



# SILENT PILER<sup>™</sup> **F401** for Z & U Sheet Piles



Construction Solutions Company

[www.giken.com](http://www.giken.com)

CONTACT US



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Extremely sophisticated modular model applicable to Z & U Sheet Piles

# SILENT PILER™ F401

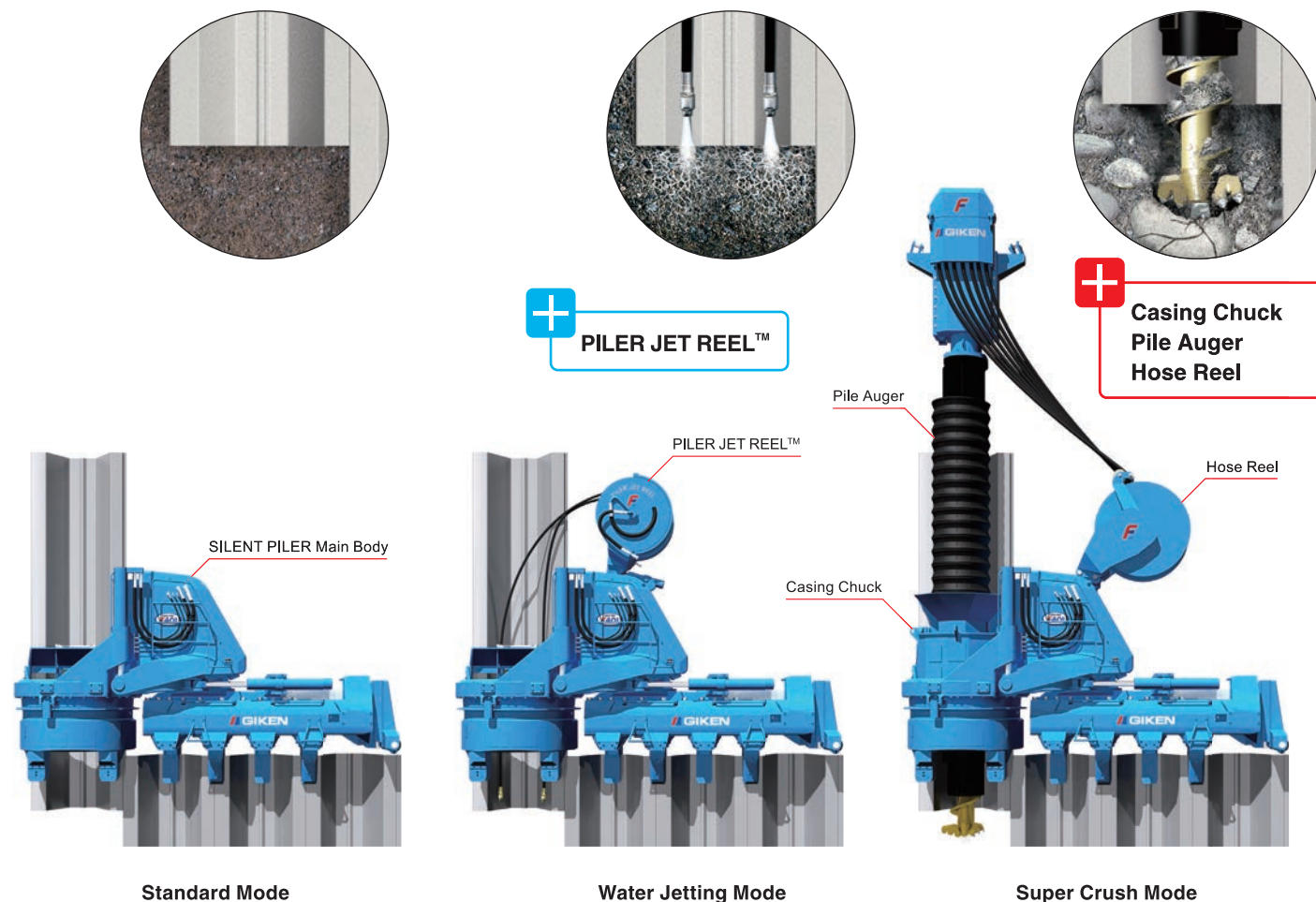
SILENT PILER™ F401

## Flexible and Functional Formula

The F401 features a new modular design developed by optimising all the parts and drastically modifying the structure, shape, and material. Not only are the main component parts more versatile, it is also equipped with a cutting-edge control system, and realising high functionality and longer operation life.

### 1 Optimising Work Efficiency with Modular Design

SILENT PILER F401 is applicable to Standard, Water Jetting, and Super Crush press-in works by changing the chuck and chuck frame, and equipping attachments. The machine can be utilised more efficiently because it is adjustable to various soil conditions and working conditions.



Standard Mode

Water Jetting Mode

Super Crush Mode

25

50

SPT N Values

### 2 New Control System

The new control system manages the position of the press-in machine and controls load generation from press-in work during operation, maximising the durability of each part. Also, control of the machine is remarkably improved by the Press-in Force Control System and the Phaseless Linear Auger Torque Control System.



Operation Mode corresponding to the Casing Chuck is automatically detected

Position of the Press-in Machine is automatically detected

Up/Down Stroke Force is optimised

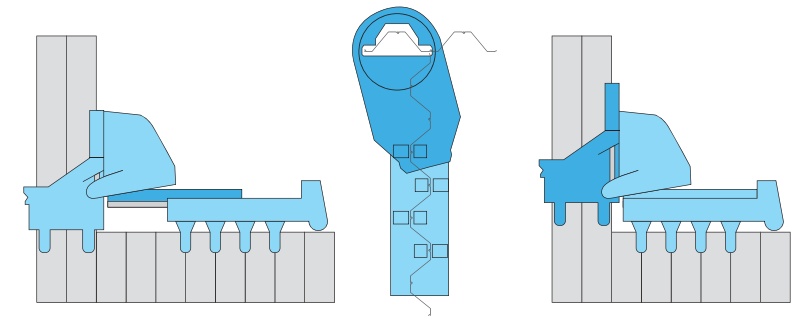
Maximum Up/Down Stroke Force is regulated

Load applied to SILENT PILER can be reduced.

■ Secondary Piling

■ Corner Piling

■ Raised Chuck



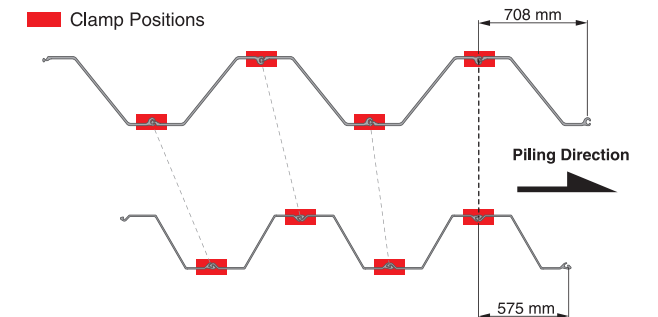
### 3 Multi-position clamps

The clamp pitch is adjustable to multiple positions by using hydraulic system for over 40 types of sheet pile without disassembly.



Multi-position clamps

Maximum width of Z sheet pile (708mm)



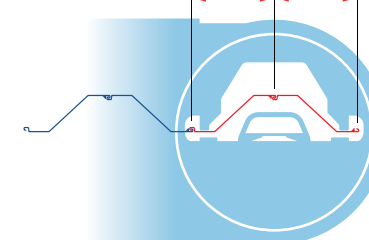
Minimum width of Z sheet pile (575mm)

### 4 For Wider Z & U Sheet Piles

The F401 has been designed to press-in 2 piles simultaneously up to a total width of 1416mm.

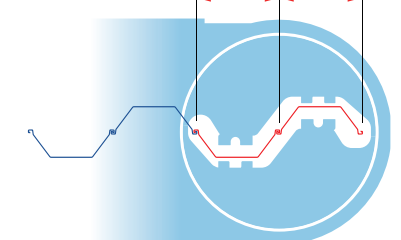
Z Sheet Piles

575 mm - 708 mm 1150mm ~1416mm 575 mm - 708 mm



U Sheet Piles\*

600mm 700mm 1200mm, 1400mm 600mm 700mm

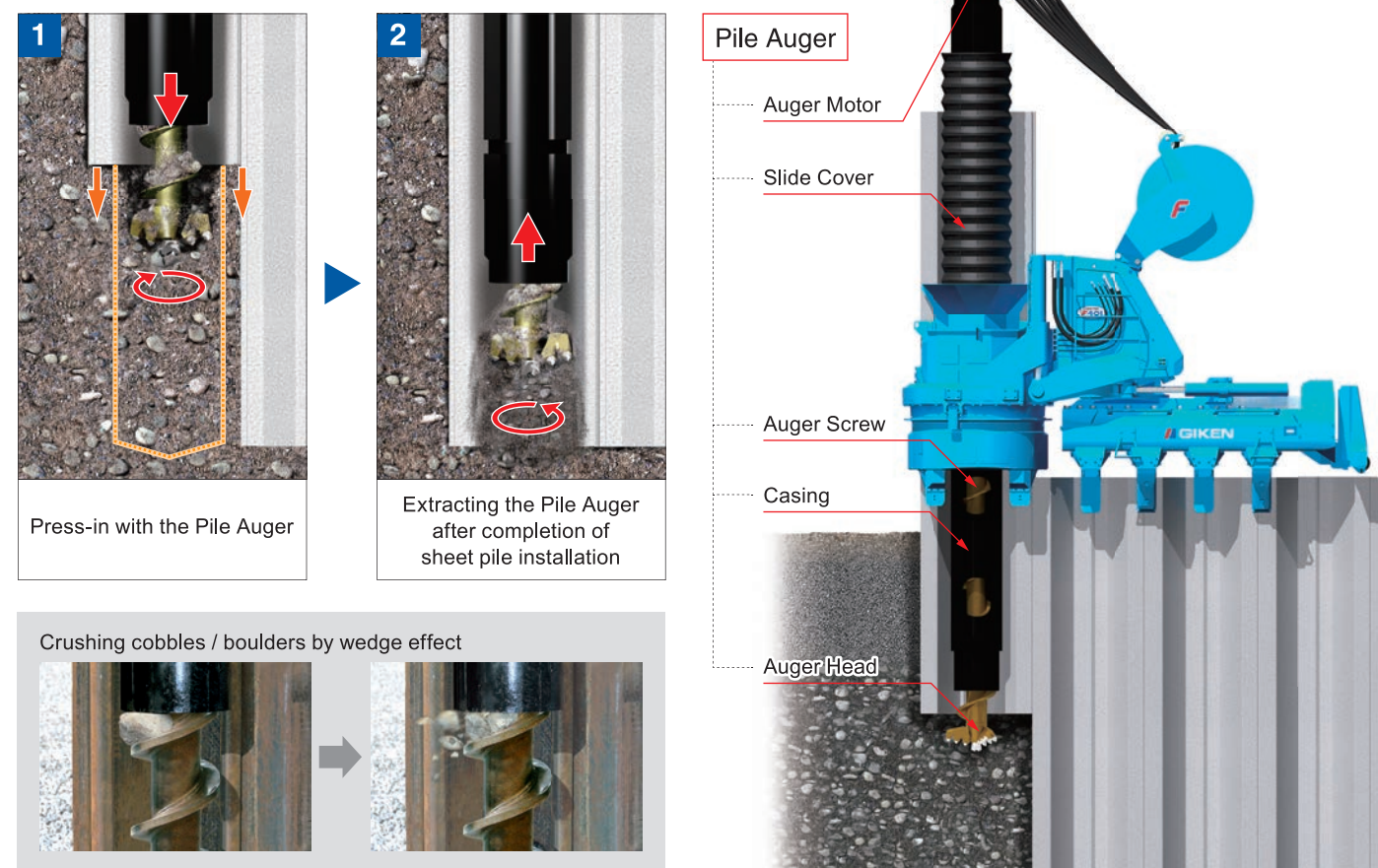


\* F401 is designed to Press-in a pair of 600mm and 700mm U sheet piles in pairs by using WU chuck attachment.



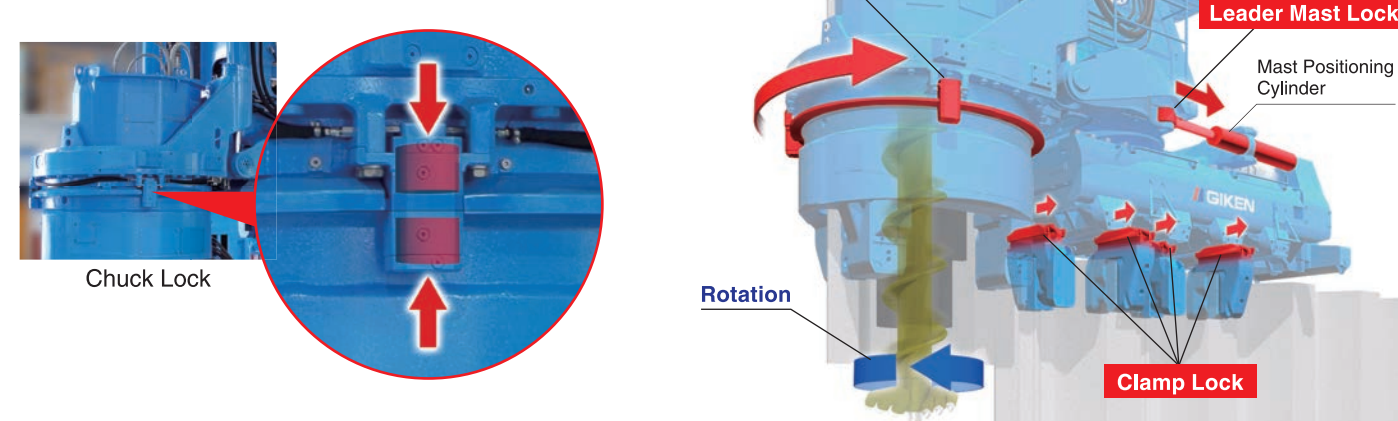
## 5 Pile Installation into Hard Ground

The "Pilot Coring Theory", GIKEN original theory, makes the Hard Ground Press-in Method able to install sheet piles into difficult ground conditions such as gravelly soil and cobble or boulder mixed soil without losing the advantages of the Press-in Method. The augering area can be reduced to assist pile installation, minimising volume of spoil and disturbance to the soil strata. Hence, high bearing capacity is available from sheet piles which are installed by the Hard Ground Press-in Method.



### Locking Function

Lock functions in the leader mast, chuck and clamps secure SILENT PILER against drilling torque and increase drilling efficiency and accuracy of pile installation.



## 6 New Generation Power Unit EU300L5

### Low Emission Engine

The Power Unit of the F401 is a new generation model and has environmentally-friendly specifications. It is designed with strict concepts for clean emissions with high combustion efficiency and GIKEN original hydraulic control technologies.

### Ultra Low Noise Level

It clears allowable construction noise levels in many industrialised countries.



### Standard Application of Biodegradable Oil

The F401 uses bio-degradable PILER ECO™ OIL and PILER ECO Grease. Hence, if hydraulic oil or grease is spilled into soil or water, there will be no environmental damage to the surrounding ecosystem. In addition, the machines are painted with TX-Free non-lead paint\*.

\* Environmentally-friendly paint which does not contain toluene, xylene and lead based pigment.



## 7 Scientific Execution of Press-in Work & Advanced IT Functions

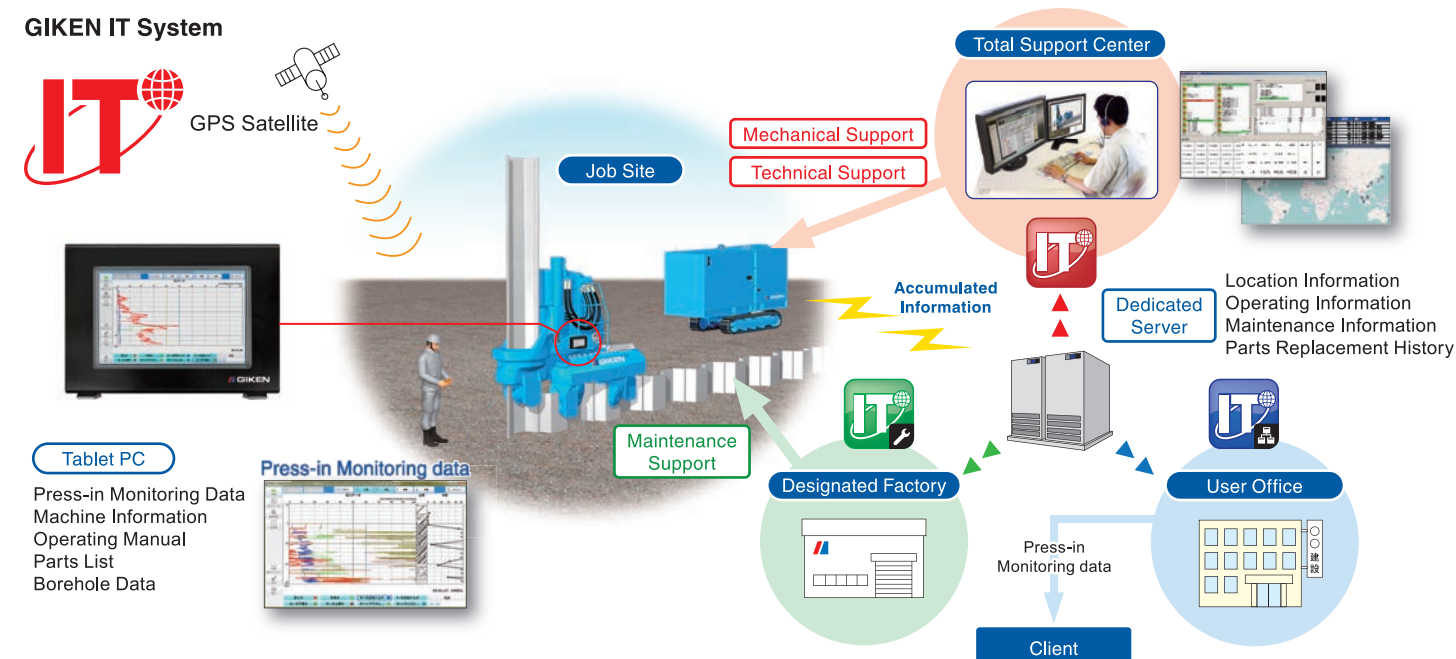
### GIKEN IT System

GIKEN engineers can monitor individual SILENT PILER, such as operating condition, maintenance records and location. Quick advice for any technical troubles is available promptly and appropriate information can also be provided to prevent troubles.

\* The system is not available in the countries where authorisation for usage cannot be acquired.

### Press-in Monitoring and Data Logging System

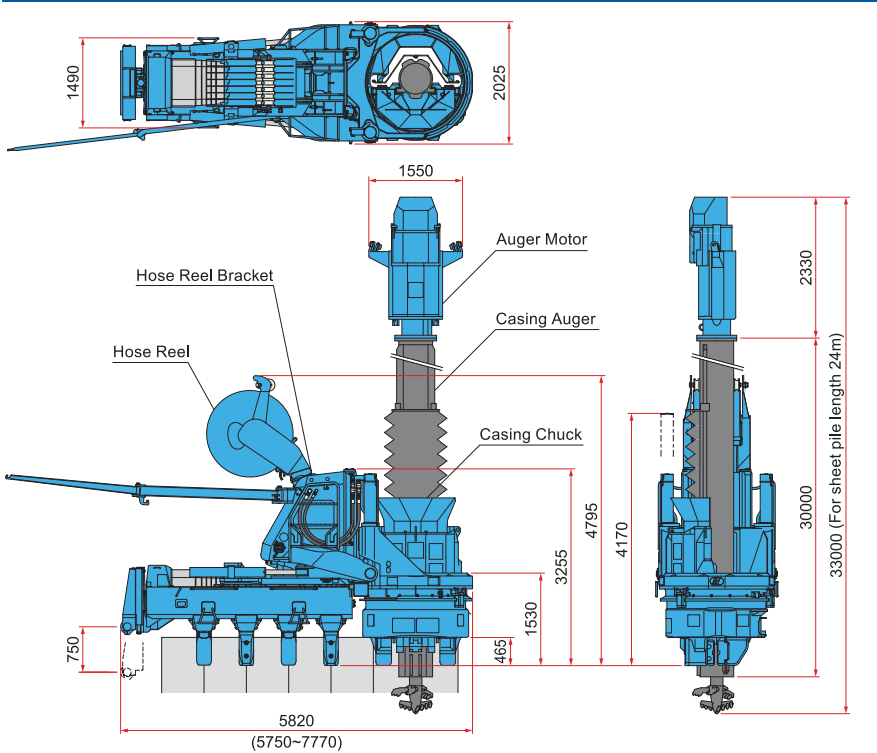
Press-in monitoring data can be used for quality control and information modelling of the foundation. Operators are able to keep working while checking data such as press-in force, auger torque, and working hours of press-in work, on a tablet or PC (both optional extras).



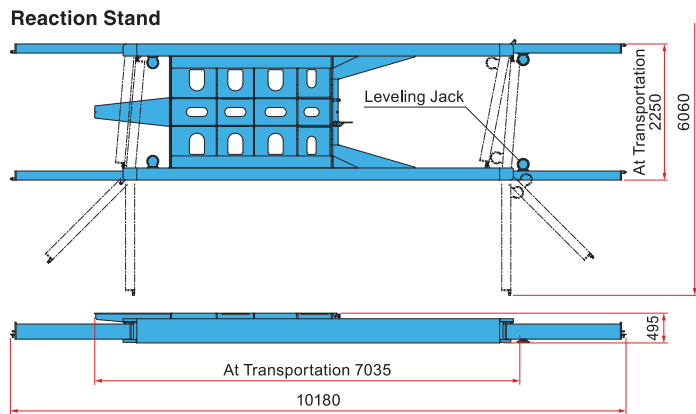
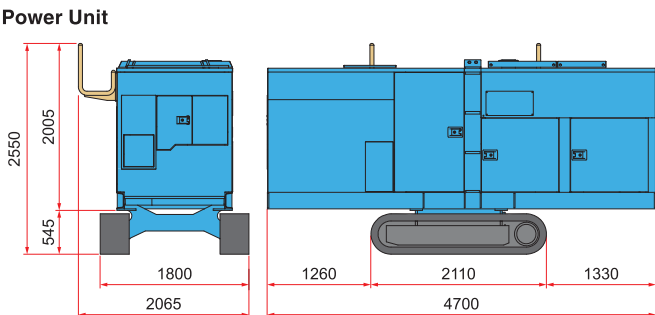
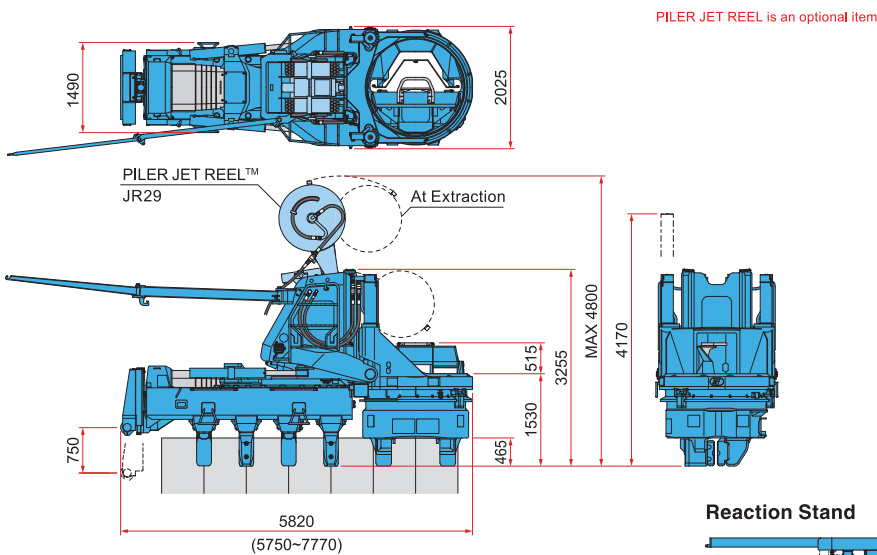


Dimensions & Specifications

Super Crush Mode



Standard / Water Jetting Mode



SILENT PIER F401

Applicable sheet piles	Z Sheet Piles 559~708 mm U Sheet Piles 600, 700 mm with WU Chuck Attachment
Max. Press-in Force	1200 kN (Super Crush Mode) 1500 kN (Standard / WJ Mode)
Max. Extraction Force	1600 kN
Stroke	1000 mm
Press-in Speed	1.3 ~ 27.0 m/min (Standard Mode)
Extraction Speed	1.0 ~ 20.2 m/min (Standard Mode)
Control System	Radio Control
Movement	Self-Moving

Super Crush Mode (Main Body, Hose Reel, Casing Chuck)	30670 kg
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Water Jetting Mode (Main Body, PILER JET REEL)	26850 kg
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Standard Mode (Main Body)	25600 kg
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Hose Reel HR17E

Mass (Standard)	2800 kg (including Hose Reel Bracket)
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Pile Auger PA20

Applicable pile length (Standard)	Max 24 m*
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Mass Auger Motor	2540 kg
Casing Auger	18260 kg

Total Mass	20800 kg
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\*Up to 30m with modification.

PILER JET REEL™ JR29

Applicable pile length	Standard 16.0 m (Max. 26.0m)
Mass	1250 kg

Power Unit EU300L5

Power Source	Diesel Engine
Rated Output	255 kW / 1800 min <sup>-1</sup>

Fuel Tank Capacity	500 L
Hydraulic Reservoir	490 L (PILER ECO™ OIL)

AdBlue/DEF Tank Capacity	57 L
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Total Mass	7400 kg (with 20m Hose) 7700 kg (with 30m Hose)
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Reaction Stand (with Leveling Jack)

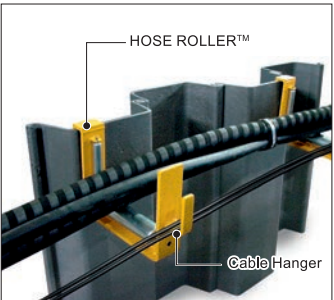
Mass	3950 kg
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The above specifications are subject to alteration without prior notice.

Accessories

Accessories are different of types.

Basic Accessories



HOSE ROLLER™



PILE LASER™



Module Box



Tablet PC (encased)



Chuck Stage



WU Chuck Attachment

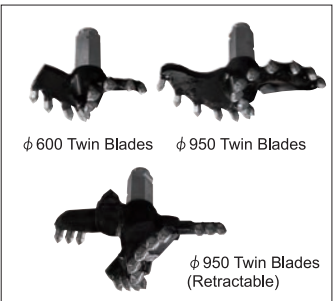


PILER JET REEL™ (JR29)

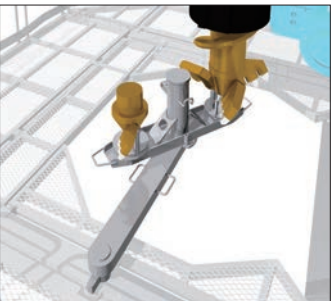


PILER STAGE™

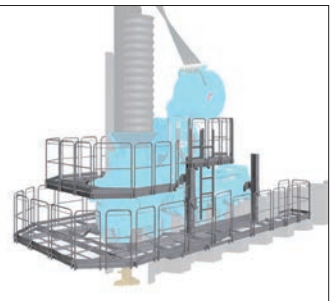
Super Crush Mode Accessories



Auger Head



Auger Head Replacement Attachment



PILER STAGE with Chuck Stage