



# MOVAX

Total Piling Solutions

MOVAX MPM  
MANIPULATORS

TECHNICAL SPECIFICATION







## HIGHER PRODUCTIVITY – SIGNIFICANT SAVINGS

Efficient. Fast. Versatile. Accurate. Safe. Reliable.





# MOVAX WAY-OF-PILING

## INTRODUCTION

Movax Oy, established in 1993, is a Finnish-based, privately-owned world-leading innovator, developer and manufacturer of excavator-mounted piling and foundation equipment with highly advanced automatic control systems and information management solutions.

### A TOTAL SOLUTION

Movax Oy focuses solely on solutions for the piling & foundation industry. The comprehensive range of excavator-mounted piling & foundation equipment and customized solutions cover a complete range of piling technologies - including both driven and bored piles.

### UNIQUE, VALUE-ADDING TECHNOLOGY

Movax Oy's piling and foundation equipment provide the optimum way-of-working - **MOVAX WAY-OF-PILING™** - when constructing foundations, building retaining walls, both temporary and permanent, cofferdams and when performing trenching and excavation work and soil stabilisation in a wide range of applications.

### QUALITY BUILT-TO-LAST

MOVAX is made with high-class materials, equipment and components – and modern, state-of-the-art production technologies and machinery ensuring the highest possible quality of manufacture. Movax Oy's Quality Management Systems is certified on accordance with ISO 9001:2015.

### GLOBALLY PROVEN

With almost **30 years of experience** and more than **3000 units delivered** to all over the world and with a clear focus on the piling and foundation industry, MOVAX has a deep understanding and know-how of varying site and soil conditions - and of all kinds of different type of excavators and rail roaders. Movax Oy's experience also covers a wide range of applications ranging from Rail, Road and Civil to Waterways & Piers, Utilities and Environmental & Energy.

### GLOBALLY LOCAL CUSTOMER CARE

Movax Oy focuses on superior customer service and support together with a world-wide network of local partners, established in more than 30 countries all over the world, performing trenching and excavation work in a wide range of applications from civil/structural, rail and road to waterways & piers, utilities and environmental.



### INNOVATION & CONTINUOUS DEVELOPMENT

Movax Oy is the inventor of the modular, vibratory side grip pile driver technology. Movax Oy's inventions have resulted in numerous patents (50+) and its trademark, MOVAX®, is registered and well known for the quality it represents all over the world.

Movax Oy is strongly committed to continuously develop its products and services in close cooperation with its customers and local partners.



## TOTAL SOLUTION

# PILING, FOUNDATION & SOIL STABILISATION

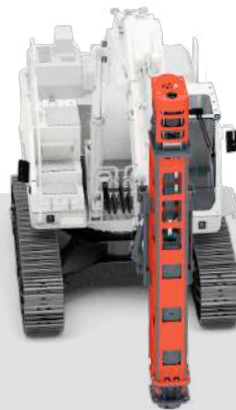
MOVAX excavator mounted piling equipment and customised solutions are available for different piling technologies, including both driven and bored piles, and for varying site and soil conditions and requirements.

The MOVAX Control System links the excavator with the MOVAX piling equipment and customised solutions whereas the MOVAX Information Management System (MIMS) provides essential information about the piling process and the pile installation - and about the MOVAX piling equipment.



### PILE DRIVERS

Side grip vibratory-type pile driver for handling, pitching, driving & extracting a complete range of driven piles, including sheet piles, H-beams, tubular steel piles and timber piles.



### PILING HAMMERS

Hydraulic, double-acting impact-type piling hammers for driving load-bearing piles or assisting in sheet pile driving in even the most difficult soil conditions.



### PILING DRILLS

Telescopic/kelly bar-type piling drills for bored, cast-in-situ (concrete) piles.



### MOVAX CONTROL SYSTEM

The **MOVAX Control System (mControl+)** controls all MOVAX piling equipment and customised solutions. The system controls the auxiliary hydraulics of the excavator and all the functions of MOVAX's piling equipment.



## MULTI-TOOL PILING LEADERS

Customised multi-purpose piling leaders with tooling including vibratory pile driver, piling hammer and rotary drives for pre-augering and CFA piling.



## COLUMN STABILISATION LEADERS

Customised column stabilisation leader for increasing strength, improving deformation properties and to increase stiffness of soft soil.



## INFORMATION MANAGEMENT

The **MOVAX Information Management System (MIMS)** provides essential information about the piling process and the pile installation – mLogbook - as well as about the MOVAX piling equipment itself – mFleet Management.





## PRODUCTS & SERVICES

# MANIPULATORS

**MOVAX manipulators** are designed for fast, flexible and efficient handling of different kinds of masts, gantries, and poles as well as a wide range of piles. Based on the patented side grip technology, the MOVAX manipulator is designed for superior maneuverability, safety and accuracy.

The manipulator has a 360 degree continuous rotary gear for unlimited and precise handling and positioning and is capable of handling different type of profiles ranging from double-U-, U-, H-, and I- to rectangular- and tubular-shapes as well as sheet piles, tubular steel piles, timber piles and precast concrete piles. Soft gripping surfaces prevent efficiently damaging sensitive masts, gantries or poles.

## FEATURES

### • Excavator-mounted

Utilizing the hydraulic power and lifting capacity of the excavator or rail roader (carrier). Designed to work on any and all wheeled and crawler-type excavators and rail roaders by utilising and commanding the standard auxiliary hydraulics and/or by connecting to the electronic control of the excavator.

### • MOVAX Modular System

Available for masts, poles gantries and different type of piles and with gripping surfaces tailor-made for the profiles to be handled.

### • MOVAX Control System

Controlled with the MOVAX Control System, mControl+.

- Easy & exact pile positioning with integrated inclination sensor and mControl+ display
- Smooth movements with thumb wheel operated proportional control valves
- Clamping pressure shown on screen
- Integrated safety lock valves on cylinders
- Safety switch for clamp opening
- Adjustable gripping force to prevent damage of for instance galvanized poles or other sensitive profiles



Manipulators for  
**HANDLING DIFFERENT PROFILES**



# MANIPULATORS

## CONFIGURATIONS

The MOVAX Modular System enables the use of the same Manipulator for the handling of a wide range of different type of profiles ranging from double-U-, U-, H-, and I- to rectangular- and tubular-shapes as well as sheet piles, tubular steel piles, timber piles and precast concrete piles. Gripping surfaces are available for different type of materials and surfaces.

Standard MOVAX Manipulator clamps are available for sheet piles, tubes and square sections. Also customised clamps are available upon request.



### SHEET PILE CLAMPS

For sheet piles,  
H-beams and similar  
W400–1600 mm,  
H100–1000 mm.



### TUBE CLAMPS

For tubular steel pipes  
OD 88.9–1220 mm.



### CUSTOM CLAMPS

For round, square, hexagonal,  
etc. OD up to 1220 mm.  
Also conical shapes.  
With soft gripping surfaces to  
protect the surface coating.





# MANIPULATORS

## TECHNICAL DATA

Technical data		MPM-4000
Weight (excl. adapter)	kg	1550 - 1750
Height	mm	1562
Depth*	mm	1700 - 2300
Width*	mm	960 - 1400
Rotation angle	°	+/-60
Tilting angle	°	360
Tilting torque	Nm	20000
Relief valve pressure max	bar	350
Minimum pressure required	bar	180
Required oil flow	l/min	85
Excavator class	t	18-35
Maximum working load	kg	4000

\*the exact dimension depends on the selected clamp type

Suitable profiles		
Square sections and H-beams	size	H100-H1000
		100x100 up to 650x650
Tubular/hexagonal sections	size	88,9-1220 mm
Sheet piles	size	max depth 265 mm
Timber poles and piles	size	160-420 mm







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Tölkkimäentie 10  
FI-13130 Hämeenlinna, Finland

Tel. +358 3 628 070  
Fax +358 3 616 1641

[marketing@movax.fi](mailto:marketing@movax.fi) | [movax.com](http://movax.com)

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