

CHANCE[®]

Power-Installed Foundation Anchors



INSTANT FOUNDATION[™] System

Chance[®] Instant Foundation[®] System

POWER-INSTALLED, VERSATILE, ECONOMICAL

Over 90 years of research, development and testing have advanced our Instant Foundation[®] System to its present mature stage. Compared to traditional methods, the Instant Foundation System offers attractive benefits in the conservation of labor, materials, equipment and, especially, time.

Power-installed foundation anchors have been proved in thousands of installations throughout the world. Chance engineers have installed, tested and retrieved countless foundation anchors to confirm performance and durability. The amount of torsional force required to install a foundation anchor relates to its installed ultimate capacity. This means that holding strengths are predictable in most soils by choosing a foundation anchor based on soil data and by measuring torque during installation.

A typical Instant Foundation anchor can be installed in minutes using standard equipment. The superstructure can be mounted immediately – no waiting for concrete to cure. Chance foundation anchors can be installed in all weather conditions, thus eliminating weather-related delays. They can function as permanent installations or serve as temporary foundations. They can be easily retrieved and reused.

The Chance Instant Foundation System includes a broad range of foundation anchors with various attachments for field adjustments. Chance support services include analysis of soil boring data, job-specific foundation anchor recommendations,

personnel training videos and hands-on demonstrations.



Non-extendable foundation

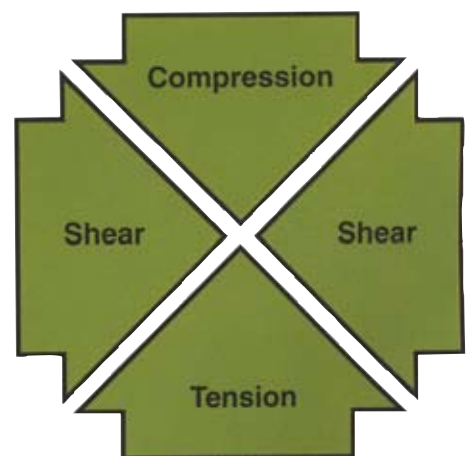


Extendable foundation

Advantages of Instant Foundation[®] Anchors

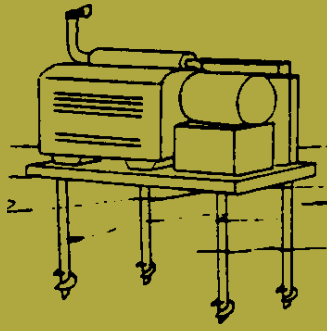
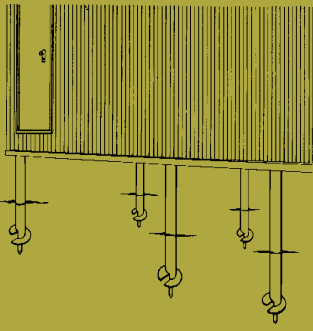
- Capacity proportional to installing torque
- One trip convenience
No advance site preparation
No concrete required
- Clean. No excavation or spoils removal
- Reusable
- Easy to transport to job site
- Convenient storage
- No expensive anchor bolts
- Install through macadam
- Available from supplier stock
- Install with available equipment
- Clean. No excavation or spoils removal
- Ideal for areas with limited access

Overcome the stresses of tension, compression and shear



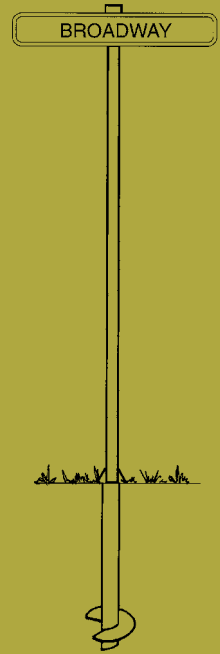
Chance[®] Instant Foundation[®] System anchors install where and when you want them . . . quickly, economically and dependably.

SAVE TIME AND MONEY IN COUNTLESS APPLICATIONS



Commercial construction and repair

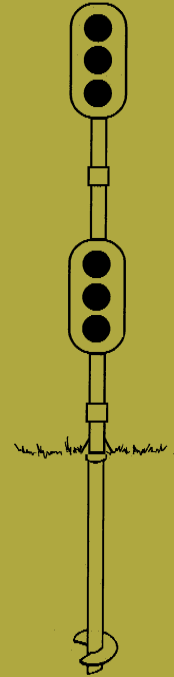
**Railway signal
and
switching
equipment
foundations**



Streetlight foundations



**Parking/area/site
lighting
foundations**

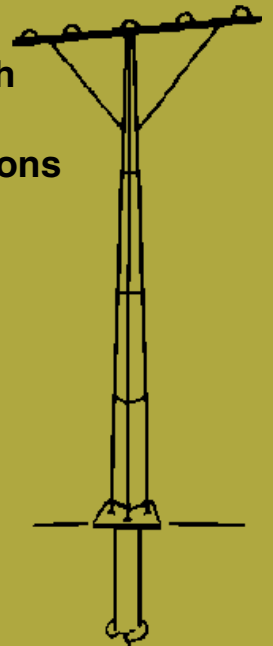
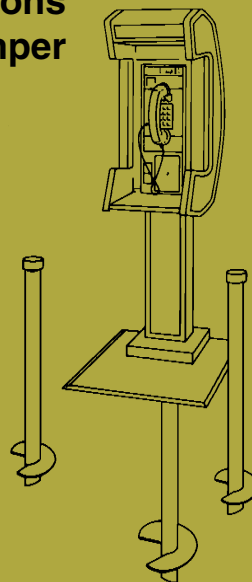
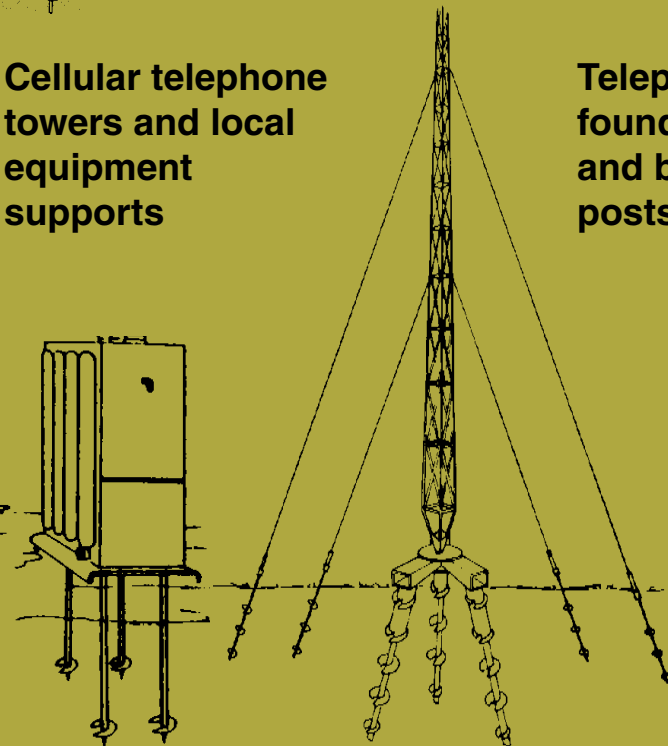


**Roadway
signs for
streets and
traffic-control
foundations**

**Cellular telephone
towers and local
equipment
supports**

**Telephone pay station
foundations
and bumper
posts**

**Aviation
approach
light
foundations**



NON-EXTENDABLE FOUNDATIONS FOR SITE LIGHTING OR ANY POLE SUPPORT

To help you determine the type and size of power-installed foundation for your requirements, furnish the following data to your Chance representative:

1. Complete the form on the facing page.

Make copies as needed for separate applications.

2. Refer to the soil classification chart below and/or furnish boring logs/report information if available.

Chance applications engineers then can match a foundation to meet your performance criteria with computer-assisted design capabilities through interactive software programs.

SOIL CLASSIFICATION DATA

Class	Common Soil-Type Description	Geological Soil Classification	Probe Values in.-lbs. (Nm)	Typical Blow Count "N" per ASTM-D1586
0	Sound hard rock, unweathered	Granite, Basalt, Massive Limestone	N.A.	N.A.
1	Very dense and/or cemented sands; coarse gravel and cobbles	Caliche, (Nitrate-bearing gravel/rock),	750-1600 (90-208)	60-100+
2	Dense fine sand; very hard silts and clays (may be preloaded)	Basal till; boulder clay; caliche; weathered laminated rock	600-750 (78-98)	45-60
3	Dense clays, sands and gravel; hard silts and clays	Glacial till; weathered shales, schist, gneiss and siltstone	500-600 (65-78)	35-50
4	Medium dense sandy gravel; very stiff to hard silts and clays	Glacial till; hardpan; marls	400-500 (52-65)	24-40
5	Medium dense coarse sand and sandy gravels; stiff to very stiff silts and clays	Saprolites, residual soils	300-400 (39-52)	14-25
6	Loose to medium dense fine to coarse sand; firm to stiff clays and silts	Dense hydraulic fill; compacted fill; residual soils	200-300 (26-39)	7-14
**7	Loose fine sand; Alluvium; loess; soft-firm clays; varied clays; fill	Flood plain soils; lake clays; adobe; gumbo, fill	100-200 (13-26)	4-8
**8	Peat, organic silts; inundated silts, fly ash	Miscellaneous fill, swamp marsh	less than 100 (0-13)	0-5

Class 1 soils are difficult to probe consistently and the ASTM blow count may be of questionable value.

**It is advisable to install anchors deep enough, by the use of extensions, to penetrate a Class 5 or 6, underlying the Class 7 or 8 Soils.

INSTALLATION OF CHANCE FOUNDATIONS

Unloading foundation from digger/derrick truck.

Attaching drive tool and Kelly bar assembly to foundation

Initial phase of actual installation . . . point of foundation is inserted into the ground.

Plumbness is frequently checked as the foundation is installed.



POLE LOAD DETERMINATION DATA (Based on 2001 AASHTO Specification)

NOTE: This worksheet is available on request in full-page format as Chance Bulletin No. 02-0601.

Following data is required to determine street light structure loads.

Circle appropriate units of measure: 11. Minimum Design Life

- | | |
|--|---|
| 1. Luminaire Mounting Height (m or ft) | (Circle choice) <u>10 25 50</u> (yrs) |
| 2. Height of Pole..... (m or ft) | Design life default is 25 yrs. See Table 3-3 AASHTO |
| 3. Outside Diameter of Pole Top (cm or in) | Spec, 4th Edition, 2001, below. |
| 4. Outside Diameter of Pole Bottom.. (cm or in) | 12. Number of Arms _____ |
| 5. Arm Length..... (m or ft) | 13. Number of Luminaires _____ |
| 6. Arm Tip Outside Diameter (cm or in) | 14. Pole Shape (Enter choice from |
| 7. Arm Bottom Outside Diameter (cm or in) | list below) _____ |
| 8. Luminaire Weight (kg or lb) | 15. Arm Shape (Enter choice from |
| 9. Luminaire EPA (projected area x Cd) (sq m or sq ft) | list below) _____ |
| 10. Basic Wind Speed (km/hr or mph) | 16. Is this Pole in Alaska? (yes or no) |

1 = Cylindrical	3 = Hexdecagonal (16 sides)	5 = Octagonal (8 sides)	7 = Diamond
2 = Flat	4 = Dodecagonal (12 sides)	6 = Square (4 sides)	

- | | |
|---|----------------------------|
| 17. Anchor Bolt Diameter (cm or in) | 19. Soil Conditions: _____ |
| 18. Bolt Circle Diameter (cm or in) | |

Please provide any soil data available.

Table 3-3 Recommended Minimum Design Life	
Reproduced from AASHTO Specification, 4th Edition, 2001	
Design Life	Structure Type
50 years	- Luminaire support structures exceeding 15m (49.2 ft.) in height - Overhead sign structures
25 years	- Luminaire support structures less than 15m (49.2 ft.) in height - Traffic signal structures
10 years	- Roadside sign structures

A digger-derrick with a conventional kelly bar is used to install the foundation. The installing tool consists of a kelly bar adapter fastened to a drive plate with multiple hole spacing to accommodate several different bolt circles. The drive plate is then attached to the foundation base plate using the mounting bolts. A standard carpenter's level or plumb bob is

the only other tool required. It is used to check the plumbness of the foundation as it is installed. Power-installed foundations are installed directly into the earth with the foundation displacing the soil outwardly, compacting the soil around the shaft. This improves the soil shear strength and its overturning resistance.

Foundation installation nears completion.

Kelly bar and drive tool assembly are removed.

Base of streetlight standard is attached to the foundation.

Completing installation of streetlight standard.



NON-EXTENDABLE FOUNDATIONS

FOR DEPTHS TO 10-FEET

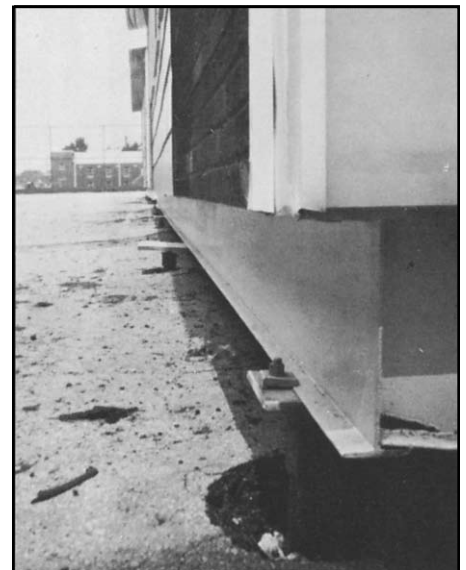
A typical non-extendable foundation installation can be made in 10 to 20 minutes using conventional rotary equipment. Torque capacities vary from 10,000 to 25,000 foot-pounds depending on diameter of foundations. Once the foundation is installed, load can be applied immediately. The geotechnical staff of Chance can provide design assistance for a foundation anchor system based on your furnished subsurface information and loading requirements. Soil parameters usually dictate the number of foundation anchors to support a given load.



The large-diameter helix on the foundation usually provides sufficient compression-load capacity and standard base-plate bolt patterns accommodate most attachments. Custom-made patterns can be made to meet specific needs.



Compression-load capacities of non-extendable foundations average 20,000 pounds. Local soil conditions govern foundation capacity. The lateral-load capacity of an individual element is a function of the pipe length, diameter and soil strength properties.



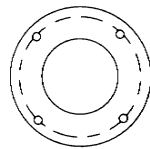
NON-EXTENDABLE FOUNDATIONS FOR MANY APPLICATIONS

All instant foundations have hot-dip galvanized, corrosion resistant finishes.

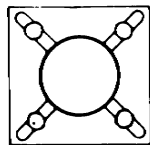
Power-installed foundations are furnished in two basic styles: Variable and Fixed bolt circle base plates. Slipbase design is optional. Bolts, nuts and washers included. Can be installed through macadam (blacktop) surfaces. Rated to 25,000 ft.-lbs. of torque. Bolt retaining washers for the slotted baseplate are available.

Catalog No.	Bolt Circle	Helix Dia.	Shaft O.D.	Shaft Length	Std. Pkg.
C11232JG4TL	11 $\frac{1}{2}$ "	12"	6 $\frac{5}{8}$ "	5'	1
C11232JG4VL	9" - 14"	12"	6 $\frac{5}{8}$ "	5'	1
C11242NG4TK	11"	14"	8 $\frac{5}{8}$ "	5'	1
C11242NG4TL	11 $\frac{1}{2}$ "	14"	8 $\frac{5}{8}$ "	5'	1
C11242NG4TM	12"	14"	8 $\frac{5}{8}$ "	5'	1
C11242NG4TU	15"	14"	8 $\frac{5}{8}$ "	5'	1
C11242NG4VP	11" - 17"	14"	8 $\frac{5}{8}$ "	5'	1
C11252SG4TU	15"	16"	10 $\frac{3}{4}$ "	5"	1

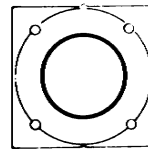
Consult factory for additional shaft lengths or bolt circle diameters.



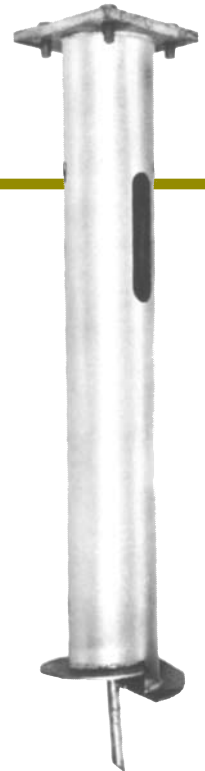
Round baseplate



Variable bolt circle



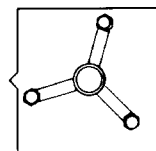
Fixed bolt circle



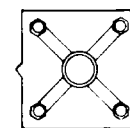
These power-installed steel foundations are available with 3- or 4-hole variable bolt circle base plates. Bolts and nuts are furnished. Can be installed through macadam. Rated 8,000 ft.-lbs. of torque.

Catalog No.	Bolt Circle	Helix Dia.	Shaft O.D.	Shaft Length	Std. Pkg.
T112-0142	5"-8" 3 bolt	12"	3 $\frac{1}{2}$ "	5'	1
T112-0143	5"-8 $\frac{1}{2}$ " 4 bolt	12"	3 $\frac{1}{2}$ "	5'	1
T112-0338*	5" - 8" 4 bolt	10"	4"	4'-8"	1
T112-0352*	5" - 8" 3 bolt	10"	4"	4'-8"	1

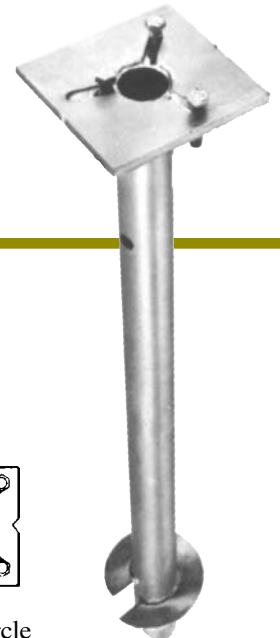
* Order hardware separately.



3-bolt circle



4-bolt circle



FLANGE DRIVE FOUNDATIONS

Power-installed light duty flange drive foundations have shaft sizes of 2 inches and lengths of 51 inches or 69 inches. Choice of 8-inch and 10-inch helices. Rated 4,000 ft.-lbs. of torque.

Catalog No.	Helix Dia.	Shaft	Shaft Length	Std. Pkg.
E107-0158	8"	2 1/2"	51"	3
E107-0397	10"	2 3/4"	69"	3

EXTENSION SECTIONS

Extension sections for flange-drive foundations provide additional depth or height when desired. Bolts and nuts included.

Catalog No.	Shaft	Shaft Length	Std. Pkg.
C107-0174	2 3/8"	30"	30

SQUARE DRIVE FOUNDATIONS

Power-installed square drive foundations have 2-inch square heads that are threaded throughout to accept the threaded accessories below.

Catalog No.	Helix Dia.	Shaft	Shaft Length	Max. Installation Torque	Std. Pkg.
C107-0394	8"	2 3/8"	69"	4,000 ft.-lbs.	1
C107-0395	10"	2 3/8"	69"	4,000 ft.-lbs.	1

MANUALLY-INSTALLED FOUNDATIONS

Manually-installed foundations are designed to be installed with standard hand tools such as ratchet wrench with deep socket. Available with accessory leveling pad, E107-0188.

Catalog No.	Helix Dia.	Shaft Dia.	Shaft Length	Std. Pkg.
C107-0048	4"	3/4"	35"	1
C107-0190	4"	3/4"	35"	1

C107-0190

C107-0048

Accessories for square drive foundations

Straight Stud
E211-0037

Level Pad
C107-0111



Streetlight Foundations

Catalog Number	Length (feet)	Base Plate (inches)	Bolt Circle (inches)	Drilled, Tapped, or Slotted	Cableway Size (in.)	Cableway, inches from Base Plate	Bolt, diameter x length	Helix dia., in.	Wt. (lb.)
6" diameter, Fixed Bolt Circle									
CT112-0265	4	1 x 12	11.5	T	3 x 12	10	1 X 2.5	12	126
CT112-0047	4	.5 x 18.625	19.812	T	—	—	—	12	148
CT112-3063	4	.75 x 10	9.5	T	3 x 12	12	1 x 4 Stud	12	94
CT112-0268	4	1.25 x 15	15	T	2.5 x 12	10	1 x 2.5 H.H.	12	128
CT112-0508	5	1 x 12	11	T	2.5 x 12	12	1 x 4 H.H.	12	177
CT11232JG4TJ	5	1 x 12	10.5	T	2.5 x 12	12	1 x 2.5 H.H.	12	141
C11232JG4TL	5	1 x 12	11.5	T	2.5 x 12	12	1 x 2.5 H.H.	12	132
CT112-0291	5	1 x 12	10.5	T	2.5 x 12	18	1 x 4 Stud	12	142
CT112-0292	5	1 x 12	11.5	T	3 x 12	18	1 x 4 Stud	12	140
CT112-0529	4	1 x 12	8	T	2.5 x 12	18	4.75 x 5 Stud	12	115
6" diameter, Variable Bolt Circle									
CC112-0524	6	1 x 12	28" x 9	S	—	—	4.75" x 8" Stud	12	167
CC112-0525	10	1 x 12	28" x 9	S	—	—	4.75" x 8" Stud	12	250
CT112-0359	4	.75 x 12	8-14	S	2.5 x 12	12	.75 x 2.5 H.H.	12	105
CT112-0296	5	1 x 15.75	9-17	S	2.5 x 12	12	1 x 3 Carriage	12	162
CT112-0361	5	1 x 15.75	9-14	S	2.5 x 12	12	1 x 4 Carriage	12	163
CT112-0438	5	.75 x 15.75	9-15	S	2.5 x 12	12	4" .75" x 5 Carriage	12	160
CT112-0516	5	1 x 15.75	9-15	S	2.5 x 12	24	4" 1" x 4 Carriage	12	173
1) C11232JG4VL	5	1 x 12	9-14	S	2.5 x 12	12	1 x 4 Carriage	12	132
1) CT112-0160	5	1 x 12	9-14	S	2.5 x 12	12	1 x 3 Carriage	12	146
1) CT112-0262	7	1 x 12	9-14	S	2.5 x 12	12	1 x 4 Carriage	12	180
8" diameter, Fixed Bolt Circle									
C11245NW4TH	5	1 x 12	10	T	2.5 x 2.5	18	1 X 2.5 H.H.	14	158
C11242NG4TJ	5	1 x 12	10.5	T	2.5 x 12	12	1 X 2.5 H.H.	14	166
C11242NG4TK	5	1 x 12	11	T	2.5 x 12	12	1 X 2.5 H.H.	14	160
C11242NG4TL	5	1 x 12	11.5	T	2.5 x 12	12	1 X 5.5 H.H.	14	166
CT112-0293	5	1 x 12	11.5	T	3 x 12	18	1 x 4 Stud	14	159
C11242NG4TM	5	1 x 12	12	T	2.5 x 12	12	1 x 4 Stud	14	158
CT112-0294	5	1.25 x 15	14.5	T	3 x 12	18	1 x 4 Stud	14	193
C11242NG4TU	5	1.25 x 15	15	T	2.5 x 12	12	1 x 2.5 H.H.	14	160
CT112-0266	5	1 x 12	11.5	T	3 x 12	10	1 x 2.5 H.H.	14	150
CT112-0267	5	1.25 x 15	15	T	3 x 12	10	1 x 2.5 H.H.	14	160
CT112-0509	6	1.25 x 15	15	T	2.5 x 12	12	1 x 5 Stud	14	215
CT112-0283	6	1 x 12	12	T	2.5 x 12	24	1 x 3.5 H.H.	14	168
C11242QG4TM	7	1 x 12	12	T	2.5 x 12	12	1 x 2.5	14	169
C112-0536	7	1 x 12	11.5	T	3 x 12	12	4" 1" x 3 Machine	14	
CT112-0512	7	1 x 12	11.5	T	2.5 x 12	12	4" 1" x 5 Th. Stud	14	
CT112-0497	7	1 x 15	11 - 15	T	2 x 12	18	4" 1" x 4 Machine	10" plate	
CT112-0530	5	1 x 15.75	15	T	2.5 x 12	18	4" 1" x 8" Stud	14	
CT112-0212	5	1 x 12	11	T	3 x 12	12	4" 1" x 2.5 Machine	plate	
8" diameter, Variable Bolt Circle									
CT112-0444	5	1 x 19.5	12-16	S	3 x 6	18	.75 x 3.5 Carriage	12	150
C11242NG4VP	5	1 x 15.75	11-17	S	2.5 x 12	12	1 x 4 Carriage	14	172
CT112-0355	5	1 x 15.75	11-17	S	2.5 x 12	12	1 x 4 Carriage	14	172
CT112-0462	5	1 x 15	11-15	S	2 x 6	18	1 x 4 H.H.	14	175
CT112-0271	5	1 x 12	8.5 - 14	S	2.5 x 12	12	1 x 4 Carriage	14	163
CT112-0426	6	1 x 15.75	11 - 17	S	2.5 x 18	18	1 x 4 Carriage	14	194
CT112-0424	7	1 x 15.75	15	S	2.5 x 18	18	1 x 4 Carriage	14	247
1) C11242QG4VP	7	1 x 15.75	11 - 17	S	2.5 x 12	12	1 x 4 Carriage	14	185
CT112-0394	5	1 x 15.75	11 - 17	S	2.5 x 12	12	4" 1" x 4 Carriage	14	
CT112-0517	5	1 x 15.75	11 - 17	S	2.5 x 12	24	4" 1" x 4" Carriage	14	172
CT112-0353	6	1 x 14	11 - 14	S	2 x 6	12	4" 1" x 4 Carriage	14	194
10" diameter									
C11252SG4TM	5	1.25 x 15	15	T	2.5 x 12	12	1 x 2.5 H.H.	16	218
CT112-0284	6	1.25 x 15	15	T	2.5 x 12	24	1 x 3.5 H.H.	16	278
CT112-0510	6	1.25 x 15	15	T	2.5 x 12	12	1 x 5 Stud	16	267
CT112-0463	7	1.25 x 17	15-17	S	2 x 6	18	1.25 x 4 H.H.	16	370
CT112-0200	7	1.25 x 15	15	D	3.5 x 36	—	1 x 5.5 H.H.	16	358
CT112-0325	7	1.625 x 19	13.5	D	2 x 6	18	1.25 x 4 H.H.	16	375
T112-0496	8	1.25 x 17	15-17	S	2 x 12	18	4" 1.25" x 4 Machine	4 x 12	
CT112-0201	10	1.25 x 15	15	D	3.5 x 36	—	1 x 8 Stud1 x 8 Stud	16	450
CT112-0143	5	.75 x 8 x 8 sq	5-8	S	1.25 dia. hole	12	.75 x 3.5 Carriage	12	71
CT112-0142	5	.75 x 10 x 10 sq	5-8	S	1.25 dia. hole	12	.75 x 3.5 Carriage	12	80
CT112-0302	5'4.5"	.75 x 12	5-10	S	1.25 dia. hole	12	5/8 x 2.5 Carriage	12	80
CT112-0338	4'8"	.75 x 8.75	8	S	1.5 x 3	18	*CT112-0393	10	80
CT112-0352	4'8"	.75 x 10.75	8	S	1.5 x 3	18	*CT112-0392	10	80

* Bolt assembly for CT112-0338 and CT112-0352 ordered separately.
 1) Retaining washer for variable baseplates available, 1" and 1 1/4" bolts.

EXTENDABLE FOUNDATIONS

FOR DEEP-BEARING SOILS

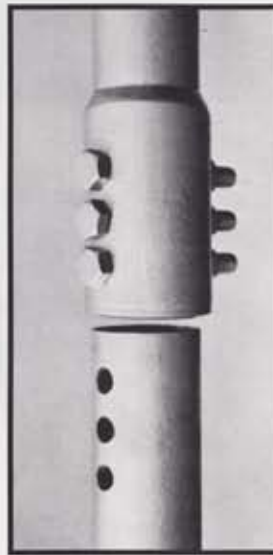
Chance extendable foundations come in two types. Type HS is a multi-helix lead section of 3-inch extra-heavy pipe shaft to which additional extensions of the same size diameter may be added if high lateral load-carrying capacity is not required. Type TC is a similar-design lead section with the same type helices used on Type HS foundations plus extensions of 8-inch pipe for resisting uplift, compression and lateral loads.

APPLICATIONS

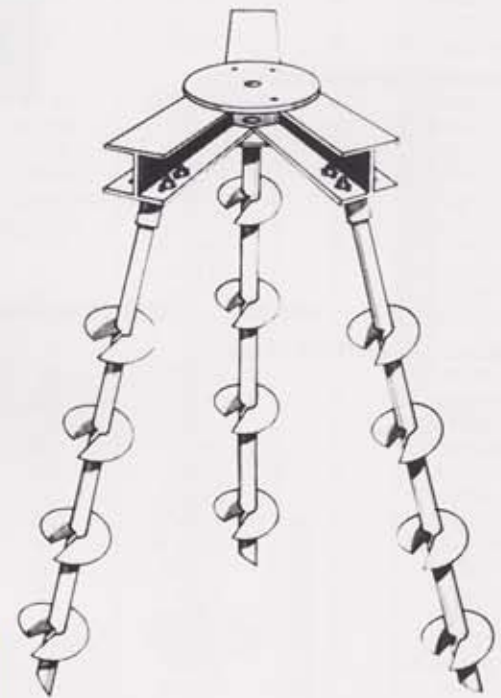
Extendable foundations are especially applicable in areas, where a high water table exists. Concrete foundations require pumping and casing in an area of high water table. The Chance foundation system does not require any soil preparation prior to installation. On jobs with low working clearances, such as when underpinning an existing building, Chance extendable foundations are ideal. Light, temporary structures and prefabricated buildings also have been supported by foundations. Each foundation element may be incorporated into a reinforced-concrete grade beam beneath the structure, or the foundation may attach directly to metal beams which support a structure.



Type HS Foundation



HS Extension



In many instances, power-installed foundations can be installed using the same equipment used for drilled foundations.

When encountering construction that demands low installing noise levels, vibration control, spoils removal or groundwater concerns associated with excavation, look to removable and re-usable Chance power-installed foundations.

SIMPLE TOOLS

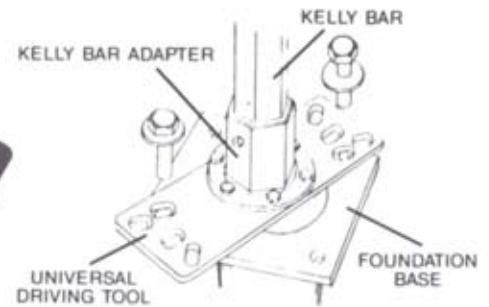
Use these tools with conventional power-digging equipment.

UNIVERSAL DRIVE TOOL

For installing all foundations listed on Page 7. Slotted bolt holes adapt to all base plate configurations.

Catalog No. C303-0139 (5/4" B.C.) Weight: 18 lbs.

C303-0684 (75/8" BC) Weight: 49 lbs.

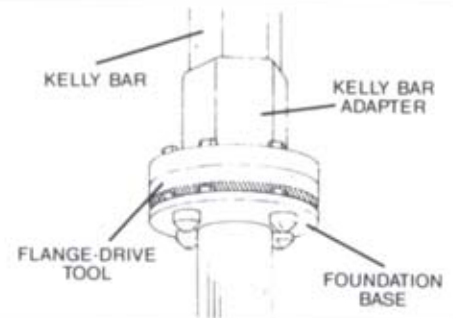


FLANGE DRIVE TOOL

For installing all flange-drive foundations on Page 8.

Catalog No. C130-0010

Weight: 10 lbs.

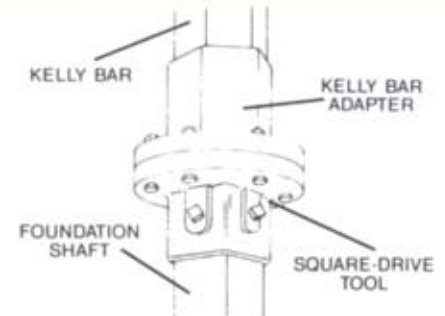


SQUARE DRIVE TOOL

For installing all square drive foundations on Page 8. Attaches directly to Kelly bar adapter.

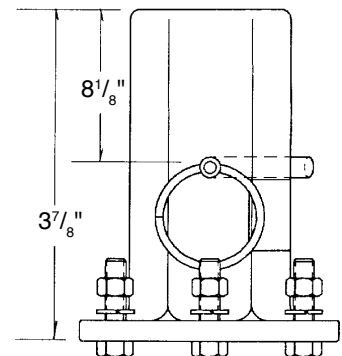
Catalog No. 639000

Weight: 8 lbs.



KELLY BAR ADAPTERS

Part No.	Kelly Bar Dimension
P630011HD	2 1/2" Hex
P630012HD	2 5/8" Hex



TYPE HS FOUNDATION

Each high-strength foundation has a galvanized multi-helix lead section of 3-inch extra-heavy pipe to which extensions of the same size may be added. HS foundations are used in applications where compression and tension loads with moderate lateral loads are encountered. Various lead configurations and helical extensions allow flexibility in event of unexpected sub-surface conditions.

CONNECTION

Type HS lead sections and extensions connect by bolted couplings. Two types of termination are available. One adapter accepts a threaded stud or L-Stud assembly for tension load. The adapter is embedded in a concrete cap. The other termination will accept a shackle or Chance Adjust-A-Grip® deadend for guy strands. Other special connectors can be fabricated on request.

HS Lead Sections

Cat. No.	Length Feet	Helix Configuration
C107-0561	5	10,12
C107-0562	5	12,14
C107-0564	7	10,12,14
C107-0565	7	12,14,14
C107-0566	10	8,10,12,14
C107-0567	10	10,12,14,14
C107-0568	10	14,14,14,14

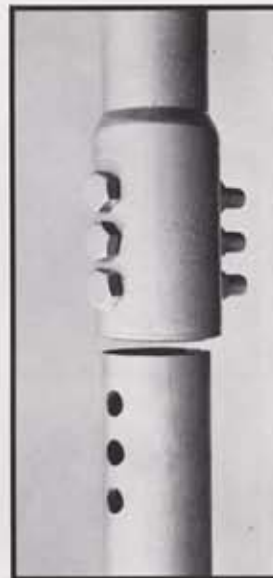
HS Extensions

Cat. No.	Length Feet	Helix Configuration
C107-0577	5	14
C107-0579	5	14,14
C107-0573	3	None
C107-0574	5	None
C107-0575	7	None
C107-0576	10	None

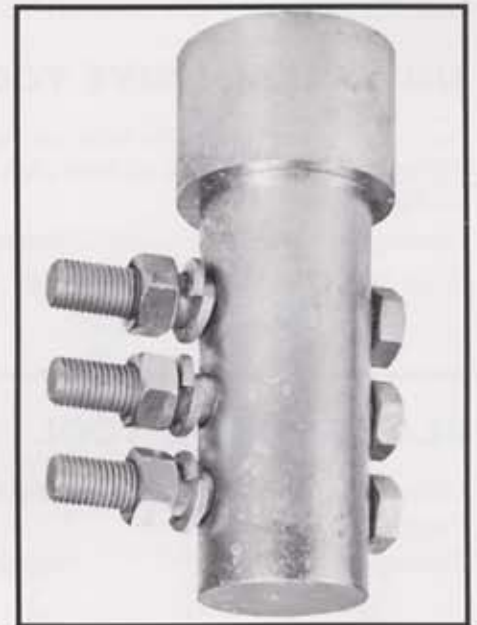
11,000 ft.-lb. Torque Capacity



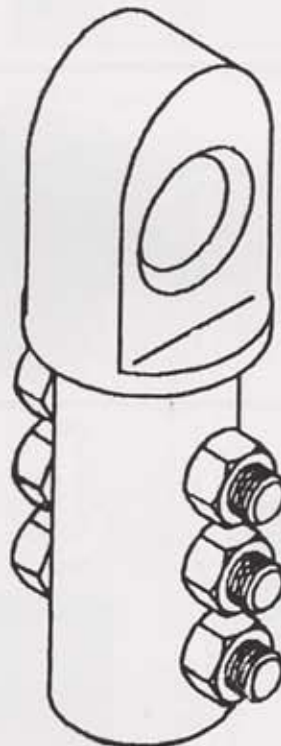
Typical HS Lead Section



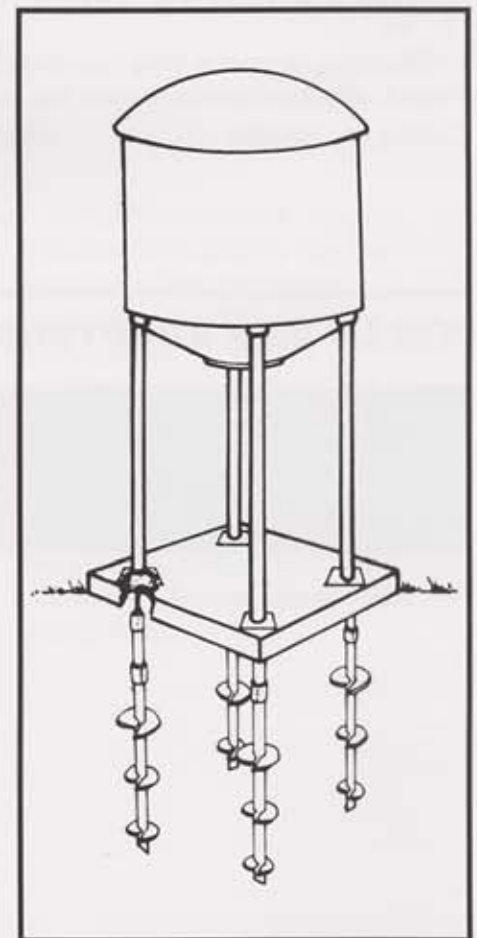
HS Extension



Threaded Bar Adapter
Catalog No. C107-0673



Guy Termination Adapter
Catalog No. C111-0046



See page 14 for foundation grillages and connections.

TYPE TC FOUNDATION

Tension/Compression Foundations have galvanized lead sections and extensions of 8-inch pipe for resisting uplift, compression and lateral loads. See page 14 for standardized components that provide flexibility in joining foundation to superstructure. A conventional pile cap will work with T/C Foundations.

CONNECTION

Type T/C members connect by bolted helical couplers at the top of the multi-helix lead section and each end of the extension section. For single-element foundations, two terminations are available: Bolted-Cap (to accept a shoe base or similar means to fit the superstructure) and Stub Angle (grouted into the extension cavity). For multi-element foundations, connections to transfer structural loads from the superstructure include the conventional concrete pile cap and metal grillages (Chance Tripod and Quadrapod designs for compression loads which can be field welded or bolted to also transfer tension loads).

Installation tolerances are incorporated into the Bolted Cap and Metal Grillage designs. The Bolted Cap provides a ± 1.4 inches of horizontal adjustment. In general, grillages permit $\pm 2^\circ$ from a 10° batter on each element. Grouted or concrete connections provide considerable flexibility in setting the Stub Angle or conventional anchor bolts in the pipe cavity.

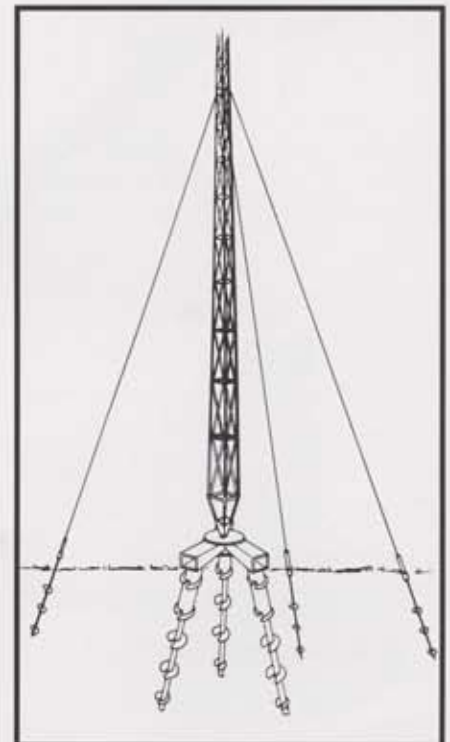
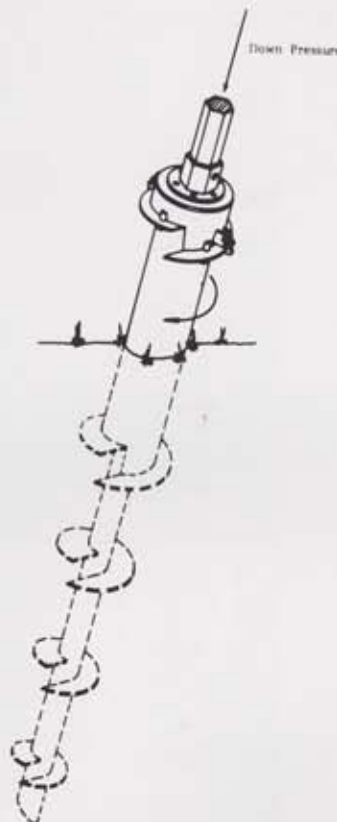
TC Lead Sections (3-inch Pipe)

Cat. No.	Length Feet	Helix Configuration
C107-0666	3	10,14
C107-0667	6	8,10,14
C107-0668	6	10,12,14
C107-0669	9	8,10,12,14
C107-0670	9	10,12,14,14

TC Extension Sections (8-inch Pipe)

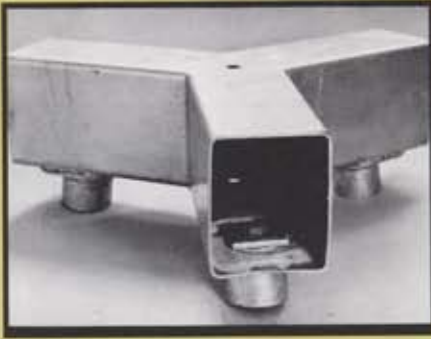
Cat. No.	Length Feet	Helix Configuration
C107-0656	3	14,14
C107-0657	5	14,14
C107-0658	7	14,14
C107-0659	10	14,14

11,000 ft.-lb. Torque Capacity



See page 14 for foundation grillages and connections.

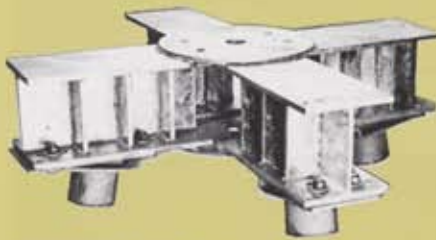
FOUNDATION GRILLAGES AND CONNECTIONS



Tripod Grillage

Tripod Grillages

Catalog No.	Description	Max. Compressive Load (KIPS)
C107-000203	Tripod to fit on 3" Pipe	125
*C107-001903	Tripod to fit on 3" Pipe	150
C107-019203	Tripod to fit on 3" Pipe	200
*T107-027803	Tripod to fit on 3" Pipe	250
C107-000208	Tripod with (3) 8" Pipe Adapters	125
*C107-001908	Tripod with (3) 8" Pipe Adapters	150
C107-019208	Tripod with (3) 8" Pipe Adapters	200
*C107-027808	Tripod with (3) 8" Pipe Adapters	250



Quadropod Grillage

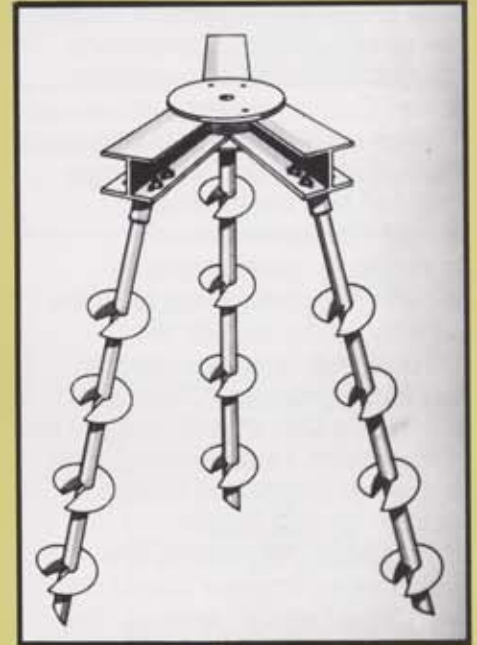
Quadropod Grillage

*T107-030303	Quadropod to fit on 3" Pipe	350
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* Note: Grillages available on a made-to-order basis.



Stub Angle



Grillage Adapter for 8" IPS

C107-0004 Adapter for 8" Pipe



INSTALLING EQUIPMENT

GENERAL CONSIDERATIONS

To select appropriate anchor-installing equipment, first consider two basic requirements: Sufficient torque capacity and sufficient ground clearance at output shaft. Other criteria that deserve advance attention include: Material-handling capability, site limitations to overhead clearance, mobility (consider self-propelled vs. carrier-mounted and tracked vs. wheeled vs. floating).

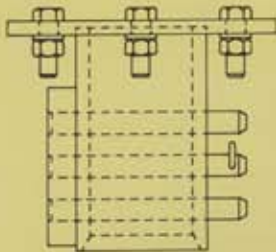
For the requirements on a specific job, also consider the characteristics of two basic types of foundation-installing machinery.

Guided-head installers offer excellent control over foundation positioning and alignment: suppliers include Acker, Highway, Hughes, ICE, Sterling, Texoma and Williams. **Articulated-head installers** usually suspend the torque head on a boom which also can be used to handle materials at the job site: suppliers include Altec, Caterpillar, Deere, Telelect and Wajax.



T/C FOUNDATION TOOL

This special tool has drive pins that insert into the bolt holes of the helical couplers on T/C foundation anchor lead sections and extensions. Easy-release mechanisms permit quick changes for additional extensions.



Catalog Number	Weight, lb.
C303-0594	38

HS FOUNDATION TOOL

Tubular tool fits over end of 3-inch IPS Type HS foundation for power installation. A throughbolt secures the tool to the foundation for driving.

Catalog Number	Weight, lb.
C303-0754	15

TORQUE INDICATOR



Using the Chance Torque Indicator, you can install screw anchors to a pre-determined torque value which gives a positive indication of anchor capacity in any type soil. The tool helps crews avoid excessive torsional loading which could cause damage to the anchor and/or other anchor tools during installation.

Use to install PISA®, SS, and RR anchors as well as power-installed foundations.

Indicator attaches to Kelly bar adapter and drive wrench or locking dog assembly using the bolts provided.



- 20,000 ft.lb. maximum torque
- Easy-to-read dial
- No shear pins to shear and replace

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