



INDUSTRIALIZED PILING

SOLUTION



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LEIMET



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INDUSTRIALIZED PILING
SOLUTION

Plenty of drive **to your piling**



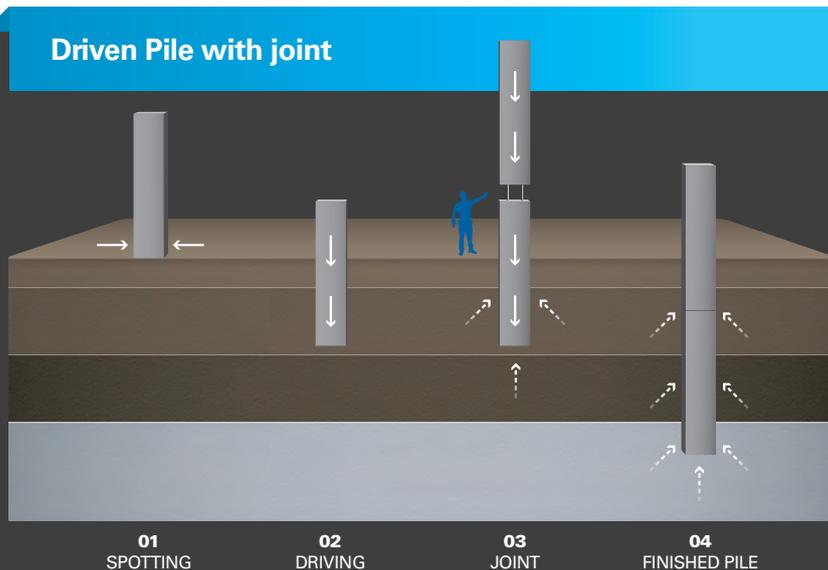
Always driving forward

When executed utilizing modern technologies and processes, as well as professional and thorough planning, modern pile driving has proven itself as a fast and productive method. As the most economical and versatile way of piling, it efficiently ensures full control of the process and high overall quality. This translates into smooth, flawless op-

erations and improved customer satisfaction – both of which being essential factors of successful piling business.

Successful pile driving process results in various benefits, each of which can be accomplished only by paying close attention to every step of the process. Mastering the

entire chain is essential – when you aim to provide the best overall solution in a highly competitive and critical line of business, there is simply no room for weak links. On the other hand, a unified team of proven professionals can make the most of pile driving's versatile opportunities, lifting the overall process efficiency to all new heights.



LET THE RESULTS SPEAK!

USA (Sentara hospital Virginia)

- Junittan PM20LC & 5 ton hammer, 2 men crew
- 300 x 300 square concrete piles, total pile length 35m, 1 mechanical joint

»» **22 piles / day**
(770m)



Trust and quality in each step of the piling process

Every step of pile driving process faces special requirements – a chain of suppliers that is able to meet these is a prerequisite for overall success and added value.

PRE-CONSTRUCTION

- Design of construction in accordance with the standards and regulations
- Setting quality limits for the final construction
- Performing driveability analyzes to select the right equipment to accomplish the job
- Setting testing methods for the quality

PILE

- Sustainable and efficient pile manufacturing in controlled conditions
- High quality pile manufacturing equipment for uniform pile properties
- Tested and approved mechanical pile joints and other pile components
- Quality inspection for material and geometry

PILING MACHINE

- The most environmental friendly and efficient methods and equipment
- Controllability to ensure productivity and pile integrity – whatever the soil conditions are
- Verified quality of the piling equipment
- Professional operator training

CONSTRUCTION

- High capacity pile manufacturing and supply
- Supervision
- Monitoring
- Proactive equipment maintenance
- Instant service operations

FINAL CONSTRUCTION

- Final construction is as designed and safe

Every step counts if you want to fully capitalize on the benefits of pile driving technology. From initial design stages throughout the actual piling, all the way to final construction, each stage requires special knowledge and utmost attention.

Driving home the benefits

Pile driving features several proven benefits that further strengthen its position as the most sustainable piling method. Our trusted professionals are able to set you up in the best possible way, providing the complete solution that is as fast, versatile, economical and environmentally sound as possible.

Overall quality

Pile driving provides the best overall control of the process and the quality of piles. The manufacturing of piles can be closely monitored to ensure high, verified quality. Results can be easily verified and reported, and corrective action can be promptly taken whenever needed.

Process efficiency

Flawless proceeding without unexpected interruptions is the key in making the piling process smooth and profitable. As the Industrialized Piling Solution provided by true professionals best ensures both quality – and thus durability – of piles and reliable operations, it is able to provide shortest overall process time from site start-up to finish.

As the need of both equipment and labor are minimized compared to other methods pile driving process can take place in a flexible, efficient manner. Efficiency can be achieved also when it comes to the use of piles; besides the fact that the piles can be driven efficiently without compromising

the pile integrity, Industrialized Piling Solution enables optimized pile lengths and concrete consumption. This is made possible by accurate planning, quick splicing and timely transportation in cost-effective lengths allowing transporting piles in regular trucks instead of oversized vehicles. For the biggest projects, a mobile pile factory can be conveniently set up on-site.

The greenest way to pile

Pile driving technology is generally known of being environmentally friendly; when planned properly and executed with modern equipment, pile driving generates considerably less emissions than other technologies. Thanks to minimal hidden effects on the pile processing chain, the ecological footprint remains as light as possible. The noise and vibration issues, often unnecessarily connected with the pile driving, are most often a cause of wrong design, false pile selection and undeveloped equipment. When Industrialized Piling Solution is thoroughly utilized by experienced people, pile driving is considered as a modern and fast way of piling and is well accepted by the public and authorities. Prompt driving process without soil removal and minor need for assisting machinery further ensure both cost-efficiency and sustainability.

Speed

Industrialized Piling Solution enables achiev-



LET THE RESULTS SPEAK!

USA (Charlotte airport north Carolina)

• Junttan PM20LC & 5ton hammer, 2 men crew

• Precast 300 x 300 square concrete piles,
total pile length 25m, 1 mechanical joint

»» **40 piles / day**
(1 000 m)

ing substantially more meters per working hour than other methods. As the actual driving can be precisely synchronized with pile transportation and other related steps of the process chain, waiting time can be efficiently minimized and the equipment on site fully utilized. Pile handling takes place quickly and accurately. The use of approved, high class mechanical joints further optimizes the process by providing a connection as strong as the pile in a matter of only a few minutes.

Versatility

Pile driving is suitable for a wide variety of construction projects and soil conditions. It adds value to the project in various ways. Industrialized Piling Solution is developed and widely utilized in Scandinavia. When the complete pile driving process – from designer's desk via pile manufacturing and equipment to PDA verifications – is highly developed as a whole, there are no other piling methods that can seriously compete with pile driving except for very rare sites.



Driven by determination

When planned and executed in a systematic, professional manner Industrialized Piling Solution offers plenty of opportunities to improve the process speed and overall quality. The chain consists of several critical links, each of which needs to be strong and reliable.

Synchronizing various tasks with one another is simply critical in the attempt to make the process as smooth as possible.

Pre-construction

At the pre-construction stage, comprehensive soil data is required for accurate capacity estimations. While this contributes to risk-free piling process, it also helps minimize the amount of waste during pile manufacturing.

Specific analyses are also required in making sure that the targeted design capacity can be achieved. While this needs the right kind of equipment to carry out the actual job, it sets certain standards to the dura-

bility of pile, especially when driven under demanding conditions.

Pile manufacturing

Professional pile manufacturing begins with careful pile design and sophisticated pile manufacturing facilities; this is essential to ensure both uniform quality and flawless supply of piles – which again contributes to sufficient pile integrity and low down time during the actual driving. Geometrical accuracy of the piles ensure high productivity and helps completing the project just on time.

Pile components

Optimized pile section lengths contribute to easy transport, decent piling equipment selection and minimized pile waste. Using components with international verification ensure high quality throughout the process; mechanical joints can be used for quick and reliable splicing of piles to achieve the final length.

Piling machine

A high-quality pile driving machine is easy



to transport and fast to set up. It gets the job done independently and efficiently, with small crew and minimal impact to the environment. While uncontested pile handling capacities ensure smooth and safe working, the machine's high leader mast and winch capacity helps in coping with varying piles and conditions. A hydraulic hammer with effective energy transfer and precise, immediate adjustment of impact energy prevents pile damages and ensures excellent cost-efficiency. Any kind of soil can be penetrated with the right equipment and comprehensive service and support availability ensure uninterrupted operation all the way.

Foundation construction

In ideal foundation construction, verified pile capacity and integrity always meet the original design. Splicing takes place in a successful manner and versatile process data is available for reporting purposes.



LET THE RESULTS SPEAK!

South-West Finland (Turku)

- Junttan PM20 & 5 ton hammer, 2 men crew
- Precast 300 x 300 square concrete piles, length 8-12m, 2 mechanical joints

» 800m/day
(8 h shift)

Complete solution for your success

Provided by the leading professionals

It goes without saying that a modern and successful pile driving process is a matter of mastering a wide variety of details. It requires special skills and personnel, proven professionals that are capable of handling specific tasks in the best possible way. Besides skills and experience, this also means the ability to synchronize working so that whenever one stage is

completed, the next one is ready to start. Minimal waiting time is one of the key elements in a productive piling process – to achieve that, you need a group of leading experts that can work together for the common goal.

As a result, you can accomplish your projects in a faster, more cost-efficient

and most of all, reliable way. With fewer equipment needed on field and minimized pile waste, the operations can take place in a smart way, both when it comes to productivity and pressure on the environment. The project goes forward in a systematic way, and the end result represents best-in-class quality that you can be proud of!



- A Finnish company with over 50 years of experience
- Headquarters: Akaa, Finland
- From complete plants to individual machines – different technology levels
- Machines and equipment
- Software, services and consultation on global scale
- 3 600 deliveries to over 100 countries across 6 continents

► www.elematic.com



- A Finnish, family owned company with 50 years' experience of producing piling material
- Leimet ABB Plus Pile Joints are used all over the world
- Own products and R&D, Highly automatized production
- Certified Company with widely tested products, which are approved by local authorities in several countries

► www.leimet.fi



LET THE RESULTS SPEAK!

Poland

- Junttan PM25H & 7ton hammer, 2 men crew
- 400 x 400 square concrete piles, length 12 – 14m, 1 mechanical joint

»» **450m/day**
(in very tough ground conditions)



Junttan

- A Finnish company, 40 years of experience in manufacturing purpose built hydraulic pile driving equipment
- Global operations:
 - Distribution in over 20 countries at all continents
 - Equipment working in more than 45 countries around the world
 - Customers are world leading contractors

► www.junttan.com



Inspecta

- A Finnish company with over 30 years of experience with trust and quality in Northern Europe
- Operations in Finland, Sweden, Norway, Denmark, Latvia, Estonia, Lithuania with 1 400 employees and 75 000 customers
- Main services
 - Testing, inspection, certification and training
- Over 10 years of experience from pile testing and product development

► www.inspecta.com



INDUSTRIALIZED PILING
SOLUTION

**Choose the best way to create the ideal
foundation – get in touch with proven
pile driving professionals!**

Fast | Green | Safe | Economical