

SBR+

Soil Settlement

The SBR+ program can be used to calculate the size and the time course of the settlement and tilting of the foundation caused by changes in the volume or shape of the subsoil, which occur with vertical, static loads. Lifts as a result of excavation relief can be calculated accordingly. The shares from immediate and consolidation setting are always calculated by default. A creep settlement can optionally be added.

Standards

- DIN EN 1997-1:2010
- DIN 1054:2010-12
- DIN 4019:2014-01
- ÖNORM B 1997-1-1
- ÖNORM B 1997-1-2

System

Any number of horizontal soil layers as well as a horizontal top edge of the terrain and a horizontal groundwater level can be defined.

Loading and superposition

The external loads can occur in the form of infinite vertical surface loads or any arbitrarily positioned limited block loads exclusively at the height of the top edge of the terrain. Asymmetrical trapezoidal loads with different load ordinates at the respective edges can also be modeled at any point and in a variable orientation. The number of terrain loads, their type of action, as well as the limit state to be considered and the design situation can be selected as required. An automatic superposition of the load cases in accordance with the applicable superposition regulations is also integrated.

Results

- The settlement can be output for any number of freely selectable design points
- Output of a settlement depression over the entire model range
- Stress influence values i per load case and per design point
- Depth of settlement influence
- Stress-settlement diagram over the depth for each design point
- Stress-settlement diagram according to settlement proportions s_0, s_1, s_2 and s_{ges} per design point
- Time-settlement diagram for each design point

