

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-14/0132
of 6 November 2020

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Eurotec Ceiling anchor EDN

Product family
to which the construction product belongs

Fasteners for use in concrete for
redundant non-structural systems

Manufacturer

Eurotec GmbH
Unter dem Hofe 5
58099 Hagen
DEUTSCHLAND

Manufacturing plant

Werk I

This European Technical Assessment
contains

9 pages including 3 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 330747-00-0601, Edition 06/2018

This version replaces

ETA-14/0132 issued on 17 June 2014

The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.

Specific Part

1 Technical description of the product

The Eurotec ceiling anchor EDN is an anchor made of galvanised steel which is pushed into a drilled hole and anchored by deformation-controlled expansion.
The product description is given in Annex A.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.
The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	See Annex C 1

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for all load directions and modes of failure for simplified design	See Annex C 1
Durability	See Annex B 1

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

In accordance with European Assessment Document EAD No. 330747-00-0601, the applicable European legal act is: [97/161/EC].
The system to be applied is: 2+

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document

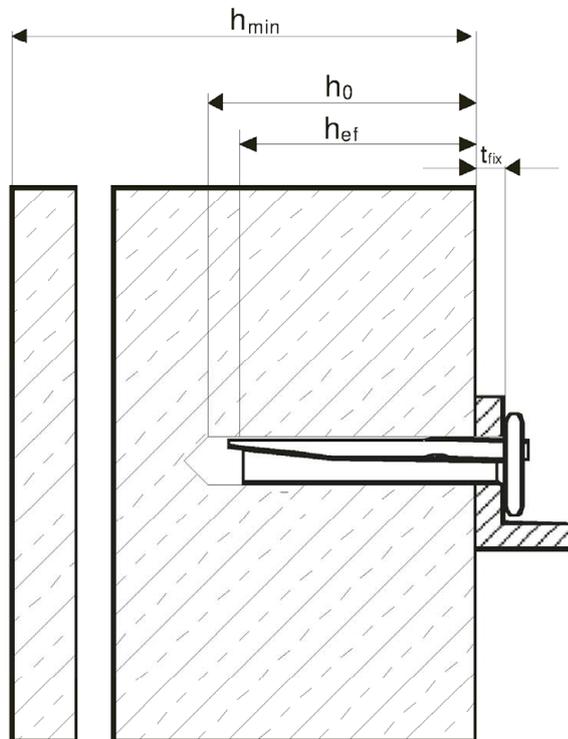
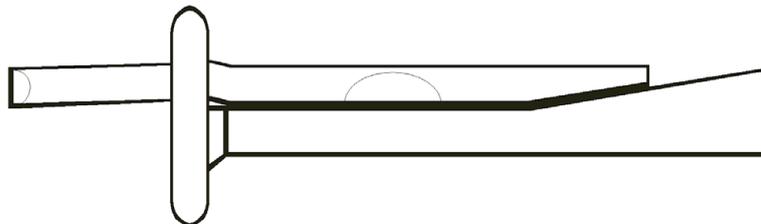
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 6 November 2020 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Baderschneider

Installed condition



Electronic copy of the ETA by DIBt: ETA-14/0132

Eurotec Ceiling Anchor EDN

Product description
Installed condition

Annex A 1

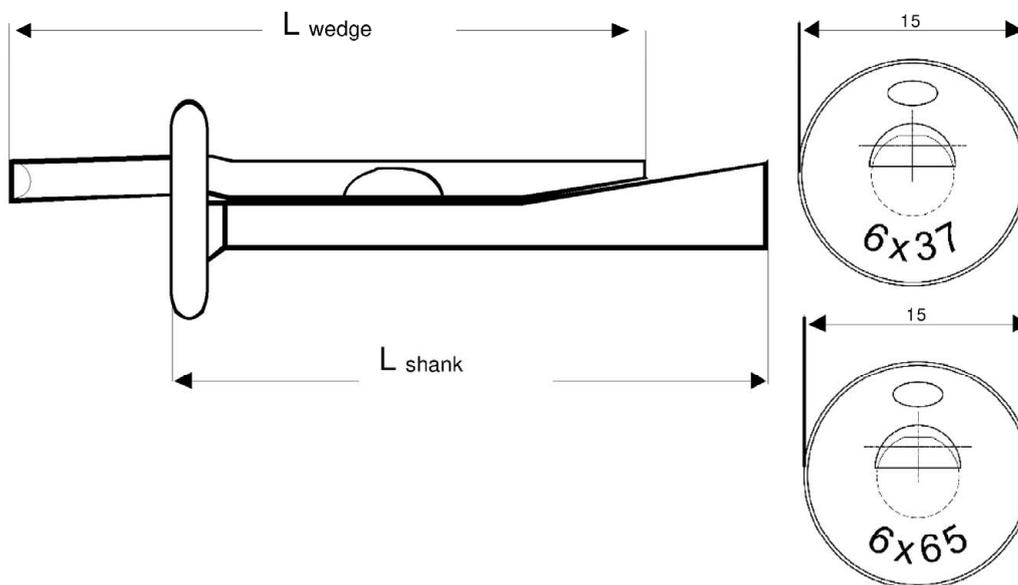


Table A1: Dimensions and material

Ceiling Anchor		6	6/65
Length of wedge	[mm]	43	68
Length of shank	[mm]	39	64,5
Material	Steel acc. to EN 10263-2:2017		

Specifications of intended use

Anchorage subject to:

- Static and quasi-static loads: all sizes.
- Fire exposure: all sizes.

Base materials:

- Compacted reinforced and unreinforced normal weight concrete without fibres according to EN 206:2013
- Strength classes C20/25 to C50/60 according to EN 206:2013.
- Cracked and non-cracked concrete: all sizes.

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e. g. position of the anchor relative to reinforcement or to supports, etc.).
- Design of fastenings according to EN 1992-4:2018, Design Method B and Technical Report TR 055

Installation:

- Hole drilling by hammer drilling only.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- The anchor may only be set once.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted drill hole is filled with high strength mortar and if under shear or oblique tension load it is not in the direction of load application.

Eurotec Ceiling Anchor EDN

Intended Use
Specifications

Annex B 1

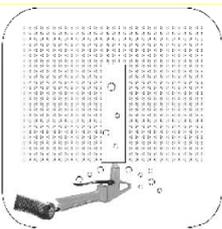
Table B1: Installation Parameters

Ceiling Anchor			6	6/65
Nominal diameter of drill bit	d_0	[mm]	6	
Cutting diameter of drill bit	d_{cut}	[mm]	$\leq 6,4$	
Depth of drill hole	$h_0 \geq$	[mm]	40	
Effective anchorage depth	h_{ef}	[mm]	32	
Minimum thickness of member	h_{min}	[mm]	80	
Maximal thickness of fixture	t_{fix}	[mm]	4,5	32,5
Minimum spacing	s_{min}	[mm]	200	
Minimum edge distance	c_{min}	[mm]	150	

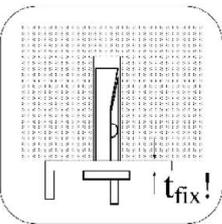
Installation Instructions



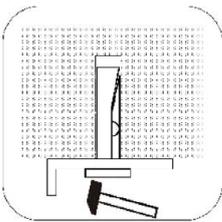
Hole drilling by hammer drilling.



Blow out dust from drilling hole.



Insert anchor with fixture.



Hammer down wedge. The anchor is properly set if the wedge is fully dropped in.

Eurotec Ceiling Anchor EDN

Intended Use
Installation parameters
Installation Instructions

Annex B 2

Table C1: Characteristic resistance

Ceiling Anchor			6	6/65
For all load directions and for all failures modes				
Characteristic resistance (in concrete C20/25 to C50/60)	F^0_{Rk}	[kN]	4	
Characteristic edge distance	$c_{cr} = c_{min}$	[mm]	150	
Characteristic spacing	$s_{cr} = s_{min}$	[mm]	200	
Partial factor	γ_M	[-]	1,5	
Installation factor	γ_{inst}	[-]	1,0	
Shear load with lever arm				
Characteristic bending moment	$M^0_{Rk, S}$	[Nm]	6,6	
Partial factor	γ_M	[-]	1,5	
Installation factor	γ_{inst}	[-]	1,0	

Table C2: Characteristic resistance under fire exposure in concrete C20/25 to C50/60 in any load direction

fire resistance class			6	6/65
R 30	Characteristic resistance without lever arm	$F_{Rk,s,fi30}^1$	[kN]	0,36
R 60	Characteristic resistance without lever arm	$F_{Rk,s,fi60}^1$	[kN]	0,28
R 90	Characteristic resistance without lever arm	$F_{Rk,s,fi90}^1$	[kN]	0,20
R 120	Characteristic resistance without lever arm	$F_{Rk,s,fi120}^1$	[kN]	0,15
R 30 to 120	Characteristic resistance with lever arm	$M^0_{Rk,s,fi}$	[Nm]	No performance assessed
R 30 to 120	Spacing	$s_{cr, fi}$	[mm]	200
	Edge distance	$c_{cr, fi}$	[mm]	150

¹⁾ $N_{Rk,s,fi} = N_{Rk,p,fi} = V_{Rk,s,fi} = F_{Rk,s,fi}$

In case of fire exposure from more than one side, the edge distance shall be ≥ 300 mm

Eurotec Ceiling Anchor EDN

Performances
Characteristic resistance and
Characteristic resistance under fire exposure

Annex C 1