

 **GIKEN**

# SILENT PILER **F201**

for U Sheet Piles  
400-600mm wide



 **GIKEN** Construction Solutions Company

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Modular model applicable to U Sheet Piles (400-600mm wide)

# SILENT PILER F201

Silent Piler F201

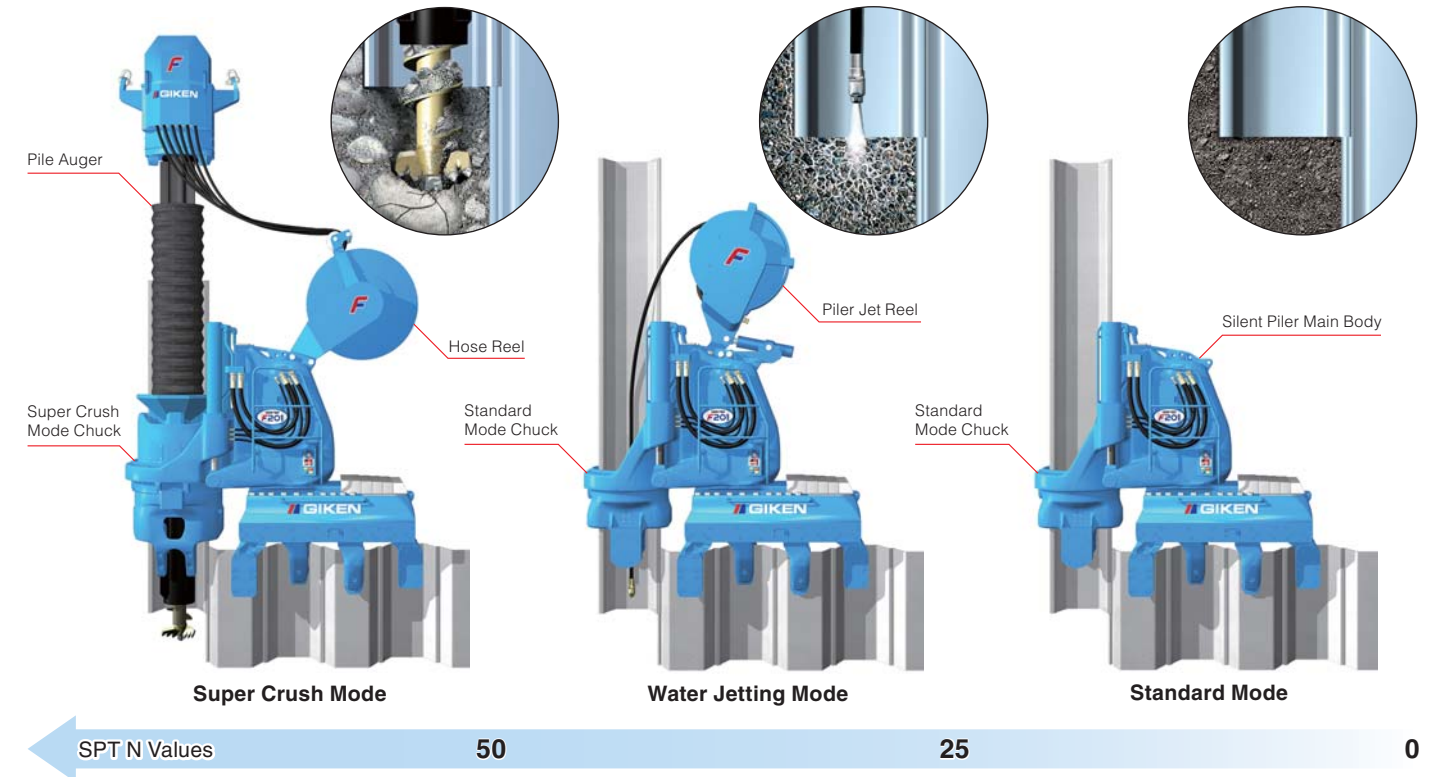
## Flexible and Functional Formula

The F201 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 Applicable to 400-600mm wide U Sheet Pile and soft to hard ground conditions

F201 has wider adoptability and is applicable to Standard Mode, Water Jetting Mode, and Super Crush Mode and 400mm, 500mm and 600mm wide U sheet pile by changing the chuck and chuck frame, and equipping suitable attachments.



## 2 Longer Operational Life and Higher Functionality by 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.



Pile width corresponding to the Chuck is automatically detected.

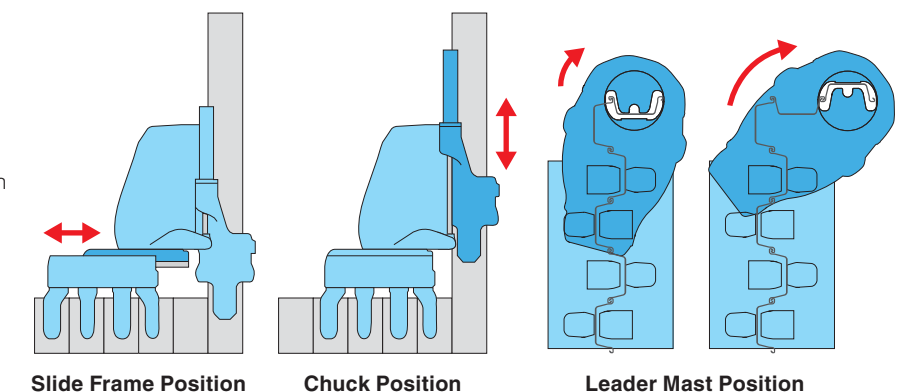
Position of main components is automatically detected.

- Slide Frame Position
- Chuck Position
- Leader Mast Position

Up/Down Stroke Force is optimised.

Maximum Up/Down Stroke Force is regulated.

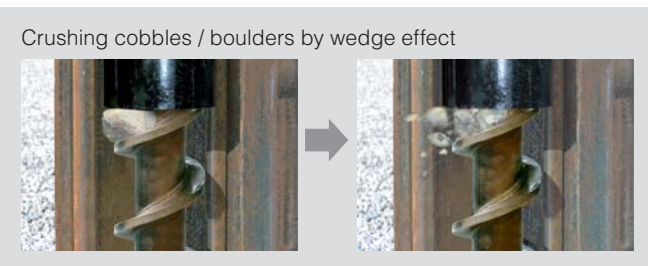
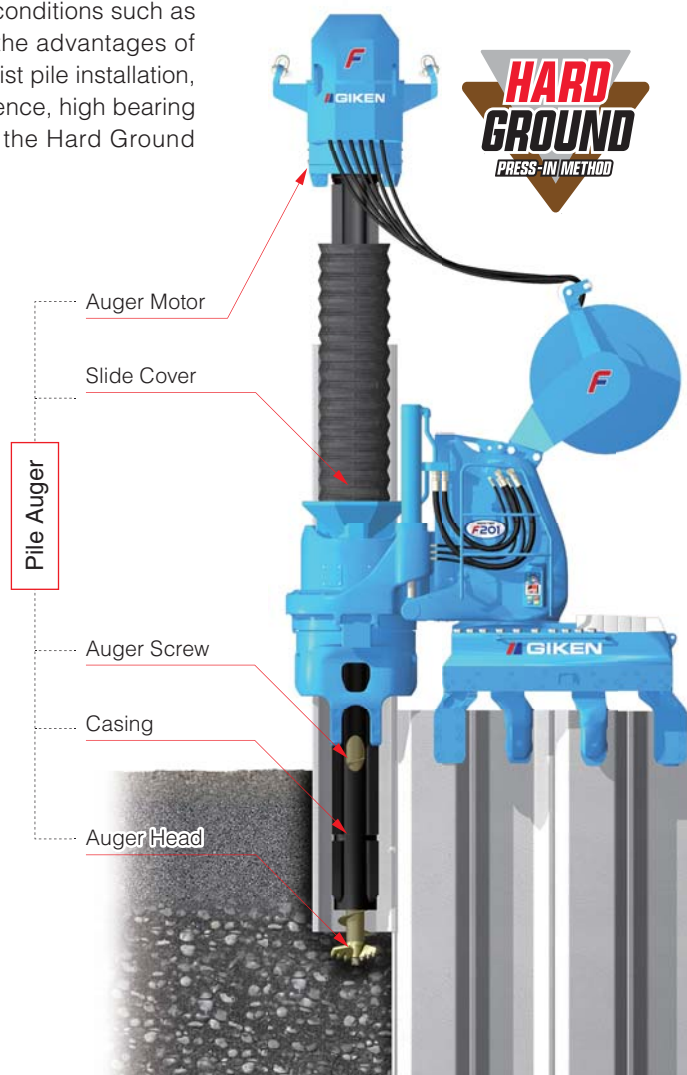
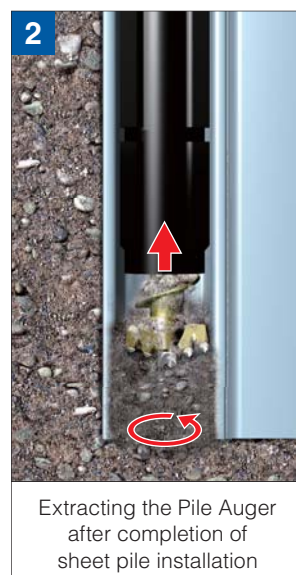
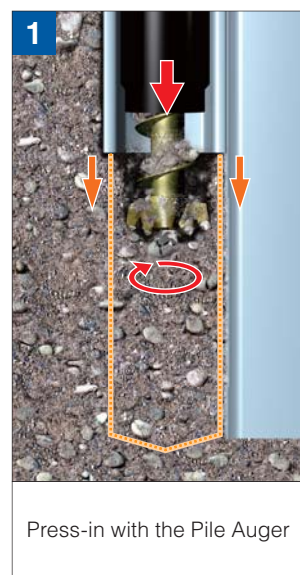
Load applied to Silent Piler can be reduced.





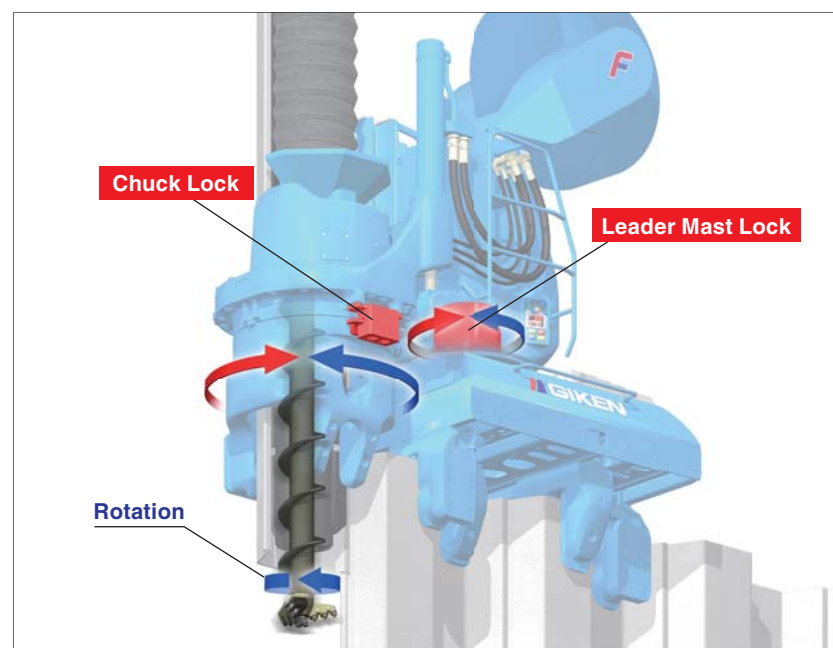
### 3 Pile Installation into Hard Ground

The "Directional Coring Theory", GIKEN's 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.



### 4 Outstanding Environmentally-Friendly Design

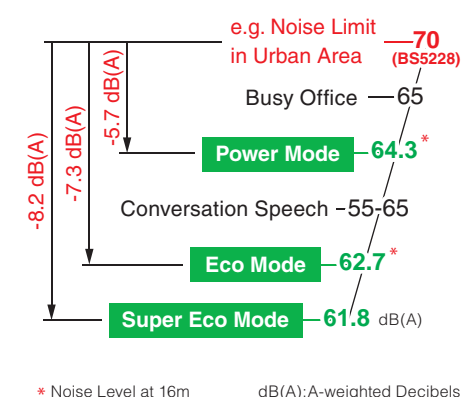
#### Low Emission Engine

The Power Unit of the F201 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's original hydraulic control technologies.



#### Ultra Low Noise Level

It clears allowable construction noise levels in many industrialised countries.



#### Standard Application of Biodegradable Oil

The F201 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-leaded paint\*.

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



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

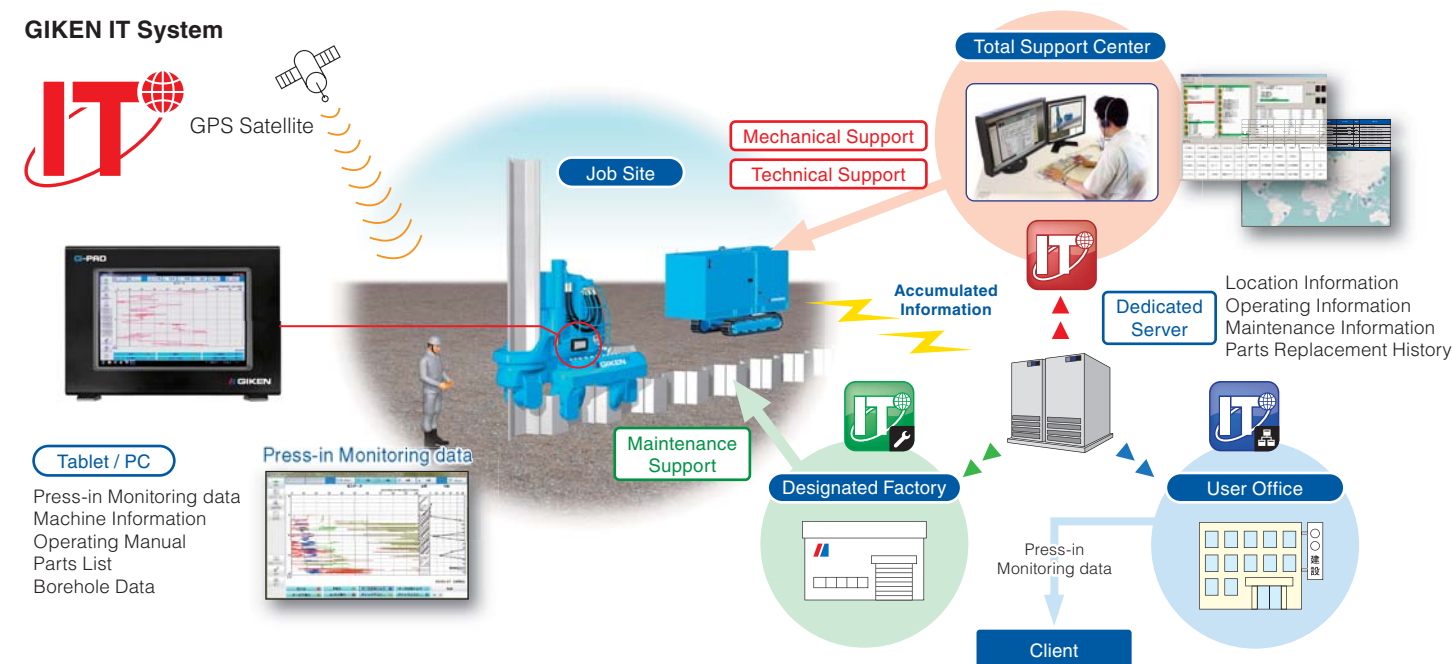
#### GIKEN IT System

GIKEN's engineers can monitor individual Silent Pilers, 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).

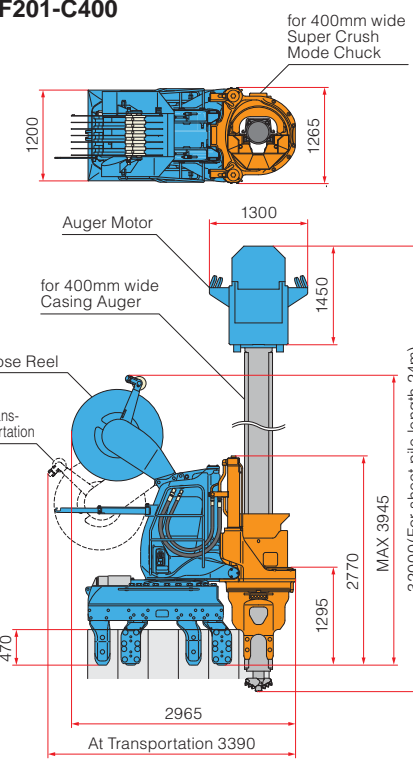


# Dimensions & Specifications

Super Crush Mode

**400mm wide**

**F201-C400**



for 400mm wide Super Crush Mode Chuck

Auger Motor

for 400mm wide Casing Auger

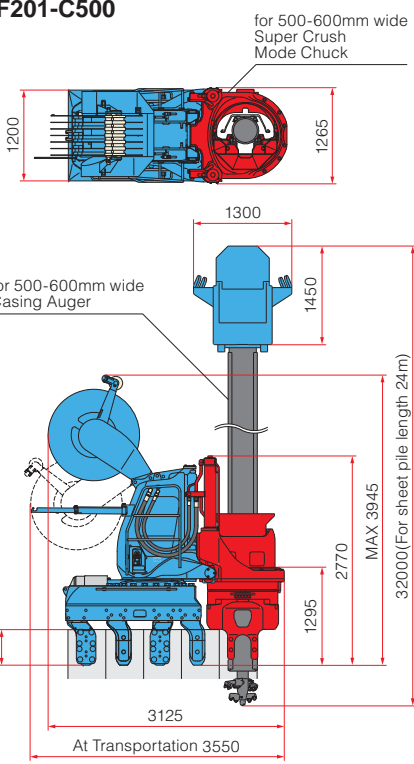
Hose Reel

At Transportation

At Transportation 3390

**500mm wide**

**F201-C500**



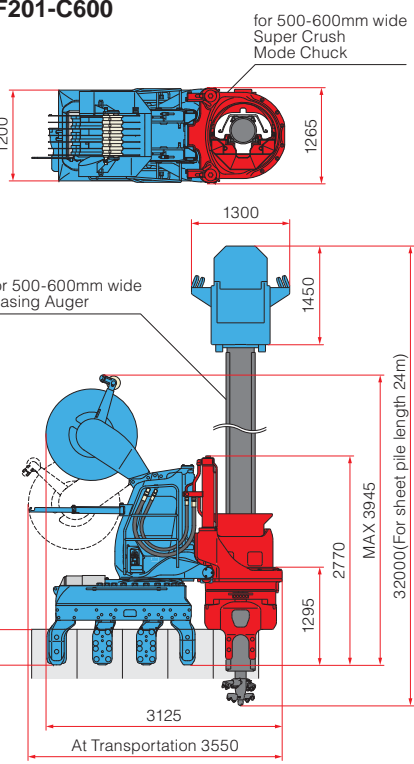
for 500-600mm wide Super Crush Mode Chuck

for 500-600mm wide Casing Auger

At Transportation 3550

**600mm wide**

**F201-C600**



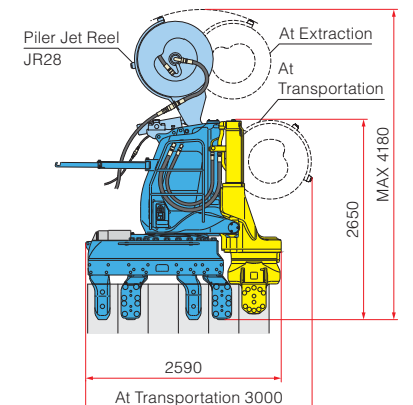
for 500-600mm wide Super Crush Mode Chuck

for 500-600mm wide Casing Auger

At Transportation 3550

Water Jetting Mode

**F201-400**



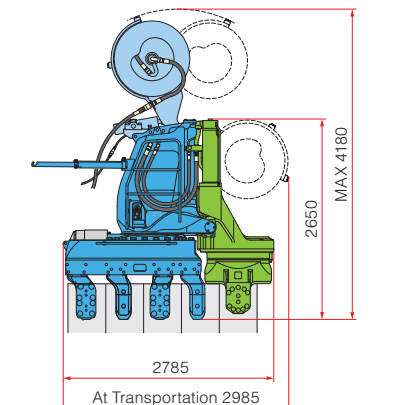
Piler Jet Reel JR28

At Extraction

At Transportation

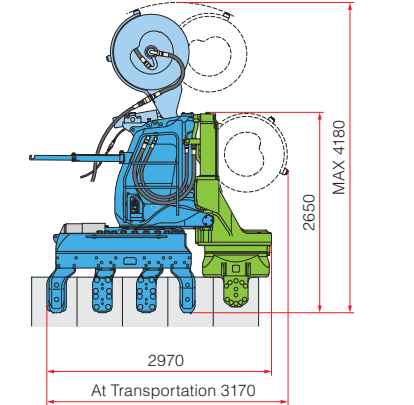
At Transportation 3000

**F201-500**



At Transportation 2985

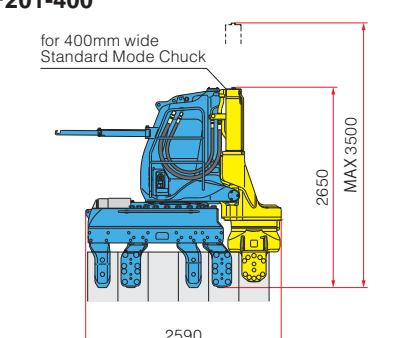
**F201-600**



At Transportation 3170

Standard Mode

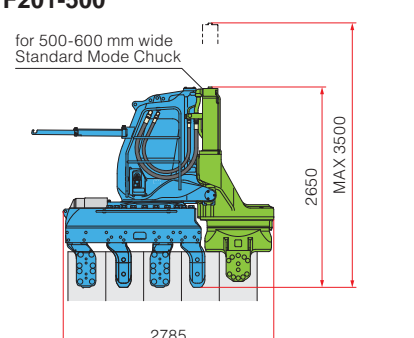
**F201-400**



for 400mm wide Standard Mode Chuck

At Transportation 3000

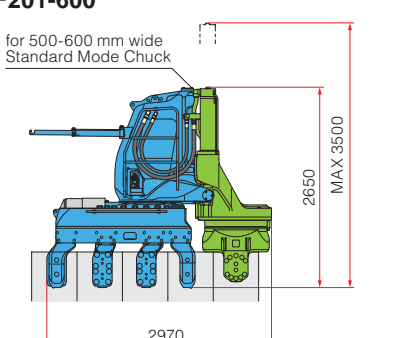
**F201-500**



for 500-600 mm wide Standard Mode Chuck

At Transportation 2985

**F201-600**



for 500-600 mm wide Standard Mode Chuck

At Transportation 3170

**F201 Specifications**

● **Super Crush Mode**

Max. Press-in Force	800 kN
Max. Extraction Force	900 kN
Stroke	850 mm
Press-in Speed	0.4 ~ 4.5 m/min
Extraction Speed	1.1 ~ 9.4 m/min
Control System	Radio Control
Mass (Main Body & Hose Reel)	for 400mm wide sheet pile 11900 kg for 500, 600mm wide sheet pile 12400 kg
<b>Hose Reel</b>	<b>HR16</b>
Mass	Standard 1550 kg (Option 1650 kg)
<b>Pile Auger</b>	<b>PA19</b>
Applicable pile length	Max 24 m (Standard)*
Auger Motor	1350 kg
Mass Casing Auger	for 400mm wide sheet pile 9050 kg for 500, 600mm wide sheet pile 10050 kg
Total Mass	for 400mm wide sheet pile 10400 kg for 500, 600mm wide sheet pile 11400 kg

\*Max 30m in special mode

● **Water Jetting Mode**

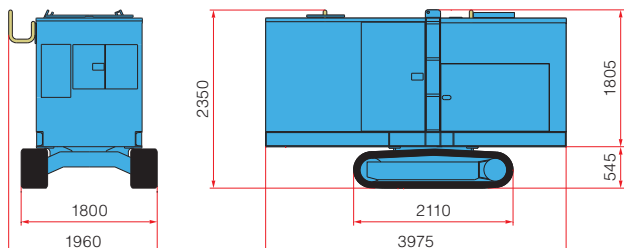
Max. Press-in Force	1500 kN
Max. Extraction Force	1600 kN
Stroke	850 mm
Press-in Speed	1.4 ~ 30.0 m/min
Extraction Speed	1.1 ~ 23.2 m/min
Control System	Radio Control
Mass (Main Body & Piler Jet Reel)	for 400mm wide sheet pile 10820 kg for 500, 600mm wide sheet pile 11120 kg
<b>Piler Jet Reel</b>	<b>JR28</b>
Applicable pile length	Standard 17.0 m (Max. 27.0 m)
Mass	820 kg

Piler Jet Reel is an optional item

● **Standard Mode**

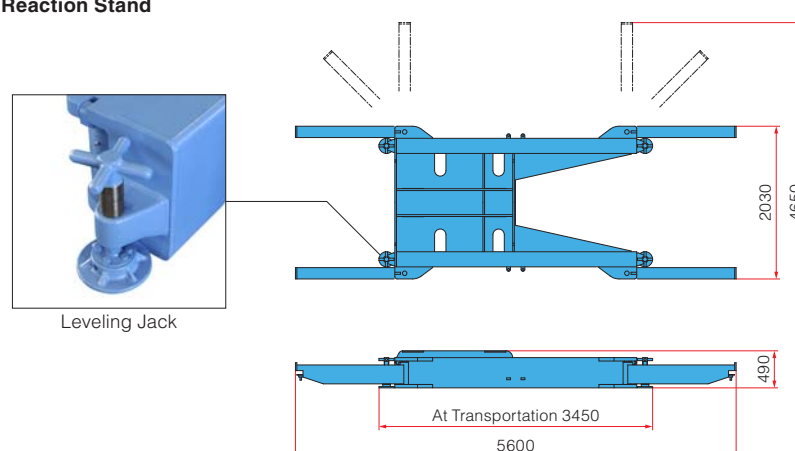
Max. Press-in Force	1500 kN
Max. Extraction Force	1600 kN
Stroke	850 mm
Press-in Speed	1.4 ~ 30.0 m/min
Extraction Speed	1.1 ~ 23.2 m/min
Control System	Radio Control
Mass (Main Body)	for 400mm wide sheet pile 10000 kg for 500, 600mm wide sheet pile 10300 kg

**Power Unit**



Power Unit		EU30013
Power Source	Diesel Engine	
Power Mode	230 kW(313 ps)/1800 min <sup>-1</sup>	
Rated Output	Eco Mode	204 kW(278 ps)/1600 min <sup>-1</sup>
	Super Eco Mode	179 kW(243 ps)/1400 min <sup>-1</sup>
Fuel Tank Capacity	500 L	
Hydraulic Reservoir	Piler ECO Oil 490 L	
Moving Speed	1.4 km/h	
Mass	6400 kg (with 20m Hose)	

**Reaction Stand**



Leveling Jack

At Transportation 3450

5600

Reaction Stand (with Leveling Jack)	
Mass	1900 kg

**Chuck Mass**

Sheet Pile Width	Standard Mode Chuck	Super Crush Mode Chuck
400 mm	2850 kg	3400 kg
500, 600 mm	2550 kg	2900 kg

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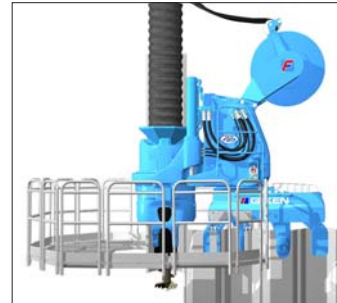
The above specifications are subject to alteration without prior notice

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## Accessories

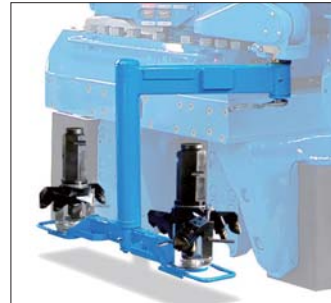
### Standard Accessories



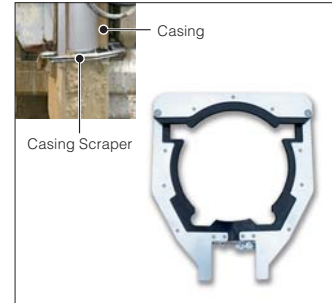
Piler Stage



Chuck Stage \*

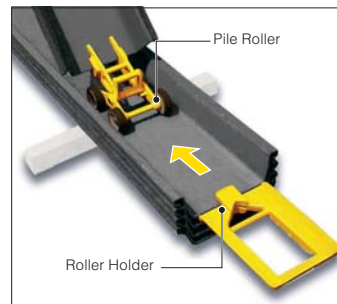


Auger Head Replacement Attachments \*

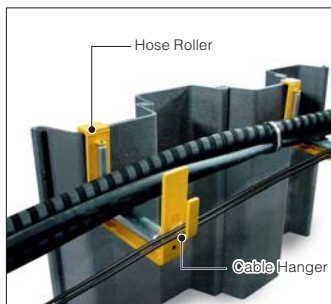


Casing Scraper \*

\* Available for Super Crush Mode only.



Pile Roller



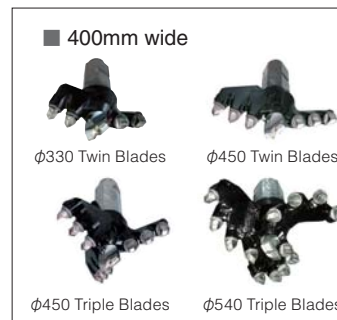
Hose Roller



Pile Laser



Module Box



■ 400mm wide

φ330 Twin Blades φ450 Twin Blades

φ450 Triple Blades φ540 Triple Blades



■ 500-600mm wide

φ400 Twin Blades φ540 Twin Blades φ540 Triple Blades

φ580 Twin Blades (Retractable) \* φ685 Triple Blades

Auger Head

\* for 600mm wide only

### Optional Accessories



Piler Jet Reel (JR28)

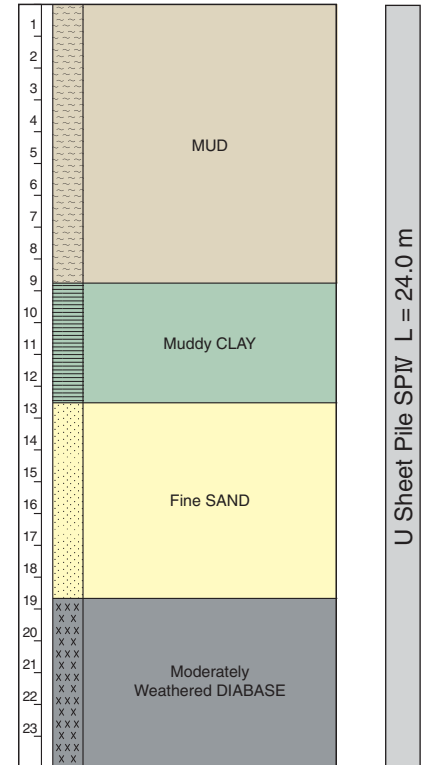
## F201 Project Data Sheet

### F201 Demonstration Test



Project : Cofferdam Test Piling  
Location : Dong Gang Business District, Dalian China  
Period : November 2013 ~ December 2013  
Silent Piler : F201  
Type of Sheet Pile : U Sheet Pile SP IV  
Pile Length : 12m (Standard Mode)  
12m, 24m (Super Crush Mode)

#### ▼ Borehole Log

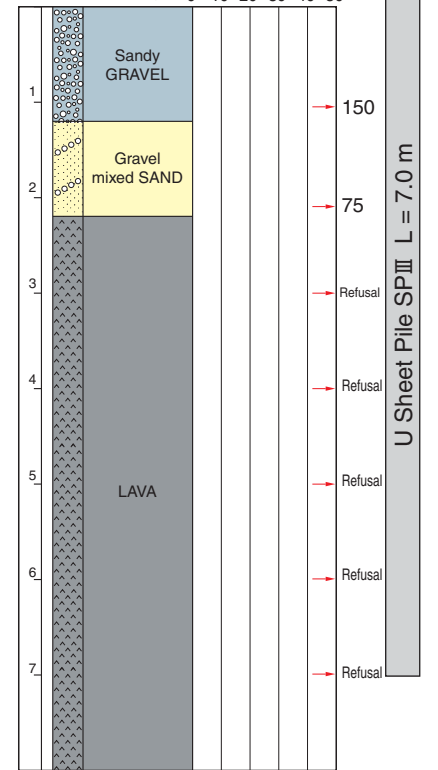


### Emergency Land Slide Remedial Works



Project : Emergency Channel Construction Works  
Location : Oshima Town, Tokyo  
Period : March 2014 ~ May 2014  
Silent Piler : F201  
Type of Sheet Pile : U Sheet Pile SP III  
Pile Length : 7.0 m

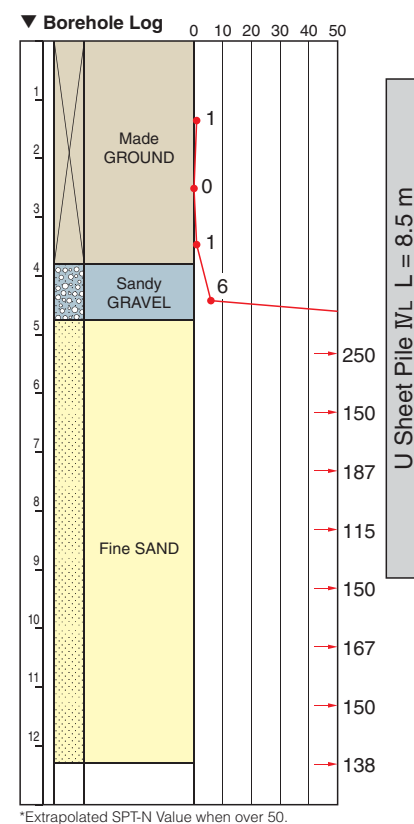
#### ▼ Borehole Log



\*Extrapolated SPT-N Value when over 50.

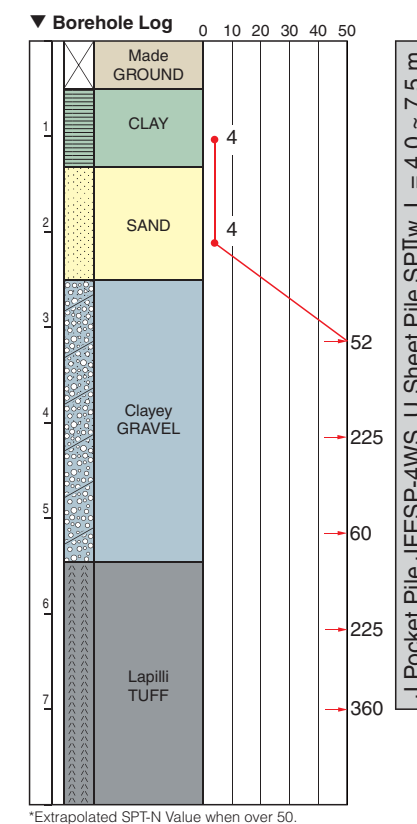


## Drainage Restoration Works in Dense Residential Area



Project : Machida City Public Sewer System, Storm-Water Sewer Construction Works  
 Location : Machida City, Tokyo  
 Period : May 2013  
 Silent Piler : F201  
 Type of Sheet Pile : U Sheet Pile SP VL  
 Pile Length : 8.5 m

## Installation of Sheet Pile Cut-off Wall into Hard Ground

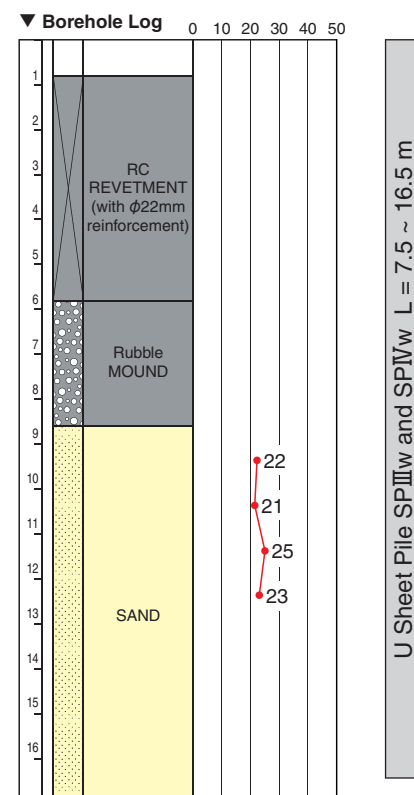


Project : Demolition of Miyagi Prefectural Public Health and Environment Bldg.- Second Phase  
 Location : Sendai City, Miyagi  
 Period : October 2013 ~ November 2013  
 Silent Piler : F201  
 Type of Sheet Pile : J Pocket Pile JFESP-4WS, U Sheet Pile SP IIw  
 Pile Length : 4.0 ~ 7.5 m

## River Dike Disaster Remedial Works



Drilling the existing RC Revetment



Project : Embankment Restoration Work Section 4, Natori River  
 Location : Natori City, Miyagi  
 Period : September 2013 ~ October 2013  
 Silent Piler : F201  
 Type of Sheet Pile : U Sheet Pile SP IIIw and SP IVw  
 Pile Length : 7.5 ~ 16.5 m

Visit the following URL for more details.

**GIKEN Project Leaflet Database**  
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Data sheets can be searched and downloaded by category.