



Impossible ? I'm possible !

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Reverse Circulation Drilling rigs



About SAMHOON

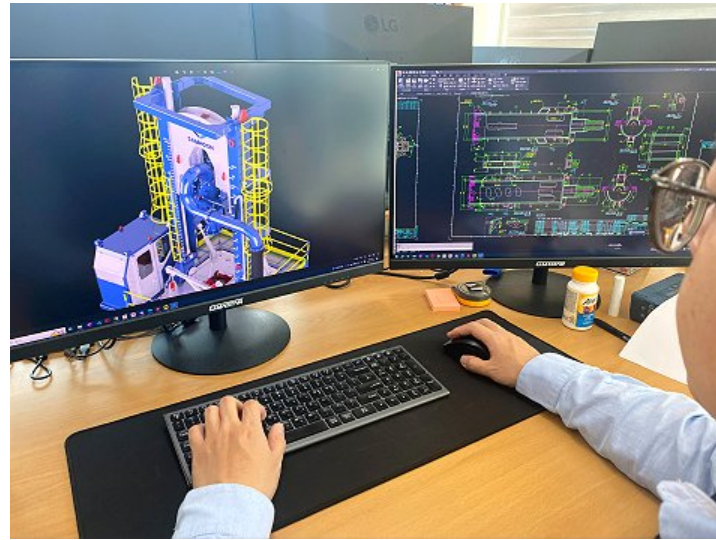
Although the SAMHOON name is new, we have more than 25 years of experience in manufacturing construction machinery. Utilizing these years of experience, we have built a strong foundation in the knowledge of equipment and systems, enabling us to build longlasting machines and parts.

SAMHOON's equipment is widely used for working on onshore drilling, offshore drilling, subsea drilling, and mining.

We fabricate all products by our own designs and drawings, including hydraulics, electrical systems, and control devices. Thanks to this, we are able to make ideal brand-new machines according to each customer's needs. We have referenced block lifters and concrete removing tools to advance and optimize the performance of our machines.

SAMHOON has our own factory and office in South Korea. We have worked with reliable partner vendors for more than 20 years, who meet SAMHOON quality control.

Global networks were built in several areas in the world, such as: USA, Hong Kong, Russia, and Brazil. These networks provide good consultation about SAMHOON products and engineering.



RCD export for rock drilling

We work closely with our customers throughout the project lifecycle, providing continuous support during the lifetime of the RCD rig to allow you to complete your project on time and within budget.

We also have many experiences and case studies to support customer who experience issues with drilling



Project study and quotation

- Close consultation and sharing experiences
- Recommendation for the type of roller cutter and length of drill string
- Provide a quote with the best lead time and price

Manufacturing & test

- Manufacturing under global standard Q/C
- Test individual movement and control system

Shipping

- Every type of Incoterms 2020 according to customer's request
- Provide reasonable packing type and container configuration

Commissioning & training

- On-site installation by RCD skilled engineer
- Crew and operator training(operation, drilling tricks,maintenance)
- Supervision at initial drilling and maximizing RCD performance

Lifetime services

- Wear and spare parts service
- Cutter management
- Supervision and training for advanced operator
- Direct decommissioning in the right way, overhaul and RCD conservation service for maximized lifetime and performance



Applications everywhere



Bridges



Commercial building



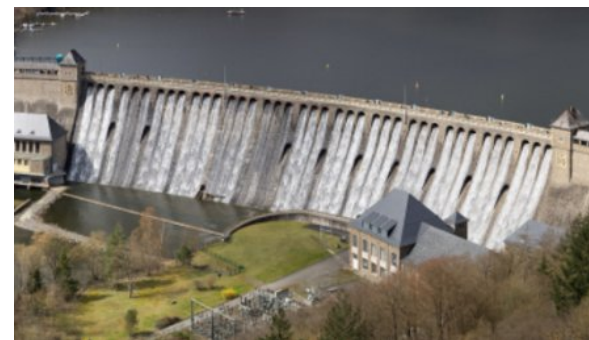
Sea terminal, Jetties



Oil & Gas platforms



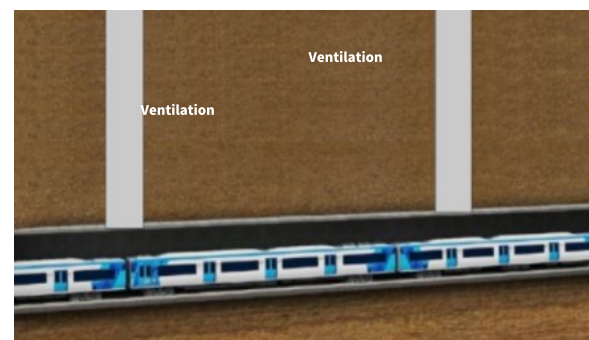
Wind farms



Dam rehabilitations



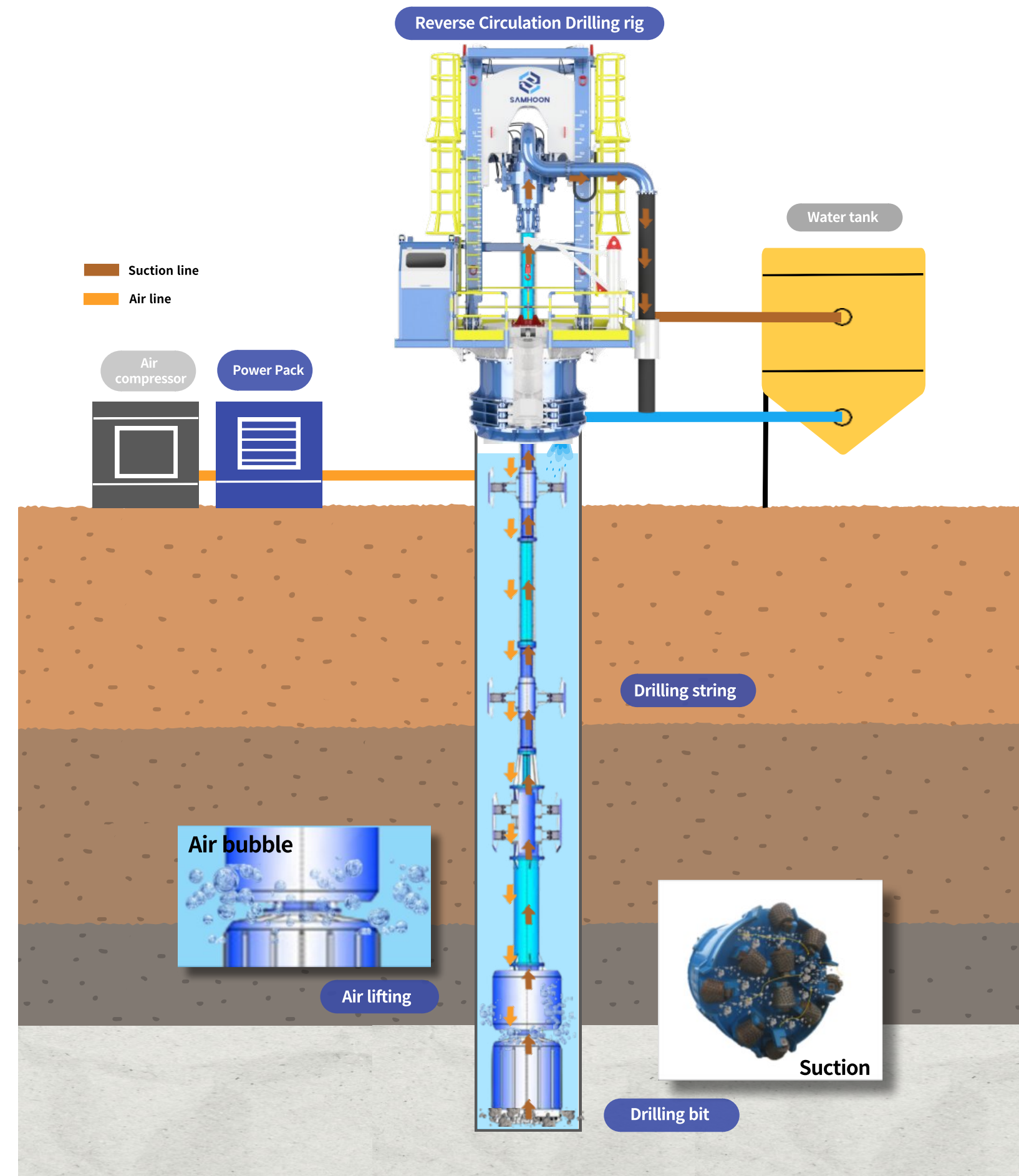
Elevated metro stations



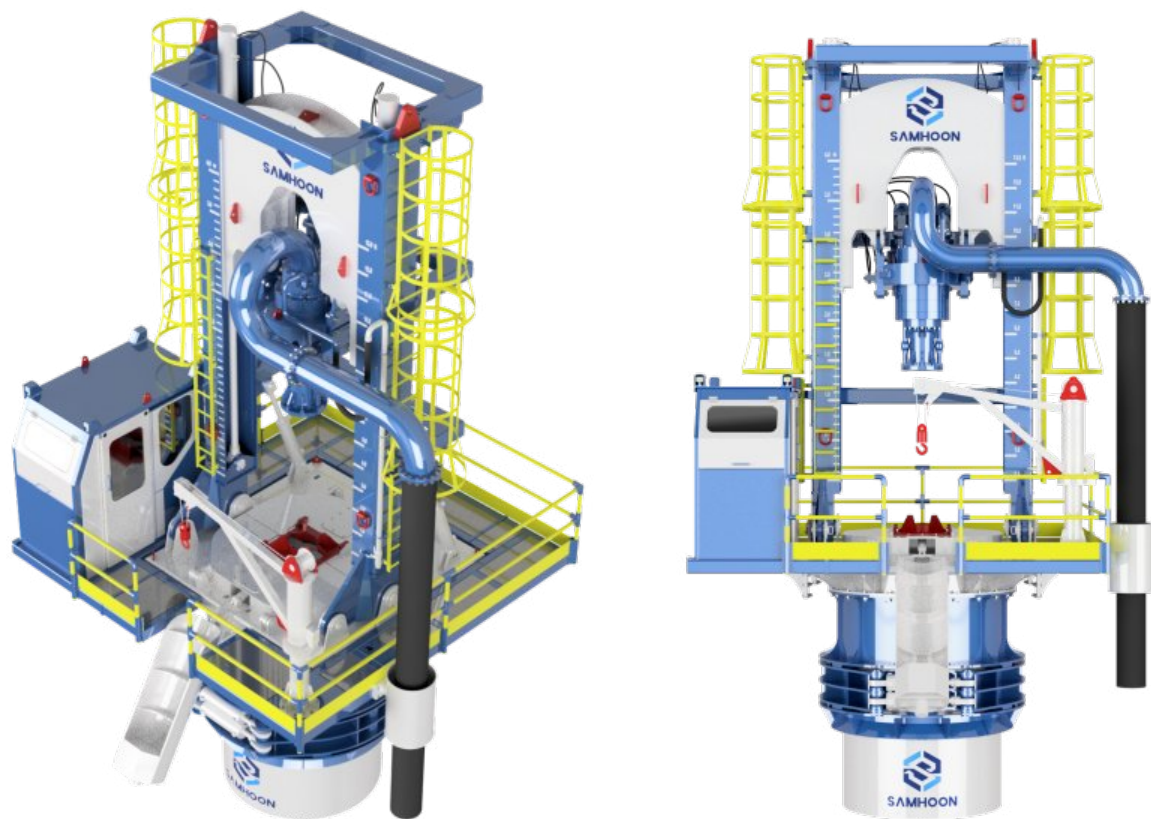
Ventilation shafts(ex. Metro)

- Mixed soil layer, inclined rock and hard rock
- Large diameter from 0.8m to 5m (2.6ft to 16.4ft)
- Super deep foundation up to 200m
- Inclined drilling for anchor pile

RCD Arrangement

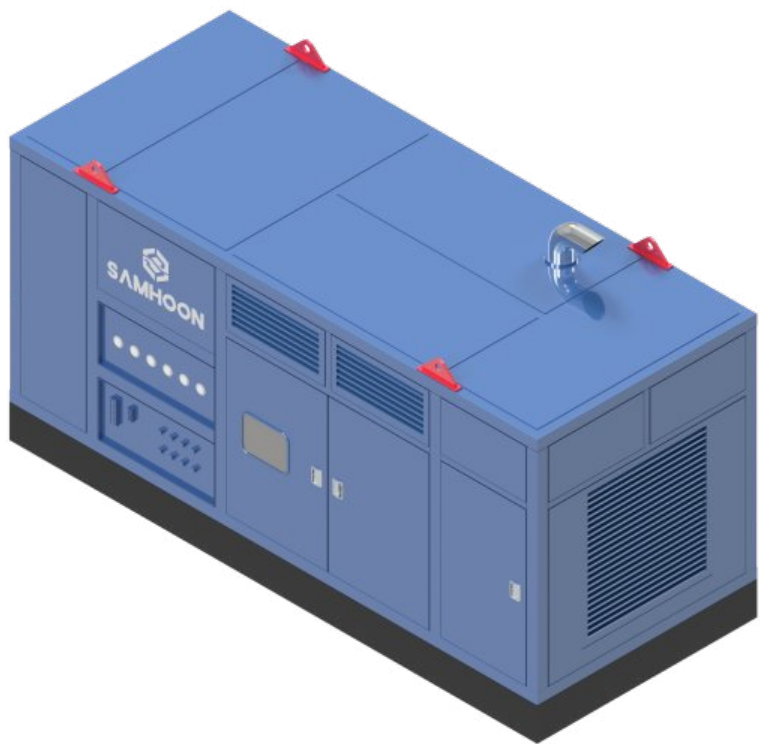


RCD specification



| Model | | PTD200 | PTD250 | PTD300 | PTD350 |
|-----------------------|-------|---------|---------|---------|---------|
| Max. casing dia. | mm | 2000 | 2500 | 3000 | 3500 |
| Power swivel torque | kN.m | 180 | 300 | 300 | 484 |
| Drilling speed | rpm | 26 | 26 | 20 | 19 |
| Thrust force up | kN | 1100 | 1400 | 1840 | 2218 |
| Thrust force down | kN | 680 | 820 | 1130 | 1463 |
| Stroke of thrust cyd. | mm | 3500 | 3500 | 3500 | 3500 |
| Weight of machine | ton | 22 | 31 | 36 | 55 |
| Weight of clamp | ton | 4.5 | 5.1 | 8.1 | 10 |
| Hyd. Power pack | kW/HP | 210/280 | 450/610 | 450/610 | 450/610 |

Hydraulic power pack



| Model | SHP280 | SHP380 | SHP610 | SHP800 |
|---------------------------|-----------------|-----------------|-----------------|-----------------|
| Engine output | 210kw / 280HP | 285kw / 380HP | 450kw / 610HP | 585kw / 800HP |
| Normal rpm | 1800rpm | 1800rpm | 1800rpm | 1800rpm |
| Hydraulic pump | 201L/min x 2set | 324L/min x 2set | 360L/min x 2set | 504L/min x 2set |
| Max pressure(bar) | 320 | 320 | 320 | 320 |
| Dimension (WxLxH / mm) | 1900x4000x2300 | 2000x5500x2500 | 2100x6000x2600 | 2300x6500x3200 |
| Weight (ton) | 7.5 | 9.0 | 11.0 | 15.0 |

Drill string

Basic drill string

Basic drill string consists of the drill rod pile and stabilizer. This string is the extension part that connect RCD swivel required length after rigid string.

One stabilizer is needed on every three drill rod pile.

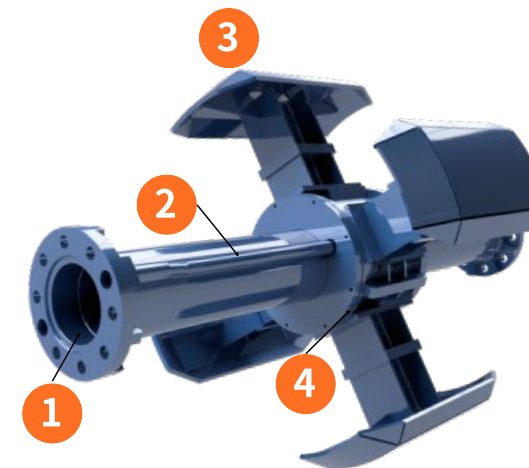
Rigid drill string

Rigid drill string consists of the heavy pipe, drum stabilizer and drill bit. These strings aim to sustains RCD torque and keep verticality.

A Rigid drill string is about 15~17m when they are all connected.

Drill rod pipe stabliizer & Drill bit

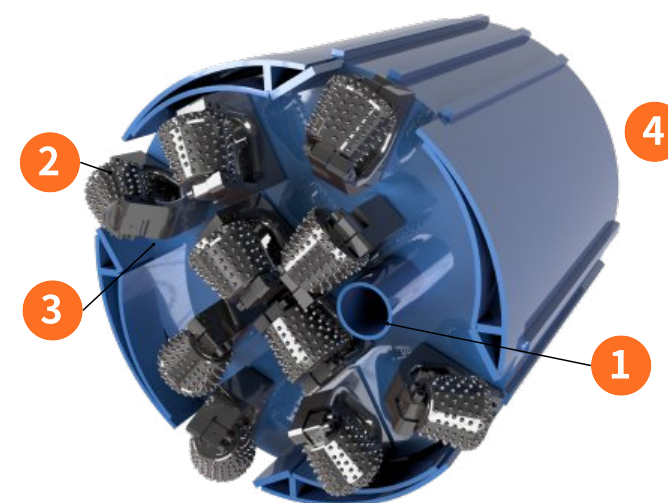
Drill rod pipe stabliizer



1. Suction hole
2. Air pipe
3. Stabilizer guide
4. Stabilizer bushing (rotating)

Drill rod pile stabilizer is installed in the middle of drilling string to prevent the pipe bending. A stabilizer with guide works to keep verticality as well.

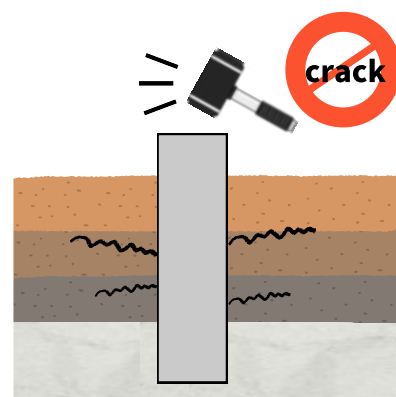
Drill bit



1. Suction hole
2. Roller cutter
3. Saddle
4. Drill bit body

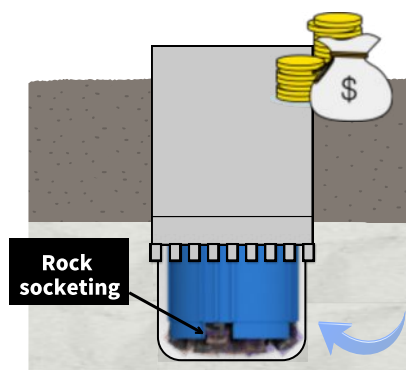
The drilling bit is equipped with roller cutters rotating at the end of the drilling string to cut off rock. It's special designed configuration of the roller cutters efficiently drains slurries very well.

Strong points



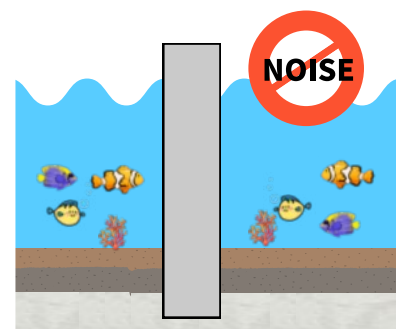
Minimizing crack

Unlike a hammer, a RCD drills and cuts the rock layer smoothly with no crack.



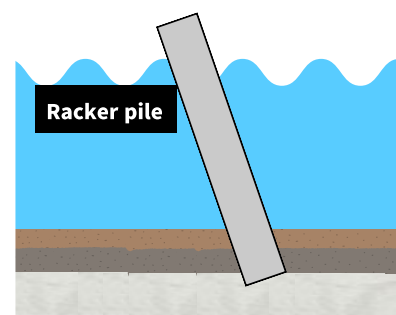
Saving cost

RCD machine is the best solution and economical method for rock socketing.



Eco-friendly method

RCD is low noise so there is little impact on the sea world and environment-friendly.



Racker pile

Racker pile is available if the project requires it, like anchor pile and sea port.

Reference

Drilling bit

Replacement all of drilling bit roller cutter.

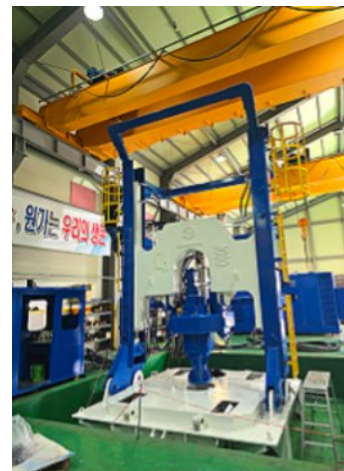
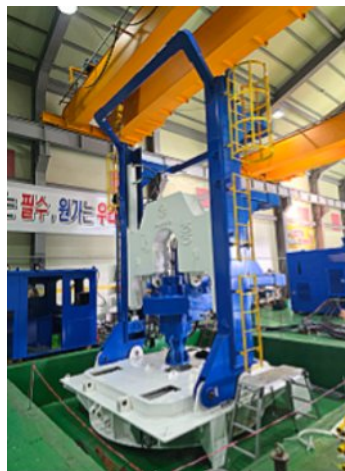
Quality roller cutters works for a long time.



3m RCD rigs with drill string

Offshore site to build bridge by RCD.

New 3m RCD rigs with drill string fabrication.



Completed Power swivel

Fabrication for completed power swivel.

Customer needs to replace it in an old RCD.

