

# Questionnaire on the Structural Sizing of SIMODRAIN Shaft Structures Based on DWA A-127

**Return to:** pipingsystems@simona.de  
Phone +49 (0) 6752 14-254

**SIMONA AG**  
Pipes and Fittings Division  
Teichweg 16  
55606 Kirn

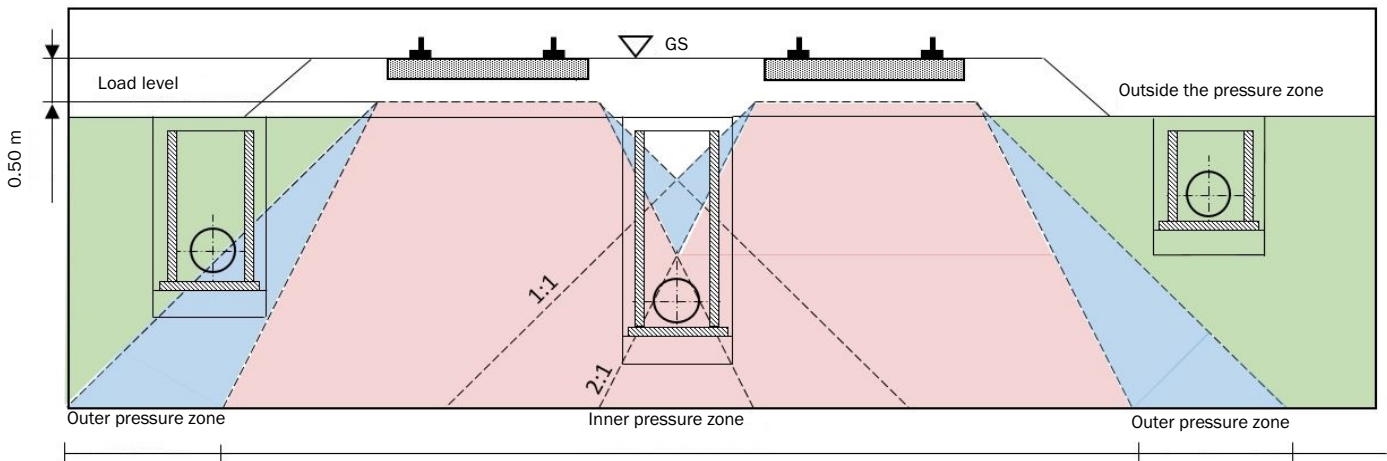
## Your details

Project: \_\_\_\_\_  
 Company: \_\_\_\_\_ Contact person: \_\_\_\_\_  
 Street: \_\_\_\_\_ Town/ZIP: \_\_\_\_\_  
 Phone no.: \_\_\_\_\_ E-mail: \_\_\_\_\_

## Shaft

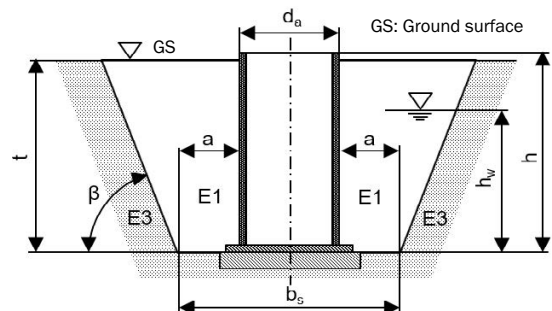
Outside diameter:  $d_a$  \_\_\_\_\_ [mm] Shaft jacket material: \_\_\_\_\_  
 Inside diameter:  $d_i$  \_\_\_\_\_ [mm] Service temperature: \_\_\_\_\_ [°C]  
 Wall thickness:  $e$  \_\_\_\_\_ [mm] Height of shaft part:  $h$  \_\_\_\_\_ [mm]

## Placement conditions



Shaft position:  Inner pressure zone  Outer pressure zone  Outside the pressure zone

Pic. depth to GS:  $t$  \_\_\_\_\_ [mm]  
 Pit diameter:  $b_s$  \_\_\_\_\_ [mm]  
 Working space:  $a$  \_\_\_\_\_ [mm]  
 Angle of slope:  $\beta$  \_\_\_\_\_ [°]  
 Spec. weight of soil: \_\_\_\_\_ [kN/m<sup>3</sup>]



## Soil characteristics

	Soil group	Proctor density	Modulus of deformation
Pipe zone E1	G _____	$D_{Pr}$ _____ [%]	$E_{v2}$ : _____ [N/mm <sup>2</sup> ]
In situ soil E3	G _____	$D_{Pr}$ _____ [%]	$E_{v3}$ : _____ [N/mm <sup>2</sup> ]

G1: non-cohesive soils (GE, GW, GI, SE, SW, SI)  
 G2: slightly cohesive soils (GU, GT, SU, ST)

G3: cohesive mixed soils, silt (GU\*, GT\*, SU\*, ST\*, UL, UM)  
 G4: cohesive soils (TL, TM, TA, OU, OT, OH, OK, UA)

DIN  
18196

**Live loads**

Shaft not fit for traffic or  Shaft fit for traffic

LM71 (single-track)  LM71  No live load

Comment: \_\_\_\_\_

**Groundwater above shaft bottom**

Non-existent

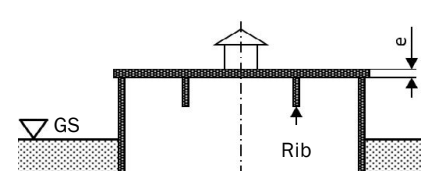
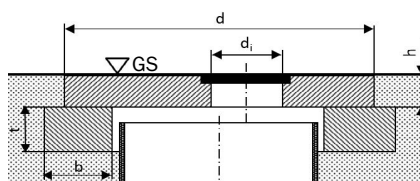
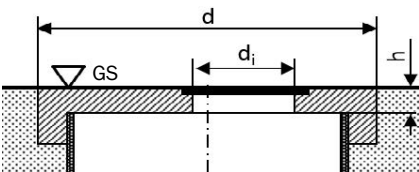
Existent, with min. \_\_\_\_\_ [mm] max. \_\_\_\_\_ [mm] groundwater  $h_w$  above shaft bottom

**Manhole cover**

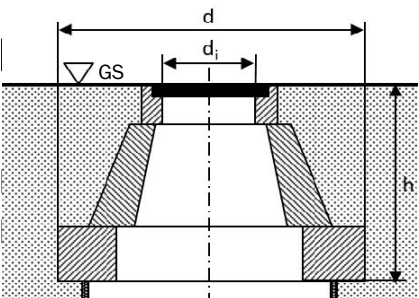
Surface-mounted road cover

Separately supported road cover

Flat roof



Standard concrete cone



Cover height: h \_\_\_\_\_ [mm]

Diameter: d \_\_\_\_\_ [mm]

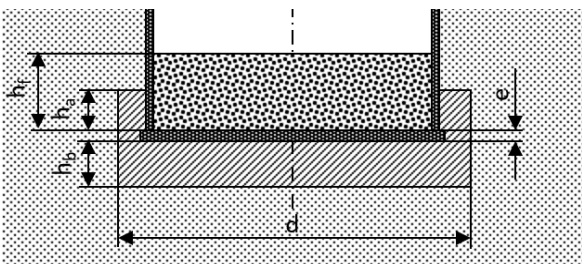
Access diameter:  $d_i$  \_\_\_\_\_ [mm]

Cover thickness: e \_\_\_\_\_ [mm]

Width ring foundation: b \_\_\_\_\_ [mm]

Depth ring foundation: t \_\_\_\_\_ [mm]

**Shaft bottom**



Diameter of foundation: d \_\_\_\_\_ [mm]

Height of foundation:  $h_b$  \_\_\_\_\_ [mm]

Thickness bottom sheet: e \_\_\_\_\_ [mm]

Height concrete edging:  $h_a$  \_\_\_\_\_ [mm]

Height concrete filling:  $h_f$  \_\_\_\_\_ [mm]

**\*Please note:** For our EBA-certified SIMODRAIN shafts (DN/OD 400 to 1000; SDR 17) no structural proof is required, provided the placement conditions conform to type approval. Only if shaft geometries or placement conditions differ is it necessary to produce a verifiable structural proof for consent in an individual case ("ZIE").

Please enclose any other information required for calculation separately!

Place, date: \_\_\_\_\_

Signature: \_\_\_\_\_