



drilling & geotechnical

MICROPILE



What is Micropile?

A micropile is a deep foundation element constructed using high-strength grout with a maximum diameter of 250 mm. These piles are typically utilized in areas with restricted access or specific soil conditions that require deeper penetration to achieve the necessary load-bearing capacity.

Micropiles serve as an effective solution for underpinning existing structures or providing foundational support in confined spaces where traditional piling rigs cannot operate.

Applications

- Enhancing load-bearing capacity in restricted or congested sites
- Seismic strengthening and retrofitting of existing structures
- Mitigating and controlling structural settlement
- Withstanding uplift forces and dynamic loading conditions
- Providing structural underpinning for existing foundations
- Offering excavation support in limited-access environments

- Forming reticulated pile walls for ground improvement and stability

Benefits

- Capable of carrying design loads ranging from 3 to over 100 tons
- Easily adaptable for resisting tension and uplift forces
- Effective across diverse soil and ground conditions
- Ideal for projects with low headroom or limited working space
- Generates minimal noise and vibration during installation
- Able to penetrate through obstructions or challenging ground layers

Equipment Highlight

We use compact hydraulic drilling machines designed for low-clearance workspaces, allowing pile installation with high precision even in challenging environments





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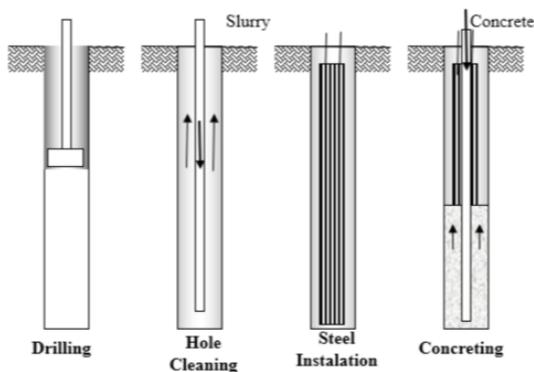
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Technical Specification

- Diameter range: typically, less than 350 mm
- Depth: up to 20 meters (soil dependent)
- Drilling method: Rotary or auger
- Reinforcement: Steel rebar cages, steel bars, or steel pipes
- Grouting: Tremie pipe method

Typical Micropile Program

1. Drilling holes, 2 inches to 12 inches
2. The construction of a pile shaft consisting of structural steel pipes, grout, steel sections and/or placement of reinforcing steel, as required by design
3. The filling of the hole with high-strength cement grout



Why Choose Geonusa Utama?

- 15+ years of experience in geotechnical solutions
- Proven track record in infrastructure and private sector
- Committed to safety and quality
- Experienced team and in-house equipment

Our Projects



Micropile installation at confined space in Ancol, Jakarta, Indonesia (2013)



Micropile installation at refinery in Tangguh, Papua, Indonesia (2013)

Contact Us:

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