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## European Technical Assessment

**ETA-24/0219**  
of 02-07-2024

### General Part

#### Technical Assessment Body issuing the European Technical Assessment:

Kiwa Nederland B.V.

**Trade name of the construction product**

**BARTEC-FORTEC Headed Bar**

**Product family to which the construction product belongs**

Reinforcing and Prestressing Steel for Concrete and Ancillaries, Post Tensioning Kits

**Manufacturer**

Dextra Manufacturing Co. Ltd.  
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**This European Technical Assessment contains**

4 pages

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

EAD 160012-01-0301, edition April 2021  
Headed reinforcing steel bars

**This version replaces**

ETA 24/0219 Issued on 15/05/2024

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## **Specific parts**

### **1. Technical description of the product**

The BARTEC-FORTEC threaded headed bars are made of an circular anchor steel plate that is screwed into the end of the reinforcement bar. The bar complies with EN 10080 and its mechanical properties are in line with Annex C of EN 1992-1-1. The product range is for bars of nominal diameter from 16 mm to 40 mm of grade B500B and B500C. More details about the product are given in Annex A.

### **2. Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)**

#### **2.1. Intended use**

Headed reinforcing steel bars are used to anchor reinforcing bar in reinforced concrete structures. The head provides mechanical end anchorage or an alternative to developing reinforcement through the combination of bond and bends/hooks. This European Technical Assessment (ETA) applies to the use in concrete structures with static and quasi-static loading.

#### **2.2. Assumed working life**

The provisions made in this ETA are based on the assumed working life of the headed reinforcing steel bars for the intended use of 100 years when installed in the works. These provisions are based upon the current state of the art and the available knowledge and experience.

When assessing the product, the intended use as foreseen by the manufacturer shall be taken into account. The real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for works.

The real working life of a product incorporated in a specific works depends on the actual environmental conditions, as well as on the particular conditions of the design, execution, use and maintenance of that works.

Therefore, it cannot be excluded that in certain cases the real working life of the product may also be shorter than referred to above.

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

The methods of verification and characteristics of BARTEC-FORTEC threaded headed bars evaluated in this ETA are given in Table 1.

Table 1 Essential characteristics, assessment methods and performances of BARTEC-FORTEC threaded headed bars.

No.	Essential characteristic	Product performance
Basic Works Requirement 1: Mechanical resistance and stability		
1.	Robustness of head-to-bar connection	The capability of head for anchoring corresponds to category B3 according to clause 7.3.2 of ISO 15698-1.
2.	Characteristic resistance under static and quasi-static loading	The capability of head for anchoring corresponds to category B3 according to clause 7.2.2 of ISO 15698-1.
3.	Characteristic resistance under seismic loading	NPA
4.	Characteristic resistance under fatigue loading	NPA
Basic Works Requirement 2: Safety in case of fire		
5.	Reaction to fire	Class A1

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

In accordance with the European Assessment Document EAD 160012-01-0301 the applicable European legal act is: Decision 97/597/EC. The system of assessment and verification of constancy of performance to be applied to the BARTEC-FORTEC headed bars is System 1+.

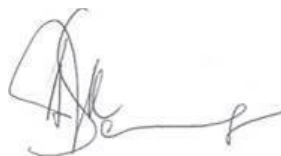
### 5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

This ETA is issued for BARTEC-FORTEC threaded headed bars on the basis of data/information deposited at Kiwa Nederland B.V. which identifies the product that has been assessed.

Changes to the product/production process, which could result in this deposited data/information being incorrect, should be notified to the approval body before the changes are introduced. Kiwa Nederland B.V. will decide whether such changes affect the ETA and if so whether further assessment or alterations to the ETA shall be necessary.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan, in accordance with Section 3.2 of EAD 160012-01-0301. The control plan shall be handed over by the manufacturer to the notified body (bodies) involved in the assessment and verification of constancy of performance.

Issued in Rijswijk on 02-07-2024 by



Ron Scheepers  
Kiwa Nederland B.V.

## Annex A Product description

All simplified drawing tables given in this Annex A are taken from the technical documentation provided by Dextra Manufacturing Co., Ltd.

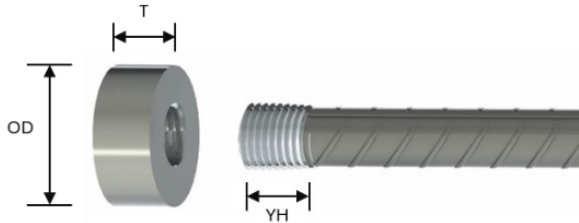


Figure A 1 Scheme

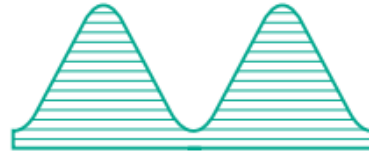


Figure A 2 Cut thread profile

Tabel A 1 Dimensions

Model	Nominal diameter of reinforcing bar	Thread	Head dimension (mm)				
	Ø (mm)		Thread size	OD <sup>1</sup>	T <sup>2</sup>	YH min	YH max
BFEAL16	16	Cut thread	M20x2.5	52	18	19	21
BFEAL20	20	Cut thread	M24x3.0	65	20	21	24
BFEAL25	25	Cut thread	M30x3.5	85	25	26	29
BFEAL32	32	Cut thread	M36x4.0	105	32	36	40
BFEAL40	40	Cut thread	M45x4.5	130	38	42	46

<sup>1</sup>Given OD dimensions are to be regarded as target sizes.

<sup>2</sup>Given T dimensions are to be regarded as minimum sizes.