

DECLARATION OF PERFORMANCE

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

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

Outer thread diameter d: 6,0 - 12,0 mm; overall length l: 16 - 1.500 mm

No. **DOP 20_1-21/2**

1. Unique identification code of the product-type: DOP 20_1-21/2

Intended use: Screws for use in timber constructions
 Manufacturer: Verbindungselemente Engel GmbH

Weltestraße 2+4 D-88250 Weingarten

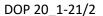
5. System of AVCP: System 3

6. European Assessment Document: EAD 130118-01-0603
European Technical Assessment: ETA-21/0055 of 21.05.2021

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				
Basic Works Requirement1: Mechanical resistance and stability (BWR 1)									
Characteristic yield moment M _{y,k}	[Nm]	10,0	20,0	30,0	42,0				
Characteristic tensile strength f _{tens,k}	[kN]	12,0	21,0	27,0	36,0				
Characteristic torsional strength f _{tor,k}	[Nm]	10,0	24,0	39,0	58,0				
Characteristic withdrawal parameter $f_{ax,k}$ (α =90°) for timber/wood density 350 kg/m ³	[N/mm²]	11,0 10,		,0					
Characteristic head pull-through parameter f _{head,k} for timber/wood density 350 kg/m ³	[N/mm²]	t > 20 mm: min. 9,4 12 mm ≤ t ≤ 20 mm: 8 t < 12 mm: 8; F _{max} : 400 N							
Characteristic yield strength f _{y,k}	[N/mm ²]	npd							
Insertion moment f _{tor,k} / R _{tor,mean} (≥1,5)		complies							
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				
Slip modus for mainly axially loaded screws K _{ser}	[N/mm ²]	780 ⋅ d ^{0,2} ⋅ l _{ef} ^{0,4}							
Bending angle α	[°]	min. 45/d ^{0,7} +20							
Durability against corrosion, coating thickness	[µm]	Zinc plated, ≥3							
Basic Works Requ	irement 2: Safe	ety in case of f	ire						
Reaction to fire		Class A1							
Basic Works Requirem	ent 4: Safety a	nd accessibilit	y 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	
Core diameter d ₁	[mm]	4,0	5,2	6,2	7,0	
Shank diameter d₅	[mm]	4,25	5,7	7,0	8,0	
Thread pitch P	[mm]	< 180: 3,3 ≥ 180: 4,5	5,2	5,6	6,0	
Head diameter dh, countersunk head/wafer head	[mm]	11,5/15	14,5/22	18/25	21/29	
Thread length I _g min.	[mm]	32	32	52	80	
Thread length I _g max.	[mm]	75	100	100	120	

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, 11.10.2024

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.
