WST 4.5 WOODMASTER® WOODSCREW 4.5mm ØD[1]
DECLARATION OF PERFORMANCE
REV. A

DoP No.:	EVO-130118-0014-A
Date of issue:	13th November 2026
ETA No.:	ETA-26/0457

[1] ØD = nominal diameter of the product,

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Declaration of Performance – WST Woodscrew 4.5mm ØD. Revision A. Published 13 Nov. 2026.

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1. UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE

WST4550,
WST4560,
WST4570,
WST4580.

The product-type is described in Table 01. All European Technical Assessment (ETA) clauses refer to those in ETA-26/0457 of 28 August 2026 unless noted otherwise.

Table 01: Product-type description

Property	Declared value	ETA clause(s)
Fastener type	Screw for use in timber constructions (timber construction screw), fully or partially threaded, Type 17 point	1; Annex 1
Head form and drive	Countersunk head with six nibs under the head; hexalobular (Torx) recess T25	Annex 1
Parent material and specification	Carbon steel; 10B21	1
Corrosion protection coating	Zinc plated	1; 3.1.10
Nominal diameter, d	4.5 mm	1.1; Annex 1
Length, l_{nom}	50.0, 60.0, 70.0 and 80.0 mm	1.1; Annex 1
Threaded length, l_g	25.0 mm (50.0 mm); 35.0 mm (60.0 mm); 40.0 mm (70.0 mm); 50.0 mm (80.0 mm)	1.1; Annex 1
Outer thread diameter, d[2]	4.46 mm	3.1.1; Annex 2
Inner thread diameter, d_1[2]	2.92 mm	3.1.1; Annex 2
Head diameter, d_h[2]	8.79 mm	3.1.1; Annex 2
Shank diameter, d_s[2]	3.10 mm	3.1.1; Annex 2
Thread pitch, p[2]	2.57 mm	3.1.1; Annex 2

[2] Average values of geometry measured by the Technical Assessment Body (ETA-26/0457, Annex 2, Table 5),

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2. INTENDED USE

Screws for use in timber constructions: connections in load-bearing timber structures between wood-based members, or between wood-based members and steel plates, where requirements for mechanical resistance and stability and safety in use shall be fulfilled, as set out in ETA-26/0457, section 2, and in EAD 130118-01-0603.

Timber members:	Solid timber (softwood) of strength classes C14 to C40 according to EN 338 and EN 14081-1; glued laminated timber (softwood) of at least strength class GL24c/GL24h and glued laminated solid timber according to EN 14080; laminated veneer lumber according to EN 14374, with the screws arranged only perpendicular to the plane of the veneers; cross laminated timber according to European Technical Assessments or national provisions that apply at the installation site.
Panels:	Plywood, oriented strand board, particleboard and fibreboard according to EN 13986, and cement-bonded particle boards and solid-wood panels according to national provisions, may be connected to the timber members above. Wood-based panels shall only be arranged on the side of the screw head.
Actions:	Static and quasi-static actions only.
Environment:	Timber structures subject to climate conditions defined by service classes 1 and 2 according to EN 1995-1-1 for this nominal diameter. Corrosivity categories according to EN ISO 12944-2 and national provisions on environmental conditions shall be taken into account.
Working life:	The provisions of the ETA are based on an assumed minimum working life of 50 years, provided that the screws are subject to appropriate use and maintenance.

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3. MANUFACTURER

Evolution Fasteners (UK) Ltd
Clyde Gateway Trade Park
Dalmarnock Road
Glasgow
G73 1AN
United Kingdom

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4. AUTHORISED REPRESENTATIVE

Authorised representatives established within the Union, each holding a mandate covering the tasks specified in Article 12(2) of Regulation (EU) No 305/2011:

Evolution Fasteners (IE) Ltd
Finglas Business Centre
Jamestown Road
Finglas
Dublin 11
Ireland

Evolution Fasteners (NL) B.V.
Pastoorslaan 57
2182 BW Hillegom
Netherlands

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5. SYSTEM OF AVCP

System 3, as set out in Annex V of Regulation (EU) No 305/2011 as amended by Commission Delegated Regulation (EU) No 568/2014, applicable to fasteners for structural timber products under Commission Decision 97/176/EC (ETA-26/0457, section 4).

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6(A). HARMONISED STANDARD

Not applicable.

6(B). EUROPEAN ASSESSMENT DOCUMENT

EAD:	EAD 130118-01-0603, edition February 2019, *Screws and threaded rods for use in timber constructions*.
ETA:	ETA-26/0457 of 28 August 2026, trade name Evolution® WoodMaster® timber construction screws.
TAB:	Technický a zkušební ústav stavební Praha, s.p., Prosecká 811/76a, 190 00 Prague, Czech Republic, Technical Assessment Body issuing the European Technical Assessment.
Notified body:	Not applicable. In accordance with point 1.6 of Annex V of Regulation (EU) No 305/2011, the European Technical Assessment is considered as the assessment of the performance of the product under System 3. The manufacturer operates factory production control in accordance with the control plan deposited with the Technical Assessment Body.

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7. DECLARED PERFORMANCES

The declared performances for the intended use given in section 2, covering the essential characteristics assessed in accordance with EAD 130118-01-0603, are given in Table 02. All ETA clauses refer to those in ETA-26/0457 of 28 August 2026.

Table 02: Declared performances

Essential characteristic	Performance (value and unit)	ETA clause
Mechanical resistance and stability (BWR 1); safety and accessibility in use (BWR 4)		
Characteristic yield moment, $M_{y,k}$[3]	4,044 Nmm	3.1.2
Characteristic withdrawal parameter, $f_{ax,90,k}$[4,5]	16.34 N/mm²	3.1.3
Characteristic head pull-through parameter, $f_{head,k}$[6,5]	25.53 N/mm²	3.1.4
Characteristic tensile strength, $f_{tens,k}$[6]	7.87 kN	3.1.5
Characteristic yield strength	R_m = 1,297 MPa $R_{p0.2}$ = 1,232 MPa	3.1.6
Characteristic torsional strength, $f_{tor,k}$[7]	5.4 Nm	3.1.7
Insertion moment, $R_{tor,mean}$[8]	2.1 Nm $f_{tor,k}$ / $R_{tor,mean}$ = 2.6 (≥ 1.5)	3.1.8
Bending angle[9]	> $(45/d^{0.7} + 20)°$	3.1.9
Durability against corrosion	Zinc plating 3–5 µm; average measured thickness 9.74 µm Service classes 1 and 2 according to EN 1995-1-1	3.1.10
Spacing, end and edge distances of the screws and minimum thickness of the timber material[10]	NPA[11]	3.1.11
Slip modulus for mainly axially loaded screws[12]	NPA[11]	3.1.12
Safety in case of fire (BWR 2)		
Reaction to fire[13]	Class A1	3.2.1

The declared performances are those stated in ETA-26/0457, Annex 2, Table 5, and apply only to the product-type described in Table 01.

[3] Determined by tests according to EN 409 on the threaded section, at a bend angle of 15°,
[4] Determined by tests according to EN 1382 with the screw axis at 90° to the grain direction; for angles of less than 45° see 3.1.3,
[5] Density of timber 350 kg/m³,
[6] Determined by tests according to EN 1383,
[7] Determined by tests according to EN ISO 10666,
[8] Mean insertion moment determined by tests according to EN 15737 in timber of density 480 kg/m³,
[9] All screws fulfil the requirement for a minimum bending angle of $(45/d^{0.7} + 20)$ degrees,
[10] Minimum spacing, end and edge distances are given in EN 1995-1-1, 8.7.1 and 8.7.2,
[11] No performance assessed,
[12] 3.1.12 gives $K_{ser} = 25 \cdot d \cdot l_{ef}$ N/mm (softwood members) and $30 \cdot d \cdot l_{ef}$ N/mm (hardwood members),
[13] Classified in accordance with Commission Decision 96/603/EC as amended; the ETA text reads "Euroclass A",

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8. APPROPRIATE TECHNICAL DOCUMENTATION AND/OR SPECIFIC TECHNICAL DOCUMENTATION

Not applicable.

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9. AUTHORISATION STATEMENT

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 IDENTIFIED ABOVE.

Signed for and on behalf of the manufacturer by:



EUR ING Ryan Murphy (Chartered Engineer)
TECHNICAL DIRECTOR
At Glasgow, United Kingdom on 13th November 2026

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10. REVISION HISTORY

Table 03: Revision history			
Rev. No.	**Comment(s)**	**Auth'd**	**Date**
A	Original issue.	RM	13 Nov 26

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