Ringlock

One Scaffold System.
Limitless Applications.

PROVIDING ATPAC COMPLETE SCAFFOLDING SOLUTIONS

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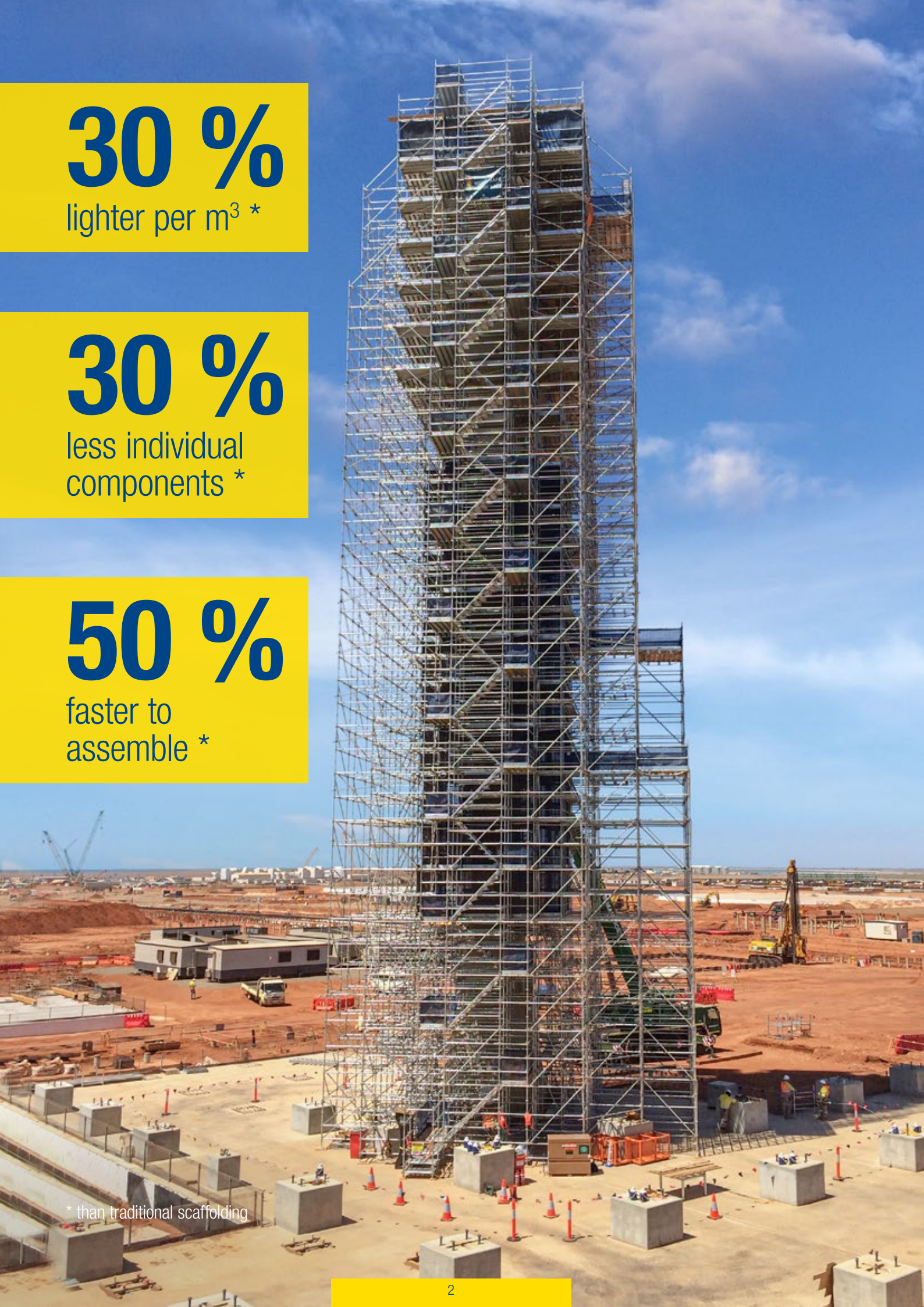


30 %
lighter per m^3 *

30 %
less individual components *

50 %
faster to assemble *

* than traditional scaffolding

One Scaffold System. Limitless Applications.

Ringlock is a modular access scaffolding system for industrial and construction applications. Ringlock is built with fewer main components which lead to a significant reduction of commissioning quantities. Regardless of the requirements, up to 80% of the material is reusable for different applications.

This will reduce investment costs and increase utilisation rates while benefiting from an assembly sequence that follows the same principle for all applications. A high return on investment is also underlined by the hot dipped galvanisation on structural components.

Global Certifications

including EN12810

Limitless Applications

Enhanced Performance

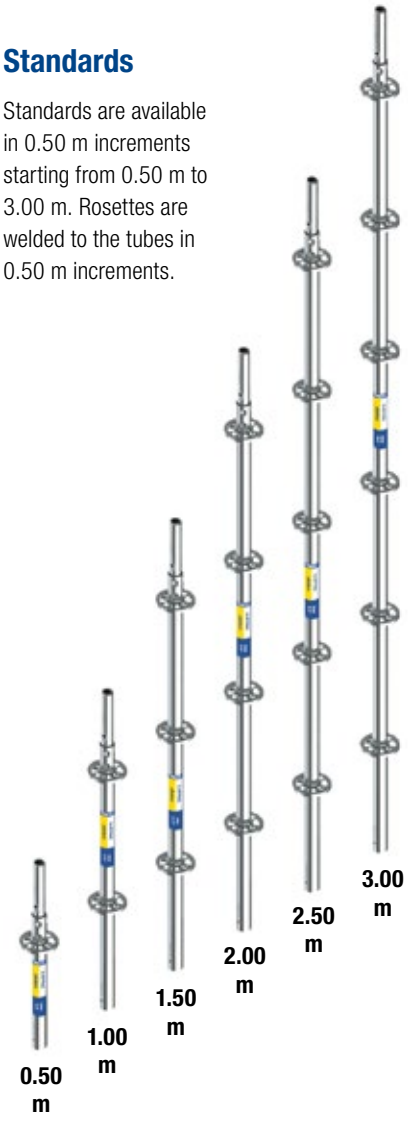
All-round Safety

Cost Efficient

Main Components

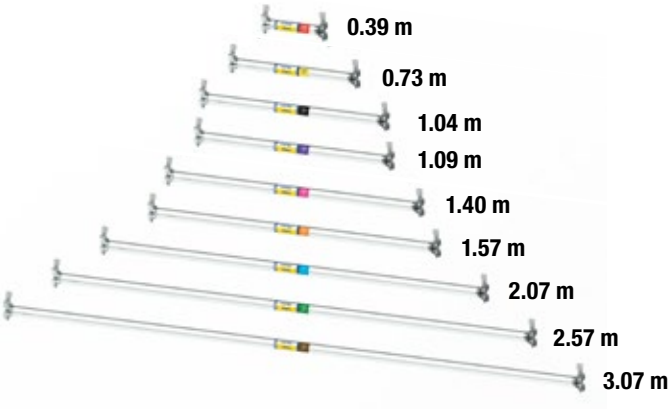
Standards

Standards are available in 0.50 m increments starting from 0.50 m to 3.00 m. Rosettes are welded to the tubes in 0.50 m increments.

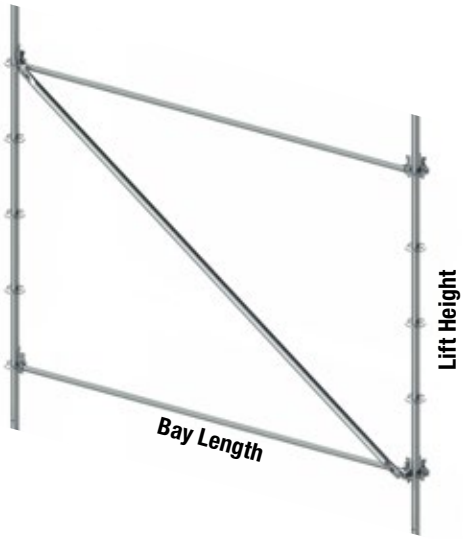


Ledgers

Ledgers are available in lengths of 0.39 m, 0.73 m, 1.04 m, 1.09 m, 1.40 m, 1.57 m, 2.07 m, 2.57 m and 3.07 m.
Ledgers are connected to the vertical Standards using the cast end with the captive wedge. This connection is extremely strong and prevents the possibility of loose components.



Standards, ledgers, diagonals and steel decks are labelled with specific colour coded identification stickers, speeding up the identification process.



Diagonals

Diagonals are available in various Ledger lengths and lift heights. Diagonals attach to the rosettes using the same integrated wedge connection as the Ledgers.

Base Jacks and Base Collars

As the first component of the Ringlock system to be assembled, the base jacks ensure the correct transfer of loads to the ground and come equipped with a spindle for height adjustment.

Standards

Standards ensure the transfer of vertical loads.

They have rosettes welded every 50 cm where ledgers and diagonal braces can be installed.

Ledgers

Ledgers connect to rosettes using a cast ledger end and wedge. Ledgers are structural elements supporting platforms or act as guardrail edge protection. Ledgers are available in lengths ranging from 0.15 m - 3.07 m.

Diagonal Braces

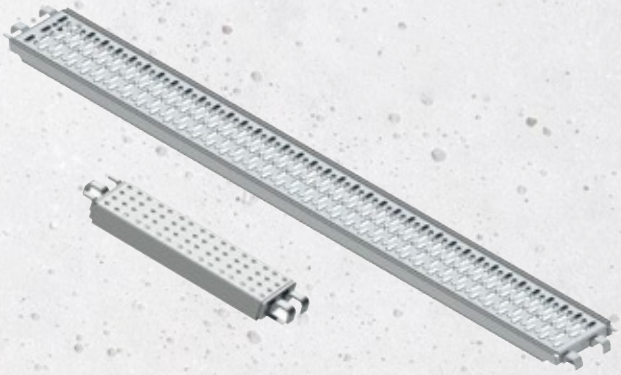
Diagonal Braces connect to the rosette using a swiveling cast end and wedge, and provide rigidity to the scaffold. Available in every Ledger length and lift height from 1.0 m - 2.0 m.

Access & Egress

Ringlock scaffold has been designed to provide safe access and egress, either integrated into a working scaffold or as a stand alone stair tower.

Steel Decks

In order to provide maximum strength and safety, our walking/working platforms are made of steel and include a perforated surface, allowing for water to pass through while providing sufficient grip for users. Each steel deck comes with an anti-lifting device and is available in all ledger lengths, and in two widths; 0.19 m and 0.32 m.



Access Deck

The access deck with a built-in trapdoor provides easy passage within the working area, while a fixed ladder provides safe access between levels. Both ladder and platform surfaces are anti-slip.

Stairways

Made from either steel or aluminium and available in different widths and lengths, the lightweight quality of our stairways enable easy and safe handling. The variable landing areas built within the stairways allow for greater versatility.

Accessories

Truss Ledger

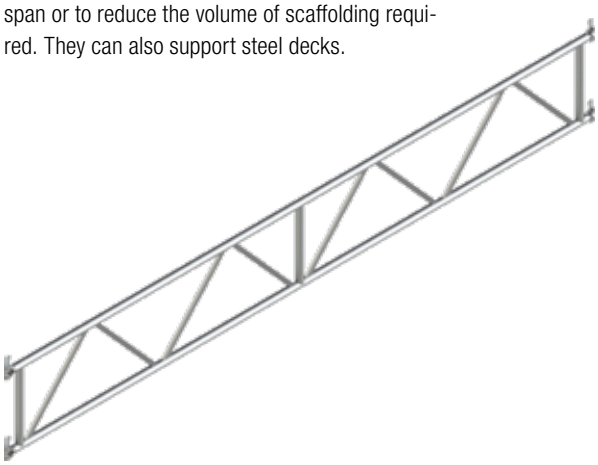
Truss ledgers are horizontal components which have increased load-bearing capacities. They are used as trusses to support decking and are mainly used in conjunction with wider scaffolding applications such as birdcage, cantilever or suspended scaffolding.

Side / Console Brackets

Brackets enable the decking floor to be extended and are available in three dimensions to accomodate between one to three steel decks.

Lattice Girder

Lattice girders are an ideal way to provide a wider span or to reduce the volume of scaffolding required. They can also support steel decks.



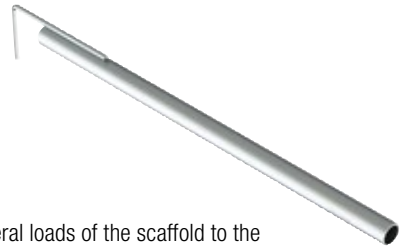
Accessories

Shoring screw-jack heads

With the integration of shoring heads, Ringlock can also be used as a shoring solution. Available in either four-way and U-head formats, heads can be used as per design requirements.

Anchoring Shoe

Whenever anchoring is needed with a greater bearing capacity, this anchoring shoe is ideal at providing quick and safe support by allowing the transfer of horizontal loads and simply using scaffolding tubes and couplers.



Anchor Tube

Transferring the lateral loads of the scaffold to the structure surface, anchor tubes can be fixed to the express anchor or eye bolt ensuring greater stability.

Wall Tie Bracket

Designed to attach to a scaffold tube and butt to a supporting structure creating an anchorage.

Express Anchor

It's safe, easy to use and has a durable lifespan.

Eye Bolt

In addition to the express anchor, the eye bolt can be used in conjunction with the plastic rawl plug to support the installation of the anchor tube.

▲ Eye Bolt

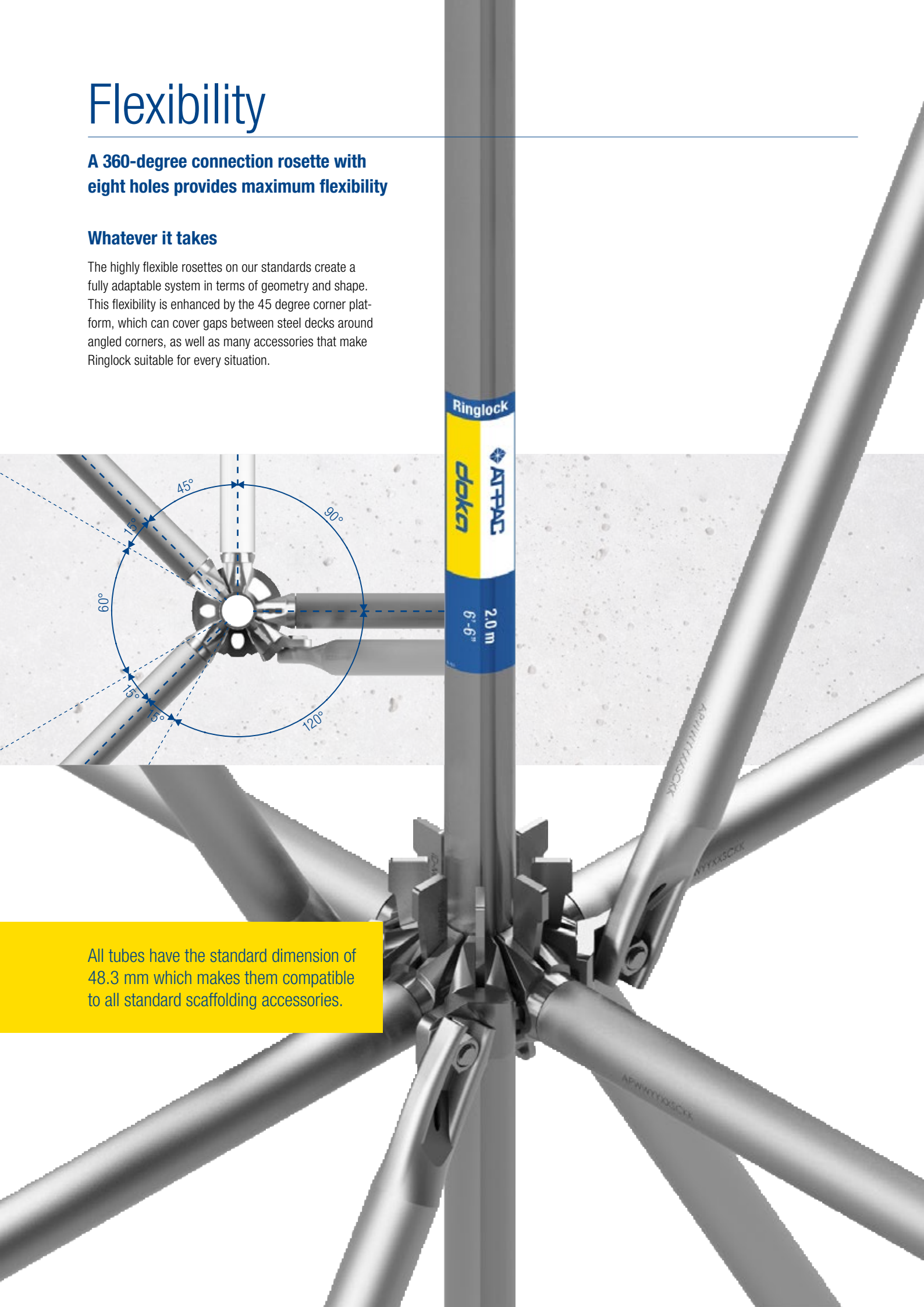
▲ Plastic Rawl

Flexibility

A 360-degree connection rosette with eight holes provides maximum flexibility

Whatever it takes

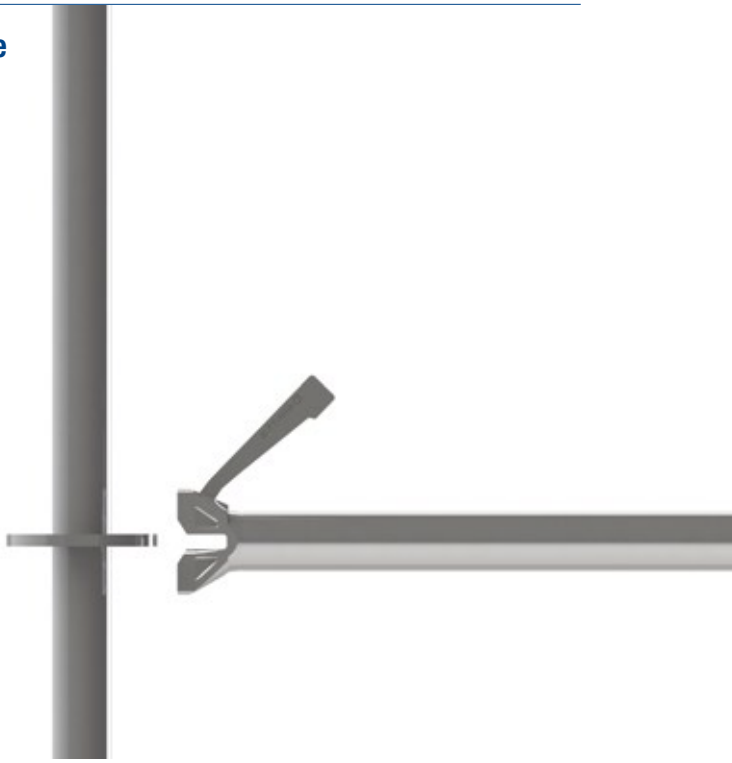
The highly flexible rosettes on our standards create a fully adaptable system in terms of geometry and shape. This flexibility is enhanced by the 45 degree corner platform, which can cover gaps between steel decks around angled corners, as well as many accessories that make Ringlock suitable for every situation.



All tubes have the standard dimension of 48.3 mm which makes them compatible to all standard scaffolding accessories.

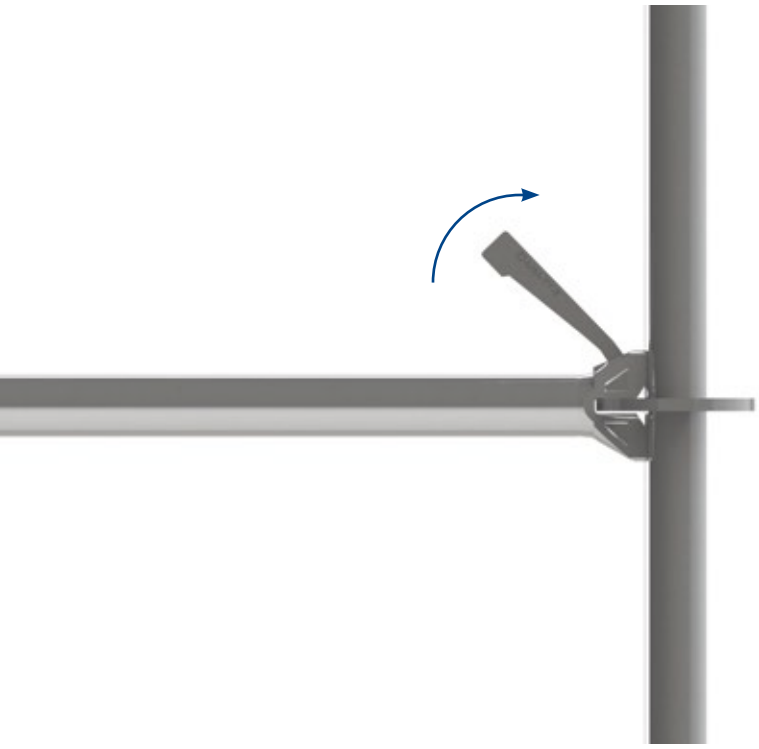
Simple and Versatile

Pre-defined dimensions of components with fixed distance between rosettes and a simple wedge lock mechanism



Intuitive connections

Slide the Ledger end onto the rosette and drop the wedge into the hole.



Simple lock

One blow of the hammer and the connection can be made rigid and capable for bearing/ transferring loads.

Sequence is key

High-speed assembly is made possible thanks to Ringlock's logical assembly sequence, regardless of application

▲ Assembly without base collar.

▲ Assembly with base collar can be assembled by even one person.

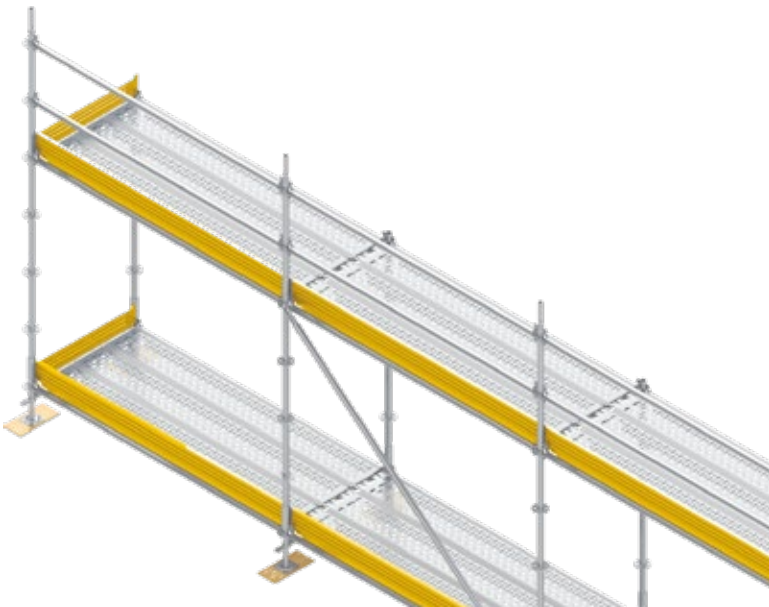
Step 1

Position the base jacks and base collars at the planned longitudinal and transverse spacings by laying out ledgers. If necessary, provide load-distributing sole plates (equalising plate, timber planks). Use a Swivel Base Jack in combination with sole plates when erecting on a slope surface.

Step 2

Before the wedges are hammered in, check the horizontal position of the ledgers using a spirit level and check the squareness. After after securing the wedge, the scaffold has the appropriate layout for further erection to be carried out easily without any major realignment. To proceed, install the standards on top of the collars and connect them immediately with the next level of ledgers and diagonals.

Note: when installing standards into the collars, or with each other ensure to align the rosette notches, this will align the spigot connection holes.

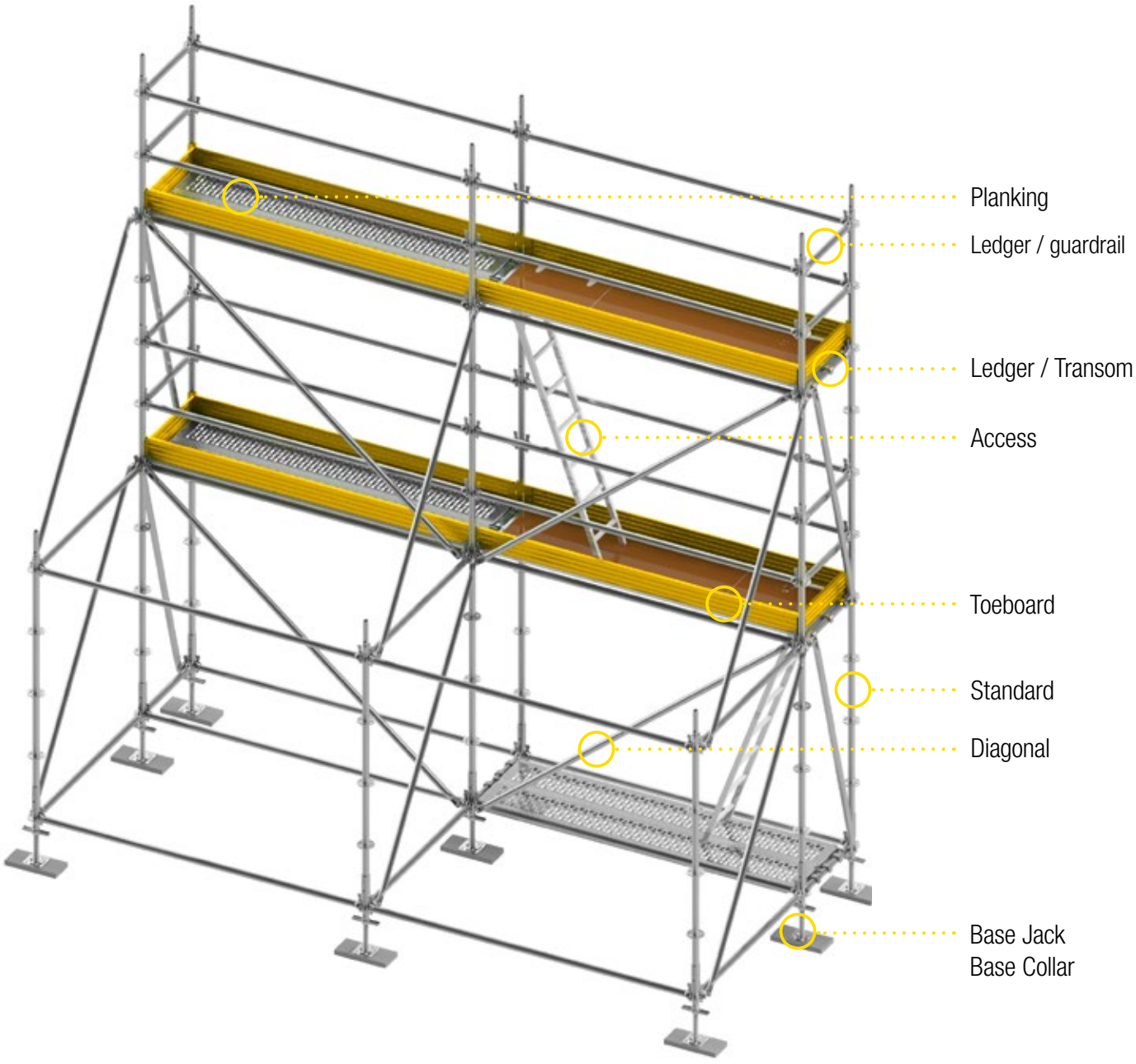


Step 3

Install the accessories such ladders and toeboards. Before starting the next level, install ledgers which also act as guardrails for the next assembly step.

Working Scaffold

Fewer components make for a more efficient system

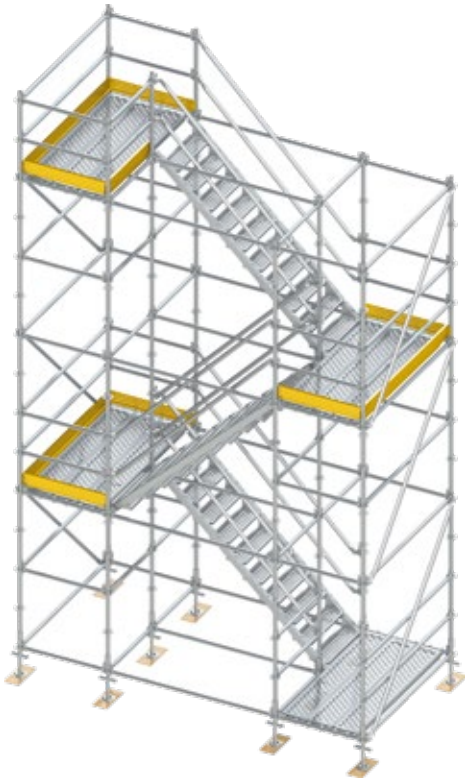


Stair Towers

The safest way to provide access on site

Two core Stair Tower configurations can be used for providing full access capabilities for any project. The 10-leg stair tower comes with individual steel Stair Treads and Stringers allowing for easier installation and storage. Lift heights available for both 1.0 m and 2.0 m heights.

The compact 4-Leg stair tower comes with Aluminium Platform Stair Units with integrated landings and attachable handrails. Platform units are available in 1.0 m or 2.0 m lift heights.



▲ 10-leg tower with steel stairway

▲ 4-leg tower with aluminium stairway

Recommended maximum height

Type	Wind conditions	
	No wind	27 m/s sea side
4-leg	80 m	40 m
10-leg	80 m	18 m

The following assumptions were taken into consideration:
- 10 levels loaded with 2 kN/m²
- Anchorage every 4 m
- No cladding

Greater heights possible and have to be backed up with calculations.

Stair Towers

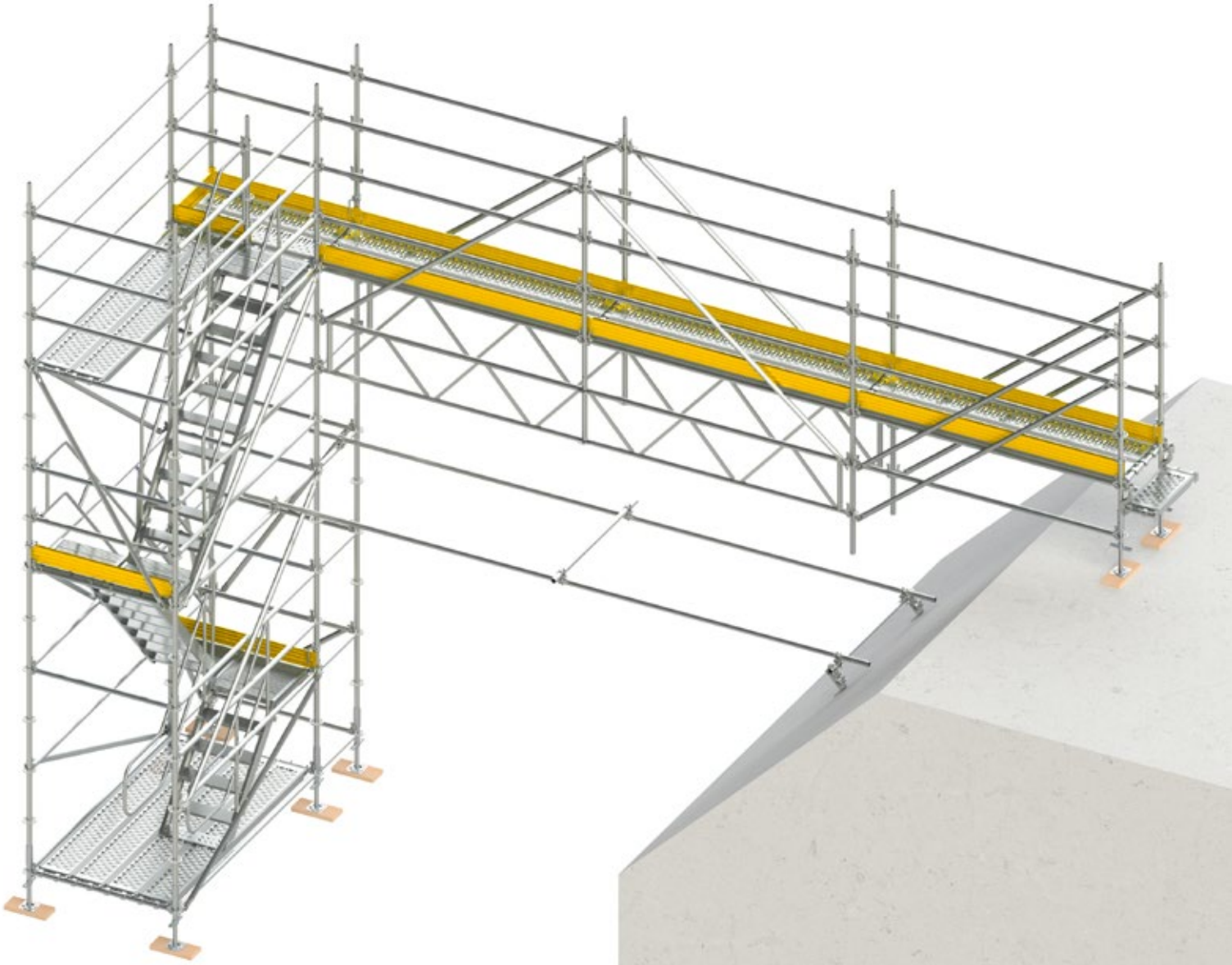
Thanks to its compatible components, Ringlock's modular format makes it easy to adjust the width or height to suit any project requirement

▲ Bottom section

▲ Middle section

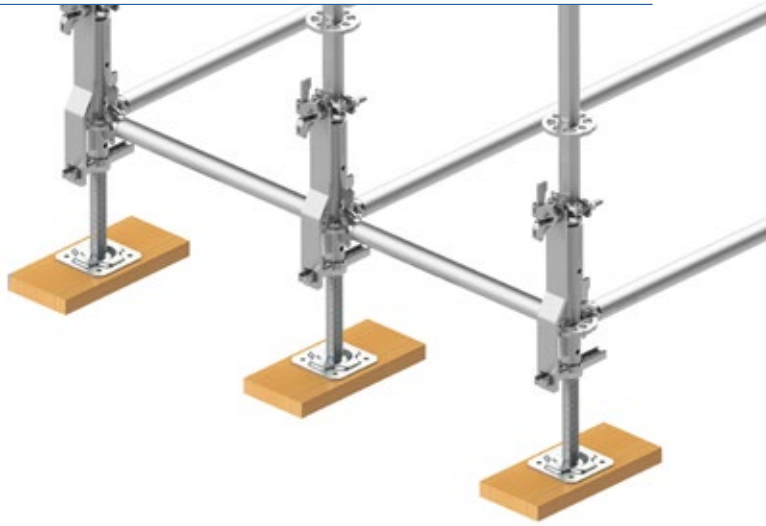
▲ Top section

Cross-over bridge



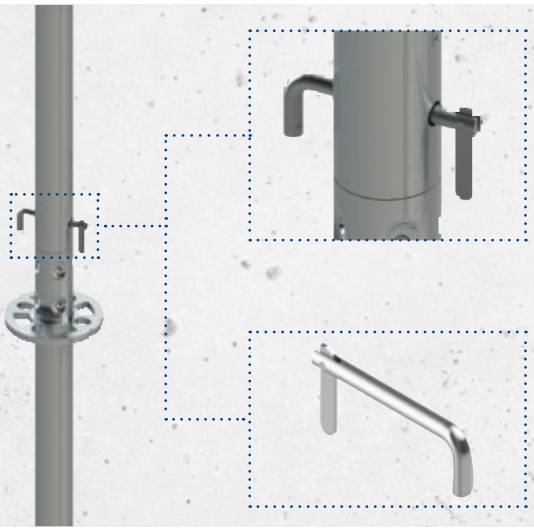
Crane Lifting

Ringlock can be lifted with few adaptations



Base Jack retention

The extra element allows the base jack and base collar to be connected to the standard, meaning the whole scaffold is fixed and can be lifted directly.



Toggle Pin

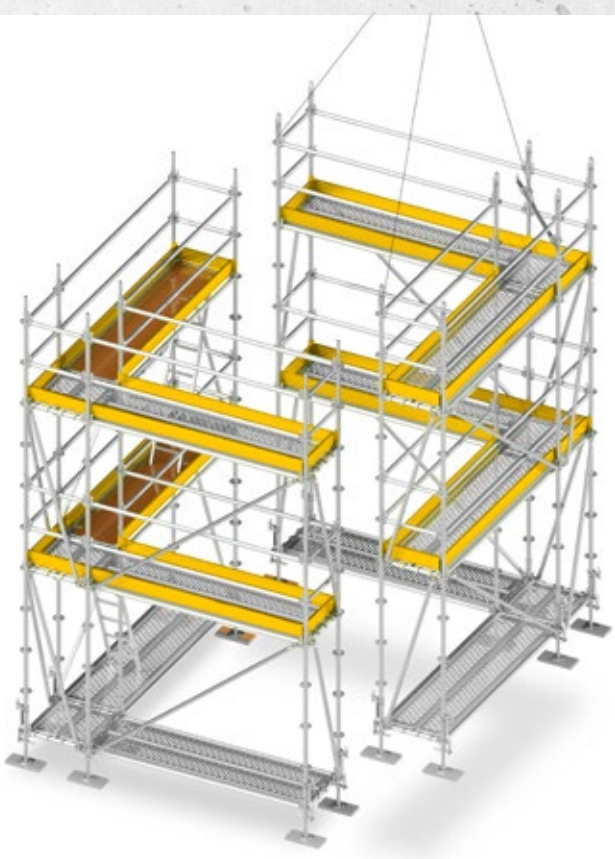
Toggle pins are used to lock the scaffolding standards together for safety purposes. Before lifting, it is important to ensure all the vertical members are joined together by the toggle pin.

Note: Not to be used on suspended scaffolds. For suspended scaffolds use hanging standards.

Lifting operation

After inserting the base jack retention, the toggle pin and the lifting lug the scaffold is ready to be lifted.

Note: Ensure the slings are suitable to carry the scaffolding load.

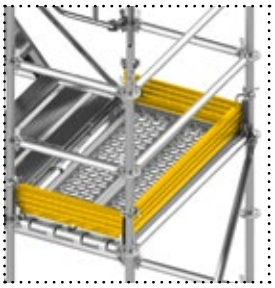


All-round Safety

Worker protection throughout the assembly process was a major priority when it came to designing Ringlock

Handrails and Toeboards

Handrails on stairs with the right inclination, ledgers serving as guardrail complemented with metal Toeboards ensure that the Safety Requirements as per EN are adhered to.



▲ Toeboard

▲ Handrail

Anchor Points

Tested anchorage points for personal fall-arrest systems (PFAS) enhance safety during system assembly.

Advanced Guardrail

temporary lift could be installed 1.0m above the base of the scaffold. The scaffolders will then able to stand at the correct height to safely install the Guardrails above the first working platform level, creating an advanced guardrail. Alternatively it can be used a step so that the scaffolder can installed the advanced guardrails.

Adjustable Swing Gate

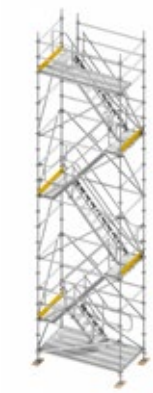
Designed as a safety gate, providing the necessary fall prevention for safe scaffold access.

Limitless Applications

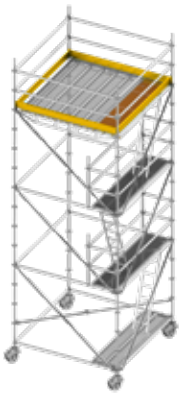
Ringlock is one system with many applications and benefits for contractors

Ringlock is the ideal add-on for Doka formwork systems. With this modular scaffolding system, reinforcement and formwork operations can be carried out safely and quickly. Thanks to its versatile and compatible design, it can be used in a variety of ways to suit your project requirements.

Rebar scaffolding



Stair tower



Mobile scaffolding

Hanging scaffolding

Circular scaffolding

Birdcage scaffolding

Shoring

Façade scaffolding

Ringlock References

Limitless Applications.


SCAN PHOTO
AR Marker
& DISCOVER
more of the latest Ringlock references!
Download our app on your smartphone from
www.doka.com/ar-vr

Access Towers

- Stairways
- Standards
- Ledgers
- Diagonal braces
- Handrails

Circular Tank

- Standards
- Ledgers
- Diagonal braces
- Steel decks
- Stairways or access decks

Façades Scaffolding

- Standards
- Ledgers
- Diagonal braces
- Steel decks
- Console brackets
- Toeboards

Suspended Scaffolding

- Lattice Girder beams
- Ledgers
- Steel decks
- Suspended scaffold accessories
- Diagonal
- Standards

Birdcage Scaffolding

- Stairways
- Standards
- Ledgers
- Diagonal braces
- Steel decks

Industrial Works

- Standards
- Ledgers
- Diagonal braces
- Steel decks
- Access Decks with ladder or Stairways
- Toeboards

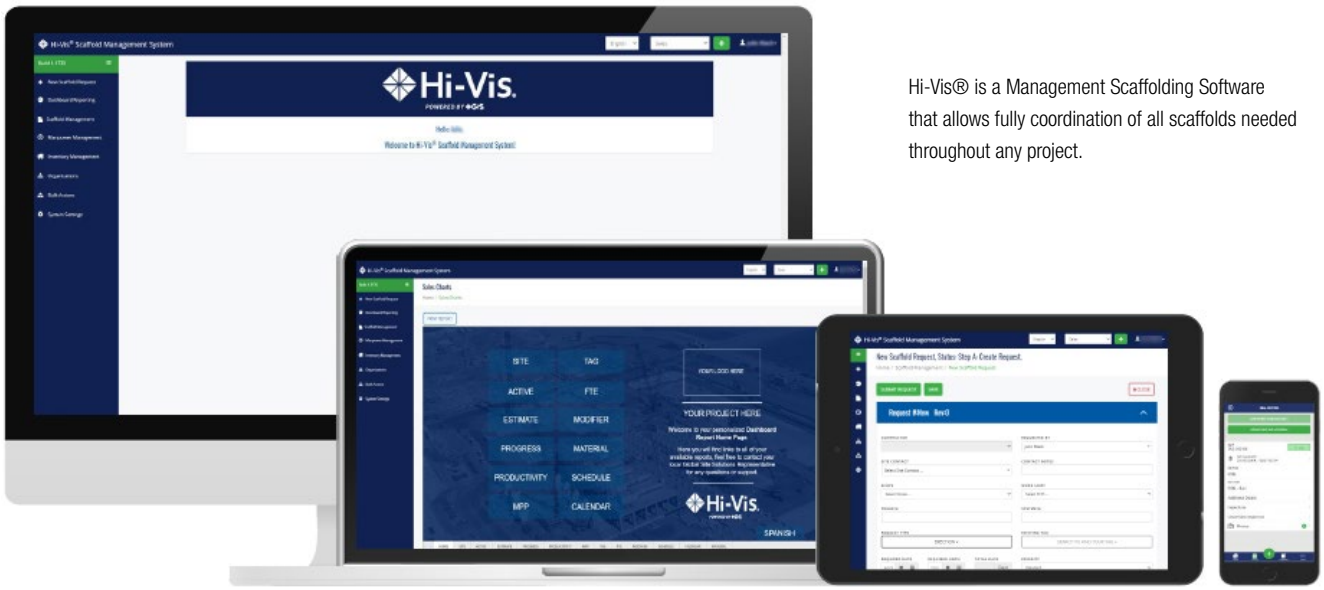
Hi-Vis®

Scaffolding Management Software

Designed to focus on **planning** and **process** controls to ensure all scaffold resources are deployed in the most effective manner to maximize **productivity** and **utilization**.

Developed to provide scaffold management tools and solutions for **any size** project. Clients have the flexibility to deploy the application modules independently or in one cohesive scaffold solution complete with **data analytics** and **dashboard reporting**.

Allows project management the **visibility** to better **understand**, **manage**, and **control** the scaffolding work process' supporting the construction schedule and increasing cost predictability whilst **mitigating project risk**.



Hi-Vis® is a Management Scaffolding Software that allows fully coordination of all scaffolds needed throughout any project.

Construction Management & Execution

- Cloud based scaffolding management software
- Designed specifically for projects and a field environment
- Designed for multiple interfaces and project stakeholders
- Improves the accuracy of estimates with proper planning
- Resource planning for required manpower
- 30, 60 and 90 day look aheads for planned work
- Tracks scaffolding inventory onsite
- Supports creation of installation work packages
- Productivity tracking
- Data analytics

Application Modules

Request Management

Electronic scaffold requests for scaffolding Erection, Modification and Dismantling improves efficiency and transparency in the scaffold request process.

Work Order Management

All approved scaffold request are managed in work order management, enabling you have full transparency on your scaffold backlog.

Tag Management

Inspection and tagging of scaffolds are recorded to show a live view of all scaffolds on a project.

Labor Management

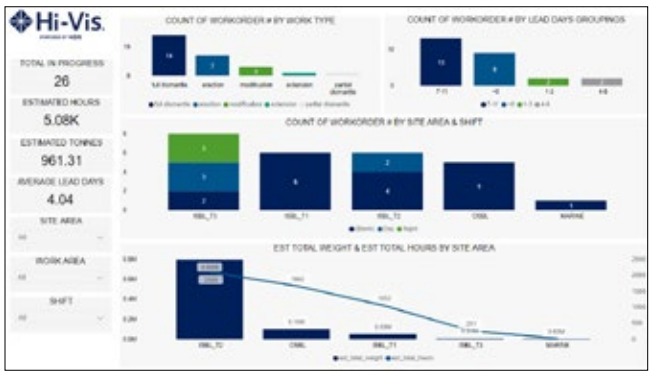
The user can now have full transparency over scaffold hours on site, allowing contractors to be held accountable.

Inventory Management

The module allows complete transparency as to where every piece of equipment is located, whether it's in the yard available for use, or whether the equipment is mobilized and erected.

Data Analytics

The module generates standard Dashboard reports including site wide overview, area overview, request status, materials status, productivity status and calendar overview.



More information

Interested in optimizing your scaffolding projects productivity?

Scan the QR-Code and learn more:
https://www.globalsitesolutions.com/

Technical Information

Ringlock

Tube diameter	48.3 mm
Wall thickness	3.2 mm
Steel grade	S355 J0H
Surface protection	hot-dip galvanized
Possible applications	Infrastructure ▪ Building ▪ Industrial ▪ Events
Type of Scaffolding	Façade ▪ Suspended ▪ Shoring ▪ Access towers ▪ Rebar ▪ Working platforms ▪ Birdcage ▪ Flyovers ▪ Mobile Scaffolding
Steel decks 3.07 m and 2.57 m (1)	class 4 / class 5
Steel decks < 2.07 m (1)	class 6
Access decks and Stair cases (1)	class 3
Available standards	0.50 ▪ 1.00 ▪ 1.50 ▪ 2.00 ▪ 2.50 ▪ 3.00 m ▪ 4.00 m
Available ledgers	0.15 ▪ 0.39 ▪ 0.73 ▪ 1.04 ▪ 1.09 ▪ 1.40 ▪ 1.57 ▪ 2.07 ▪ 2.57 ▪ 3.07 m
Average weight	Average weight 20 kg/m^2 and 35 kg/m^3
Permissible height	Up to 76 m (2)
Crane liftable	✔
Cladding	✔
Rubish retaining	✔
Average assembled per day (3)	Up to 300 m^2 /6000 kg
Average per truck/40 ft container	**1400 m^2** /1200 m^2

(1) class 6 according to EN 12810-1
(2) depending on the scaffold configuration, on the wind, load and on-site conditions
(3) considering an experienced crew of three men and eight working hours

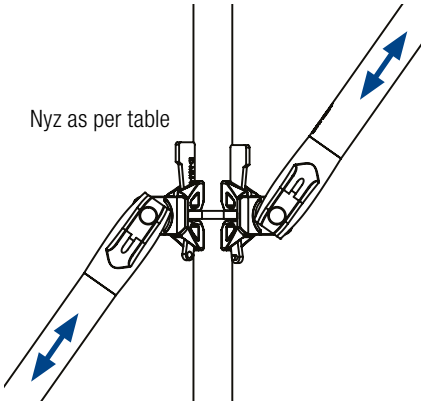
Ringlock

High-speed assembly as Ringlock follows one logical assembly

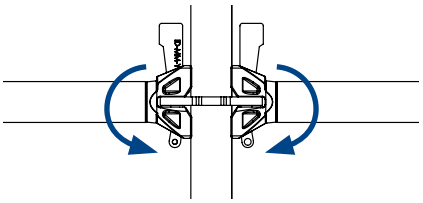
Maximum Design Forces

All permissable loads with γM = 1.1 and γF = 1.5

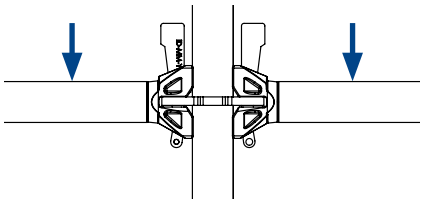
Diagonal bay brace 2.0 m lift height load rating		
Bay length (m)	Tension / Nyz (kN)	Compresion / Nyz (kN)
0.73	12.20	11.90
1.09	12.20	11.90
1.40	12.20	11.80
1.57	12.20	11.60
2.07	12.20	11.10
2.57	12.20	9.20
3.07	12.20	7.70



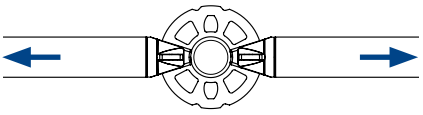
My 105 kNcm



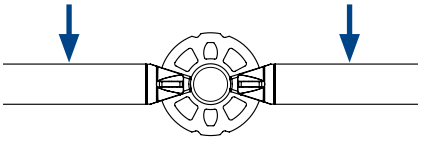
Vz 18.5 kN



N 23.9 kN

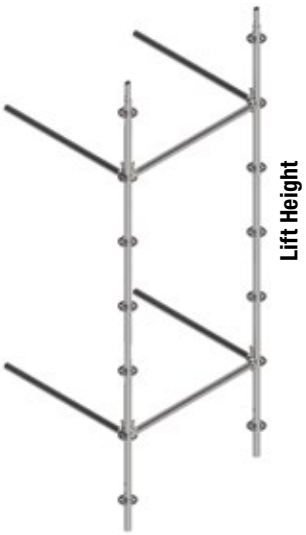


Vy 10.8 kN



Standards		
Vertical spacing of ledgers (m)	Permissible compressive load * (kN)	Permissible tensile load ** (kN)
0.5	62	56
1.0	55	56
1.5	43	56
2.0	29	56
2.5	19.2	56
3.0	13	56

(*) When properly connected with ledgers and bay braces
(**) When properly connected using leg locks



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