DECLARATION OF PERFORMANCE

according Annex III of the Regulation (EU) No 305/2011

Name of the product **E-JET X full threaded screws**

Outer thread diameter d: 6,0 – 14,0 mm; overall length l: 16 – 1.500 mm

No. **DOP 20_2-25/1**

1. Unique identification code of the product-type: DOP 20_2-25/1
2. Intended use: Screws for use in timber constructions
3. Manufacturer: Verbindungselemente Engel GmbH
   Weltestraße 2+4
   D-88250 Weingarten
5. System of AVCP: System 3
6. European Assessment Document: EAD 130118-01-0603
   European Technical Assessment: ETA-21/0055 of 11.11.2024
   Technical Assessment Body: Deutsches Institut für Bautechnik (DIBt)
7. Declared performances:

Essential characteristic	Unit	Performance					
		Outer thread diameter d					
	[mm]	Ø 6,0	Ø 8,0	Ø 10,0	Ø 12,0	Ø 13,0	Ø 14,0
Basic Works Requirement1: Mechanical resistance and stability (BWR 1)							
Characteristic yield moment $M_{y,k}$	[Nm]	10,0	20,0	30,0	42,0	60,0	68,0
Characteristic tensile strength $f_{tens,k}$	[kN]	12,0	21,0	27,0	36,0	55,0	55,0
Characteristic torsional strength $f_{tor,k}$	[Nm]	10,0	24,0	39,0	58,0	95,0	102,0
Characteristic withdrawal parameter $f_{ax,k}$ (α=90°) for timber/wood density 350 kg/m³	[N/mm²]	11,0		10,0			
Characteristic head pull-through parameter $f_{head,k}$ for timber/wood density 350 kg/m³	[N/mm²]	Countersunk/wafer hd: t > 20 mm: 9,4; 12 mm ≤ t ≤ 20 mm: 8 t < 12 mm: 8; F_{max}: 400 N Cylinder head: -					
Characteristic yield strength $f_{y,k}$	[N/mm²]	1.000			900		
Insertion moment $f_{tor,k}$ / $R_{tor,mean}$ (≥1,5)		erfüllt					
Spacing, end and edge distances of the screws		Acc. to EN 1995-1-1:2004+A1:2008+A2:2014 clauses 8.3.1.2 or 8.7.2 and tables 8.2 and 8.6, as for nails with non-predrilled holes. Here, the outer thread diameter d shall be considered. For Douglas fir members minimum spacing and distances parallel to the grain shall be increased by 50 %. Minimum distances from loaded or unloaded ends shall be at least 15·d for screws with outer thread diameter d ≥ 8 mm and timber thickness t < 5·d.					
Minimum thickness for structural timber members t	[mm]	30	30	40	100	100	100
Slip modus for mainly axially loaded screws K_{ser}	[N/mm²]	$780 \cdot d^{0,2} \cdot l_{ef}^{0,4}$					
Bending angle α, min.	[°]	32,9	30,5	29,0	27,9	27,5	27,1
Durability against corrosion, coating thickness	[µm]	Zinc plated, ≥ 3					
		Nickel plazted, ≥ 5					
		Zink-nickel coating, ≥ 5					
		Zinc flake coating, ≥ 25					
		VG Coating, ≥ 25					
		Nanocoating, ≥ 25					
Basic Works Requirement 2: Safety in case of fire							
Reaction to fire		Class A1					

Basic Works Requirement 4: Safety and accessibility in use								
Same as BWR 1								
Essential characteristic		**Unit**	**Performance**					
			Outer thread diameter d					
		[mm]	**Ø 6,0**	**Ø 8,0**	**Ø 10,0**	**Ø 12,0**	**Ø 13,0**	**Ø 14,0**
Core diameter d_1		[mm]	4,0	5,2	6,2	7,0	8,00	8,50
Thread pitch P		[mm]	3,8	4,8	5,6	6,0	6,0	6,8
Head diameter d_h	Countersunk head	[mm]	11,5	14,5	18,0	21,0	21,5	22,0
	Wafer head*		15,0	18 / 20 / 22	25,0	29,0	29,0	29,0
	Cylinder head		7,5	10,5	12,5	14,5	14,5	14,5
* ø8 head diameter d_h according to item description/label/marking								

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by: ppa. Guido Hochschorner
Weingarten, 26.05.2025

This document is a copy in accordance with Article 7 of the EU Construction Products Regulation of the signed original declaration of performance with identical content.
