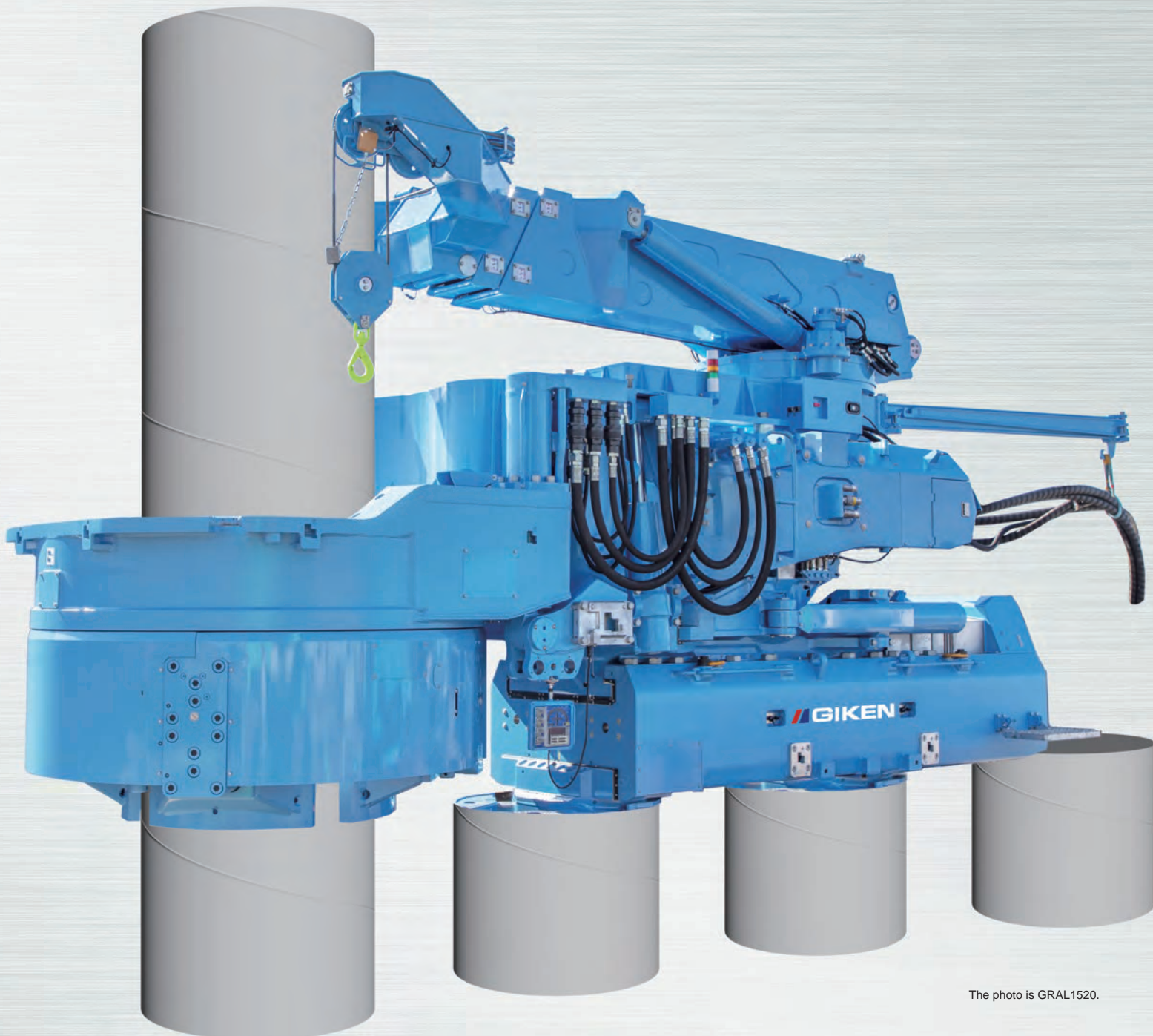


**GIKEN**  
**GYRO PILER™**

**GRAL1015**  
**GRAL1520**

**For Gyropress Method™**



The photo is GRAL1520.



# GYRO PILER™

## Rotary Cutting Press-in Rig for Limited Headroom

# GRAL1015 / 1520

GYRO PILER GRAL1015 (SP6A)  
GYRO PILER GRAL1520 (SP8A)

### 1 Gyopress Method™ (Rotary Jack-in Method)

Gyopress Method is a rotary jack-in piling method to press-in tube piles with cutting bits attached to the pile toe. In this piling method, Gyro Piler, a SILENT PILER™ with rotary press-in function, installs piles by utilizing previously driven piles as reaction and self-walks on top of the reaction piles. This method is applied where piling is difficult with conventional methods due to ground conditions or presence of underground reinforced concrete structures. Besides, by adopting GRB System, all piling work activities can be carried out without building massive temporary working platforms. Consequently, this environmentally-friendly piling method can minimize total construction costs and duration.

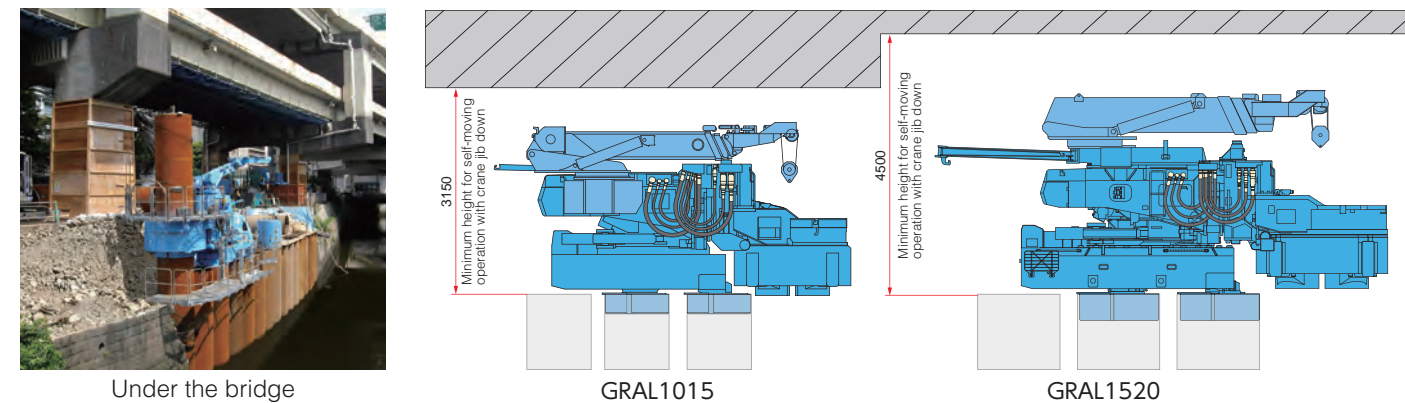
#### Cutting Reinforced Concrete

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 For Overhead Clearance Method

Constructions can be carried out without impairing superiorities of Press-in Method, even under limited headroom that are difficult to overcome with conventional machines, such as under a bridge and under high-voltage cables.



\* The minimum height may differ from working conditions and site constrains.

### 3 Outstanding Environmentally-Friendly Design

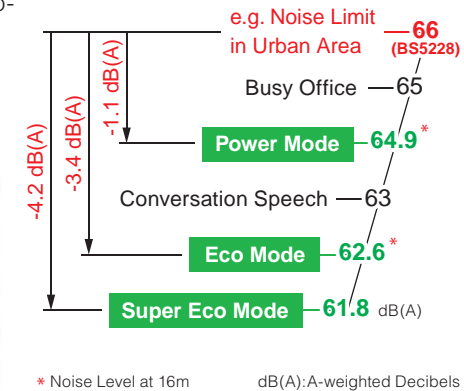
#### Low Emission Engine

The Power Unit has environmental-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 GRAL1015/GRAL1520 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

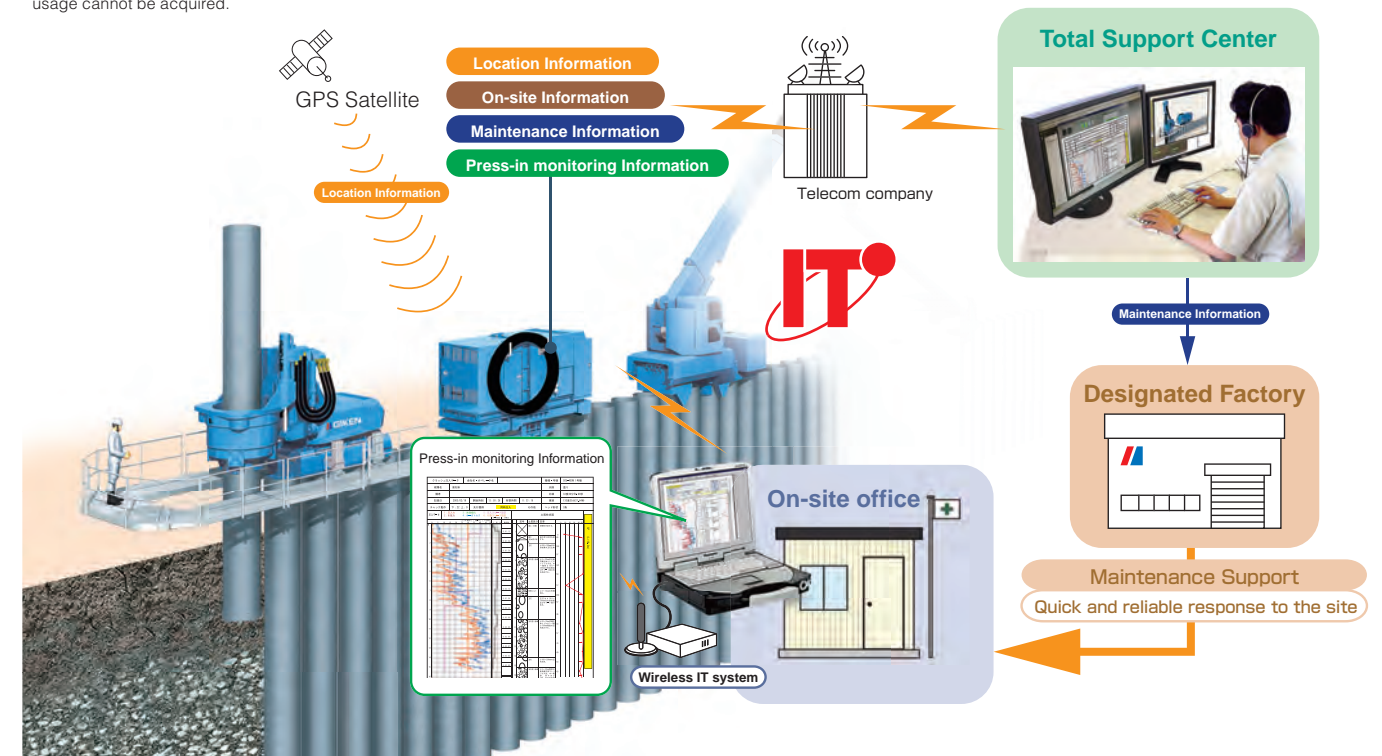
#### GIKEN IT System

GIKEN experts can monitor real time information of the press-in machines being active on sites such as location and maintenance information. They can provide you judgements and measures for any machine troubles, and also appropriate information can be provided to prevent troubles.

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

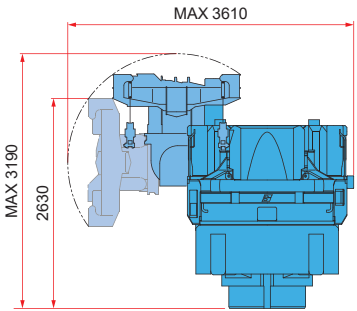
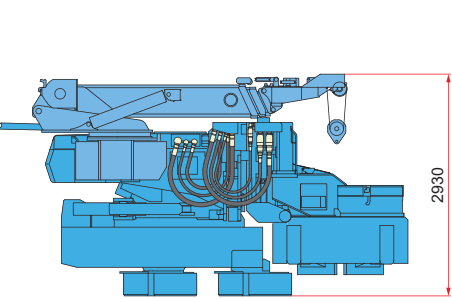
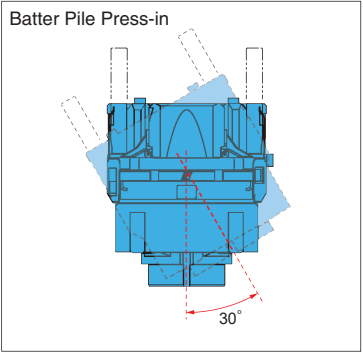
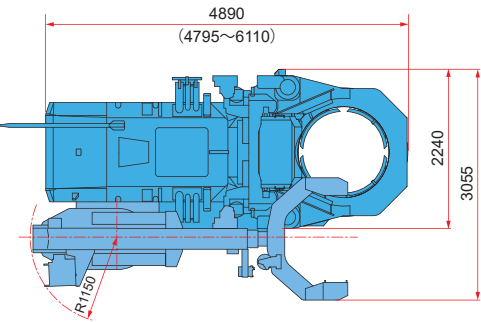
#### Press-in Monitoring and Data Logging System

Press-in monitoring data can prove the press-in record to contractors and main contractors, and enables reliable and responsible construction. With wireless IT system, operators are able to check data from distant places such as office and in a car. As a result, you can monitor press-in operations safely and precisely.



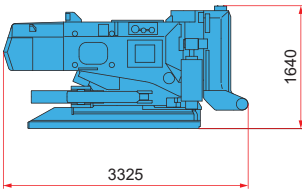
Dimensions & Specifications

GRAL1015

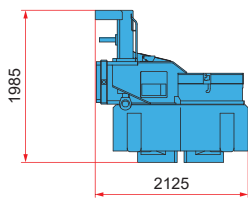


At press-in machine disassembly

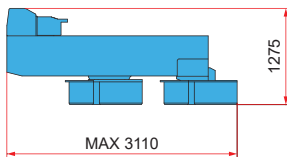
Mast (Width : 2000)



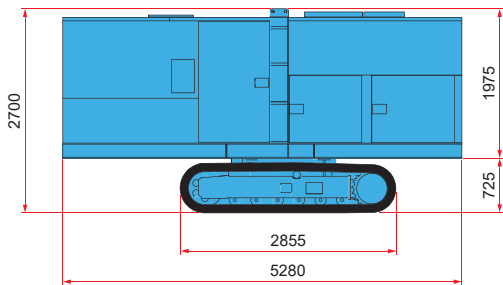
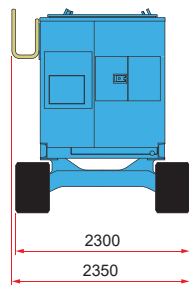
Chuck (Width : 2085)



Saddle (Width : 1280)



Power Unit



Press-in Machine Main Body	
Applicable Piles	Tubular Pile $\phi 800 \sim 1000^1$ mm
Max. Press-in Force	1500 kN
Max. Extraction Force	1600 kN
Chuck Rotation Torque	600 kN·m
Chuck Rotation Velocity	12.0 min <sup>-1</sup>
Stroke	700 mm
Press-in Speed	0.8 ~ 6.3 m/min
Extraction Speed	0.6 ~ 4.7 m/min
Control System	Radio Control
Travailing Method	Self-Moving
Mass	for D 800mm 22150 kg
	for D 900mm 22350 kg
	for D 1000mm 22550 kg
	for D 1000mmS 22650 kg
Chuck Inc. Angle	30 Degrees, Either Side

\*1 For D 900mm Tubular Piles, optional Chuck Teeth are required.  
\* An external power source is required for Chuck rotation.  
(200V-50/60Hz, 220V-60Hz, Min. 30KVA, 3 phases)

Crane Attachment	CLC1-2G + AM60
Hoisting Capacity	2.95 t x 4.5 m
Boom Length	3.1m ~ 6.2 m
Applicable Pile Diameter	D 1000mm or less
Mass	2870 kg

Mast	
Mass	9050 kg

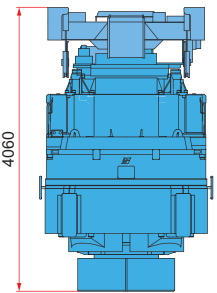
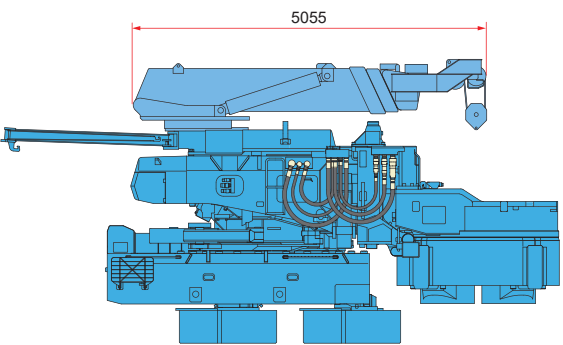
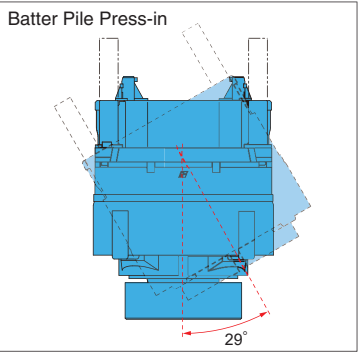
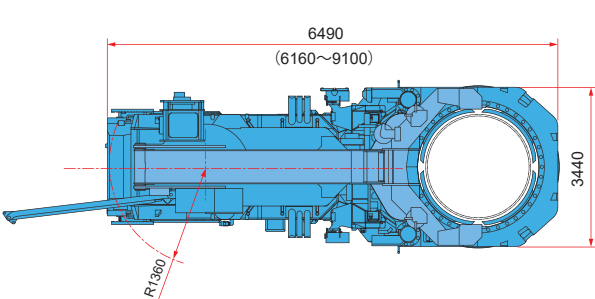
Saddle	
Mass	$\phi 800$ mm 4750 kg
	$\phi 900$ mm 4950 kg
	$\phi 1000$ mm 5050 kg
	$\phi 1000$ Light weight mode 5150 kg

Chuck	
Mass	$\phi 800$ mm 8350 kg
	$\phi 900$ mm 8350 kg
	$\phi 1000$ mm 8450 kg

Power Unit		EU500B4
Power Source	Power Mode	350 kW(476 ps)/1800 min <sup>-1</sup>
	Eco Mode	311 kW(423 ps)/1600 min <sup>-1</sup>
Rated Output	Super Eco Mode	272 kW(370 ps)/1400 min <sup>-1</sup>
	Fuel Tank Capacity	800 L
Hydraulic Reservoir	PILER ECO Oil 660 L	
Moving Speed	1.4 km/h	
Mass	11050 kg (with 30m Hose)	

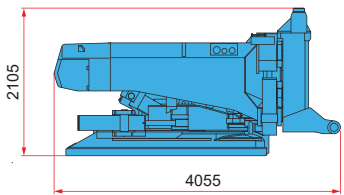
Dimensions & Specifications

GRAL1520

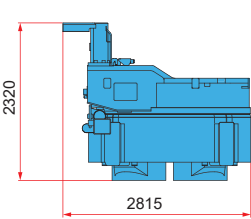


At press-in machine disassembly

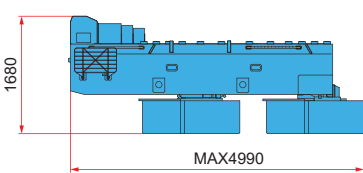
Mast (Width : 2230)



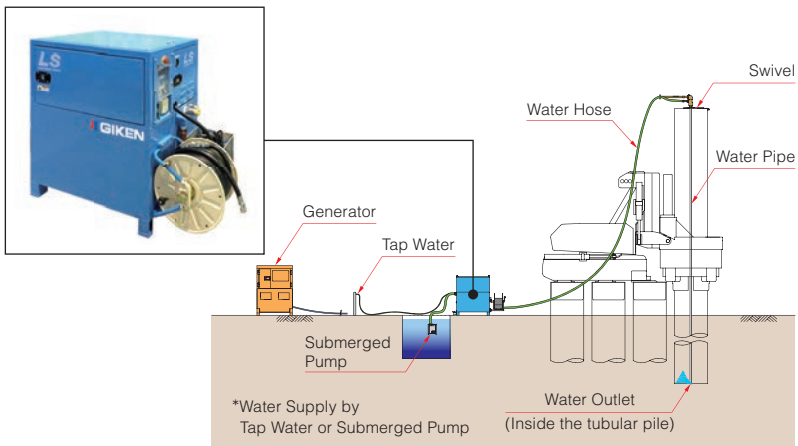
Chuck (Width : 2320)



Saddle (Width : 1480)



Lubrication System



Press-in Machine Main Body	
Applicable Piles	Tubular Pile $\phi 1200 \sim 1500$ mm
Max. Press-in Force	2000 kN
Max. Extraction Force	2100 kN
Chuck Rotation Torque	1300 kN·m
Chuck Rotation Velocity	8.0 min <sup>-1</sup>
Stroke	800 mm
Press-in Speed	0.6 ~ 4.6 m/min
Extraction Speed	0.4 ~ 3.3 m/min
Control System	Radio Control
Travailing Method	Self-Moving
Mass	for D1200 mm 42310 kg
	for D1300 mm 42530 kg
	for D1400 mm 42990 kg
	for D1500 mm 43460 kg
Chuck Incline Max.Angle	29° to the both side

\*1 For D 1200mm Tubular Piles, optional Chuck teeth are required.  
\* An external power source is required for Chuck rotation.  
(200V-50/60Hz, 220V-60Hz, Min. 30KVA, 3 phases)

Crane Attachment	CLC3-1
Hoisting Capacity	7.0 t x 6.89m
Boom Length	3.89 m ~ 6.89 m
Applicable Pile Diameter	D 1500mm or less
Mass	8000 kg

Mast	
Mass	16450 kg

Saddle	
Mass	$\phi 1200$ mm 11040 kg
	$\phi 1300$ mm 11220 kg
	$\phi 1400$ mm 11500 kg
	$\phi 1500$ mm 11770 kg

Chuck	
Mass	$\phi 1200$ mm 14820 kg
	$\phi 1300$ mm 14860 kg
	$\phi 1400$ mm 15040 kg
	$\phi 1500$ mm 15240 kg

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	

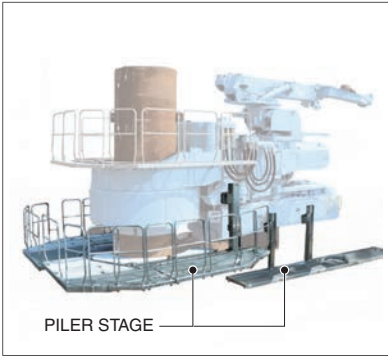
The above specifications are subject to alteration without prior notice.



Standard Accessories

\*Accessories vary depending on sales package.

- PILER STAGE  
ST29 (GRAL1015)  
ST30 (GRAL1520)



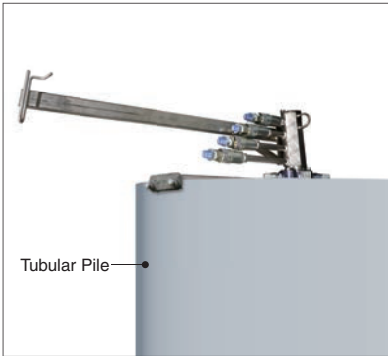
- PILE LASER  
PL-3



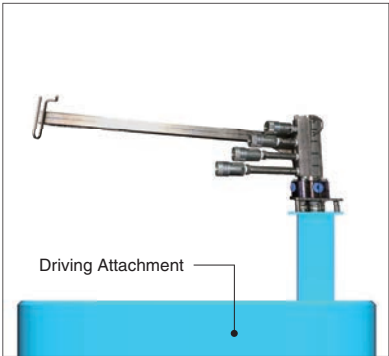
- Lubrication System  
OP114A



- 4 ports swivel  
OP149 (for Tubular Piles)



- 4 ports swivel  
OP150 (for Driving Attachment)



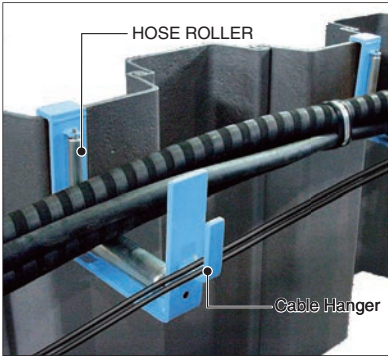
- PILE ROLLER



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



- HOSE ROLLER



- Chuck Teeth  
φ 800~1000 (GRAL1015)  
φ 1200~1500 (GRAL1520)



Chuck Teeth Set		
	φ800	1000 kg
Mass	φ900	1000 kg
	φ1000	1080 kg
* 4 pieces for 1 set (Exclude fixed stand)		

Chuck Teeth Set		
	φ1200	2540 kg
Mass	φ1300	2580 kg
	φ1400	2760 kg
	φ1500	2960 kg
* 4 pieces for 1 set (Exclude fixed stand)		

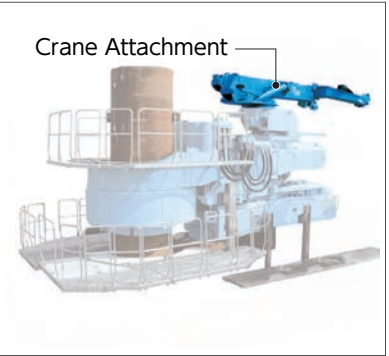
- Driving Attachment  
φ 800~1000 (GRAL1015)  
φ 1200~1500 (GRAL1520)



Driving Attachment		
Mass	AM69 (φ800)	2050 kg
	AM90 (φ900)	2300 kg
	AM105 (φ1000)	3350 kg
	φ1000 - Light weight mode	2760 kg

Driving Attachment		
Mass	AM105 (φ1200)	4100 kg
	AM86A (φ1300)	3500 kg
	AM92 (φ1400)	4000 kg
	AM93 (φ1500)	4450 kg

- Crane Attachment  
CLC1-2G  
CLC3-1



Crane Attachment		CLC1-2G + AM60
Hoisting Capacity	2.95 t × 4.5 m	
Boom Length	3.1m ~ 6.2 m	
Applicable Pile Diameter	D 1000mm or less	
Mass	2870 kg	

Crane Attachment		CLC3-1
Hoisting Capacity	7.0 t × 6.89m	
Boom Length	3.89 m ~ 6.89 m	
Applicable Pile Diameter	D 1500 or less	
Mass	8000 kg	

