

KOMO[®] product certificate



Number	K53316/01	Replaces	--
Issued	2009-11-19	Dated	--
Valid until	Indefinite	Page	1 van 3

Mechanical Connections for Reinforcement Steel
Category 2, Types 4010 and 2020/2020-P

Demu Metaalindustrie B.V.

STATEMENT BY KIWA

This product certificate is issued on the basis of BRL "Mechanical Connections for Reinforcement Steel" issued on 2006-6-12 by Kiwa, in accordance with the Kiwa Regulations for Product Certification.

Kiwa declares that legitimate confidence exists that the by the producer manufactured products on delivery comply with the technical specifications as laid down in this product certificate, provided that they have been marked with the KOMO[®]-mark in the manner as indicated in this product certificate.

Bouke Meekma
Director Kiwa N.V.

Advice: consult www.kiwa.nl in order to ensure that this certificate is still valid.

Holder of Certificate
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Evaluated is:
quality system
product
Periodic inspection

Mechanical Connections for Reinforcement Steel, Category 2

PRODUCT SPECIFICATION

General

Mechanical connections for reinforcement steel meet the requirements of section 2 of BRL 0504. Straightening, cutting and bending of the rebar ends and rebar anchors meet the requirements of section 4.3.2 of BRL 0503 "Tack welded mesh reinforcements, reinforcement structures, cut and bend products". The reinforcement steel of these couplers in the FeB 500 HWL grade meet the requirements of section 2 of BRL 0501 "Steel reinforcement" and, therefore, of section 3 "Term descriptions" and section 5 "Requirements" of NEN 6008.

Only complete mechanical couplers made of reinforcement steel produced from the rebar anchors and rebar ends specified under "Further specification" fall under this KOMO product certificate.

Further specification

Area of application

The products are to be used in concrete structures with a dynamic character such as, for example, bridge structures in accordance with NEN 6723. Fatigue strength category 2.

Category 2

These mechanical couplers can be used in concrete structures with a dynamic character as described in, for example, NEN 6723, The characteristic fatigue strength is determined through a stress ripple $2 \sigma_a$ at: 2 million load swings and a maximum stress of $0.6 R_{e;k}$ of $0.6 R_p;0.2;k$

Characteristic fatigue strength

The characteristic fatigue strength has been determined to be 66 N/mm².

The characteristic fatigue strength has been determined in accordance with annex 3 of the BRL0504 with a ripple voltage $2 \sigma_a$ and matches the reliability index: P = 10 %

The following has not been processed in these values:

- The material factor for reinforcement steel: $\gamma_m = 1, 15$ (see NEN 6720 article 6.2.1);
- The function for the representative value of the fatigue limit of reinforcement steel (see NEN 6723 article 8.6.3).

Characteristic diameter of reinforcement steel

The products are produced from reinforcement steel with a characteristic diameter Φ_k : 20 and 25 mm

Reinforcement steel grade

The reinforcement steel is delivered in the FeB 500 HWL grade.

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 "Tack welded mesh reinforcements, reinforcement structures, cut and bend products".

Production site

The production of mechanical couplers takes place at Demu in Utrecht.

Quality marks

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

- KOMO logo;
- Certificate number;
- Name or logo of the certificate holder;
- Coupler type;
- Category number;
- Characteristic fatigue strength.

A packaging unit will be provided with one label with a certification mark.

The elaboration of this mark can be as follows (see Figure 1)

	DEMU Metaalindustrie B.V. Atoomweg 1, 3542 AA Utrecht Holland Tel +31 (0)30 241 24 21 – Fax +31 (0) 30 241 44 69
	 K53316 Categorie 2 Karakteristieke Vermoeingssterkte: 66 MPa Voor de typen: 4010 met 2020-2020/P
Diameter: Length:	Quantity: Code:

Figure 1

Mechanical Connections for Reinforcement Steel, Category 2

Marking on the product:

The letter "D" for rebar ends on the crosscut edge of the reinforcement steel where the thread is.
The "DEMU" name on the thread bushing.
See the documentation and processing instructions of the certificate holder for more information.

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 do 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:

- DEMU Metaalindustrie B.V.
- And, if required, Kiwa Nederland B.V.

Consult NEN 6722 and the processing instructions of the producer for information on the correct storage method.

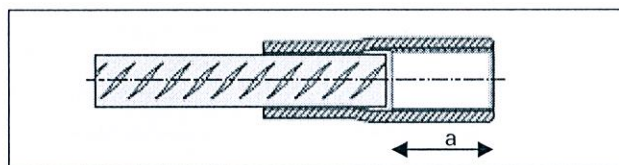
LIST OF DOCUMENTS MENTIONED*

NEN 6722	"Regulations for concrete – Execution"
NEN 6008	"Steel reinforcement"
BRL 0501	"Steel reinforcement"
BRL 0503	"Tack welded mesh reinforcements, reinforcement structures and strapwork"
BRL 0504	"Mechanical reinforcement steel couplers"

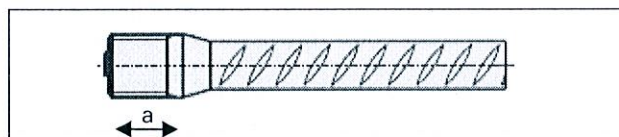
* For the correct version of the above-mentioned standards, please refer to the last revision page of BRL 5070.

Additional information

Rebar anchor 4010 (pressed version)



Rebar end 2020/2020-P (swaged and rolled version)



Remark

The 2020 type can be supplied as 2020 and 2020-P (with rolled end).

Tightening torque

	$\Phi_k20/M24$	$\Phi_k25/M30$
A rebar anchor 4010 size	38	48
A rebar end 2020 size	≥ 38	≥ 48
Tightening torque (Nm)	160	250
Tightening torque tolerances +/- 5%		