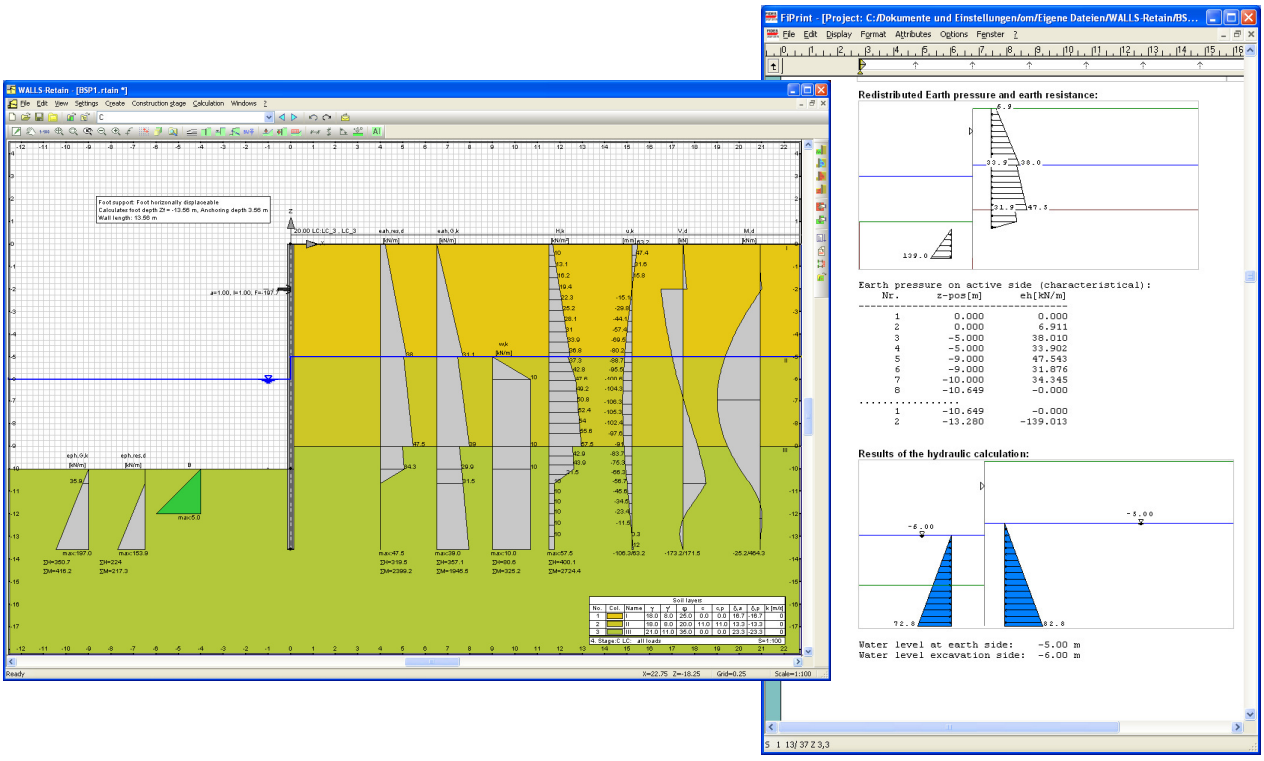
FIDES DV-PARTNER
SOFiSTiK SYSTEMHAUS

WALLS-Retain

Calculation of Retainment walls due to DIN/EAB/EAU

The Working Group for Excavations of the German Society for Geotechnics publishes its Recommendations for Computations on Excavations in the „EAB“. These recommendations are applied by the program. Buildings and structures in the cities and new constructions in high density areas place large requirements against the safety of deep excavations. New construction methods have been developed and known sheeting methods have been improved.
Extensive structural computations of the retaining walls will be necessary, in order to calculate the existing safety level. The exploration of several structural variants makes an optimal utilization of the possible bearing reserves.
Grout anchors in one or in several layers are used to an increasing degree for the anchorage of the retaining walls. Thus the necessary anchor lengths must be determined and the stability checks in the deep slip joint must be performed. In a constant reciprocal effect with practical building appliaces this program was newly developed from the ground up, to satisfy the expectations on modern retainment wall calculations.

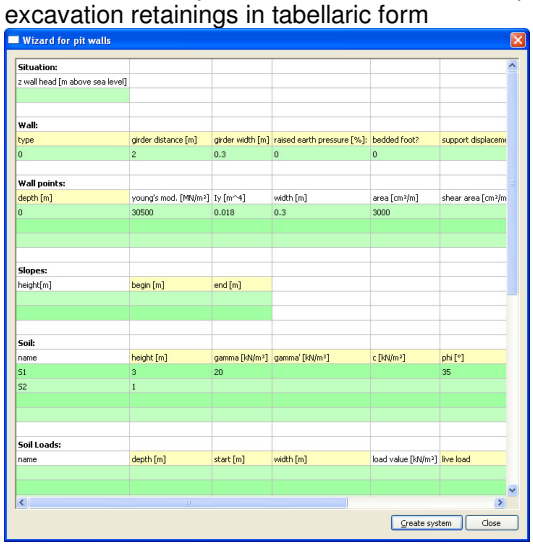


Performance Characteristics

- Various type of walls: Soldier pile wall, drilling pile wall, In-situ concrete wall, sheet pile wall.
- Calculation according to old and new DIN 1054, SIA 262, OENORM and Eurocode, EAB/EAU
- Internal forces, reproducible and separate for permanent and life loads
- The bending stiffness of the wall may be variable or section wise constant at any distances
- Active, increased or neutral earth pressure according to classical DIN, Coulomb or Culmann methods
- All possible earth pressure redistributions according to various design codes are available
- Calculation of earth pressure due to Culmann / Gudehus is implied inside the program. For the passive Gudehus the KEM will be used.
- Automation for fast finding of reasonable earth pressure redistribution figures
- Access to the soil layer database commonly used by all Fides geotechnical software
- Arbitrary load groups of limited and unlimited permanent and life surcharge and walls loads different load figures per load
- Arbitrary supports: anchor or struts pre stressed, elastic or rigid, determining the anchor length with the verification in the deep slip joint
- Supports can be switched active or inactive in each excavation stage
- Elastic support conditions and prestressing forces
- Any number of excavation and back fill stages
- Continuative verifications with e.g. WALLS-FEA, FIDES-SlipCircle or FIDES-GeoStability possible through identical file format of all Fides-programs
- Verification of the land safety with the splip circle calculation
- Automatic determination of radius and slip circle center or optionaly self defined slip circle geometry
- Any number of soil layers, layer geometries and landscape surface
- Self defined horizontal active and passive earth pressure, water pressure and elastic bedding support conditions of every building stage
- Verification of hydraulic heave failure and ground water story
- Potential flow with Boundary Element Analysis
- Import of the water pressure from the seepage calculation of FIDES-Flow

User-Interface

- Graphical interactive user interface with a huge variety and freedom of modeling
- Assistant for fast parameterized studies of simpler excavation retainings in tabellaric form

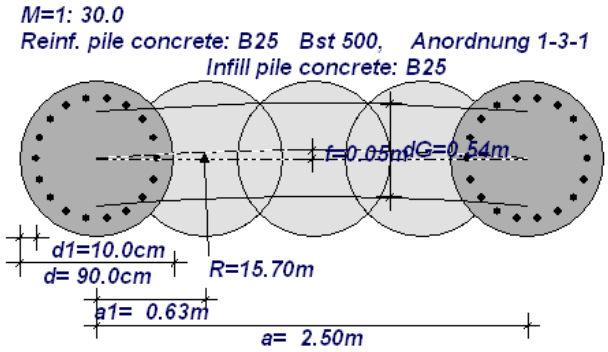


Output of Results

- Graphics and text together on one document
- Very detailed and auditable printer output
- Fast control of anchor - and strut results as well as enveloping internal forces
- Large scale possibilities for individually controlling the amount of print output
- Big freedom of arrangement of the head and footing lines

Optional

- WALLS-FEA: Finite Element Analysis
- WALLS-Dimensioning: single dimensioning of building parts wall, anchor and waling



FIDES DV-Partner GmbH
Phone
Fax
E-Mail

Berlin
+49 30 4202690-0
+49 30 4202690-29
berlin@fides-dvp.eu

Munich
+49 89 143829-0
+49 89 143829-11
munich@fides-dvp.eu