

# APPLICATIONS KORTEX<sup>®</sup> TUBE

Geotextile KORTEX<sup>®</sup> TUBE (further only GTX) requires a correct usage and respect of basic procedures, so that there is no damage, or destruction of it before it begins to do its job on a construction site. The GTX or its function is most frequently damaged during installation and this is why it is necessary that there is no traffic rolling over the newly installed GTX and the following recommendations are respected:

## STORAGE AND HANDLING

- the rolls of the GTX are stored in a dry, clean and on even surface,
- the stack of GTX should not be more than five rolls high,
- the rolls should not be stored in crisscross fashion,
- the package is open only before the GTX immediate use.

All networks (gas, sewer, water etc.) must be constructed and finished before the GTX is laid, so that there would be no damage to the GTX layers.

## INSTALLATION

The pile installation begins with pressure the circle the working steel casing until the load-bearing layers are reached and vibrating at the same time. The bottom part of the casing has two flaps which are closed during installation and push the earth out.

After it is vibrated in, the KORTEX<sup>®</sup> TUBE is prepared – it is cut to the desired lengths. This cutting is done on a mobile table by hot wire. Next, a funnel is attached to the casing, with KORTEX<sup>®</sup> TUBE and the so called hose with closed off (wire closed) bottom. This geotextile is filled with non-crushed sandy gravel mixture and the casing is pulled out with the help of vibrator.

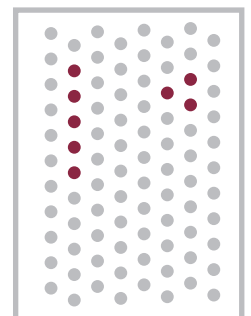
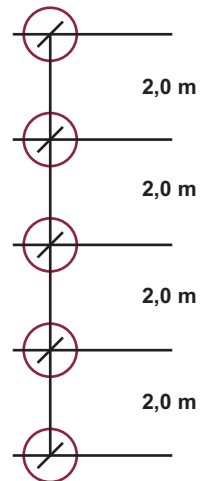
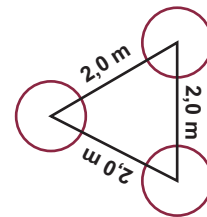
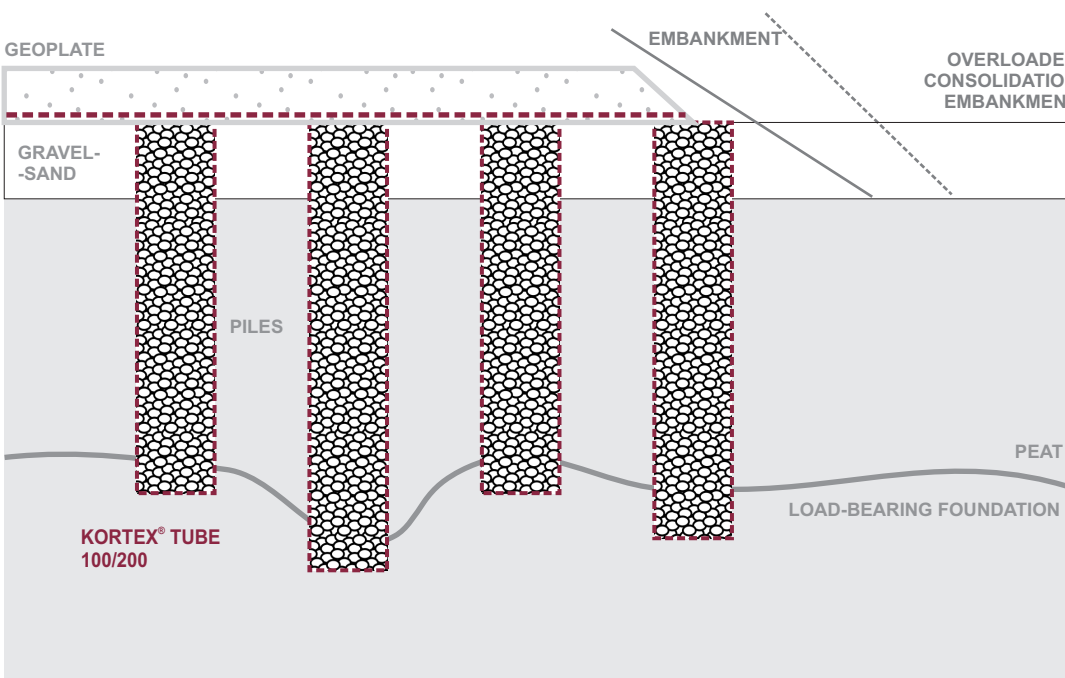
The pulling out of the casing, while vibrating, increases the density of the sandy gravel and stretches the geotextile. This creates great horizontal tension, which thanks to them the sandy gravel pile, wrapped in the KORTEX<sup>®</sup> TUBE textile is stronger and has better features than the surrounding earth.

## MAIN APPLICATIONS

- foundation with sandy gravel piles
- foundation in bogs, clays and other "mushy" ground where shearing stress  $\tau < 15 \text{ kPa}$  (for  $\tau 15\text{-}20 \text{ kPa}$  are geotextiles recommended)
- foundation in geotechnical complicated condition

## ADVANTAGES

- capture of horizontal shear strength, which could lead to shear failure and fail its function
- prevention of undesirable mixing of sandy gravel with surrounding fine-gravel soil
- achieving an even settling
- gravel sand piles improve foundation conditions: they drain off, increase modulus of elasticity of foundation
- quickly reached the safety value of shear strength
- safe value of shear strength is achieved relatively soon after completing the pile so that it can be loaded already after short period
- no need for a dense network of piles, such as it is the case with concrete piles
- seamless finishing of KORTEX<sup>®</sup> TUBE (seams are often the case of failure in this type of installation)
- the piles can be driven even during wintertime (approx to  $-10^{\circ}\text{C}$ ), what leads to quickening of the construction time



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