

Jumbo Eco Pile System

JET GROUTING



Large diameter Jet Grout Column Adaptable to various site requirements JEP system

ADVANTAGES

(1) Large Diameter Column

Hardening agents are jetted with a high energy and discharge rate from double jet monitors to construct larger diameter improved columns (dia 3.5m).

(2) High Speed Construction

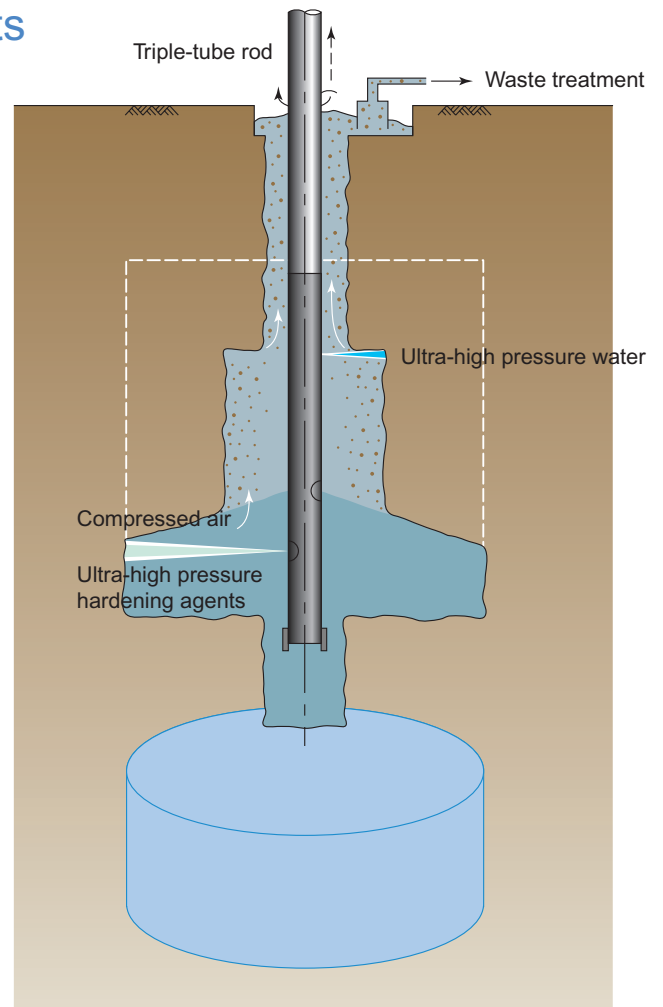
Double jet makes the process more efficient as compared to conventional jet grouting and shortens construction time.

(3) High Quality Product

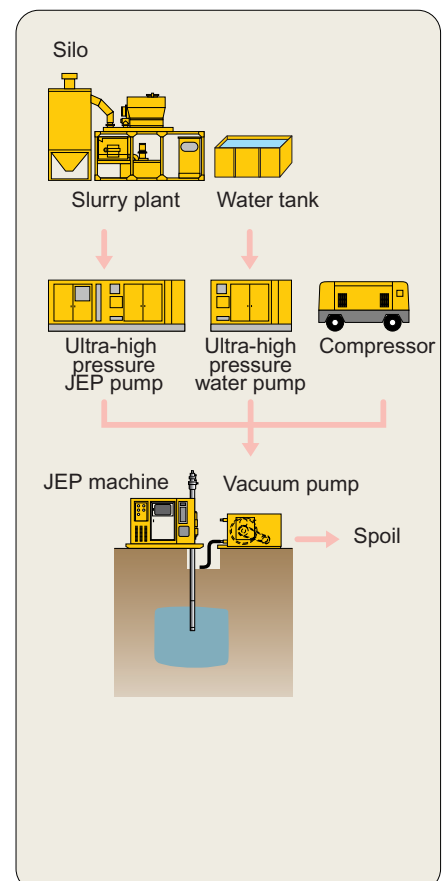
In-situ soil is cut into smaller pieces while two jets rotate and cross in the ground.

(4) Cost Efficiency

The large diameter improvement reduces the number of columns required.

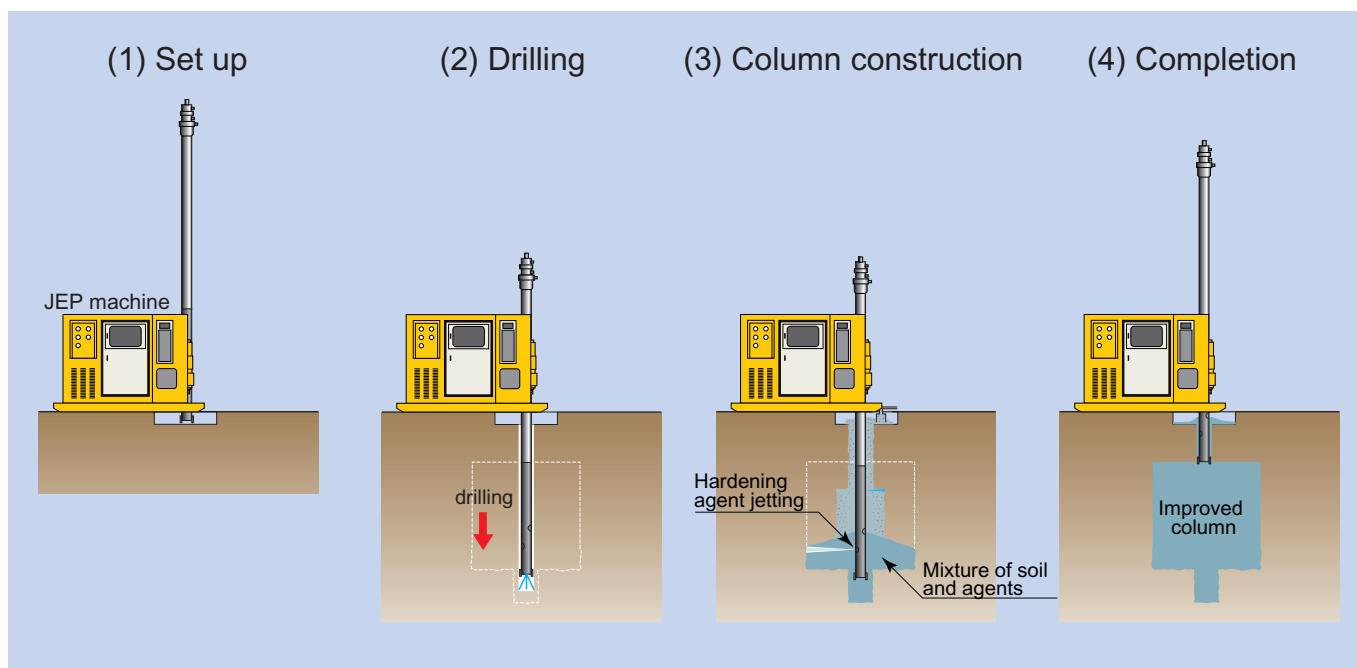


PLANT CONFIGURATION



	Cutting Materials	Standard Discharge Capacity	
Ultra-high pressure Jet (upper monitor)	Water	Pressure	40MPa
		Discharge Rate	50L/min
Ultra-high pressure Jet (lower monitors)	Hardening agents	Pressure	35MPa or more
		Discharge Rate	300L/min
Compressed Air		Pressure	1.05MPa
		Discharge Rate	4 to 8m ³ /min

CONSTRUCTION SEQUENCE



APPLICABLE SOIL RANGE

Applicable soils and effective diameter of standard column

Sandy Soil	$0 \leq N \leq 15$	$15 < N \leq 30$	$30 < N \leq 50$
Cohesive Soil ¹⁾	$0 \leq N \leq 1$	$1 < N \leq 3$	$3 < N \leq 5$
Effective Diameter	3.5m	3.2m~3.5m	3.0m~3.5m

Note:

- 1) When the cohesion of the target ground exceeds 50kN/m², separate study is required.
- 2) Separate study is also required for sand and gravel layer.

STANDARD MIX

Portland Cement	760kg
JEP admixtures ¹⁾	10kg
Water	751kg

STANDARD PRODUCT SPECIFICATION

	UCS q_u (MN/m ²)	Cohesion C (MN/m ²)	Adhesion f (MN/m ²)	Tensile strength σ_t (MN/m ²)	Deformation modulus E_{50} (MN/m ²)	Coefficient of horizontal subgrade reaction K (MN/m ³)
Sandy Soil	3	0.5	$\frac{1}{3} C$	$\frac{2}{3} C$	300	300
Cohesive Soil	1	0.3			100	100

Nota:

- 1) JE-01 for sandy soil, JE-02 for cohesive soil

APPLICATION EXAMPLE





4-2-35, Kudankita, Chiyoda-ku, Tokyo 102-8236 JAPAN
TEL. +813-3265-2506
FAX. +813-3230-1709
E-mail overseas@raito.co.jp
URL <http://www.raito.co.jp>