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International Leaders in Roof Technology



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INTERNATIONAL TRUSS SYSTEMS

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About the ITC-SA

Enjoy the peace of mind of a rationally designed and safely erected and inspected roof structure with Professional Indemnity Cover, to ensure the structural stability of your lifetime investment, together with the personal well-being of having a secure roof over your head.

The ramifications of using roof trusses of inferior quality, poor erection and inadequate inspection procedures, are far-reaching. Make it your policy to use SAFE timber roof structures by ensuring that the trusses are manufactured, erected and inspected by ITC Certificated Members and Certificated Inspectors.

Fabrication

Trusses fabricated by a Timber Truss Fabricator who holds a current Certificate of Competence issued by the ITC.

The leading systems suppliers to the industry in South Africa are:

- Alpine Automation SA (Pty) Ltd
- International Truss Systems (Pty) Ltd

Erection

Trusses and sundry roof material erected by a Roof Erector who holds a current Certificate of Competence issued by the ITC.

Inspection

After the roof trusses and bracing components have been installed and prior to the loading of the roof covering, the Rationally Designed structure has to be inspected by the appointed Responsible Person, in compliance with the National Building Regulations.

The ITC have developed the legal methodology and structure to assist with this process, through the appointment of "Approved Engineers" who in turn appoint a team of "Certificated Inspectors" to carry out the inspection task.

International Truss Systems (Pty) Limited policy is to continually improve all products. In line with our policy, information and prices in this document is subject to change without notice. For further information on the products please contact International Truss Systems (Pty) Limited.

Internet website: www.rooftruss.co.za

Email: admin@rooftruss.co.za

Our Standard Conditions of Sale apply.

All prices are FOB Jet Park

Ver 2021.10

About ITS

International Truss Systems (Pty) Limited is a full System Supplier to the prefabricated timber roof truss industry and associated businesses. It is the first and only nail plate system company in the country to have received the prestigious SABS ISO 9001 quality management award, ensuring that only the highest level of services and products are provided to our licensed fabricators.

In conjunction with our externally audited quality assurance programme and internally driven customer awareness programme, we offer unrivalled professional excellence and dedicated customer support to our client base. We offer a comprehensive structural timber engineering consultancy with full professional indemnity insurance for all design work as well as product liability insurance for our range of nail plates and structural timber sundry components.

International Truss Systems (Pty) Ltd maintains a mechanical equipment and spares division specialising in the development, manufacture and maintenance of truss making equipment and associated machinery.

The marketing department of International Truss Systems (Pty) Ltd has, since its inception, embarked on comprehensive marketing exposure to the building industry and professional practices. This ensures a high level of awareness and confidence in International Truss Systems (Pty) Ltd and our fabricator base. Feasibility designs and costings are done on large and complex structures and competitive quotations are obtained from our licensed truss manufacturers.

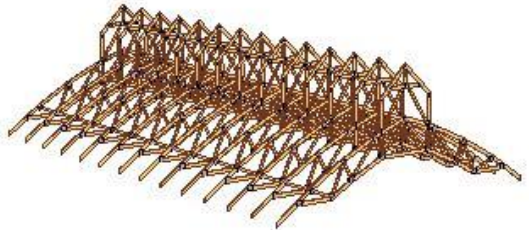
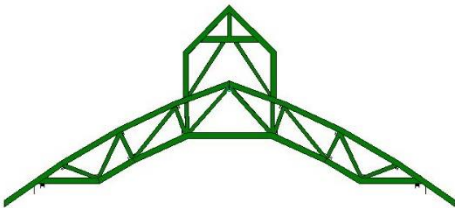
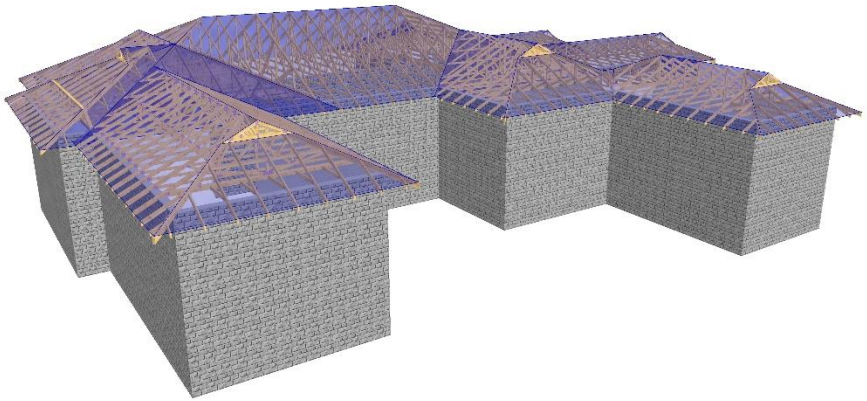
All products manufactured by International Truss Systems have been fully tested by the CSIR and Lignum Laboratory (University of Pretoria) and are available throughout South Africa.





RoofCon[®]

International Truss Systems



ROOFCON™ SOFTWARE

ROOFCON™ Software, a trademark of International Truss Systems (Pty) Ltd incorporates over 30 years of international development in the specification, design and manufacture of prefabricated timber roof trusses, it complies with all relevant local and International Codes of Practice, Building Regulations and generally accepted methods of “good engineering practice”.

ROOFCON™ is a “state-of-the-art” STRUCTURAL TIMBER ENGINEERING software package that has been written specifically for desktop computers. It offers fully interactive graphical input of modern timber structures and roofs, to produce outputs, ranging from design calculations to fabrication detailing and costing.

Advanced features such as split level, enabling the user to separate buildings and any combination of walls makes this input module an industry leader.

A mouse-driven graphical “query” facility allows effortless checking of the correctness of input dimensions on even the most complicated of building shapes and any errors or changes can immediately be corrected. This enormously useful function is ideal for changing the quoted “plan dimensions” to the actual “site dimensions” once a quote becomes an order.

A library of Standard Shapes and House Types is offered during ROOF INPUT to facilitate unrivalled speed of input on commonly used building shapes.

International Truss Systems’ attention to technical excellence is borne out in the HIP EDITOR. Every hip type used in South Africa has been specifically incorporated in the hip editor. The user even has the option of building his own hip types. This allows limitless flexibility and maximum “user friendliness” to every estimator and Truss Plant Manager, irrespective of any particular hip system preference.

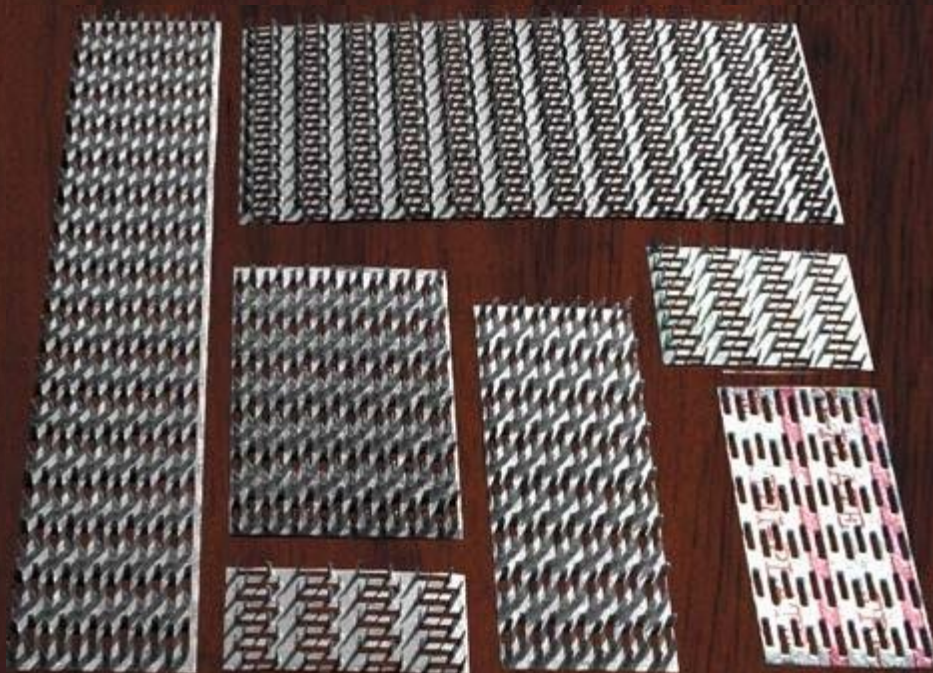
ROOFCON™ with its powerful features such as zoom, windowing and 3D rotation, enables the user to view the roof-scape from all combinations of direction, elevation or angle and distance. It comes complete with its own GENERAL DRAFTING PACKAGE thus eliminating the need for expensive “add on” costs of stand-alone CAD/CAM systems. If required, it can also be linked to all major CAD software.

Any combination of roof plots, 3D views, zoomed in areas, truss and girder cutting details, plating details and over 100 standard bracing and erection details, can simply be plotted or printed onto a single drawing sheet within seconds and without any actual additional draughting work.

Notes:

PUNCHED METAL CONNECTORS

**Product Code: TA4; TB2,3,4,6,8; TC2,3,4,5,6,8,9,10
TD2,4,5,6,7,8,9,10; TE1,2,3,4**

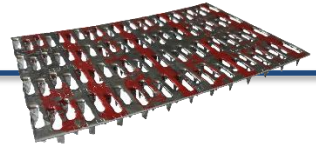


ITS LICENSING AGREEMENT

TRI-PLATE® PUNCHED METAL CONNECTOR plates are not available to the general public. They are used in the manufacture of timber roof and floor trusses, and prefabricated frames for timber housing.

The truss fabricator is required to sign a licensing agreement, which gives him access to sophisticated design programs, staff training, and the ITS Structural Timber Engineering consultancy.

Metal connector plates for use in DIY applications are available from the Timbalok division of ITS.



Application

TRI-PLATE® PUNCHED METAL CONNECTOR plates are designed in strict accordance with local and international codes of practice and specifications to provide sound structural timber to timber connections for the prefabricated timber truss and associated industries.

TRI-PLATE® PUNCHED METAL CONNECTOR plates are manufactured in a range of sizes to provide the most cost effective structural joints in prefabricated timber roof trusses.

Fixing

TRI-PLATE® PUNCHED METAL CONNECTOR plates are either hydraulically pressed or mechanically rolled into the timber joints, and the design ensures an effective spread of design load in the joints with extremely high resistance to “withdrawal” and metal shear.

Safe Working Loads

Design values are available from the ITS Timber Engineering Consultancy on request.

Product Sizes

Numerous standard sizes are available, we can
Additional sizes of plates can be manufactured upon request.

STEEL SPECIFICATION

Steel Grade: ISQ300-Z275.

Steel Thickness: 1mm. Rolling Tolerance: $\pm 0.09\text{mm}$.

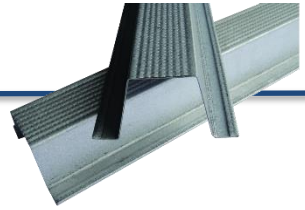
Weight used for calculation purpose: 8.117 kg/m^2 .

Area of steel per 25 kg of product used for
Calculation: 3.08 m^2

TRI-MRUNNER

Product Code: TMR02





Application

The TRI-MRUNNER is a cost effective way of bracing top & bottom chords and webs of trusses. They are always straight and level resulting in less wastage.

The TRI-MRUNNER is equivalent to a 38 x 76mm (SAP5) timber runner. They are made from corrosion resistant galvanised steel. The runners are lightweight and are quick and easy to install, requiring no special connections.

Method of attachment

The TRI-MRUNNER is connected to timber using 2 x 3.15mm x 32mm long **Timbalok** PASSIVATED NAILS.

Specifications*

Galvanised G550 0.58mm

Standard length: 6 meters (other lengths available on request)

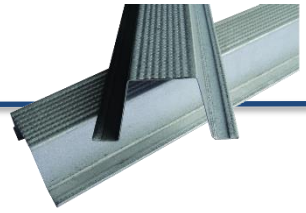
22mm Deep top hat profile

* Please refer to the ITS bracing manual for further details.

TRI-STEEL PURLIN

Product Code: TSP01





Application

The TRI-STEEL PURLIN is a cost effective, alternative to timber purlins. They are always straight and level resulting in less wastage.

The TRI-STEEL PURLIN is equivalent to a 50 x 76 mm (SAP5) timber purlin. They are made from corrosion resistant galvanised steel.

The purlins are lightweight and are quick and easy to install, requiring no special connections.

Method of attachment

The TRI-STEEL PURLIN is connected to the top chord of the truss or to the rafter using 2 off 4mm diameter x 60mm long **Timbalok** RING-SHANK PASSIVATED nails. At all gable ends, ridges and eaves, the TRI-STEEL PURLIN is connected to the top chord of the truss or the rafter with 2 off 6mm Diameter x 70mm long TRI-JET screws.

Specifications*

Galvanised G550 0.58mm

Standard length: 6 meters (other lengths available on request)

40mm top hat

Truss / Purlin / Batten centres:

- 1200mm max cc for sheeting (Purlin cc = 1200mm max cc)
- 1200mm max cc for tiles (Batten cc = 400mm max cc)

Recommended connections for attaching metal sheeting to Tri-Steel purlins



Classicorr corrugated profile on steel purlin (max 4.5mm thick)
#12 (5.5mm) x 38mm HWHF + epdm seal



Tufdek IBR profile on steel purlin (max 4.5mm thick)
#12 (5.5mm) x 68mm HWHF + epdm seal



Side cladding to steel purlin (max 4.5mm thick)
#12 (5.5mm) x 25mm HWHF + epdm seal

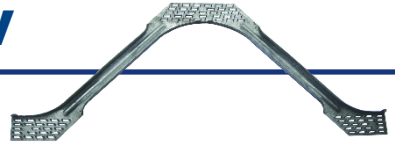
* Please refer to the ITS bracing manual for further details.

SpaceJoist®

Product Code: TJ100V - TJ325V



SJ100V - SJ325V



Application

SPACEJOIST® metal webs are used to manufacture space joist floor trusses. They are a cost effective alternative to timber webs. A SpaceJoist® floor truss floor system is far more economical than a concrete floor system.

The V shaped galvanised steel webs are used to join together timber flanges to form a space joist floor truss.

The SpaceJoist® is lightweight and is easy to install, giving a safe, economical and durable floor system. The SpaceJoist® can also be used in a roof application.

Spacejoists® floor trusses are normally manufactured at a Roof Truss Factory and then shipped out to the job site.

Safe Work Loads

SPACEJOIST® is a precisely engineered structural component, the design of which is dependent on the loads applied. For further information please contact International Truss Systems.



Timbalok ACUTE ANGLE BRACKET

Product Code: AAS (small = 30°)/AAL (large = 67°)





Application

Timbalok ACUTE ANGLE BRACKETS are used to join jack trusses to hip girder trusses and must be used in conjunction with a fully nailed booster gusset.

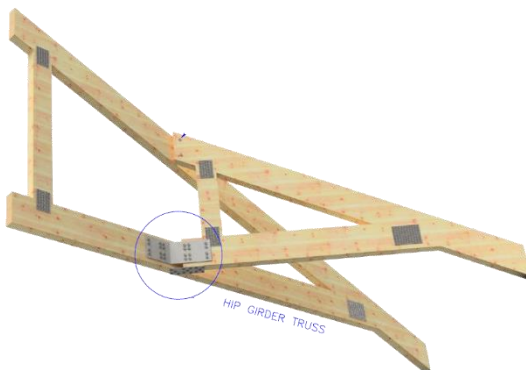
Timbalok ACUTE ANGLE BRACKETS are available in two sizes: small = 30° and large = 67°. While angles are set, the brackets can be further bent to suit the application.

Method of attachment

Timbalok ACUTE ANGLE BRACKETS are fixed using 2,8 x 32mm **Timbalok** PASSIVATED NAILS.

Safe working Loads*

2.36kN when used with a fully nailed booster gusset.

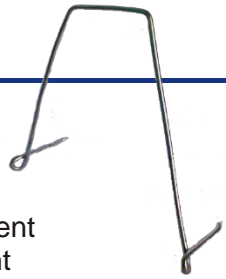


* Truss fabricators must refer to the ITS bracing manual for applications and details

Timbalok SWING FIX BRACKET

Product Code: SF01





Application

The **Timbalok** SWING FIX CLIP is designed for attachment of 50mm x 76mm and 50mm x 50mm purlins in an upright position to beams or roof trusses. They provide positive anchorage against uplift and lateral loads.

Special features

Quick and easy to install.

The **Timbalok** SWING FIX CLIP spikes are simply hammered home using a conventional claw hammer.

Comparative tests conducted by the SABS show that the average uplift resistance of the **Timbalok** SWING FIX CLIP assembly is nearly twice that of the conventional nailing with skew nails.

Method of attachment

Attach using a minimum of 2 **Timbalok** SWING FIX CLIPS and one 125mm nail.

A minimum of 2 **Timbalok** HURRICANE CLIPS together with 1 x 125mm nail are to be used on all ridges, gable ends and overhangs.

Safe working Loads*

2 SWING FIX CLIPS and 1 x 125mm nail 1,3 kN

Timbalok GLIDE SHOE

Product Code: GS01

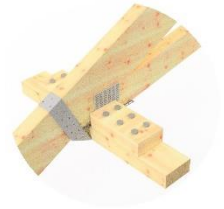




Application

Timbalok GLIDE SHOE is designed for use in trusses that have a horizontal displacement of between 10 to 25mm at a support. They provide free lateral movement of the truss at the support, thus preventing excessive horizontal forces from the truss being transferred into the wall supports.

Timbalok GLIDE SHOES are to be used in conjunction with **Timbalok** Tri-nail SITE APPLICATION PLATE (TNA1) 50 x 96mm Nail plate.



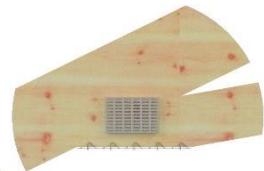
Method of attachment

The **Timbalok** Tri-Nail SITE APPLICATION PLATE is hammered into the underside of the bottom chord of the truss, centred over the wall plate.

The **Timbalok** GLIDE SHOE is positioned over the wall plate at the location where the truss will bear and the nails of the **Timbalok** GLIDE SHOE are hammered into the wall plate.

The **Timbalok** GLIDE SHOE 'base' is simply hammered into the wall plate at the appropriate truss spacing to ensure fixity of the base.

Once erected, the truss will then glide on the P.T.F.E. strip which has been fixed on the wall plate as described above.



Timbalok HEAVY DUTY CLEATS

Product Code: HDC01; 02; 03; 04; H45 + (V5; V8; V12)





Application

Timbalok HEAVY DUTY CLEATS are manufactured exclusively by International Truss Systems (Pty) Ltd to offer a cost effective and professionally engineered solution for the support requirements of the timber roof truss industry.

Method of attachment

Timbalok HEAVY DUTY CLEATS are designed to be used with M12 diameter bolts and **Timbalok** SQUARE WASHERS. The **Timbalok** SQUARE WASHERS are installed on the back face of the timber girder truss.

Every cleat is manufactured with holes in the horizontal leg to ensure the correct and safe installation of timber trusses to provide adequate lateral restraint to the connection.

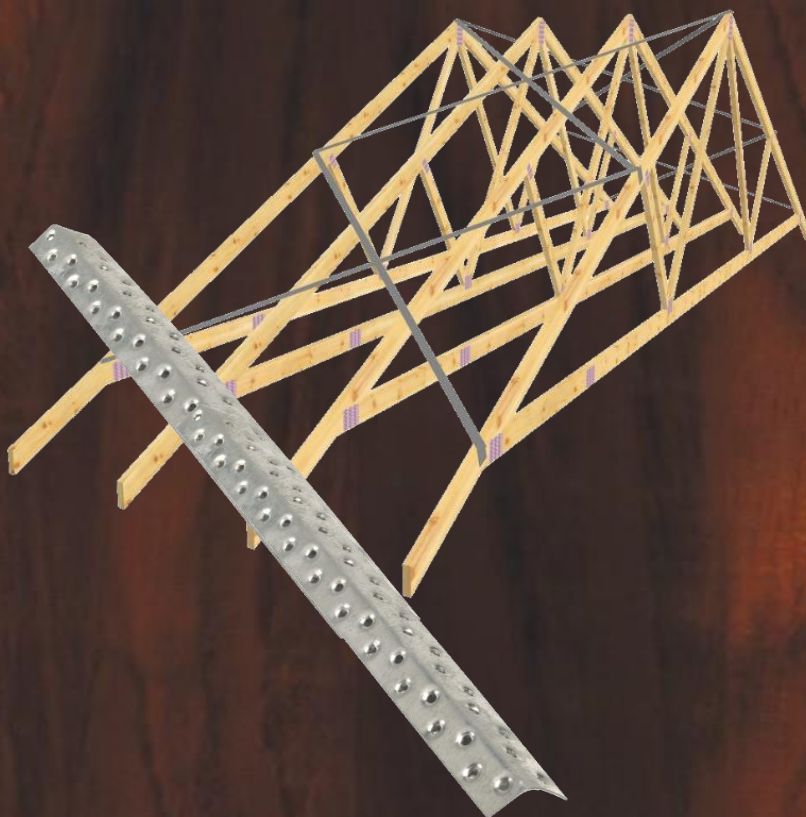
Support requirements for heavier loads can be designed and provided by ITS Timber Engineering Consultancy. *

Product Code	Safe working Loads*
HDC01	7kN
HDC02	16kN
HDC03	20kN
HDC04	30kN
H45V5P2	16kN
H45V8P2	25kN
H45V12P2	37kN

* For further queries, please contact the Timbalok Head Office

QUICK BRACE

Product Code: QB





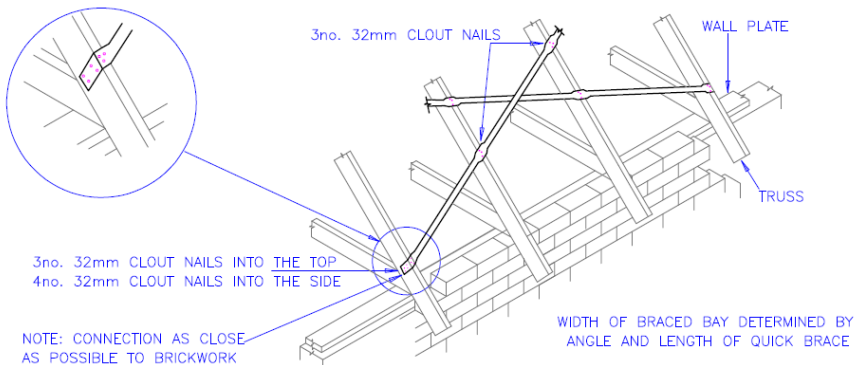
Application

Quick Brace are manufactured exclusively by International Truss Systems (Pty) Ltd to offer a cost effective and professionally engineered solution for the bracing requirements of the timber roof truss industry.

Method of attachment

Quick Brace are designed to be connected to the top chord of a timber truss to provide stability bracing to prevent lateral buckling of the top chords.

Quick Brace are connected to the timber truss using 2 of 2,8 x 32mm **Timbalok** Passivated Ringshanked nails. The **Quick Brace** are design to be in a zigzag/criss-cross patten at no more then 45 °.



QUICK BRACE STANDARD HEEL CONNECTION
WHERE BEAMFILL IS INSTALLED.

* Truss fabricators must refer to the ITS bracing manual for applications and details.



Sundry metal components

successful
for DIY projects

Timbalok STRUCTURAL TIMBER CONNECTOR COMPONENTS

Timbalok is a range of newly developed structural timber sundry components that encompass the most commonly used support elements in the design and erection of timber trusses.

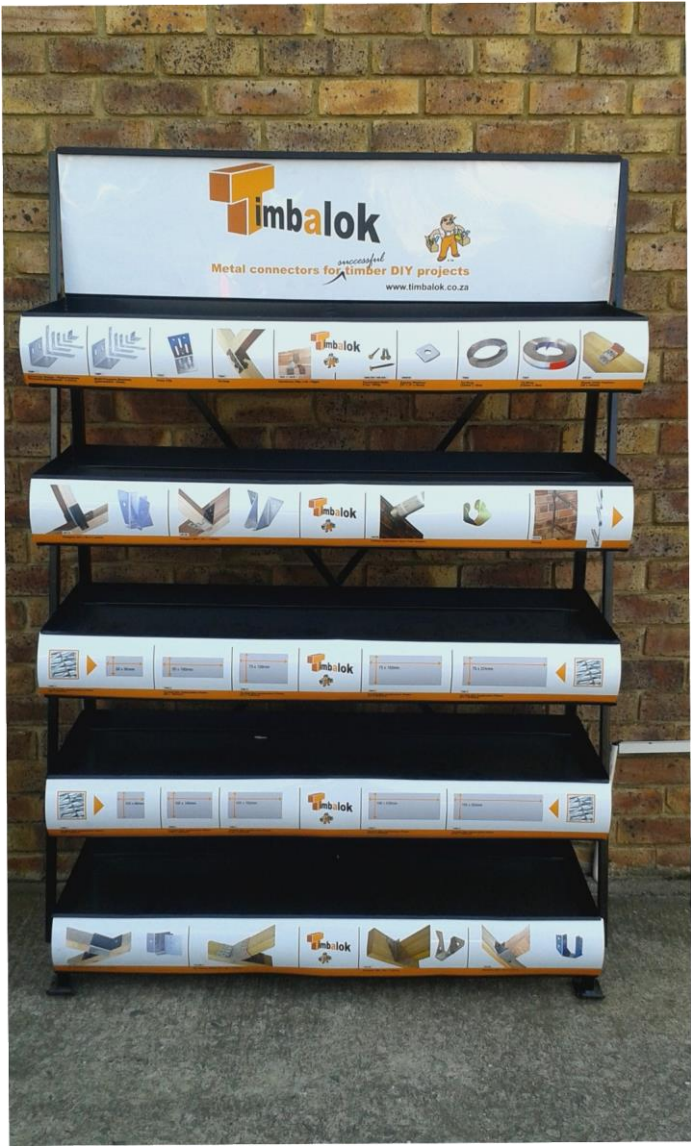
During the development of the **Timbalok** range, ideas from the four corners of the globe have been evaluated and improved upon and the range of components offers the user unrivalled flexibility in timber connection and support hardware.

The **Timbalok** range of components have been designed and manufactured in accordance with all relevant local Codes of Practice and building regulations and have been tested by the C.S.I.R.

The full range of **Timbalok** timber connector components are maintained at our depots in Jet Park, Durban and Cape Town.



Timbalok Display Stand



Display units are available on loan to building material outlets and hardware stores in 1200mm or 600mm widths.

Timbalok LEAFLETS

Project Shopping List

Materials:

- 1. 100mm x 50mm x 3000mm (4x10)
- 2. 100mm x 50mm x 3000mm (4x10)
- 3. 100mm x 50mm x 3000mm (4x10)
- 4. 100mm x 50mm x 3000mm (4x10)
- 5. 100mm x 50mm x 3000mm (4x10)
- 6. 100mm x 50mm x 3000mm (4x10)
- 7. 100mm x 50mm x 3000mm (4x10)
- 8. 100mm x 50mm x 3000mm (4x10)
- 9. 100mm x 50mm x 3000mm (4x10)
- 10. 100mm x 50mm x 3000mm (4x10)

Tools:

- 1. Saw
- 2. Drill
- 3. Screws
- 4. Nails
- 5. Sandpaper
- 6. Paint
- 7. Primer
- 8. Brush
- 9. Roller
- 10. Trowel

Other Handy Products Available from Timbalok

- 1. 100mm x 50mm x 3000mm (4x10)
- 2. 100mm x 50mm x 3000mm (4x10)
- 3. 100mm x 50mm x 3000mm (4x10)
- 4. 100mm x 50mm x 3000mm (4x10)
- 5. 100mm x 50mm x 3000mm (4x10)
- 6. 100mm x 50mm x 3000mm (4x10)
- 7. 100mm x 50mm x 3000mm (4x10)
- 8. 100mm x 50mm x 3000mm (4x10)
- 9. 100mm x 50mm x 3000mm (4x10)
- 10. 100mm x 50mm x 3000mm (4x10)

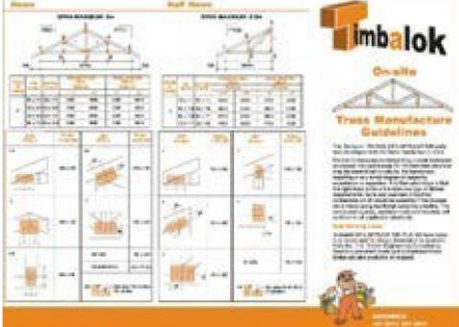


Truss Manufacture Guidelines

Timbalok

Truss Manufacture Guidelines

The Truss Manufacture Guidelines provide detailed instructions for the construction of various truss structures. It includes diagrams of different truss types, such as gable, gambrel, and flat trusses, along with their respective dimensions and material requirements. The guidelines also cover the assembly process, including the use of Timbalok's proprietary connectors and fasteners. A table of materials and dimensions is provided for each truss type, and a list of tools and equipment is included. The guidelines are designed to be easy to follow and ensure the safety and durability of the structures.



Ready-Made Trusses

Trusses


Ready-made trusses are available in various sizes and configurations. They are designed for easy installation and are suitable for a wide range of applications, including residential and commercial buildings. The trusses are made from high-quality materials and are tested to meet industry standards. They are available in a variety of colors and finishes to match your building's exterior. The trusses are easy to transport and store, and they can be installed in a matter of hours. They are a cost-effective and reliable solution for your truss needs.



Site Truss Fabrication Examples

Site Truss Fabrication Examples

This section provides examples of site truss fabrication for various structures. It includes diagrams and tables for different truss types, such as gable, gambrel, and flat trusses. The examples show the dimensions and material requirements for each truss type, and they provide step-by-step instructions for the fabrication process. The examples are designed to be easy to follow and ensure the safety and durability of the structures. They are a valuable resource for anyone looking to fabricate trusses on-site.



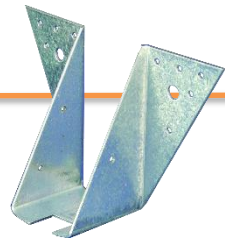
Notes:

Timbalok MINI-HANGERS

Product Code: UH10



Lazy Nail®



Application

Timbalok MINI-HANGERS are specifically manufactured to cater for lightly loaded prefabricated trusses or rafters.

Method of attachment

Timbalok MINI-HANGERS are designed to be attached using **Timbalok** RING-SHANK PASSIVATED NAILS. 2 x M6 bolts holes are provide for masonry connections.

Special Features

A unique temporary fixing “Lazy Nail®” is provided to facilitate temporary installation (prior to nailing)

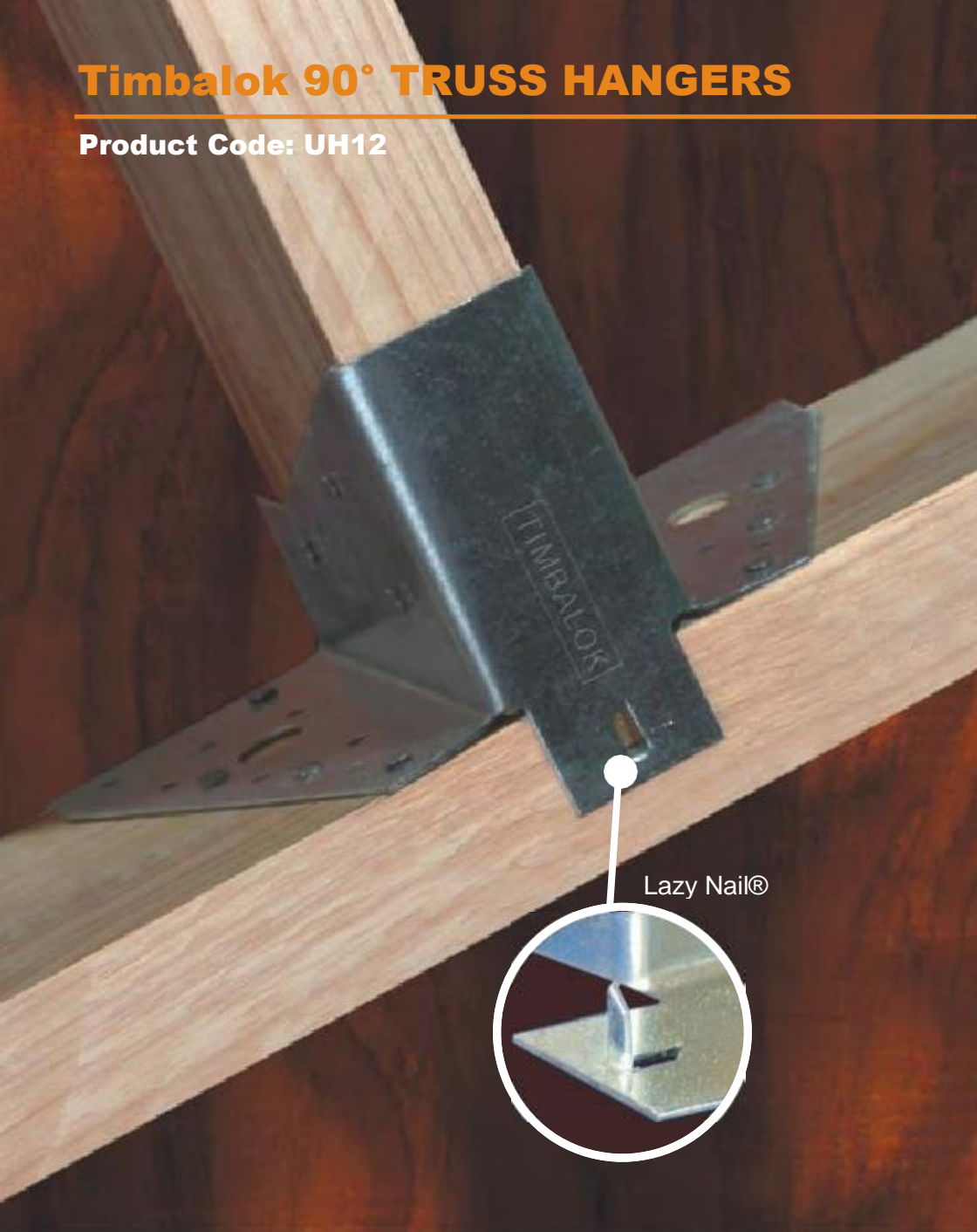
Safe Working Load *

202 Kg fully nailed using **Timbalok** RING-SHANK PASSIVATED NAILS

* Please refer to the ITS bracing manual for exact specifications.

Timbalok 90° TRUSS HANGERS

Product Code: UH12



Lazy Nail®



Application

Timbalok 90° TRUSS HANGERS are specifically designed to support truss-to-girder and girder-to-girder connections in prefabricated timber roof structures.

Timbalok 90° TRUSS HANGERS can also be connected to concrete or masonry.

Method of attachment

Timbalok 90° TRUSS HANGERS are attached using **Timbalok** RING-SHANK PASSIVATED NAILS or may be bolted using M12 bolts and **Timbalok** SQUARE WASHERS. 12 mm rawl bolts can be used to attach the hanger to a masonry wall or concrete beam.

Special features

A unique temporary fixing “Lazy Nail®” is provided to facilitate temporary installation (prior to nailing).

Safe Working Loads*

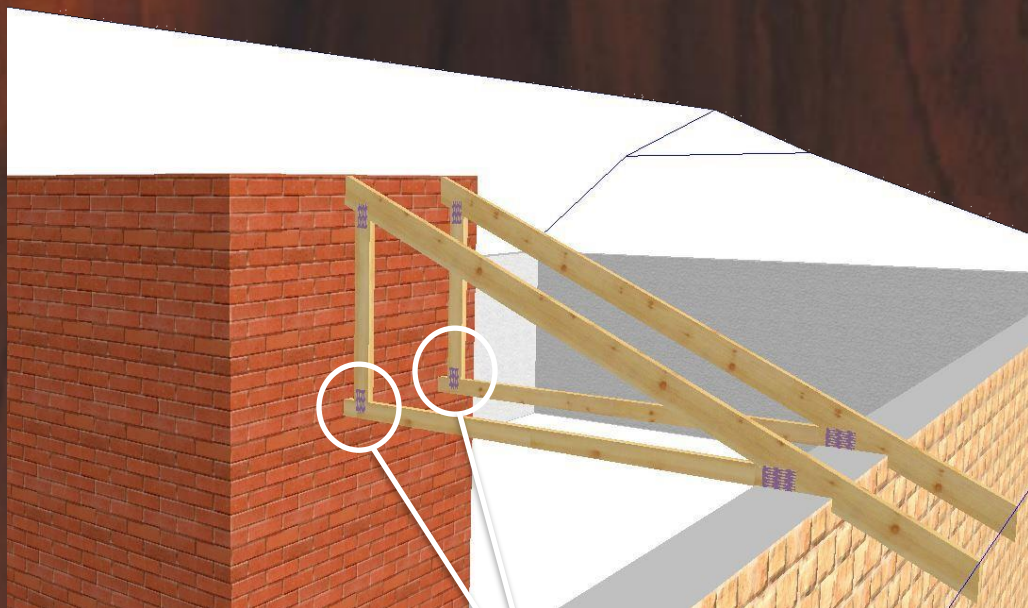
438 Kg fully nailed.

674 Kg – nailed and bolted using M12 bolts and with **Timbalok** SQUARE WASHERS.

* Truss fabricators are to refer to the ITS bracing manual for further applications and details.

Timbalok 90° WALL MOUNT HANGER

Product Code: UH12W





Application

Timbalok 90° WALL MOUNT TRUSS HANGERS are specifically designed to support truss-to-wall connections in prefabricated timber roof structures.

Method of attachment

Timbalok 90° WALL MOUNT TRUSS HANGERS are attached using 2 off M12mm x 100mm chemical anchors to be used to attach the hanger to a masonry wall or concrete beam.

Safe Working Loads*

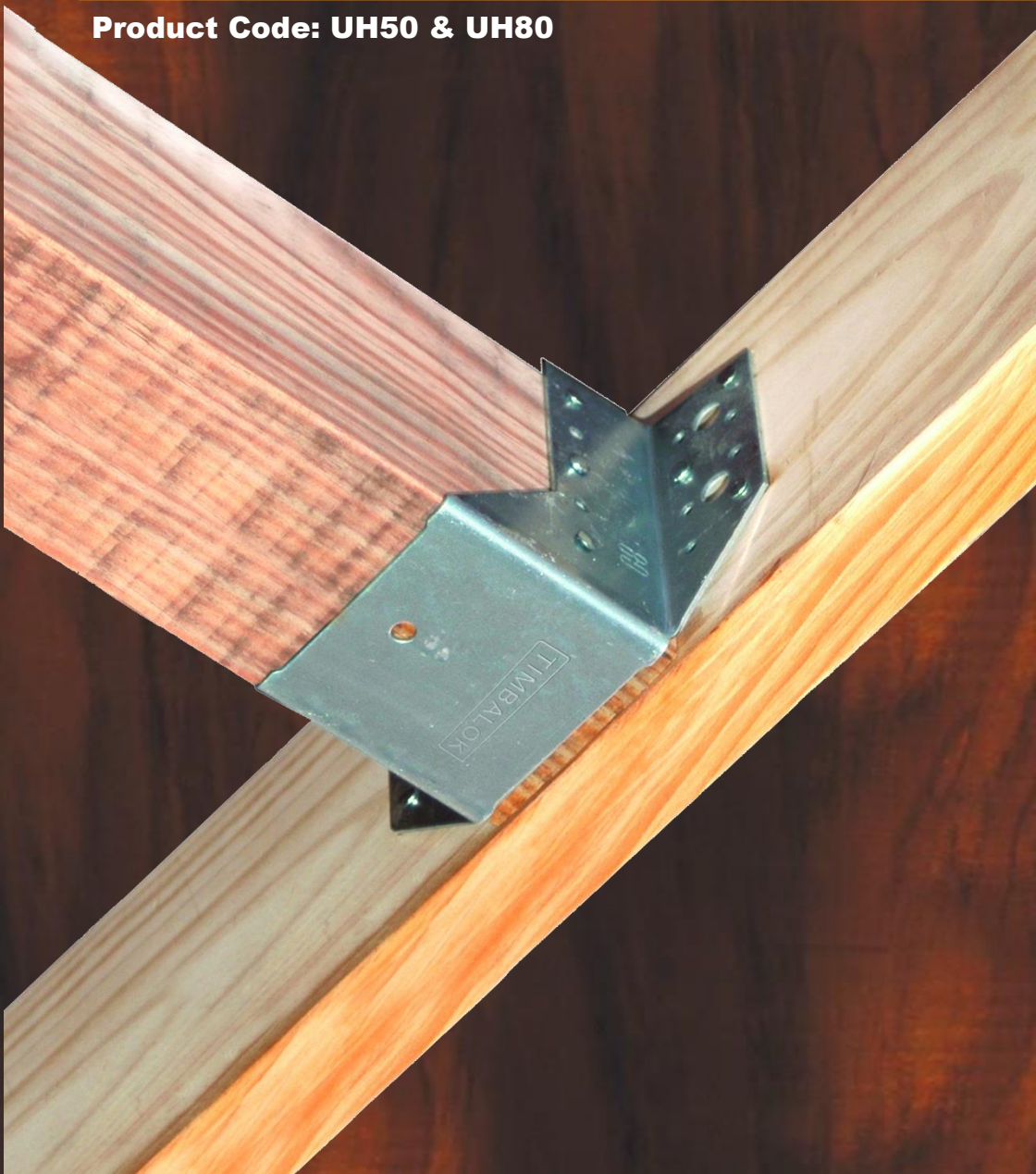
Solid Masonry (clay bricks excluded) - 340 Kg fully bolted.

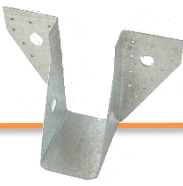
Concrete or Steel - 500 Kg – fully bolted.

* Please contact ITS Engineering for exact specifications.

Timbalok “U” TYPE HANGERS

Product Code: UH50 & UH80





UH50 / UH80



Application

Timbalok 50 “U” TYPE HANGERS are manufactured to cater for 48mm timber widths. Code: UH50

Timbalok 80 “U” TYPE HANGERS are manufactured to cater for 76mm timber or 2ply trusses. Code: UH80

Method of attachment

Timbalok 50 “U” TYPE HANGERS are designed to be attached with 2 x M12 bolts or fully nailed with **Timbalok PASSIVATED NAILS** – 2.8mm diameter x 32mm long.

Timbalok 80 “U” TYPE HANGERS are designed to be attached with 4 x M10 bolts & fully nailed with **Timbalok PASSIVATED NAILS** – 4mm diameter x 60mm long

Safe Working Loads UH50*

4.38kN - fully nailed with **Timbalok RING-SHANK PASSIVATED NAILS**
6.74kN - fully nailed and bolted with 2 x M12 bolts and with **Timbalok SQUARE WASHERS**.

Safe Working Loads UH80*

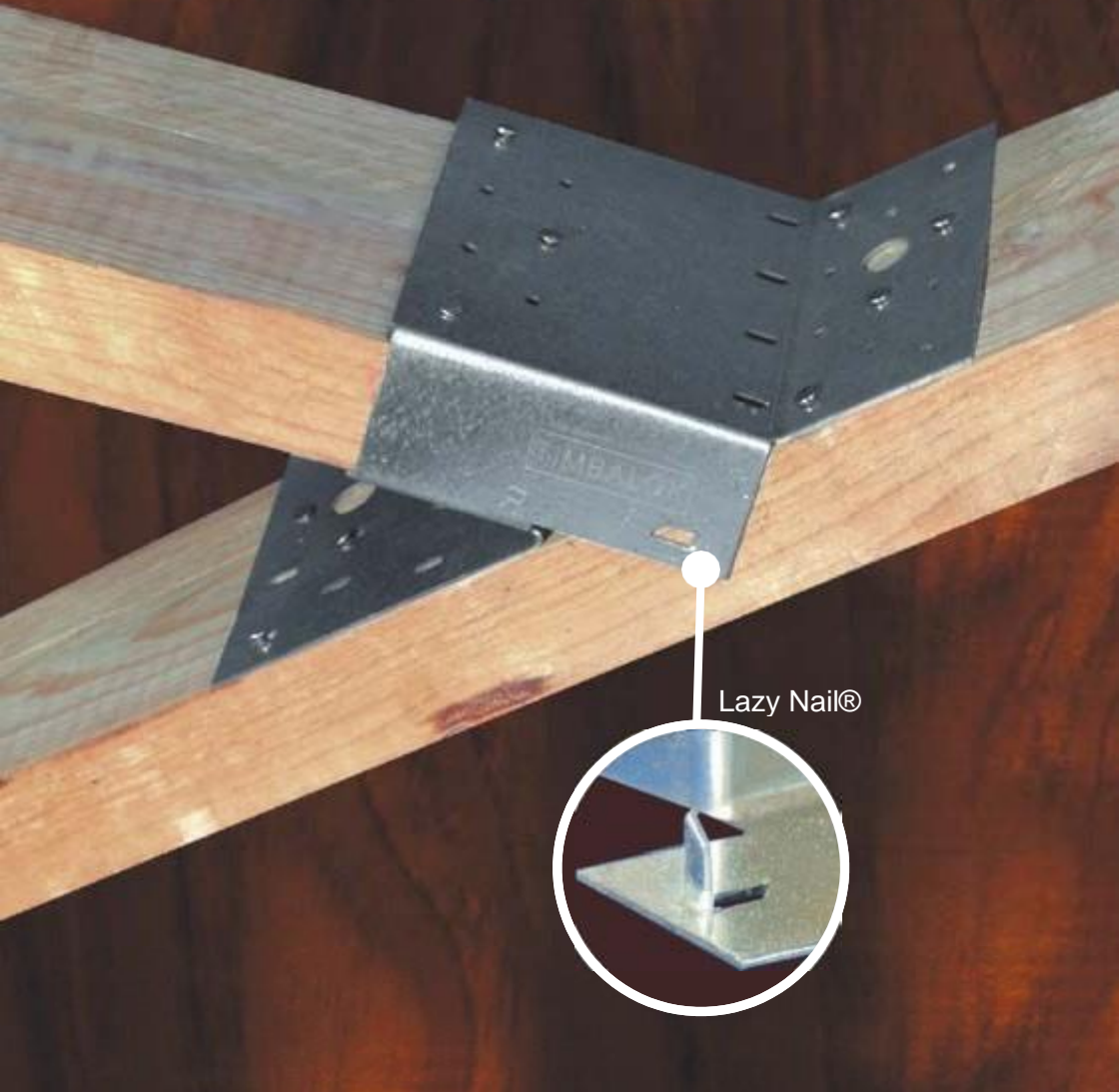
6.93kN - fully nailed with **Timbalok 4mm RING-SHANK PASSIVATED NAILS**
10.4kN - fully nailed and bolted with 4 x M10 bolts PLUS **Timbalok 4mm RING-SHANK PASSIVATED NAILS**.

* Truss fabricators are to refer to the ITS bracing manual for further applications and details.

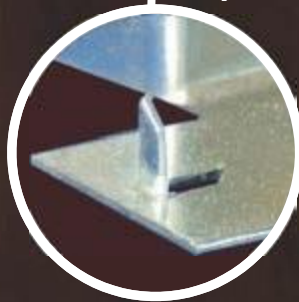
* Please contact ITS Engineering when connecting the hanger to concrete or masonry.

Timbalok 45° TRUSS HANGERS

Product Code: TH45L (Left); TH45R (Right)



Lazy Nail®



TH45L (Left); TH45R (Right)



Application

Timbalok 45° TRUSS HANGERS are specifically designed to provide adequate support for all 45° hip girder, hip truss and jack connections.

Method of attachment

Timbalok 45° TRUSS HANGERS can be attached using **Timbalok** PASSIVATED NAILS. or M12 bolts with **Timbalok** SQUARE WASHERS.

Special features

A unique fixing “Lazy Nail®” is provided to facilitate temporary installation (prior to nailing)

Safe Working Loads*

435 Kg - fully nailed with **Timbalok** RING-SHANK PASSIVATED NAILS
672 Kg - bolted using M12 bolts and **Timbalok** SQUARE WASHERS.

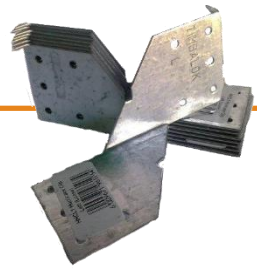
* Truss fabricators are to refer to the ITS bracing manual for further applications and details.

Timbalok HURRICANE CLIPS

Product Code: HCL1 (Left); HCR1 (Right)



HCL1 (Left); HCR1 (Right)



Application

Timbalok HURRICANE CLIPS are designed for general timber connections, where the members cross each other at 90° angles.

Common Applications

Purlin to rafter or purlin to top chord of trusses. Ceiling bracing to truss connections. Truss to wall plate connections. Attachment of bracing members to trusses / rafters. Lightweight timber to timber connections.
Purlin sizes = 50 x 50mm; 50 x 76mm

Method of attachment

Timbalok HURRICANE CLIPS are attached using 10 x 2.8mm diameter x 32mm long **Timbalok** RING-SHANK PASSIVATED NAILS.

One **Timbalok** HURRICANE CLIP per truss/purlin connection.

On all ridge lines, gable ends and overhangs a minimum Of 2 **Timbalok** HURRICANE CLIPS must be used.

Special features

A unique temporary fixing “Lazy Nail®” is provided to facilitate easy temporary installation (prior to nailing)

Safe Working Loads*

150 Kg fully nailed (per clip)

* Truss fabricators are to refer to the ITS bracing manual for further applications and details.

Timbalok TRUSS CLIP

Product Code: TC01





Application

Timbalok TRUSS CLIP is designed as a general purpose connector for the DIY market.

Common applications

Timbalok TRUSS CLIPS may be used to provide Transverse restraint to trusses over non load bearing internal walls without restricting vertical movement due to loading of the roof.

Timbalok TRUSS CLIPS can also be used in shelf bracing to the wall plate and the trusses on each side when metal cross bracing is used to brace the top chords of trusses.

Method of attachment

Timbalok TRUSS CLIPS are attached using 7 off 2.8mm Diameter x 32mm long **Timbalok** RING-SHANK PASSIVATED NAILS

Timbalok **TIMBER WASHERS**

Product Code: SW01G





Application

Timbalok SQUARE WASHERS are 35 x 35 x 4mm. They are designed to enhance the load bearing capacity of M12 bolts used in timber engineering.

As per SANS 10163, the specified load capacity of a M12 bolt can be enhanced by 15% if **Timbalok** SQUARE WASHERS are used.

Common applications

Used on all timber faces when bolting multiply girders together.
Used on all timber faces when bolting **Timbalok** hangers to girder trusses.
Used on all timber faces when connecting timber members together with M12 bolts.

Method of attachment

Timbalok SQUARE WASHERS should be used for every M12 bolted connection (on both sides of the timber), except with use of **Timbalok** MULTI PURPOSE BRACKETS then only one washer is required on the back face of the timber.

Timbalok BATTEN SPLICE

Product Code: BS02





Application

Timbalok BATTEN SPLICES are specifically manufactured to provide sound structural connections for battens and are SABS approved.

They are designed for use in converting timber 'shorts' to 'longs' and for the recovery of waste and off cuts in a factory environment.

Timbalok BATTEN SPLICES are made in a standard 32mm x 150mm size to meet all the requirements of commonly used batten sizes (**38x38**; **38x50**; **50x50**).

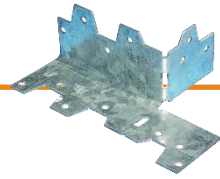
Method of attachment

Timbalok BATTEN SPLICES are either pressed home using hydraulic presses or mechanically rolled in after temporary placing with a claw hammer.

Timbalok TRI-GRIP[®]

Product Code: TG01





Application

Timbalok TRI-GRIP[®] is manufactured from 1.0mm galvanised steel, and is the most versatile framing anchor.

Nail holes are spaced to prevent wood splitting. The

Timbalok TRI-GRIP is exclusive bending slots allows instant, accurate bends for both the builder and DIY market.

The balanced, completely reversible design permits a variety of connections.

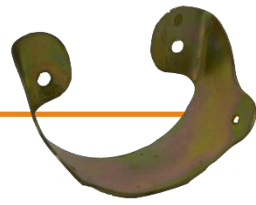
Method of attachment

Timbalok TRI-GRIP[®] is attached using 14 x 2.8mm Diameter x 32mm long **Timbalok RING-SHANK PASSIVATED NAILS**.

Timbalok ADJUSTABLE POLE HANGER

Product Code: HPH01





Application

Timbalok ADJUSTABLE POLE HANGER is manufactured to provide a sound, attractive fixing for a gum pole with a diameter of 125mm.

Method of attachment

Timbalok ADJUSTABLE POLE HANGER is designed to be fixed to the supporting structure with 2 x 10mm bolts and nail holes are provided in the supporting legs to restrain the pole.

Safe Working Loads

Safe working loads will depend upon the size of:

- the bolt, with which the pole hanger is attached to the support. The support may be a timber beam or column, or a concrete or masonry wall.
- The nails, with which the pole is attached to the hanger.

Safe working loads should be determined by an engineer or designs can be made available upon written request from the I.T.S. Timber Engineering Consultancy*

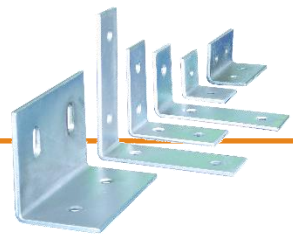
* For further queries, please contact the Timbalok Head Office

Timbalok MULTI-PURPOSE BRACKETS

See Table Opposite for Product Codes



Codes: HMP & EMP



Application

Timbalok MULTI-PURPOSE BRACKETS are manufactured by International Truss Systems (Pty) Ltd to meet the needs of the D.I.Y. market.

They are specifically designed for a wide range of applications in the structural timber market and general building industry.

Method of attachment

Timbalok MULTI-PURPOSE BRACKETS are designed to be fixed with 8,10 and 12mm bolts depending upon the application and type of bracket used.

HMP# = 5mm thickness & **EMP#** = 2.5mm thickness

Product Code

Bracket Size : L x H x W x Thickness

HMP 01
50x50x50x5mm



HMP 02
100x50x50x5mm



HMP 03
150x75x55x5mm



HMP 04
150x100x80x5mm



HMP 05
50x100x100x5mm



HMP 06
50x150x150x5mm



HMP 07
50x100x50x5mm



HMP 08
50x150x75x5mm

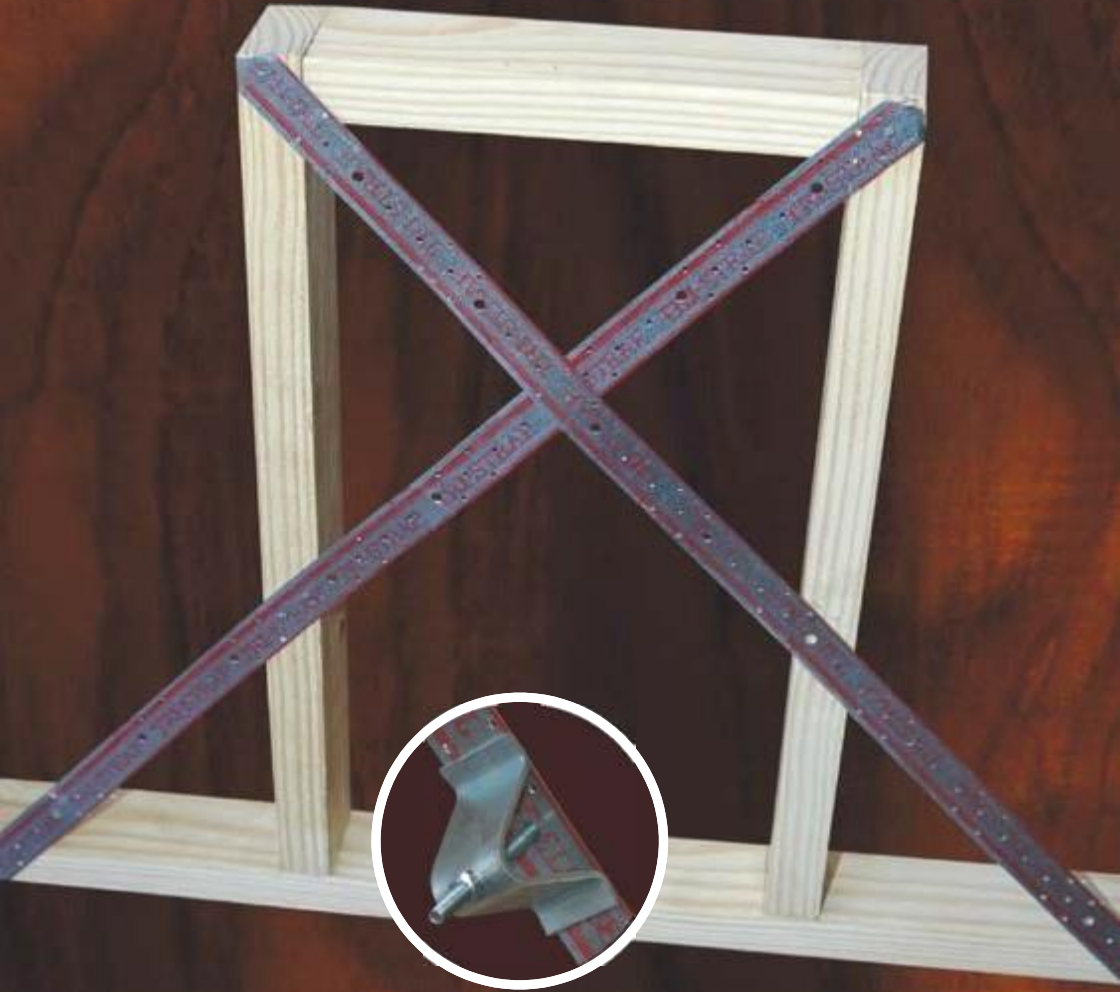


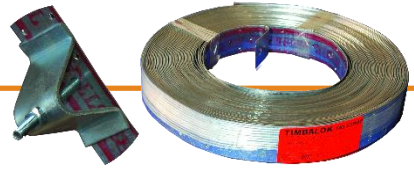
HMP 09
100x100x100x5mm



Timbalok TRI-STRAP & TENSIONER

Product Code: TS01; TS02





Application

Timbalok TRI-STRAP is a pre-punched galvanized coil strip which is used in a variety of holding down, tying and bracing applications. Its most common applications are:

- Holding down strap either built in or bolted to walls and beams at truss heel/wall plate intersections.
- Truss to girder or girder to girder web tie connections
- Attic bracing where conventional timber bracing interferes in the roof space.
- Cross bracing of timber frame housing, roofs and garage doors.
- Rafter and gum pole structure bracing and ties.

Method of attachment

Timbalok TRI-STRAP is produced with a row of centrally punched holes for quick and easily nailed connections to the timber structure whilst maximising edge distance and the associated failures of 'edge tearing' in thin material.

Timbalok TRI-STRAP is unique in that it has a 7mm diameter hole every 100mm to accommodate a 6mm bolt for positive long-term tension and minimum creep or slip used with a tensioner. 3,5mm diameter nail holes are provided at 25mm centres for alternate strap to timber connections.

Timbalok TRI-STRAP TENSIONERS are used with **Timbalok TRI-STRAP** to achieve maximum tension after fixing.

Timbalok SITE APPLICATION PLATES



The **Timbalok** SITE APPLICATION PLATE was developed with the home handyman in mind.

For the home-owner contemplating a small extension or carport, the roof trusses for the intended structure may be assembled on-site by the handyman, requiring a very small degree of carpentry experience or expertise. A further advantage is that the tight truss joints will enable savings on timber requirements, bolts and washers or toothed connectors which would be essential if the trusses were made using traditional carpentry practice. The completed trusses, carefully made and erected, will conform to all applicable standards.

Safe Working Loads

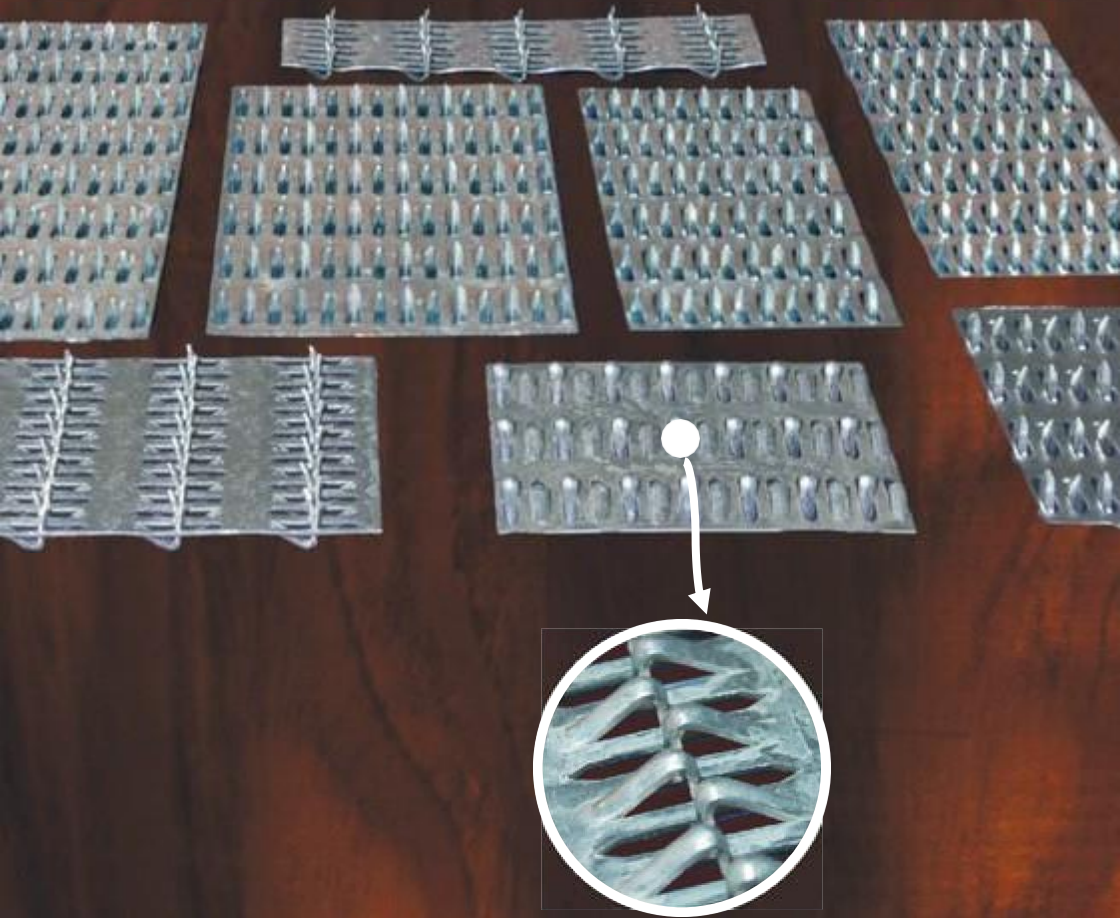
Timbalok SITE APPLICATION PLATES have been fully tested by the C.S.I.R. and full design information is available from the I.T.S. Timber Engineering Consultancy. Specially prepared charts giving load/span/truss tables are also available on request.



Roof Erectors' Handbook available from the ITC.

Timbalok SITE APPLICATION PLATES

Product Code: Various (see table opposite)





Application

Timbalok SITE APPLICATION PLATES are manufactured by International Truss Systems (Pty) Ltd in 1mm galvanised steel coil to compliment the wide range of **Timbalok** TRI-PLATES (punched metal connector plates) used in Prefabricated Truss Manufacture.

The **Timbalok** range of SITE APPLICATION PLATES are specifically produced to offer the benefits of 'mono-planar' timber truss manufacture in rural or remote areas where electricity and hydraulically operated equipment is not available.

Method of attachment

No power or mechanical equipment is needed. The individual nails are simply driven into the timber using a conventional claw hammer and in strict accordance with the guidelines and specifications given in the **Timbalok** On-site Truss Manufacture Guidelines Pamphlet.

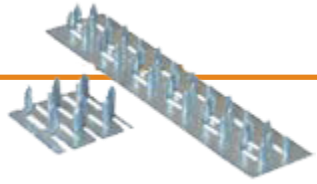
Specifications

<u>Code</u>	<u>Plate Size</u>	<u>Code</u>	<u>Plate Size</u>
TNA 1	50 x 96 mm	TNA5	75 x 128 mm
TNA 2	50 x 160 mm	TNA6	75 x 192 mm
		TNA7	75 x 224 mm
TNB 1	100 x 96 mm	TNC 1	150 x 160 mm
TNB 2	100 x 160 mm	TNC 2	150 x 192 mm
TNB 3	100 x 192 mm	TNC 3	150 x 256 mm
TNB 4	100 x 256 mm	TNC 4	150 x 320 mm
TNB 5	100 x 320 mm	TNC 5	150 x 416 mm

Timbalok ANTI-SPLIT PLATES

Product Code: Various (see table opposite)





Application

Timbalok ANTI-SPLIT PLATES for scaffold planks and poles are designed for easy insertion into the end grain of timber. **Timbalok** ANTI-SPLIT PLATES will provide maximum protection against end splitting of timber.

Timbalok ANTI-SPLIT PLATES (punched metal plates) are manufactured in a range of sizes to provide the most cost effective cover area.

Method of attachment

Timbalok ANTI-SPLIT PLATES punched metal plates are either hydraulically pressed or hammered into the timber or pole ends. **Timbalok** ANTI-SPLIT PLATES provide an extremely high resistance to “pull out”.

Steel Specification

Steel Thickness: 1.2mm. Rolling Tolerance: $\pm 0.09\text{mm}$.

Weight used for calculation purpose: 9.7404 kg/m^2 .

Area of steel per 25 kg of product used for calculation:
 2.5664 m^2 .

NB. SANS 457 and 1288 require coverage of 85% of cross sectional area on pole ends. All nails to be fully embedded into poles and scaffold planks.

<u>Code</u>	<u>Plate Size</u>	<u>Code</u>	<u>Plate Size</u>
ASA1	20 x 40 mm	ASB2	40 x 60 mm
ASA2	20 x 160 mm	ASB3	40 x 80 mm
ASA3	20 x 120 mm	ASB4	40 x 100 mm
ASA4	20 x 140 mm	ASB5	40 x 180 mm
ASA5	20 x 180 mm	ASB6	40 x 200 mm
ASA6	20 x 200 mm		
ASC1	80 x 60 mm	ASD1	120 x 180 mm
ASC2	80 x 80 mm	ASD2	120 x 100 mm
		ASD3	120 x 120 mm
ASE1	140 x 120 mm	ASD4	120 x 160 mm
ASE2	140 x 140 mm		

Timbalok TRI-LUG®

Product Code: HTL01



Application

Timbalok TRI-LUG^R is a useful device used to bond brick work and building blocks to concrete columns and walls, existing brick work and timber window and door frames.

Method of attachment

Timablok TRI-LUG^R should be fixed to the completed structure with masonry pins or plugs and screws. No need to pocket bricks when interlocking wall to wall at right angles.



Timbalok RING-SHANK PASSIVATED NAILS

Product Code: Various (see table below)



Application

The yellow passivating process gives a rust resistance equivalent of 96-120 hours in a salt spray test.

The salt spray test is an internationally recognised standard for determining the rust resistance of metal products by exposing them to exaggerated corrosive conditions in a salt bath and then measuring the degree of corrosion in hours.

In all applications of **Timbalok** products where 'galvanised clout nails' are specified, it is preferable to use **Timbalok PASSIVATED** corrosion resistant NAILS.

Product

<u>Code</u>	<u>Size</u>	<u>Weight</u>
HNS-355	35 x 3.15mm	500g packet
HNS-351	35 x 3.15mm	1kg packet
NS-35	35 x 3.15mm	25kg box
TSN 01	60 x 4mm	25kg box

Notes:

Head Office

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