

GIKEN

SILENT PILER™

F301

for Z & U Sheet Piles



GIKEN

Construction Solutions Company

www.giken.com

CONTACT US



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Modular model applicable to for Z & U Sheet Piles

SILENT PILER™ F301

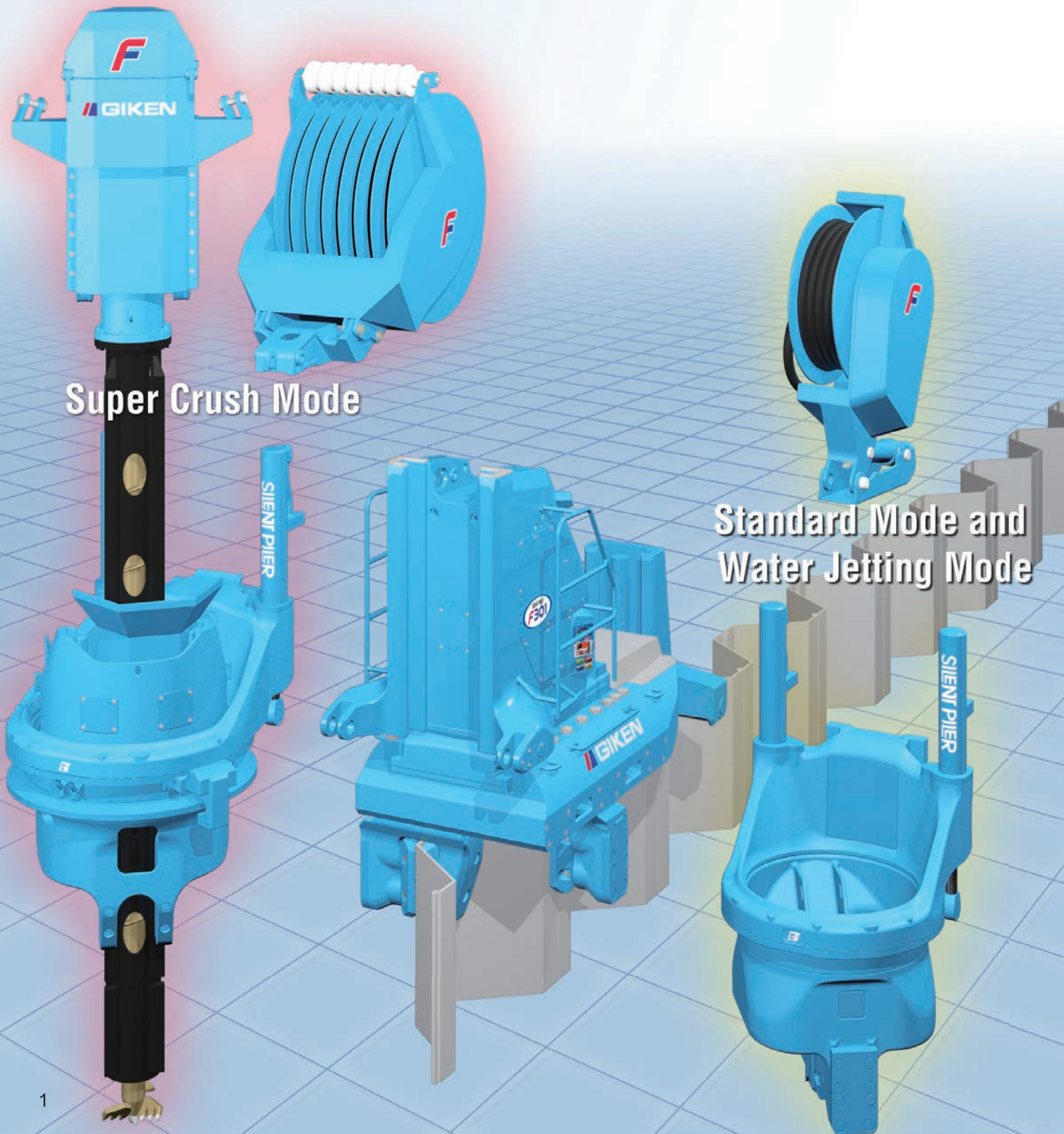
SILENT PILER™ F301

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.

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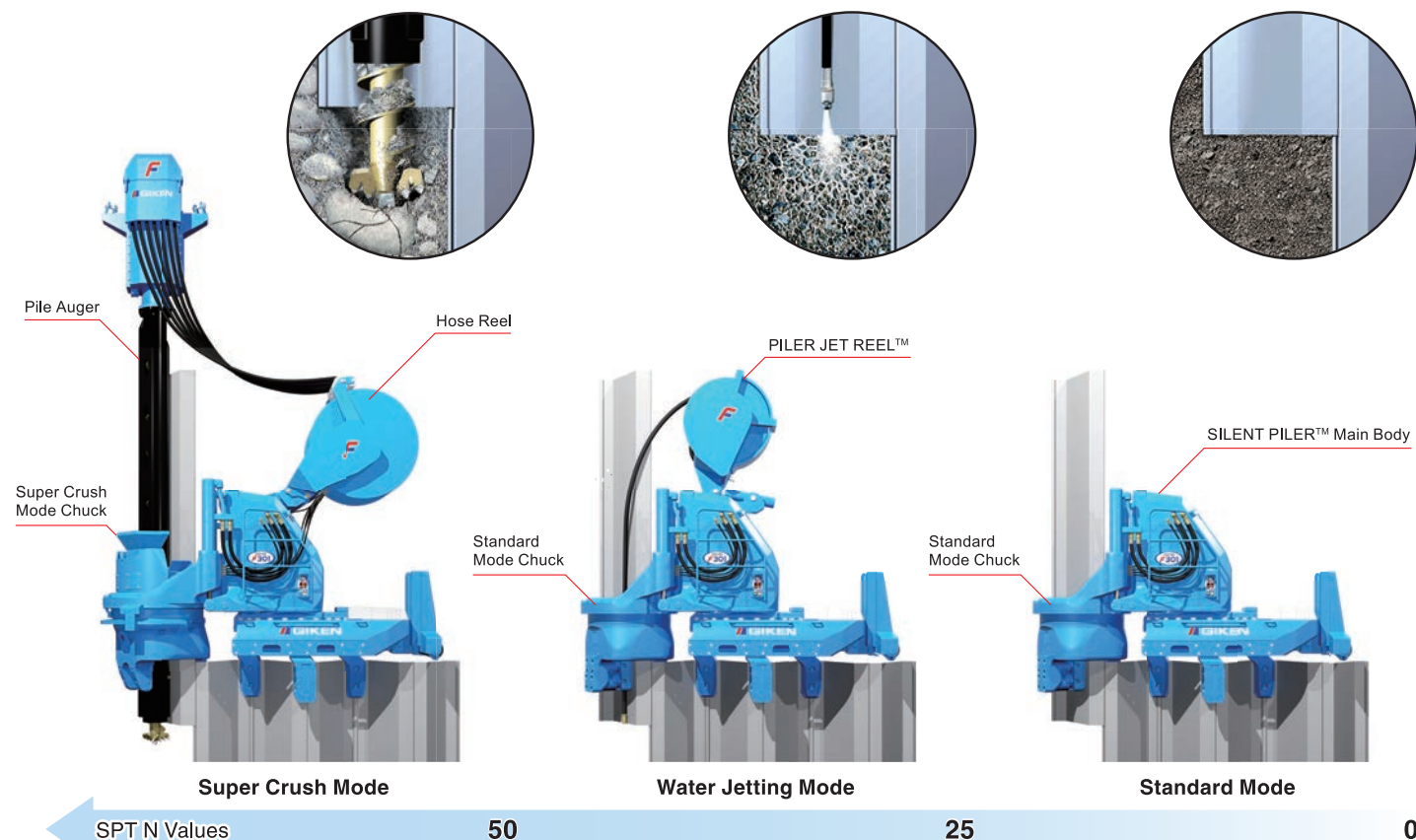


Super Crush Mode

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.



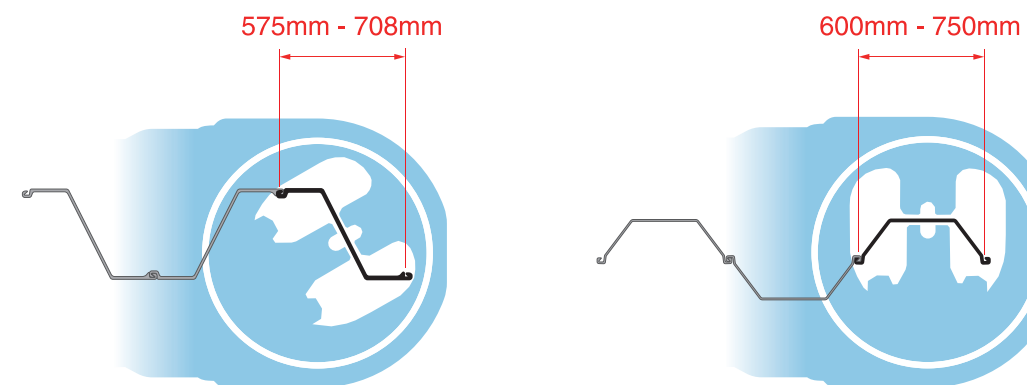
2 Longer Operational Life and Higher Functionality by New Control System

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.



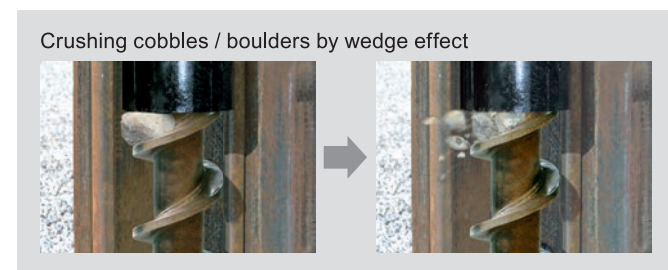
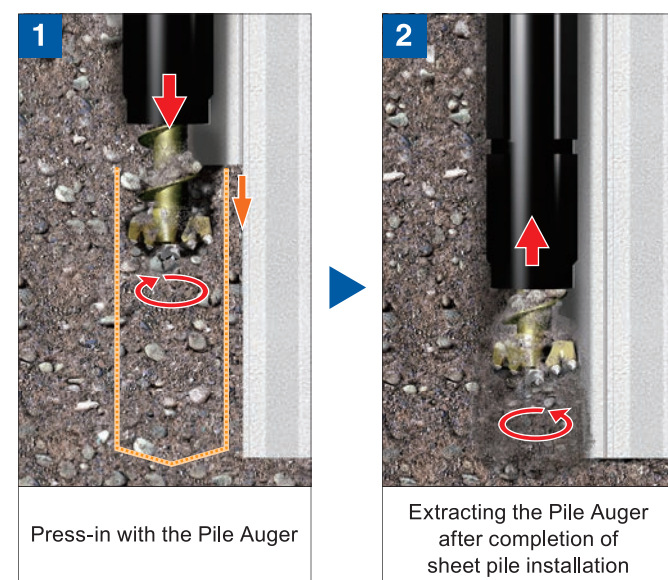
3 For Wider Z & U Sheet Piles

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



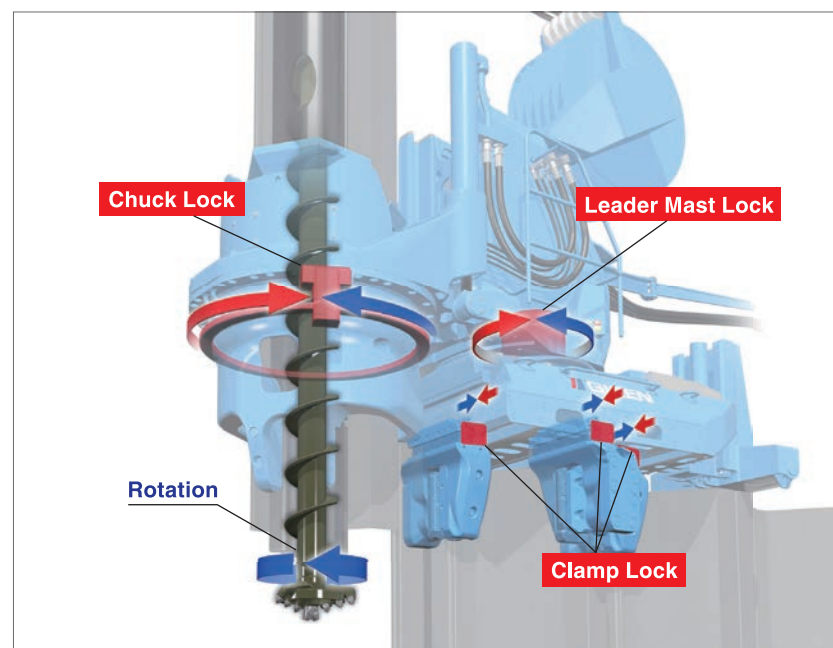
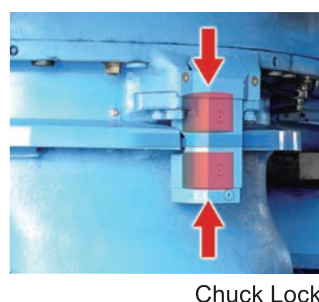
4 Pile Installation into Hard Ground

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.



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 EU300L5

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

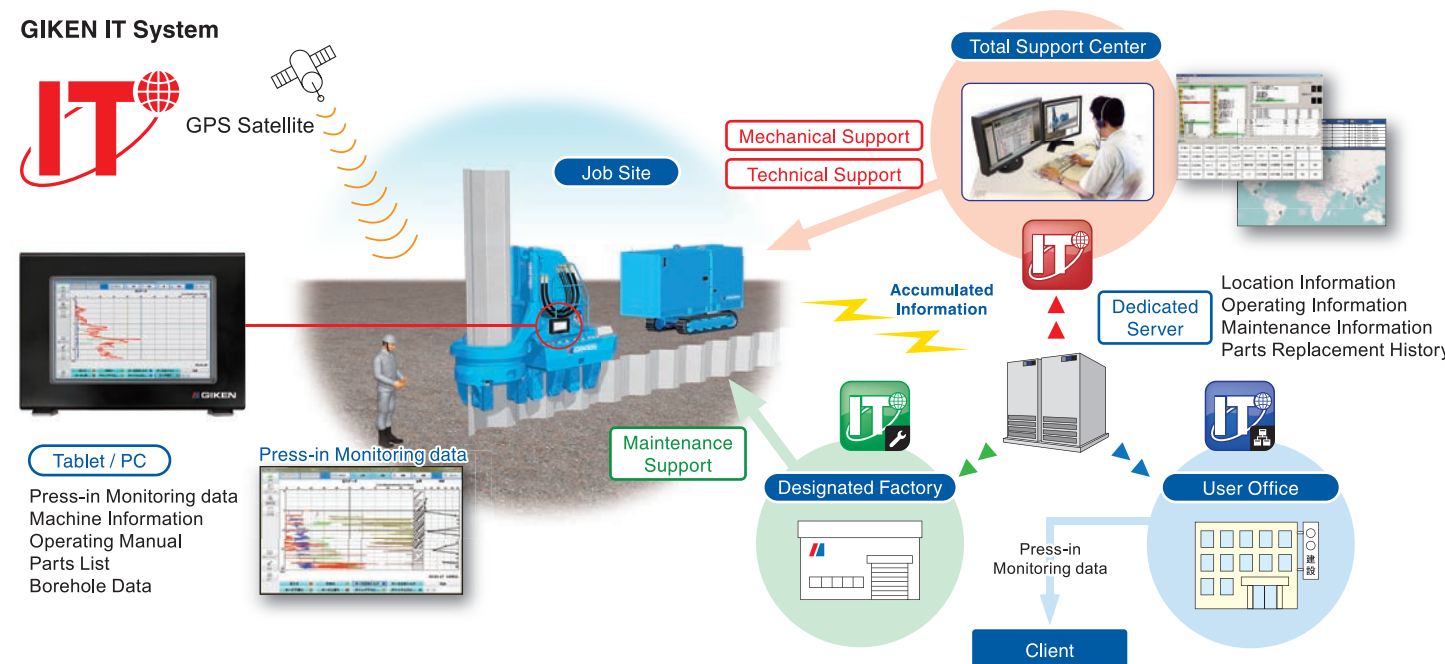
GIKEN IT System

GIKEN 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

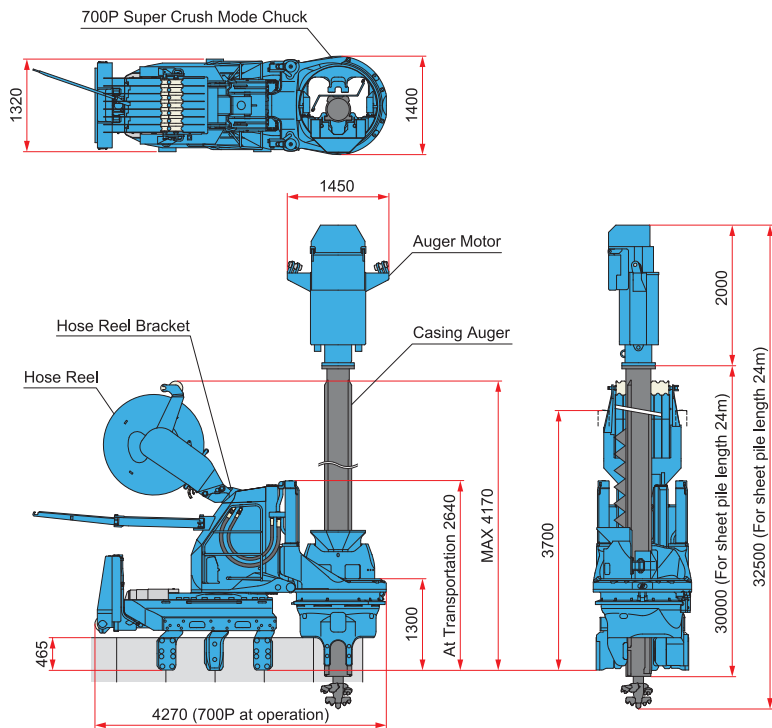
Press-in monitoring data can be used for quality control and information modelling of the foundation. Operators are able to keep working while checking data such as press-in force, auger torque, and working hours of press-in work, on a tablet or PC (both optional extras).



Dimensions & Specifications

Super Crush Mode

F301-C700

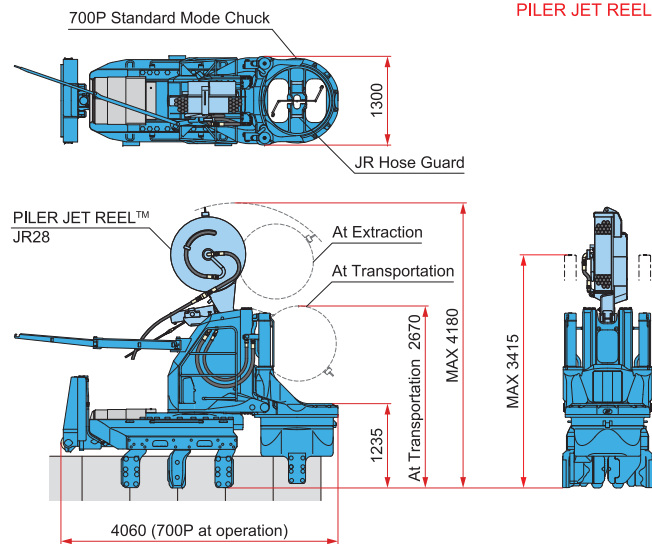


SILENT PIER		F301
Applicable sheet piles	Z Sheet Piles (575~708P) U Sheet Piles (600~750P)	
Max. Press-in Force	800kN (Super Crush Mode) 1000kN (Standard / Water Jetting Mode)	
Max. Extraction Force	900kN (Super Crush Mode) 1200kN (Standard / Water Jetting Mode)	
Stroke	850 mm	
Press-in Speed	2.0 ~ 43.5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

Standard / Water Jetting Mode

F301-700

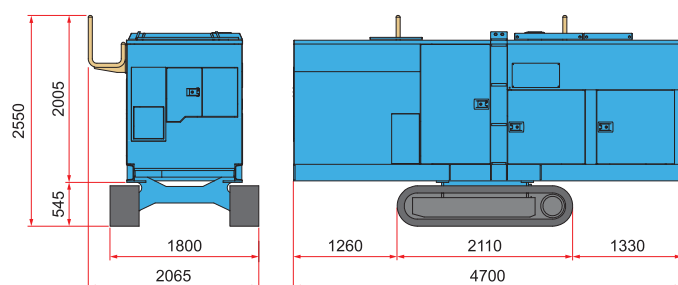
PILER JET REEL is an optional item



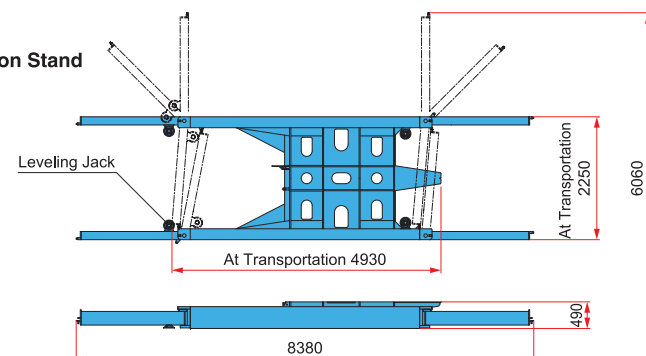
PILER JET REEL™		JR28
Applicable pile length	Standard 17.0 m (Max. 27.0 m)	
Mass	820 kg	
Power Unit	EU300L5	
Power Source	Diesel Engine	
Rated Output	255 kW / 1800 min ⁻¹	
Fuel Tank Capacity	500 L	
Hydraulic Reservoir	PILER ECO™ OIL 490 L	
AdBlue/DEF Tank Capacity	57 L	
Mass	with 20 m Super Crush hose (Standard)	7400 kg
	with 30 m Super Crush hose	7700 kg
Reaction Stand (with Leveling Jack)		
Mass	3000 kg	

The above specifications are subject to alteration without prior notice

Power Unit



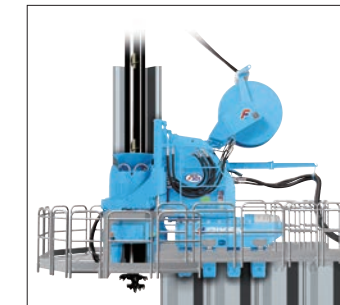
Reaction Stand



Accessories

Standard Accessories

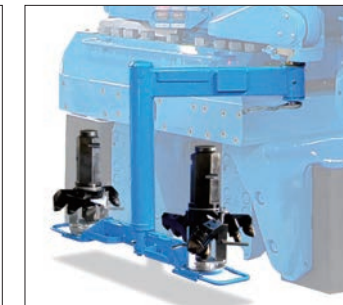
* Available for Super Crush Mode only.



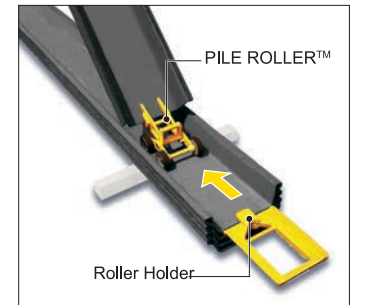
PILER STAGE™



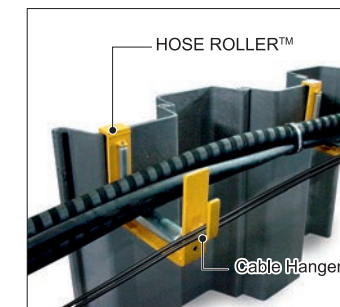
Chuck Stage*



Auger Head Replacement Attachment*



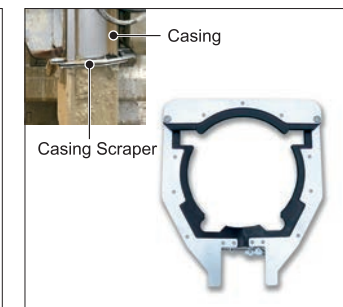
PILE ROLLER™



HOSE ROLLER™



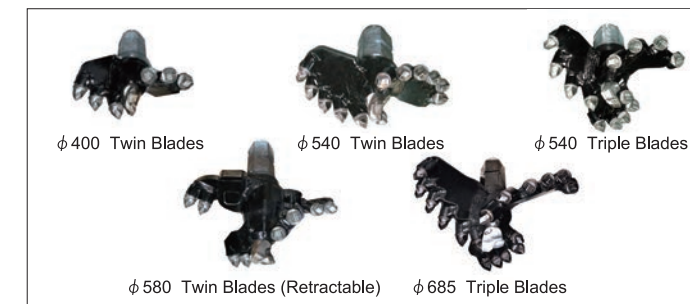
PILE LASER™



Casing Scraper*



Module Box



Auger Head*

Optional Accessories



PILER JET REEL™ (JR28)



φ 685 Twin Blades

Auger Head*