Modular model applicable to for Z & U Sheet Piles

**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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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’s 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.

1 Press-in with the Pile Auger
2 Extracting the Pile Auger after completion of sheet pile installation

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.

1 Chuck Lock
2 Leader Mast Lock
3 Rotation
4 Clamp Lock

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’s 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-leaded paint.

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

GIKEN IT System

GIKEN’s engineers can monitor individual Silent Pilers, 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.

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).

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

70 dB(A): A-weighted Decibels

Ultra Low Noise Level

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Environmentally-friendly paint which does not contain toluene, xylene and lead-based pigment.
### Dimensions & Specifications

#### Super Crush Mode

- **F301-C700**
- **Power Unit**: Diesel Engine
  - 265 kW (360 ps) / 1800 min⁻¹
  - 236 kW (321 ps) / 1600 min⁻¹
  - 206 kW (280 ps) / 1400 min⁻¹
- **Fuel Tank Capacity**: 600 L
- **Piler ECO Oil**: 630 L
- **Hydraulic Reservoir**: 38 L
- **Moving Speed**: 1.4 km/h
- **Mass**: 7250 kg (with 20m Hose)

#### Standard / Water Jetting Mode

- **F301-F700**
- **Piler Jet Reel is an optional item**
- **Power Unit**: Gasoline Engine
- **Rated Output**: 86.2 kVA / 624 ps
- **Fuel Tank Capacity**: 610 L
- **Moving Speed**: 1.4 km/h

#### Accessories

### Standard Accessories

- **Piler Stage**
- **Chuck Stage**
- **Auger Head Replacement Attachment**
- **Pile Roller**
- **Hose Roller**
- **Pile Laser**
- **Casing Scraper**
- **Module Box**

### Optional Accessories

- **Piler Jet Reel (JR28)**
- **Auger Head**
- **Auger Head**

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*Available for Super Crush Mode only.*