

**DECLARATION OF PERFORMANCE**  
according Annex III of the Regulation (EU) No 305/2011

Name of the product **E-JET® Screws**  
**Nominal- $\phi$ : 3,0 – 6,0 mm; Nominal length l: 20 – 300 mm**

**Nr. DOP 5\_1-13/4**

- |  |   |
|--|---|
| 1. Unique identification code of the product-type: | DOP 5_1-13/4  |
| 2. Intended use:                                   | Screws for use in timber constructions                                  |
| 3. Manufacturer:                                   | Verbindungselemente Engel GmbH<br>Weltestraße 2+4<br>D-88250 Weingarten |
| 5. System of AVCP:                                 | System 3  |
| 6. European Assessment Document:                   | EAD 130118-00-0603  |
| European Technical Assessment:                     | ETA-13/0536 vom 20.02.2018  |
| Technical Assessment Body:                         | Deutsches Institut für Bautechnik (DIBt)                                |
| 7. Declared performances:                          |   |

Essential characteristic	Unit	Performance					
		Diameter d					
	[mm]	$\phi$ 3,0	$\phi$ 3,5	$\phi$ 4,0	$\phi$ 4,5	$\phi$ 5,0	$\phi$ 6,0
Mechanische Festigkeit und Standsicherheit (BWR 1)							
Characteristic yield moment $M_{y,k}$	[Nm]	1,4	2,2	2,8	3,8	5,4	7,2
Characteristic tensile capacity $f_{tens,k}$	[kN]	3,5	4,5	6,0	7,0	8,0	9,0
Characteristic torsional strength $f_{tor,k}$	[Nm]	1,5	2,5	3,5	4,5	5,7	8,5
Characteristic withdrawal parameter $f_{ax,k}$ ( $\alpha=90^\circ$ ) for timber/wood density 350 kg/m <sup>3</sup>	[N/mm <sup>2</sup> ]	11,5					
Characteristic head pull-through parameter $f_{head,k}$ for timber/wood density 350 kg/m <sup>3</sup>	[N/mm <sup>2</sup> ]	t > 20 mm: min. 9,4 12 mm $\leq$ t $\leq$ 20 mm: 8 t < 12 mm: 8; $F_{max}$ : 400 N					
Characteristic yield strength $f_{y,k}$		npd					
Insertion moment $f_{tor,k} / R_{tor,mean}$ ( $\geq 1,5$ )		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 thickness for structural timber members t	[mm]	30					
Slip modulus for mainly axially loaded screws $K_{ser}$	[N/mm <sup>2</sup> ]	$780 \cdot d^{0,2} \cdot l_{ef}^{0,4}$					
Bending angle $\alpha$	[°]	min. $45/d^{0,7}+20$					
Durability against corrosion, coating thickness	[ $\mu$ m]	verzinkt, $\geq 3$					
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							

Wesentliche Merkmale	Einheit	Leistung					
		Nenndurchmesser d					
	[mm]	Ø 3,0	Ø 3,5	Ø 4,0	Ø 4,5	Ø 5,0	Ø 6,0
Core diameter $d_1$ , min.	[mm]	1,7	2,05	2,3	2,61	2,9	3,42
Shank diameter $d_s$ , min.	[mm]	2,25	2,6	2,85	3,15	3,5	4,2
Thread pitch P	[mm]	1,35	1,6	1,8	2	2,2	2,6
Head diameter $d_h$ , min.	[mm]	5,7	6,7	7,6	8,6	9,5	11,5
Thread length $l_g$ min.	[mm]	12	14	16	18	20	24
Thread length $l_g$ max.	[mm]	37	46,5	48	48	60	70

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, 14.10.2024

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.

-----