DRIVECAST[™] SCREW DISPLACEMENT PILE

DEEP FOUNDATION SOLUTIONS

BRIDGE	HIGHWAY/SPORTS LIGHTING	NEW CO	NEW CONSTRUCTION		
SECANT WALLS	ABUTMENTS	SEAWALLS	PIPELINE		

SEWER UNDERPINNING

MIDRISE STRUCTURE FOUNDATIONS



Never Compromise¹

HANCE Civil Construction | 210 North Allen Street | Centralia, MO 65240 | United States of America

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CHANCE[®] FOUNDATION SOLUTIONS

he Drivecast™ screw displacement pile utilizes soil displacement methodology which allows the pile to be advanced into the soil by rotation. Pile sections are comprised of a centralized steel shaft and a patented displacement assembly placed at regular intervals from the pile tip. By design, the pile establishes a cylindrical void which allows a column of grout to be immediately pulled down from a gravity-fed reservoir, creating a fully grouted, high capacity pile.

▶ HIGH PRODUCTION RATES ► NO VIBRATIONS / SPOILS

PERMANENT FOUNDATIONS, ANYWHERE

Construct a high capacity pile, simply by installing Drivecast to the required depth while maintaining a cement grout reservoir at ground surface. Gravity will naturally pull down the grout into the space provided by the displacement assembly, creating a fully encased grouted pile.



DRIVECAST[™] SCREW DISPLACEMENT PILE DEEP FOUNDATION SOLUTIONS



INSTALLATION PROCESS

Drivecast[™] pile sections are engaged and advanced into the soil in a smooth, continuous manner at a rate of rotation of 5 to 20 RPM's.

Extensions are installed for required depths can be achieved, while sufficiently applying down pressure to uniformly advance each of the sections. Sections are connected by using coupling bolts and nuts, torqued to 40 ft-lbs. The rate of rotation and magnitude of down pressure is adjusted for different soil conditions and depths.

The grout is released from a gravity-fed reservoir located at the surface, prior to the advancement of the lead section into the soil, and is continued until the minimum column length is achieved.

DRIVECAST GROUT

Drivecast grout is typically a 4500 psi mix, either neat or with a sand aggregate filler. Grout is placed into the reservoir immediately prior to the advancement of the lead section into the soil. The volume of grout contained in the reservoir is always maintained at a level to maintain positive hydrostatic pressure on the grout column. Grout placement continues until the Drivecast installation is completed.

▶ MINIMAL SITE DISTURBANCE ► LOW MOBILIZATION COSTS ► STANDARD INSTALLATION EQUIPMENT



INSTALLATION EQUIPMENT

A rotary type, hydraulic power driven torque motor should be utilized, along with a Kelly bar adapter and Square Shaft (SS) or Round Shaft (RS) drive tool. It is recommended that a torque indicator be used to measure torque and can be an integral part of the installation equipment or externally mounted in-line with the installation tooling.





Torgue Indicator

COMPARISON OF DEEP FOUNDATION ELEMENTS

	Helical Piles	Micro Piles	Caissons	Driven Piles	Rammed Aggreate	CFA Piles	Drivecast™
Capacity 300k ULT Load	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Capacity 675k ULT Load	*	\checkmark	\checkmark	\checkmark			*
Predictable Load Capacities	\checkmark			\checkmark			\checkmark
Ability To Install In Tight Access (5ft wide) and Low Headroom (8ft high)	\checkmark	\checkmark					\checkmark
Limited or No Spoils	\checkmark	\checkmark		\checkmark			\checkmark
Limited / No Vibration, Noise	\checkmark	\checkmark	\checkmark			\checkmark	\checkmark
No Dewatering Required	\checkmark	\checkmark				\checkmark	\checkmark
Obstructions In Soil (Boulders, Rubble, etc.)	+	\checkmark					+

* Multiple helical piles could be installed + Predrilling may be required

MECHANICAL STRENGTH RATINGS		TYPE SS175 1-3/4" ROUND CORNER SHAFT	TYPE SS200 2" ROUND CORNER SHAFT	TYPE RS3500 3-1/2" O.D 0.300" WALL PIPE	TYPE RS4500 4-1/2" O.D 0.337" WALL PIPE	
	Torsional Strength* Rating (ft-lb)	10,500	16,000	13,000	23,000	
	Grout Column Diameter (in)	8	12	10	12	
	Allowable Compressive Strength** (kip)	170	280	150	210	

*Actual installed capacities are dependent on soil conditions

**CHANCE Drivecast™ allowable compressive strength = 0.33(f'c)Ac + 0.4(Fys)As

► OPTIMAL FOR LIMITED ACCESS AREAS WITH LOW OVERHEAD OR LOW CLEARANCE CONDITIONS

APPLICATION VERSATILITY

Designed for projects where increasing capacity and providing predictable results is a must, CHANCE Drivecast is a fully grouted pile, resisting corrosion in aggressive soils and high water tables.

As a proven engineered system, bearing and side resistance is combined to bring a large diameter solution to a wide variety of applications for new construction, heavy highway, tanks/sewer, pipelines, and commercial/industrial buildings.

Perfect for limited access sites or areas with low overhead, this sectional, driven pile provides added capacity with efficient, predictable results.

RS Drive Tool

SS Drive Tool

PRODUCT FEATURES





CORROSION PROTECTION

Drivecast piles are offered both as uncoated or hot dip galvanized per ASTM A153 or A123. The fully grouted column itself provides one level of corrosion protection. If soil conditions, service life, or code requirements warrant additional protection, then hot dipped galvanization provides a second level of protection. Hot dipped galvanization is the only practical means to provide a corrosion resistant coating capable of withstanding the rigors of installation.





