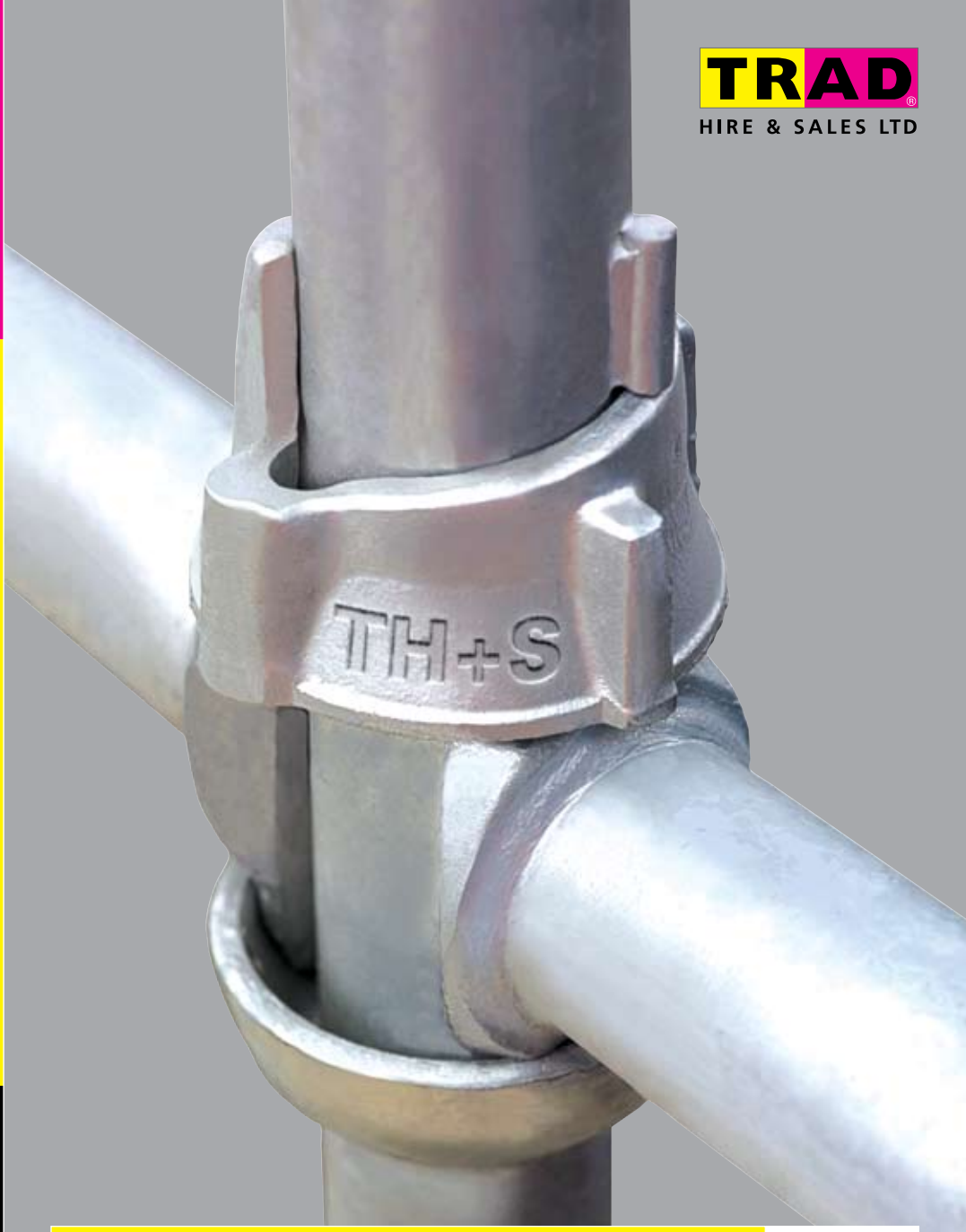
TRAD HIRE & SALES LTD



TRADLOK USER GUIDE

Providing quality products and services at a competitive price.

Valid Only For TRAD Genuine Equipment

PLEASE NOTE

You should **read** and **ensure** you understand this manual in its entirety prior to commencing work.

Only trained and competent operatives should erect, dismantle or modify TRADLOK scaffolding at all times.

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GUIDANCE NOTE

This manual is valid only for the use of

Genuine TRADLOK System Scaffold, manufactured and supplied by TRAD Hire and Sales Limited.

TRAD Hire & Sales Ltd reserves the right to alter or amend without notice the design and / or specifications of any of the equipment forming part of the TRADLOK system, in the interest of improvement.

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ABOUT TRAD Hire & Sales Ltd

TRAD Hire & Sales is one of the UK's market leaders for the supply of system scaffolding, scaffold tube, fittings, boards, stair towers, temporary roofing systems and associated equipment.

All the products we stock are of the highest quality and comply fully with all relevant British or European Standards. In addition, with our commitment to exceeding all safety standards, all our products, whether sourced internationally or within the UK, are subject to thorough testing by qualified external UK testing bodies.

From the smallest requirement up to complete hire or sale packages, our UK-wide network of depots have the resources and capabilities to meet every demand.

TRAD Hire & Sales Ltd is a full non-contracting member of the National Access and Scaffolding Confederation (NASC) and is a fully accredited ISO 9001 company.

NASC
National Access & Scaffolding Confederation

RoSPA Member

NSCC
National Specialist Contractors Council

ISO 9001: 2008
REGISTERED FIRM

ABOUT TRADLOK

TRADLOK® is a scaffold system which utilises a locking device that is formed by a captive bottom cup welded to the standards at 500 mm intervals. Ledgers, transoms and associated items have blade ends, which are located into the captive bottom cup. A top cup is then rotated down and locked into place with a hammer blow, giving a rigid and secure connection.

The TRADLOK system has no loose fittings or wedges, and requires no further leveling once the base lift has been set out. It is generally faster to erect, adapt and dismantle than other system scaffolds. TRADLOK can be used with three types of platform, either standard 38 mm thick scaffold boards, 63 mm thick timber battens or 65 mm thick steel battens.

This guide sets out the basic components of the system and how to use them. This system can be used for all types of access scaffold work, from the basic to the complex. For information on TRADLOK components and applications not shown in this guide, please contact your nearest TRAD Hire and Sales Branch (locations are detailed on the rear cover of this guide).

TRADLOK offers many advantages over other forms of scaffolding, including:

- **Strength** — TRADLOK's simple design makes it extremely robust with load capacities in excess of those provided by conventional tubes & fittings.
- **Speed** — TRADLOK's revolutionary node points makes TRADLOK system scaffold faster and simpler than any other system scaffold.
- **Compatibility** — TRADLOK can also be used in conjunction with traditional tubes, fittings & boards.
- **Cost Savings** — TRADLOK's lack of loose components coupled with the galvanised finish make the system easy to use and exceptionally cost effective.

TRADLOK is tested in line with the ISO 9001 series of quality management systems and has met or exceeded the criteria to satisfy BS EN 12810, BS EN 12811 and the NASC Code of Practice.

TRADLOK and it's associated products offer compliance with the current editions of the following:

- **BS EN 12810 Part 1** — Facade Scaffolds made of Prefabricated Components: Product Specifications
- **BS EN 12810 Part 2** — Facade Scaffolds made of Prefabricated Components: Particular Methods of Structural Design
- **BS EN 12811 Part 1** — Scaffolds – Performance Requirements & General Design
- **BS EN 12811 Part 2** — Information on Materials
- **BS EN 12811 Part 3** — Temporary Works Equipment - Load Testing
- **BS EN 39 Part 1** — Metal Scaffolding, Couplers and Special Couplers in Steel
- **BS EN 74 Series** — Couplers, Spigots and Base Plates for use in Falsework and Scaffolds
- **BS 2482** — Timber Boards for use in Scaffolding

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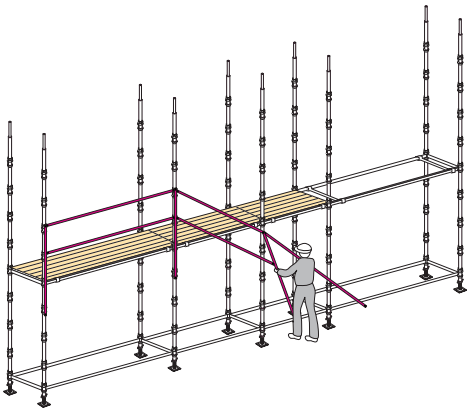
TRADLOK & SAFETY

1 Competence of Erectors

Competence of individuals working at height is now a direct requirement of the current "Work at Height" regulations. Consequently, employers have a duty to ensure that all individuals involved in the erection, modification or dismantling of any scaffolding equipment have received the training necessary to enable them to carry out their work in a safe manner.

The Construction Industry Scaffolders Record Scheme (CISRS) is currently recognised as a world-leader in providing specific system training through the System Scaffold Product Training Scheme (SSPTS) which ultimately provides the requisite level of competence. SSPTS is available through our nationally accredited training partners. For further information, please contact your local TRAD Hire & Sales depot, details of which can be found on the rear cover of this guide, or visit www.tradhireandsales.co.uk.



Advanced Guardrail

2 Work at Height/Fall Prevention

The current edition of the Work at Height Regulations places a duty on employers to protect individuals from harm. Scaffolding inevitably carries a risk of falling from height and consequently, it is of paramount importance that a safe system of work be adopted during any scaffold activity. It is therefore strongly recommended that the procedures outlined in the NASC's guidance note SG4 – "Preventing Falls in Scaffolding" are followed. SG4 describes several safe methods of work, including the use of collective fall protection systems such as the advanced guardrail and the scaffolder's step.

Scaffolder's Step

3 Harness and Lanyard Anchor Points

To ensure the safety of TRADLOK erectors, it is important that fall protection equipment is only attached to those components that are capable of withstanding any likely imposed loads. This section details the key components acceptable for attachment, based on all scaffolds being erected in accordance with this guide.

GUIDANCE NOTE

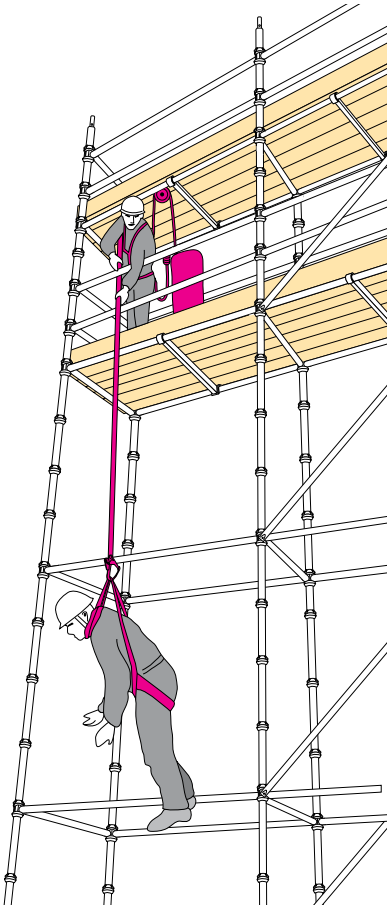
ATTACHMENT CAN BE MADE TO THE FOLLOWING COMPONENTS!

- **TRADLOK ledger – highest available point and secured at both ends**
- **TRADLOK Transoms above head-height and secured at both ends**
- **TRADLOK ledger at guardrail height, secured at both ends**
- **TRADLOK ledger at foot level – as a last resort only**

Attachment must not be made to Omega Transom Components!

4 Rescue of Suspended Casualties

While the current Work at Height Regulations requires that work at height be carried out safely, they also require that contingency plans be made for any eventuality. This extends to making plans to rescue personnel suspended by fall arrest equipment. Personnel should be fully trained to use all relevant rescue equipment for the event of a suspended casualty.



Note: Details relating to rescue and what should be considered can be found in the latest editions of the NASC guidance notes SG4 & SG19 (SG19 – "A Guide to Formulating Rescue Plans").

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MANUAL HANDLING

The following basic rules should be adhered to when manually handling the TRADLOK system and associated components.

- Plan lay down/storage areas in advance, to reduce the distance materials have to be manually handled.
- Always check the transit route before manual handling, to ensure that it is suitable and free from obstructions and any tripping hazards.
- When handling long materials, beware of damaging property, overhead electric lines, other people or moving vehicles.
- Only tackle loads that can be reasonably handled by the individuals involved – i.e. consider personal physical capabilities.
- Manual handling operations should be eliminated where possible, by using mechanical handling equipment and manual handling aids whenever possible. These include light-lines, gin wheel, forklifts and cranes etc.
- Use the correct knots and hitches if using a rope to lift equipment.

GUIDANCE NOTE

Always use the correct kinetic handling technique:

- **Make sure your feet are on a firm level base, a comfortable distance apart (Approx. 300 mm).**
- **Use your legs and not your back to bend.**
- **Raise your head slightly and tuck in your chin to keep your spine straight.**
- **Avoid turning / twisting the trunk of the body.**

SAFETY ON SITE

As is the case with any scaffold erection, dismantling or modification, consideration must always be given to those that may be affected by the works being carried out. To ensure that the highest standards of safety performance are maintained, consideration should be given to the following:

1. If the scaffold is on rough or uneven ground, ensure that it is erected on adequate timber sole boards which are properly levelled and bedded, and that the ground is capable of withstanding the proposed loadings.

2. All working platforms must be complete with double guardrails and a toe board, and free from trip hazards or projections. Where there is a risk of items falling, the use of the TRADLOK Safety Panel or brick guards should be considered.

3. Do not overload the working platforms with brick or any other materials. If you require to stack large quantities of material at platform level, then a TRADLOK loading tower should be utilised.

4. All scaffolds require adequate bracing and ties to ensure the continued safety of the scaffold. Neither should be removed without first giving consideration to installing alternative bracing or ties.

5. Ladders or stair access towers must be provided on all working platforms.

   Where ladders are used for access, ensure that they stand on a solid base and are securely fixed at the top.

   On many occasions staircase towers provide safe and convenient access for men and materials, while also speeding up the circulation of staff.

6. All scaffolds must be erected in strict accordance with this user guide. Any configurations outside of this guide including sheeting, netting or other similar wind sails should be referred to a person competent in the design of TRADLOK.

7. Any unauthorised interference should be immediately reported to site management, with any incomplete or unsafe parts of the scaffold being clearly marked and access restricted.

8. All TRADLOK components require a visual inspection before use. **No** damaged equipment should be used within the scaffold structure. Any equipment found damaged should be immediately set aside in a quarantined area, clearly marked, and senior management must be informed. Maintenance and repair procedures should only be carried out by qualified / approved personnel.

9. Always wear appropriate PPE with Hi-Vis where required.

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GENERAL RULES FOR SAFETY

Always

- Always ensure that all who erect, adapt and dismantle the scaffold are trained and competent to do so.
- Always ensure that all risk assessments and method statements have been carried out, then communicated to those concerned, and understood.
- Always ensure that there is adequate storage space for the materials.
- Always ensure that there is clear access to the work area and that the ground is level and suitable for the scaffold.
- Always work to current SG4 guidelines.
- Always ensure that there are adequate tying points.
- Always ensure that loads are evenly distributed.
- Always ensure that scaffold inspections are carried out and recorded as per current legal requirements.
- Always ensure that all defects are notified to the site management immediately.

Never

- Never let untrained persons erect, modify or dismantle the scaffold.
- Never remove guardrails, toe boards or brick guards.
- Never remove ties without prior approval.
- Never create gaps in platforms by removing scaffold boards.
- Never remove restrictions or warning signs from the scaffold structure.
- Never undermine the scaffold by digging trenches underneath or near the base.
- Never add sheeting or netting without prior approval.
- Never use damaged materials.
- Never allow unqualified/unapproved personnel to repair damaged equipment.
- Never load directly on to the access scaffold's working platform (always use a loading tower).
- Never overload the scaffold.

REMEMBER

Safety is no accident.
Don't risk it - if in doubt ask!

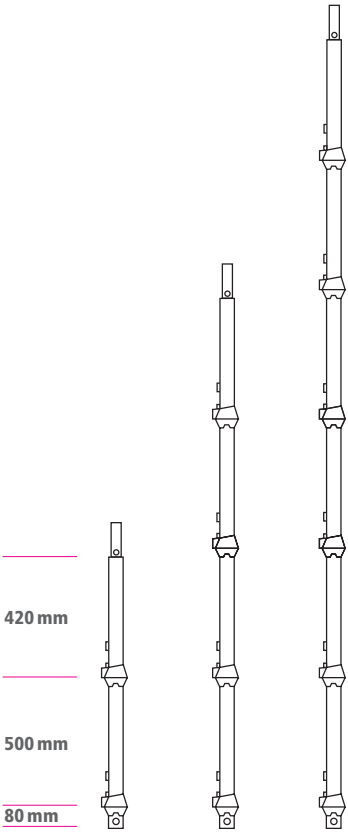
The information given in this TRADLOK user guide relates solely to genuine TRADLOK equipment supplied by TRAD Hire & Sales Limited.

COMPONENTS ACCESS COMPONENTS

1 Access Standards

These items form the vertical members of the scaffold and are made from 48.3 mm diameter x 3.2 mm thick high-grade steel tube. They incorporate a fixed bottom cup, which is welded at 500 mm intervals, with a captive moving top cup that can secure up to four components. These cups are the fixing points for the ledgers, transoms and ancillary items. The location of the bottom cup, 80 mm from the base of the standard, improves the structural strength and reduces the need for base-bracing in support structures. At the top of the standards, there is a 150 mm spigot that allows the vertical connection of further standards. This spigot is absent from support standards, allowing the placement of universal jacks with various support components. At the bottom and top of each standard, there is a corresponding drilled hole to allow two standards to be bolted together.

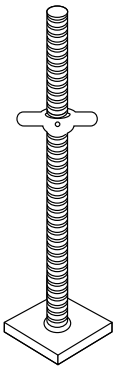
Code	Height (m)	Overall Height (m)	Weight (kg)
137301	3.0	3.15	16.46
137302	2.0	2.15	11.19
137303	1.0	1.15	6.25



2 Adjustable Base Jacks

A combined jack and base plate designed for levelling the scaffold where the ground or foundation levels vary. These are adjusted by winding the collar up and down the threaded stem.

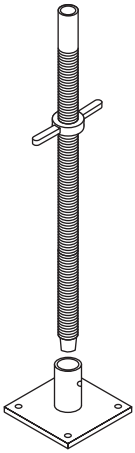
Code	Height (m)	Max Adj (m)	Weight (kg)
137313	0.65	0.5	3.4



3 Universal Jacks, Base & Head Plates

The universal jack is used for both access and support structures, to accommodate variations in ground and soffit levels. It can be used in conjunction with either the base & head plate, forkheads or the rocking base plate.

Code	Item	Weight (kg)
137345	Universal Jack	3.9
137346	Base & Head Plates	2.3



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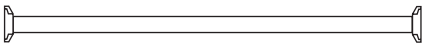
4 Horizontals (Ledgers, Transoms & Guardrails)

These are horizontal members that form the ledgers and structural transoms of the system. They incorporate symmetrical blade ends that allow ledgers and transoms to be completely interchangeable and quick to assemble. Horizontals locate into the cups of the standards to form the basic bay sizes.

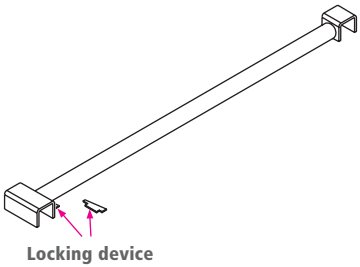
Code	Length (m)	Overall Length (m)	Weight (kg)
137304	2.5	2.452	10.33
137305	1.8	1.752	7.20
137306	1.3	1.252	5.22
137307	0.9	0.852	3.73
137390	0.8	0.752	3.10



5 Intermediate Transoms

Used where 38 mm scaffold boards require intermediate support, they span between the inner and outer ledgers and are secured in place by a locking device at one end, to prevent movement during use.

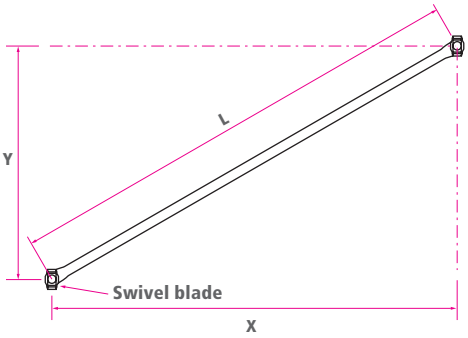
Code	Length (m)	Overall Length (m)	Weight (kg)
137382	2.5	2.566	14.5
137383	1.8	1.866	9.0
137308	1.3	1.366	6.99
137352	0.795	0.861	3.7
137353	0.565	0.631	2.8



6 Facade Brace

This component forms the face bracing of the scaffold. Braces come in differing lengths to suit combined bay sizes and lift heights. Each end has a swivel blade, which allows for easy location within the node joint.

Code	Bay Size (X x Y)	Overall Length (m)	Weight (kg)
137309	2.5 x 2.0	3.255	11.5
137310	2.5 x 1.5	2.969	10.7
137311	1.8 x 2.0	2.744	9.8
137312	1.8 x 1.5	2.396	8.7

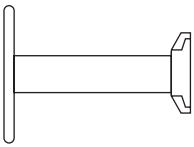


Note: Internal ledger bracing ('dog-leg') is not required for TRADLOK scaffolds used in common access formats.

7 Single Inside Board Support

This item is located at the standards to provide support for a single inside board.

Code	Overall Length (m)	Weight (kg)
137347	0.26	1.5

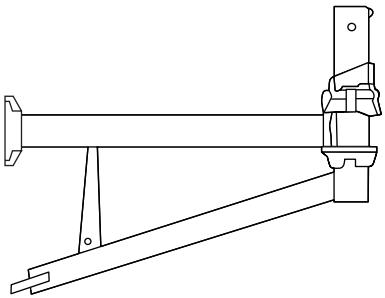


8 Hop-up Brackets

These components are designed to increase the width of the working platform from five boards to seven or eight boards wide, by supporting additional boards beyond the inside face of the scaffold. They incorporate a cup to locate an additional inside ledger, which links adjacent hop-up brackets to prevent movement, while also supporting intermediate transoms.

There is also a location point for a handrail post if required.

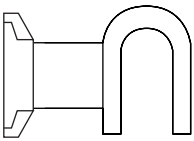
Code	Item	Overall Length (m)	Weight (kg)
137348	2 Board	0.585	6.03
137349	3 Board	0.815	8.05



9 Return Device

Used to create a 90-degree return bay, this component has a blade on one side for fixing into the cup on the standard, and a hook section that fits over the ledger of the return bay. This item must be used in pairs.

Code	Weight (kg)
137316	2.4



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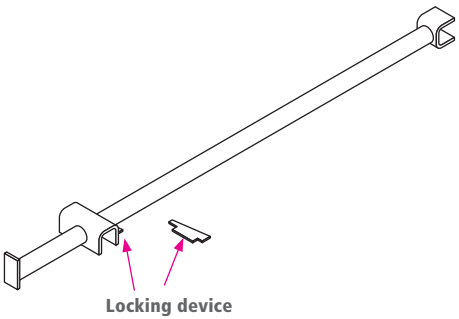
10 Inside Board Transoms

Used to provide support, instead of intermediate transoms, when inside boards are required.

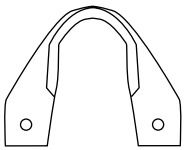
Code	Item	Overall Length (m)	Weight (kg)
137350	1 board	1.62	7.84
137351	2 board	1.895	10.2



11 Toeboard Clip

For use with scaffold boards only. Locates around the standards and locks the toeboard rigidly in position.

Code	Weight (kg)
026012	0.14



12 Scaffold Boards

Used to form working platforms within the Access System. A full range of boards are available (38 mm thick x 225 mm nominal width) all require some form of intermediate support.

Stated weights may vary due to moisture content.

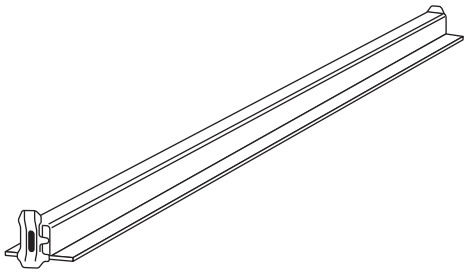
Code	Length (m)	Weight (kg)
034013	3.9	19.00
034010	3.0	14.62
034008	2.4	11.92
034006	1.8	8.77
034005	1.5	7.31
034004	1.2	5.85

The Omega System uses the same basic components, with the exception of the platform bearing items. No intermediate transoms are required for the Omega System, as stronger battens are used in place of standard scaffold boards. This system utilises 63 mm thick timber battens or 65 mm deep steel battens.

1 Omega Transom

This specially designed component forms the shape of an inverted 'T', which fits between the standards, to form the lateral spacing, and to support the platform battens. This item locates into the cups of the standards in the same way as TRADLOK access transoms.

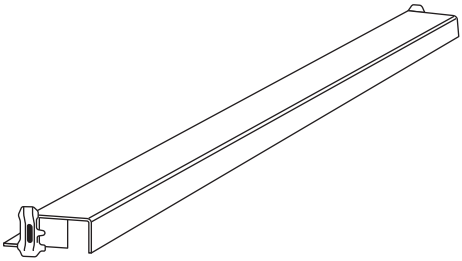
Code	Length (m)	Overall Length (m)	Weight (kg)
137360	2.5	2.452	24.8
137361	1.8	1.752	10.8
137362	1.3	1.252	7.76
137359	0.8	0.752	5.0



2 Omega Return Transom

Used to create a 90-degree corner, this unit fits between a pair of standards and over the ledger of the adjacent scaffold, creating a return bay. The other side of the transom incorporates a conventional Omega section, to receive timber or steel battens.

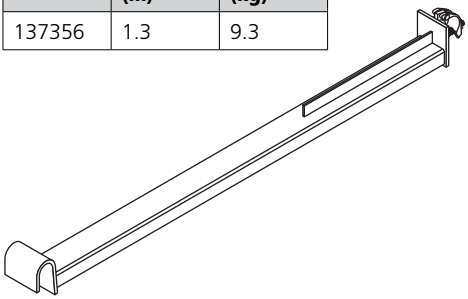
Code	Length (m)	Overall Length (m)	Weight (kg)
137315	1.3	1.252	12.3



3 Omega Ladder Access Transom

A transom unit, with an Omega profile across part of the width, is used to support short battens at a ladder opening. They are fixed with a claw at one end, and a half coupler at the other, to allow secure positioning to the Ledger.

Code	Length (m)	Weight (kg)
137356	1.3	9.3



Note: This item must only be used in conjunction with Omega Transoms.

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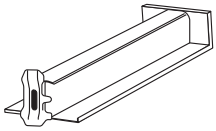
4 Omega Inside Board Support

This item is located at the standard, to provide support to a single inside batten.

Code	Length (m)	Weight (kg)
137325	0.26	2.7

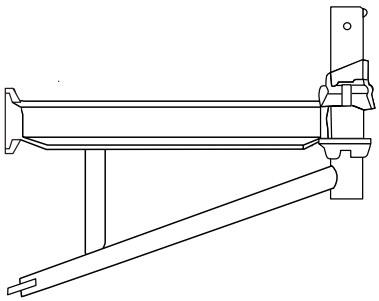


5 Omega Hop-up Brackets

These components are designed to increase the overall working platform from five battens to seven or eight battens wide, by supporting additional battens beyond the inside face of the scaffold. They incorporate a cup to locate an additional inside ledger, which links adjacent hop-up brackets, to prevent movement.

There is also a location point for a handrail post, if required.

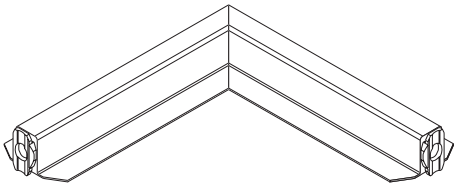
Code	Item	Overall Length (m)	Weight (kg)
137326	2 Board	0.585	7.5
137327	3 Board	0.815	9.8



6 Internal Corner Unit

These units allow inside platforms at internal corner returns. They locate into the cups of the hop-up brackets, providing corner support. Infill with timber cut to size.

Code	Item	Weight (kg)
137377	2 Board	6.6
137329	3 Board	9.3

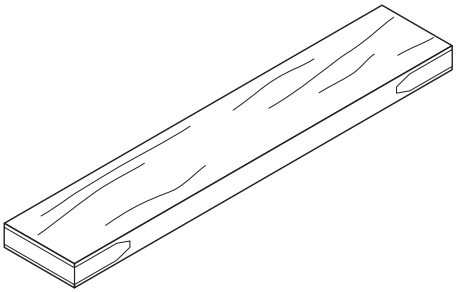


7 Omega Timber Battens

Used to form the working platform within the Omega System. A full range of battens is available (63 mm thick x 225 mm nominal width). Each batten comes complete with nailed, steel end bands. As the Omega System uses a stronger batten, no intermediate supports are required.

Stated weights may vary due to moisture content.

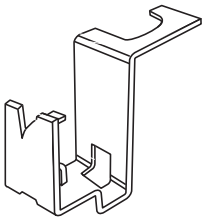
Code	Length (m)	Weight (kg)
137317	2.5	19.26
137318	1.8	13.76
137319	1.3	9.83



8 Omega Toeboard Clip

For use with Omega timber or steel battens only, this item locates around the standards and locks the toeboards rigidly in position.

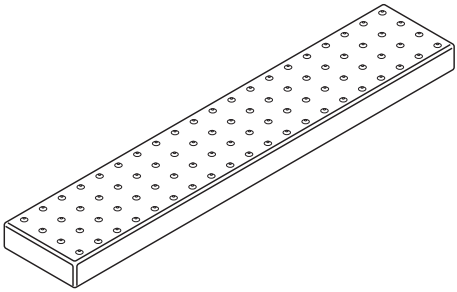
Code	Weight (kg)
137320	1.0



9 Omega Steel Batten

Galvanised steel battens (65 mm deep x 225 mm wide) can be used in place of the Omega timber battens to create working platforms. Surface is a non-slip dimple finish for greater slip resistance in bad weather. As with the Omega timber batten no intermediate supports are required.

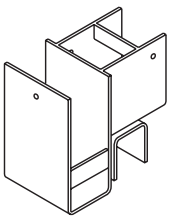
Code	Length (m)	Weight (kg)
137321	2.5	17.5
137322	1.8	13.0
137323	1.3	8.86



10 Omega End Toeboard Clip

To be used with Omega timber or steel battens only, this item is designed to locate on top of the Omega transom, allowing stop-end and corner toeboards to be fitted on the outside of the scaffold platform.

Code	Weight (kg)
137364	1.5



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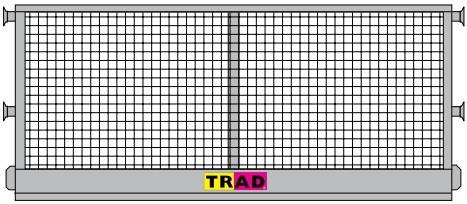
COMPONENTS ANCILLARY COMPONENTS

This section details components not covered by previous categories, that complete the TRADLOK system range of products.

1 TRADLOK Safety Panel

This unique, patented product is a composite panel used as an alternative to traditional guardrails, toeboards and brickguards. This item locates into the cups on the standards in the normal way, as a combined single unit.

Code	Item	Overall Length (m)	Weight (kg)
137603	2.5	2.452	25
137602	1.8	1.752	20
137601	1.3	1.252	15.5
137600	0.8	0.752	10.5

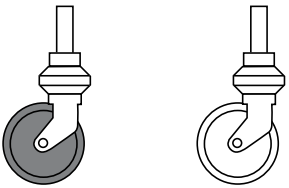


Note: May be used with both Access & Omega Systems.

2 Castor Wheel

Used when TRADLOK is erected to form mobile towers. The spigot fits into the bottom of the TRADLOK standard and is secured by a bolt to prevent movement.

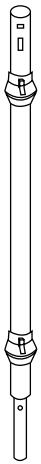
Code	Item	Weight (kg)
137340	Rubber Castor	6.7
137339	Steel Castor	7.0



3 Handrail Post

Used in conjunction with hop-up brackets to allow the location of ledgers to form inside guardrails.

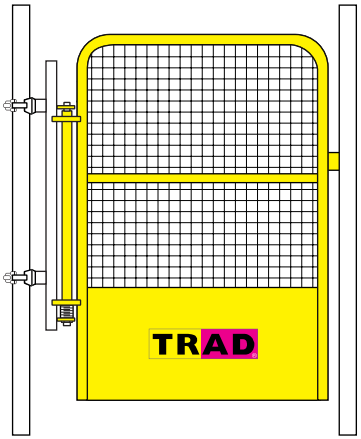
Code	Length	Weight (kg)
137355	1.15	4.8



4 Ladder Safety Gate

A self-closing gate that is used to allow safe access to and from the working platform, where a ladder access is provided. This item can be used individually, or in conjunction with the cranked standard or staircase guardrail post.

Code	Weight (kg)
166087	11.45



5 Cranked Standard

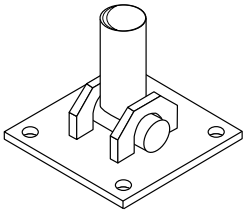
Used in conjunction with the ladder safety gate, this item provides an opening in the guardrails of a standard TRADLOK bay, allowing access to the working platform.

Code	Weight (kg)
137425	7.2

6 Rocking Base Plate

To support standards on sloping ground, up to 45-degrees from the horizontal. Should always be secured to a timber sole board using the holes provided. Must be used in conjunction with the universal jack.

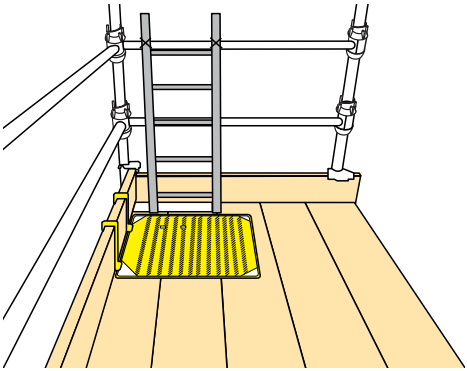
Code	Weight (kg)
137379	4.3



7 Ladder Access Trap Door

Used to provide cover for ladder access openings being used in working platforms. This item is secured to the adjacent toeboard and clipped into the vertical position when access is required.

Code	Weight (kg)
166091	9.0



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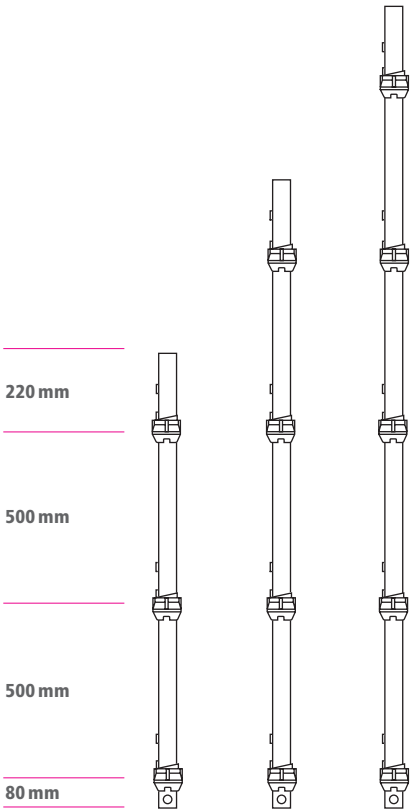
8 Support Standards

Commonly known as open-ended standards, these differ from the access standards by having no attached spigot. This allows universal jacks to be inserted, providing adjustable support beneath the soffit. Support standards are used in conjunction with the access standards, which allows all soffit heights to be reached.

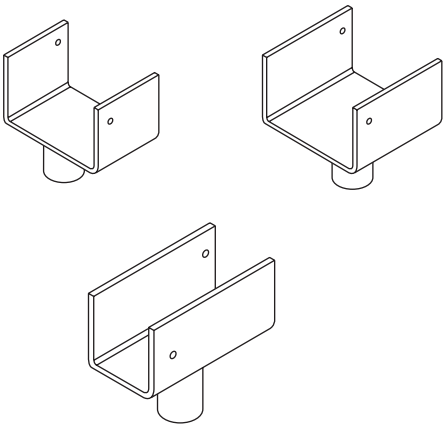
Code	Height (m)	Weight (kg)
137341	2.3	11.6
137342	1.8	9.1
137343	1.3	6.6
137344	0.8	4.1



9 Forkheads

Intended to be used with universal jacks and support standards. Forkheads provide placement to hold aluminium, steel and timber beams. Nail holes allow fixing points for timber beams.

Code	Size (m)	Weight (kg)
137378	0.200 x 0.186	5.2
137621	0.200 x 0.086	3.9
137620	0.150 x 0.162	3.7



ERECTION & DISMANTLING GUIDANCE

This section describes the basic erection and dismantling procedures for TRADLOK scaffolds.

As with all scaffolding, only trained, competent operatives should erect, dismantle or modify TRADLOK scaffolds at any time.

TRAD Hire & Sales Ltd recommends, that as a minimum, the working practices for all scaffold activities set out in the NASC's document SG4 – "Preventing Falls in Scaffolding" are applied at all times.

Prior to commencing work, make sure all method statements, risk assessments and permits are in place, and that suitable tie points are available.

Ensure that the ground is level and firm and capable of taking the imposed load of the completed scaffold. Where required, use sole boards of a suitable size to spread the load over the ground.

Set out the scaffold according to the ground levels and working platform heights required. If using inside boards, determine the set-off distance required from the building. Start from the most convenient point, usually at the highest ground level, adjacent to the corner of the building.

It is recommended that erecting and dismantling the scaffold is carried out by a minimum of two operatives.

If using advanced guardrails or scaffolder's steps, information relating to the use of these products should be obtained from the original supplier.

BASIC ERECTION PROCEDURE

ACCESS SYSTEM

Step 1

Layout adjustable base jacks, ledgers and transoms used to create the first few bays in their approximate positions (Fig.1).

Step 2

Fit the adjustable base jacks into the bottom of the first pair of standards, ensuring that the outer standard is a 3 m and the inner is a 2 m (Fig.2).

Note: In some low level applications (such as house building up to a height of 6 m) it is not necessary to alternate the size of the standards.

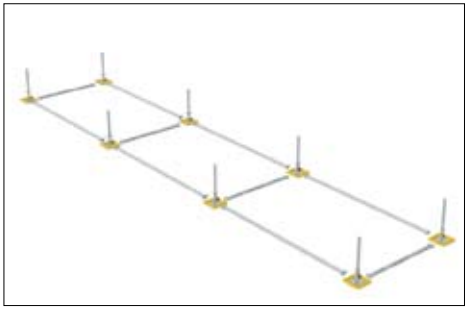


Fig. 1

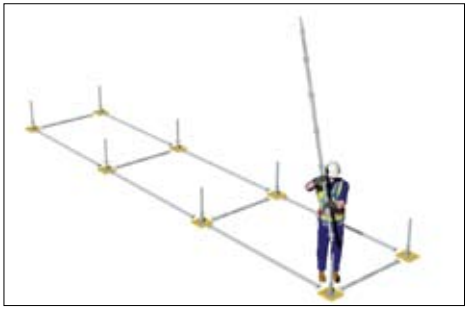


Fig. 2

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Step 3

While holding the standards, place the first ledgers and transom into the bottom cup and temporarily secure the structure, by lowering the upper cups into the locking position, hand tight only (Fig.3).

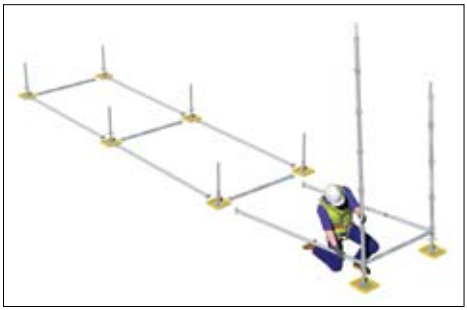

Fig. 3

Step 4

Place a second set of standards, equipped with their jacks, into position, and form the base lift of the first bay by connecting the existing ledgers, then a second transom into the bottom cups of the second pair of standards. Temporarily secure as before (Fig.4).

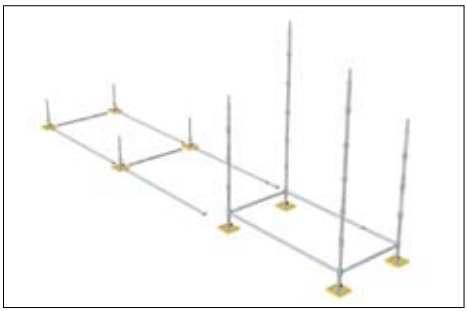

Fig. 4

Step 5

You may now complete the first bay by levelling the scaffold structure using the adjustable base jacks with the aid of a spirit level (Fig.5).

The locking upper cups can now be secured with a hammer blow.

Fig. 5

Step 6

The scaffold base can now be extended to the required length, by adding further components to the existing bay, using the same procedures as described (Fig.6).

Note: Once the scaffold is levelled and aligned for all base lifts, no further levelling of the scaffold is required.

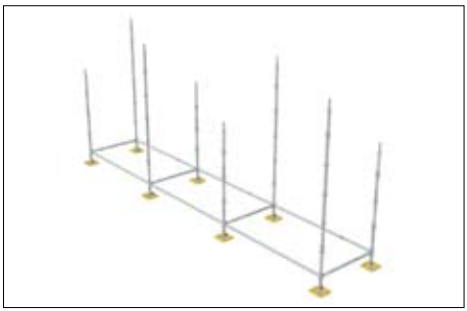

Fig. 6

Step 7

The first working platform can now be constructed by connecting ledgers and transoms at the required height (Fig.7).

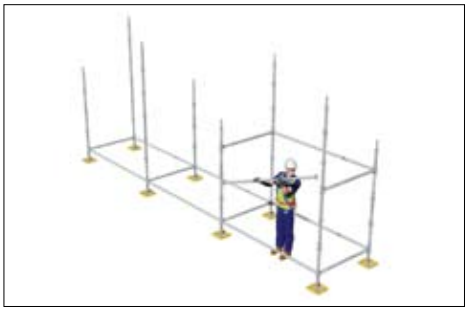

Fig. 7

Step 8

The facade brace should now be connected to the structure at the cup joints, and should span from lift level to lift level (Fig.8).

Note: Please see page 34 for frequency required.

Fig. 8

Step 9

Intermediate transoms are placed at strategic points, across the ledgers, to support 38 mm scaffold boards, and are secured in place by a locking device at one end to prevent movement (Fig.9).

Note: The frequency of Intermediate Transoms is determined by the grade of scaffold board used, and the load class of the scaffold required.

Fig. 9

Step 10

Scaffold boards and toe boards can now be installed from below, using 38 mm scaffold boards (Fig.10).

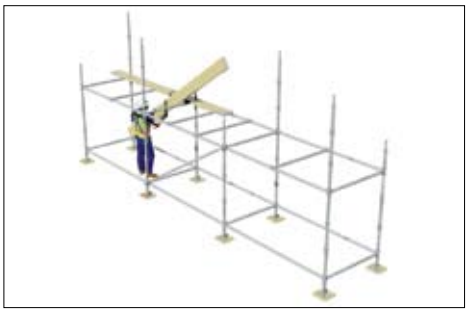

Fig. 10

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Step 11

The working platform can now be completed by adding double guardrails / safety panels, and paying particular attention to the current NASC guidance note SG4 – "Preventing Falls in Scaffolding" (Fig.11).

Note: It may be necessary to 'top-out' the standards before guardrails or safety panels can be fixed.

Fig. 11

Step 12

Additional lifts can be constructed simply by adding further standards onto the spigots of the lower lift. Ledgers and transoms are then used, as previously described, to create the next level (Fig.12).

Note: Always ensure that the scaffold is braced and tied in accordance with the bracing and tie patterns specified in this user guide.

Fig. 12

BASIC ERECTION PROCEDURE | OMEGA SYSTEM

If using the Omega Batten System, the same erection procedure is adopted, except that the Omega transom is used in place of the access transom. Omega transoms support 63 mm thick Omega timber battens or 65 mm deep Omega steel battens, which replace the 38 mm thick scaffold boards. As the Omega battens require no mid-span support, there is no requirement for the use of intermediate transoms.

CORNER RETURNS AND INSIDE PLATFORMS

This section completes the erection process, by showing methods in which TRADLOK scaffolding can be used to create corner returns and inside platforms.

Corner returns can be formed by using either the Access System, or the Omega System.

Inside board transoms and hop-up brackets are used to create inside platforms, which allow most building projections to be overcome.

1 Corner Returns using Return Devices

Corner returns can be formed by using return devices to link two TRADLOK scaffold runs together, at right angles. This allows for the 'fly-past' method to be adopted, eliminating the need for non-standard bays.

Position an inside standard, equipped with its jack (at the required height and correct distance from the building face), alongside the inner ledgers of the existing scaffold. Hook a return device over the bottom ledger and attach to the standard in the normal way. Now, connect a second return device at the next lift level, securing the standard into position.

Then, place the outside standard (with jack set at the correct height) alongside the inner ledgers of the existing scaffold. Connect the inside and the outside standards, firstly at the base lift level, and then the next lift level, with access transoms of the required size. Return devices can now be used to fix these standards to the existing ledgers (some minor height adjustments may be required with the aid of a spirit level). This now forms the first set of standards for the corner return (Fig.13).

Continue erecting the new elevation, fixing components in the sequence and manner described in the basic erection guidance (Fig.14).

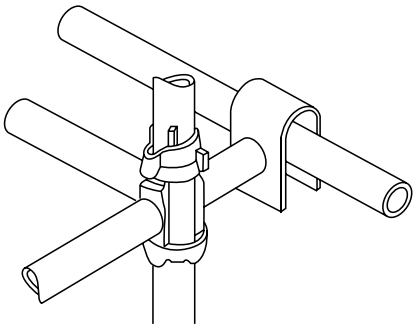

Fig. 13 'Fly-past' method, Access System

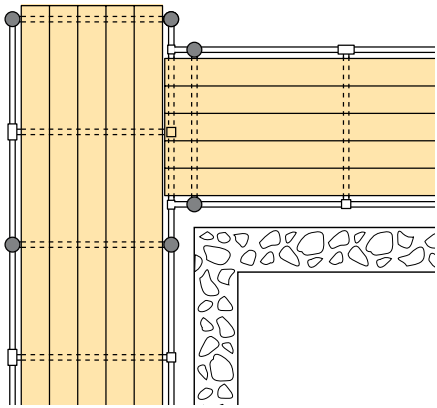

Fig. 14 'Fly-past' method, Access System

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2 Corner Returns using 1.3 m Square Bays

Corner returns can be formed, by incorporating a 1.3 m square bay at the end of a scaffold elevation. This allows components to be fixed at right angles to the two inside standards of this 1.3 m square bay. These two standards now form the first inside and outside standards of the new elevation and become common to both scaffolds, forming the return.

Continue erecting the new elevation, fixing components in the sequence and manner described in the basic erection guidance (Fig.15).

Note: Please pay particular attention to the position of the 1.3 m intermediate transom that allows the boards to butt together to prevent overlapping.

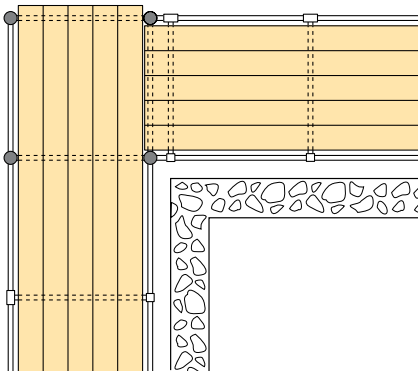

Fig. 15 '1.3 m bay' method, Access System

3 Corner Returns with Inside Platforms

Erect the corner return bay by using either the 'fly-past' method or a 1.3 m square bay. In place of intermediate transoms, use the 1 board inside board transoms to create support for the main working platform.

These inside board transoms, in conjunction with single inside board supports, are then used to form the end and intermediate support for the inside platform boards (Fig.16).

If required, 2 board inside board transoms, used in conjunction with 2 board hop-up brackets, may be used to create a wider platform. Ledgers of the appropriate size must be used to connect the 2 board hop-up brackets together, while also allowing support to the inside board transoms.

Where possible, position the transoms and hop-up brackets, so that the inside platform boards butt together, without overlapping.

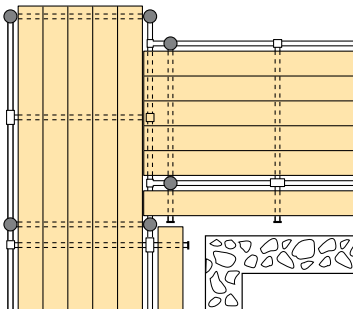

Fig. 16 'Fly-past' with inside boards, Access System

Alternatively it is possible to use 0.565 m or 0.795 m intermediate transoms, with 2 & 3 board hop-up brackets, to create independent support for the inside platform boards. This is done by placing the intermediate transoms over the inside ledger on the main scaffold, and the additional ledger fixed between the hop-up brackets.

All single inside board supports and hop-up brackets are fixed to the standards in the usual manner.

4 Omega Corner Returns using Return Transoms

Corner returns can be formed by using Omega return transoms, to link two TRADLOK scaffold runs together, at right angles. This allows for the 'fly-past' method to be adopted, eliminating the need for non-standard bays.

Position an inside standard, equipped with its jack (at the required height and correct distance from the building face), alongside the inner ledgers of the existing scaffold. Hook an Omega return transom over the bottom ledger, and attach to the standard in the normal way. Now, place the outside standard (with jack set at the correct height), alongside the inner ledgers of the existing scaffold, and connect to the Omega return transom.

Then hook another Omega return transom over the ledger at the next lift level, and connect to both standards in the normal way. This now forms the first set of standards for the corner return.

Continue erecting the new elevation, fixing components in the sequence and manner described in the basic erection guidance (Figs.17 & 18).

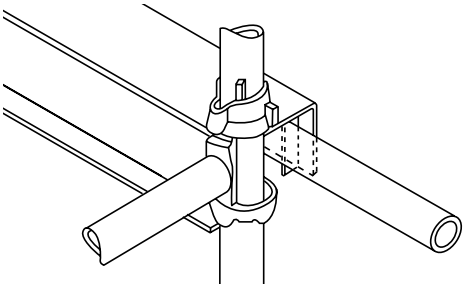

Fig. 17 'Fly-past' method, Omega System

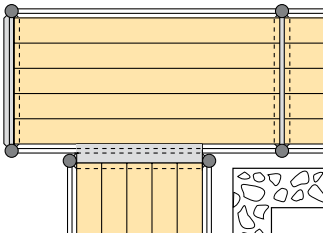

Fig. 18 'Fly-past' method, Omega System

5 Omega Corner Returns using 1.3 m Square Bays

Corner returns can also be formed in the Omega System, like the Access System, by incorporating a 1.3 m square bay at the end of a scaffold elevation. This allows components to be fixed at right angles to the two inside standards of this 1.3 m square bay. These two standards now form the first inside and outside standards of the new elevation, and become common to both scaffolds, forming the return.

Omega transoms must replace the access transoms on at least three sides of the bay, to provide support for the Omega battens from both elevations.

Continue erecting the new elevation, fixing components in the sequence and manner described in the basic erection guidance (Fig.19).

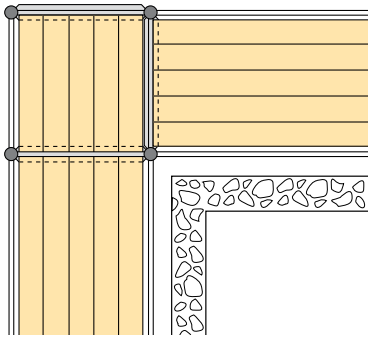

Fig. 19 '1.3 m bay' method, Omega System

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6 Omega Corner Returns with Inside Platforms

Erect the corner return bay using the 'fly-past' method as described in item 4.

Form the inside platform using either Omega single board supports, or Omega hop-up brackets. These components are fixed to the standards at the required height in the usual manner. The hop-up brackets are linked together using ledgers of the appropriate size, to prevent the hop-ups from spreading. Once the hop-up brackets are connected, insert Omega battens to create the inside platform. Where required, use timber Omega battens to cover any remaining gap in the inside platform (Fig.20).

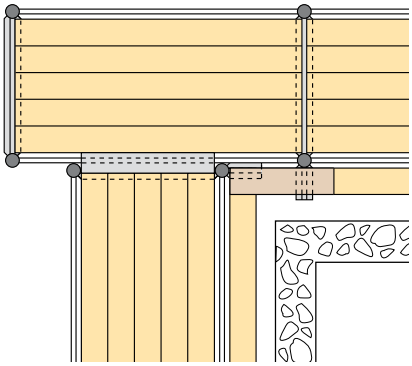

Fig. 20 'Fly-past' with inside boards, Omega System

Where a 1.3 m square bay is used at the corner, the first bay on the new elevation must also be a 1.3 m square bay. These bays will share two common standards as before. Extra Omega transoms are fixed on the inside of one elevation, in place of the 1.3 m access ledgers. This is to support the inside boards from the other elevation. Where required, use timber Omega battens to cover any remaining gap in the inside platform (Fig.21).

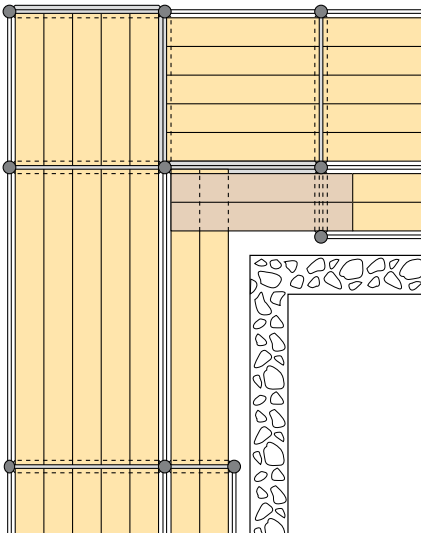

Fig. 21 '1.3 m bay' with inside boards, Omega System

Note: It is permissible to use the Omega Batten System to create the inside platform on an Access System scaffold. This can create greater flexibility for the movement of hop-ups.

7 Internal Corner Returns with Hop-Ups

When using either the Access or Omega System, the infill corner may be completed by using the Omega internal corner unit to support 63 mm thick Omega battens (cut to suit) or 38 mm thick scaffold boards. The internal corner unit is fixed to the cups of the last hop-up on each elevation, where the scaffolds meet (Fig.22).

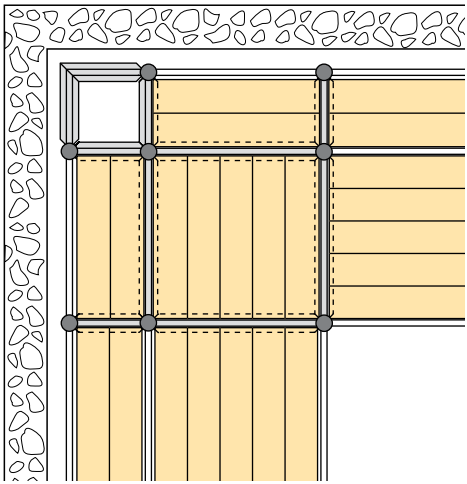

Fig. 22 Internal corner

8 Inside Platform Guardrails

When required, an inside platform guardrail can be created using a handrail post, which locates into the end sockets of the hop-up brackets.

The handrail post incorporates cup joints, to allow the location of ledgers to form inside guardrails.

9 Using Tube & Fittings

It is permissible to use conventional tube, fittings and boards, to supplement the TRADLOK system, where required. Examples of this are:

- Tying In
- Additional Bracing
- Cantilever Platforms
- Rakers
- Non-standard bays
- Joining off-set bays/runs

This list is not exhaustive. For further information and supply, please contact your local TRAD Hire & Sales Ltd depot, details of which can be found on the rear cover of this guide.

Note: All tube and fittings must comply with the relevent standards detailed on page 4 of this manual.

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BASIC DISMANTLING PROCEDURE

Step 1

Prior to commencing work, make sure all method statements, risk assessments and permits are in place.

Step 2

Check that the scaffold is still in the properly erected condition. Make sure that all components and ties have not been interfered with, and that all platforms are clear of any loose material and debris prior to dismantling.

Step 3

Decide on the safe lowering method by which the components shall be lowered to ground level, for example hand to hand, crane, hoist, forklift truck or hand-line.

Under **no** circumstances should 'bombing' be used to lower equipment.

Once the components are safely on the ground, they should be stacked neatly, ready for transportation.

Step 4

To allow access and also for the removal of materials, make sure that there is a minimum of one bay of the scaffold that is a safe working platform, i.e. fully boarded & guardrailed for the full height of the scaffold.

Step 5

All components fixed above the top platform's guardrails should be removed, by un-securing the cups via a hammer blow. Rotate and lift the cup to the open position, and remove the component. Components should then be lowered to ground level.

Step 6

The top working platform can now be dismantled, paying particular attention to the current NASC guidance note SG4 – "Preventing Falls in Scaffolding". If using an advance guardrail or scaffolder's step, information relating to the use of these products should be obtained from the original supplier.

Step 7

Remove any toeboards and associated brackets, and transfer to the ground.

Step 8

Un-secure the guardrail's cups, and place in the open position (as previously described). Removing all guardrails and any 'topped-out' standards as you go, move progressively along the scaffold towards the access point. Components should then be lowered to ground level.

Step 9

From a safe working platform directly below, remove all scaffold boards (along with any intermediate transoms) or Omega battens. These components should either be lowered to the ground or used to create a platform on the next level, if the scaffold is not fully boarded.

Note: If the scaffold is not fully boarded, a temporary safe working platform **must** be installed, below each lift, during the progressive dismantle.

Step 10

Un-secure the cups at the previous platform level. Remove all components progressively and lower to the ground. Remember when dismantling face bracing the lower cup should be released first.

Step 11

Repeat steps 6 to 10, dismantling and lowering the scaffold in the sequence described.

Note: Ties should only be removed when they prevent further dismantling.

Step 12

At ground level, work progressively towards the last bay, removing components from the cups, while holding the standards so they do not become unstable. Remove the standards from the adjustable base jacks when they are no longer attached.

Once the last bay is reached, it is imperative that a second operative holds the last pair of standards, otherwise the scaffold will become unstable.

Step 13

If any element of this dismantling sequence cannot be complied with, please seek advice from your local TRAD Hire & Sales Ltd depot, details of which can be found on the rear cover of this guide.

GUIDANCE NOTE

When dismantling long elevations of TRADLOK scaffolding it may be easier to dismantle the scaffold in sections (i.e. five or six bays at a time).

Always make sure that any remaining scaffold is left in a safe and secure condition.

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BRACING

1 Diagonal Face Bracing

TRADLOK System Scaffolding requires a certain amount of diagonal face bracing to eliminate any tendency for the scaffold to distort or sway.

Face bracing is required in one bay every 20 m maximum, i.e. every eighth bay, for the full height of the scaffold structure.

For a TRADLOK scaffold that is between 10 m and 20 m long, a minimum of two bays should be face braced.

If possible, bracing of the end bays should be avoided (Fig.23).

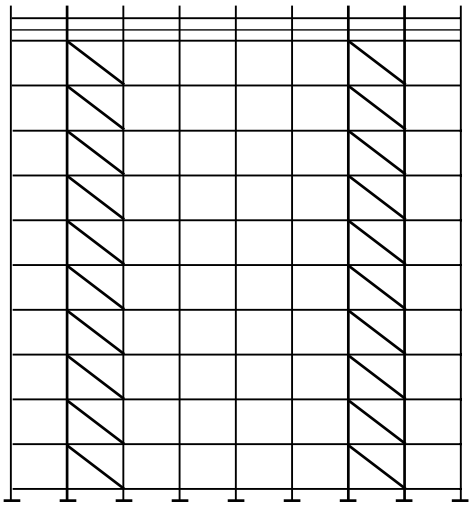

Fig. 23

2 Ledger Bracing

TRADLOK structures do not generally require ledger bracing under normal use. Ledger bracing can be used when ties cannot be located in the correct positions, or where scaffolds extend above the building.

TRADLOK may be erected above the last tied level to a maximum of 4 m (2 lifts). Where this occurs, ledger bracing must be fixed at each set of standards on each lift above the last tied level.

It is acceptable to use tube and fittings to form the ledger bracing. Appropriate lengths of tubes should be fixed to the ledgers with right-angled couplers, or to the standards with swivel couplers.

3 Plan Bracing

TRADLOK structures only require plan bracing under certain conditions, for example where ties cannot be located in their correct positions.

In all cases, it is acceptable to use tube and fittings to form the plan bracing. Appropriate length tubes should be fixed to the standards under the lift with right-angled couplers.

For information relating to plan bracing, please refer to a competent temporary works engineer.

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LOADING

1 Working Platform

The maximum loading for TRADLOK system scaffolding is 3 kN/m2 (BS EN 12811 load class 4), based on 2.5 m bay lengths and 1.3 m bay widths (five boards). For scaffolds with more than one boarded lift, the maximum loading is one Platform @ 3 kN/m2 + one other @ 1.5 kN/m2.

For progressive brick and block work scaffolds using 1.5 m lift heights, only one working platform is assumed @ 3 kN/m2.

All Working Platforms are checked under each Load Case in accordance with BS EN 12811-1: 2003, table 3, for the 2.5 m and 1.8 m ledger sizes. For access transom arrangements with standard scaffold boards, the 2.5 m ledger incorporates two intermediate transoms at equal third intervals, and the 1.8 m ledger incorporates one intermediate transom at the centre point. In the Omega transom cases, 1.3 m Omega transoms are used in supporting standard timber or steel battens.

2 Inside Boards

The demand for wider working platforms has increased with changes in construction practices. TRADLOK has many variations for providing inside boards or Hop-ups in Access or Omega formats, or even a combination of both (e.g. Access System platform with Omega System Hop-ups).

Internal board arrangements follow the same basic principals as above. The single board arrangement is formed using single board supports, while the two and three board internal arrangements utilise hop-up brackets. Please refer to pages 26 to 30 for standard hop-up configurations.

Brackets	Max Bay Length (m)	Uniformly Distributed Load (kN/m2)
1 Board Support	2.5 m	3
2 Board Hop-up Bracket	2.5 m	1.5
3 Board Hop-up Bracket	2.5 m	0.75

3 Loads Imposed Upon the Foundations of a TRADLOK Scaffold

The foundations for a TRADLOK scaffold should be adequate to carry and disperse the loads imposed, both locally at each standard and, in general, to carry the whole weight of the scaffold. The responsibility for the adequacy of the foundations should be established and approved prior to erection.

The client for the scaffold and/or the contractor may need to be consulted. The foundation for a scaffold should be maintained in an adequate condition during the life of the scaffold. Regular inspection procedures must be completed in line with current legislation and the use of the scaffold should be suspended if there is found to be any loss of support.

TYING

1 Forces Upon the Building Structure from Ties

All access scaffolds will impose forces upon the structure they are fixed to, through their ties. An assessment should be initially made regarding the ability of the structure they are fixed to, either globally, due to its own instability, or locally, as a result of defective finishes. Loadings from the ties into the supporting structure are dependent upon the live loading to the working platforms, the height of the scaffold, the wind loading imposed upon the scaffold, and the cladding status of the scaffold. For guidance to the design of ties into building facades, we refer you to Section 2 Chapter 5 of TG20:08 or a competent temporary works engineer.

2 Tie Connections

Appropriate continuous lengths of tube should be fitted to both the inside and outside standards or ledgers of the TRADLOK structure (Fig.24).

Standard tube and fittings are used to form the tie connection in conjunction with a proprietary tie system (Fig.25).

TRADLOK Typical Tie Detail

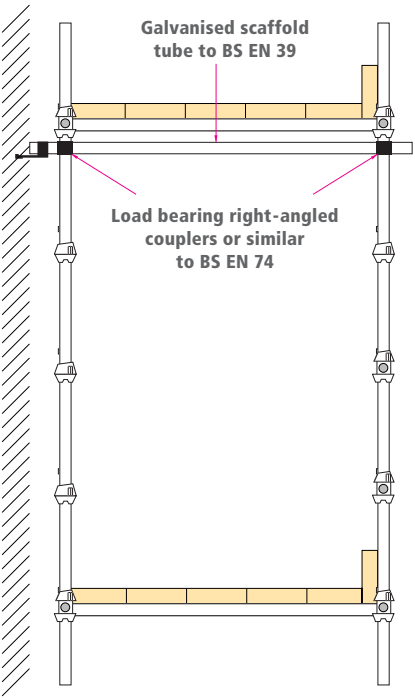

Fig. 24

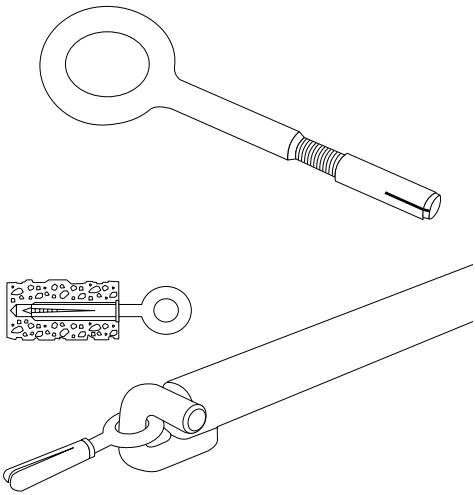

Fig. 25

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In addition to masonry anchors, the following tie assemblies (Figs.26-28) may also be used to ensure the stability of the TRADLOK system. (Where suggested configurations cannot be used, qualified design input must be sought).

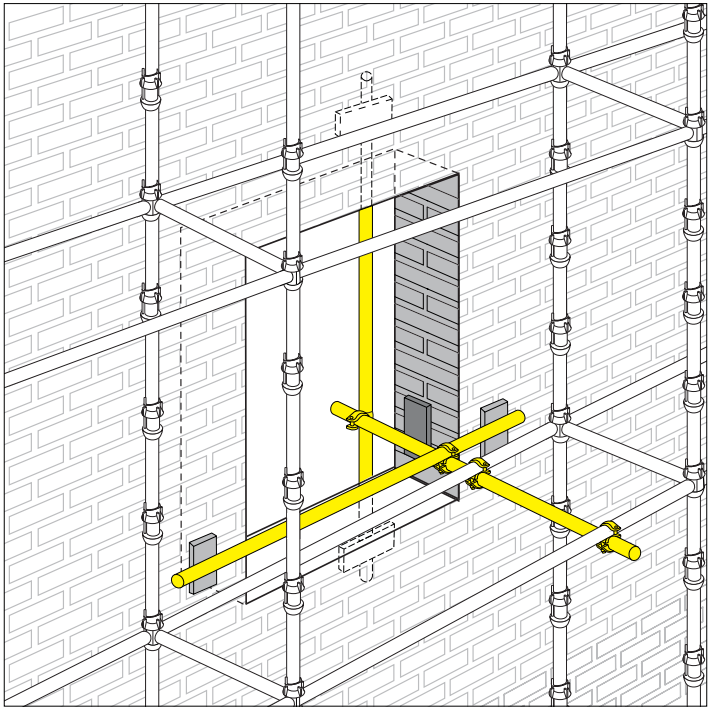

Fig. 26 Through Tie

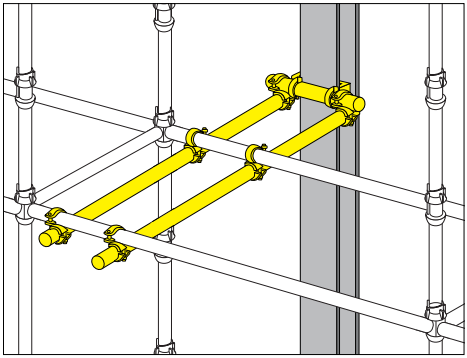

Fig. 27 Girder Clamp Tie

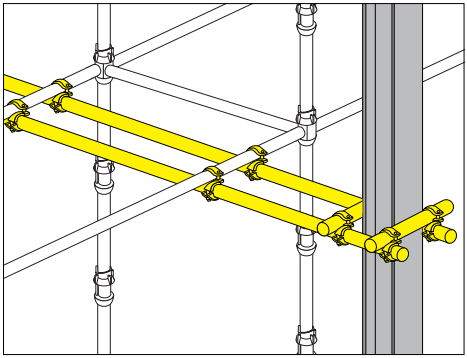

Fig. 28 Box Tie

3 Tie Patterns

The following grids (Figs.29-32) detail the tie patterns to be used with TRADLOK scaffold. (Max. lift heights 2 m).

Tie Pattern A

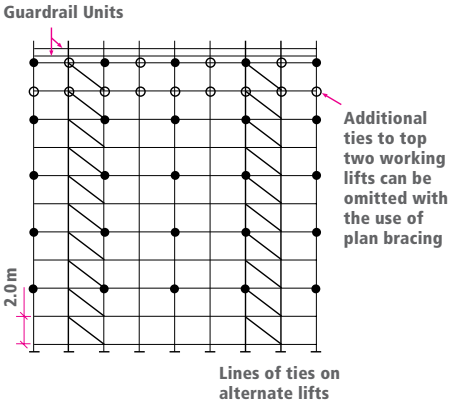

Fig. 29

Tie Pattern B

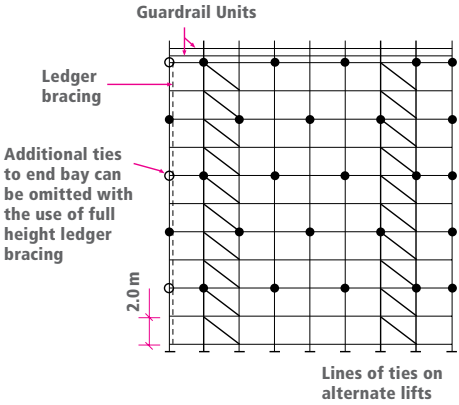

Fig. 31

Tie Pattern D

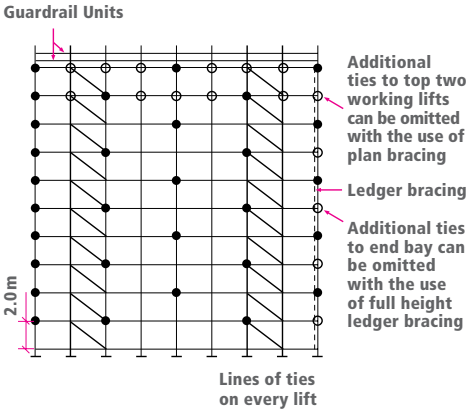

Fig. 30

Tie Pattern E

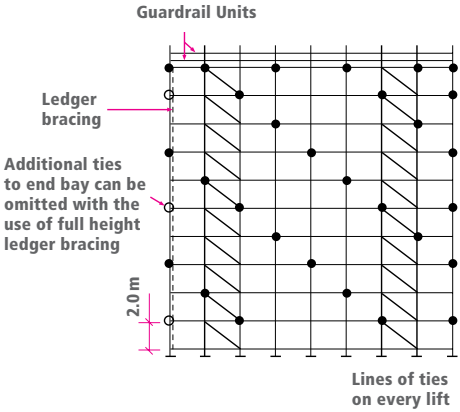

Fig. 32

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SCAFFOLD DESIGNATION						Max Height in Metres (m) FULLY LOADED INSIDE BOARDS (BS EN 12811)							
						COUNTRY				TOWN			
						TIES AT ALTERNATE LIFTS		TIES AT EVERY LIFT		TIES AT ALTERNATE LIFTS		TIES AT EVERY LIFT	
LOAD CASE	BAY LENGTH (m)	BAY WIDTH (m)	NO. INSIDE BOARDS	TRANSOM	CLADDING	A	B	D	E	A	B	D	E
3	2.5	1.3	0	ACCESS	NONE	8	24	12	24	10	24	12	24
					DEBRIS	0	14	0	14	4	14	4	14
					SHEET	0	0	0	0	0	4	0	4
3	2.5	1.3	0	OMEGA	NONE	12	24	12	24	12	24	12	24
					DEBRIS	0	18	0	18	4	18	4	18
					SHEET	0	0	0	0	0	4	0	4
3	2.5	1.3	1	ACCESS	NONE	8	24	10	24	10	24	12	24
					DEBRIS	0	14	0	14	0	14	0	14
					SHEET	0	0	0	0	0	4	0	4
3	2.5	1.3	1	OMEGA	NONE	12	24	10	24	12	24	10	24
					DEBRIS	0	18	0	18	0	18	0	18
					SHEET	0	0	0	0	0	0	0	0
3	1.8	1.3	0	ACCESS	NONE	16	24	18	24	16	24	18	24
					DEBRIS	4	24	6	24	6	24	8	24
					SHEET	0	6	0	8	0	8	0	8
3	1.8	1.3	0	OMEGA	NONE	20	24	20	24	20	24	20	24
					DEBRIS	6	24	6	24	8	24	8	24
					SHEET	0	8	0	6	0	8	0	8
3	1.8	1.3	1	ACCESS	NONE	16	24	18	24	16	24	18	24
					DEBRIS	4	24	6	24	6	24	8	24
					SHEET	0	6	0	8	0	8	0	8
3	1.8	1.3	1	OMEGA	NONE	20	24	20	24	20	24	20	24
					DEBRIS	6	24	6	24	8	24	8	24
					SHEET	0	6	0	6	0	8	0	8
4	2.5	1.3	0	ACCESS	NONE	0	16	0	14	0	16	0	14
					DEBRIS	0	10	0	8	0	10	0	8
					SHEET	0	0	0	0	0	0	0	0
4	2.5	1.3	0	OMEGA	NONE	8	24	4	22	8	24	4	22
					DEBRIS	0	12	0	12	0	12	0	12
					SHEET	0	0	0	0	0	0	0	0
4	2.5	1.3	1	ACCESS	NONE	0	16	0	12	0	16	0	12
					DEBRIS	0	0	0	0	0	0	0	0
					SHEET	0	0	0	0	0	0	0	0
4	2.5	1.3	1	OMEGA	NONE	0	16	0	14	0	16	0	14
					DEBRIS	0	8	0	6	0	8	0	6
					SHEET	0	0	0	0	0	0	0	0
4	1.8	1.3	0	ACCESS	NONE	12	24	10	24	12	24	10	24
					DEBRIS	0	22	4	20	6	22	6	20
					SHEET	0	4	0	4	0	6	0	6
4	1.8	1.3	0	OMEGA	NONE	16	24	16	24	16	24	16	24
					DEBRIS	4	24	4	24	6	24	6	24
					SHEET	0	4	0	4	0	8	0	6
4	1.8	1.3	1	ACCESS	NONE	10	24	10	24	8	24	10	24
					DEBRIS	0	22	4	16	4	22	6	16
					SHEET	0	4	0	4	0	6	0	6
4	1.8	1.3	1	OMEGA	NONE	16	24	12	24	16	24	12	24
					DEBRIS	4	24	0	24	6	24	0	24
					SHEET	0	4	0	4	0	8	0	6

SAFE WORKING HEIGHTS OF THE TRADLOK SYSTEM

The maximum height to which a TRADLOK Scaffold may be erected is dependant upon a number of factors, the most important of which are:

- The vertical and horizontal distances between tied points on a standard.
- The lift height.
- Wind loading.
- The vertical loadings in the legs due to the self-weight, and the working platform loading.
- Whether or not the foot ties are used.
- The inclusion of Debris Netting or Sheeting to the Scaffold.
- Whether or not the cantilever platforms are used.

The Safe Height Table shown is based on all scaffolds being limited to a maximum height of 24.5 m (12 lifts) incorporating a maximum of two working lifts. This is due to the increased potential for wind loading to vary from the standard guidance because of local conditions. Scaffolds in excess of this height and/or incorporating more than two working lifts can be constructed, but special consideration should be given to their design. Please contact your local TRAD Hire & Sales depot or a competent temporary works engineer for guidance if these or any of the conditions below are to be exceeded.

The Safe Working Height table is based on:

- Tie patterns being adhered to at all times.
- 2 m lift heights.
- TRADLOK scaffolds erected within the 24 m/s basic wind speed area of the wind map contained within the NASC Document – TG20 and all locations with no significant local features such as cliffs, steep hills, ridges, in coastal locations, to tall structures surrounded by other tall structures which may cause funnelling of the wind pressures, or altitudes in excess of 100 m above sea level and within 100 km of the closest distance to sea upwind. If the site; is at least 2 km inside a town terrain, is shielded by buildings within 100 m and the average height of the surrounding buildings are 5 m or more then it is classified as a "Town" site. All other locations are considered to be "Country".
- Two boarded lifts: one fully loaded and one at 50 % loading.
- Foot ties fitted to all scaffolds.
- Any sheeting or debris netting spans from lift height to lift height.

The safe height table and section capacities contained within this TRADLOK User Guide are based upon live loading from the intended use only. Additional loading may accrue on the working platforms or components as a consequence of atmospheric precipitations such as ice, snow, sand or dust. The working processes may also cause debris such as sand, grit or demolition debris to accumulate on the working platforms or components, which will also increase the live loading above that allowed for. Where this is seen to occur or is expected to occur, further guidance should be sought from a competent temporary works engineer, which may result in a downgrading of the Load Class of the scaffold.

Wind effect forces have been calculated for wind suction only. Under wind pressure conditions, it is assumed that the scaffold will move into bearing with the face of the building to provide extra points of support. To achieve this, it is recommended that scaffolds be erected with a gap of no more than 50 mm to the facade.

The parameters detailed in this manual are based on calculations, and are the results of extensive testing by an accredited independent UK testing house.

Note: For pavement lifts and floor height lifts greater than 2 m, the advice of a competent temporary works engineer should be sought.

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STABILITY & BUTTRESSING

1 Rakers

On structures where it may not be suitable to use physical tie arrangements, a TRADLOK scaffold can be supported up to a height of 6 m using raking tube arrangements.

Single galvanised tubes up to a maximum length of 6.4 m may be used as rakers. These are fixed to the standards at the top using swivel couplers, then tied back to the standard at the foot and mid-levels using galvanised tube and right-angled couplers. The rakers are then joined horizontally at these lower levels by galvanized tube ledgers and right-angled couplers.

The angle of the raking tube should be at no more than 2:1 (vertical to horizontal).

At the foot of the raker, a galvanised tube should be driven into the ground at a 45-degree angle, to a depth of approximately 1.2 m. The capacity of these anchors is dependent on the ground conditions.

If these anchors are not suitable, kentiledge weight may be used as an alternative. Please contact your local TRAD Hire & Sales depot or a competent temporary works engineer for guidance (Fig.33).

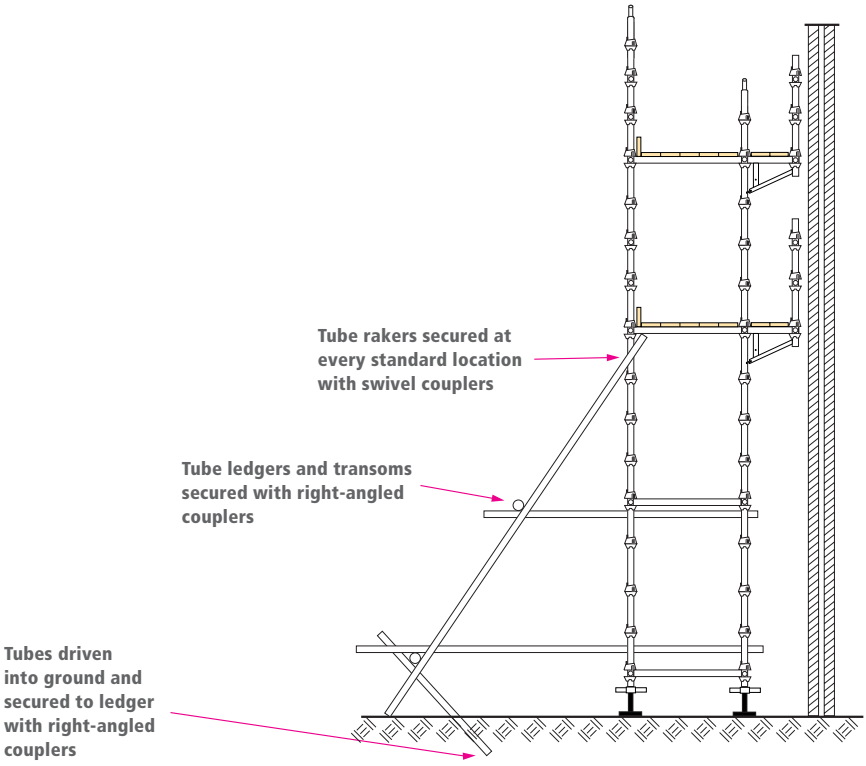

Fig. 33 Typical Raker Detail

2 Buttresses

Again on structures where it may not be suitable to use physical tie arrangements, it is possible to achieve stability of the TRADLOK scaffold by using fully braced buttresses.

Typically, buttresses will be erected using a 2.5 m x 2.5 m bay, and positioned at a frequency of one in every four bays. The remaining standards on the main access scaffold (between buttresses) require to be plan braced (wing-tied) to the outer standard of the nearest buttress, using galvanised tube and right-angled couplers.

Local conditions may make it necessary to 'spike' the outside standards of the buttresses, using tubes driven into the ground. Information relating to this should be sought from a competent temporary works engineer.

The maximum height to which a 2.5 m x 2.5 m buttress arrangement can support a TRADLOK scaffold is 11 m, advice must to be sought from a competent temporary works engineer for heights in excess of this level (Fig.34).

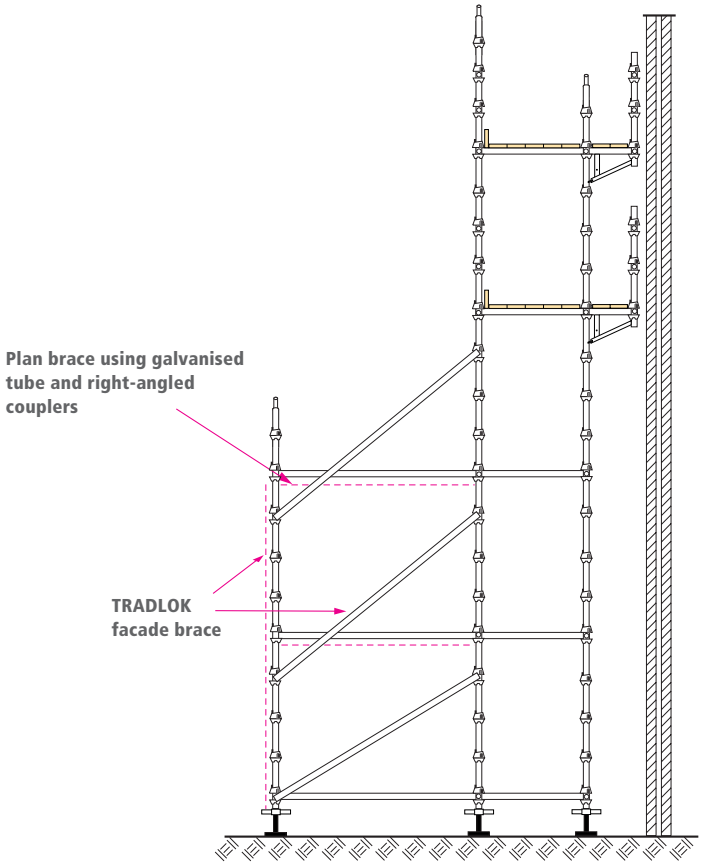

Fig. 34 Typical Buttress Detail

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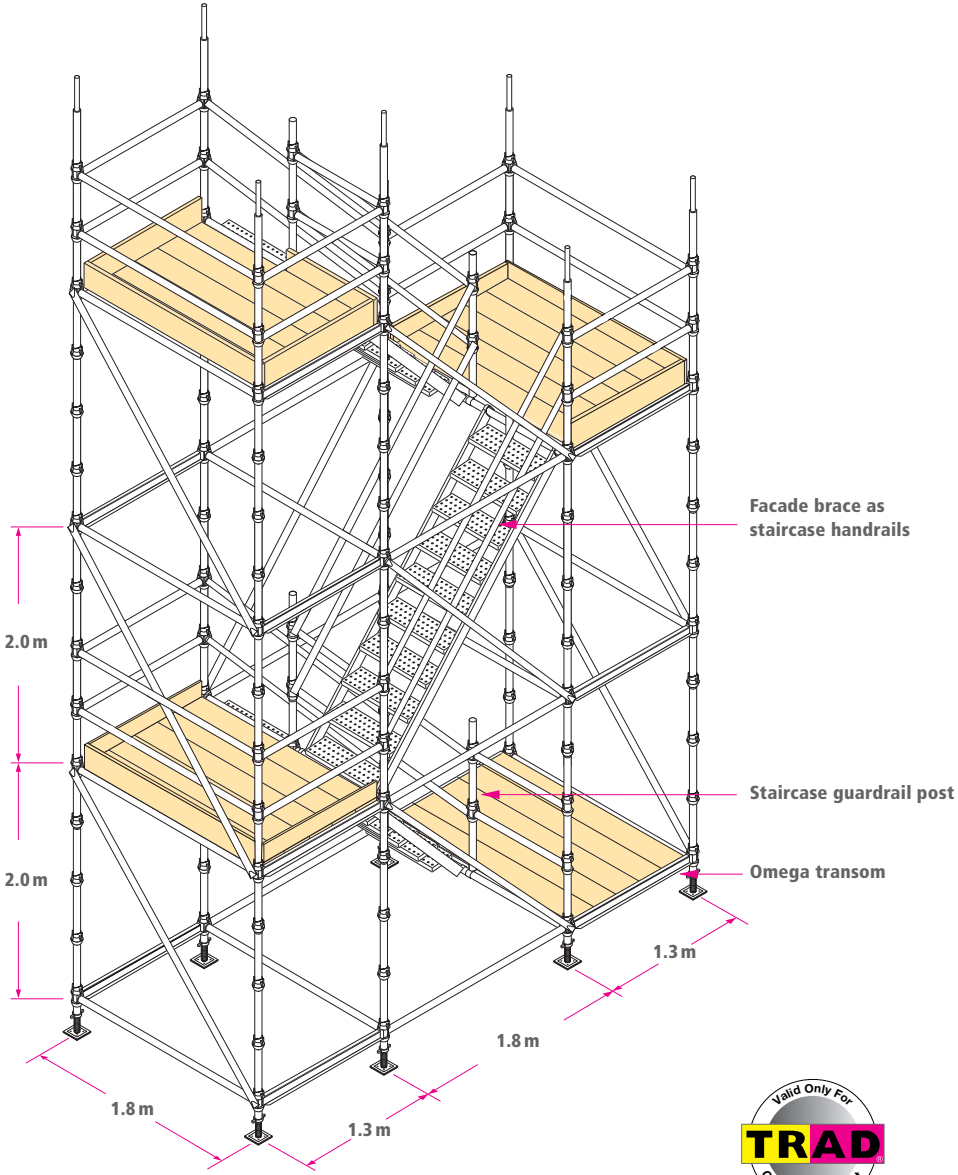
TRADLOK Typical 8-Leg Staircase



Note: Plan brace omitted for clarity.

Fig. 35

STAIRCASE TOWERS

TRADLOK staircase towers provide a safe, user-friendly solution and are quick and simple to erect, allowing improved access and egress for site personnel.

TRADLOK staircase towers are available in two versions, having either 8-leg (Fig.35) or 10-leg configurations, according to load capacity and height requirements.

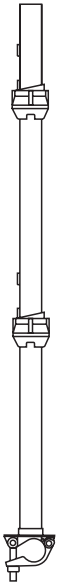
Special staircase components can be used with standard TRADLOK equipment to form staircase towers. The plan dimensions of the two towers are 4.4 m x 1.8 m, with the landing platforms being 1.3 m wide and staircases 0.8 m wide.

These staircase towers should be tied at every standard, every other lift. Plan bracing is positioned every other lift of both supporting TRADLOK towers, under the landing platforms.

1 Staircase Guardrail Post

The guardrail posts are attached to the midpoints of the inside ledgers at the top and bottom of the staircase units via the half coupler. TRADLOK facade braces are then used to create guardrails by fitting into the guardrail post cups.

Code	Weight (kg)
137376	7.2

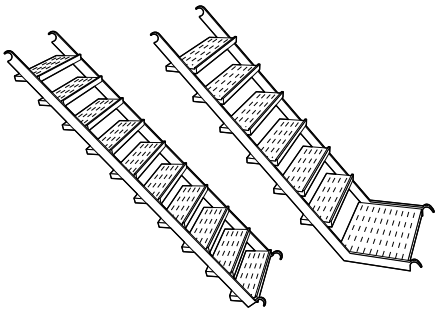


2 Staircase Unit

Staircase units are available in steel and aluminium formats. Both types are available in 2 m & 1.5 m lift heights. All units are 800 mm wide, with hooks at the top and bottom of the stiles, which locate over the ledger.

A combination of stair units may be used in the same tower to suit various platform levels.

Code	Item	Weight (kg)
137374	2 m Steel	73
137372	2 m Alloy	30
137375	1.5 m Steel	55
137400	1.5 m Alloy	28

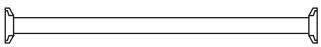


3 Staircase Ledger

Used to form the handrail at the access & egress points at the top & bottom of all TRADLOK staircase towers.

This ledger is also used within the 10-leg tower. It is fixed to the inside standard, and provides the location point of the staircase units.

Code	Length (m)	Overall Length (m)	Weight (kg)
137307	0.9	0.852	3.73



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TRADLOK 8-Leg Staircase quantity list

Code	Description	1.5m	2.0m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m	7.5m
137301	3 m Standards	8	8	8	8	12	12	16	16	16	16	20	20
137302	2 m Standards	-	4	8	8	4	4	4	4	8	8	4	4
137305	1.8 m Ledgers	16	16	24	24	24	32	32	32	32	40	40	40
137306	1.3 m Ledgers	8	8	12	12	12	16	16	16	16	20	20	20
137307	0.9 m Ledgers	4	4	4	4	4	4	4	4	4	4	4	4
137362	1.3 m Omega Transoms	8	8	12	12	12	16	16	16	16	20	20	20
137311	Facade Brace 1.8 m x 2.0 m	-	8	-	8	16	-	8	16	24	8	16	24
137312	Facade Brace 1.8 m x 1.5 m	8	-	16	8	-	24	16	8	-	24	16	8
137313	Adjustable Base Jack	8	8	8	8	8	8	8	8	8	8	8	8
137376	Staircase Guardrail Post	2	2	3	3	3	4	4	4	4	5	5	5
137318 137322	1.8 m Omega Timber Battens 1.8 m Omega Steel Battens	12	12	18	18	18	24	24	24	24	30	30	30
137319* 137323*	1.3 m Omega Timber Battens* 1.3 m Omega Steel Battens*	4	4	6	6	6	8	8	8	8	10	10	10
137372 137374	2.0 m x 0.8 m Aluminium Stair Units 2.0 m x 0.8 m Steel Stair Units	-	1	-	1	2	-	1	2	3	1	2	3
137400 137375	1.5 m x 0.8 m Aluminium Stair Units 1.5 m x 0.8 m Steel Stair Units	1	-	2	1	-	3	2	1	-	3	2	1
137364*	Omega End Toeboard Clip*	8	8	12	12	12	16	16	16	16	20	20	20
102008	2.4 m Galvanised Scaffold Tube	1	1	2	2	2	3	3	3	3	4	4	4
026001	Right-angled Couplers	2	2	4	4	4	6	6	6	6	8	8	8

continued on next page ›

Optional Equipment

The relevant quantities of the following equipment may be used in place of the standard toe board equipment marked*

137320	Omega Toeboard Clip	4	4	6	6	6	8	8	8	8	10	10	10
034005	1.5 m Scaffold Board	4	4	6	6	6	8	8	8	8	10	10	10
026003	Single Couplers	8	8	12	12	12	16	16	16	16	20	20	20
102004	1.2 m Galvanised Scaffold Tube	4	4	6	6	6	8	8	8	8	10	10	10
026001	Right-angled Couplers	8	8	12	12	12	16	16	16	16	20	20	20

continued on next page ›

continued ›

Code	Description	8.0m	9.0m	10.0m	11.0m	12.0m	13.0m	14.0m	15.0m	16.0m	17.0m	18.0m
137301	3m Standards	24	24	28	32	32	36	40	40	44	48	48
137302	2m Standards	4	8	4	4	8	4	4	8	4	4	8
137305	1.8m Ledgers	40	48	48	56	56	64	64	72	72	80	80
137306	1.3m Ledgers	20	24	24	28	28	32	32	36	36	40	40
137307	0.9m Ledgers	4	4	4	4	4	4	4	4	4	4	4
137362	1.3m Omega Transoms	20	24	24	28	28	32	32	36	36	40	40
137311	Facade Brace 1.8m x 2.0m	32	24	40	32	48	40	56	48	64	56	72
137312	Facade Brace 1.8m x 1.5m	-	16	-	16	-	16	-	16	-	16	-
137313	Adjustable Base Jack	8	8	8	8	8	8	8	8	8	8	8
137376	Staircase Guardrail Post	5	6	6	7	7	8	8	9	9	10	10
137318 137322	1.8m Omega Timber Battens 1.8m Omega Steel Battens	30	36	36	42	42	48	48	54	54	60	60
137319* 137323*	1.3m Omega Timber Battens* 1.3m Omega Steel Battens*	10	12	12	14	14	16	16	18	18	20	20
137372 137374	2.0m x 0.8m Aluminium Stair Units 2.0m x 0.8m Steel Stair Units	4	3	5	4	6	5	7	6	8	7	9
137400 137375	1.5m x 0.8m Aluminium Stair Units 1.5m x 0.8m Steel Stair Units	-	2	-	2	-	2	-	2	-	2	-
137364*	Omega End Toeboard Clip*	20	24	24	28	28	32	32	36	36	40	40
102008	2.4m Galvanised Scaffold Tube	4	5	5	6	6	7	7	8	8	9	9
026001	Right-angled Couplers	8	10	10	12	12	14	14	16	16	18	18

137320	Omega Toeboard Clip	10	12	12	14	14	16	16	18	18	20	20
034005	1.5m Scaffold Board	10	12	12	14	14	16	16	18	18	20	20
026003	Single Couplers	20	24	24	28	28	32	32	36	36	40	40
102004	1.2m Galvanised Scaffold Tube	10	12	12	14	14	16	16	18	18	20	20
026001	Right-angled Couplers	20	24	24	28	28	32	32	36	36	40	40

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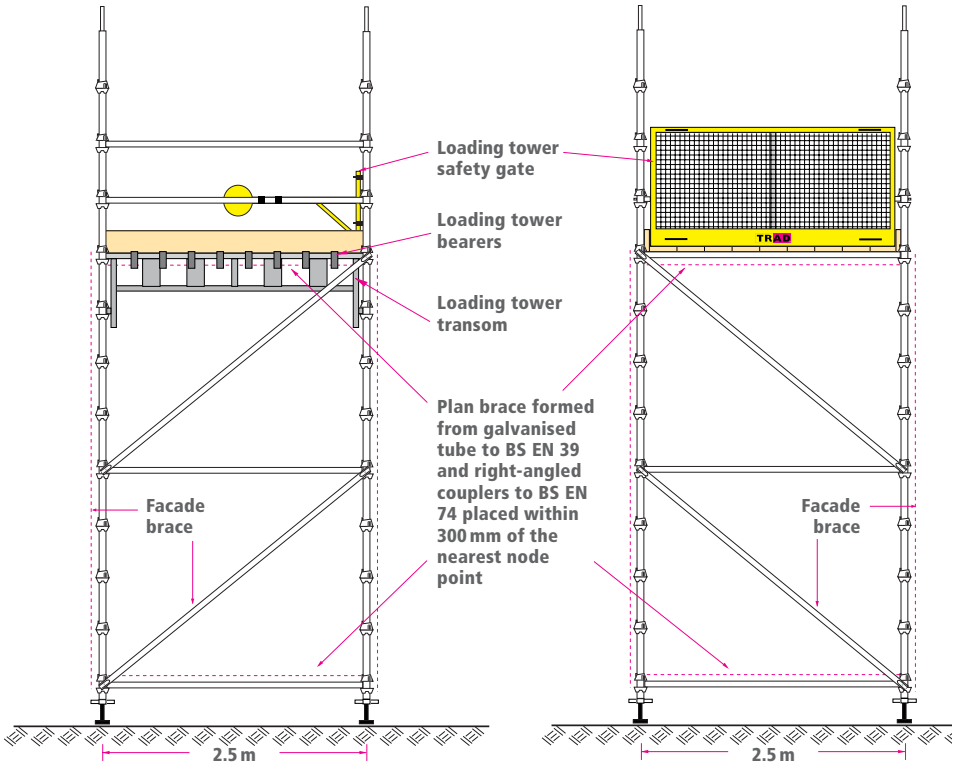
TRADLOK Typical Loading Tower



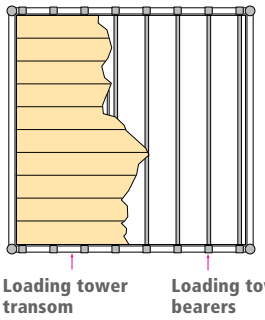


Fig. 36

LOADING TOWERS

The TRADLOK loading tower (see Fig.36) uses standard TRADLOK components along with special transoms, bearers and safety gates, to form a strengthened platform specifically for the loading of materials by forklift truck or crane.

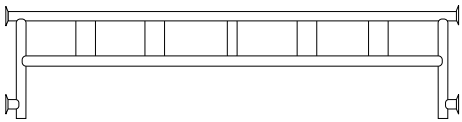
The standard loading tower has a plan size of 2.5 m x 2.5 m, and can be erected either as part of the main scaffold structure or a stand-alone tower. In both cases, suitable ties are required, along with facade and plan bracing.

1 Loading Tower Transom

This specially designed unit replaces the 2.5 m ledgers to the left and right-hand sides of the loading tower. Loading tower transoms are used in pairs at each working platform level and must be used in conjunction with the loading tower bearers.

As the loading tower transom covers two node points, the lowest point on which the first working lift on the scaffold can be located is at the second cup height.

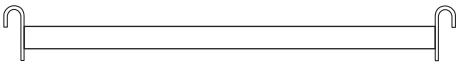
Code	Length (m)	Overall Length (m)	Weight (kg)
137330	2.5	2.452	33.57

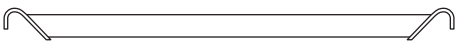


2 Loading Tower Bearers

Eight of these 2.5 m long special box-section horizontal units are placed over the loading tower transoms (at 345 mm centres) to transmit the imposed load.

Code	Item	Overall Length (m)	Weight (kg)
137332	Batten Bearer	2.572	22.68
137405	Board Bearer	2.572	22.68





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3 Loading Tower Safety Gate

In order to provide leading edge protection before, during and after loading of materials onto the loading tower, the loading tower safety gate should be used. This system uses an up-and-over counterbalance mechanism providing a continuous guardrail before, during and after loading, ensuring the operator is at all times protected (Fig.37).

Code	Weight (kg)
137334	96

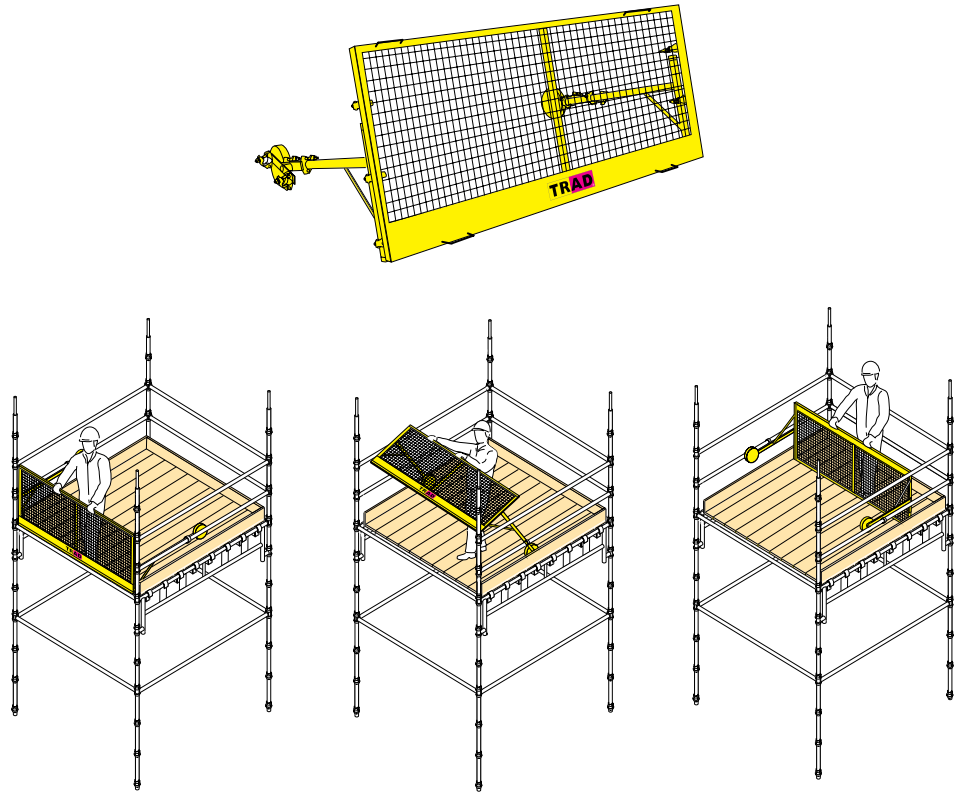

Fig. 37 Operation of Loading Tower Gate

Note: Bracing omitted for clarity.

4 Loading Tower Working Detail

The loading tower transoms are fixed to both sides of the 2.5 m x 2.5 m bay. They span from the front to the rear standards and connect to two node points (cups) on each standard. Ledgers of 2.5 m are then used to complete the square of the tower. Eight of the loading tower bearers are placed over the transoms at 345 mm centres.

The loading tower can now be boarded using 2.4 m scaffold boards or 2.5 m Omega timber battens. Guardrails to the side of the tower are formed, using 2.5 m ledgers, with the leading edge protection being formed from the loading tower safety gate that is attached to the mid-guardrail. As the loading tower transom covers two node points, the lowest point on which the first working lift on the scaffold can be located is at the second cup height. A foot-tie must be used and sole boards of a suitable size must be placed beneath each adjustable base jack.

The loading tower must be braced on all four sides where possible. However, if multiple platforms are being used and the tower is part of a larger TRADLOK structure, then the loading tower must be braced on the front elevation from foot-tie level, to the first working lift, and on both sides for the full height of the scaffold. The facade brace on the sides of the tower may be moved from the node points to the nearest cups, to accommodate guardrails and ledgers on the main scaffold.

Loading towers that are part of a larger main scaffold require to be plan braced (wing-tied) from the outer standard to the main scaffold on both sides of every lift. Independent stand-alone towers require plan bracing to be installed, and are located at the base lift, as well as directly beneath all working lifts, and at every alternate lift (maximum 4 m) throughout the tower (Figs.38 & 39).

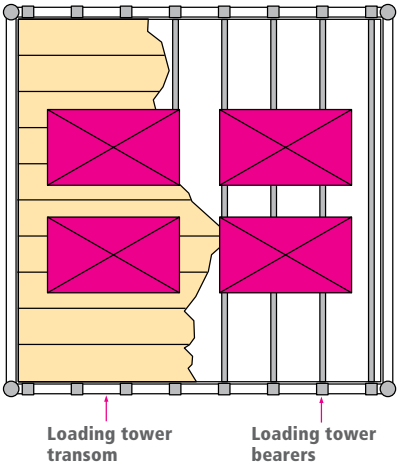

Fig. 38
Four 10 kN (1 tonne) pallets

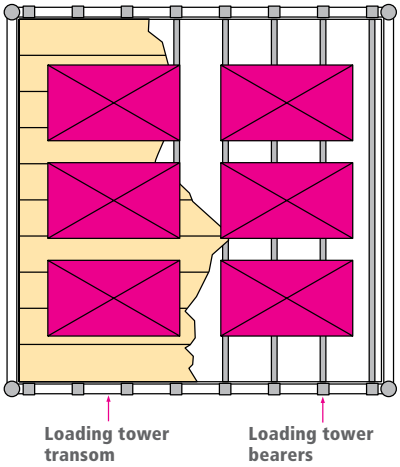

Fig. 39
Six 8.25 kN (0.825 tonne) pallets

Note: The safe working load of the TRADLOK Loading tower is 49.5 kN (4.95 tonnes) at any one time. This can be on one lift or spread over the working lifts (e.g. one lift loaded to 2.95 tonnes, with a second loaded to 2.00 tonnes).

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TRADLOK Typical Mobile Tower

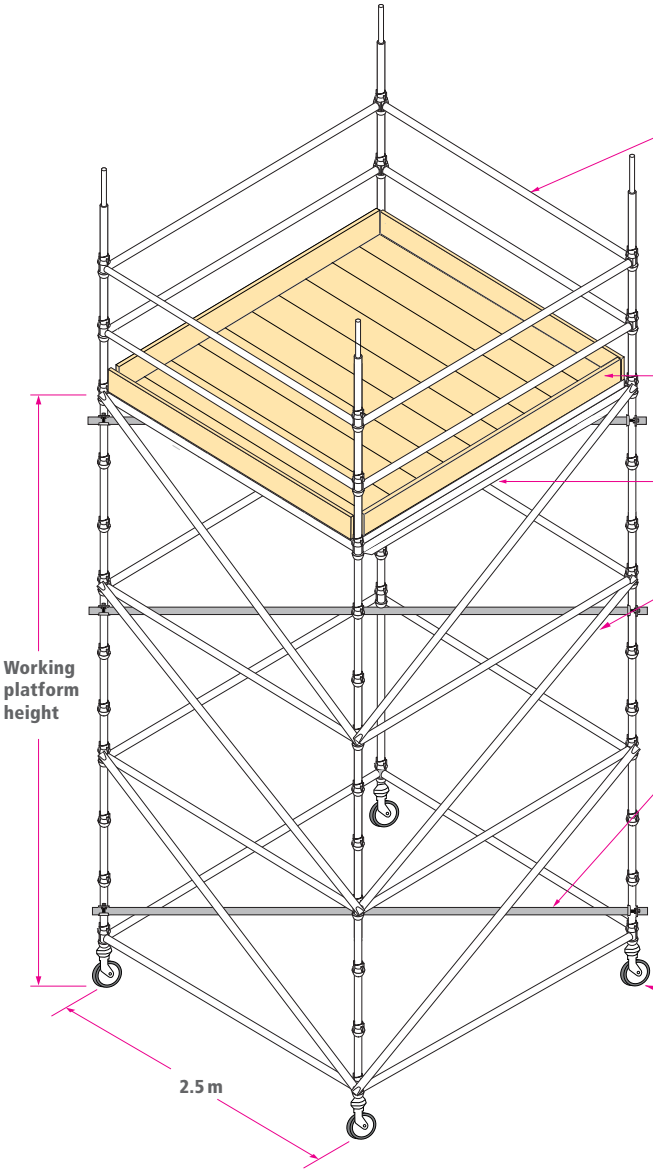

Fig. 40

STATIC & MOBILE TOWERS

TRADLOK towers can be erected with standard components using standard adjustable base jacks, or bespoke castor wheels, for full mobility (Fig.40). The working platform can be formed using either scaffold boards or Omega battens. If Omega battens are used with Omega transoms, no intermediate transoms are required.

Static towers may be erected to a maximum height of 24.5m, provided they are secured in line with the tie pattern shown in figure 41. Heights above this are possible but should be referred to a competent temporary works engineer.

All towers must be fitted with facade bracing on all external faces throughout the full height of the TRADLOK tower.

Additional plan bracing is also required, which is located at the base lift, as well as directly beneath the top working lift and at every alternate lift (maximum 4m) throughout the tower.

Plan bracing can be installed using BS EN 39 scaffold tubes and BS EN 74 fittings.

Note: Scaffold ties must be fitted to both inside and outside Standards / Ledgers.

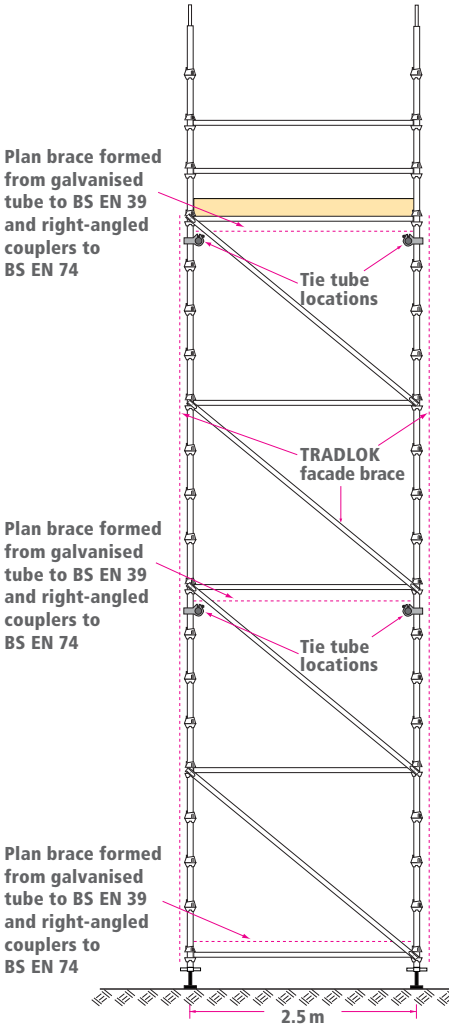

Fig. 41

Smallest Base Dimension to Height Ratios for Un-tied Tower Scaffolds		
	Max Internal Ratio	**Max External Ratio**
Static	4 to 1	3.5 to 1
Mobile	3.5 to 1	3 to 1

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TRADLOK Typical Omega Ladder Access

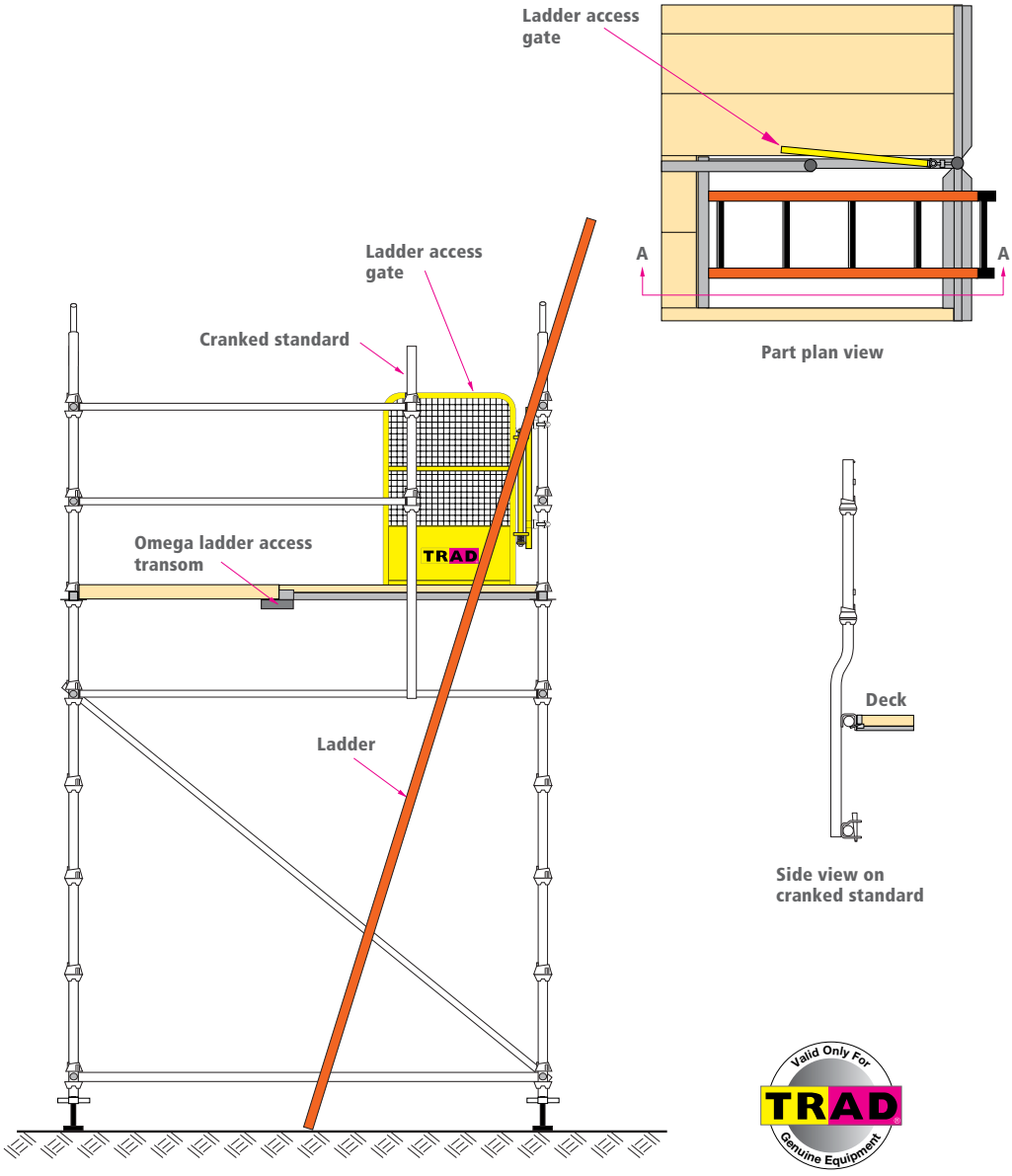

Fig. 42

LADDER ACCESS TOWERS

TRADLOK ladder access towers can be used within a TRADLOK main scaffold structure, or as an independent ladder access tower.

The ladder access tower framework should be erected in accordance with the procedures set out in the basic erection guide, being normally built within a 2.5 m x 1.3 m bay.

Where the ladder access tower is constructed using the Access System, the gap for the ladder to pass through is formed by replacing the outer two scaffold boards on the bay with short scaffold boards. These two boards should then be fixed to the intermediate transom (which is positioned at the midpoint of the bay), with board retaining clamps, to prevent any movement.

When using the Omega System, the gap for the ladder to pass through is formed by placing an Omega ladder access transom at the midpoint of the bay, across the ledgers (with the half coupler usually to the outside). 1.3 m Omega battens are then placed between the Omega ladder access transom and the Omega transom, then complete the platform using 2.5 m Omega battens (Fig.42).

When ladder towers are required as the access to a TRADLOK main scaffold structure, their location should be given careful consideration, taking into account the recommendations below:

- An external ladder access tower should be erected to the side of the main scaffold where possible, allowing the working platform to remain intact. It is recommended that the ladder access gate is used in conjunction with the cranked standard or the staircase guardrail post, to enable the continuation of the main scaffold's double guardrail.
- When an external ladder access tower is not feasible, the ladder access should be positioned to the end of a scaffold run. This will keep any disruption to the working platform to a minimum. It is recommended that a ladder access trapdoor is used in this situation to cover the access & egress point.
- Only as a last resort should the ladder access be positioned in the general run of the main scaffold. Again, a ladder access trapdoor should be used in this situation.

Note: Independent ladder access towers follow the same criteria regarding bracing and ties as static towers.

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TRADLOK Typical Birdcage

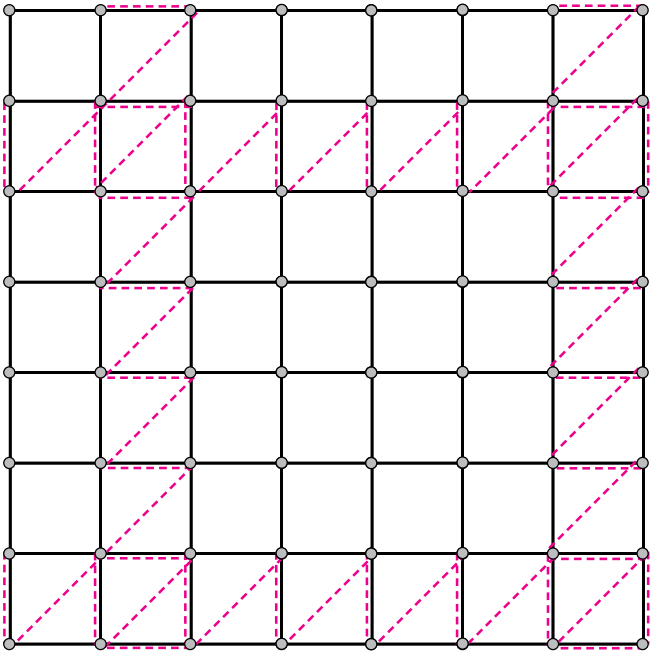

Fig. 43 Typical Birdcage Plan

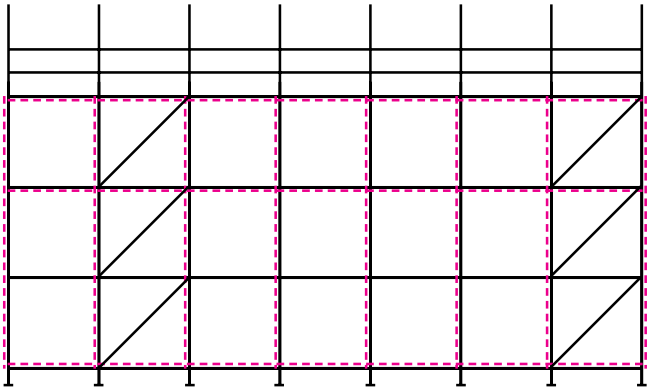

Fig. 44 Typical Birdcage Elevation

BIRDCAGES

TRADLOK Birdcage scaffolds provide one of the most cost effective methods of providing access to large areas such as ceilings and atriums. Standard components are used in conjunction with either intermediate transoms or Omega transoms, allowing a combination of bay sizes to cover the floor area required.

Plan and vertical bracing is required throughout all TRADLOK Birdcage Scaffolds, at a frequency of one in every fifth bay. Plan bracing is located at the base lift, as well as directly beneath the top working lift and at every alternate lift throughout the scaffold with a maximum of 4m between. (Figs. 43 & 44). It should be noted that a foot-tie lift is required throughout the scaffold, although one bay can be omitted to provide access.

Where plan bracing is deemed to be necessary, the use of BS EN 39 galvanised tubes and BS EN 74 fittings is acceptable. Scaffold tubes of the appropriate length can be fixed to the standards with right-angle couplers within 300mm of the node point.

Vertical bracing to the outside faces is fixed using normal TRADLOK facade braces, although internal ledger to ledger bracing is installed, using BS EN 39 tubes and BS EN 74 fittings. Scaffold tubes of the appropriate length should preferably be fixed to the ledgers with right-angle couplers, or alternatively, to the standards with swivel couplers, allowing minimum obstruction to any working platform. As with plan bracing, ledger bracing must also be fixed within 300mm of the node point.

The maximum permissible safe height for a freestanding external TRADLOK birdcage scaffold must not exceed the smallest base dimension. Advice must be sought from a competent temporary works engineer for heights in excess of this level.

For a TRADLOK birdcage scaffold built internally, the scaffold should be butted and tied to the inside walls of the building. The height of the scaffold is then dependent on the ability of that structure to take the loads imposed on it by the scaffold. Any height that is required above the smallest base dimension should be referred to a competent temporary works engineer (the client and/or the contractor may also need to be consulted).

Grid Dimension (m)	Max No. Load Platforms	Uniformly Distributed Load (kN/m2)	Load Class
1.3 x 1.3	1	3.00	4
1.3 x 1.8	1	3.00	4
1.3 x 2.5	1	3.00	4
1.8 x 1.8	1	2.00	3
1.8 x 2.5	1	1.50	2
2.5 x 2.5	1	0.75	1

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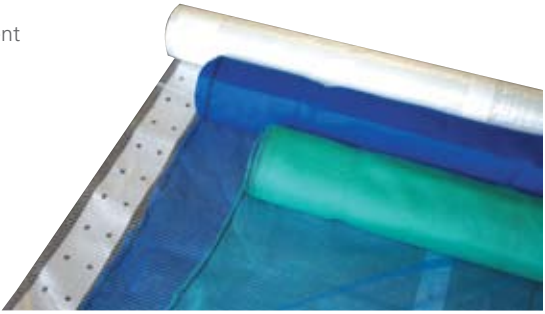
OTHER PRODUCTS

1 Scaffold Sheeting and Debris Netting

TRAD Sheeting and Debris Netting is a cost effective and versatile temporary containment and weather protection solution.

TRAD Sheeting is manufactured from clear low-density polythene, reinforced with high-density polythene yarn.

TRAD Debris Netting is manufactured from high-density polythene monofilaments that have been UV stabilised.



2 Tools & Tool Holders

3 Harnesses & Lanyard

4 Post Pallets

5 Steel Bins

6 Tags & Signs

9 Galvanised Tubes BS EN 39

7 Sign Board Frames

10 Scaffold Fittings BS EN 74

8 Tube End Protectors

11 Alloy Beams

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