

## Bearing capacity and durability

The bearing capacity of screw piles is excellent even in frosty soils. In addition, the screw pile is suitable for all anchoring with high tensile strength needed.

The bearing capacity of a crew pile is formed by the ratio of soil quality, pile length, pipe diameter and flange area. In order to determine the correct pile type, a structure designer must be used for difficult locations.

The screw pile bears both lightweight and heavy structures.



## Extensive selection – high quality

### Sizes / lengths of screw piles

#### Screw piles with Ø 150 mm flanges

Pipe 60 x 2.9 mm, flange Ø 150 mm, hot-dip galvanized

- Manually installed screw pile - length 1.15 m
- Manually installed screw pile - length 1.65 m
- Manually installed screw pile - length 2.15 m
- Manually installed screw pile - length 3.15 m
- Manually installed screw pile - length 1.50 m
- Manually installed screw pile - length 2.00 m
- Manually installed screw pile - length 3.00 m

#### Screw piles with Ø 250 mm flanges

Pipe 76.1 x 6.3 mm, flange Ø 250 mm, untreated surface  
 Pipe 88.9 x 6.3 mm, flange Ø 250 mm, untreated surface  
 Pipe 114.3 x 6.3 mm, flange Ø 250 mm, untreated surface

Available only on machine-installed model - lengths 1-6 m

#### Screw piles with Ø 400 mm flanges

Pipe 88.9 x 6.3 mm, flange Ø 400 mm, untreated surface  
 Pipe 114.3 x 6.3 mm, flange Ø 400 mm, untreated surface  
 Pipe 114.3 x 3.6 mm, flange Ø 400 mm, hot-dip galvanized

Available only on machine-installed model - lengths 1-6 m

Screw piles are delivered in accordance to the requirements set by the building location. Various set sizes are available. The usual pipe sizes vary between 60.3–114.3 mm. The screw piles are made of high-quality steel in accordance with rigorous quality requirements. The piles are mainly delivered hot-dip galvanized but the larger screw piles with 6.3mm thick walls are delivered untreated. The most common sizes for flanges are 150 mm, 250 mm and 400 mm. Durable foundations effortlessly and cost-efficiently – contact Paalupiste or your nearest screw pile retailer!



Manually installed screw pile



Machine installed screw pile



### Accessories



Extension pile, length 1 m–6 m



Screw pile for flagpoles



Extension adaptor



Bolt bracket, fixing spacing 100 mm



U-bracket 2" for horizontal structures



Bolt bracket, fixing spacing 150 mm



U-bracket 4" for horizontal structures



Flat fitting for horizontal structures



U-bracket 4" for vertical structures



Angle bracket for horizontal structures



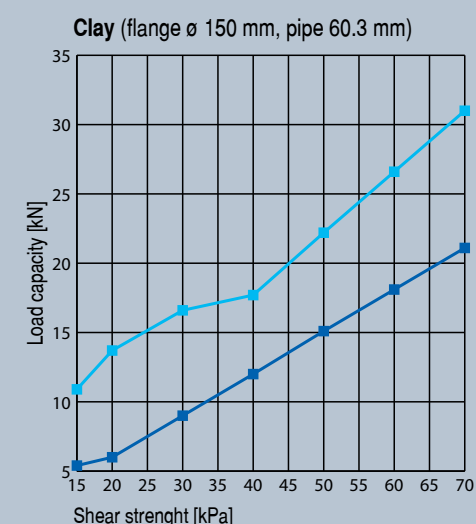
U-bracket 6" for vertical structures

## The geotechnical bearing capacity of screw piles

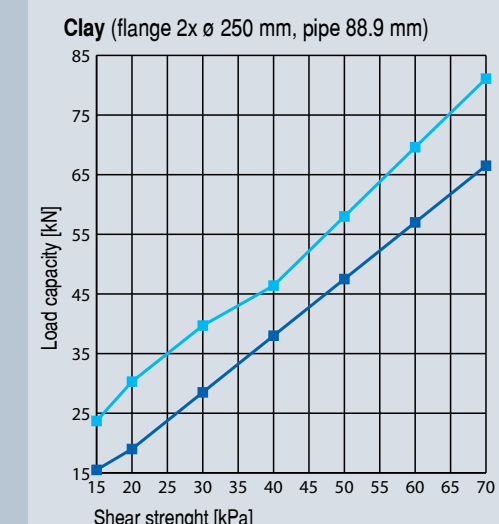
The safety coefficient must be taken into consideration according to the regulations.

— Embedding depth 3.0 m  
 — Embedding depth 1.5 m

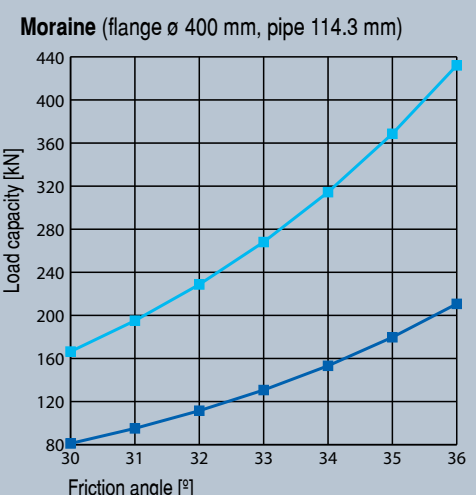
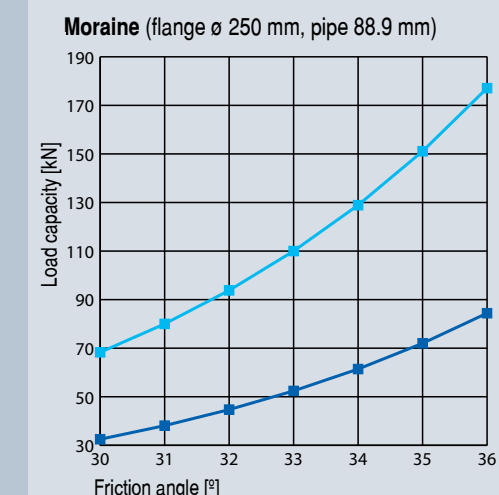
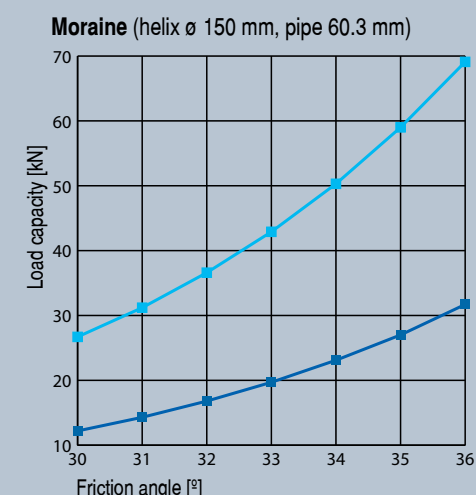
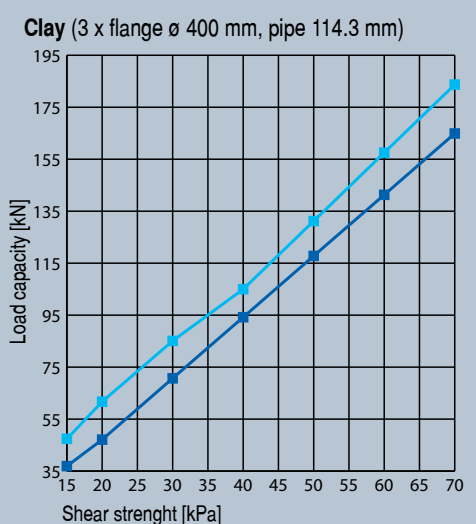
### Compressive load in clay and moraine soil, flange ø 150 mm



### Compressive load in clay and moraine soil, flange ø 250 mm



### Compressive load in clay and moraine soil, flange ø 400 mm



Manufacturer:  
**Paalupiste Oy**  
 Kesäniityntie 25, 06500 Porvoo  
 Tel/Fax: + 358 19 523 2312  
 GSM +358 45 676 6742 , +358 45 676 6743  
 E-mail: info@paalupiste.com



www.paalupiste.com

Retailer:

# Screw pile foundation – solid steel



- Fast to install – either manually or mechanically
- No frost insulation or subsurface drainage
- Excellent bearing capacity
- No earthmoving work
- Ready to use – no drying time
- Saves costs





## The screw pile is worthwhile

The screw pile, screwed into the ground, is a fast and effortless method of foundation for all building. The installation does not cause vibration or noise, nor does it require substantial earthmoving work. Thus the soil remains undisturbed and the environment intact.

Frost insulation is not needed, either, when the flange of the pile is screwed below the frost line. In addition, screw piles allow the creation of foundations in places where other foundation methods do not work, such as on weak soil or in places with poor traffic connections. Paalupiste has been selling screw piles since 2001. Ever increasing numbers of builders have chosen the screw pile, encouraged by the positive experiences of other users. The screw pile is worthwhile – in more than one way.

Just like the name says, a screw pile is a pile which is screwed into the ground. It creates a solid anchor into the ground quickly and easily, functioning as a foundation pillar or as a fitting to different kinds of buildings.

The steel screw pile is a durable product and an excellent method of foundation. It can be used in various locations, from lightweight to heavy buildings.

Can the easier and more affordable method be the better alternative? In this case, yes, it can. The benefits of the screw pile speak for themselves.



## For lightweight building: Manually installed screw pile

The screw pile is a fast and effortless method of foundation for all kind of small building. In several cases, the screw pile has turned out to be the best choice for do-it-yourself builders. The manually installed screw pile is screwed into the ground using, for example, an iron bar or some other lever arm. The manually installed screw pile is perfect for locations which only need a few piles or where machine installation is impossible due to difficult terrain or traffic connections, for example.

Installation is begun by first hitting a 20-30 cm deep hole into the ground with the iron bar, after which the screw pile is installed by twisting it clockwise until it is the desired height. The screw pile can also be installed using a portable earth drill. A versatile selection of fittings allows easy attachment to other structures.



**Yard structures**  
decks and patios  
fences and gates  
garages  
warehouses  
canopies

**Summer cottages**  
saunas  
barbecue shelters  
jetties  
woodsheds  
boathouses  
buoy fittings



Fast and  
cost-efficient solution

## For heavy building: Koneasennettava ruuvipaalu

The machine-installed screw pile is installed into the ground with a hydraulic rotary actuator, which can be attached to an excavator, front loader or other machine. The machine-installed screw pile is normally used for heavier building and in locations where several piles are needed. All the piles with larger flanges, 250mm and 400mm, are to be installed mechanically.

Machine installation allows the piles to be installed into harder and rougher soils than if the piles were to be installed manually. The machine-installed screw piles are designed to endure the stress of installation. In addition, the piles can have several flanges in them, when necessary.

The machine-installed screw piles are suitable for both new building and renovations. Their bearing capacity and tensile strength make them a reliable and professional solution. Screw pile installation can be ordered via Paalupiste Oy or from your nearest retailer.



**Building industry**  
residential buildings  
halls and warehouses

**Traffic**  
traffic signs  
railroad ties  
airport structures

**Industry**  
pipelines  
electric poles  
foundations for tanks

**Municipal engineering**  
street lights  
bus stops  
signs  
heating poles  
playgrounds

**Agriculture**  
fencing  
greenhouses  
nurseries  
riding rings



## Many good reasons: Why should I use screw piles?

### Cost-efficient and fast

- Fast installation saves in work and machine expenses.
- Cheap to transport and store.
- No substantial earthmoving work.
- No frost insulation.
- No subsurface drainage.
- No casting or molding work.
- The installation of one pile only takes a couple of minutes.
- Usually only requires one visit to the site.

### Numerous uses

- New buildings and extensions, all kinds of lightweight and heavy structures.

### Excellent compressive load and tenacity

- Enables building on weak soil.

### Instantly ready to use

- No drying time.
- Can be installed in all weather conditions.

### Environmentally friendly

- The option of manual installation and lightweight installation equipment protect yards and plants.
- Keeps the environment clean and intact.
- Noise-free and vibration-free installation.
- Installation possible at all times of the day.

### For difficult locations

- The screw pile can be installed indoors and close to walls.
- Suitable for confined spaces and locations with difficult traffic connections.
- Also underwater foundations.

### Reusability

- The screw pile can be screwed up and used again.
- Well-suited for temporary buildings.

### Extensive selection of accessories

- Various fittings allow effortless attachment to other structures.

### Long-lasting method of foundation

- The hot-dip galvanized screw piles resist corrosion well.

