



## Micropiles for Foundation Engineering

Specially designed to suit Sabah challenging soil conditions, the A-Build engineering team has developed the most cost effective price/performance micropile for long term foundation requirement. The May 2015 earthquake in Sabah further commands for higher specification of foundation engineering requirement, hence micropile.

### What is Micropile?



**Micropile** can be used as normal foundation piles and compensation piles for remedial work, especially in the area of site constraints. **Micropile** is typically less than 12" (300mm) in diameter constructed by drilling a borehole placing steel reinforcement, and grouting the hole. Subject to the soil stratum, micropiles can be designed as either as rock socketed pile or soil friction pile. **Micropile** installing methods have minimal impact and disturbance to the adjacent structure, soil and the environment.

Furthermore, micropile can also be installed in limited access area and restricted head room.

### Typical Application of Micropile



The micro-piling technology saved the historical Leaning Tower of Pisa.

### Typical Micropile Loading

Diameter (ext.)	4.65" (118mm)	6" (150mm)	8" (200mm)	10" (250mm)	12" (300mm)
Typical Load (ton)*	12 - 33	31 - 54	43 - 106	47 - 148	73 - 209
Typical Load (kN)*	122 - 330	315 - 545	435 - 1064	471 - 1482	736 - 2094

\* These loadings are for general reference only, subject to soil strata, composition, reinforcement, grout and other conditions which may vary from site to site. Please contact us for actual project requirements.



## Project Profit Maximization begins with the foundation

Modern Micropile utilizes the advancement of reinforcement API, steam pipe and rebar, capitalizing the much lower cost of API than before achieving high loading compared to traditional multi-joint piles. This single piece micropile grouted at site provides known performance while reducing the total number of piles resulting with smaller footing and cost saving. Optimization of the Price/Performance of the micropiles can be achieved by utilizing various reinforcement and the given project site soil strata.

### Micropiles preferred

A-Build Corporation specializes in the design and construction of micropile foundations where access, environmental factors or geological conditions. We also offer micropile installation expertise for deteriorating foundation systems, either to provide additional support for structures during renovation, or to support structures affected by undesired activities.



### Benefit of using Micropiles

Micropiles are installed for new foundation support or for underpinning tiebacks or soil nails. They are a perfect solution for drilling extremely hard rock and soil layers. A-Build can also install micropiles in spaces with restricted overhead clearance, basements and limited access areas to stabilize structures or for additional foundation support. Micropiles are a great solution when using conventional concrete caissons is not possible. Problem conditions can be limited access job sites, soils with high blow counts, drilling into bedrock, nearby structures.



### The Advantages of Micropiles

- Limited access situations
- Ability to rock drill into soils with high blow counts and /or bedrock
- Can be installed with solid or hollow bar
- Can be installed through most ground conditions, obstructions and foundations at any incline
- Ensure minimum vibration or other damage to foundation and subsoil
- Can be installed in as restricted headroom and close to existing walls
- Simple and economical connection to existing and new structures



## Delivering [ True Value ]



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