Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment

ETA-12/0607 of 18 January 2018

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	Blue-Tip Screwbolt
Product family to which the construction product belongs	Concrete screw for use in concrete
Manufacturer	Stanley Black & Decker Deutschland GmbH Black & Decker Straße 40 65510 Idstein DEUTSCHLAND
Manufacturing plant	Manufacturing Plant 5 and 6
This European Technical Assessment contains	11 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 330232-00-0601

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Specific Part

1 Technical description of the product

The Blue-Tip Screwbolt is an anchor made of zinc plated steel of sizes BT10, BT12 and BT16. The anchor is screwed into a predrilled cylindrical drill hole. The special thread of the anchor cuts an internal thread into the member while setting. The anchorage is characterised by mechanical interlock in the special thread.

The product description is given in Annex A.

2 Specification of the intended use in accordance with the applicable EAD

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 the assumption of 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 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Product performance for static and quasi static action	See Annex C1 / C 2
Displacements	See Annex C1 / C 2

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Anchorages satisfy requirements for Class A1
Resistance to fire	See Annex C 3

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

In accordance with European Assessment Documents EAD No. 330232-00-0601 the applicable European legal act is: [96/582/EC].

The system to be applied is: 1

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 at Deutsches Institut für Bautechnik.

Issued in Berlin on 18 January 2018 by Deutsches Institut für Bautechnik

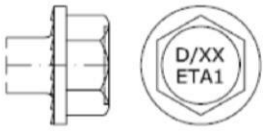
Dr.-Ing. Lars Eckfeldt
p.p. Head of Department

beglaubigt:
Baderschneider

Blue-Tip Hex head version

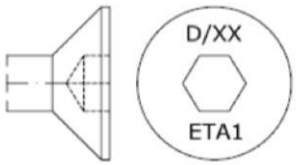
Head styles and marking

BT HEX

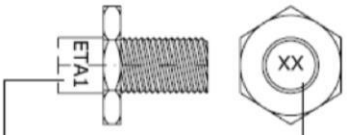


Head Marking:
Identifying mark: ETA1
Diameter D: e.g. 10
Length XX: e.g. 150

BT CS



BT ET

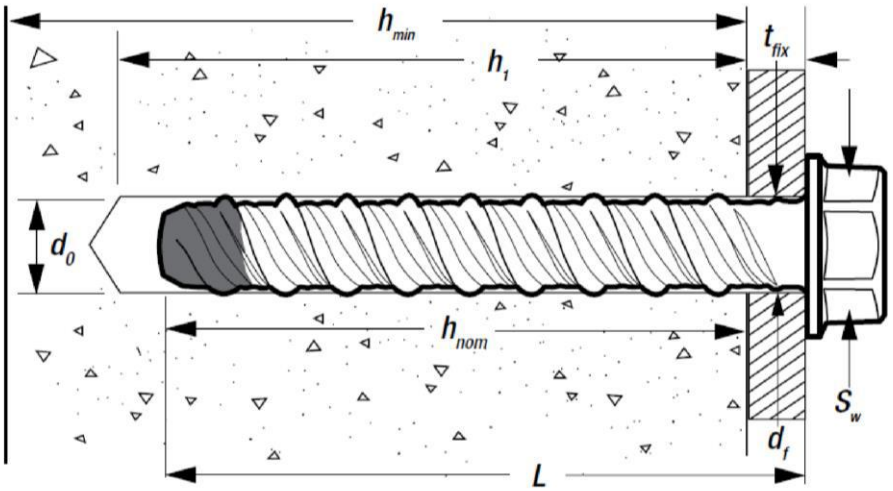


Marking I:
Identifying mark: ETA1
Diameter D: e.g. 10

Marking II:
Length XX: e.g. 150

Marking D/XX where
D= Nominal diameter of the bore hole [mm]
XX= Length of anchor [mm]

Anchor in use



Blue-Tip Screwbolt	Annex A1
Product description Product Instalation condition	

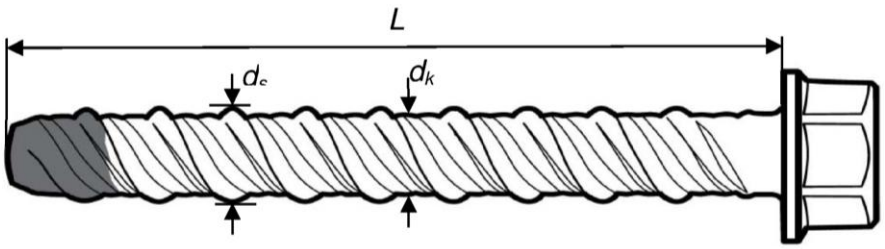


Table A1: Dimensions and Material

Anchor size		**BT10**	**BT12**	**BT16**
Length of the anchor	L ≥ [mm]	60	75	95
	L ≤ [mm]	320	320	320
Diameter of the shaft	d_k [mm]	9.7	11.6	15.2
Outer diameter of the thread	d_s [mm]	11.2	13.4	17.9
Nominal drill hole diameter	d_0 [mm]	10	12	16
Material		Special hardened C-Steel, Zinc plated > 5 µm		

Blue-Tip Screwbolt

Annex A2

Product description
Dimension and material

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Specifications of intended use

Anchorages subject to:

- Static and quasi-static loading.
- Fire exposure.

Base materials:

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2000.
- Strength classes C20/25 to C50/60 according to EN 206-1:2000.
- Cracked and non-cracked concrete.

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions.

Design:

- 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
- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Design for fastenings in accordance to FprEN 1992-4:2016 and EOTA Technical Report TR 055.

Installation:

- Hole drilling by hammer drill with conventional carbide bit.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Cleaning of the hole of drilling dust.
- In case of aborted hole, drilling of new hole at a minimum distance of twice the depth of the aborted hole, or smaller distance provided the aborted drill hole is filled with high strength mortar and no shear or oblique tension loads in the direction of aborted hole.
- After Installation further turning of the anchor is not possible. The head of the anchor is supported on the fixture and is not damaged.

Blue-Tip Screwbolt	Annex B1
Intended Use Specifications	

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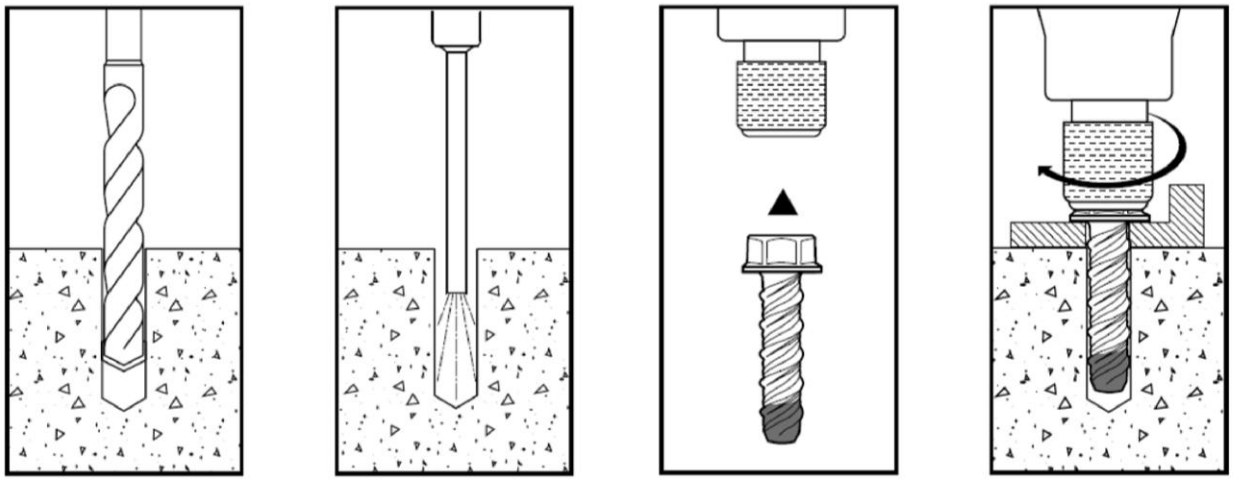
Table B1: Installation parameters

Anchor size			**BT10**		**BT12**		**BT16**	
Nomial drill hole diameter	d_0	[mm]	10		12		16	
Depth of drill hole	$h_1 \geq$	[mm]	65	85	80	95	90	125
Nominal embedment depth	h_{nom}	[mm]	55	75	70	85	80	110
Maximum clearance hole in the fixture	d_f	[mm]	12		14		19	
Minimum thickness of member	h_{min}	[mm]	105	115	125		145	165
Minimum spacing	s_{min}	[mm]	60		90		110	
Minimum edge distance	c_{min}	[mm]	60		90		110	

Installation: Blue-Tip



Blue-Tip Screwbolt

Intend Use
Installation Parameters, minimum spacing and minimum edge distance of anchor
Installation Instruction,

Annex B2