

GIKEN

SILENT PILER™
F401

for Z & U Sheet Piles



GIKEN

Construction Solutions Company

www.giken.com

CONTACT US



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Extremely sophisticated modular model applicable to Z & U Sheet Piles

SILENT PILER™ F401

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Flexible and Functional Formula

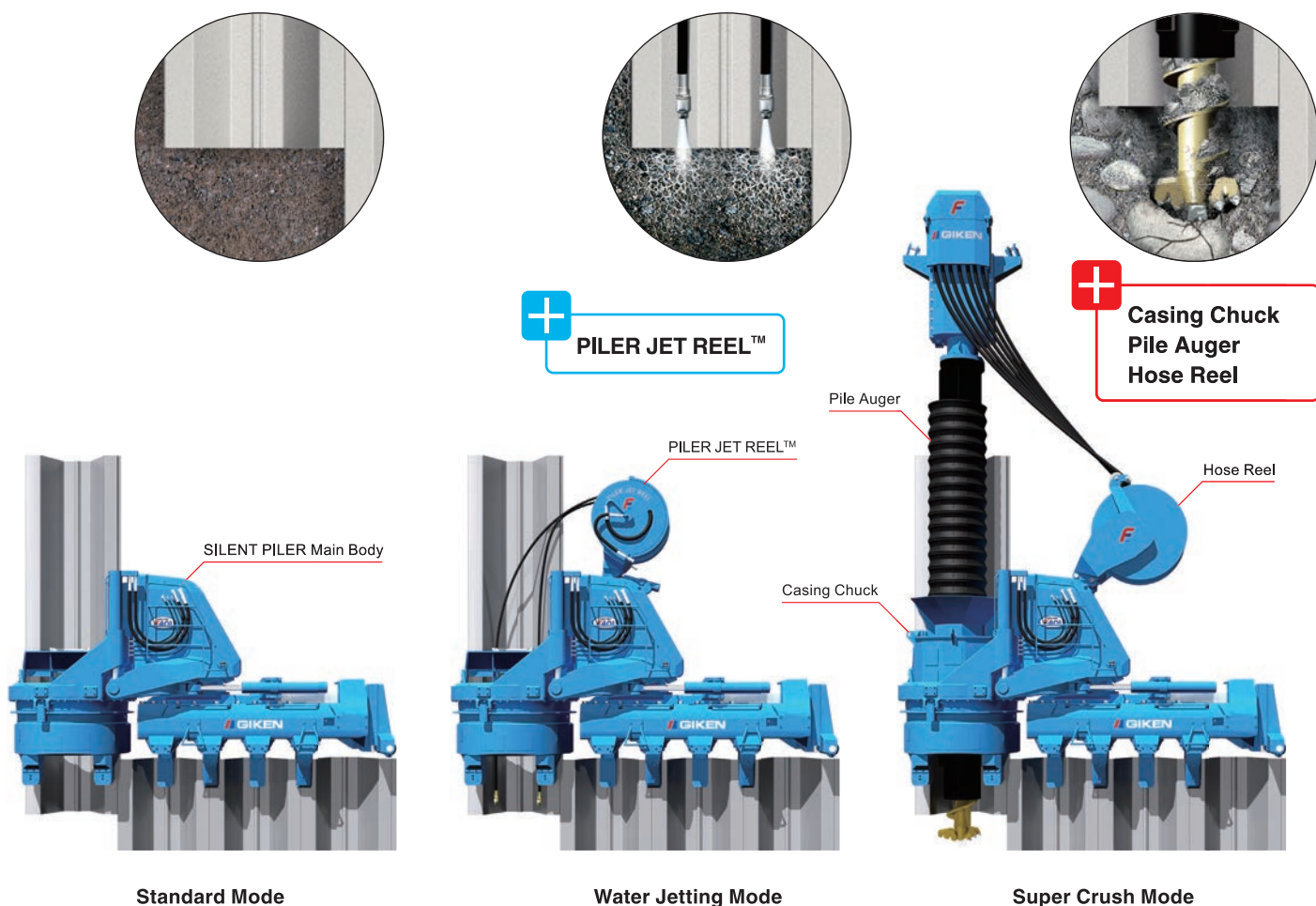
The F401 features a new modular design developed by optimising all the parts and drastically modifying the structure, shape, and material.

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.



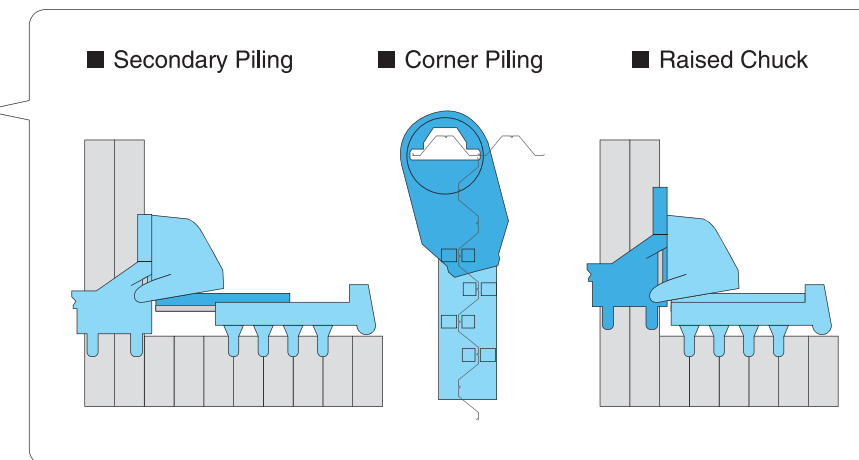
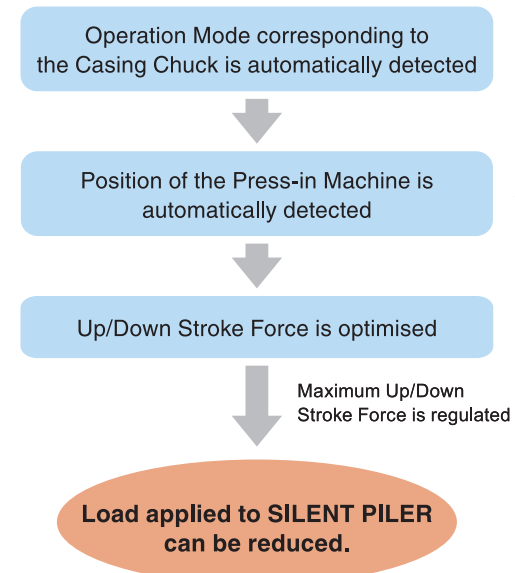
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50

SPT N Values

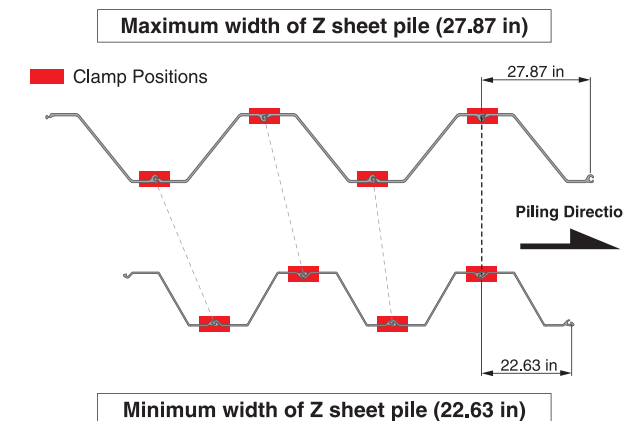
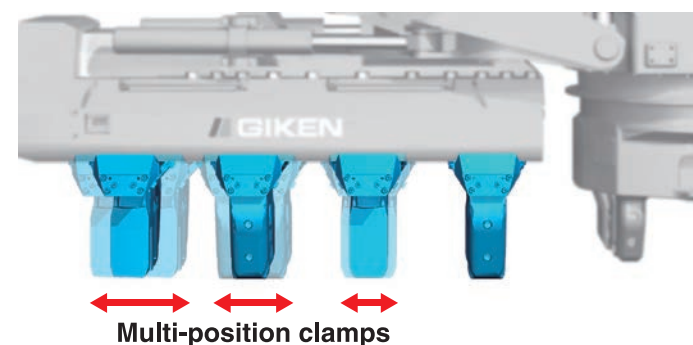
2 New Control System

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.



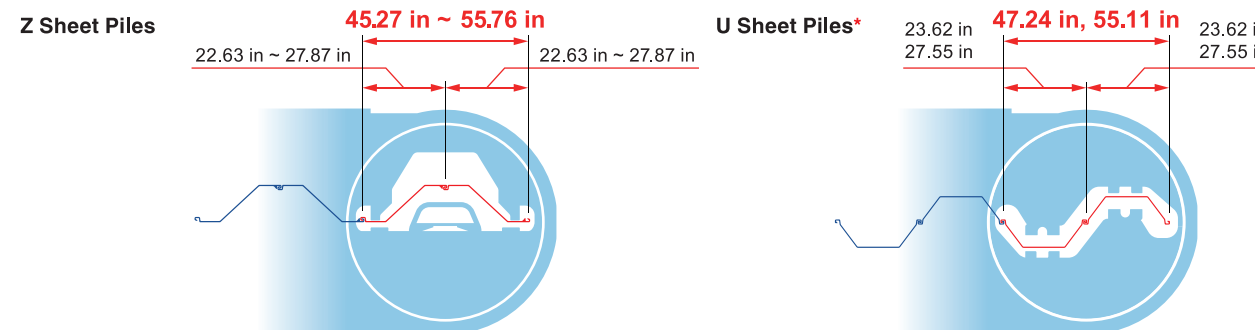
3 Multi-position clamps

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



4 For Wider Z & U Sheet Piles

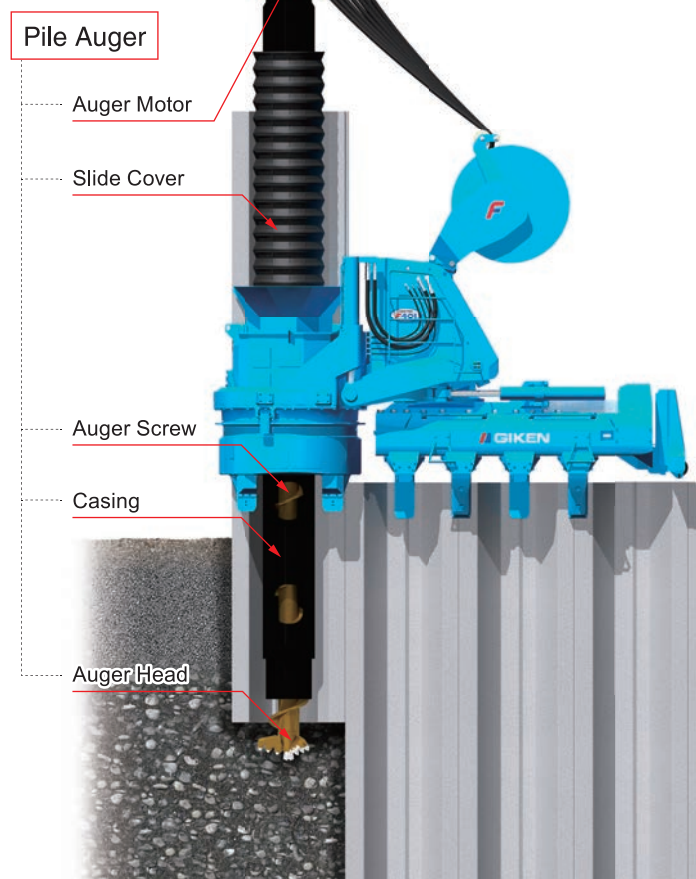
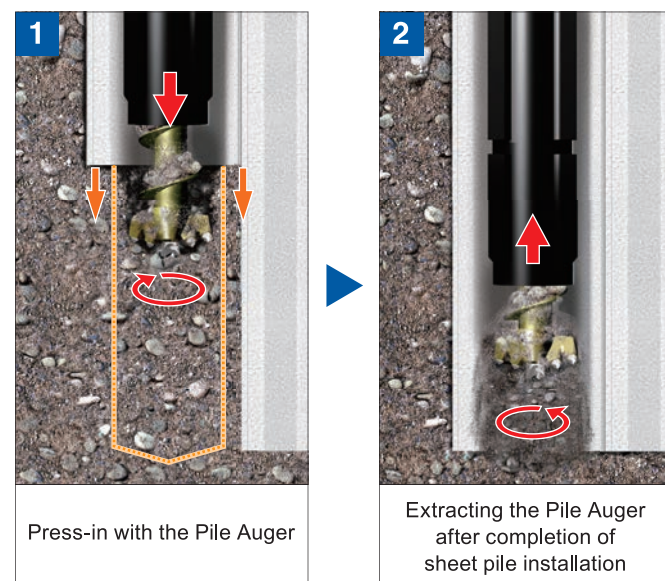
The F401 has been designed to press-in 2 piles simultaneously up to a total width of 55.75 in.



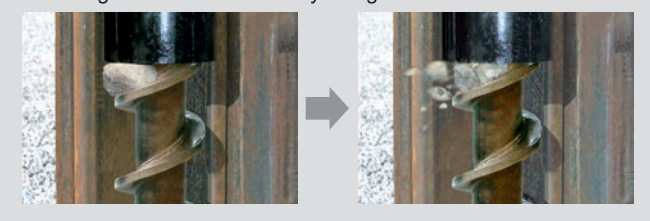
* F401 is designed to Press-in a pair of 23.62 in and 27.55 in U sheet piles in pairs by using WU chuck attachment.

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.

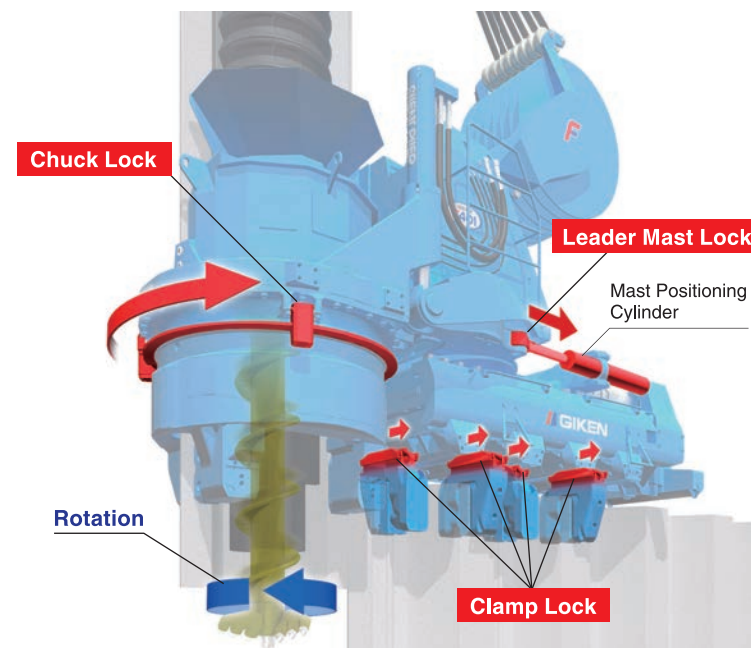
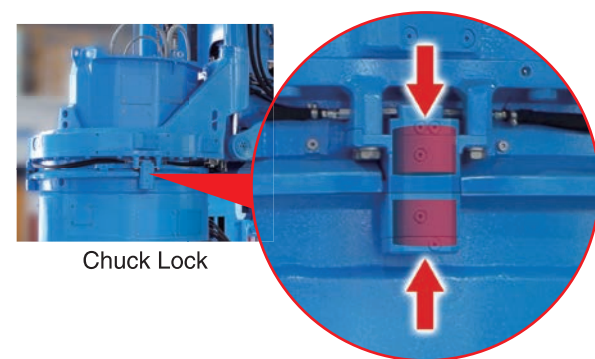


Crushing cobbles / boulders by wedge effect



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.



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

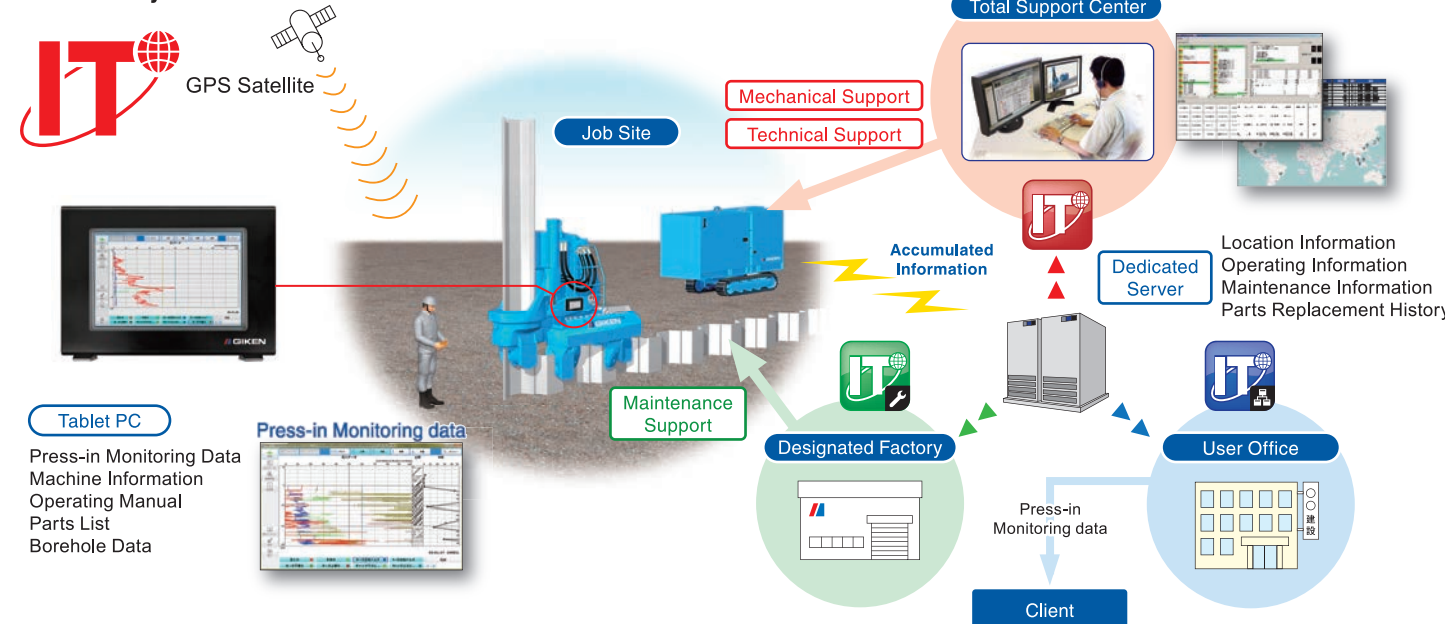
GIKEN engineers can monitor individual SILENT PILER, such as operating condition, maintenance records and location. Quick advice for any technical troubles is available promptly and appropriate information can also be provided to prevent troubles.

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

Press-in Monitoring and Data Logging System

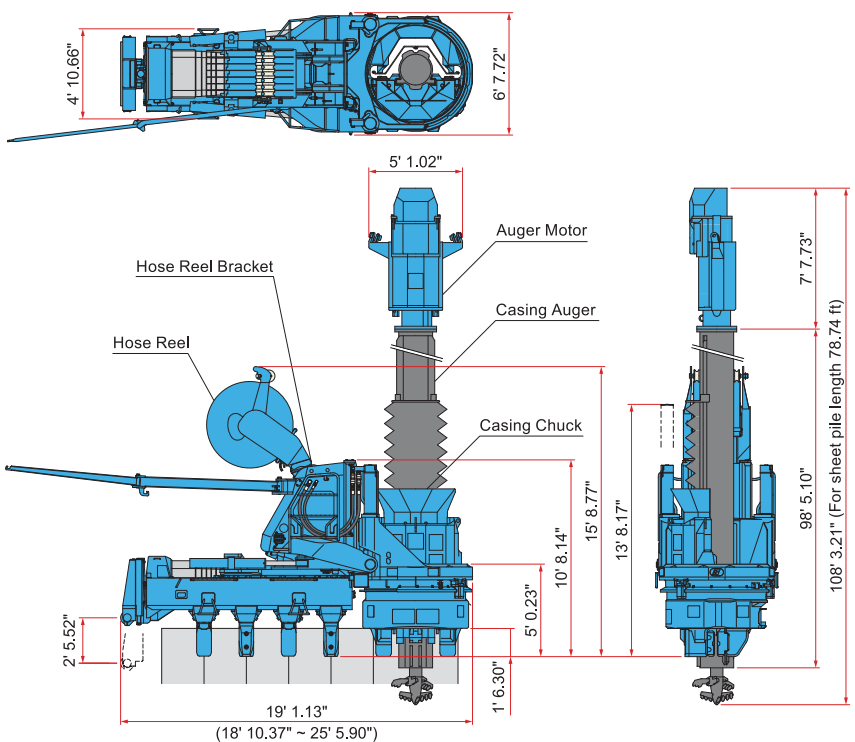
Press-in monitoring data can be used for quality control and information modelling of the foundation. Operators are able to keep working while checking data such as press-in force, auger torque, and working hours of press-in work, on a tablet or PC (both optional extras).

GIKEN IT System



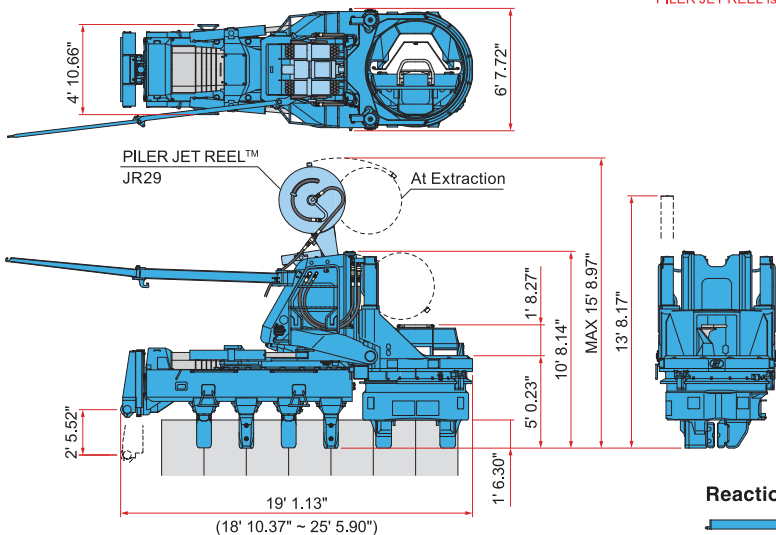
Dimensions & Specifications

Super Crush Mode

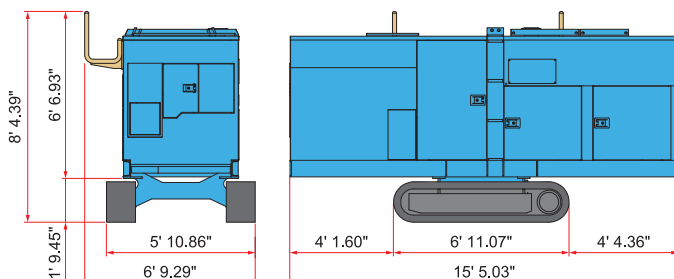


Standard / Water Jetting Mode

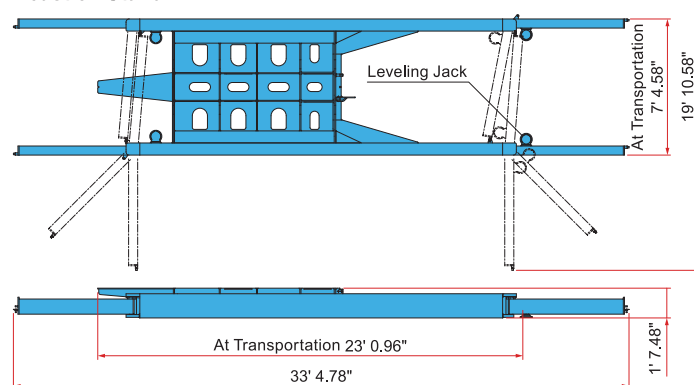
PILER JET REEL™ is an optional item



Power Unit



Reaction Stand



SILENT PILER	F401
Applicable sheet piles	Z Sheet Piles 22.63 ~ 27.87 in U Sheet Piles 23.62, 27.55 in with WU Chuck Attachment
Max. Press-in Force	134.8 ton(US) (Super Crush Mode)
Max. Extraction Force	168.6 ton(US) (Standard / WJ Mode)
Stroke	39.37 in
Press-in Speed	4.2 ~ 88.5 ft/min (Standard Mode)
Extraction Speed	3.2 ~ 66.2 ft/min (Standard Mode)
Control System	Radio Control
Movement	Self-Moving

Mass	Super Crush Mode (Main Body & Hose Reel)	67615 lb
	Water Jetting Mode (Main Body & PILER JET REEL)	59194 lb
Hose Reel	Standard Mode (Main Body)	56438 lb

Hose Reel	HR17E
Mass (Standard)	6172 lb
	(including Hose Reel Bracket)

Pile Auger	PA20
Applicable pile length (Standard)	Max 78.74 ft*
Mass	Auger Motor 5599 lb Casing Auger 40256 lb
Total Mass	45856 lb

*Up to 98.42 ft with modification.

PILER JET REEL™	JR29
Applicable pile length	Standard 52.49 ft (Max. 85.30 ft)
Mass	2755 lb

Power Unit	EU300L5
Power Source	Diesel Engine
Rated Output	341 HP / 1800 rpm
Fuel Tank Capacity	132 US gal
Hydraulic Reservoir	PILER ECO™ OIL 129 US gal
AdBlue/DEF Tank Capacity	15 US gal
Mass	with 65.61 ft Super Crush hose (Standard) 16314 lb with 98.42 ft Super Crush hose 16975 lb

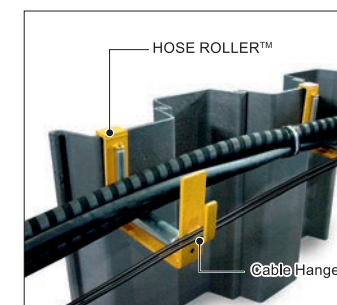
Reaction Stand (with Leveling Jack)	
Mass	8708 lb

The above specifications are subject to alteration without prior notice.

Accessories

Accessories are different of types.

Basic Accessories



HOSE ROLLER™



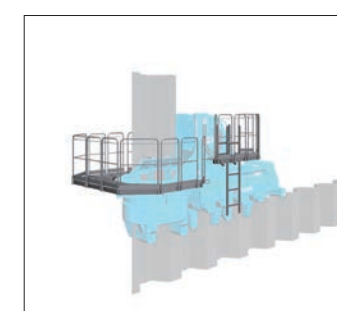
PILE LASER™



Module Box



Tablet PC (encased)



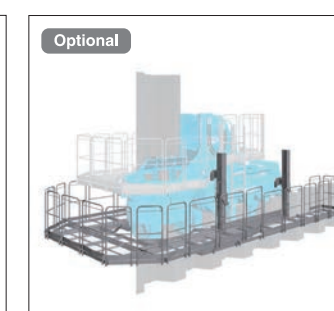
Chuck Stage



WU Chuck Attachment

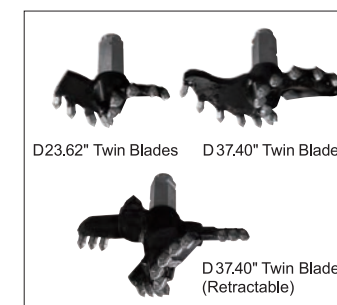


PILER JET REEL™ (JR29)

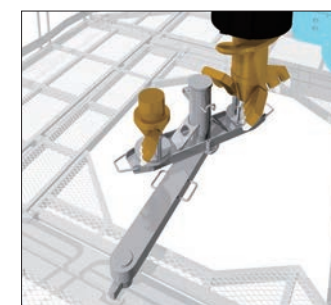


PILER STAGE™

Super Crush Mode Accessories



Auger Head



Auger Head Replacement Attachment



PILER STAGE with Chuck Stage