**Bearing capacity and durability**

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

The bearing capacity of a screw pile is determined 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.

**The geotechnical bearing capacity of screw piles**

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

<table>
<thead>
<tr>
<th>Compressive load in clay and moraine soil, flange ø 150 mm</th>
<th>Compressive load in clay and moraine soil, flange ø 250 mm</th>
<th>Compressive load in clay and moraine soil, flange ø 400 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load capacity [kN]</td>
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</tr>
<tr>
<td>Pipe 60.3 x 3.6 mm, flange Ø 150 mm, hot-dip galvanized</td>
<td>Pipe 88.9 x 6.3 mm, flange Ø 250 mm, untreated surface</td>
<td>Pipe 114.3 x 6.3 mm, flange Ø 400 mm, untreated surface</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>30</td>
<td>60</td>
<td>90</td>
</tr>
</tbody>
</table>

**Extensive selection – high quality**

**Sizes / lengths of screw piles**

Screw piles with Ø 150 mm flange:
- Manually installed screw pile - length 1.5 m
- Manually installed screw pile - length 2.1 m
- Manually installed screw pile - length 3.1 m
- Machine installed screw pile - length 6 m

Screw piles with Ø 250 mm flange:
- Manually installed screw pile - length 1.5 m
- Manually installed screw pile - length 2.1 m
- Manually installed screw pile - length 3.1 m
- Machine installed screw pile - length 6 m

Screw piles with Ø 400 mm flange:
- Manually installed screw pile - length 1.5 m
- Manually installed screw pile - length 2.1 m
- Manually installed screw pile - length 3.1 m
- Machine installed screw pile - length 6 m

**Screw piles with Ø 400 mm flanges**

Pipe 114.3 x 3.6 mm, flange Ø 400 mm, untreated surface:
- Length 2.5 m
- Length 3.5 m
- Length 4.5 m

Pipe 114.3 x 6.3 mm, flange Ø 400 mm, untreated surface:
- Length 2.5 m
- Length 3.5 m
- Length 4.5 m

Available on a factory-installed screw pile:
- Length 6 m

**Accessories**

- Extension pile, length 1 m
- Extension pile, length 3 m
- Extension pile, length 6 m
- Extension pile, length 9 m

**Manufacturers**

PaaluPiste Oy

Keskäniityntie 25, 06500 Porvoo

Tel/Fax: +358 19 523 2312

E-mail: info@paalupiste.com

**Website**

www.paalupiste.com

**Screw pile foundation – solid steel**

- Fast to install – either manually or mechanically
- No need for 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. It requires no vibration or noise, and it does not require substantial earthmoving work. Thus the soil remains undisturbed and the environment intact.

First installation 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.

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 subsoil examination work.
• No frost insulation.
• No substantial earthmoving work.
• No casting or existing work.
• The installation of one pile only takes a couple of minutes.
• Usually only requires one visit to the site.

Excellent compressive load and tenacity
• Enables building on weak soil.
• Excellent compressive load and tenacity – key to a lasting foundation.
• Various fittings allow effortless attachment to other structures.

Environmentally friendly
• The option of natural 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 heavy building: Machine installed screw pile

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 machines. 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 faster and rougher than if the pile were to be installed manually. The machine-installed screw piles are designed to endure the stresses 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.

For lightweight building: Manually installed screw pile

The screw pile is a fast and effortless method of foundation for all kinds 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 manual selection of fittings allows easy attachment to other structures.

Manually installed screw pile

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.

For foundations:
• Building industry
• Residential buildings, hotels and warehouses
• Industry
• Pipelines, electric poles, foundations for tanks
• Agriculture
• Livestock housing, greenhouses, nurseries
• Building industry
• Industrial halls and warehouses
• Traffic
• Traffic signs, road signs, communication towers
• Municipal engineering
• Street lights, bus stops, signs
• Heating piles, playgrounds
• Machine installed screw piles

Fast and cost-efficient solution

For easy building:
• Enables building on weak soil.
• Excellent compressive load and tenacity
• Various fittings allow effortless attachment to other structures.

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The screw pile is worthwhile

First 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.

Many good reasons: Why should I use screw piles?

Cost-effective and fast
• Fast installation saves in work and machine expenses.
• Cheap to transport and store.
• No substantial earthly work.
• No frost insulation.
• No cumbersome fittings.
• No casing or existing 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 tensility
• Strength building on weak soil.

Instantly ready to use
• No drying time.
• Can be installed in all weather conditions.

Environmentally friendly
• Use of metal and plastic foundation equipment protects yards and plants.
• Leaves the environment clean and intact.
• Noise-free and vibration-free installation.
• Installation possible at all times of the year.

For difficult locations
• The screw pile can be installed indoors and close to walls.
• Installed in 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-dipped-galvanized screw pile resists corrosion well.

Fast and cost-efficient solution

Yard structures
• decks and patios
• fences and gates
• garages
• warehouses
• campsites

Summer cottages
• lake houses
• beach houses
• lodges

Manually installed screw pile
Installation is begun by first hitting a 20-30 cm deep hole into the ground with the screw pile. After this, 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.

For lightweight building: Manually installed screw pile

The screw pile is a fast and effortless method of foundation for all kinds of lightweight 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 where only 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 25-30 cm deep hole into the ground with the screw pile. After this, 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.

For heavy building: Machine installed screw pile

The machine-installed screw pile is installed into the ground with a hydraulic clay extractor, which can be attached to an excavator, front loader or other machine. The machine-installed screw pile is normally used for heavier building work 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 faster and more reliably 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.

For difficult locations
• Installation possible at all times of the day.

Numerous uses
• New buildings, additions and conversions, all kinds of lightweight and heavy structures.

Excellent compressive load and tensility
• Strength building on weak soil.

Instantly ready to use
• No drying time.
• Can be installed in all weather conditions.

Environmentally friendly
• Use of metal and plastic foundation equipment protects yards and plants.
• Leaves the environment clean and intact.
• Noise-free and vibration-free installation.
• Installation possible at all times of the year.

For difficult locations
• The screw pile can be installed indoors and close to walls.
• Installed in confined spaces and locations with difficult traffic connections.
• Also underwater foundations.
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 earth-moving work. Thus the soil remains undisturbed and the environment intact.

First 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. Even 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.

The screw pile is a fast and effortless method of foundation for all kinds 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 center 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 manual selection of fittings allows easy attachment to other structures.

Installation possible at all times of the day. It does not cause vibration or noise, nor does it require substantial earth-moving work. The manually installed screw pile is a reliable and professional solution. Screw pile installation can be ordered via Paalupiste Oy or from your nearest retailer.

For lightweight building:
Manually installed screw pile

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Yard structures</td>
<td>decks and patios, fences and gates, garages, awnings, campers</td>
</tr>
<tr>
<td>Summer cottages</td>
<td>lodges, beach shelters, jetty, woodsheds, boathouses, bus fittings</td>
</tr>
</tbody>
</table>

Fast and cost-efficient solution

Many good reasons:
Why should I use screw piles?

Cost-efficient and fast

• Few installation services required. Most of the work can be done by the builder himself/herself.
• Easy to transport and store.
• No substantial earth-moving work.
• No frost insulation.
• No substructure fittings.
• No casting or mixing work.
• The installation of one pile only takes a couple of minutes.
• Usually only requires one visit to the site.

Numerous uses

• Bare foundations and extensions, all kinds of lightweight and heavy structures.

Excellent compressive load and tenacity

• Stable building on weak soil.

Instantly ready to use

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

Environmentally friendly

• The system of manual installation and lightweight installation equipment protects yards and plants. It leaves the environment intact.
• Noise-free and vibration-free installation.

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 pile resists corrosion well.

For heavy building:
Machine installed screw pile

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 machines. 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.

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</tr>
<tr>
<td>Industry</td>
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</tr>
<tr>
<td>Agriculture</td>
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</tr>
<tr>
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The screw pile bears both lightweight and heavy structures.

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

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
  - 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 400 mm, untreated surface

- Screw piles with Ø 220 mm flanges
  - Pipe 88.9 x 6.3 mm, flange Ø 250 mm, untreated surface
  - Pipe 114.3 x 6.3 mm, flange Ø 400 mm, untreated surface

Screw piles are delivered in accordance to the requirements set by the building location. Various set sizes are available. The usual pile made vary between 40–60 in length. The screw piles are made of high-quality steel in accordance with rigorous quality requirements. The piles are manually driven to the required depth. Screw piles are delivered in accordance with all relevant legislation and standards. Screw piles are delivered non-corrosion, solid steel products. We operate under the European Systems Quality Assurance. Please ask for more information.

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