

Project questionnaire for pipe stress calculation according to ATV-DVWK-A 127

Please understand that only completely filled questionnaires can be considered.

Description of the project	Office / company
	Processed by (last name, first name)
	E-mail
Postal code / town	Phone / fax
Street / number	Postal code / town
Start of construction (if known)	Street / number
Type of pipe: _____	Nominal width: _____ mm

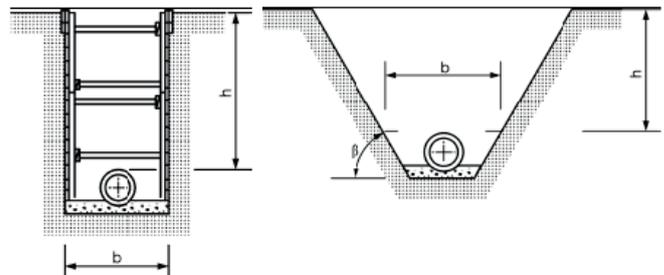
Installation of the pipe

Gravel – sand – bedding:
 (please also refer to the embedding conditions B1-B4 shown below)

Angle of support 2α for the proof of deformation:

- 180° (commonly used with B1 and B4)
- 120° (commonly used with B2 and B3)

- Installation in:**
- embankment
 - trench
 - width of trench b: _____ m
 (at the height of pipe crown)
 - angle of slope β :
 - 45° 60°
 - 90° _____ degrees
 - stepped trench: (drawing required)



Backfill conditions (in trench):

- A1:** Backfill compacted in layers against existing natural ground, also in the case of steel soldier piles with wooden infill (without control of the degree of compaction).
- A2:** Vertical trench construction using trench sheets which are withdrawn after backfilling. Trench plates or other shoring equipment is removed progressively ahead of backfilling; uncompacted backfilling; 'jetting' of backfilling (only suitable for soil group G1).
- A3:** Vertical trench construction using sheet piles, timber boards, wooden planks, trench plates or other shoring equipment, which is only removed on completion of backfilling.
- A4:** Backfill compacted in layers against existing natural ground with control of the degree of compaction as specified in ZTVE-StB; also in the case of steel soldier piles with wooden infill. Backfill condition A4 is not applicable to soil group G4.

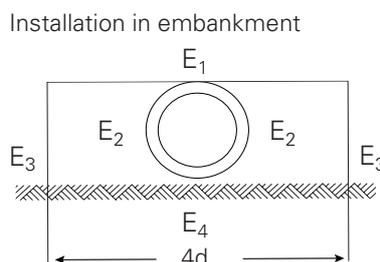
Embedding conditions:

- B1:** Pipe zone fill compacted in layers against the existing natural ground, also in the case of steel soldier piles with wooden infill, or in layers in an embankment (without control of the degree of compaction).
- B2:** Vertical shoring within the pipe zone using trench sheets up to the trench bottom which is only removed after backfilling. Trench plates or other shoring equipment given that compaction of the soil is assured after withdrawal of the equipment.
- B3:** Vertical shoring within the pipe zone using sheet piles or timber boards and compaction against the support up to the trench bottom.
- B4:** Pipe zone fill compacted in layers against the existing natural ground or in layers in an embankment with control of the degree of compaction as specified in ZTVE-StB. Embedding condition B4 is not applicable to soil group G4.

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Soil group according to ATV-DVWK-A 127, Tab.1	Backfill E 1	Embedding area E 2	Native soil E 3	Building ground E 4
G1 – non-cohesive soils; e.g. sand, gravel ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G2 – slightly cohesive soils; e.g. sand, gravel with fine particles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G3 – cohesive mixed soils and silt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G4 – cohesive soils; e.g. clay, silt ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Installation in trench</p>	<input type="checkbox"/> 92 %	<input type="checkbox"/> 92 %	<input type="checkbox"/> 92 %	<input type="checkbox"/> 92 %
	<input type="checkbox"/> 95 %	<input type="checkbox"/> 95 %	<input type="checkbox"/> 95 %	<input type="checkbox"/> 95 %
	<input type="checkbox"/> 97 %	<input type="checkbox"/> 97 %	<input type="checkbox"/> 97 %	<input type="checkbox"/> 97 %
	<input type="checkbox"/> _____ %	<input type="checkbox"/> _____ %	<input type="checkbox"/> _____ %	<input type="checkbox"/> _____ %
	<input type="checkbox"/> acc. to Tab. 8 of ATV-DVWK-A 127	<input type="checkbox"/> acc. to Tab. 8 of ATV-DVWK-A 127		<input type="checkbox"/> E 4 = 10 x E 1')

*) Assumption for soils (granular soil), if there are no further details



Load assumptions

Earth load

- Depth of cover above the crown of the pipe _____ m (minimum 50 cm acc. to ATV-DVWK-A127)
- Weight of cover material 18 kN/m³ 20 kN/m³
 _____ kN/m³

Road traffic loads

- no traffic load (different to ATV-DVWK-A 127)
- 12-tonne truck (acc. to ATV-DVWK-A 127 also to be applied outside traffic loads as a minimum load)
- HGV 30
- HGV 60
- with or without road surface (e.g. tarmac or concrete)
- LM 1 – lane width: 3.0 m
- LM 1 – lane width: 2.7 m
- LM 1 x 0.5 – green space
- other traffic load (e.g. aircraft)
_____ (please enclose type of load and drawing if required)

Railway traffic loads

- UIC 71 – single-track
- UIC 71 – several tracks
- LM 71 – single-track
- LM 71 – several tracks

Additional area loads on the surface

_____ kN/m² (please enclose type of load and drawing if required)

Other loads

Ground water

- yes; height above bottom of pipe _____ m
- no

For the accuracy of the data

Place, date

Signature