



## Catalogue

一、 BVEM profile.....	2
二、 Vibroflot profile.....	2
2.1 vibrator structure.....	2
2.2 vibroflot working pricple.....	2
三、 Vibroflotation.....	3
3.1 vibro-compaction.....	4
3.2 vibro-replacement.....	4



北京振冲工程机械有限公司

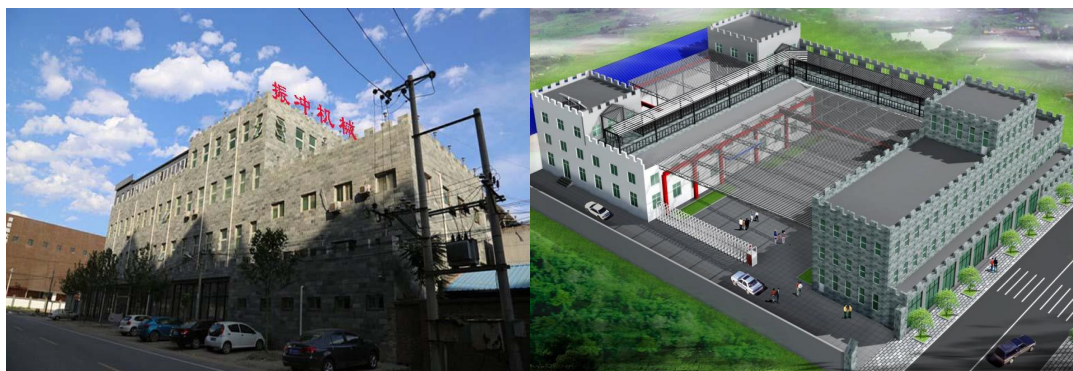
BEIJING VIBROFLOTATION ENGINEERING MACHINERY LIMITED COMPANY

## 一、BVEM Profile

Beijing Vibroflotation Engineering Machinery Co., LTD (BVEM) started from a special R&D team worked for a vibroflot strategic localization project and organized by Ministry of Water Resources and Hydro-power. After 40 years development of products and market, BVEM has grown to be a well-known enterprises in China's foundation engineering industry. With the main business of complete sets of equipment supplying for vibroflotation construction, BVEM was included into the group of National High & New Technology Enterprise. As an active participant of vibroflotation industry, BVEM is one of the editor-in-chief of national industry manufacturing standard <Electric Deep Vibrator DL/T 1557-2016>, and participated numerous national key projects including Yangtze River Three-Gorge project and Hong Kong- Zhuhai- Macao Bridge project. BVEM's holding company is Beijing Vibroflotation Engineering Co., LTD (BVEC), who is a leading enterprises in domestic vibro-industry.

Focusing in mechanical design, manufacturing, sales, maintenance, construction, leasing and consultant platform development, BVEM condenses 40 years of industry experience in design, construction, improvement, optimization, and manufactures high-class series electrical vibroflots including multiple models applied to different soil layer condition, and have implemented the assembly line of production capacity. Products have been sold to more than 30 countries in the world, involving many foundation engineering field as power, transportation, petrochemical, ports, airports and offshore reclamation etc.

For years always, nailing on the core conception of " CREATING BOUTIQUE to SERVING VIBRO-PEOPLE", adhering to the grand vision of " WORLD VIBROFLOTATION", BVEM has been being down-to-earth, fearless of difficulties, unremitting efforts, continuous innovation and keeping pace The Time! In the pursuit of outstanding, BVEM people develop themselves and face the common destiny with company together, seize the moment, unremitting self-improvement!The future can look forward to being better. Development need unlimited power and the power can make achievement of unlimited life.



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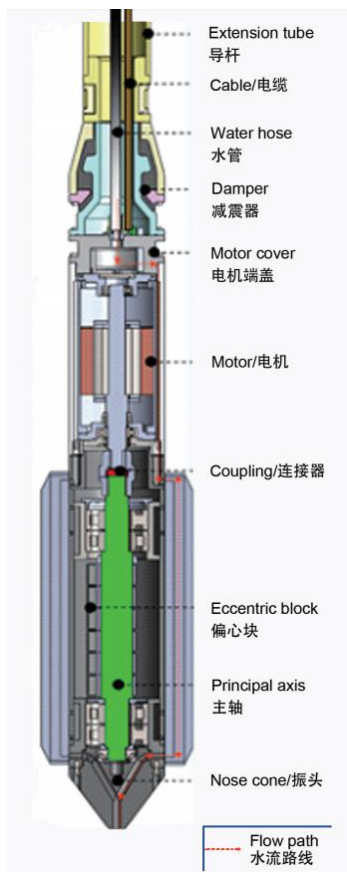
Tel:010-89579272 Fax:010-69592173

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## 二、Vibroflot

### 2.1 Vibrator structure



### 2.2 Working principle

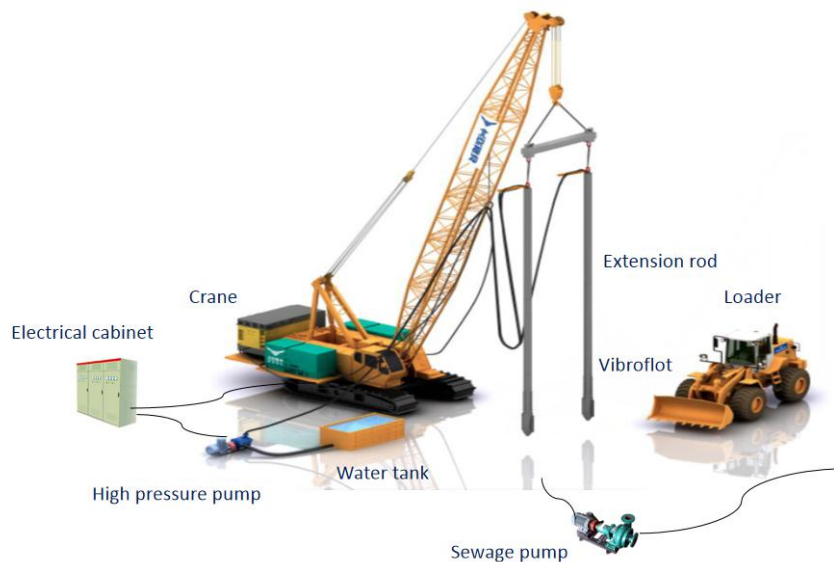
Vibroflot equipment makes a joint action of horizontal vibration and high pressure water shock to compact the loose sand layer or formed in soft soil of stone column to compose the composite foundation with original soil together; finally achieve the improvement of soil on load capacity, settlement controlling as well as the anti-seismic capacity.



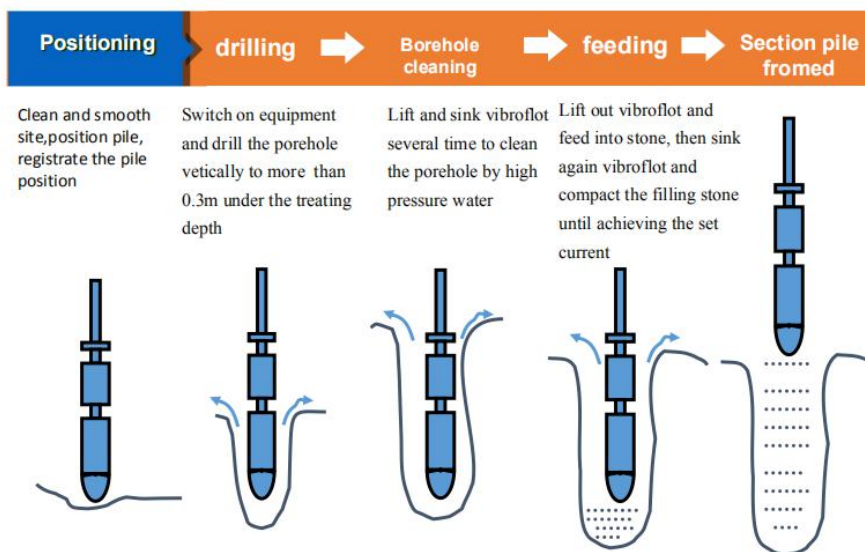
### 三、Vibroflotation

Vibroflotation is one of a typical technique which is a widely used application for foundation soil improvement. Vibroflotation method can be divided into vibro-compaction method and vibro-replacement method or Vibroflotation stone column method according to different requirements of construction. The construction method is to lift the vibroflot device with a crane, start the submersible motor to drive the eccentric block, so that the vibroflot device will generate high-frequency vibration, at the same time start the high-pressure water pump, under the effect of vibration and high-pressure water, vibroflot will be reach the design depth of pile. After cleaning hole, stone shall be filled from the ground to the hole section by section. Each compaction period is 30-50cm. After the vibroflotation meets the design requirements, the vibroflotation device is lifted and another pile section is built.

#### Complete equipment of vibro-construction



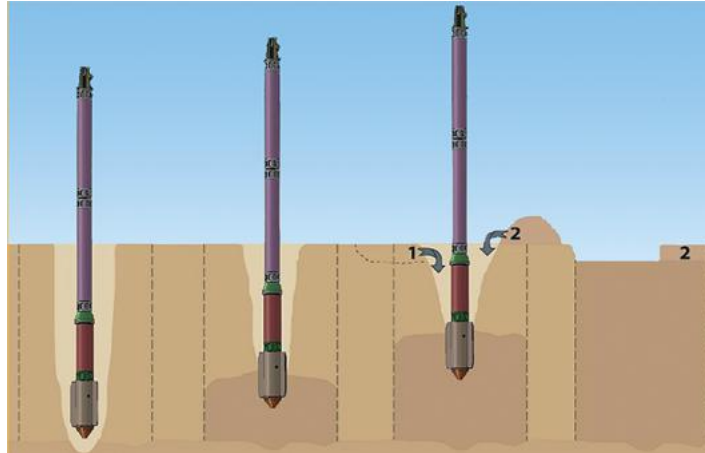
#### Construction process





### 3.1 Vibro-compaction

By the force of the vibroflot, enforce liquefaction of saturated sand layer, the sand particles with rearrange and pores will reduce.



#### Boring

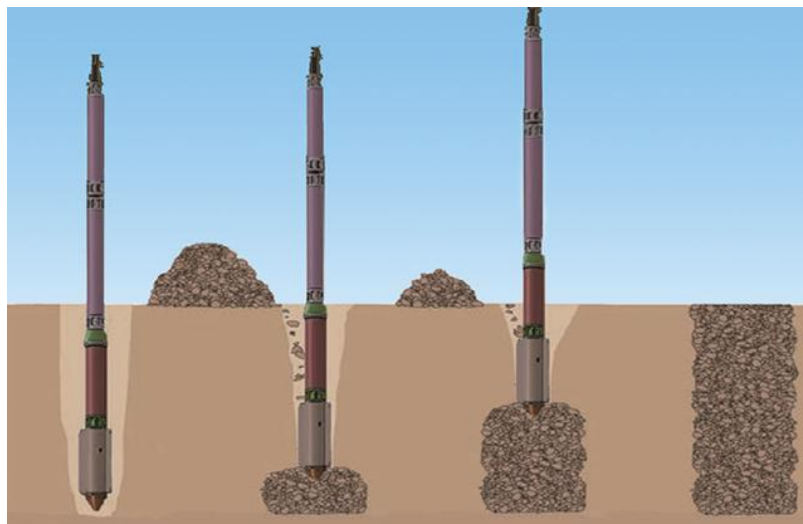
By vibration and the flushing of water and/or air, the vibroflot penetrates to the designed depth.

#### Compaction

Compact the soil section by section up to the ground according to the requirements of the compaction current, compaction time and sectional compaction length.

### 3.2 Vibro-replacement

Jet water and vibrate by vibroflot to form holes. Fill in pile holes by section with solid filling materials such as gravel (cobble) etc., to finally form composited foundation.



#### Boring

By vibration and the flushing of water and/or air, the vibroflot penetrates to the designed depth.

#### Backfill

Fill stones into the bore-hole, and compact section by section up to the ground according to the requirements of compaction current and the sectional compaction length.