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European Technical Assessment

ETA 19/0018
of 23/05/2025

General Part

Technical Assessment Body issuing the European Technical Assessment:	RISE Research Institutes of Sweden AB
Trade name of the construction product	Centrum Rock Point
Product family to which the construction product belongs	Rock shoes for concrete piles
Manufacturer	Centrum Pæle A/S Grønlandsvej 96 7100 Vejle , Denmark
Manufacturing plant(s)	ECM industries Runddelen 11 6040 Egtved, Øster Starup - Denmark
This European Technical Assessment contains	5 pages including 1 Annex which form an integral part of this assessment. Annex 1A contains confidential information and is not included in the European Technical Assessment when that assessment is publicly disseminated.
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	EAD 200014-01-0103, Pile joints and rock shoes for concrete piles, issued June 2018.
This version replaces	ETA 19/0018, issued on 12/12/2023

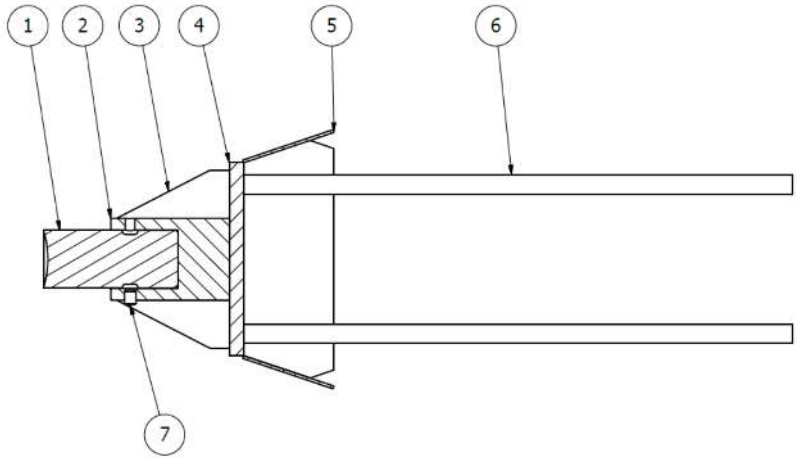
Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Specific parts

1 Technical description of the product

The Centrum Rock Point is a steel construction made of steel sheet, steel bar and steel reinforcement bar, with a hardened tip (Figure 1.) to be used as protective reinforcement for the leading end of the first precast reinforced concrete pile segment when being driven into rocky ground or down to solid rock or to prevent piles from sliding off steep inclined bedrock, or in soil that contains large boulders or other large objects that could potentially influence the forces on the pile during driving. The Rock point ensures that the force applied to the pile is concentrated in the rock point tip and thus preventing the pile from being damaged when driving it into the bedrock/ground.

Figure 1. Principal rock point construction



1. Rock point tip /Dowel
2. Centerbush /Dowel casing
3. Triangle reinforcement /Gusset plate
4. Base plate /Bottom plate
5. Skirt /Collar
6. Connection rod /Rebar
7. Set screw M12

Dimensions, tolerances and materials are given in Annex 1.

2 Intended use

2.1 General

The products are intended to be used with concrete piles made of concrete manufactured according to EN 206 for piling in undisturbed natural soils and compacted non-aggressive fills of mineral soil materials.

The product is used when driving concrete piles to the bedrock, to prevent concrete piles from sliding off steep inclined bedrock or in soil that contains large boulders or other large objects that could potentially influence the forces on the pile during driving and thus prevents breaking of pile.

2.2 Working life /Durability

Intended working life is 100 years

Corrosion rate 1,2 mm per 100 years as recommended in standard EN 1993-5, Table 4-1, should then be taken into account. Alternatively, empirical measurement data and statistical deterioration design model may be used when the conditions certainly can be classified as normal. Local conditions, standards and regulations in force at the place of use shall in both cases be considered and respected.

3 Performance of the product and references to the methods used for its assessment

3.1 Essential characteristics and their performance

		Characteristic	Performance
BWR 1	Mechanical resistance and stability	Resistance of rock shoe	Clause 3.1.1
		Dimensional tolerances	Clause 3.1.1
BWR 2	Safety in case of fire	Reaction to fire	Clause 3.1.2
BWR 3	Hygiene, health and the environment	Not relevant	
BWR 4	Safety in use	Not relevant	
BWR 5	Protection against noise	Not relevant	
BWR 6	Energy economy and heat retention	Not relevant	
BWR 7	Sustainable use of natural resources	Not relevant	

3.1.1 Mechanical resistance and stability, BWR 1

Essential characteristic	Performance	
Resistance of rock shoe	Class 1	According to standard SS-EN 12794
Dimensional tolerances	given in Annex A1	

3.1.2 Safety in case of fire, BWR 2

Essential characteristic	Performance	
Safety in case of fire	Reaction to fire, class A1	Commission Decision 96/603/EC

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the decision 2000/606/EC - Commission decision of date 26 September 2000, published in the Official Journal of the European Union (OJEU) L231/12 of 12/10/2000, of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the regulation (EU) No 305/2011) given in the following table applyies:

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Rock shoes for concrete piles	For structural uses	-	2+

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at RISE.

Issued in Borås on 2025-05-23

By RISE Research Institutes of Sweden AB

Martin Tillander
Director product certification

Details of rock point

Figure A1-1. Principal dimensions of rock points for precast concrete piles.

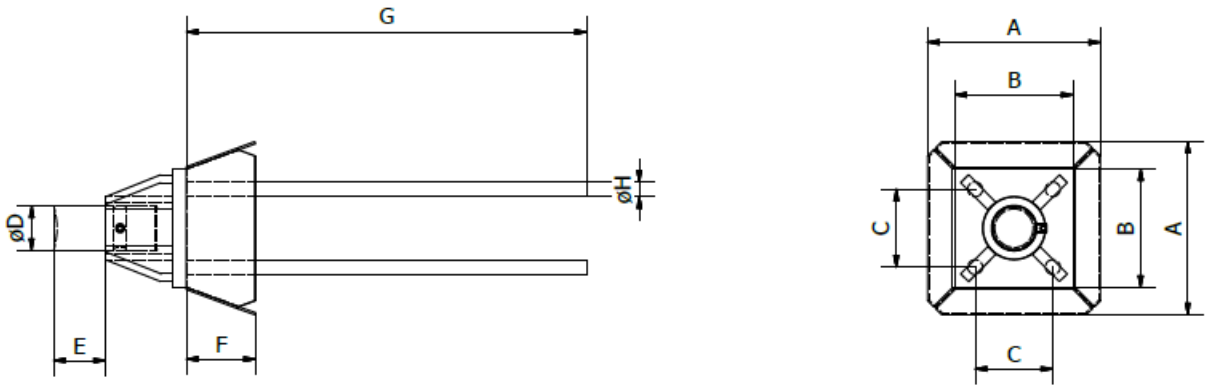


Table A1-1. Principal dimensions of rock point for precast concrete piles

General dimensions								
Pile dimension	A	B	C	Ø D	E	F	G	Ø H
[mm]	+0 /-2 [mm]	+0 /-2 [mm]	+0 /-3 [mm]	+0 /-0,5 [mm]	±1 [mm]	±2 [mm]	+80 /-0 [mm]	Ø H [mm]
From: 200 To: 400	From: 195 To: 399	From: 160 To: 280	From: 70 To: 230	From: 50 To: 120	From: 50 To: 130	From: 32 To: 150	From: 500 To: 1200	From: 16 To: 32

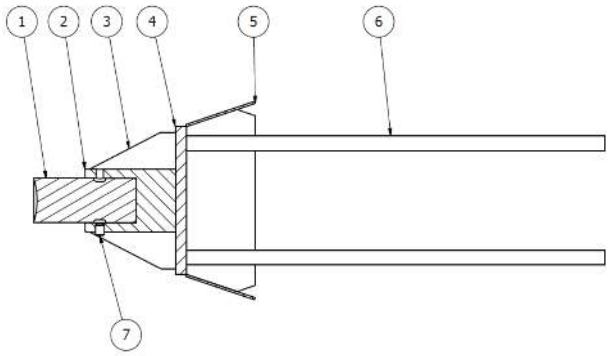


Table A1-2. Rock point parts list

Parts list with specification of materials				
Item	Qty	Description	Material	Standard
1	1	Dowel/ Rock point tip	33MnCrB5-2	EN ISO 683-2
2	1	Dowel casing/ Centerbush	S355J2	EN 10025-2
3	4	Gusset plate/ Triangle reinforcement	S355J2+N	EN 10025-2
4	1	Bottom plate/ Base plate	S355J2	EN 10025-2
5	4	Collar/ Skirt	S355J2+N	EN 10025-2
6	4	Rebar/ Connection rod	B500B	EN 1992-1-1
7	1	Set screw DIN 916 M12		DIN 916