Extremely sophisticated modular model applicable to Z & U Sheet Piles

**SILENT PILER™**

**F401**

Silent Piler F401

**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.

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.

- Operation Mode corresponding to the Casing Chuck is automatically detected
- Position of the Press-in Machine is automatically detected
- Up/Down Stroke Force is optimised
- Maximum Up/Down Stroke Force is regulated
- Load applied to Silent Piler can be reduced.

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 1416mm.

- **Z Sheet Piles**
  - 670mm - 704mm
  - 1156mm - 1416mm

- **U Sheet Piles**
  - 700mm
  - 1200mm, 1400mm
  - 600mm - 700mm
  - 1200mm, 1400mm
  - 600mm - 700mm

* F401 is designed to press-in a pair of 600mm and 700mm U sheet piles in pairs by using WU chuck attachment.
5 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 cobbles 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.

3 4

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 EU300K4

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’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 F401 uses biodegradable Piler Eco Oil and Piler Eco Grease. Hence, if hydraulic oil or grease should be blown into soil or water, there will be no environmental damage to the surrounding soil system. In addition, the machines are painted with TX-Free non-lead paint.

7 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 modeling 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**

- **Main Body, Hose Reel, Casing Chuck**
  - Mass: 30670 kg

- **Super Crush Mode**
  - Mass Water Jetting Mode: 26850 kg
  - Standard Mode: 25600 kg

The above specifications are subject to alteration without prior notice.

**Standard / Water Jetting Mode**

- **Piler Jet Reel (JR29)**
  - Applicable pile length: Standard 16 m (Max. 27.0 m)
  - Mass: 1250 kg

**Power Unit**

- **Diesel Engine**
  - Rated Output: 265 kW (360 ps) / 1800 min-1
  - Fuel Tank Capacity: 600 L

**Hose Reel**

- **Mass (Standard)** 2770 kg
  - **Hose Reel Bracket**

**Piler ECO Oil**

- **Capacity**: 630 L

**Moving Speed**

- **1.4 km/h**

**Mass**

- **Total Mass**: 18260 kg

**Piler Jet Reel (JR29)**

- **Applicable pile length (Standard)**
  - **Mass**: 2540 kg

**Auger Head**

- **Replacement Attachment**
  - **Mass**: 2025 kg

**Accessories**

- **Basic Accessories**
  - **Hose Roller**
  - **Pile Laser**
  - **Module Box**
  - **Tablet PC (encased)**

- **Super Crush Mode Accessories**
  - **Auger Head**
  - **Auger Head Replacement Attachment**
  - **Piler Stage with Chuck Stage**