

Mast foundation piles

Efficient one stop solution



Efficient installation for a lasting solution

Centrum's mast foundation piles provide a stable foundation for electrification masts. The installation is a time, cost and material efficient one stop solution.

Areas of use

Mast foundation piles are a development of previous types of mast foundations from Centrum's product range. They are primarily designed to serve as the foundation for overhead line masts used in the electrification of railway networks.

A proven solution in Denmark, Poland, Spain, Italy and Sweden.



The applications for mast foundation piles have broadened over time. With the growing demand for renewable energy sources, these piles have also proven to be a reliable option for solar panel farms and other similar installations.



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Conical mast foundation piles provide an ideal foundation for overhead line masts for railway lines, due to their ability to carry both static and dynamic loads.

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Benefits

Applying Centrum's mast foundation piles offers several advantages:

- No soil deposit
- High quality with full traceability
- Fast and flexible installation process
- Reuse within their lifespan (120 years)
- Installation unaffected by weather conditions

Innovation

Research and development

At Centrum Pæle in Denmark, research and development are integral to our approach, driving the creation of new and improved products.

Through innovation and an ambition to reduce carbon dioxide emissions from the pile production and the proceeding installation phase, the conical mast foundation pile was developed.

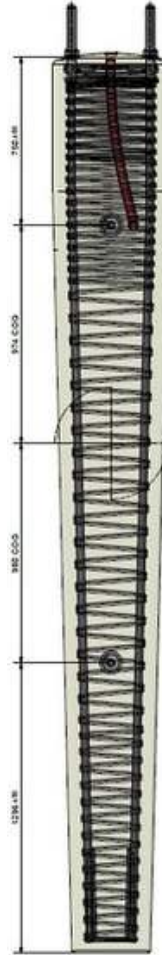
Without compromising on quality, the material consumption and weight were reduced through the development of a conical shape.

Design

The mast foundation pile is based on a prefabricated reinforced concrete pile, which is cast in a conical shape.

The new conical design requires less concrete compared to similar products. This not only reduces the weight of the pile but also simplifies installation and lowers the emissions associated with the pile's materials.

Stainless steel threaded bolts are integrated into the upper end of the pile, facilitating the connection of the mast foot plate. If necessary, an adaptor plate can be used to accommodate different foot plate geometries.



Country-specific demands

As requirements vary slightly from country to country, aspects such as the material mix and adaptor plate can be customised to meet the specific needs of each market.



Production

Quality

Production takes place in a controlled environment to ensure consistently high quality.

Comprehensive production data, including material specification, are recorded for each pile, ensuring complete traceability.



Capacity & Deliverability

Conical mast foundation piles can be produced at all Centrum locations, ensuring high production capacity. We are committed to delivering reliable service for large-scale projects.

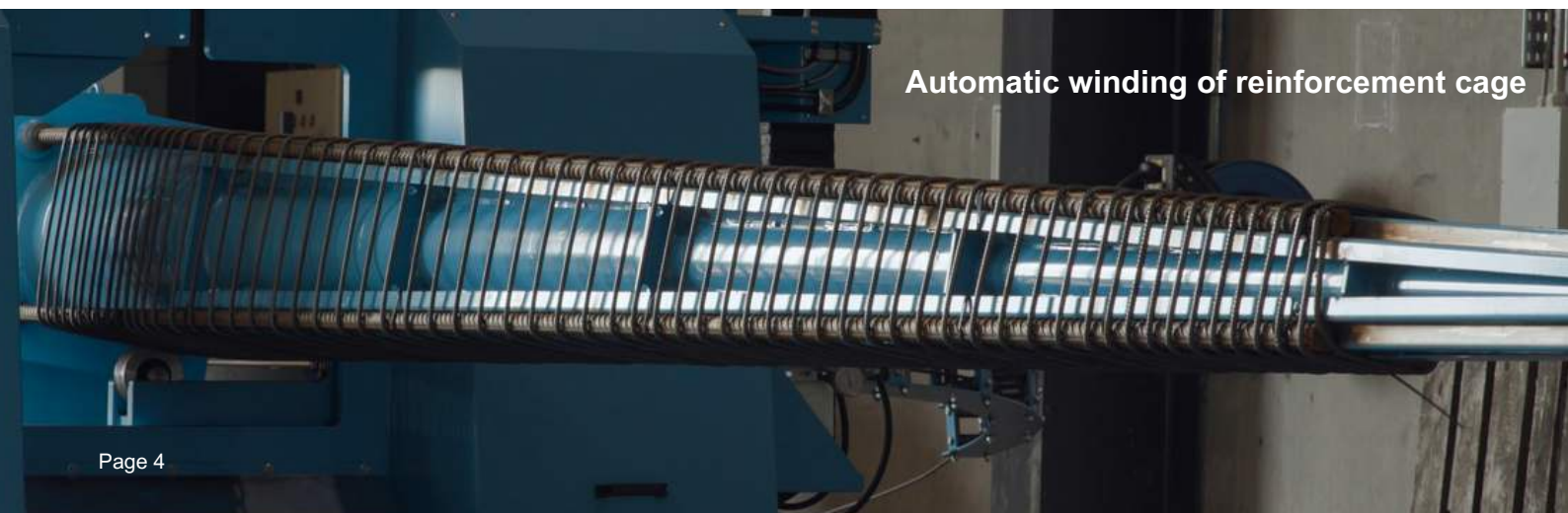
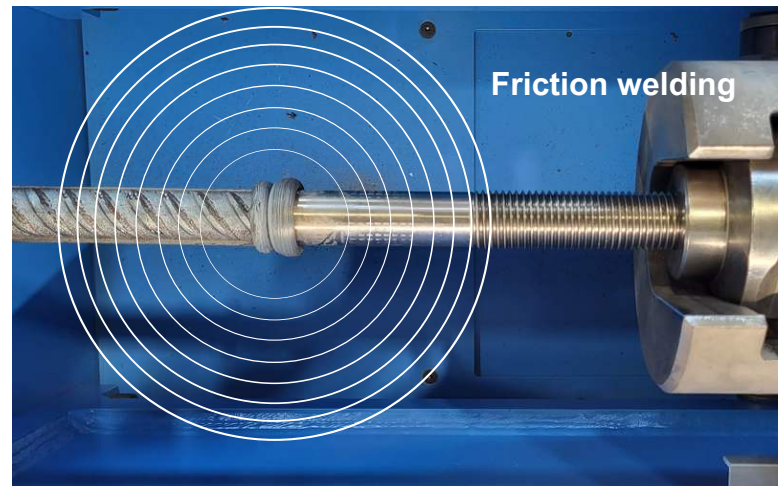
Currently these piles are primarily manufactured at Centrum facilities in Denmark and Poland.



Friction welding

Friction welding technology enables the secure attachment of stainless steel connection bolts to the piles reinforcement, maximising the products lifespan.

This proven technique ensures strength throughout the entire weld surface, giving mast foundation piles strong static and dynamic load-bearing properties.



Sustainability

Environmental Product Declaration (EPD)

An EPD (Environmental Product Declaration) is a document that provides information about the environmental impacts associated with a product throughout its lifecycle. EPDs are based on international standards and are used to quantify environmental impacts, such as CO2 emissions, energy consumption, water usage, and waste generation.

The environmental product declaration for the mast foundation pile - MD 22035 EN - can be downloaded from the EPD Database at www.epddanmark.dk.

The EPD is available in English, Danish and German.

Download via QR code:



Reuse & Recycle

An advantage of Centrum's mast foundation piles is that they can be reused during their lifetime. They can simply be pulled up and installed again in a new location, made possible by the conical shape of the pile.

At end of life, the concrete and steel from the pile can be recycled.

Centrum factories

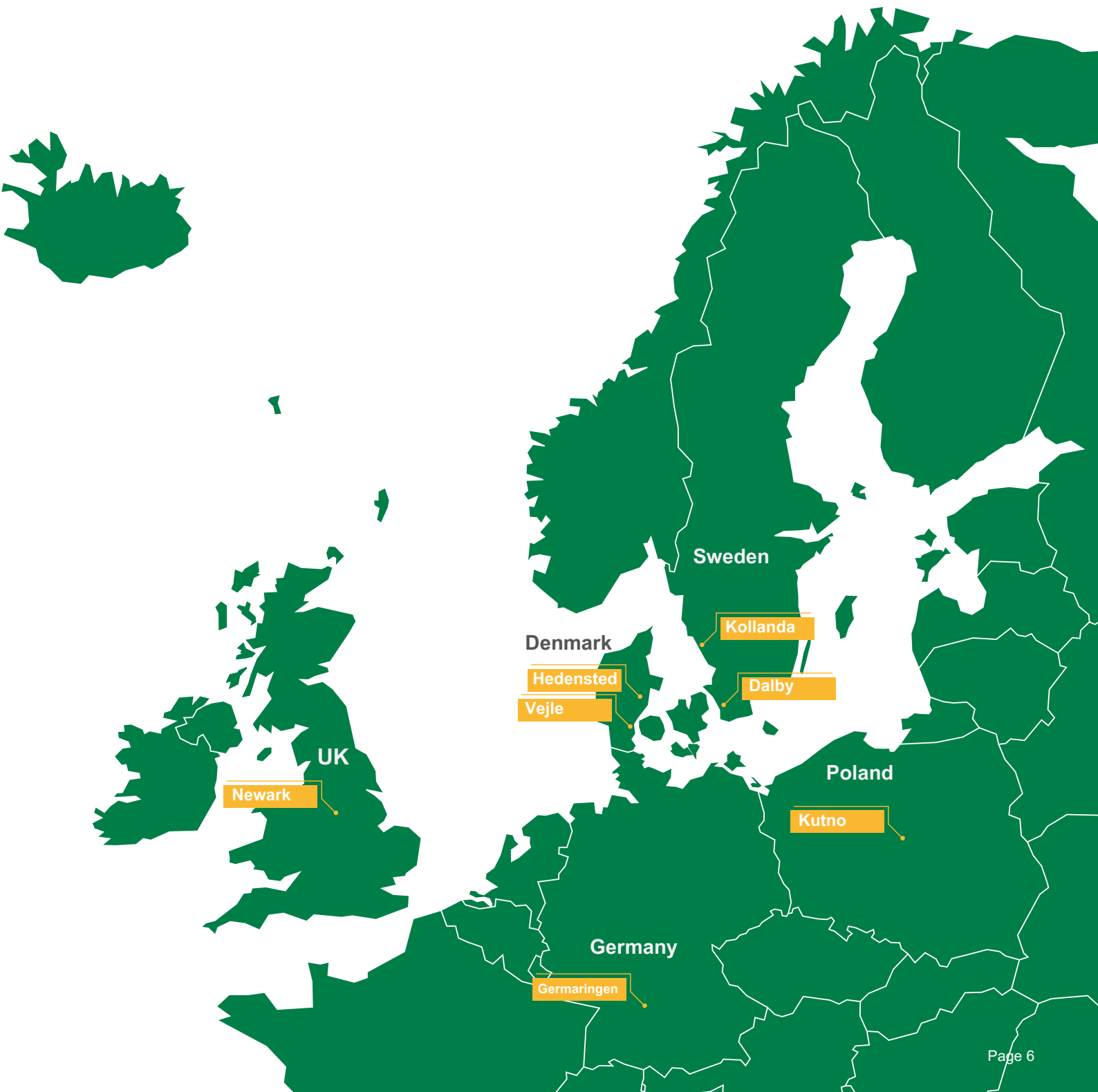
Factories across Europe

Centrum's factories are today represented by seven facilities in five countries: Denmark, England, Germany, Poland and Sweden.

Close collaboration ensures high capacity and uniform product properties.

Large capacity

In 2023, the factories manufactured approximately 4.3 million linear metres of prefabricated piles, across the seven facilities, making Centrum Pile the largest manufacturer of prefabricated piles in Europe.



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Our team of experts are happy to advise on the suitability of the mast foundation piles and assess appropriate pile lengths for your project.

THE OPTIMAL FOUNDATION SYSTEM

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