

DECLARATION OF PERFORMANCE

No 04/01/2024

1. Name and trade name of element: **ExBox re-bend connecting kits**
2. Designation of the construction product type: **ExBox re-bend connecting kits type S, WH, H, 2H**
3. Intended use of product: **ExBox re-bend connecting kits are intended to be use for connecting rebars in jonts of monolithic elements concreted section by section. Concrete class of connected elements should not be less than C20/25 according to PN-EN 206+A1:2016**
4. Name and address of the manufacturer's headquarters and place of production of the product:
Manufacturer: **Extrea Sp. z o.o. ul. P. Włodkowica 2c, 03-140 Warszawa**
5. Name and adresse of manufacturer's authorised representative: **NA**
6. National system of assessment and verifiacation of performance constancy: **1+**
7. National technical specification:
 - 7a. National standard: **NA**
 - 7b. National Technical Assessment: **ITB-KOT-2017/0331 edition 3**Technical Assessment Body: **Instytut Techniki Budowlanej, ul. Filtrowa 1, 00-611 Warszawa**

Name of the accredited certification body, accreditation number and certificate number: **Instytut Techniki Budowlanej – Zakład Certyfikacji AC 020, ul. Filtrowa 1, 00-611 Warszawa; Certyfikat Zgodności Nr 020-UWB-2647/W**

8. Declared performance properties:

Basci characteristics:		Requirements for ductility class		Methods of evaluation (unless otherwise specified in the reference document)
		B	C	
Characteristics for the profile (rails)	Thickness	≥ 0,4 mm		ITB-KOT-2017/0331 edition 3
	Yield strenght Re [MPa]	≥ 210 MPa		
	Tensile strenght Rm [MPa]	≥ 270 MPa		
	Zinc coating thickness	≥ 6 µm (≥85 g/m ²)		
Characteristics for bars	Chemical composition – element content [%] Cu C P S N	≤ 0,80 (0,85) ¹⁾ ≤ 0,22 (0,24) ¹⁾ ≤ 0,050 (0,055) ¹⁾ ≤ 0,050 (0,055) ¹⁾ ≤ 0,012 (0,014) ¹⁾		according to the reference document
	Carbon equivalent Ceq	≤ 0,50 (0,52) ²⁾		according to the formula (1)
	Shape, dimensions and weight	according to the reference document and Eurocode 2		
	Yield point Re [MPa]	≥ 500 MPa		PN-EN-ISO 6892- 1:2016
	Tensile strength Rm [MPa]	≥ 550 MPa		
	Rm / Re ratio	≥ 1,08	1,15-1,35	
	Relative elongation A10 [%]	≥ 10		
	Unit elongation A5 [%]		≥ 16	
	Total elongation at maximum tensile force Agt [%]	≥5,0%	≥8,0%	
	Bending of "aged" samples by an angle of 20° after bending by an angle of 90°o kąt 90° on a 5d diameter mandrel	no cracks		PN-EN ISO 15630- 1:2019
	Reinforcing bars with a diameter of 8, 10, 12, 14, 16 mm meet the requirements specified for reinforcing steel class B or C in the PN-EN 1992-1-1: 2008.2008/AC:2011			
¹⁾ The values without brackets refer to the requirements for the content of elements according to the heat analysis; in brackets - according to the chemical analysis of the product				
²⁾ $C_{eq} = c + \frac{Mn}{6} + \frac{Cr + V + Mo}{5} + \frac{Cu + Ni}{15} \quad (1)$				

9. Performances of specfied product meet all declared in paragraph. 8. This declaration of conformity is issued according enactement from 16 april 2004, under sole responsibility of the manufacturer.

Signed in behalf of manufacturer:
Marcin Chrobok – Technical Support Director

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21.08.2024 r. Warsaw
(place and date of issue)

extrea®
Marcin Chrobok
Marcin Chrobok
Dyrektor ds. technicznych
(signature)