

# Declaration of Performance

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## Solo Woodscrews



Material - Carbon Steel (C1022)

Head Type - Double Countersunk

Screw Diameter (mm) - 3.0, 3.5, 4.0, 4.5, 5.0, 6.0

We hereby declare these designated products have performed initial type testing under system 3, Annex V of the regulation (EU) no. 305/2011 (Construction Products Regulation), with the reference to the harmonised European standard (hEN) BS EN 14592:2008+A1:2012 (Timber structures - Dowel type fasteners - Requirements) for screws intended for the use in "load bearing timber structures" and produced the calculation/test reports as attached;

The initial type testing has been carried out by independent notified body;  
Strojirensky Zkusebni Ustav, NB # 1015, Hudcova 424/56B, 621 00 Brno-Medlánky, Czechia

Certificate Number: E-30-20008-13 to E-30-20013-13

Test Report Number: No. 30-9797/7 to No. 30-9797/12

Factory Process Control (FPC) has been established by the factory and independently audited by TUV Rheinland UK in accordance with ISO9001.

This declaration of conformity is valid until there is a significant change in the product and declared characteristics. ie. raw material or change in production process.

This declaration is the responsibility of the importer ; T.I.Midwood & Co. Ltd.

Simon Midwood

Managing Director

TIMCO House  
2013

2013

Name

Position

Signature

Location &amp; Date

Test Year

# Declaration of Performance

## Solo Woodscrews

### Double Countersunk Head - Ø3.0mm

#### Material & Geometry

Material	Carbon Steel (C1022)
Screw diameter (mm)	3.0
Head diameter (mm)	6.0
Inner thread diameter (mm)	2.00

#### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 20° [Nmm] (thread section) in acc. to EN 409	1343
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 390\text{kg/m}^3$	17.99
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 390\text{kg/m}^3$	12.37
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 500\text{kg/m}^3$	45.41
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	3.11
Characteristic torsional ratio in acc. to EN 15737 with density of wood $\rho_k = 450\text{kg/m}^3$	6.28

#### Durability

Coating (Finish)	Zinc or Yellow coating
Corrosion protection	Service Class 1 acc. to EN 1995-1-1

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## Solo Woodscrews

### Double Countersunk Head - Ø3.5mm

#### Material & Geometry

Material	Carbon Steel (C1022)
Screw diameter (mm)	3.5
Head diameter (mm)	7.0
Inner thread diameter (mm)	2.25

#### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 18° [Nmm] (thread section) in acc. to EN 409	2490
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 390\text{kg/m}^3$	18.55
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 390\text{kg/m}^3$	11.04
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 500\text{kg/m}^3$	35.55
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	4.57
Characteristic torsional ratio in acc. to EN 15737 with density of wood $\rho_k = 450\text{kg/m}^3$	2.90

#### Durability

Coating (Finish)	Zinc or Yellow coating
Corrosion protection	Service Class 1 acc. to EN 1995-1-1

# Declaration of Performance

## Solo Woodscrews

### Double Countersunk Head - Ø4.0mm

#### Material & Geometry

Material	Carbon Steel (C1022)
Screw diameter (mm)	4.0
Head diameter (mm)	8.0
Inner thread diameter (mm)	2.50

#### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 17° [Nmm] (thread section) in acc. to EN 409	3648
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 390\text{kg/m}^3$	17.85
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 390\text{kg/m}^3$	11.52
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 500\text{kg/m}^3$	28.02
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	5.99
Characteristic torsional ratio in acc. to EN 15737 with density of wood $\rho_k = 450\text{kg/m}^3$	3.45

#### Durability

Coating (Finish)	Zinc or Yellow coating
Corrosion protection	Service Class 1 acc. to EN 1995-1-1

# Declaration of Performance

## Solo Woodscrews

### Double Countersunk Head - Ø4.5mm

#### Material & Geometry

Material	Carbon Steel (C1022)
Screw diameter (mm)	4.5
Head diameter (mm)	9.0
Inner thread diameter (mm)	2.70

#### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 15° [Nmm] (thread section) in acc. to EN 409	4540
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 420\text{kg/m}^3$	19.42
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 420\text{kg/m}^3$	13.22
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 500\text{kg/m}^3$	27.02
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	6.75
Characteristic torsional ratio in acc. to EN 15737 with density of wood $\rho_k = 450\text{kg/m}^3$	3.36

#### Durability

Coating (Finish)	Zinc or Yellow coating
Corrosion protection	Service Class 1 acc. to EN 1995-1-1

# Declaration of Performance

## Solo Woodscrews

### Double Countersunk Head - Ø5.0mm

#### Material & Geometry

Material	Carbon Steel (C1022)
Screw diameter (mm)	5.0
Head diameter (mm)	10.0
Inner thread diameter (mm)	3.10

#### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 14.59° [Nmm] (thread section) in acc. to EN 409	6625
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 410\text{kg/m}^3$	18.29
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 410\text{kg/m}^3$	10.12
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 500\text{kg/m}^3$	24.90
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	9.74
Characteristic torsional ratio in acc. to EN 15737 with density of wood $\rho_k = 450\text{kg/m}^3$	3.86

#### Durability

Coating (Finish)	Zinc or Yellow coating
Corrosion protection	Service Class 1 acc. to EN 1995-1-1

# Declaration of Performance

## Solo Woodscrews

### Double Countersunk Head - Ø6.0mm

#### Material & Geometry

Material	Carbon Steel (C1022)
Screw diameter (mm)	6.0
Head diameter (mm)	12.0
Inner thread diameter (mm)	3.80

#### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 12° [Nmm] (thread section) in acc. to EN 409	10236
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 420\text{kg/m}^3$	16.94
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 420\text{kg/m}^3$	10.18
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 445\text{kg/m}^3$	27.70
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	11.88
Characteristic torsional ratio in acc. to EN 15737 with density of wood $\rho_k = 450\text{kg/m}^3$	2.94

#### Durability

Coating (Finish)	Zinc or Yellow coating
Corrosion protection	Service Class 1 acc. to EN 1995-1-1