



# KOMO® Product certificate K62602-6



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Valid until Indefinite Dated 2019-10-16  
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## Mechanical Connections for Reinforcement Steel: Type TSE-PSA - Category 2, Ductility Class B

### Terwa B.V.

#### STATEMENT BY KIWA

This product certificate is issued on the basis of BRL 0504 " Mechanical Connections for Reinforcement Steel " issued on 2012-11-08 including amendment sheet dated December 12, 2018 in accordance with the Kiwa-Regulations for Certification.

The quality system and product characteristics associated with it are checked periodically.

On this basis, Kiwa declares that there is justifiable confidence that the delivered by the certificate holder on delivery meet:

- The technical specification laid down in this product certificate,
- The product requirements laid down in this product certificate and in the BRL provided it is provided with the KOMO® brand in a manner as indicated in this product certificate;

Ron Scheepers  
Kiwa

The certificate is included in the summary on the website of KOMO: [www.komo.nl](http://www.komo.nl).  
Advice: consult [www.kiwa.nl](http://www.kiwa.nl) in order to ensure that this certificate is still valid

*Disclosure of the certificate is permitted.*

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Evaluated is:  
quality system  
product  
Periodic inspection

**PRODUCT SPECIFICATION****General**

Mechanical connections for reinforcement steel meet the requirements of section 2 of BRL 0504. Cutting and bending of the rebar ends and rebar anchors meet the requirements of BRL 0503 "Cutting, bending and tack welded (prefab) reinforcing steel structures". The reinforcement steel of these couplers in the B500B meet the requirements of BRL 0501 "Reinforcement Steel" and, therefore of table 1 "performance requirements" of NEN 6008.

Only complete mechanical rebar connections made from the rebar anchors and rebar ends mentioned under "additional information" are covered by this KOMO product certificate.

**Further specification****Scope**

The products are intended to be used in concrete constructions with a dynamic character as described in, among others in NEN-EN 1992-2+C1:2011/NB:2011, category 2.

*Category 2*

*These mechanical connections are applicable in concrete constructions with a dynamic character, as described in, among others, NEN-EN 1992-2 + C1: 2011 / NB: 2011. The characteristic fatigue strength is determined with a stress ripple  $2 \sigma_a$  at 2 million stress cycles and an upper stress level of  $0.6 R_e$ ;  $k$  or  $0.6 R_p$ ;  $0.2$ ;  $k$*

**Characteristic fatigue strength**

The characteristic fatigue strength ( $2\sigma_a$ ) is determined at 60 N / mm<sup>2</sup>.

The characteristic fatigue strength is determined according to Annex III of the BRL0504 with a stress amplitude of  $2\sigma_a$  at 2 x 10<sup>6</sup> stress cycles and corresponds to the reliability index: P = 10%

In these values the material factor for reinforcing steel:  $\gamma_m = 1.15$  is not processed.

**Reinforcement steel diameter**

Product are manufactured of reinforcement steel quality B500B (hot rolled) with diameter  $\varnothing$  : 12, 14, 16, 20, 25, 32 mm.

**Reinforcement steel Grade**

The reinforcement steel is supplied in the grade B500B. (hot rolled).

The reinforcement steel can be supplied in any required length.

The reinforcement steel can be supplied as straight and bent rods where the bending mandrel must meet the requirements of section 4.3.2 of BRL 0503 "Cutting, bending and tack welded (prefab) reinforcing steel structures".

**Production location**

Production takes place at Terwa, Romania.

**Markings**

The products are provided with a label on which at least the following information is specified clearly and indelibly:

- KOMO<sup>®</sup> logo;
- certificate number;
- name or logo supplier;
- coupler type;
- ductility class;
- characteristic fatigue strength
- category number.

**K62602****Marking on the product:**

The connecting piece is provided with the following brands:

- certificate holder code: TW
- thread size: M16
- code producer, this starts with the number: 2

The rebar end is marked on the head with: T

For more details, see the documentation and processing instructions of the certificate holder.

**TIPS FOR THE USER**

Inspect the following upon delivery:

- That what has been agreed has been delivered;
- The mark and marking method are correct;
- The products does not exhibit any damage or defect as a result of transport or handling.

If you decide to reject the product(s) based on the above, contact:

- Terwa B.V.  
and, if required,
- Kiwa Nederland B.V.

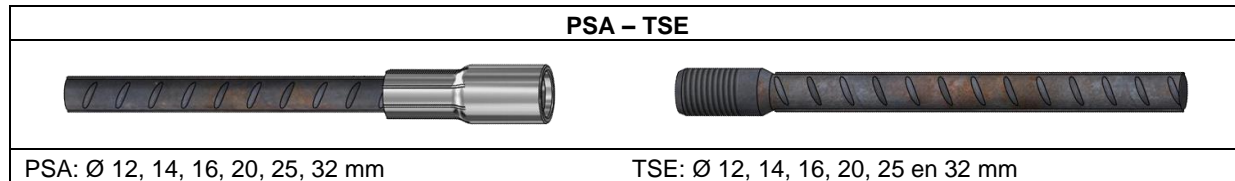
For the proper handling of the product, refer to the installation instructions of the manufacturer.

**LIST OF DOCUMENTS MENTIONED\***

NEN-EN 1992-1-1 Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings  
 +C2+NB + National Annex  
 NEN 6008 Reinforcement Steel  
 BRL 0501 Reinforcement Steel  
 BRL 0503 "Cutting, bending and tack welded (prefab) reinforcing steel structures"

\* For the correct version of the specified standards please refer to the last change sheet with BRL 0504.

**ADDITIONAL INFORMATION**



**Tightening torque**

Type connection TSE/PSA	$\Phi_k$ 12/M16	$\Phi_k$ 14/M18	$\Phi_k$ 16/M20	$\Phi_k$ 20/M24	$\Phi_k$ 25/M30	$\Phi_k$ 32/M42
Tightening torque between Rebar End and Anchor	5 x $\Phi_k$ 60 [Nm]	5 x $\Phi_k$ 70 [Nm]	5 x $\Phi_k$ 80 [Nm]	5 x $\Phi_k$ 100 [Nm]	5 x $\Phi_k$ 125 [Nm]	5 x $\Phi_k$ 160 [Nm]