PREBENA®

ETA

CE

European Technical Assessment for staples as wood connecting fasteners

ETA-16/0101

MADE IN GERMANY

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ETA - Certificate

PREBENA®

Deutsches Institut für Bautechnik DIBt

Member of EOTA
www.eota.eu

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-16/0101 of 18 July 2016

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	PREBENA tack staples d = 1,52 mm d = 1,80 mm d = 2,00 mm
Product family to which the construction product belongs	Dowel-type fasteners with resin coating
Manufacturer	PREBENA Wilfried Bornemann Seestraße 20-26 63679 Schotten DEUTSCHLAND
Manufacturing plant	PREBENA Wilfried Bornemann Seestraße 20-26 63679 Schotten DEUTSCHLAND
This European Technical Assessment contains	14 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	European Assessment Document (EAD) 130019-00-0603

The European Technical Assessment

What is the ETA?

The European Technical Assessment (ETA) provides a Europe-wide standardised, independent procedure for assessing the main performance characteristics of a construction product. The legal basis for the ETA procedure is Regulation (EU) No. 305/2011 (Construction Products Regulation).
The abbreviation ETA is derived from the English term "European Technical Assessment".

A demanding assessment

What advantages does the ETA offer?

The ETA procedure offers manufacturers and users numerous advantages

- **Europe-wide recognition:** The ETA procedure is clearly regulated in the Construction Products Regulation. ETA is thus recognised throughout the EU and furthermore in all Member States that subscribe to the ETA procedure.

- **Objectivity and independence:** In particular, ETA offers the security and credibility of an objective technical assessment. ETAs may only be issued by independent bodies designated by the Member States. This creates transparency and trust in the market. The DIBt is the only Technical Assessment Body named by Germany .

- **Protection of legitimate expectations by means of continual monitoring:** The ETA procedure is linked to a "system for the assessment and monitoring of constancy of performance" of the assessed construction product. These systems include at least periodic factory production control by the manufacturer. Independent bodies must additionally be involved dependent upon the safety relevance of the product.

- **CE marking:** The ETA procedure allows CE markings to be used on construction products for which no harmonised standard exists. With the ETA, the product can thus be freely traded on the European market. Where a harmonised standard already exists, the ETA may be used to include in the CE marking additional essential characteristics which are not covered by the standard or for which the standard does not provide an appropriate test procedure.

Staples as a certified construction product - recognised throughout Europe and respected worldwide

The European Technical Assessment (ETA) replaces the general building inspectorate approval, which can no longer be extended from 2019.

ETA approval entitles the holder to a CE marking and offers reliable proof of special performance characteristics for permanent use in the construction, prefabricated house and timber frame construction sectors.

- Strict certification requirements
- Higher pull-out values compared to the previous general building inspectorate approvals
- Greater wire strength
- Guaranteed service life for the staples of at least 50 years
- Unlimited validity of the approval

According to Eurocode 5, staples used in structural timber construction must not be subjected to sustained or continuous pull-out forces (e.g. in the case of suspended ceilings or ceiling sections). **A staple with ETA approval is absolutely essential for such purposes.**

PREBENA ETA staples are
- **approved for sustained pulling out**
- **approved for use with wood fibre insulating materials with stipulated pull-through values**

What is certified?

Staple certification for wire Ø 1.52 - 2.0 mm
up to 170 mm in length in the designs:
RF = rust and acid-resistant, material no. 1.4301
SV = highly galvanised, at least 12 µm galvanisation

Approval possible for wire Ø 1.52 mm,
e.g. for PREBENA types: L, Z, GX, KG, S, WD, ZK
and many more

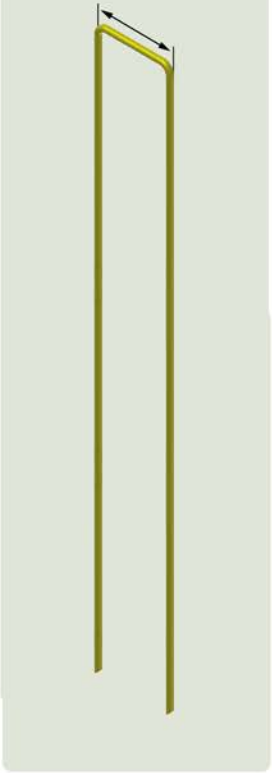
Approval possible for wire Ø 1,80 mm,
e.g. for PREBENA types: Q, SB, WH, ZB
and many more

Approval possible for Ø 2.00 mm,
e.g. for PREBENA types: WP, QL, WK, WL
and many more

The highly galvanised PREBENA staples made of steel wire are manufactured with a zinc coating of at least 12 µ. Steel wire, material no. 1.4301 (V2A), is used for the rust and acid-resistant staples.

EN1995-1-1 (Eurocode 5) and product standard EN14592 continue to apply for the use of PREBENA-ETA staples.

Ø 1,52 mm:	8,8 - 30 mm
Ø 1,80 mm:	10,5 - 30 mm
Ø 2,00 mm:	11,6 - 30 mm



Materials for connections

The PREBENA staples are used for establishing load-bearing connections with the following materials:

Materials for the staple substrate

- Solid softwood in accordance with EN 338 / EN 14081-1
- Glued laminated lumber (softwood) in accordance with EN 14080
- Laminated beam lumber in accordance with EN 14080
- Laminated veneer lumber LVL in accordance with EN 14374
- Cross laminated lumber in accordance with European Technical Approvals / Assessments, EN 16351 or in accordance with the national regulations applicable at the place of installation

Materials for the connected component

- Oriented Strand Board (OSB) in accordance with EN 300 and EN 13986
- Plywood in accordance with EN 636 and EN 13986
- Cement-bonded chipboards in accordance with EN 634-2 and EN 13986
- Fibreboards in accordance with EN 622-2, EN 622-3 and EN 13986
- Laminated veneer lumber LVL in accordance with EN 13986 in conjunction with EN 14279
- Solid wood panels in accordance with EN 13353 and EN 13986
- Gypsum boards in accordance with EN 520, bulk density $p > 680$ kg/m^3 with the exception of type D,
- Gypsum board type D, bulk density $p > 800$ kg/m^3
- Gypsum fleece and gypsum fibre boards in accordance with EN 15283-1 and EN 15283-2
- Cement-bonded mineral building boards in accordance with EN 12467
- Wood fibre insulating materials in accordance with EN 13171

Requirements and definition

DIN EN 14592

Staples are designed in accordance with the product standard DIN EN 14592.
This standard specifies the material properties as well as the required test methods that are necessary to make the fasteners conform to ETA requirements.

This distinction is demonstrated by the CE marking.
The standard also stipulates a number of verification and testing procedures to pursue receipt of the CE marking.

CE conformity in accordance with DIN EN 14592

With its **CE conformity**, the manufacturer **PREBENA** declares "that the product complies with the applicable requirements".

With the CE conformity, the company PREBENA is obliged to document its processes precisely in order to guarantee assurance and compliance with the EU directive.

Definition of staples in accordance with DIN EN 14592:

- The zinc coating must have a layer thickness of at least >12 µm
- Cross-sectional area must be circular, rolled barrel-shaped or rectangular
- Steel wire must have a minimum tensile strength of 800 N/mm^2

Mechanical properties must be ascertained and made available to the end user.

- Characteristic flow moment
- Characteristic extract parameter
- Characteristic head pull-through parameter

These values are ascertained with the test standards prescribed by the product standard DIN EN 14592 and must correspond to the specifications of the standard.

Service classes

The service classes are a major element in the planning and execution of timber constructions.
These requirements are taken into account in the calculations of the strength and rigidity of the components and component connections that are to be designed.
Reliable planning can only be assured if designs are based on these guide values

The service classes (NKL) were defined in accordance with DIN EN 14592:

Service class 1 - not relevant for ETA!

This is characterised by a moisture content in the building materials that corresponds to a temperature of 20 °C and a relative humidity of the ambient air which may exceed 65% for several weeks a year.

Service class 2

This is characterised by a moisture content in the building materials that corresponds to a temperature of 20 °C and a relative humidity of the ambient air which may exceed 85% only for several weeks a year.

Service class 3

This is used when the moisture content and climatic conditions exceed those for usage class 2.

Note on the service classes:

- With NKL 1, the average moisture content of coniferous timbers does not exceed 12%
- With NKL 2, the average moisture content of coniferous timbers does not exceed 20%

This must always be taken into consideration for a connection using suitable fasteners.

Mechanical properties

Here you can see the complete CE label required by DIN EN 14592.

Our fasteners conform to the properties required by the ETA.
The values required for the structural planning in accordance with EN 1995-1-1 can be found in the CE data sheet. These documents can be downloaded from our website www.prebena.de.
Or simply scan the QR code on the labels of the fasteners.

1 • Service class
2 • CE marking
3 • Material in accordance with ETA-16/0101
4 • Conforms to EN 14592
5 • Fire behaviour in accordance with EN 14566
6 • Year of manufacture
7 • DoP number (Declaration of Performance)
8 • Manufacturer's address
9 • Batch / factory number
10 • Quantity
11 • Type designation
12 • Staple design
13 • EAN code
14 • QR code
15 • Illustration with dimensions

ETA-Quality Certificate

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PREBENA®

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Staples type: Q - stainless steel

Diameter:	1,80mm
Lenght:	32-80mm
Material:	1.4301

ETA CE

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Properties of the material used:

Tensile strength in accordance with EN 10088-1 min. 950 N/mm²

Mechanical strength and stiffness:

- Yield Moment (acc. EN 14592):	$M_{y,k}$	=	970 Nmm
- Withdrawl parameter (EAD, 60°C, 75% r. ah.):	$f_{ax,k}$	=	5,00 N/mm²
- Withdrawl parameter (acc. EN 14592):	$f_{ax,k}$	=	5,11 N/mm²
- Head pull-through parameter (acc. EN 14592):	$f_{head,k}$	=	29,0 N/mm²
- Design value of resistance (Load duration)	$R_{ax,d}$	=	70 N

Values are valid for materials with a characteristic density pk ≥ 350 kg/m3

Reaction to fire (acc. 96/603/EG, acc. 200/605/EG) = Class **A1**

Service class:
Service class 3 in accordance with EN 1995-1

Quality PREBENA Control

TÜV PROFI CERT ZERTIFIKAT DIN EN ISO 9001:2008

MADE IN GERMANY

Member of fasteners associations

CE

PREBENA Fasteners for all systems

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For processing of ETA staples:

SlideSystem FÜR DEN HOLZRAHMENBAU

PREBENA SLIDER

- Staples can be set with precise, regular spacing
- Exact adherence to staple and edge spacing according to the statics
- Staple angle 30° in accordance with DIN EN 1995-1-1
- Single shot possible on both sides at any time
- Blank shot protection
- Sliding or pulling possible
- Path-controlled continuous triggering
- Spacing adjustment for 40, 60, 80, 110 mm
- Guide aid - sighting mechanism
- Adjustable side stop
- Trigger protection
- Can be operated from both sides
- Depth adjustment
- Rubberised wheels
- Handle extension available as accessory

- SLIDER 4C-Z50 / SLIDER 4C-Z50-T
- SLIDER 5C-Q67 / SLIDER 5C-Q67-T
- SLIDER 5C-Z75 / SLIDER 5C-Z75-T
- Pneumatic Stapler 4C-L50
- Pneumatic Stapler 4C-L50 Automatic
- Pneumatic Stapler 4C-Z50
- Pneumatic Stapler 4C-Z50 Automatic
- Pneumatic Stapler 5C-Q67
- Pneumatic Stapler 5C-Z75
- Pneumatic Stapler 9X-WP130
- Pneumatic Stapler 9X-WP160
- Pneumatic Industrial Stapler MODUL

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