

GIKEN

GYRO PIER™
F501
- G1500

for Tubular Pile 1200,1500mm
for Tubular Sheet Pile 1200,1500mm



GIKEN
www.giken.com

Construction Solutions Company

CONTACT US



GYRO PILER™ F501-G1500

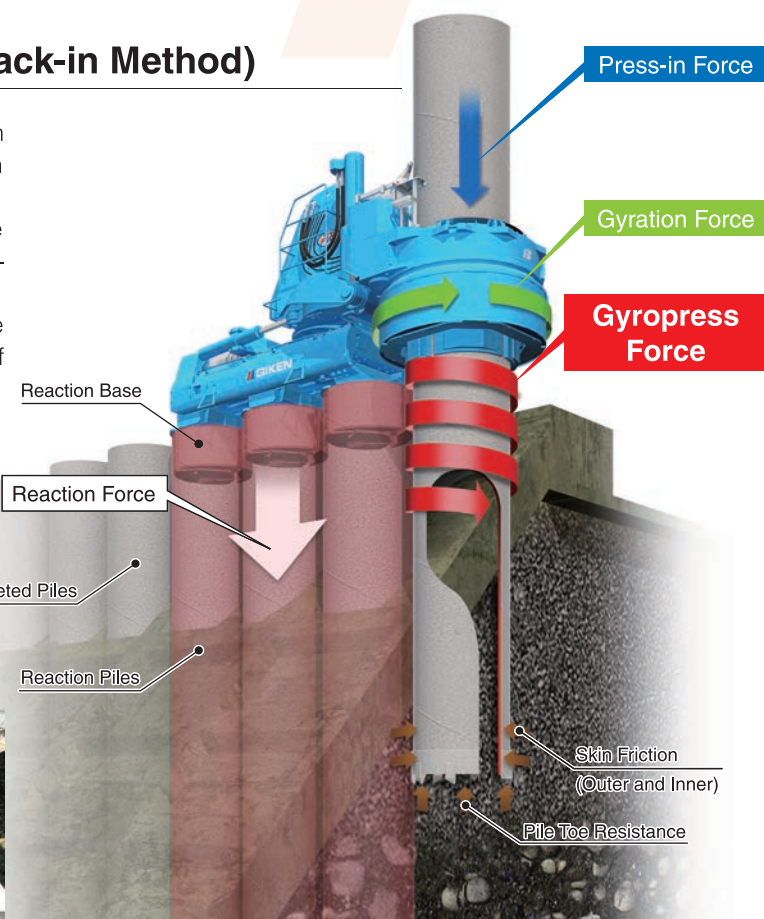
GYRO PILER™ F501-G1500

F501-G1500

Flexible and Functional Formula

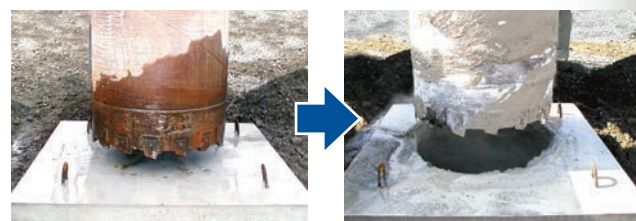
1 Gyropress Method™ (Rotary Jack-in Method)

The Gyropress Method is a "reaction based" rotary jack-in method to install tubular piles with cutting bits with self-walking functions. The Gyropress Method enables tubular piles to be installed through existing structures or buried obstructions. Therefore, by this method, construction costs and time can be minimized simultaneously, due to the avoidance of enabling removal works.



Cutting Reinforced Concrete

The followings present cutting off performance through reinforced concrete (t = 80 cm, $\sigma_{ck} = 24 \text{ N/mm}^2$, D16@250 x 3 layers).



2 Applicable to 1,200mm and 1,500mm O.D. Tubular Pile

The F501-G1500 can install tubular piles ($\phi 1200\text{mm}$ and 1500mm O.D.) and tubular sheet piles ($\phi 1200\text{mm}$ and 1500mm O.D.) by changing only the Chuck jaws and Clamp jaws. Spacing between Clamps of the F501-G1500 can be adjusted by hydraulic cylinders at an optional distance.



*For Tubular Sheet Piles (Tubular Piles with external interlocks), optional Chuck jaws are required.

3 Outstanding Environmentally-Friendly Design

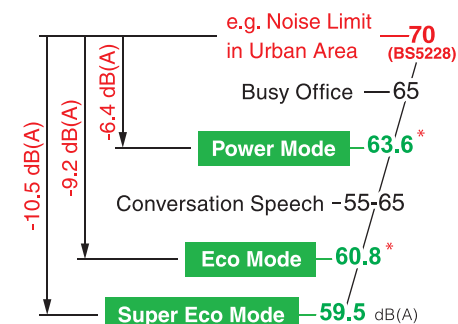
Low Emission Engine

The Power Unit of the F501 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 F501 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.



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

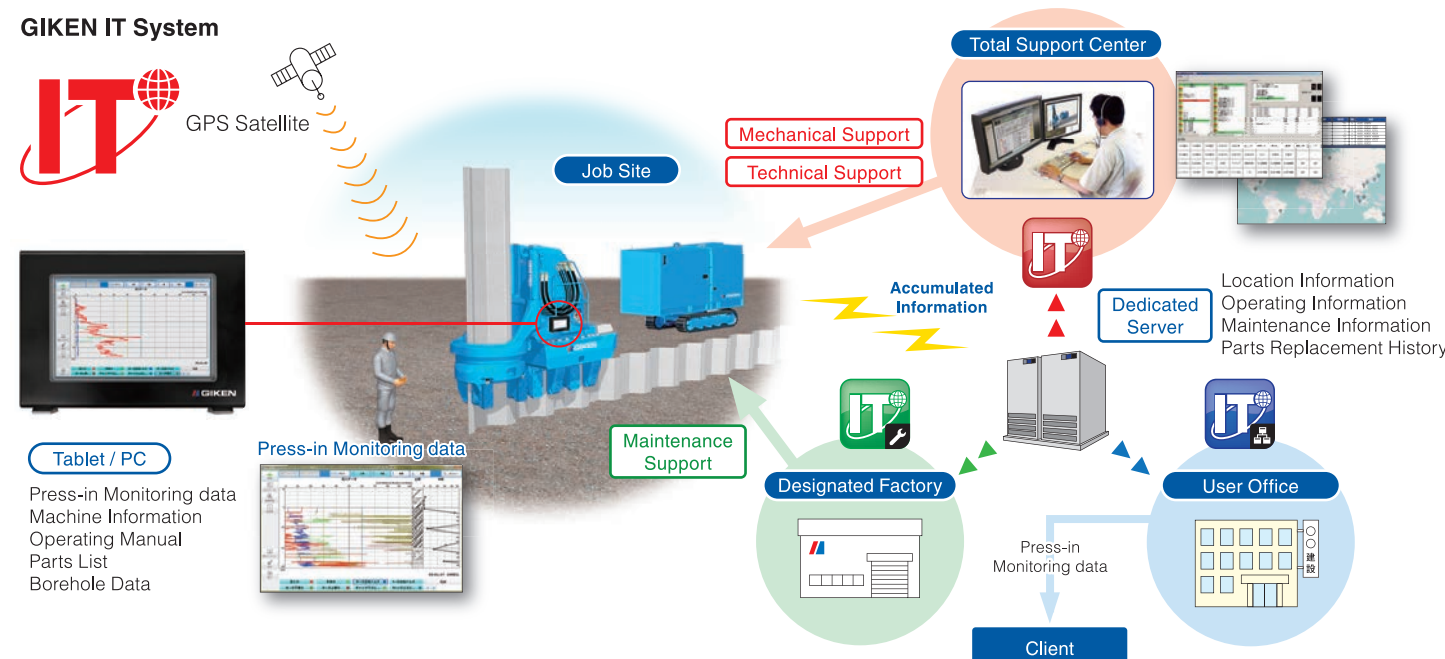
GIKEN IT System

GIKEN engineers can monitor individual GYRO 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.

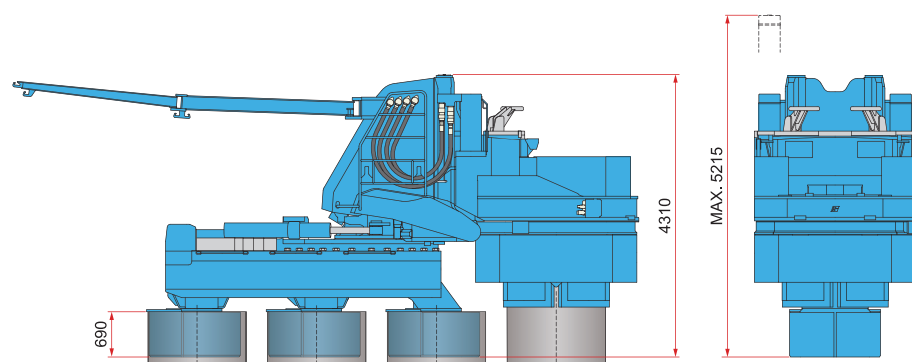
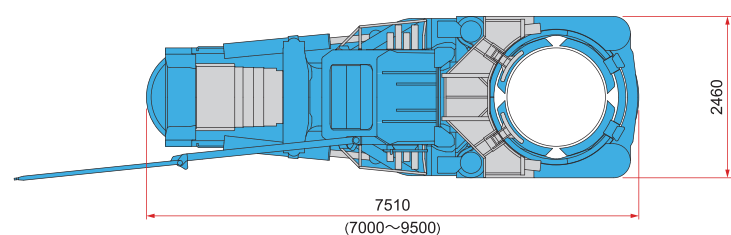
* The system is not available in the countries where authorisation for usage cannot be acquired.

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



GYRO PILER		F501-G1500
Applicable Piles	Tubular Pile ϕ 1200, 1500 mm Tubular Sheet Pile ϕ 1200, 1500 mm ¹	
Max. Press-in Force	with Chuck Rotation ²	3200 kN
	without Chuck Rotation	4000 kN
Max. Extraction Force	with Chuck Rotation ²	3600 kN
	without Chuck Rotation	4500 kN
Chuck Rotation Torque	2200 kN·m	
Chuck Rotation Velocity	1.8 ~ 10.0 min ⁻¹	
Stroke	1200 mm	
Press-in Speed	0.4 ~ 2.5 m/min	
Extraction Speed	1.0 ~ 2.4 m/min	
Applicable Pile Spacing	for 1200mm	1250 ~ 1825 mm
	for 1500mm	1550 ~ 1825 mm
Control System	Radio Control	
Movement	Self-Moving	
Mass	for 1200mm	65450 kg
	for 1500mm	68600 kg

¹ For Tubular Sheet Piles (Tubular Piles with external interlocks), optional Chuck jaws are required.

² An external power source is required for Chuck rotation. (200V-50/60Hz, 220V-60Hz, Min. 30kVA, 3 phases)

Mast	
Mass ^{*3}	21750 kg

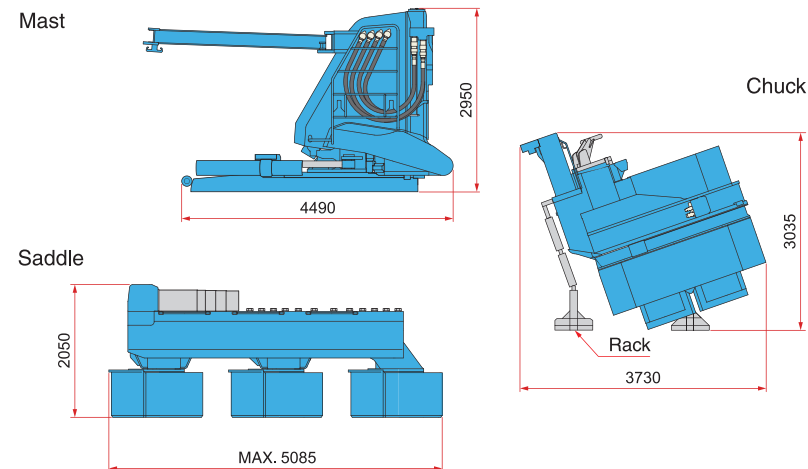
^{*3} Excluding Mast Stage

Saddle	
Mass	for 1500mm: 22550 kg for 1200mm: 20050 kg

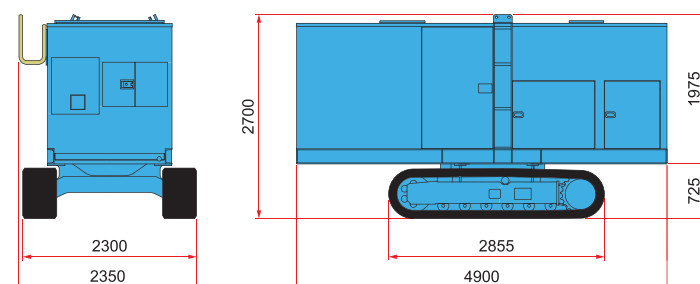
Chuck	
Mass	for 1500mm: 24300 kg (for Gyropress Mode) for 1200mm: 23650 kg
Mass	for 1500mm: 23850 kg (for Tubular Sheet Pile) for 1200mm: 23350 kg

Power Unit		EU500C3
Power Source	Diesel Engine	
Rated Output	Power Mode	377 kW(513 ps)/1800 min ⁻¹
	Eco Mode	335 kW(456 ps)/1600 min ⁻¹
	Super Eco Mode	293 kW(399 ps)/1400 min ⁻¹
Fuel Tank Capacity	850 L	
Hydraulic Reservoir	PILER ECO OIL 660 L	
Moving Speed	1.4 km/h	
Mass	10950 kg (with 30m Hose)	

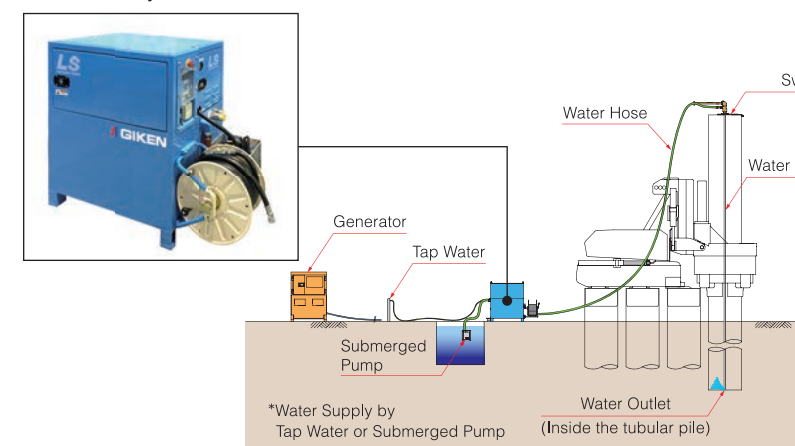
Dismantled GYRO PILER in 3 Pieces



Power Unit



Lubrication System



Lubrication System		OP114A
Input Voltage(3 phases)	AC200V, 50/60Hz, 24kVA or more	
Water Pump Discharge Rate	Max. 60 L/min	
Water Pump Discharge Pressure	Max. 6 MPa	
Outer Dimension(W x D x H)	1505 x 755 x 1230 mm	
Water Tank Capacity	300 L	
Mass(without water)	410 kg	

*The above specifications are subject to alteration without prior notice.

GYRO PILER Model and Applicable Pile

GYRO PILER Model	Tubular Pile (Diameter : mm)							Tubular Sheet Pile (Diameter : mm)						
	600	800	1000	1200	1500	2000	2500	600	800	1000	1200	1500	2000	
F301-G1000	●	●	●					●	●					
F401-G1200		●	●	●					●	●				
F501-G1500				●	●						●	●		
GRV2540						●	●							●

Auxiliary equipment

CB3-6	CLAMP CRANE™ Max. Lifting Capacity : 10t		●	●	●					●	●	●		
CB4-2	CLAMP CRANE™ Max. Lifting Capacity : 20t		●	●	●	●				●	●	●	●	
PR2	PILE RUNNER™ Load Capacity : 5t		●	●	●	●				●	●	●	●	
UR5	UNIT RUNNER™ (for Power Unit EU500)		●	●	●	●				●	●	●	●	

Performance Comparison of GYRO PILER Models

With greater torque and chuck rotation speed, F501-G1500 is capable of installing longer tubular piles at a faster rate.

Model	F301-G1000	F401-G1200	F501-G1500
Length	4000mm~5300mm	5735mm~7955mm	7000mm~9500mm
Height	2815mm	3290mm	4310mm
Width	1800mm	2070mm	2460mm
Mass	17150kg	33600kg	68600kg
Max. Press-in Force (without Chuck Rotation)	700kN	2000kN	4000kN
Max. Extraction Force (without Chuck Rotation)	850kN	2200kN	4500kN
Chuck Rotation Torque	600kN·m	900kN·m	2200kN·m
Chuck Rotation Velocity	MAX10.0min ⁻¹	MAX11.0min ⁻¹	MAX10.0min ⁻¹

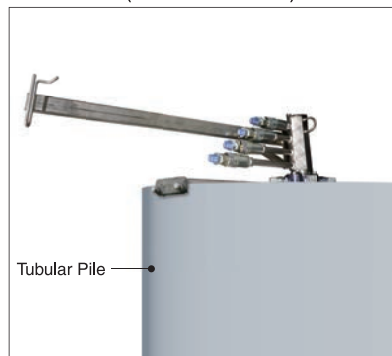
Standard Accessories

*Accessories vary depending on sales package.

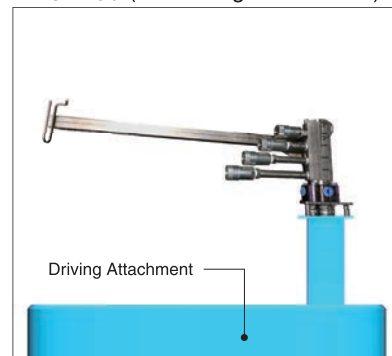
● PILER STAGE™
ST49



● Water Hose Swivel
OP149 (for Tubular Pile)



● Water Hose Swivel
OP150 (for Driving Attachment)



● Tablet / PC



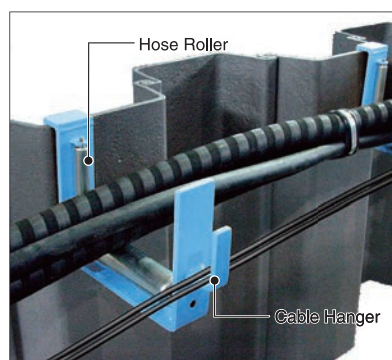
● Radio Control Shackle (5t)
RH5A



● PILE ROLLER™



● HOSE ROLLER™



● PILE LASER™
PL-3



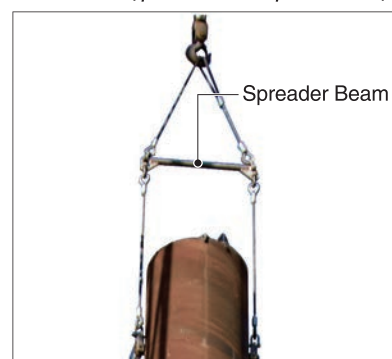
● Lubrication System
OP114A



● Module Box
(from the left, MB17, MB14 and MB15)



● Spreader Beam
OP134 (φ1200mm~φ1500mm)



Optional Accessories

*Accessories vary depending on sales package.

● Driving Attachment
AM171 (φ1200mm)



● Driving Attachment
AM172 (φ1500mm)



● PILER JET REEL™
JR19 (with mounting bracket)



● Chuck Jaw for Tubular Sheet Pile
OP192 (φ1200mm)



● Chuck Jaw for Tubular Sheet Pile
OP193 (φ1500mm)



Driving Attachment		
Mass	AM171 (φ1200mm)	5250 kg
	AM172 (φ1500mm)	6800 kg

PILER JET REEL		JR19
Mass		1800 kg ^{*4}

*4 Minus mounting bracket

Chuck Jaw for Tubular Sheet Pile		
Mass	OP192 (φ1200mm)	2640 kg ^{*5}
	OP193 (φ1500mm)	3160 kg ^{*5}

*5 : 4 Jaws (minus storage rack)