



UTILITY

Helical Anchors for the Utility Industry

Earth Contact Products, L.L.C., is a privately owned company based in Olathe, KS. The company started in 1998 based upon the foundation construction and repair industries, manufacturing helical piles and anchors. Our product lines include resistance piers, cross plate anchors, utility anchors and related accessories

Today, ECP Utility manufactures a complete line of Helical Guy Anchors and Tower Support Helical Piles. These products provide our customers "The Very Best" solutions to their piercing and anchoring needs.

Our modern manufacturing facility is 100,000 square feet, with robotic welding, CNC controlled equipment, and certified welders, all of which enables ECP Utility to fabricate custom products to fit engineer specific products throughout the utility market.



ECP Utility's customer service, engineering support, and on-time delivery of American Made products has created a new standard within our industry. Call today to see why the utility industry prefers using ECP Utility Products.

For a complete list of ECP Utility products with RUS approval, please go to: www.rurdev.usda.gov



ECP Utility

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ECP UTILITY

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"Designed and Engineered to Perform"

www.ecputility.com 1-866-327-0007

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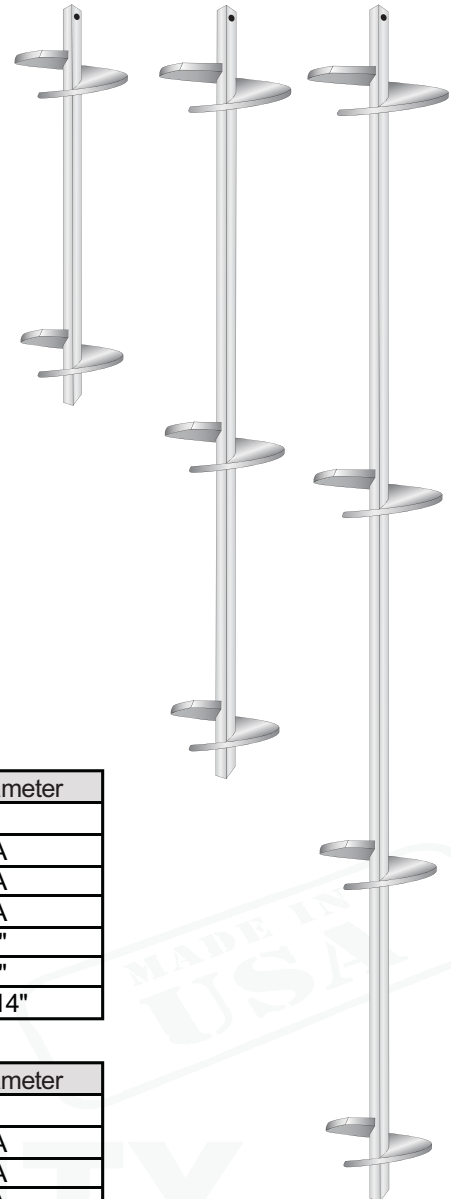
1-1/2" 7,000 ft lbs. Helical Anchors

Part #	Length	Helix Diameter
Leads		
TAF-150-36 (8,10) *	36"	8",10"
TAF-150-42 (10,12)	42"	10",12"
TAF-150-66 (8,10,12) *	66"	8",10",12"
TAF-150-84 (10,12,14)	84"	10",12",14"
TAF-150-126 (8,10,12,14)	126"	8",10",12",14"
TAF-150-126 (10,12,14,14)	126"	10",12",14",14"

1-3/4" 10,000 ft lbs. Helical Anchors

Part #	Length	Helix Diameter
Leads		
TAF-175-36 (8,10)	36"	8",10"
TAF-175-42 (10,12)	42"	10",12"
TAF-175-66 (8,10,12)	66"	8",10",12"
TAF-175-84 (10,12,14)	84"	10",12",14"
TAF-175-126 (8,10,12,14)	126"	8",10",12",14"
TAF-175-126 (10,12,14,14)	126"	10",12",14",14"

Custom sizes available



1-1/2" 7,000 ft lbs. Extensions

Part #	Length	Helix Diameter
Extensions		
TAE-150-42	42"	NA
TAE-150-60	60"	NA
TAE-150-84	84"	NA
TAE-150-42 (14)	42"	14"
TAE-150-60 (14)	60"	14"
TAE-150-84 (14,14)	84"	14",14"

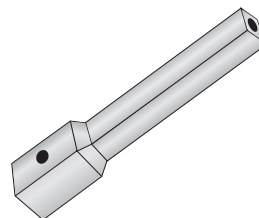
1-3/4" 10,000 ft lbs. Extensions

Part #	Length	Helix Diameter
Extensions		
TAE-175-42	42"	NA
TAE-175-60	60"	NA
TAE-175-84	84"	NA
TAE-175-42 (14)	42"	14"
TAE-175-60 (14)	60"	14"
TAE-175-84 (14,14)	84"	14",14"

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Threaded Bar Adapters

Part #	Size	Description
TAT-150-HD	1-1/2"	#8 WF Bar
TAT-175-HD	1-3/4"	#10 WF Bar



Guy Wire Adapters

Part #	Size	Description
TAA-150-002	1-1/2"	Twin
TAA-150-003	1-1/2"	Triple
TAA-175-003	1-3/4"	Triple



Table 2. Capacities of ECP Helical Torque Anchors

Shaft Size	Installation Torque Factor (k)	Axial Compression Load Limit	Ultimate-Limit Tension Strength	Useable Torsional Strength	Practical Load Limit Based Torsional Strength
1-1/2" Square Bar	9 - 11	70,000 lb.	70,000 lb.	7,000 ft-lb	Load limited to the rated capacity of the attachments and the lateral soil strength against the shaft
1-3/4" Square Bar	9 - 11	100,000 lb.	100,000 lb.	10,000 ft-lb	
2-1/4" Square Bar	10 - 12	200,000 lb.	200,000 lb.	23,000 ft-lb	
2-7/8" Tubular – 0.262" Wall	8 - 9	100,000 lb.	100,000 lb.	9,500 ft-lb	80,000 lb
3-1/2" Tubular – 0.300" Wall	7 - 8	115,000 lb.	120,000 lb.	13,000 ft-lb	97,000 lb
4-1/2" Tubular – 0.337" Wall	6 - 7	160,000 lb.	160,000 lb.	22,000 ft-lb	143,000 lb

The designer should select a product that provides adequate additional torsional capacity for the specific project and soil conditions.

IMPORTANT NOTES:

The capacities listed for Axial Compression, Tension and Torsion in Table 2 are mechanical ratings. One must understand that the actual installed load capacities for the product are dependent upon the actual soil conditions on a specific job site. The shaft "Useable Torsional Strengths" given here are the maximum values that should be applied to the product. Furthermore, these torsional ratings assume homogeneous soil conditions and proper alignment of the drive motor to the shaft. In homogeneous soils it might be possible to achieve up to 95% or more of the "Useable Torsional Strength" shown in Table 2. In obstruction-laden soils, torsion spikes experienced by the shaft may cause impact fractures of the couplings or other components. Where impact loading is expected, reduce shaft torsion by 30% or more from "Useable Torsional Strength" depending upon site soil conditions to reduce chance of fracture or damage. Another advantage of selecting a torsional rating below the values shown in Table 2 is that one may be able to drive the pile slightly deeper after the torsional requirements have been met, thus eliminating the need to cut the pile shaft in the field.

The load transfer attachment capacity must be verified for the design. Standard attachments and ratings are shown on the following pages. Special configurations to fit your project can be fabricated to your specifications upon request.

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2-7/8" 100,000 ft lbs. Helical Compression Piles

Part #	Length	Helix Diameter
Leads		
TAF-288-60 (12)	60"	12"
TAF-288-60 (8,10)	60"	8",10"
TAF-288-60 (10,12)	60"	10",12"
TAF-288-84 (10,12)	84"	10",12"
TAF-288-84 (12,14)	84"	12",14"
TAF-288-84 (8,10,12)	84"	8",10",12"
TAF-288-84 (10,12,14)	84"	10",12",14"

3-1/2" 115,000 ft lbs. Helical Compression Piles

Part #	Length	Helix Diameter
Leads		
TAF-350-60 (12)	60"	12"
TAF-350-60 (8,10)	60"	8",10"
TAF-350-60 (10,12)	60"	10",12"
TAF-350-84 (10,12)	84"	10",12"
TAF-350-84 (12,14)	84"	12",14"
TAF-350-84 (8,10,12)	84"	8",10",12"
TAF-350-84 (10,12,14)	84"	10",12",14"

Custom sizes available



2-7/8" 100,000 ft lbs. Extensions

Part #	Length	Helix Diameter
Extensions		
TAE-288-36	36"	NA
TAE-288-60	60"	NA
TAE-288-84	84"	NA
TAE-288-36 (14)	36"	14"
TAE-288-60 (14)	60"	14"
TAE-288-60 (14,14)	60"	14",14"

3-1/2" 115,000 ft lbs. Extensions

Part #	Length	Helix Diameter
Extensions		
TAE-350-36	36"	NA
TAE-350-60	60"	NA
TAE-350-84	84"	NA
TAE-350-36 (14)	36"	14"
TAE-350-60 (14)	60"	14"
TAE-350-60 (14,14)	60"	14",14"

Custom sizes available

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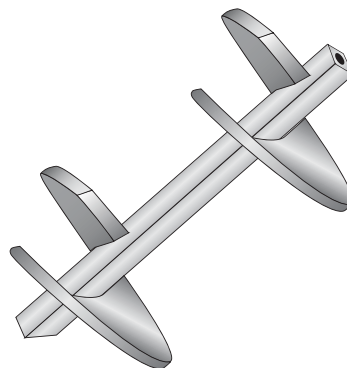


1-3/8" Shaft 6000 ft lbs. Single Helix

Part #	Rod	Helix
TAPL-625-10 (8)	5/8"	8"
TAPL-100-10 (8)	3/4" or 1"	8"
TAPL-625-10 (10)	5/8"	10"
TAPL-100-10 (10)	3/4" or 1"	10"
TAPL-625-10 (12) *	5/8"	12"
TAPL-100-10 (12)	3/4" or 1"	12"
TAPL-100-10 (14) *	3/4" or 1"	14"

1-1/2" Shaft 7000 ft lbs. Single Helix

Part #	Rod	Helix
TAP-625-10 (8)	5/8"	8"
TAP-100-10 (8)	3/4" or 1"	8"
TAP-625-10 (10)	5/8"	10"
TAP-100-10 (10)	3/4" or 1"	10"
TAP-625-10 (12)	5/8"	12"
TAP-100-10 (12)	3/4" or 1"	12"
TAP-100-10 (14)	3/4" or 1"	14"

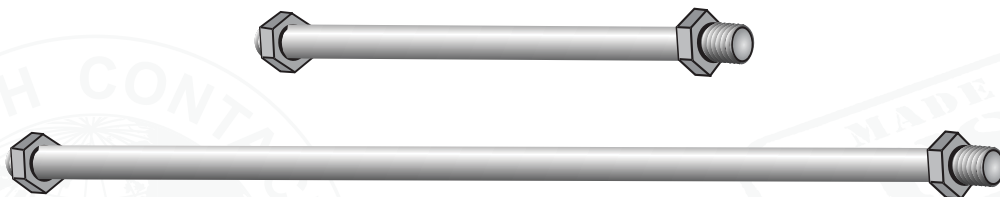


1-3/8" Shaft 6000 ft lbs. Double Helix

Part #	Rod	Helix
TAPL-100-26 (4,4)	1"	4" ,4"
TAPL-100-26 (8,8)	1"	8" ,8"
TAPL-100-36 (10,10)	1"	10" ,10"

1-1/2" Shaft 7000 ft lbs. Double Helix

Part #	Rod	Helix
TAP-100-26 (4,4)	1"	4" ,4"
TAP-100-26 (8,8)	1"	8" ,8"
TAP-100-36 (10,10)	1"	10" ,10"



Power Installed Anchor Rods

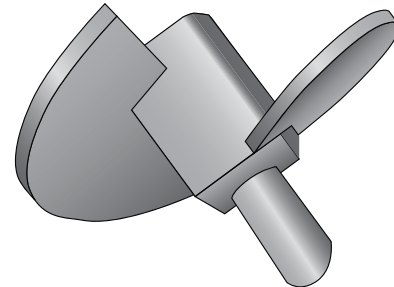
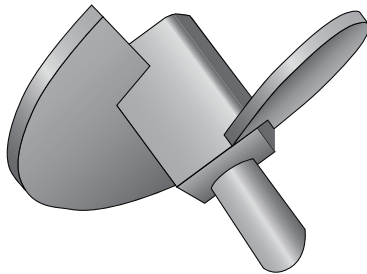
Part #	Size	Length	Tensile Strength
TAR-625-42	5/8"	42"	16,000 ft lbs.
TAR-750-42	3/4"	42"	23,000 ft lbs.
TAR-100-42	1"	42"	36,000 ft lbs.
TAR-625-84 *	5/8"	84"	16,000 ft lbs.
TAR-750-84 *	3/4"	84"	23,000 ft lbs.
TAR-100-84	1"	84"	36,000 ft lbs.

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Power Installed Nuts

Part #	Rod	Eye
TAN-625-001	5/8"	Thimble
TAN-100-001	3/4" or 1"	Thimble
TAN-625-002 *	5/8"	Twin
TAN-100-002	3/4" or 1"	Twin
TAN-625-003	5/8"	Triple
TAN-100-003 *	3/4" or 1"	Triple



2-1/4" Hub 10,000 ft lbs. 3/8" Flight Thickness

Part #	Rod	Flight
TAX-225-625 (8)	5/8"	8"
TAX-225-100 (8)	3/4" or 1"	8"
TAX-225-625 (10)	5/8"	10"
TAX-225-100 (10)	3/4" or 1"	10"
TAX-225-625 (12)	5/8"	12"
TAX-225-100 (12)	3/4" or 1"	12"
TAX-225-100 (14)	3/4" or 1"	14"

2-1/2" Hub 15,000 ft lbs. 3/8" Flight Thickness

Part #	Rod	Flight
TAX-250-625 (8)	5/8"	8"
TAX-250-100 (8)	3/4" or 1"	8"
TAX-250-625 (10)	5/8"	10"
TAX-250-100 (10)	3/4" or 1"	10"
TAX-250-625 (12)	5/8"	12"
TAX-250-100 (12)	3/4" or 1"	12"
TAX-250-100 (14)	3/4" or 1"	14"

2-1/4" Hub 10,000 ft lbs. 1/2" Flight Thickness

Part #	Rod	Flight
HTAX-225-100 (8)	3/4" or 1"	8"
HTAX-225-100 (10)	3/4" or 1"	10"
HTAX-225-100 (12)	3/4" or 1"	12"
HTAX-225-100 (14)	3/4" or 1"	14"

2-1/2" Hub 15,000 ft lbs. 1/2" Flight Thickness

Part #	Rod	Flight
HTAX-250-100 (8)	3/4" or 1"	8"
HTAX-250-100 (10)	3/4" or 1"	10"
HTAX-250-100 (12)	3/4" or 1"	12"
HTAX-250-100 (14)	3/4" or 1"	14"

ECP Utility's Extreme Anchor provides an economical anchoring option for stiff and cobbled soil conditions. ECP's welded and fabricated Extreme Anchor withstands higher strains that may produce fractures in anchors made with cast steel components. Upgrade your anchoring program with ECP Utility's Extreme Anchors today.

Failure to install anchors within 5° of alignment with guy wire can significantly decrease holding capacity.

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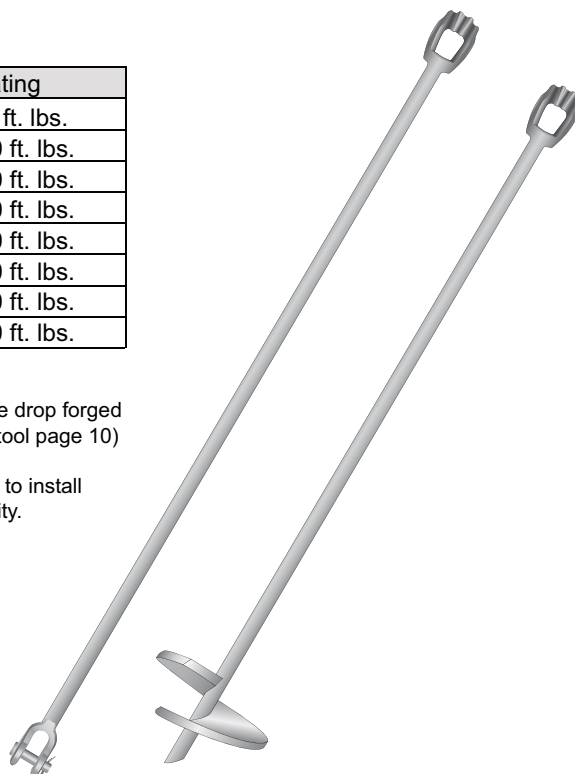
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No Wrench

Part #	Rod	Length	Flight	Rating
TNW-750-543 (4)	3/4"	54"	4"	400 ft. lbs.
TNW-750-663 (6)	3/4"	66"	6"	1000 ft. lbs.
TNW-100-663 (10)	1"	66"	10"	2300 ft. lbs.
TNW-125-663 (10)	1-1/4"	66"	10"	2300 ft. lbs.
TNW-125-963 (10)	1-1/4"	96"	10"	2300 ft. lbs.
TNW-125-963 (14)	1-1/4"	96"	14"	2300 ft. lbs.
TNW-125-963 (15)	1-1/4"	96"	15"	2300 ft. lbs.
TNE-125-72	1-1/4"	72"	NA	2300 ft. lbs.

ECP Utility No Wrench Anchors may be installed by hand or power installed. The large drop forged triple eye opening provides ease of installation by hand or machine. (See installation tool page 10)

Note: If installing by hand, holding capacity may be reduced as much as 20%. Failure to install anchors within 5° of alignment with guy wire can significantly decrease holding capacity.



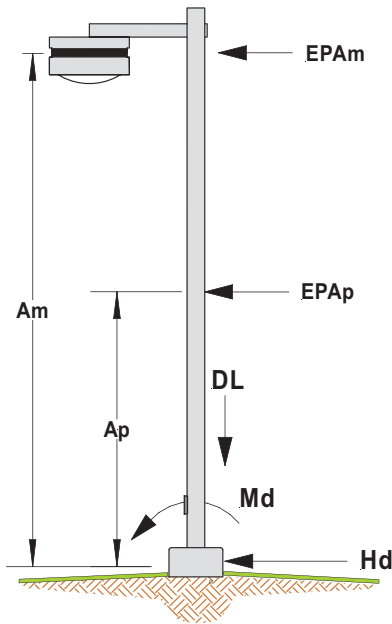
Bust Anchor

Part #	Rod	Hole	Area
UAB-080-750 *	5/8" or 3/4"	8"	135 SQ. IN.
UAB-080-100	1"	8"	135 SQ. IN.
UAB-010-750	5/8" or 3/4"	10"	200 SQ. IN.
UAB-010-100	1"	10"	200 SQ. IN.
UAB-012-100	1"	12"	300 SQ. IN.
UAB-012-125	1-1/4"	12"	300 SQ. IN.

Bust Anchor Rods

Part #	Diameter	Length	Eye
UAR-625-721	5/8"	6'	Thimble
UAR-625-722	5/8"	6'	Twin
UAR-625-841	5/8"	7'	Thimble
UAR-625-842	5/8"	7'	Twin
UAR-625-961	5/8"	8'	Thimble
UAR-625-962	5/8"	8'	Twin
UAR-750-721	3/4"	6'	Thimble
UAR-750-722	3/4"	6'	Twin
UAR-750-841	3/4"	7'	Thimble
UAR-750-842	3/4"	7'	Twin
UAR-750-961	3/4"	8'	Thimble
UAR-750-962	3/4"	8'	Twin
UAR-100-963	1"	8'	Triple
UAR-100-1203	1"	10'	Triple
UAR-125-1203	1-1/4"	10'	Triple

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q = wind pressure

EAPm = Effective projected area of light fixture

EAPp = Effective projected area of light pole

Am = Moment arm to EAPm centroid

Ap = Moment arm to EAPp centroid

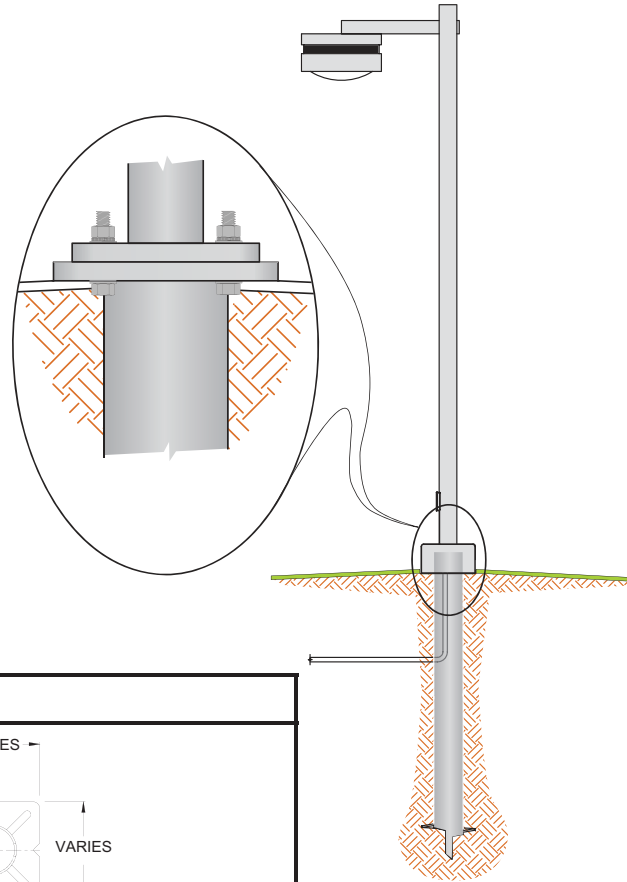
PILE REACTIONS

$$H_d = H_1 + H_2$$

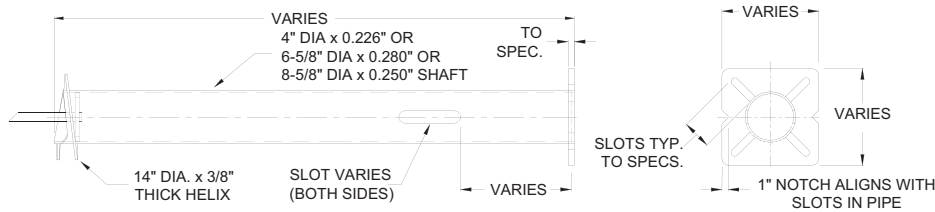
$$= [EAP_m \times q] + [EAP_p \times q]$$

$$M_d = [H_1 \times A_m] + [H_2 \times A_p]$$

Resultant Pile Foundation Loads



Light Pole Anchor Configurations



NOTE: 4" DIA FOUNDATION ANCHOR CONFIGURATION IS SIMILAR - NOT SHOWN

Part #	Shaft Size	Helix Diameter	Length	Ultimate-Limit Capacity at SPT ≥ 5 bpf	
				Overturning Moment	Lateral Load
LPS-400-60-12	4"	12"	5'-0"	< 5,000 ft-lb	< 500 lb
LPS-663-60-14	6-5/8" x 0.280" Wall	14"	5'-0"	< 12,000 ft-lb	< 1,000 lb
LPS-663-84-14			7'-0"		
LPS-663-120-14			10'-0"		
LPS-863-60-14	8-5/8" X 0.250" Wall	14"	5'-0"	< 17,500 ft-lb	< 1,200 lb
LPS-863-84-14			7'-0"		
LPS-863-120-14			10'-0"		

Notes: Standard Product Shown Includes:

Standard Integral Pile Cap - 1" thick x 15-3/4" Square pile cap welded to shaft

Standard 1-1/8" slots are designed for 1" diameter mounting bolts

Cable Access Slot available on both sides of shaft - (2" x 10" Standard)

Supplied Hot Dip Galvanized Per ASTM A123.

Stinger End (LPS) has single chamfer on bottom of shaft with a "stinger" for alignment

Special Product Designs Are Available: We fabricate custom light pole supports to your design specifications

Please allow extra time for Special Product Designs.



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Torque Motor Accessories								
1.50 inch Square Shaft Drive Tool	1.75 inch Square Shaft Drive Tool	2 inch Hex Drive Tool	2.50 inch Hex Drive Tool					
								
DT-150-5	DT-175-5	DTH-200-5	DTH-250-5					
Locking Dog Assembly 7-5/8"	Locking Dog Assembly 5-1/4"	No-Wrench Installation Tool	Shear Pin Indicator					
								
DTL-200-7	DTL-200-5	DT-TNW-5	DT-SPI					
2-3/8" Tubular Drive Tool	3-1/2" Tubular Drive Tool	Light Pole Foundation Installation Tool						
								
DT-288-5	DT-350-5	DTL-LPS-200 or DTL-LPS-250						
Hydraulic Torque Motor Specifications								
Illustration	Model Number	Torque Output ft-lb	Motor Torque Conversion Factor – "K"	Maximum Pressure psi	Max. Flow gpm	Output Speed rpm	Hex Output Shaft	Weight lb.
ECP	PDU 76	12,612	4.20	3,000	40	21	2-1/2"	366
	PDU 76B	6,335	2.53	2,500	16	13.8	2	132
	78	4,030/12,128	2.24 / 4.85	2,500	65	73 / 33	2-1/2"	382

IMPORTANT: Torque Motor Conversion Factors tend to become lower than shown in this table when pressure differentials are below 1,000 psi. As a guideline, use only 90% of "K" shown when pressure differentials are between 750 and 900 psi; use 50% of "K" shown for pressure differentials between 500 and 750 psi.

Note: Tooling should be inspected regularly. Any cracked tooling should be discarded and replaced immediately.

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ECP Smart Anchor Monitor

WIRELESS ANCHOR TORQUE MONITORING SYSTEM



- State Of The Art Wireless Technology
- Highly Accurate Torque Monitoring Capabilities
- Torque, RPM, Angle, Depth & Location Monitoring
- Easy To Use
- Extremely Rugged Design (IP67 Rated)
- No Need To Ever Calibrate a Drive Head Again
- Logged Data Can Be Exported To Third Party Software
- GPS Capable
- Connects To Current Tooling



ECP S.A.M. is revolutionizing the industry. No longer do engineers and installers have to rely on highly inaccurate monitoring systems. If you are not utilizing the ECP S.A.M. technology then your competition is one step ahead of you.

S.A.M. – 10 10,000 ft-lb model fits 5-1/4" Bolt circle

S.A.M. – 25 25,000 ft-lb model fits 7-5/8" Bolt circle

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