

GIKEN

SILENT PILER™

F301

for Z & U Sheet Piles



GIKEN

Construction Solutions Company

www.giken.com

CONTACT US



"SILENT PILER" is a registered trademark or trademark of GIKEN LTD. in the United States and other countries.

© 2014 GIKEN LTD. All Rights Reserved.

T4_Ver 2.1EN04 / 06 Jun 2023

Modular model applicable to for Z & U Sheet Piles

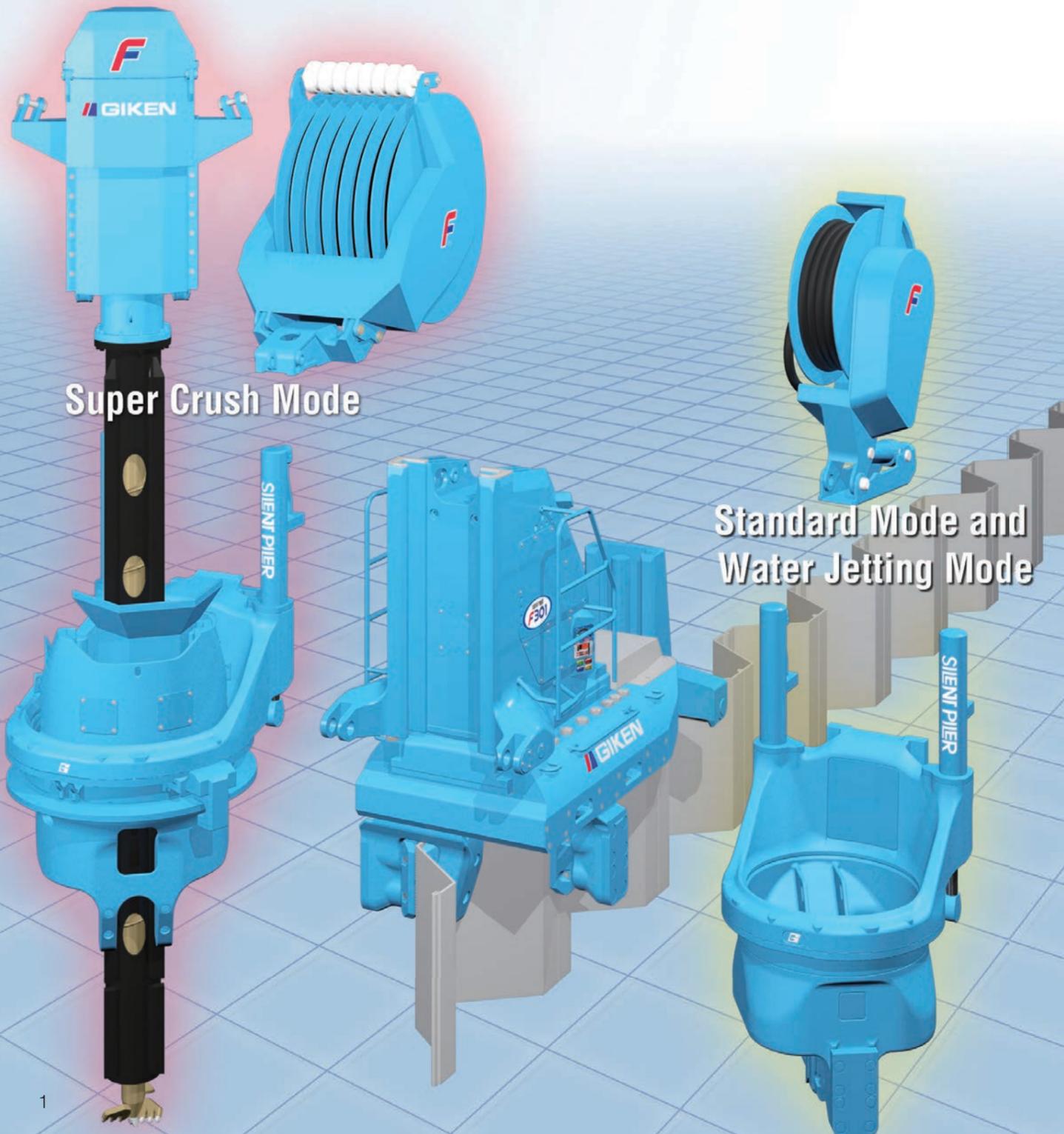
SILENT PILER™ F301

SILENT PILER F301

Flexible and Functional Formula

The F301 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.

"SILENT PILER" is a registered trademark or trademark of GIKEN LTD. in the United States and other countries.

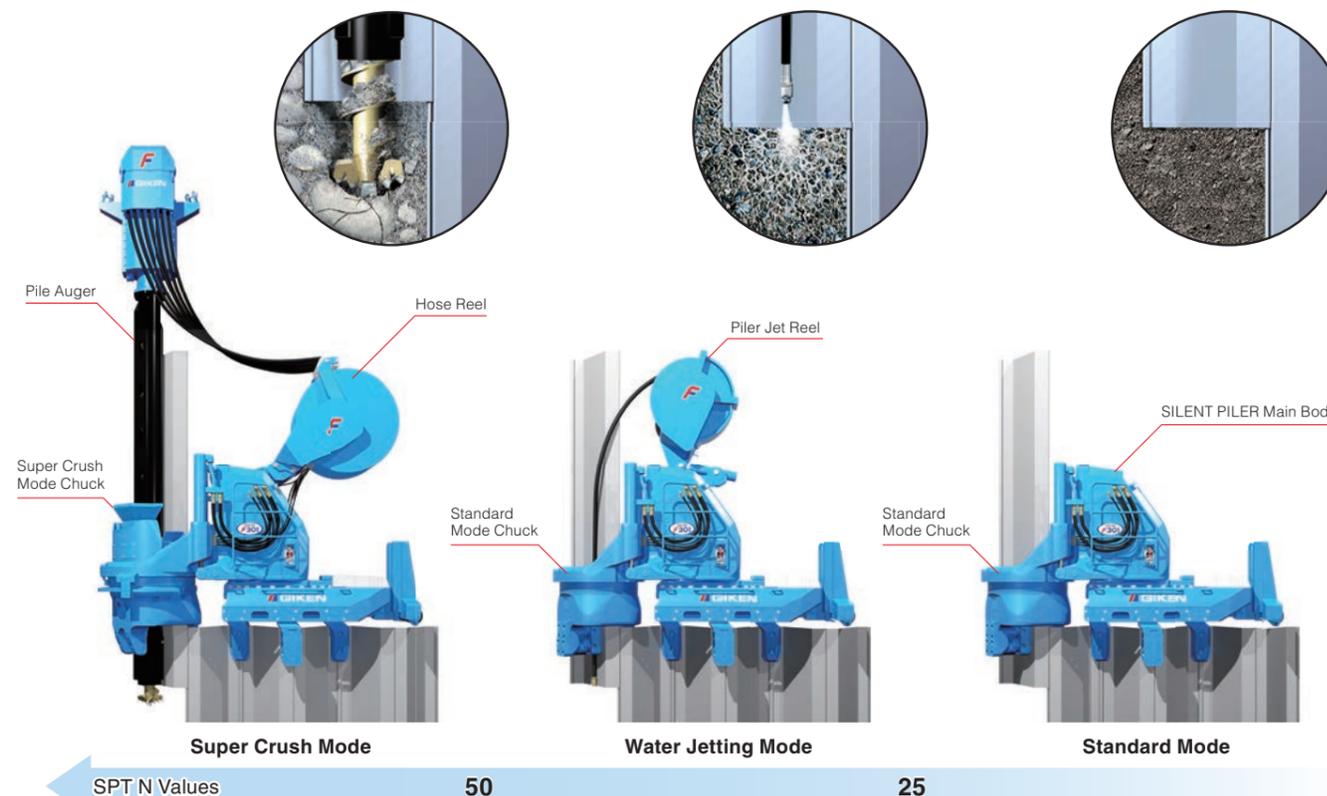


Super Crush Mode

Standard Mode and Water Jetting Mode

1 Optimising Work Efficiency with Modular Design

SILENT PILER F301 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.



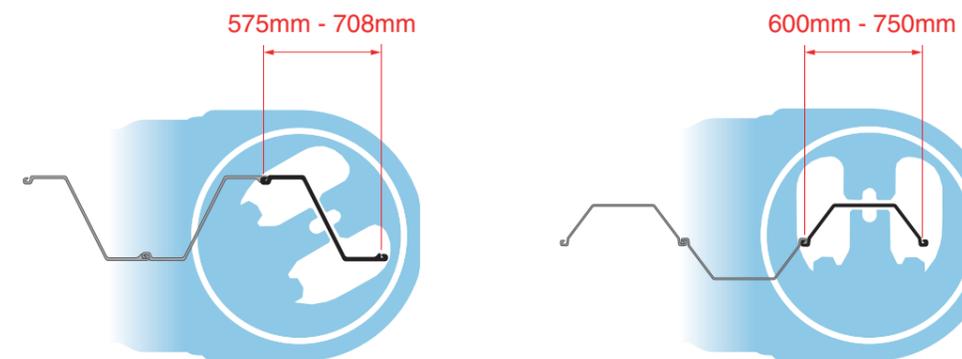
2 Longer Operational Life and Higher Functionality by New Control System

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.



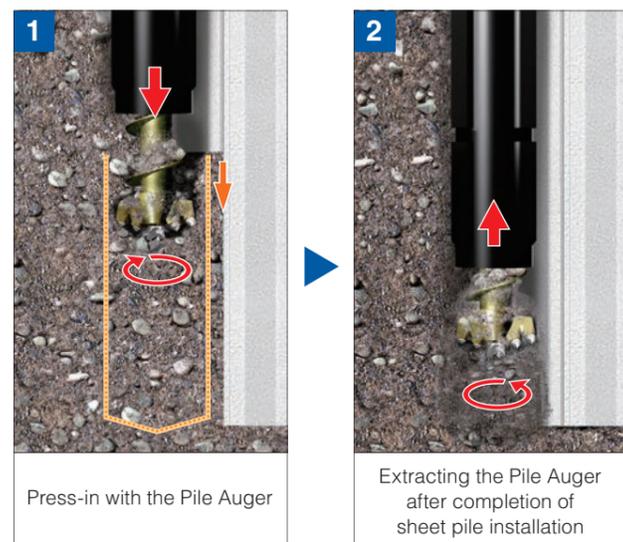
3 For Wider Z & U Sheet Piles

F301 has been designed to press-in Z piles to 708mm wide and U piles up to 750mm wide.

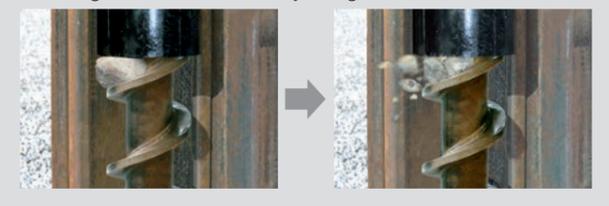


4 Pile Installation into Hard Ground

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.

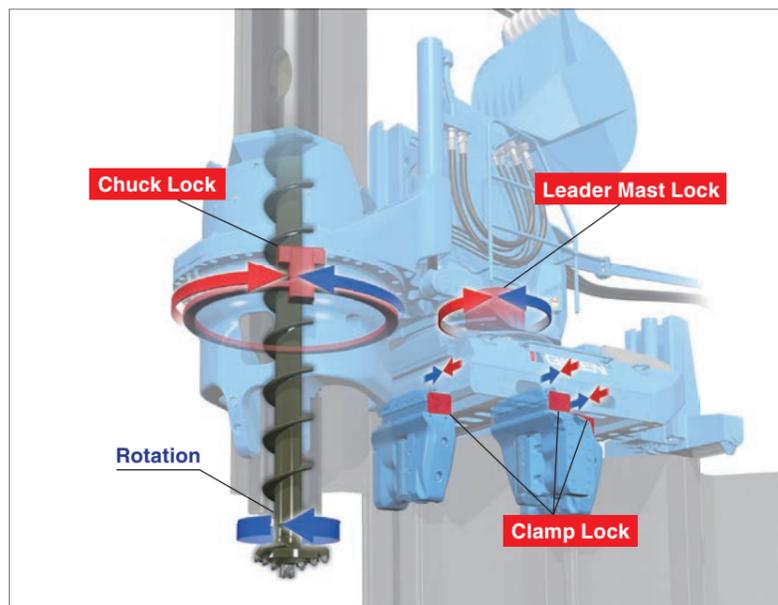
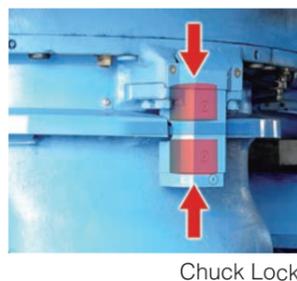


Crushing cobbles / boulders by wedge effect



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.



5 New Generation Power Unit EU300K4

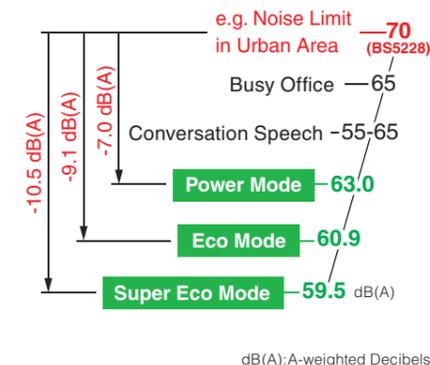
Low Emission Engine

The Power Unit of the F301 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 F301 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.



6 Scientific Execution of Press-in Work & Advanced IT Functions

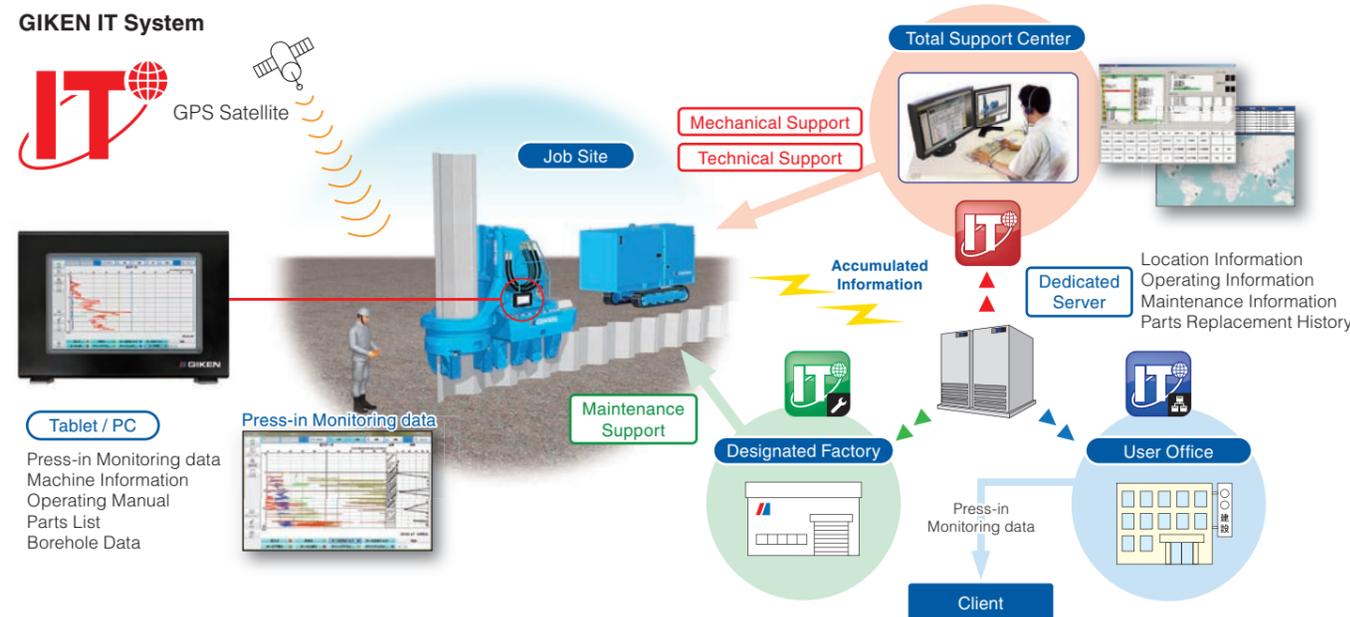
GIKEN IT System

GIKEN's 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

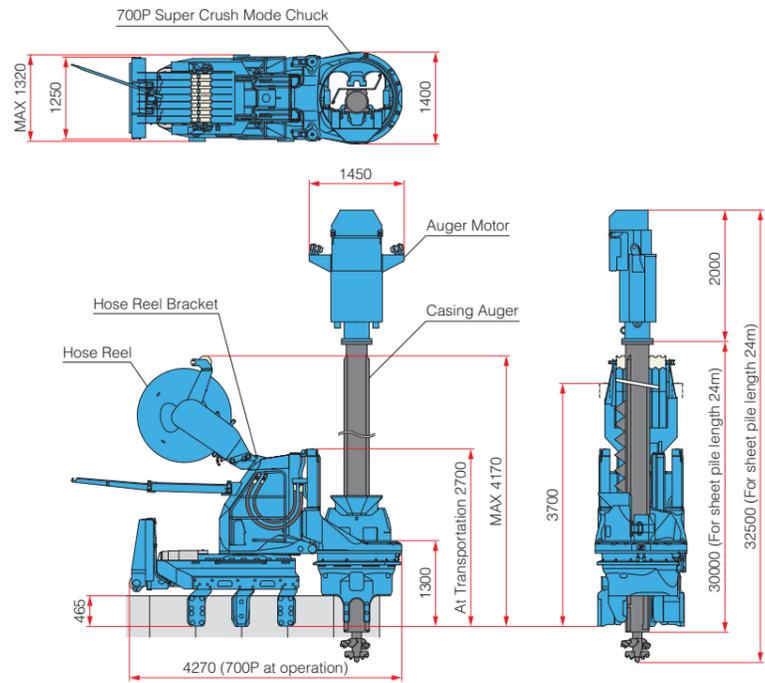
Press-in monitoring data can be used for quality control and information modelling of the foundation. Operators are able to keep working while checking data such as press-in force, auger torque, and working hours of press-in work, on a tablet or PC (both optional extras).



Dimensions & Specifications

Super Crush Mode

F301-C700



SILENT PIER	F301
Applicable sheet piles	Z Sheet Piles (575~708P) U Sheet Piles (600~750P)
Max. Press-in Force	800kN (Super Crush Mode) 1000kN (Standard / Water Jetting Mode)
Max. Extraction Force	900kN (Super Crush Mode) 1200kN (Standard / Water Jetting Mode)
Stroke	850 mm
Press-in Speed	2.0 ~ 43.5 m/min (Standard Mode)
Extraction Speed	1.5 ~ 32.3 m/min (Standard Mode)
Control System	Radio Control
Movement	Self-Moving

Super Crush Mode (Main Body & Hose Reel)	15630 kg
Water Jetting Mode (Main Body & Piler Jet Reel)	12520 kg
Standard Mode (Main Body)	11700 kg

Hose Reel	HR17D
Mass (Standard)	2780kg (including Hose Reel Bracket)

Pile Auger	PA22
Applicable pile length (Standard)	Max 24 m *
Mass	Auger Motor 1850 kg Casing Auger 10050 kg
Total Mass	11900 kg

*Max 30m in special mode

Piler Jet Reel	JR28
Applicable pile length	Standard 17.0 m (Max. 27.0 m)
Mass	820 kg

Power Unit	EU300K4
Power Source	Diesel Engine
Power Mode	265 kW (360 ps) / 1800 min ⁻¹
Rated Output	Eco Mode 236 kW (321 ps) / 1600 min ⁻¹ Super Eco Mode 206 kW (280 ps) / 1400 min ⁻¹
Fuel Tank Capacity	600 L
Hydraulic Reservoir	PILER ECO OIL 630 L
Urea Additive Tank Capacity	38 L
Moving Speed	1.4 km/h
Mass	7250 kg (with 20m Hose)

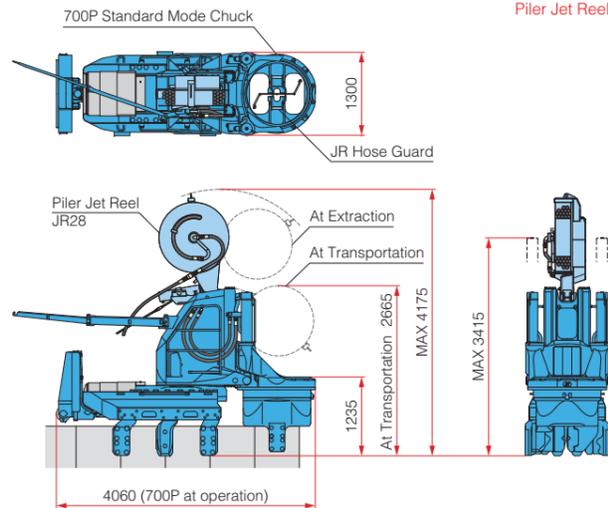
Reaction Stand (with Leveling Jack)	
Mass	3000 kg

The above specifications are subject to alteration without prior notice

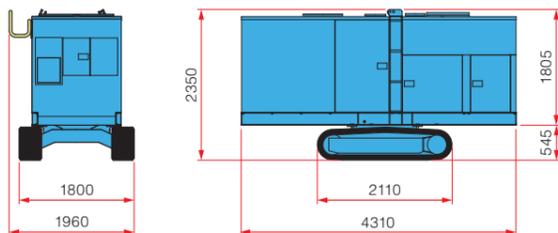
Standard / Water Jetting Mode

F301-700

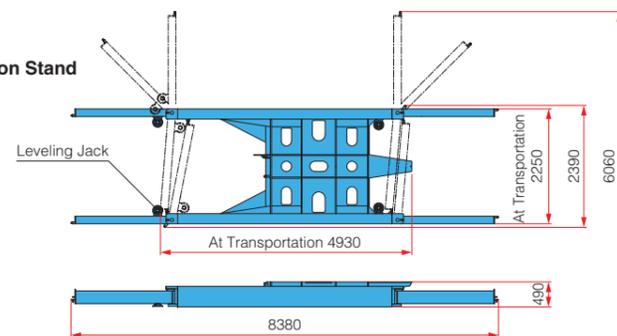
Piler Jet Reel is an optional item



Power Unit



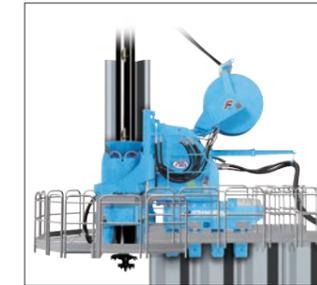
Reaction Stand



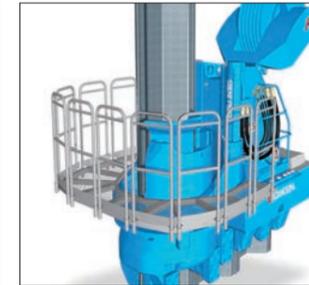
Accessories

Standard Accessories

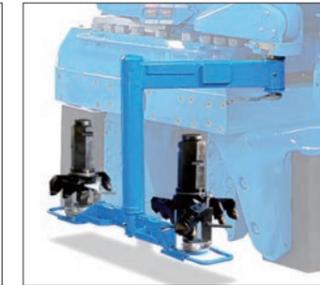
* Available for Super Crush Mode only.



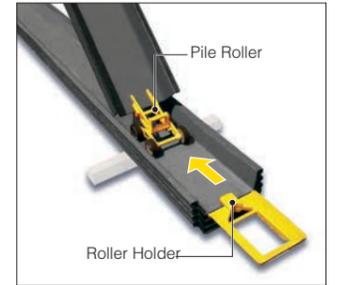
Piler Stage



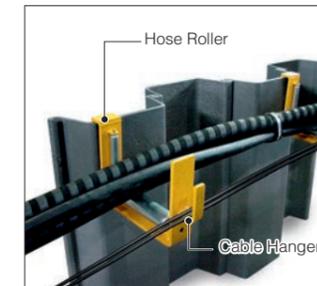
Chuck Stage*



Auger Head Replacement Attachment*



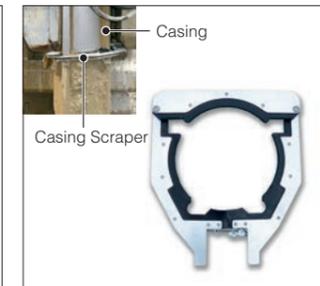
Pile Roller



Hose Roller



Pile Laser



Casing Scraper*



Module Box



Auger Head*

Optional Accessories



Piler Jet Reel (JR28)



φ685 Twin Blades

Auger Head*