

# Declaration of Performance No. DOP-03-FIRM-02-T2000 / Page 1 of 5

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## FIRMAHOLD Clipped Head Collated Nails



Material - Carbon Steel

Head Type - D-head

Nail Diameter (mm) - 2.8, 3.1

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;  
 BM Trada, NB # 2389, Chilton House, Stocking Lane, Hughenden Valley, High Wycombe, HP14 4ND

Certificate Number: CPR-J-00107-20 & CPR-J-00108-20

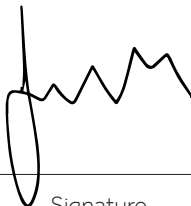
Test Report Number: 30-14691/2/1/JD & 30-14691/3/JP

Factory Process Control (FPC) has been established by the factory.

This declaration 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.

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Simon Midwood	Managing Director		TIMCO House 2013	2013
Name	Position	Signature	Location & Date	Test Year

# Declaration of Performance

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## FIRMAHOLD Clipped Head Collated Nails

D-head - Ring Shank - Ø2.8mm

### Material & Geometry

Material	Carbon Steel
Screw diameter (mm)	2.8
Head area (mm <sup>2</sup> )	27.92
Point length (mm)	2.42

### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 45° [Nmm] in acc. to EN 409	2351
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	9.16
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	4.81
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 350\text{kg/m}^3$	23.95
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	3.82

### Durability

Coating (Finish)	Galvanised coating
Corrosion protection	Service Class 2 acc. to EN 1995-1-1

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## FIRMAHOLD Clipped Head Collated Nails D-head - Ring Shank - Ø3.1mm

### Material & Geometry

Material	Carbon Steel
Screw diameter (mm)	3.1
Head area (mm <sup>2</sup> )	29.40
Point length (mm)	4.07

### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 45° [Nmm] in acc. to EN 409	3079
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	8.71
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	5.59
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 350\text{kg/m}^3$	23.22
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	4.54

### Durability

Coating (Finish)	Galvanised coating
Corrosion protection	Service Class 2 acc. to EN 1995-1-1

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## FIRMAHOLD Clipped Head Collated Nails D-head - Part Ring Shank - Ø3.1mm

### Material & Geometry

Material	Carbon Steel
Screw diameter (mm)	3.1
Head area (mm <sup>2</sup> )	29.40
Point length (mm)	4.07

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### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 45° [Nmm] in acc. to EN 409	3079
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	8.71
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	5.59
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 350\text{kg/m}^3$	23.22
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	4.54

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### Durability

Coating (Finish)	Galvanised coating
Corrosion protection	Service Class 2 acc. to EN 1995-1-1

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## FIRMAHOLD Clipped Head Collated Nails

D-head - Smooth Shank - Ø3.1mm

### Material & Geometry

Material	Carbon Steel
Screw diameter (mm)	3.1
Head area (mm <sup>2</sup> )	29.40
Point length (mm)	4.07

### Mechanical Strength & Stiffness

Characteristic yield moment $M_{y,k}$ at 45° [Nmm] in acc. to EN 409	3141
Characteristic withdrawal parameter (loading across the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	8.56
Characteristic withdrawal parameter (loading along the fibre) $f_{ax,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1382 with density of wood $\rho_k = 350\text{kg/m}^3$	6.70
Characteristic head pull-through parameter $f_{tens,k}$ [N/mm <sup>2</sup> ] in acc. to EN 1383 with density of wood $\rho_k = 350\text{kg/m}^3$	23.22
Characteristic tensile capacity $f_{tens,k}$ [kN] in acc. to EN 1383	4.68

### Durability

Coating (Finish)	Galvanised coating
Corrosion protection	Service Class 2 acc. to EN 1995-1-1