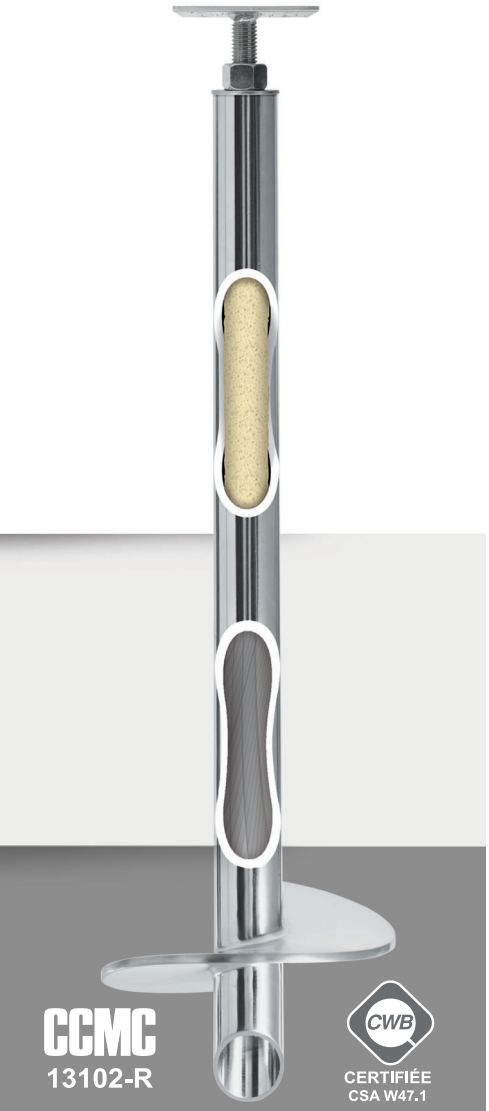
TECHNICAL DATA SHEET
POSTECH PILE P512 (5 1/2")



CCMC 13102-R

CWB CERTIFIÉE CSA W47.1

NORMATIVE INFORMATION

Postech products are approved by the Canadian Construction Materials Centre (CCMC 13102-R). They were tested on-site by an engineering firm recognized by the CCMC. The technical evaluation indicates that Postech products respect the requirements of the CCMC guidelines for augered steel piles. Their performance is equivalent or superior to prescribed NBC 2010 standards.

MANUFACTURER:
Pieux Vistech - Postech Screw Piles
10260, Bourque boulevard
Sherbrooke QC J1N 0G2
Tel. : 819.843.3003
Toll free: 1.866.277.4389
Fax. : 819.868.0793
postech-foundations.com

PRODUCT CHARACTERISTICS	
Physical and Chemical properties	
STEEL GRADE	Conform to CAN/CSA G40.21-350W and/or ASTM A500 grade C
ARC WELDING	Conform to CSA W59-18
HOT DIP GALVANIZATION	Conform to ASTM-A123M
THERMAL INSULATION	Unique polyurethane foam
Standard characteristics	
TUBING DIAMETER	140 mm (5 1/2 in)
BLADE DIAMETER	From 355 to 610 mm (14 to 24 in)
TUBING LENGTH	Standard of 2.1 m and 3 m (7 ft and 10 ft)
TUBING THICKNESS	6.5 mm (0.258)
BLADE THICKNESS	12.7 mm (1/2 in) for diameter from 355 to 610 mm (14 to 24 in)
ADAPTER HEADS	Various forms as needed according to the project specifications
EXTENSIONS	Available according to project specifications

ALLOWABLE MECHANICAL RESISTANCE (SLS)	
MAXIMUM COMPRESSIVE AND TENSILE OF TUBING	530 kN (119 150 lb) (1)
BENDING MOMENT OF TUBING	23.3 kN.m (17 185 lb.ft)
INSTALLATION TORQUE - MAXIMUM APPLICABLE	43 320 N.m (31 950 lb.ft)

BEARING CAPACITY (ULS)	
COMPRESSIVE TORQUE CORRELATION FACTOR (K_t)	13,7 m^{-1} (4,2 ft^{-1}) (2)

ULS = Ultimate Limit State SLS = Service Limit State

(1) The maximum support value is applicable to steel tube only. The resistance is conditional on the composition of the on-site soil (granular and / or cohesive) and that the pile must be supported laterally. In all cases, the mechanical capacity of the steel tube must be certified by an authorized engineer. (Not applicable in the presence of liquefiable or loose soils, water, air, peat bogs, etc.)

(2) The K_t factor supplied by Postech is only applicable to determine plies compressive bearing capacity in, screwed into granular (cohesionless) soils. When the piles are used in tension, or in a cohesive soil, please contact Postech to determine its bearing capacity.

SCREW PILES **BEARING CAPACITY**

$Qt = Kt \times T$

- Q_t = Ultimate bearing capacity.
- K_t = Torque correlation factor.
- T = Average torque mesured on the last 0,3 m (1 ft.) installation, in N.m or lb.ft.

To obtain the service bearing capacity (SLS), the value of Q_t must be divided by 2 (SF=2).

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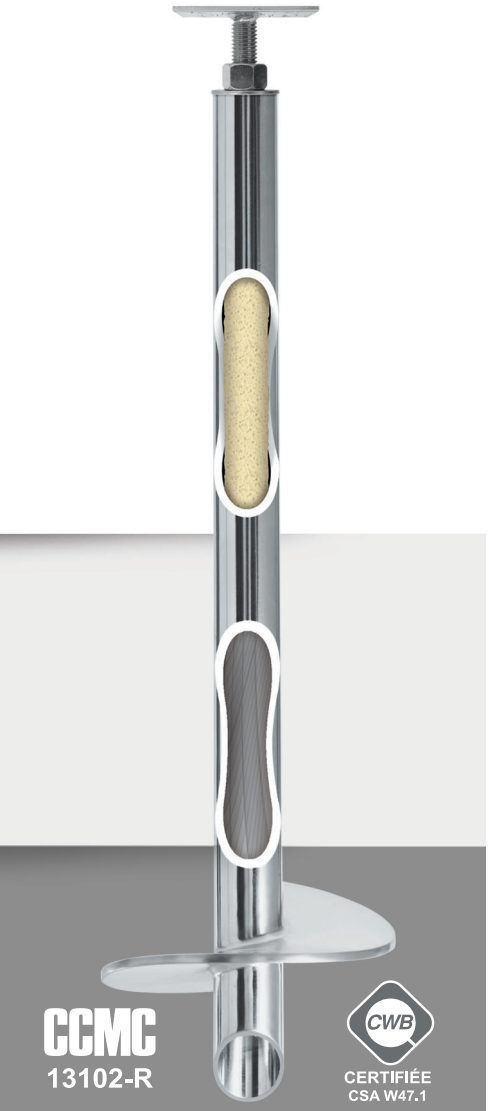

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LATERAL LOADS

ALLOWABLE LOADS (SLS) DEPENDING ON SOIL DENSITIES

SOIL DENSITIES (kN / m³)	P512 ALLOWABLE LATERAL LOADS (3)	
	(kN)	(Lb)
16	17.5	3 935
18	19.8	4 455
20	22.0	4 950
22	24.1	5 420

SLS = Service Limit State

(3) Lateral loads are applicable at the pile head, less than 0.3 m (1 ft) above ground, and the pile must be supported laterally by the ground. However, lateral loads do not apply in the presence of liquefiable or loose soils, water, air and peatlands. The lateral capacity of a pile must always be certified by an engineer licensed to practice under the appropriate provincial or territorial legislation. The safety factor for the lateral loads is equal our superior to 2.0.

Technical note :

- If there are boulders (> 200 mm diameter) in the granular matrix, the above mentioned capacities will be overstated. In this case, the allowable compessive and tensile loads have to be confirmed by on-site load tests.

DESIGN INFORMATION

In all cases, please refer to the CCMC 13102-R Assessment Report. All applicable loads must be validated by an engineer licensed to practice under the appropriate provincial or territorial legislation.

BEARING CAPACITY

Postech products are designed to bear compressive and tension loads. The design of the shaft and the size of the blade depend on the load and on the bearing capacity of the soil. The monitoring of the applied torque on-site allows for the confirmation of the ultimate and allowable bearing capacities (ULS and SLS) of the soil. All capacities listed on this data sheet must be applied at the pile head less than 0.3 m (1 ft) above ground.

THERMAL INSULATION

Postech products are insulated by a process of injecting polyurethane foam in the piles shaft. The insulation system ensures that the inside of the pile is maintained at a temperature that will prevent ice or frost build-up at the base of the pile; providing optimal protection against frost heave.

The urethane insulation is not supplied as standard on this model of pile. Available only on demand.

SCREW PILE **ADVANTAGES**

- Product and installation is supplied, you only need to mark the spot!
- Can be installed in all climates, weather or ground conditions;
- No excavation usually required, minimal impact to your property;
- No waiting time, you can build as soon as the installation is ready;
- Reusable and recyclable, environmentally friendly;
- Can be installed under an existing structure;
- The most reliable & economical solution available.