	SS125 Transition Assembly Kit	19.1	PSA1577



\*KIT DOES NOT INCLUDE WILLIAMS FORM BAR.

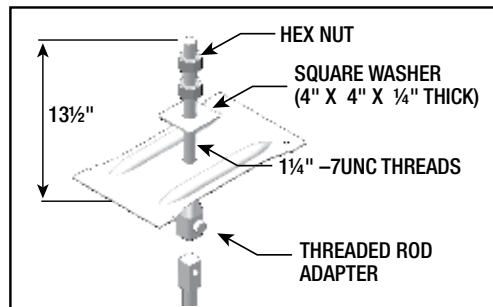
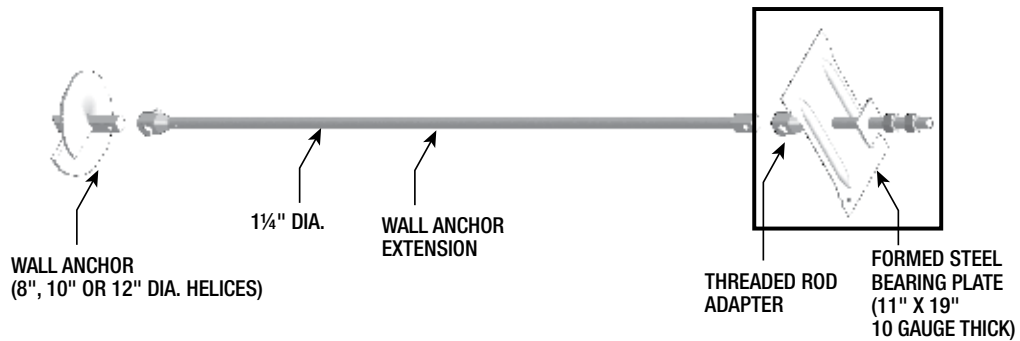


## WALL ANCHORS AND ACCESSORIES

### Wall Anchor Kits and Components

Catalog Number	Description	C150-0032 20" Threaded Bar Adapter	12698 7' x 1.25" Extension	E150-0088 Plate and Washer Assembly	E150-0079 8" Helix	E150-0252 10" Helix	E150-0254 12" Helix
T150-0080	8" Kit	X	X	X	X		
T150-0253	10" Kit	X	X	X		X	
T150-0255	12" Kit	X	X	X			X
T150-0447	48" Threaded Adapter						
12696	3.5' x 1.25" Extension						
12697	5' x 1.25" Extension						

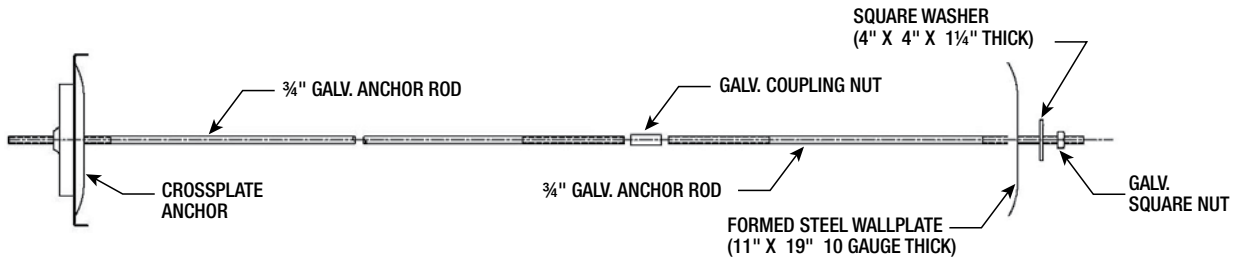
"X" = included in kit



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## WALL ANCHORS AND ACCESSORIES

### Dura Grip® Wall Anchor Kit



#### Wall Anchor Kits

Catalog Number	Description
T150-0362	20" galv crossplate anchor, 19" galv wallplate w/ washer and 9' x 3/4" rod w/ 2 nuts.
T150-0363	20" clear-coated crossplate anchor, 19" clear-coated wallplate w/ washer and 9' x 3/4" rod w/ 2 nuts.
T150-0364	20" galv crossplate anchor, 19" galv wallplate w/ washer, 9' x 3/4" Rod w/ 2 nuts and 4 1/2' x 3/4" rod w/ 1 nut and 1 coupling.
T150-0365	20" clear-coated crossplate anchor, 19" clear-coated wallplate w/ washer, 9' x 3/4" rod w/ 2 nuts and 4 1/2' x 3/4" rod w/ 1 nut and 1 coupling.
T150-0366	20" galv crossplate anchor, 19" galv wallplate w/ washer, 4 1/2' x 3/4" rod w/ 1 nut and 1 coupling and 4 1/2' x 3/4" rod w/ 1 nut.
T150-0367	20" clear-coated crossplate anchor, 19" clear-coated wallplate w/ washer, 4 1/2' x 3/4" rod w/ 1 nut and 1 coupling and 4 1/2' x 3/4" rod w/ 1 nut.

#### Wall Anchor Accessory Components

Catalog Number	Description
T150-0348	Four each: galv washers, galv square nuts and galv couplings (all for 3/4" rod).
T150-0349	9' x 3/4" galv rod w/ 18" of thread on both ends.
T150-0350	4 1/2' x 3/4" galv rod w/ 18" of thread on both ends.
T150-0351	4 1/2' x 3/4" rod, all-thread.
T150-0372	25" galv wallplate w/ galv washer.
T150-0373	25" clear-coated wallplate w/ clear-coated washer.
T150-0374	24" galv crossplate anchor.
T150-0375	24" clear-coated crossplate anchor.

#### Square Bevel Washers

Catalog Number HDG	Description	Part Number	Weight (lbs)
C150-0671	Beveled Washer	HDW-BW[G]15[1 1/8" dia hole] (150)	0.1
C150-0671	Beveled Washer	HDW-BW[*]15[1" dia hole] (150)	0.1



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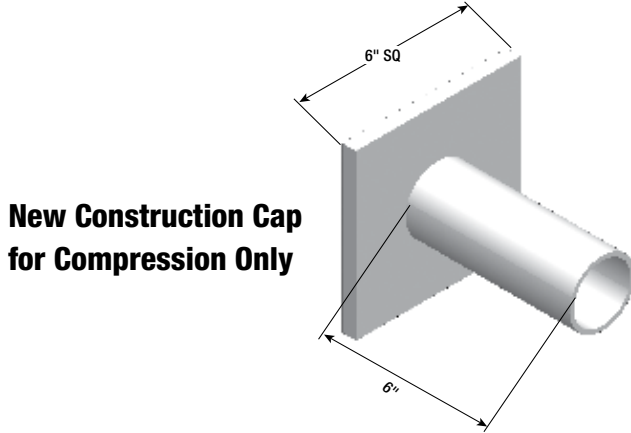
**ASSEMBLIES AND HARDWARE**

**ACCESSORIES AND TERMINATION DEVICES  
FOR CHANCE® HELICAL ANCHORS/PILES**

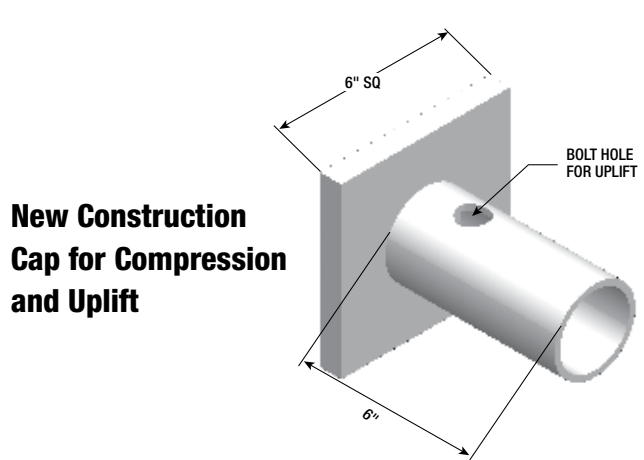
Specifying exactly what you need is easy with CHANCE® Helical Foundation Support Products. CHANCE® Civil Construction offers a variety of standard accessories and special termination devices depending on the project and application. This section illustrates some of our standard termination devices along with their mechanical ratings. If your project requires a special termination device, please contact your area CHANCE® Civil Construction Distributor.

**New Construction Pile Caps**

For preliminary design guidelines for reinforced pile caps refer to Section 4 of the Technical Design Manual.



**New Construction Cap  
for Compression Only**

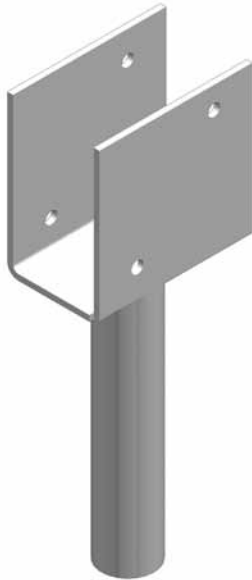


**New Construction  
Cap for Compression  
and Uplift**

**CHANCE® Helical New Construction Pile Caps**

Catalog Number	Fits Shaft Size	Plate Dimensions			Pipe Dimensions			Hole/ No Hole	Bolt	Galv/ Black	Working Rating (kip)	
		Length	Width	Thickness	OD	Wall Thickness	Length				Compression	Uplift
C150-0458	SS5/SS150	6	6	½"	2.375	0.154	6	NO HOLE	N/A	BLACK	40	N/A
C150-0465	SS5/SS150	6	6	½"	2.375	0.154	6	1 HOLE	YES	BLACK	40	20
PSA1673	SS5/SS150	4	6	½"	2.5	0.250	4	1 HOLE	YES	GALV	N/A	N/A
PSA5951	SS5/SS150	6	6	½"	2.5	0.250	6	NO HOLE	N/A	BLACK	N/A	N/A
T150-0725	SS5/SS150	4	2.63	½"	2.625	0.250	4	1 HOLE	YES	BLACK	N/A	N/A
C150-0459	SS175	6	6	¾"	2.875	0.203	6	NO HOLE	N/A	BLACK	60	N/A
C150-0467	SS175	6	6	¾"	2.875	0.203	6	1 HOLE	YES	BLACK	60	30
PSA2521	RS2875	8	8	¾"	3.4	0.216	4	1 HOLE	YES	BLACK	N/A	N/A
C150-0744	RS2875	8	8	¾"	3.4	0.216	6	1 HOLE	YES	BLACK	N/A	N/A
C278-8180	RS2875	8	8	¾"	3.4	0.216	6	2 HOLE	YES	BLACK	N/A	N/A
PSA5349	RS2875	6	6	½"	3.4	0.216	12	NO HOLE	N/A	GALV	N/A	N/A
PSA3864	RS2875	6	6	½"	3.4	0.216	6	NO HOLE	N/A	GALV	N/A	N/A
C150-0686	RS2875	6	6	½"	3.5	0.216	6	NO HOLE	N/A	GALV	N/A	N/A
C150-0607	RS3500.300	6	6	¾"	4.5	0.237	6	NO HOLE	N/A	BLACK	45	N/A
C150-0688	RS3500.300	8	8	½"	4.5	0.237	6	NO HOLE	N/A	BLACK	N/A	N/A
C150-0572	RS3500.300	10	10	¾"	4.5	0.237	6	3 HOLE	YES	GALV	N/A	N/A
C150-0615	RS3500.300	6	6	½"	4	0.219	6	1 HOLE	YES	GALV	N/A	N/A
PSA4202	RS3500.300	8	8	½"	4	0.219	6	1 HOLE	YES	GALV	N/A	N/A
C107-0981	RS4500.337	8	8	½"	3.75	0.500	7	2 HOLE	YES	BLACK	N/A	N/A

## TIMBER SUPPORT BRACKETS



These brackets are used to connect timbers or girder beams to helical piles. The split bracket design is more universal because beam thickness or tolerance is not a problem. Both of these brackets fit over an SS5 or SS150 square shaft and inside an RS2875.203 round shaft.

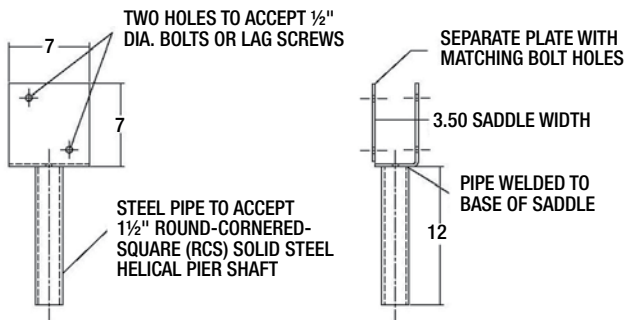
Types of Timber Support Brackets:

- **C110-0682** bracket has an ultimate rating of 10,000 lb. in compression.
- **C110-0736** is designed to attach to battered piles for lateral support.

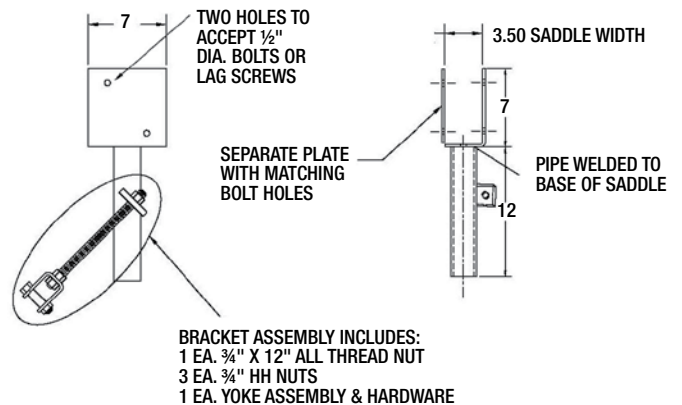
Standard finish is Hot Dipped Galvanized per ASTM A153.

For different size shafts, mounting holes, or special finishes please contact your area CHANCE® Civil Construction Distributor for availability.

### C110-0682 Bracket



### C110-0736 Assembly





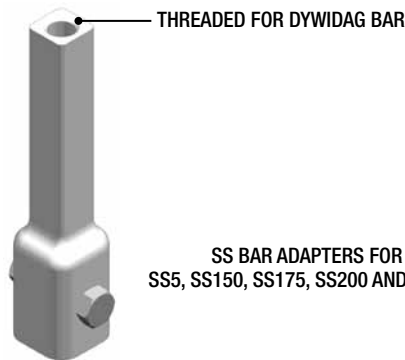
## SQUARE SHAFT THREADED BAR ADAPTERS

(See Table 9 on Page 4 for Mechanical Limits)



### Cast Square Bar Transitions 1¼" thru 1½" with Bolts and Nuts (Available Only HDG)

Catalog Number	Product Series	Threaded Output		Weight (lbs)	Item No
C150-0631	SS125	1" DIA	STANDARD	3	PSA15710



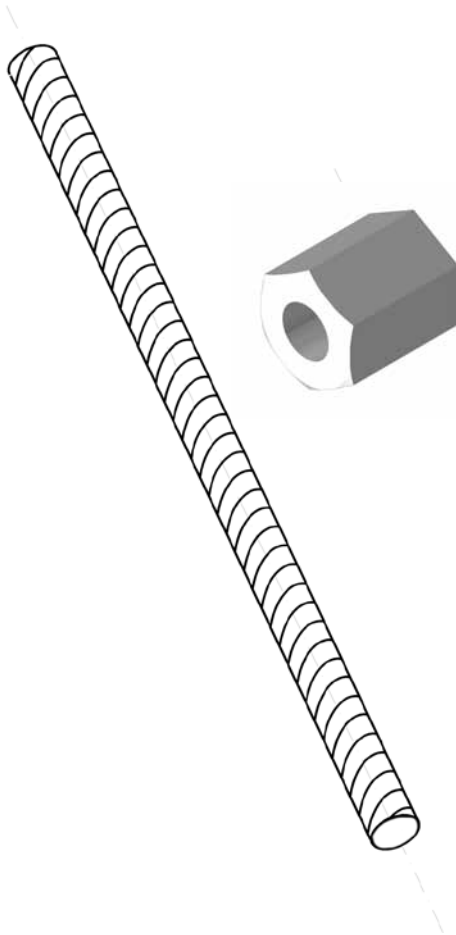
### Forged Square Bar Threaded Adapters 1½" thru 2¼" with Bolts and Nuts (Available Only HDG)

Catalog Number	Product Series	Threaded Output		Weight (lbs)
C114-0009	SS5/SS150	1" DIA	STANDARD	9
C114-0010	SS175	1" DIA	STANDARD	16
C114-0227	SS200	1" DIA	OPTIONAL	24
C114-0256	SS200	1¼" DIA	STANDARD	20
C114-0262	SS225	1¼" DIA	OPTIONAL	28
C114-0250	SS225	1½" DIA	STANDARD	27

## WILLIAMS FORM CONTINUOUSLY THREADED REBAR AND NUT

### HDW-ATRB-Bar Size[G][Length]

All-thread rebar connects to the transition attached to the anchor or pile and provides a threaded connection to a wall plate, eye nut for connecting a cable, turnbuckle, etc. Hot Dip Galvanized.



Catalog Number	Bar Designation	Nominal Diameter	Length	Product Description
C150-0643	6	3/4"	10'	HDW-ATRB-WF6[G][10'0]
C150-0644	6	3/4"	2'	HDW-ATRB-WF6[G][2'0]
C150-0645	6	3/4"	3'	HDW-ATRB-WF6[G][3'0]
C150-0646	6	3/4"	4'	HDW-ATRB-WF6[G][4'0]
C150-0647	6	3/4"	6'	HDW-ATRB-WF6[G][6'0]
C150-0648	6	3/4"	10'	HDW-ATRB-WF6[P][10'0]
C150-0649	6	3/4"	2'	HDW-ATRB-WF6[P][2'0]
C150-0650	6	3/4"	3'	HDW-ATRB-WF6[P][3'0]
C150-0651	6	3/4"	4'	HDW-ATRB-WF6[P][4'0]
C150-0652	6	3/4"	6'	HDW-ATRB-WF6[P][6'0]
C150-0653	7	7/8"	10'	HDW-ATRB-WF7[G][10'0]
C150-0654	7	7/8"	2'	HDW-ATRB-WF7[G][2'0]
C150-0655	7	7/8"	3'	HDW-ATRB-WF7[G][3'0]
C150-0656	7	7/8"	4'	HDW-ATRB-WF7[G][4'0]
C150-0657	7	7/8"	6'	HDW-ATRB-WF7[G][6'0]
C150-0658	7	7/8"	10'	HDW-ATRB-WF7[P][10'0]
C150-0659	7	7/8"	2'	HDW-ATRB-WF7[P][2'0]
C150-0660	7	7/8"	3'	HDW-ATRB-WF7[P][3'0]
C150-0661	7	7/8"	4'	HDW-ATRB-WF7[P][4'0]
C150-0662	7	7/8"	5'	HDW-ATRB-WF7[P][5'0]
C150-0663	7	7/8"	6'	HDW-ATRB-WF7[P][6'0]
C150-0664	8	1"	10'	HDW-ATRB-WF8[G][10'0]
C150-0665	8	1"	2'	HDW-ATRB-WF8[G][2'0]
C150-0666	8	1"	3'	HDW-ATRB-WF8[G][3'0]
C150-0667	8	1"	4'	HDW-ATRB-WF8[G][4'0]
C150-0668	8	1"	5'	HDW-ATRB-WF8[G][5'0]
C150-0669	8	1"	6'	HDW-ATRB-WF8[G][6'0]
C150-0635	10	1 1/4"	10'	HDW-ATRB-WF10[G][10'0] V1.5+
C150-0636	10	1 1/4"	2'	HDW-ATRB-WF10[G][2'0] LHT
C150-0637	10	1 1/4"	3'	HDW-ATRB-WF10[G][3'0]
C150-0638	10	1 1/4"	4'	HDW-ATRB-WF10[G][4'0] LHT
C150-0639	10	1 1/4"	6'	HDW-ATRB-WF10[G][6'0]
C150-0640	11	1 3/8"	10'	HDW-ATRB-WF11[G][10'0] V1.5+
C150-0641	11	1 3/8"	4'	HDW-ATRB-WF11[G][4'0] LHT
C150-0642	14	1 3/4"	10'	HDW-ATRB-WF14[G][10'0]

## SQUARE SHAFT THREADED STUD ADAPTERS



THREADED ADAPTER FOR SS5 AND SS150



THREADED ADAPTER FOR SS175

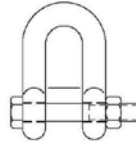
### Square Shaft 1½' thru 1¾' with Bolts and Nuts (Available only HDG)

Catalog Number	Product Series	Rod Diameter	Overall Length	Length of Thread	Weight (lbs)	Ultimate Capacity (lbs)
C150-0032	SS5/SS150	1¼'	20'	13½'	11	70,000
C110-0026	SS5/SS150	1¼'	20'	13½'	11	70,000
T150-0447	SS5/SS150	1¼'	48'	36'	19	70,000
C110-0514	SS175	1¼'	20'	13½'	12	100,000
T110-0352	SS175	1¼'	48'	36'	24	100,000
C150-0037	SS175	1¼'	20'	13½'	12	100,000

## GUYWIRE CONNECTION DEVICES

### Square Shaft Chain Shackles

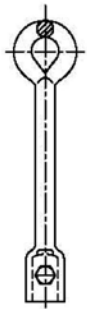
CHAIN SHACKLE FOR  
SS5, SS150, SS175,  
SS200, AND SS225



### Chain Shackles (Available only in HDG)

Catalog Number	Product Series	Weight (lbs)	Ultimate Capacity (lbs)
C110-0574	SS5/SS150	4	70,000
T110-0134	SS175	6	100,000
C110-0557	SS200	12	150,000
C110-0558	SS225	15	200,000

### Square Shaft Guy Adapters



OVALEYE  
ADAPTER



THIMBLEYE  
ADAPTER



TWINEYE  
ADAPTER



TRIPLEYE  
ADAPTER



TRIPLEYE  
SHACKLE

### Ovaley, Thimbleye, Twineye, and Tripleye Adapters

Catalog Number	Product Series	Description	Weight (lbs)	Ultimate Capacity (lbs)
C110-0041	SS5/SS150	Ovaley	11	70,000
C102-0023	SS5/SS150	Thimbleye	11	70,000
C102-0024	SS5/SS150	Twineye	10	70,000
C102-0025	SS5/SS150	Tripleye	10	70,000
C110-0574	SS5/SS150	Tripleye Shackle	4	70,000
C150-0039	SS175	Tripleye	11	100,000
T110-0311	SS175	Thimbleye	11	100,000

\* The 1¼" adapters have a clevis connection **not** a forged coupling.

## INSTALLATION TOOLS

# CHANCE® CIVIL CONSTRUCTION INSTALLING TOOLS FOR HELICAL ANCHORS AND PILES

### **WARNING**

Do not weld, cut, alter or modify any of the equipment shown in this Bulletin. Doing so will void all warranties and could create hazardous conditions for anyone in the vicinity of the equipment when in use.

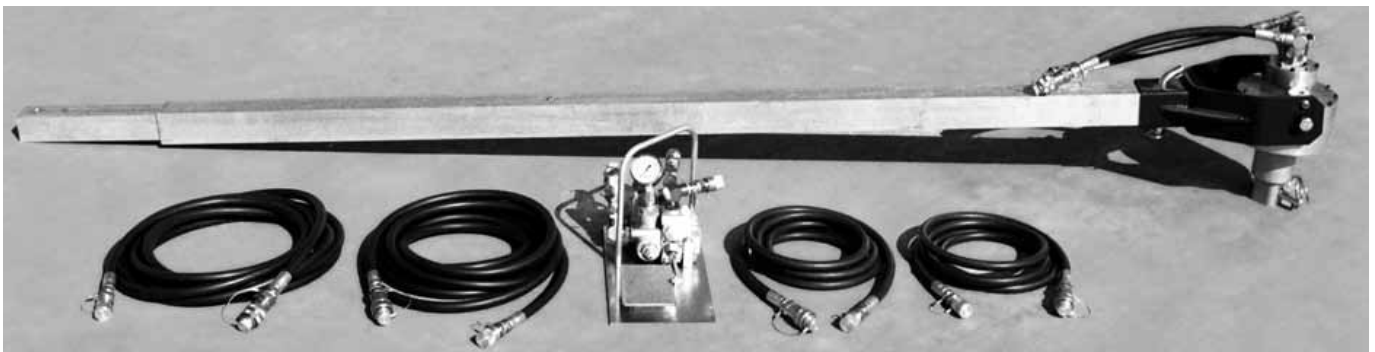
## Portable Anchor Installers for small foundations

### 2,500 ft.-lb. torque capacity hydraulic power drive

### Economical manual operation and portability for remote sites, common anchor installations

For most shaft-driven guy anchors and smaller screw foundations, these compact drivers get into areas where large equipment cannot go or is impractical. Operator does not need to resist the torque generated by anchor installation. Counter torque transmits through a torque bar from the drive head to the earth or other restraint. This frees the operator for the task of guiding the anchor path.

Built-in bypass valve limits output to 2,500-ft.-lb. maximum, two-way foot pedal gives operator direct control over drive and reverse directions, hoses (two 12-ft. and two 25-ft.) come with quick couplers for all connections from power supply to foot control to drive head. Pivoting drive-head yoke connects with bent-arm pin to square-tubular torque bar which telescopes from 8 feet to 10 feet as needed.



Catalog Number C303-1032

Medium-Duty Installer requires 1550 psi at 8 gpm flow rate to deliver 2,500 ft.-lb. maximum torque.



Catalog Number C303-1244

Heavy-Duty Installer requires 1,900 psi at 8 gpm flow rate to deliver 2,500 ft.-lb. maximum torque.

## 2,500 FT-LB PORTABLE ANCHOR INSTALLERS ORDERING INFORMATION

### †Medium Duty — Catalog Number C303-1032

Grease filled gear case.

Single Catalog Number above includes all items below.

Each item also may be ordered by separate number.

*Hydraulic Control Valve	C303-1031
Two 25-ft. Hydraulic Hoses	C417-6121 (each)
*Hydraulic Drive Head	C303-1180
Yoke Assembly	E303-0680
*Two 12-ft. Hydraulic Hoses	E303-0876 (pair)
Square Torque Bar Assembly	E303-1041

Output shaft is 1½" square socket. Requires C303-1230 and flanged drive tool (order separately) to install anchors other than 1½" square 1¼" round shaft.

\* Note: Hydraulic components are not interchangeable between C303-1032 and C303-1244.

### Heavy Duty — Catalog Number C303-1244

Sealed oil-filled gear case.


Single Catalog Number above includes all items below.

Each item also may be ordered by separate number.

*Hydraulic Control Valve	C303-1247
Two 25-ft. Hydraulic Hoses	C417-6121 (each)
*Hydraulic Drive Head	C303-1233
Yoke Assembly	E303-0680
*Two 12-ft. Hydraulic Hoses	E303-1253 (pair)
Square Torque Bar Assembly	E303-1041

Output shaft is 2" Hex. – Requires Kelly Bar Adapter P630013 and flanged drive tool (order separately) to install all anchors.

\* Note: Hydraulic components are not interchangeable between C303-1032 and C303-1244.



### Anchor Drive Tools

See page 68 for details on tools to drive specific anchor types.

† Note that all 5¼" bolt-circle tools may be connected directly to Heavy Duty Portable Anchor Installer Catalog Number C303-1244. †Adapter Tool Catalog Number C303-1230 is required to connect 5¼" bolt-circle tools to Medium Duty Portable Anchor Installer Catalog Number C303-1032. If needed, order Adapter C303-1230 as a separate item.

### Optional Hydraulic Power Unit

#### Catalog Number C303-1201

For easy wheeling to worksite, hydraulic drive head and foot control secure by rubber strap included to angle braces atop the cart frame and hoses ride on handles.

Cart-mounted on 5/8" -diameter axle with two 4.80 x 8 inflatable (30psi) tires; 27¼" wide x 34½" high x 36" long; shipping weight with oil: 275 lb.

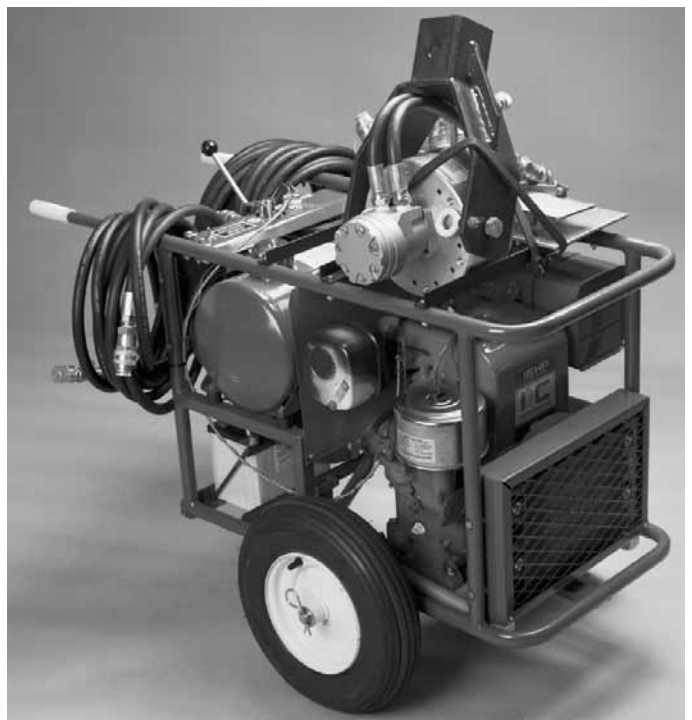
#### Hydraulic Pump with fan cooling system:

Typical output pressure 2500psi  
 Pump displacement 8 gpm @ 3400rpm  
 Reservoir capacity 5 gallons US  
 (shipping cap and vented fill cap provided)

#### Gasoline Engine System:

16hp Briggs & Stratton  
 Industrial/Commercial Model 326437, Type 2527  
 12-Volt pushbutton start, 3600rpm (maximum)

Operating instructions are included with anchor installer and hydraulic power unit.



## ANCHOR/FOUNDATION DRIVE HEADS

- Vehicle Mounted
- Hydraulic Powered
- 3,500, 6,000 & 11,500 ft.-lb. Torque Ratings

Specially suited for vertical installations of screw-type anchors, foundations, and bumper posts.

The drive head comes in two torque-rating ranges. The design also delivers other features for rugged field conditions.

- Precision planetary gears and bearings in oil-filled, sealed gear case
- Heavy-duty output housing and bearings
- Heavy-duty bail flange mounted to gear case housing provides balanced load-sharing torque restraint
- Dual-pin mounting provides drive-head positioning for controlled installations
- Drive-head also readily accepts earth augers for hole digging

Hose assemblies are not furnished with drive heads. For hydraulic flow more than 20 gpm, 3/4"-diameter hose is recommended. For flow rates of 20 gpm and below, 1/2" hose may be used. Swivel joint and swivel joint adapter are furnished. Thread size is 1"-11 1/2" NPSM (National Pipe Straight Mechanical).



## Skid-Steer Utility Plate, Bail and Jib Components

To order, refer to information below and on next page. Specify one each: Drive Head, Utility Plate, Bail & Jib Assembly, and Kelly Bar Adapter.

3,500 and 6,000 ft.-lb. maximum torque

### For Bobcat Skid-Steers ONLY:

Catalog Number*	Description
C303-0999	3,500 ft.-lb. Utility Plate, Bail & Jib Assembly
C303-1014	6,000 ft.-lb. Utility Plate, Bail & Jib Assembly

### For Skid-Steers other than Bobcat: (for field welding to utility plates on skid-steers)

C303-1015	3,500 ft.-lb. Bail & Jib Assembly less Utility Plate
C303-1016	6,000 ft.-lb. Bail & Jib Assembly less Utility Plate

\* Catalog Numbers do not include drive head, hoses or kelly bar adapter as shown in the photo.





## Backhoe Mounting Components

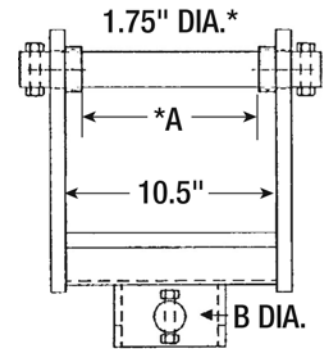
To order, specify components in Typical Tool-String Assemblies on next page.

3,500, 6,000 and 11,500 ft.-lb. maximum torque

### †Backhoe Mounting Brackets

Catalog Number	Dimensions, inches		Backhoe Brand Name	Bracket Description
	*A	B		
C303-0969	10.1	1.5	Case	6K & 11.5K ft.-lb. Eskridge
C303-0970	10.1	1.0	Case	3.5K ft.-lb. Eskridge
C303-0971	7.00	1.5	JCB	6K & 11.5K ft.-lb. Eskridge
C303-0972	7.00	1.0	JCB	3.5K ft.-lb. Eskridge
C303-0973	8.18	1.5	John Deere	6K & 11.5K ft.-lb. Eskridge
C303-0974	8.18	1.0	John Deere	3.5K ft.-lb. Eskridge

\*Bracket accepts boom up to 10.2" wide (1.75" dia. pin). For booms 7" & 8.18" wide, 2 spacer bushings supplied. Other bushings available for backhoes not listed.



## Typical Backhoe Tool-Strings

**For SS5 and SS150 (1½" Square Shaft) Series Anchors**

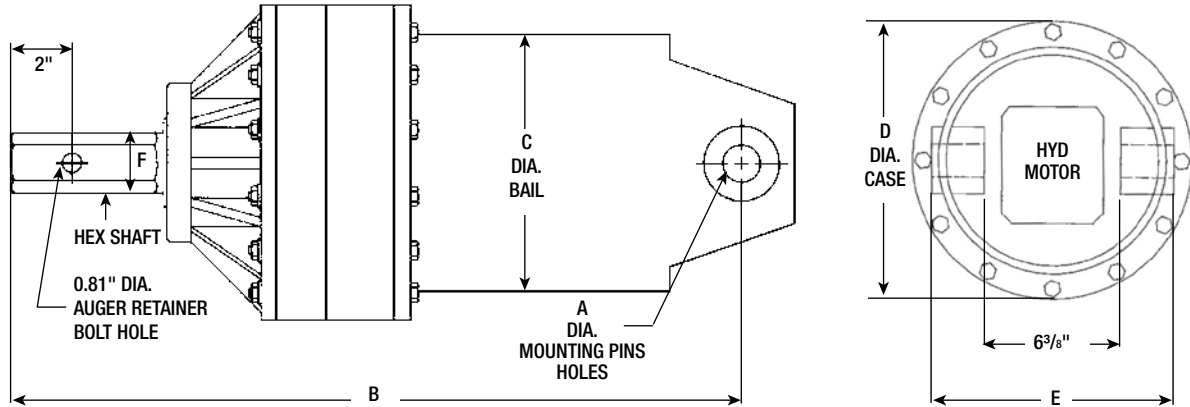
Headroom Dimension	Drive Head ft.-lb.
52½"	6,000
52½"	11,500

**For SS175 (1¼" Square Shaft) Series Anchors**

Headroom Dimension	Drive Head ft.-lb.
56¾"	6,000
56¾"	11,500



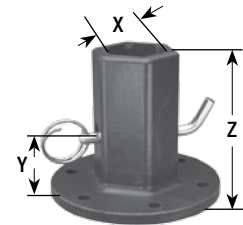
## Anchor/Foundation Drive Heads



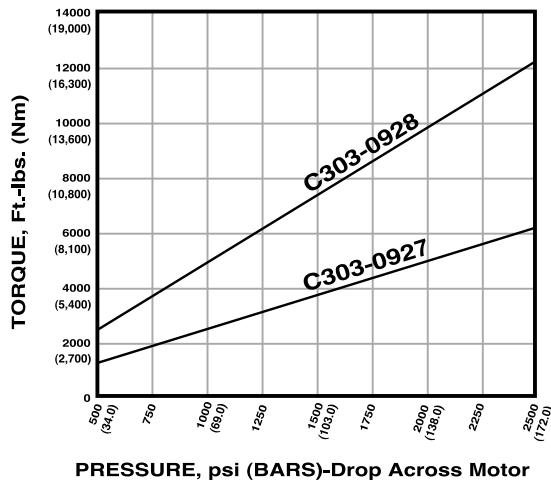
### #Kelly Bar Adapters

Each of these Kelly Bar Adapters has a 5 1/4" bolt circle and comes with (6) 1/2" bolts, nuts and lock washers and a Bent-Arm Pin with Coil Lock (see page 66).

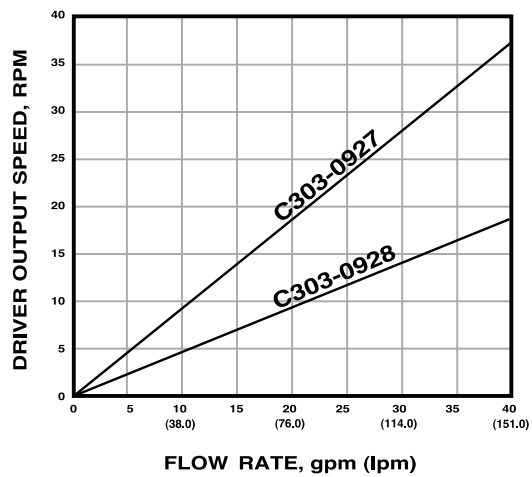
Part No.	X	Y	Z
630013	2" Hex	5"	6 1/8"
630011HD	2 1/2" Hex	4 1/4"	8 1/8"



Output Torque vs. Pressure



Output Speed vs. Flow



Catalog Number	Running Torque ft.-lb.	Running Torque Nm	Flow gpm	Speed rpm	Wt. lb	Wt. kg	Dimensions (in., cm)											
							A	B	C	D	E	F						
C303-0927	6,000 @ 2,400 psi	8,100 @ 165 BARS	40	39	246	112	1.5	3.81	29.5	74.9	10.7	27.0	13	33.0	11.4	28.9	2.5	6.4
C303-0928	11,500 @ 2,400 psi	15,600 @ 165 BARS	40	20	246	112	1.5	3.81	29.5	74.9	10.7	27.0	13	33.0	11.4	28.9	2.5	6.4

## TORQUE INDICATORS

### MECHANICAL TORQUE INDICATOR

Catalog Number C303-1340

For installing torques up to 20,000 ft.-lb.

Using the CHANCE® Torque Indicator, you can install screw anchors to a pre-determined torque value which gives a positive indication of anchor holding capacity in any type soil. These tools also help your crew avoid excessive torsional loading which could cause damage to the anchor and/or other anchor tools during installation.

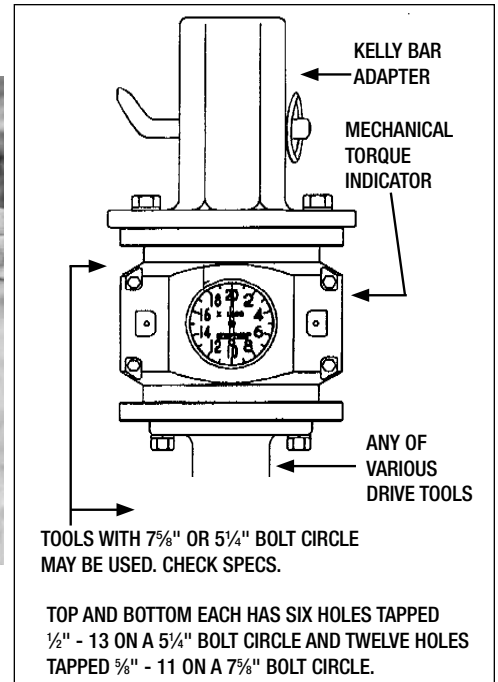
The Indicators are mounted between the Kelly bar adapter and drive tool or locking dog assembly.

**Advantages:**

- Easy-to-read dial gives the operator a direct readout of installation torque at all times.
- No Shear pins to replace.



**NOTE:** Mechanical Torque Indicator is not recommended in heavy, rocky soil applications or horizontal installations.



### SHEAR PIN TORQUE LIMITER

Catalog Number C303-0044

For installing torques up to 10,000 ft.-lb.

**Ordering Information**

Catalog Number	Description	Weight (lbs)
C303-0044	Shear Pin Torque Limiter	54
*C303-0045	Carton of Shear Pins (Approx. 1700 pins)	50
*T303-1420	Box of Shear Pins (Approx. 510 pins)	15

\*Each Shear Pin provides 500 ft.-lb. of torque.

**Advantages:**

- Protection for anchors and installing tools by disconnecting the power when the installing torque reaches a preselected level.
- Usable in very rocky soil.
- Durable — does not require special storage or handling.



Top and bottom each has six holes tapped 1/2" - 13 on a 5 1/4" bolt circle.

### 5 1/4" to 7 5/8" Bolt Circle Adapter

For installing torques up to 10,000 ft.-lb.

This adapter is used to connect two tools having incompatible bolt circles: One with a 5 1/4" bolt circle and one with a 7 5/8" bolt circle.



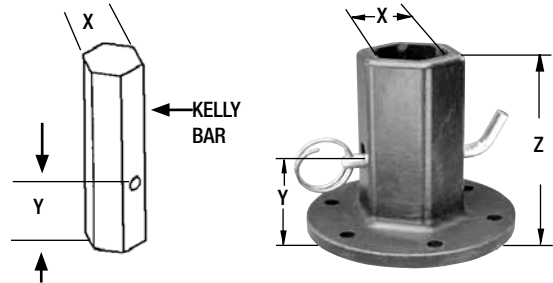
Catalog Number	Description	Weight (lbs)
T303-0166	Bolt circle adapter with one 1/2" x 5 1/4" bolt circle and one 3/8" x 7 5/8" bolt circle	18

## KELLY BAR ADAPTERS

### Selecting the correct Kelly Bar Adapter is key to building a proper Drive String.

Follow these two easy steps:

- Remove the auger from the driver and carefully measure the X and Y dimensions of the Kelly Bar.
- Match the shape of the Kelly Bar and the X and Y dimensions with the Kelly Bar Adapter charts below. The Y dimension on the Kelly Bar Adapter must be equal to or greater than the Y dimension on the intended Kelly Bar.



Bolt Circle	Maximum Torque
(6) 1/2" Grade 5 bolts on 5/4" Bolt Circle	10,000 ft.-lb.
(12) 5/8" Grade 2 bolts on 7/8" Bolt Circle	20,000 ft.-lb.

#### A Note about Bolt Circles

CHANCE® anchor installing tools are provided with appropriate bolt circles for the expected service. The torque limitations for the two standard bolt circles are given below. **Never exceed the rated torque of any CHANCE® installing tool.**

### 5 1/4"-Bolt-Circle Kelly Bar Adapters for 10,000 ft.-lb. Maximum Installing Torque

Each of these Kelly Bar Adapters has six holes for 1/2" bolts on a 5 1/4" bolt circle and comes with six 1/2" Grade 5 bolts, nuts & lock washers, Bent-Arm Pin with Coil Lock.

Catalog Number	Kelly Bar Shape	Kelly Bar Dimension			Weight (lbs)
		X	Y	Z	
630016	Square	2 1/4"	2 1/4"	3 1/2"	10
630017	Square	2 1/2"	2 1/4"	3 1/2"	10
630013	Hex	2"	5"	6 1/8"	10
630013A	Hex	2"	3 1/4"	6 1/8"	10
630012HD	Hex	2 5/8"	4 1/4"	8 1/8"	12
630011HD	Hex	2 1/2"	4 1/4"	8 1/8"	12

### 7 5/8"-Bolt-Circle Kelly Bar Adapters for 20,000 ft.-lb. Maximum Installing Torque

Each of these Kelly Bar Adapters has twelve holes for 5/8" bolts on a 7 5/8" bolt circle and comes with twelve 5/8" Grade 2 bolts, nuts & lock washers, Bent-Arm Pin with Coil Lock.

Catalog Number	Kelly Bar Shape	Kelly Bar Dimension			Weight (lbs)
		X	Y	Z	
C303-0936	Hex	2 1/2"	4 3/8"	8 1/4"	23
C303-0937	Hex	2 5/8"	4 3/8"	8 1/4"	23
C303-0940	Hex	3"	3 1/2"	8"	27
C303-0955	Hex	2 1/2"	2 1/4"	7"	22
C303-0958	Square	3"	3 1/2" & 2 1/16"	7"	23

## BENT-ARM PINS

### To retain Kelly Bar Adapters and drive tools for Bumper Posts and SS Anchors

Each CHANCE® plated-steel Bent Arm Pin is designed to attach a Kelly bar adapter to a Kelly bar. The pin also is used to secure SS Anchors and Bumper Posts to their drive tools.

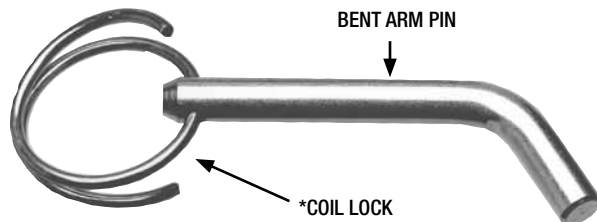
Bent Arm pins are included with new tools as required. Order replacement pins for existing tools as listed at right.

#### Dimensions

Bent Arm Pin and Coil Lock Assembly	Size
C303-1226	3" x 5/8"
C303-1225	3 1/2" x 3/4"
C303-1227	5" x 3/4"
C303-1223	4 1/2" x 1/2"
C303-1222	5" x 5/8"



SHOWN HERE AS USED WITH A KELLY BAR ADAPTER.



#### WARNING:

The CHANCE® Bent Arm Pin and Coil Lock are the only tested and approved means for through-pin attachment of drive tools. Do not use any other means of attachment.

Kelly Bar Adapter	Bent Arm Pin and Coil Lock Assembly
630011HD	C303-1223
630012HD	C303-1223
630013	C303-1223
630013A	C303-1223
630016	C303-1223
630017	C303-1227

Kelly Bar Adapter	Bent Arm Pin and Coil Lock Assembly
C303-0936	C303-1223
C303-0937	C303-1223
C303-0940	C303-1222
C303-0955	C303-1227
C303-0958	C303-1227

SS Anchor Series Tool	Bent Arm Pin and Coil Lock Assembly
639001	C303-1226
C303-0195	C303-1225
C303-0020	C303-1226

Bumper Post Tool	Bent Arm Pin and Coil Lock Assembly
C303-0737	C303-1227

\*Each new Kelly Bar Adapter or Anchor Drive Tool listed above includes a bent-arm pin with coil lock.

For Coil Lock only, order Part No. P303-1215P.

## ANCHOR DRIVE TOOLS

### For SS Helical Pier Anchors

These drive tools require the appropriate Kelly bar adapter (see page 66). Each comes with bolts, nuts and lock washers and a bent-arm retaining pin with coil lock.

Catalog Number	SS Anchor Series Tool	Bolt Circle, Holes	Approx. Weight (lbs)
639001	SS5/SS150	5¼", (6) ½" holes	7
C303-0195*	SS175	7⅝", (12) ⅝" holes	18
C303-0201*	SS200	7⅝", (12) ⅝" holes	30
C303-0202*	SS225	7⅝", (12) ⅝" holes	30

\*Coupling to a Kelly bar adapter with a 5¼" bolt circle requires use of T303-0166 adapter and limits tool's maximum torque rating to 10,000 ft.-lb. (see page 66).



### For RS3500 Helical Pier Anchors

Each comes with bolts, nuts and lock washers.

Catalog Number	Bolt Circle, Holes	Approx. Weight (lbs)
C303-0754*	7⅝", (6) ⅝" holes	27

\*Coupling to a Kelly bar adapter with a 5¼" bolt circle requires use of T303-0166 adapter and limits tool's maximum torque rating to 10,000 ft.-lb. (see page 66).



### For Flange-Drive Foundation Anchors

C130-0010 drive tool has a (6) ½" tapped holes on a 5¼" bolt circle, (6) ½" Grade 5 bolts and requires a Kelly bar adapter (see page 66).

Catalog Number	Description	Approx. Weight (lbs)
C130-0010	Kelly Bar Adapter Drive Tool	10



### For RS278 Helical Pile Anchors

Each comes with bolts, nuts and lockwashers.

Catalog Number	Bolt Circle, Holes	Approx. Weight (lbs)
C303-1490*	5¼", (6) ½" holes	19

\*Maximum torque rating 10,000 ft.-lb.



### For 2" Square LD Foundation Anchors

Connects direct to a Kelly bar adapter with bolts, lock washers and nuts furnished with Kelly bar adapter (see page 66). Maximum torque rating: 10,000 ft.-lb.

Catalog Number	Bolt Circle, Holes	Approx. Weight (lbs)
639000	5¼", (6) ½" holes	10



## ANCHOR DRIVE TOOLS

### For T/C (Tension/Compression) Helical Pier Anchors

This drive tool has both 5¼" and 7⅝" bolt circles and comes with (6) 5/8" bolts, nuts and lockwashers.

Catalog Number	Bolt Circle, Holes	Approx. Weight (lbs)
C130-0594*	5¼", (6) ½" holes and 7⅝", (12) ⅝" holes	38

\*Coupling to a Kelly bar adapter with a 5¼" bolt circle limits tool's maximum torque rating to 10,000 ft.-lb.



### For Bumper Posts

Each comes with (6) ⅝" bolts and a bent-arm retaining pin with coil lock (see page 66).

Catalog Number	Bolt Circle, Tapped Holes	Approx. Weight (lbs)
C303-0737*	5¼", (6) ½" holes	11

\*Coupling to a Kelly bar adapter with a 5¼" bolt circle requires use of T303-0166 adapter and limits tool's maximum torque rating to 10,000 ft.-lb. (see page 66).



### For Decorative Lighting Foundation Anchors

This 10"-diameter drive plate fits the 8" bolt circle of decorative lighting foundations. Connects direct to a Kelly bar adapter with (6) ½" furnished bolts. Maximum torque rating: 10,000 ft.-lb.

Catalog Number	Bolt Circle, Tapped Holes	Approx. Weight (lbs)
T303-0247	5¼", (6) ½" holes	16



### Universal Tools for STL Foundations

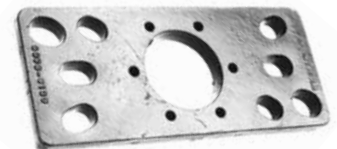
These tools fit STL Foundation Anchors with 9" to 13½" bolt circles.

C303-0139 connects direct to a Kelly bar adapter with (6) ½" furnished bolts.  
C303-0684 includes (12) ⅝" bolts.

Catalog Number	Bolt Circle, Holes	Approx. Weight (lbs)
C303-0139*	5¼", (6) ½" tapped holes	18
C303-0684†	7⅝", (6) ⅝" drilled holes	49

\*Maximum torque rating for C303-0139: 10,000 ft.-lb.

†Maximum torque rating for C303-0684: 20,000 ft.-lb. Coupling C303-0684 to a Kelly bar adapter with a 5¼" bolt circle requires use of T303-0166 adapter and limits tool's maximum torque rating to 10,000 ft.-lb. (see page 66).



C303-0139



C303-0684

**For assistance with:**

Preliminary designs (applications)  
Drawings, specifications and other design aids  
Engineering seminars for anchor, pier and pile applications  
HeliCAP® Helical Capacity Design Software

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