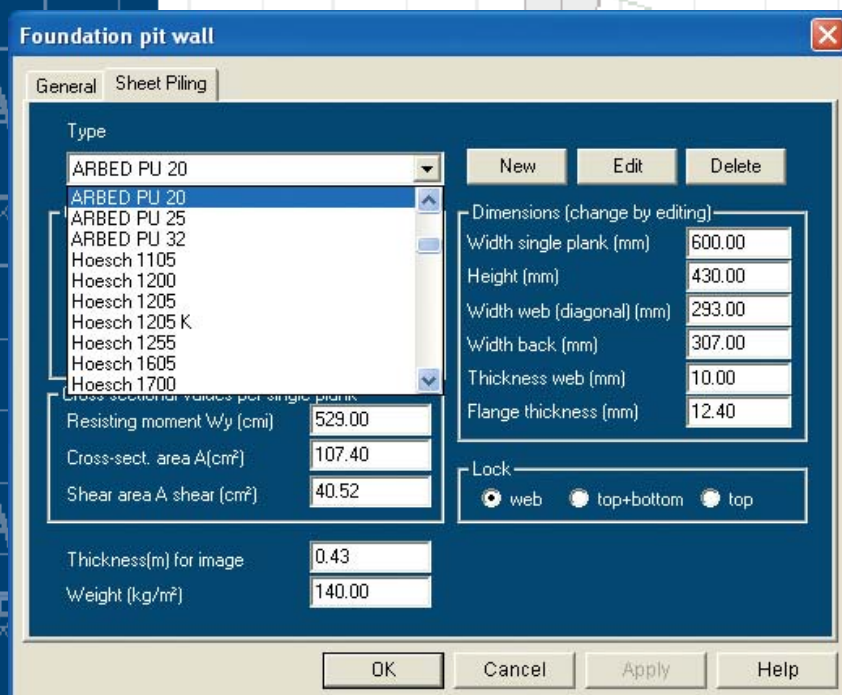


# Analysis of foundation pit walls

## DC-Pit

- Analysis of foundation pit walls acc. to DIN 1054:2005, DIN 4085, EAB 2006, EAU 2004, SIA 267, British Standard BS 8002
- Design option (Dimensioning): Steel design acc. to DIN 18 800, SIA 263, British Standard BS 5950, Indian IS 800, reinforced concrete acc. to DIN 1045, DIN 1045-1, ÖNORM B 4700, SIA 262, British Standard BS 8110, Indian IS 456
- Analysis with partial safety factors or with global safety
- German, English, French program version
- Bore pile walls, diaphragm walls, sheet pilings, girder plank walls, MIP (Mixed In Place)
- Selection of predefined sheet piling types or girder profiles (HE-A, HE-B, etc.)
- Wall types to be combined (e.g. inserted girder on a bore pile wall)
- Inclined walls with earth pressure on the inclined wall
- Active, increased active earth pressure or pressure at rest
- Different redistribution types: triangle, trapezium, one or several rectangles, affined figure
- Dead and live loads in different load cases, unlimited imposed loads and block loads with different earth-pressure distribution, excavation-related loads
- Different soil layers and slopes
- Arbitrary water levels in front of and behind the wall
- Building and dismantling stages
- Adjustable anchor positions and props per excavation incl. pre-deformation
- Inactive anchors in order to analyze variants
- Different foot bearings
- Fixed foot depth or iteration



*Selection of sheet pile profiles*



- Elastic support with automatic adaptation to the passive earth pressure
- Calculation of section forces with anchor and bedding forces
- Equilibrium of the H and V forces
- Anchor analysis in the deep sliding plane
- Detailed result output

Type:

Bore Pile Wall

Diaphragm Wall

Sheet Piling

Girder Plank Wall

MIP

Unit weight gamma (kN/m³)

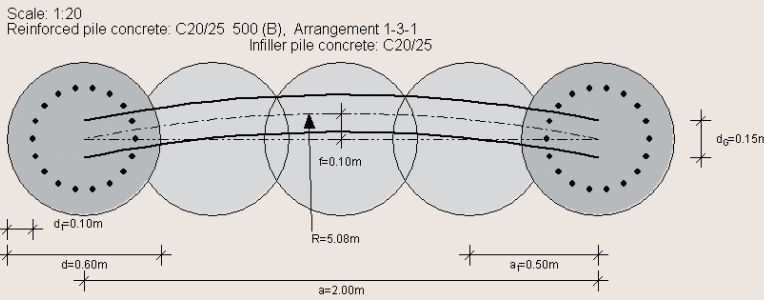
Young's modulus (MN/m²)

Shifting

delta x top

delta x bottom

**Dimensioning of the bore pile wall (to 8.48 m)**



*Different wall types*  
**Design of bore pile walls (1-3-1)**

- Graphic of the system, earth pressures, section forces and deformations
- Display of section forces alternatively characteristic and design values, from dead, live, water and total loads
- Dimensioning option for the design of all components: sheet pilings, in-situ concrete walls incl. circular section of bored piles, girder planks, infillings in concrete, timber or steel, pile or shotcrete infilling, dimensioning of anchors and booms (steel or reinforced concrete)

**Dimensioning of the girder plank wall (to 1.85 m)**

HEB 300 S 235 (St 37-2) Timber infilling: perm.  $\sigma = 12.00 \text{ N/mm}^2$

Scale: 1:10

**Design of a girder plank wall**

Use load case types: Lc1/Lc2/Lc3

Safety factors actions/loads	Lc1	Lc2	Lc3	Lc2/3
Live loads LS 1B (Std.)	1.50	1.30	1.00	1.15
Live loads LS 1C (Std.)	1.30	1.20	1.00	1.10
Live loads railway 1B	1.50	1.30	1.00	1.15
Live loads railway 1C	1.30	1.20	1.00	1.10

Safety factors resistances	Lc1	Lc2	Lc3	Lc2/3
Passive earth pressure	1.40	1.30	1.20	1.25
Water pressure (fav. action)	1.00	1.00	1.00	1.00
Layer parameter tan(phi)	1.25	1.15	1.10	1.13
Layer parameter cohesion	1.25	1.15	1.10	1.13
Sliding resistance LS 1B	1.10	1.10	1.10	1.10
Anchor steel LS 1B	1.15	1.15	1.15	1.15

Factors LS 1A / EAB / EAU

Dimensioning:  DIN 1045 / 18800  DIN 1045-1 / 18800  SIA 262 / 263  ÖNORM B 4700  BS 8110/5950

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