Amiblu®
Pipes designed for generations

FLOWTITE® HOBAS®

Input Data for structural analysis

of application buried pipes in open trench condition, calculation acc. DWA-A 127

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project

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Pipe Details:

nominal diameter DN		sewer pipe	☐
pressure class PN		sewer pressure pipe	☐
nominal stiffness SN		pressure pipe	☐
pipe material		potable water pipe	☐
		installation in protective water area	☐
		air pipe	☐
		storage sewer	☐
		others	

Types of native soil: acc. ATV-DVWK-A 127; DIN 18196 (please add subsoil expertise)

		Native soil	backfilling	Pipe zone
G1	Non cohesive soils (gravel, sand) (GE, GW, GI, SE, SW, SI)	☐	☐	☐
G2	Slightly cohesive soils (GU, GT, SU, ST)	☐	☐	☐
G3	Cohesive mixed soils, silt (GŪ, GŤ, SŪ, SŤ, UL, UM)	☐	☐	☐
G4	Cohesive soils, except silts (TL, TM, TA, OU, OT, OH, UA)	☐	☐	☐
Other types of soil		☐	☐	☐

Proctor density for native soil (Proctor density 85 – 100 %) ____ %

Foundation of pipeline

- ☐ On native soil
- ☐ Very hard and rocky
- ☐ Weak soil, not stable for foundation

Soil replacement: thickness ____ m
material ____
Proctor density D_{Pr} ____ %

Specification of loads:

	Min. cover depth		Max. cover depth	
Depth of earth cover h		m		m
min. Ground water h_w above pipe invert		m		m
max. Ground water h_w above pipe invert		m		m

Other surface loads ____ kN/m²

For pressure pipes
Short term ____ bar, e.g. system test pressure; hydrostatic pressure, water hammer
Long term ____ bar, e.g. operating pressure (OP), system pressure (PN, DP)

Traffic load

☐ no traffic

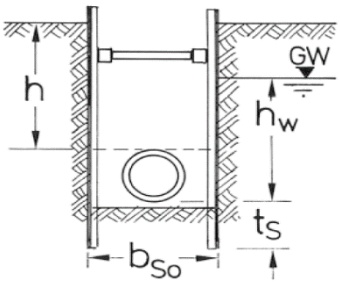
street
- ☐ HCL 60
- ☐ HCL 30
- ☐ HGV 12
- ☐ DIN EN 1991-2, TS und UDL
  - ☐ LM1-lane 3,00 m
  - ☐ LM1-lane 2,70 m
  - ☐ LM1-green field area

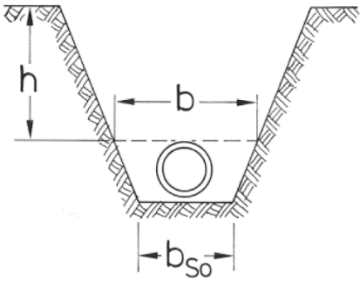
railway
- ☐ one track, UIC
- ☐ two tracks, UIC
- ☐ one track, LM 71
- ☐ two tracks, LM 71

aircraft
- ☐ BFZ 90
- ☐ BFZ 180
- ☐ BFZ 350
- ☐ BFZ 550
- ☐ BFZ 750

Other loads, e.g. special vehicle (please add load scheme with axle, wheels and wheel loads): ____

Building construction:





Type of trench ☐ embankment ☐ single trench ☐ double trench [1] ☐ stepped trench [1]
[1] For special shapes add a sketch

Trench angle ☐ 90° ☐ 60° ☐ 45° ☐ ____

Width of trench b = _____ m at pipe crown

b_{So} = _____ m at pipe trench bottom inclusive planks

Trench planking

☐ no planks

☐ Horizontal planks, also applies to plank walls (Berlin lining)
☐ Planking with plates
☐ Vertical plank with light weight
☐ Vertical plank with boards *
☐ Vertical plank with light weight *
☐ Vertical plank with sheet piling *

* Depth of sheeting below pipe invert t_S = _____ m

* thickness of plank (one-side) b_S = _____ m

bedding

☐ on native soil (acc. EN 1610)
☐ on gravel, sand
☐ on concrete [2)]

[2)] only as spezial construction in agreement with the pipe producer

bedding angle 2α

☐ 90° ☐ 120°
☐ 180°

Cover condition for backfilling:

A1 ☐ Backfilling compacted in layers against the native soil (without proof of compaction degree); also applies to plank walls, Berlin lining

A2 ☐ Vertical pipe trench lining with boards that are not removed before backfilling. Lining boards or devices that are removed step by step during backfilling. Non-compacted backfilling/ backfilling with slurry (only suitable for soils of group G1).

A3 ☐ Vertical trench lining with sheet piling, light weight sheet connection, wooden planks, lining boards or devices that are not removed before backfilling.

A4 ☐ Backfilling compacted in layers against the native soil with proof of the required compaction degree to ZTVE-StB ; also applies to plank walls (Berlin lining). Cover condition A4 is not applicable to sails of group G4.

Bedding condition for pipe:

B1 ☐ Bedding compacted in layers against the native soil or in the embankment (without proof of compaction degree); also applies to plank walls, Berlin lining

B2 ☐ Vertical lining in the pipe zone with planks that reach down to the trench bottom and are not removed before backfilling and compaction. Lining boards or devices provided that the soil is compacted after the linings are removed.

B3 ☐ Vertical lining in the pipe zone with sheet piling or lightweight sheeting and compaction against the lining reaching down below the trench bottom. There is no safe calculation model for determining vertical lining with wooden planks, boards or devices that are not removed before backfilling and compaction the pipe zone.

B4 ☐ Bedding compacted in layers against the native soil or in the embankment with proof of the required compaction degree to ZTVE-StB. Bedding condition B4 does not apply to soils of group G4.