



BEARING CAPACITY

EVALUATE THE ULTIMATE BEARING CAPACITY OF SHALLOW FOUNDATIONS
GEOTECHNICAL | E11

Summary

Bearing Capacity evaluates the ultimate bearing capacity of shallow foundations for drained and undrained conditions.

What makes this module special?

- Deterministic and probabilistic analysis
- Graphical output
- Detailed output

Detailed Description

Bearing Capacity can be used to evaluate the ultimate bearing capacity of shallow foundations. Rectangular and circular foundation shapes are supported, and an angled ground slope can be defined. Bi-directional forces and moments can be applied, and the drained and undrained conditions are evaluated.

The formulae for the calculation of the ultimate bearing capacity of shallow foundations are taken from the publication of the American Petroleum Institute (1987). They are based on the procedures as described by AS Vesic (1975) in the Foundation Engineering Handbook as edited by HF Winterkorn and HY Fang.

Theory used in this module

This module can perform a deterministic as well as a probabilistic analysis. With a probabilistic analysis you can consider variations in material properties and other parameters.

Distribution types that can be applied to material properties in a probabilistic analysis include uniform, triangular, exponential, normal, log normal and beta distributions. You can set the number of analysis iterations to be performed and the required probability limit.

