acrow.
ENGINEERING & CONSTRUCTION

TECHNICAL GUIDE
HANDRAILS

SPECIALISED SYSTEMS

Any safety provisions as directed by the appropriate governing agencies must be observed when using our products. Illustrations in this document represent partial assembly stages and should not be considered complete configurations. For the purpose of safety, they shall not be considered definitive.

The loads featured in this document, related to the parts of the product, are approximate.

The company reserves the right to introduce any modifications deemed necessary for the technical development of the product.

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Technical Manual Release Notes

This page is intended to record all changes to the **HANDRAIL SYSTEM** technical manual pages. Changes or additions to this manual will be itemised with a brief description and date when the amendments were made.

ISSUE	DATE	Amendment Description
A	08/24	First Release
B	11/25	Second Release
C	03/26	Third Release
D	06/26	Fourth Release
E	09/26	Additional Tank Head Posts Added
F	10/26	Fifth Release

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1. Technical Specifications

System Description

Acrow provides a range of **HANDRAIL SYSTEM** options to suit the varying needs of construction requirements & limitations. Edge guard and handrail options can be used with a variety of scaffolding or formwork that Acrow provides and can be used both with and without containment depending on job requirements.

These edge guard solutions can be provided with a variety of both scaffolding systems and items and heavier duty solutions utilizing items of formwork systems.

Purpose of the Document

The purpose of this document is to provide guidelines for design, safe handling, transport and installation of the **HANDRAIL SYSTEM**.

The document also outlines the various components of the system and it features illustrations, working load limits, typical assembly arrangements and safe transport and handling measures.

The information contained in this document is provided as a general guide only and does not replace the need for the design to be reviewed and checked by a qualified person in the field of temporary works design and installation, concrete, steel, building construction and services.

This material has been prepared in the context of relevant Australian Standards and the National Construction Code (NCC). Users should make themselves aware of any recent changes to these documents referred to therein and to local variations or requirements.

This document is NOT a substitute for site-specific Safe Operation Procedures. It is the Installation Contractor's responsibility to prepare safe work method statements and observe and comply with site specific health and safety regulations, standards, and policies.

Acrow Engineering and Construction has dedicated engineering services available for project assistance. We can provide design support for clients to determine the best way to specify and document the **HANDRAIL SYSTEM**. Our technical experts can identify the most efficient temporary work design meeting project requirements, specifications and installation process.

Should the users require any further information or guidance, they are encouraged to contact their local Acrow branch.

Safety Information

This safety information draws the user's attention to potential musculoskeletal risks associated with manual handling. It is recommended that appropriate procedures and control measures be implemented during assembly and dismantling of the **HANDRAIL SYSTEM**. Refer to the Code of Practice on manual handling published by local Workcover Authority or other approved and recognised guidelines for correct and appropriate manual handling procedures.

1. Technical Specifications

Important Information

The erection and application instructions contained in this manual are the recommended methods to be used for **HANDRAIL SYSTEM** products.

The technical function related instructions must be accurately followed to obtain the correct performance of the product. Any deviation from the recommended use shall require separate design verification by Acrow Engineering.

The safe use and application of the system must be in accordance with Australian Standard AS 3610 Formwork for Concrete, Occupational Health & Safety regulations, approved industry codes of practice and relevant regulatory authority requirements.

The illustrations in these assembly configurations are minimum guidelines only.

The combined use of the **HANDRAIL SYSTEM** system with equipment from other suppliers may entail performance issues and therefore requires a design check and/or verification by Acrow Engineering or a qualified experienced engineer.

Hazard Identification/Risk Assessments for the erection and dismantling of the system are available from Acrow branches. Site specific Hazard and Risk assessments may need to be generated for specific projects.

Disclaimer

1. The photographs/illustrations shown within this manual are intended as expressing the diversity and possible applications of the product and as such must not be used as assembly instructions.
2. In line with Acrow's commitment to continuous product development and improvement, the information contained in this manual is subject to change without notice. Please confirm with Acrow Engineering for latest update.
3. While all reasonable effort has been taken to ensure the accuracy and adequacy of the information contained herein, Acrow accepts no responsibility or liability for any loss or damage suffered by any person acting or refraining from action as a result of this information.

Should users require any expert assistance, they are encouraged to contact Acrow Engineering department.

Applicable Codes and Standards

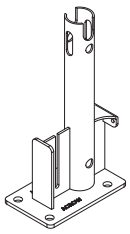
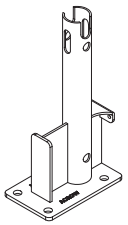
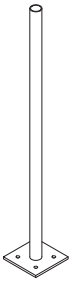
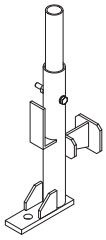
The structural design information and guide provided in this document are limited to the relevant codes nominated below. It does not include certification of any structures or works associated with a project.

ELEMENT	DESCRIPTION	CODE
LOADING	Structural Design Actions – General Principles	AS/NZS 1170.0-2002 (R2016)
	Structural Design Actions – Permanent, Imposed And Other Actions	AS/NZS 1170.1-2002 (R2016)
EDGE PROTECTION	Temporary Edge Protection - General Requirements	AS/NZS 4994.1 : 2009
	Temporary Edge Protection - Installation And Dismantling For Edges Other Then Roof Edges	AS/NZS 4994.3 : 2010

2. GENERAL PRODUCT INFORMATION

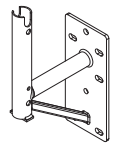
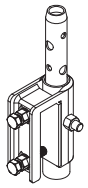
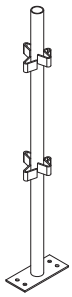
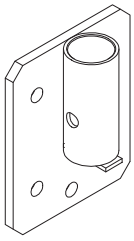
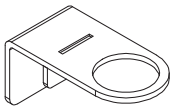
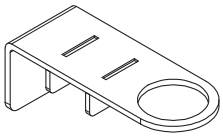
2. General Product Information

Handrail Brackets

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Universal Handrail Slotted Bracket** The Universal Handrail Slotted Bracket allows for the installation of Uni-Ring interlocking toeboards		
	Universal Handrail Slotted Base	HSB	4.8
	**Universal Handrail Bracket** The HBB allows for a variety of handrail posts to be placed and secured, also allowing both single and double kickboards to be mounted or clipped on.		
	Universal Handrail Base	HBB	4.9
	Guardrail Post A single anchor base plate with 1.2m guardrail post. Max handrail height 1.0m		
	Slab Edge Guardrail Post	STT12	5.6
	**Tankhead Post** A single anchor base plate with 1.2m guardrail post. Max handrail height 1.0m		
	Tankhead Post 0.6m	ABTH06	3.3
	Tankhead Post 1.2m	ABTH12	5.6
	Tankhead Post 1.5m	ABTH15	7.7
	**Guardrail Post Adapter** A single anchor handrail post that allows supercuplok standards to be installed above. Bracket is limited to 1.0m max handrail height. Has in built kickboard retainer.		
	Guard Rail Post Adapter	CGPA	4.3

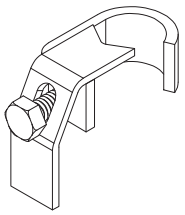
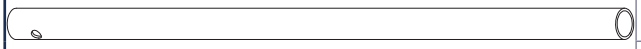
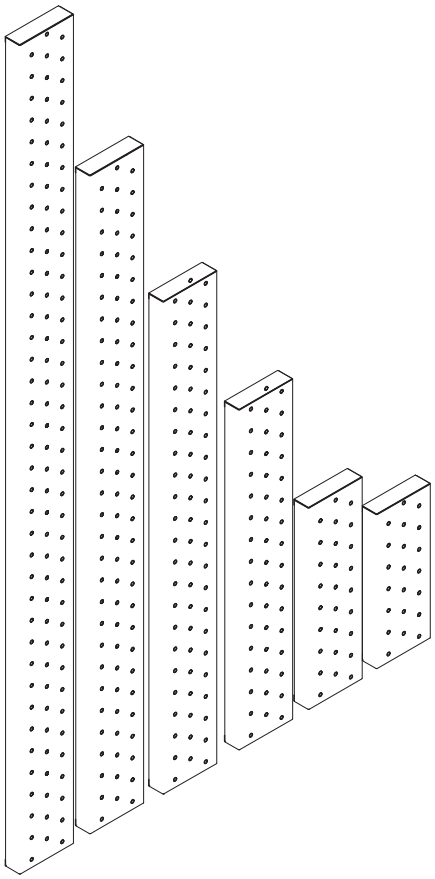
2. General Product Information

Handrail Brackets

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Face Fixed Bracket** A handrail bracket that allows for the fixture of handrails to vertical members/walls.		
	Face Fixed Bracket	HFFH	9.1
	**Sheet Pile Handrail Bracket** Bracket is designed to attach to sheet piles and allows the installation of 1.2m high handrail post.		
	Sheet Piling Bracket	SPB	4.4
	**Quickstage Handrail Post** 1.2 Bolt down post with stairs Adaptable with Quickstage System		
	Quickstage Handrail Post	2002m	6.6
	**Slim-Max Soldier End Plate Bracket** An end plate adapter that allows connection of Handrail Systems to Slim-Max Soldier ends		
	Soldier End Handrail Adapter	SMSEGPB	4.5
	**Handrail Bracket Toeboard Clamp Single** Used for single kickboards, slots over the top of the HBB to secure kickboard.		
	Handrail Toeboard Clamp Single	HBTCS	1.0
	**Handrail Bracket Toeboard Clamp Double** Used for double kickboards, slots over the top of the HBB to secure kickboards.		
	Handrail Toeboard Clamp Double	HBTCD	1.0

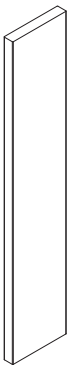
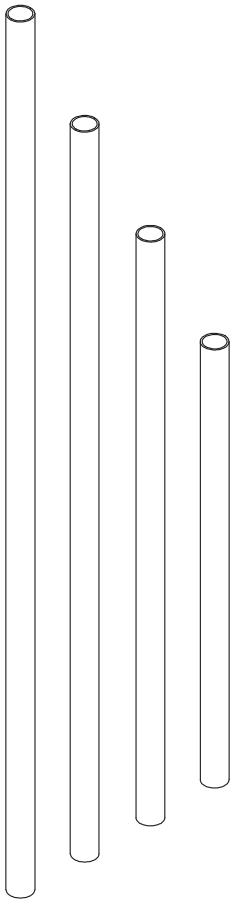
2. General Product Information

Guardrail Posts and Steel Planks

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Toeboard Clamp** Toe boards are secured using the generic Toe Board Clamp which locks around the Standard with its protruding prong holding the toe board Plank or Planks in place.		
	Toeboard Clamp	TBC	1.0
	**Guardrail Post** Used in conjunction with Working Platform Bracket, Guardrail Post Bracket, Post Adapter or Top Hand Rail Brackets to provide connection for pin or M16 x 80mm bolt and nut.		
	Guardrail Post 1200mm	SSHS12	5.5
	Guardrail Post 1500mm	SSHS15	7.0
	Guardrail Post 1800mm	SSHS18	8.0
	Guardrail Post 2100mm	SSHS21	9.5
	**Cuplok Steel Planks** Used as kickboards, clamped down using Putlog Hook Clamps or Toe Board Clips if required.		
	Steel Plank 0.61m	SPC061	3.0
	Steel Plank 0.83m	SPC083	5.1
	Steel Plank 1.05m	SPC105	7.0
	Steel Plank 1.27m	SPC13	8.5
	Steel Plank 1.50m	SPC15	9.5
	Steel Plank 1.83m	SPC18	11.5
	Steel Plank 2.44m	SPC24	15.5
	Steel Plank 3.05m	SPC30	19.5
	Quickstage Steel Planks Used as kickboards, clamped down using Putlog Hook Clamps or Toe Board Clips if required.		
	Steel Plank 0.5m	7405	3.5
	Steel Plank 0.7m	7407	4.0
	Steel Plank 1.2m	7412	6.5
	Steel Plank 1.8m	7418	9.0
	Steel Plank 2.4m	7424	12.0
	Steel Plank 3.0m	7430	15.0

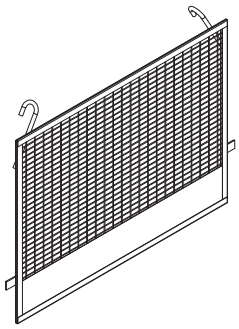
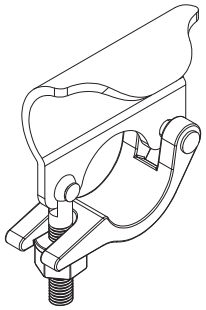
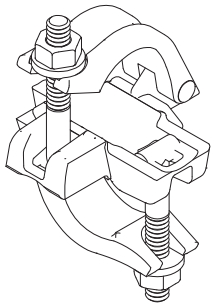
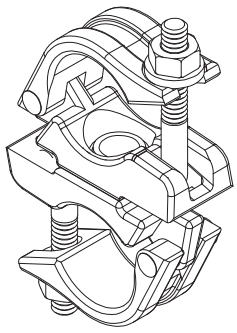
2. General Product Information

Scaffold Tube

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Edge Board** Structural laminated veneer lumber (LVL)		
	300 x 36 x 6.0m (Pack QTY = 21)	S3003660	35.6
	240 x 36 x 6.0m (Pack QTY = 28)	S2403660	28.5
	200 x 36 x 6.0m (Pack QTY = 35)	S2003660	23.7
	150 x 36 x 6.0m (Pack QTY = 49)	S1503660	17.8
	100 x 36 x 6.0m (Pack QTY = 70)	S1003660	11.9
	**Scaffold Tubes** Assorted lengths of Ø48.3mm x 3.2mm thick grade 350 steel tubes used in various parts of scaffold construction including hand rails, safety barriers, bracing and tying.		
	0.3m Tube - HDG - 3.2mm	ST03	1.5
	0.6m Tube - HDG - 3.2mm	ST06	2.5
	0.9m Tube - HDG - 3.2mm	ST09	3.5
	1.2m Tube - HDG - 3.2mm	ST12	5.0
	1.5m Tube - HDG - 3.2mm	ST15	6.0
	1.8m Tube - HDG - 3.2mm	ST18	7.0
	2.1m Tube - HDG - 3.2mm	ST21	8.5
	2.4m Tube - HDG - 3.2mm	ST24	9.5
	2.7m Tube - HDG - 3.2mm	ST27	10.5
	3.0m Tube - HDG - 3.2mm	ST30	11.5
	3.3m Tube - HDG - 3.2mm	ST33	13.0
	3.6m Tube - HDG - 3.2mm	ST36	14.0
	3.9m Tube - HDG - 3.2mm	ST39	15.0
	4.2m Tube - HDG - 3.2mm	ST42	16.0
	4.5m Tube - HDG - 3.2mm	ST45	17.5
	4.8m Tube - HDG - 3.2mm	ST48	18.5
	5.1m Tube - HDG - 3.2mm	ST51	19.5
	5.4m Tube - HDG - 3.2mm	ST54	21.0
	5.7m Tube - HDG - 3.2mm	ST57	22.0
	6.0m Tube - HDG - 3.2mm	ST60	23.0
	6.3m Tube - HDG - 3.2mm	ST63	24.0
	6.5m Tube - HDG - 3.2mm	ST65	25.5

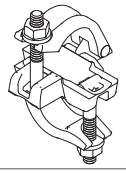
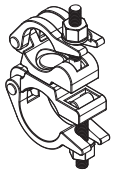
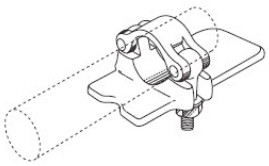
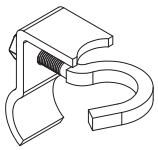
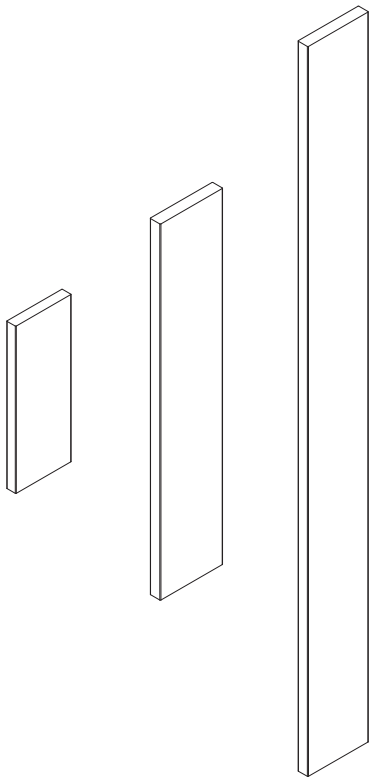
2. General Product Information

Couplers

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Mesh Guards** Mesh Panels are hung from the guardrail to provide a full protective screen 1 meter in height along the length of the platform. The unit incorporates a built in kick plate and typically a mid-rail is not used when Mesh Guards are in place. Available in nominal bay lengths.		
	Mesh Guard 12.7m	MP12	10.8
	Mesh Guard 1.83m	MP18	14.6
	Mesh Guard 2.44m	MP24	18.4
	Mesh Guard 3.05m	MP30	22.2
	**Putlog Coupler - Wrapover (Standard Wrapover single type)** • Joins 48 O.D. scaffold tubes at right angles. • Used for positioning putlog tubes onto ledger tubes. • Tightening nut suits standard Scaffold Spanner (23mm A/F). • Replaceable 'T' bolt, nut and washer. • Pressed steel body and drop forged steel cap. • Hot dip galvanised finish for corrosion resistance. • Complies with the requirements of AS1576.2.		
	Putlog Coupler Wrapover	PCSW	1.0
	**Double Coupler** • Joins two scaffold tubes having outside diameter of 48.3mm at right angles. • Tightening nuts suit standard Scaffold Spanner (23mm A/F). • Replaceable 'T' bolts, nuts and washers. • Robust design made from drop forged steel for durability and reliability. • Hot dip galvanised finish for corrosion resistance. • Complies with the requirements of AS1576.2.		
	Double Coupler	DC	1.0
	**Swivel Coupler** • Joins scaffold tube having outside diameter of 48.3mm at any angle. • Each half of the Coupler is interconnected with a swivel pin. • Typically used for connecting bracing members. Also used for tension splicing of scaffold tubes. • Tightening nuts suit standard Scaffold Spanner (23mm A/F). • Replaceable 'T' bolts, nuts and washers. • Robust design made from drop forged steel for durability and reliability. • Hot dip galvanised finish for corrosion resistance.		
	Swivel Coupler	SC	1.5

2. General Product Information

Couplers & Scaffold Planks

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Reduction Double Coupler** Similar to Double Coupler except that it connects 48 O.D. tube to 60 O.D.		
	Reduction Coupler	DCR	2.0
	**Reduction Swivel Coupler** Similar to Swivel Coupler except that it connects 48 O.D. tube to 60 O.D.		
	Reduction Swivel Coupler	SCR	2.0
	**Putlog Head** • Used for single pole putlog scaffolding. • Fits 48 O.D. scaffold tube.		
	Putlog Head	PH	1.5
	**Putlog Coupler - Hook Type** Joins 48 O.D. scaffold tubes at right angles. Not recommended for fixing of putlog tubes to ledger tubes for working decks.		
	Putlog Coupler Hook Type	PCHT	1.0
	**Timber Scaffold Plank** The LVL (Laminated veneer lumber) scaffold plank is a high strength and lightweight LVL scaffold plank. Its waxed emulsion end seal reduces moisture ingress. All sizes in packs of 50.		
	230 x 38 x 0.6m	TP06	2.9
	230 x 38 x 0.9m	TP09	4.3
	230 x 38 x 1.2m	TP12	5.8
	230 x 38 x 1.5m	TP15	7.2
	230 x 38 x 1.8m	TP18	8.6
	230 x 38 x 2.1m	TP21	10.1
	230 x 38 x 2.4m	TP24	11.5
	230 x 38 x 2.7m	TP27	13.0
	230 x 38 x 3.0m	TP30	14.4
	230 x 38 x 3.3m	TP33	15.9
	230 x 38 x 3.6m	TP36	17.3
	230 x 38 x 4.2m	TP42	20.2
	230 x 38 x 4.8m	TP48	23.1
	230 x 38 x 5.4m	TP54	25.9
	230 x 38 x 6.0m	TP60	28.8

3. WORKING LOAD LIMITS (WLL)

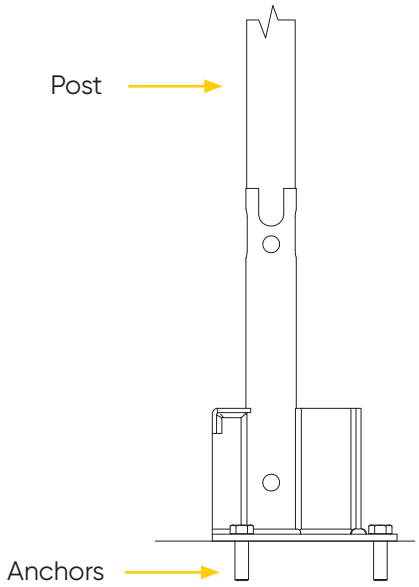
3. Working Load Limits (WLL)

Handrail Bracket

Moment Capacity Bracket = 3kNm

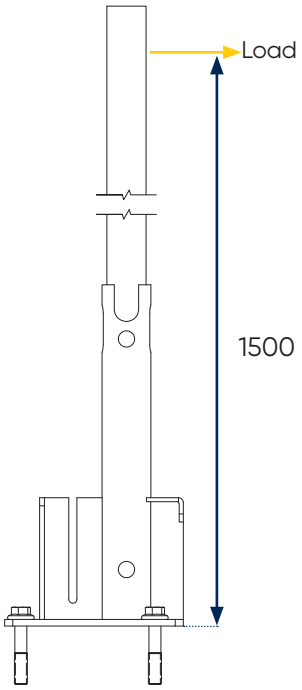
Capacity is based on any of the below anchor positions.

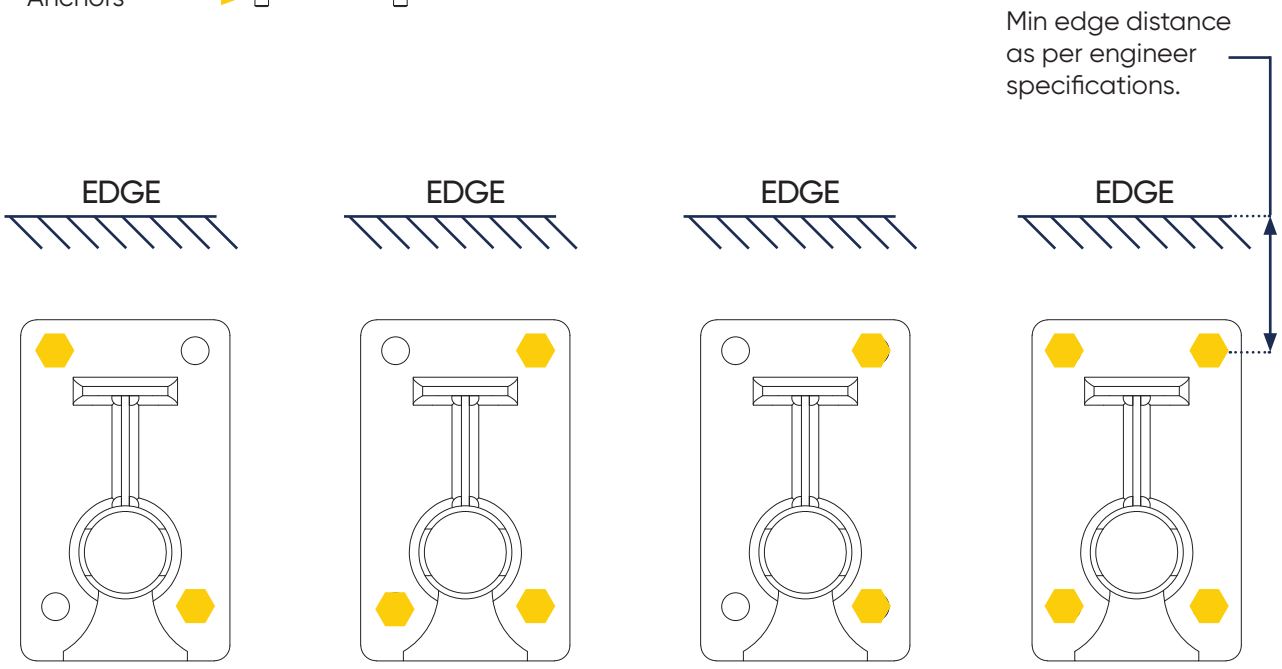
Handrail post to be checked independently.



Universal Handrail Bracket Slotted Base

Serviceability Limit State = 600N
Ultimate Limit State = 1200N



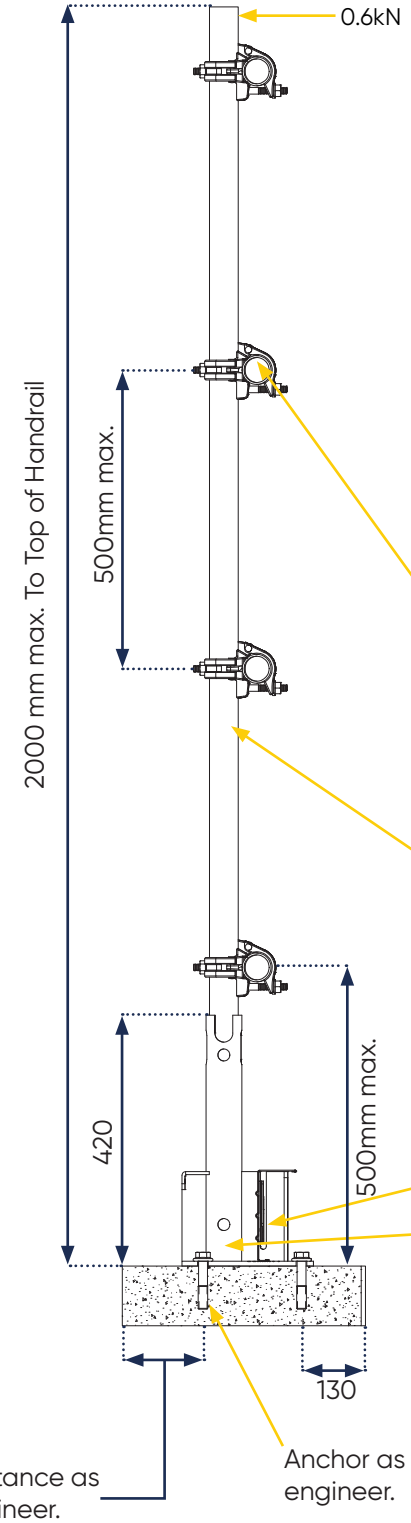


Indicates anchor locations

Plate to be square to edge as shown

3. Working Load Limits (WLL)

Handrail Bracket Typical Arrangement - Scaffold Tube Handrail



Wind loads calculated in accordance with AS/NZS 1170.2 using the following parameters;

- Importance level 2 (Construction)
- Region B
- Terrain category 2

$-V_{100}$ (ULTIMATE) = 48 m/s
Handrail load = 0.6kN or 0.35kN/m
Toe Board load = 0.1kN
If hoarding is installed, it must be removed should winds be expected to reach or exceed 80kph.

Handrail Height (mm)	Centres (mm)	Containment
1200	2400	✓
1500	2400	✓
2100	1800	✓
	2400	✕

Denotes continuous 48Ø x 3.2 G350 scaffold tube handrail fixed to handrail post using double couplers.

Denotes 48Ø x 3.2 G350 2100 scaffold tube handrail post inserted into bracket as shown. Approx 400mm sleeve engagement.

Denotes Uni-Ring Interlocking Kickboard.

Denotes Handrail Bracket.

Anchor edge distance as specified by engineer.

Anchor as specified by engineer.

3. Working Load Limits (WLL)

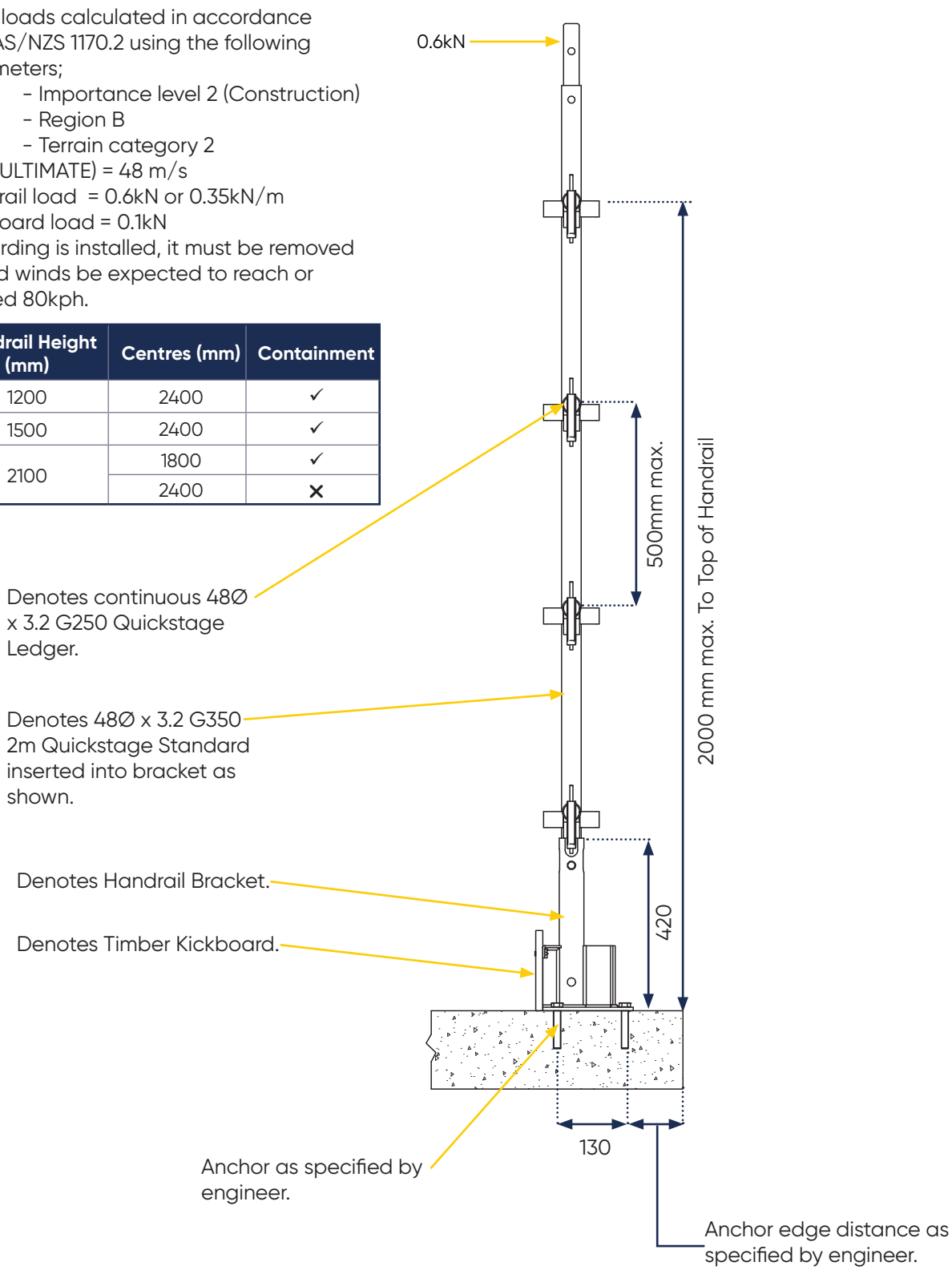
Quickstage Handrail Typical Arrangement

Wind loads calculated in accordance with AS/NZS 1170.2 using the following parameters;

- Importance level 2 (Construction)
- Region B
- Terrain category 2

$-V_{100}$ (ULTIMATE) = 48 m/s
Handrail load = 0.6kN or 0.35kN/m
Toe Board load = 0.1kN
If hoarding is installed, it must be removed should winds be expected to reach or exceed 80kph.

Handrail Height (mm)	Centres (mm)	Containment
1200	2400	✓
1500	2400	✓
2100	1800	✓
	2400	✗



3. Working Load Limits (WLL)

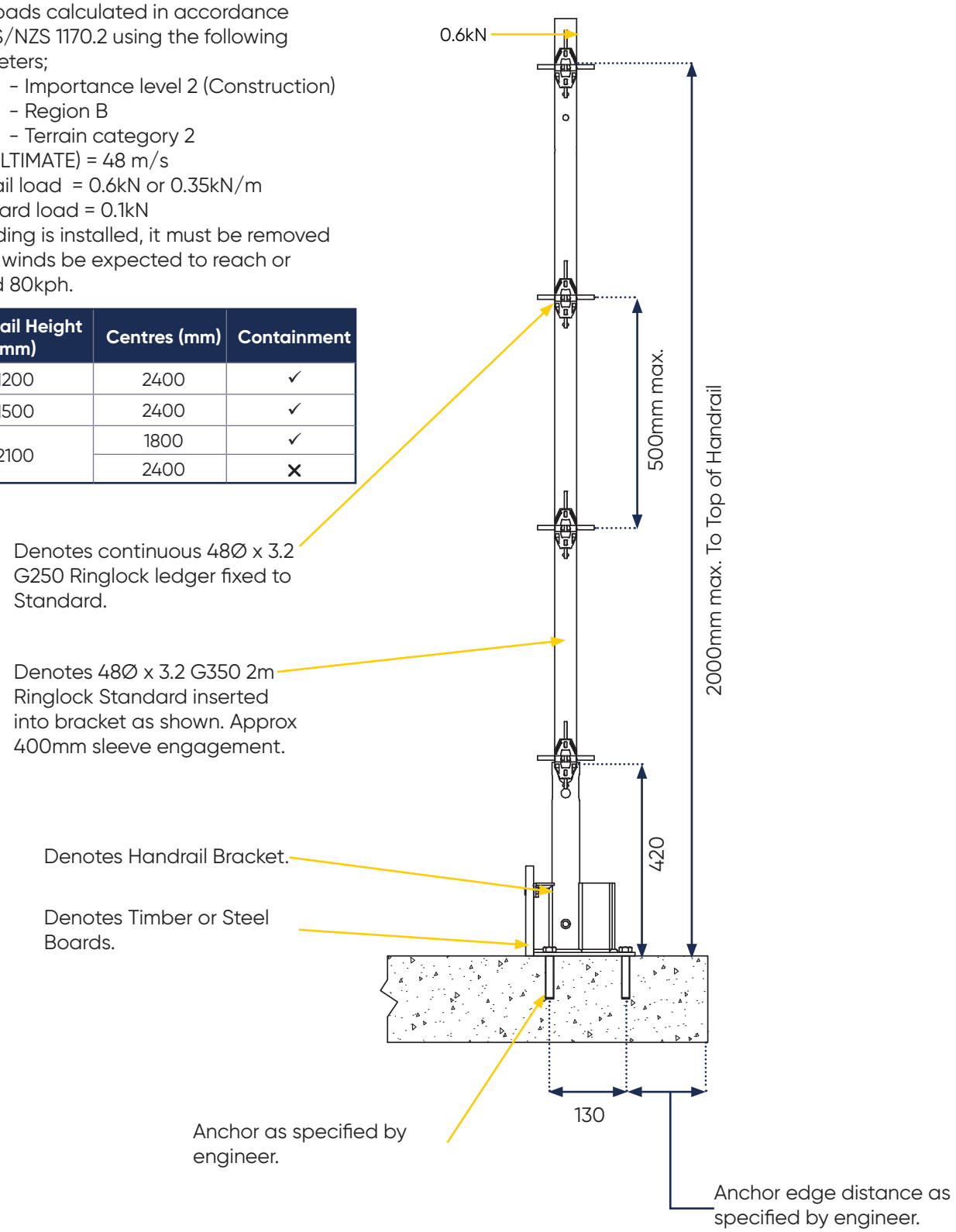
Ringlock Handrail Typical Arrangement

Wind loads calculated in accordance with AS/NZS 1170.2 using the following parameters;

- Importance level 2 (Construction)
- Region B
- Terrain category 2

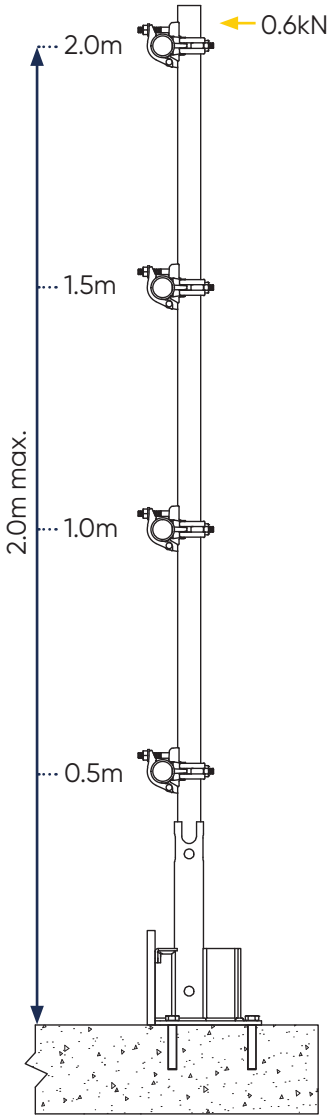
$-V_{100}$ (ULTIMATE) = 48 m/s
Handrail load = 0.6kN or 0.35kN/m
Toe Board load = 0.1kN
If hoarding is installed, it must be removed should winds be expected to reach or exceed 80kph.

Handrail Height (mm)	Centres (mm)	Containment
1200	2400	✓
1500	2400	✓
2100	1800	✓
	2400	✗

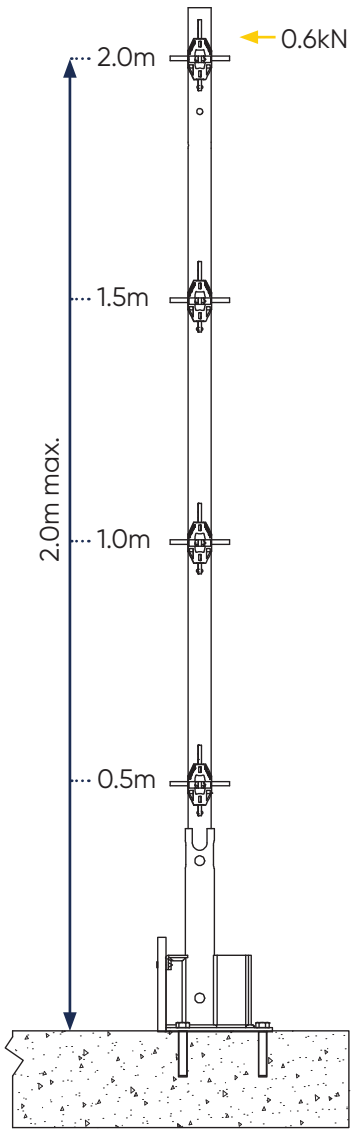


3. Working Load Limits (WLL)

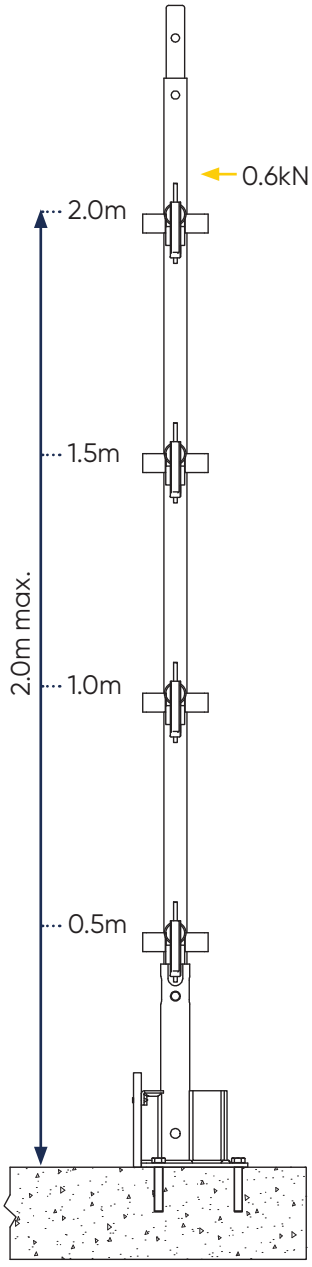
Comparison of Configurations using Universal Base



Scaff Tube Post
48.3 x 3.2 G350



Ringlock Post
48.3 x 3.2 G350



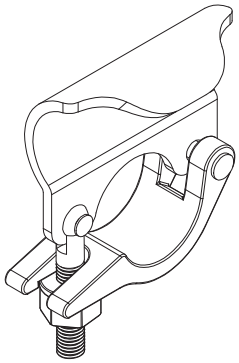
Quickstage Post
48.3 x 3.2 G350

All Quickstage, Tube & Ringlock posts used with Handrail Bracket meet deflection requirements as is listed in AS 4994 when handrail load applied at maximum 2m on post.

3. Working Load Limits (WLL)

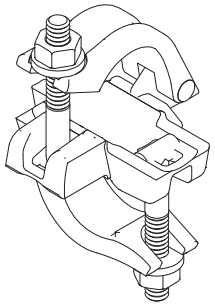
Couplers

Putlog Coupler - Wrapover



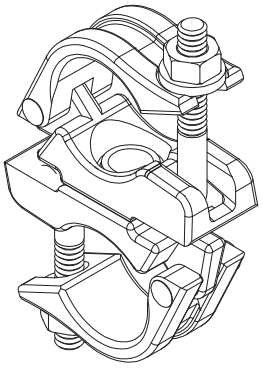
- Typically used for securing guardrails and midrails to standards at right angles. Other uses can distort the Coupler so that tube retention is not effective and WLL does not apply.
- Not to be used for connecting ledger tube. Only use Right Angle Couplers for such purpose.
- Refer AS/NZS1576.6 for guidance on tube-and coupler scaffolding.
- WLL = 0.62 kN against slip of tube through flaps of coupler at tightening torque of 54 Nm.

Double Coupler



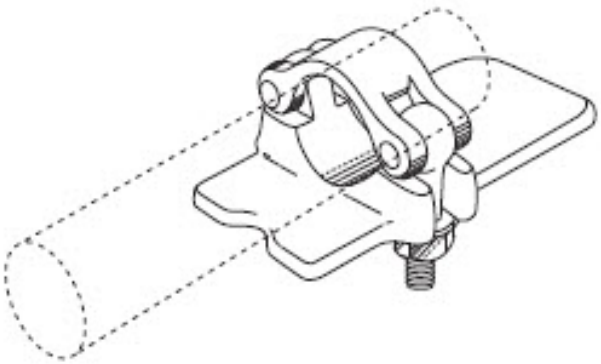
- Typical working load limit of 6.25kN against slip at tightening torque of 54 Nm.
- Can be used to resist tension or compression loads.

Swivel Coupler



- Complies with the requirements of AS1576.2.
- WLL = 6.25 kN against slip at tightening torque of 54 Nm.
- Can be used to resist tension or compression loads in bracing.

Putlog Head

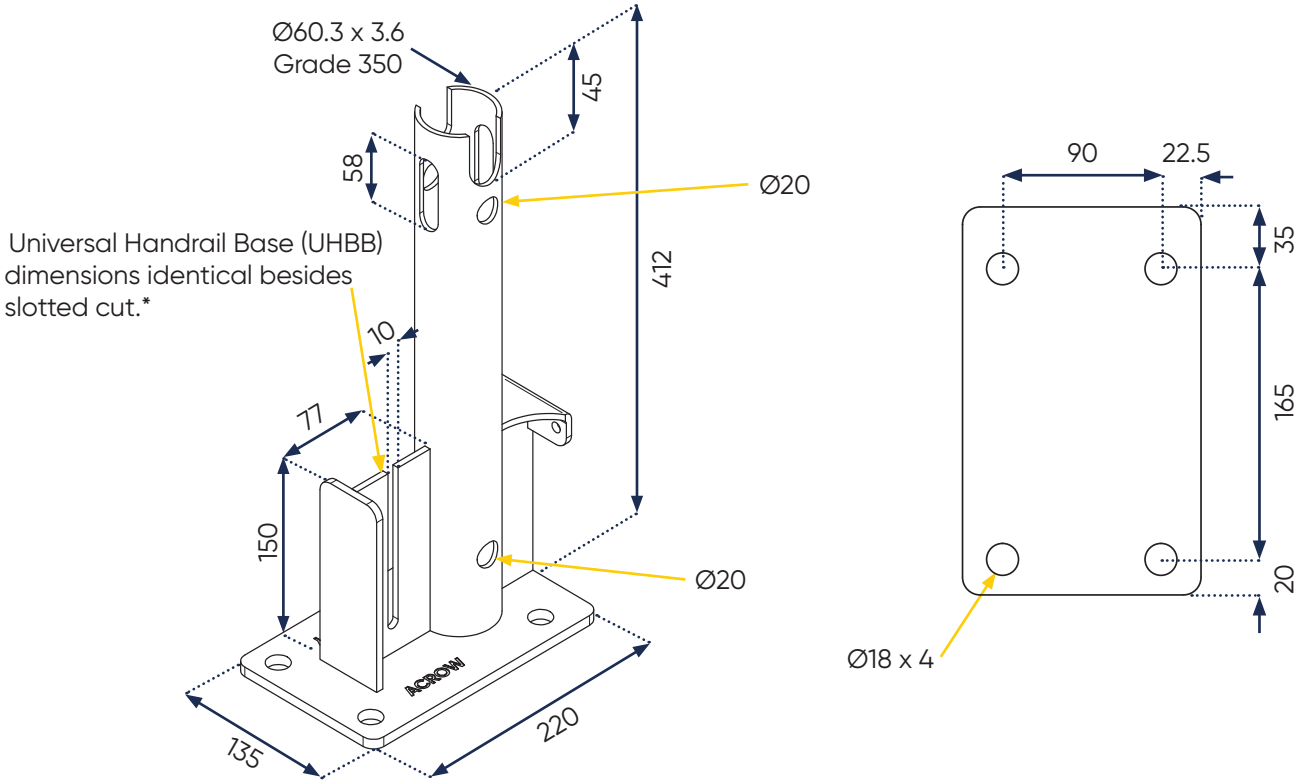


- WLL = 6.25 kN (resistance to tube slip where nuts tightened to 54 Nm torque).
- WLL = 2.25 kN (bending of blade).

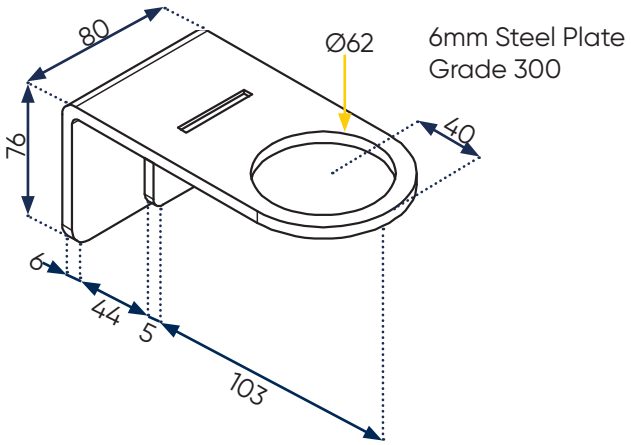
4. SYSTEM DETAILS

4. System Details

Universal Handrail Slotted Base

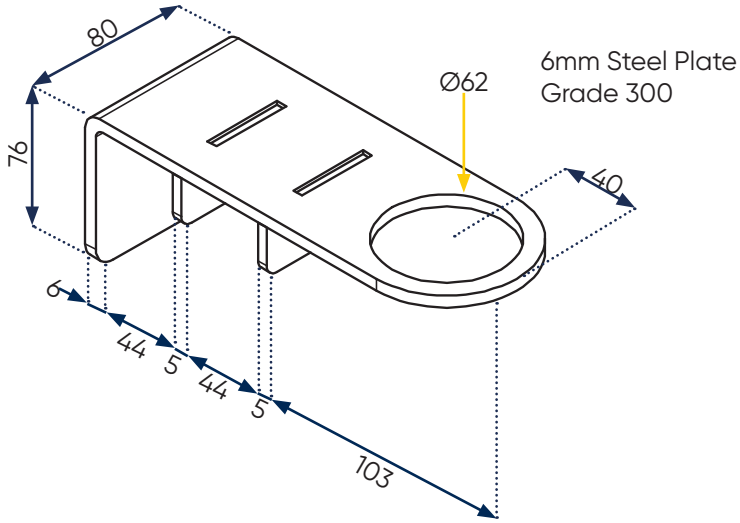


Handrail Bracket Toeboard Clamp Single



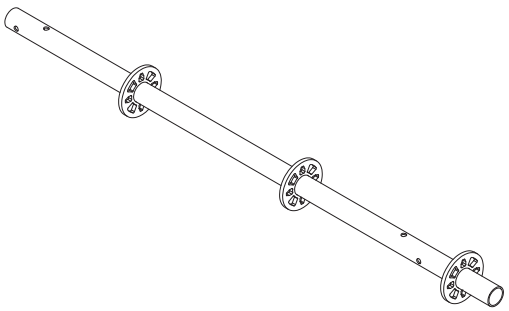
4. System Details

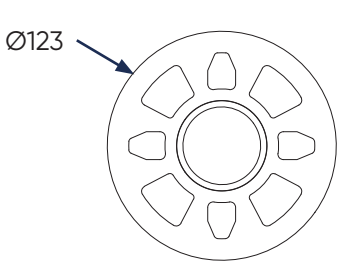
Handrail Bracket Toeboard Clamp Double



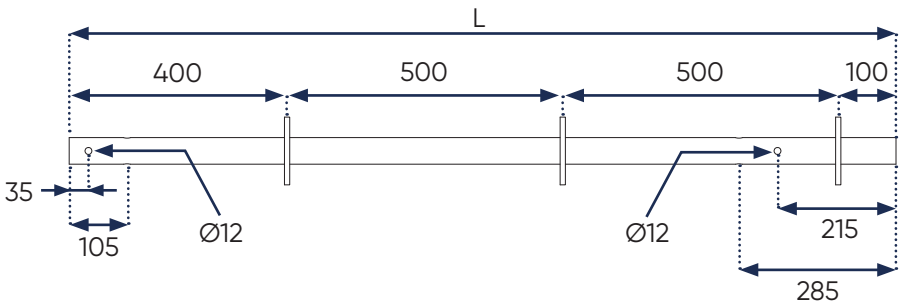
Ringlock Standards

Standard	Length (mm)
01011000	1000
010115000	1500
010120000	2000
010125000	2500
010130000	3000
010140000	4000





All connection locations spaced at 45⁰ angles.



4. System Details

Quickstage Standards

Spigotted Standards

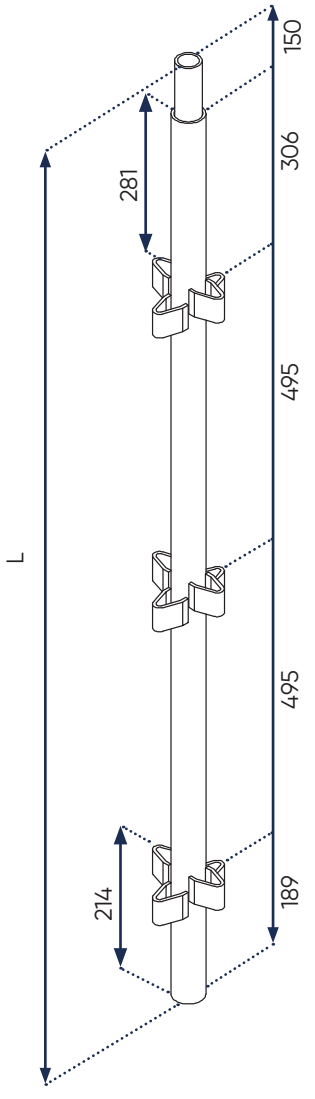
Used in access scaffolding applications and as a base for formwork. Cup joints at 50mm intervals designed to hold standard and transoms captive. Comes in multiple sizes to fit variety of jobs.

Spigot Standard	L (mm)
7010	1000
7015	1500
7020	2000
7025	2500
7030	3000

Open Ended Standards

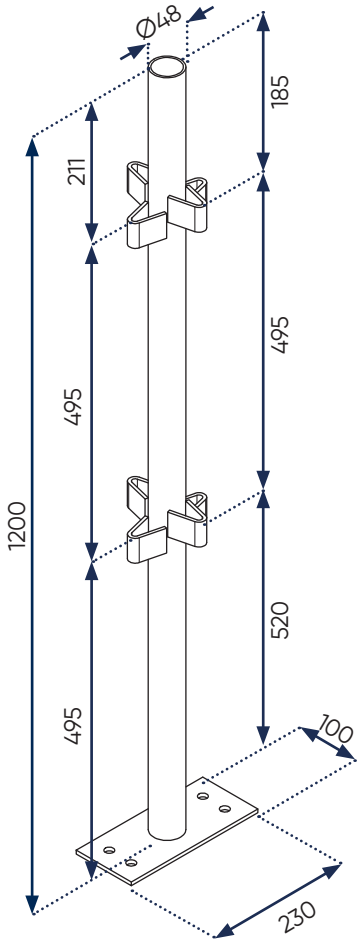
Used in falsework or formwork support applications in conjunction with Spigotted Standards or as a single height unit. The open ended design allows the insertion of an Adjustable Base or Adjustable U-Head to provide the final support to the soffit formwork.

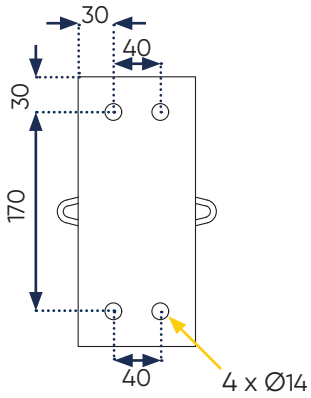
Open End Standard	L (mm)
7010O	1000
7015O	1500
7020O	2000
7025O	2500
7030O	3000



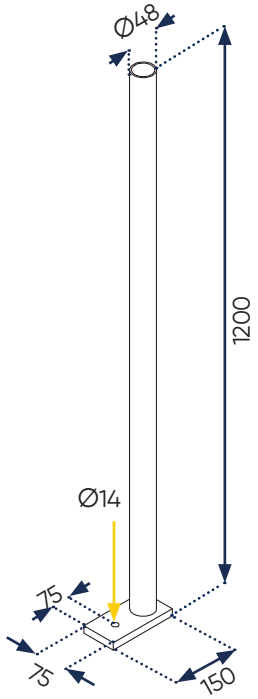
4. System Details

Quickstage Handrail Post



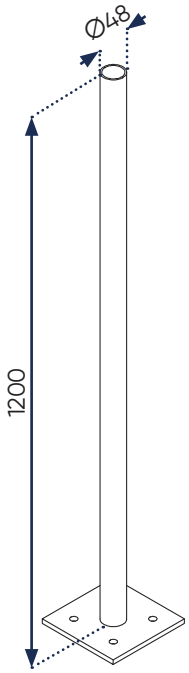


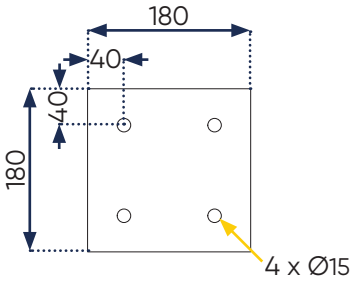
Slab Edge Guardrail Post



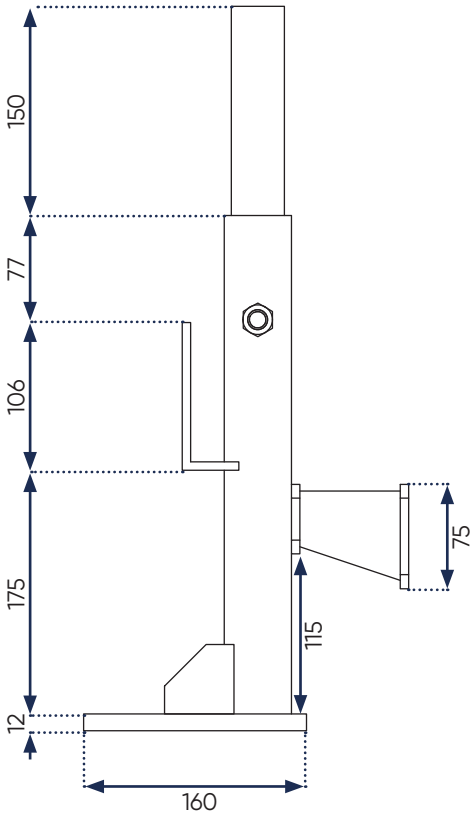
4. System Details

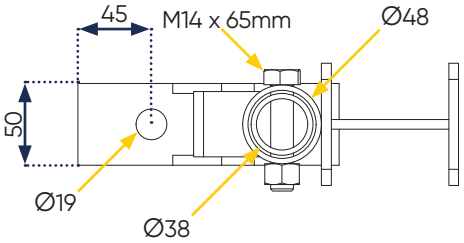
Tankhead Post





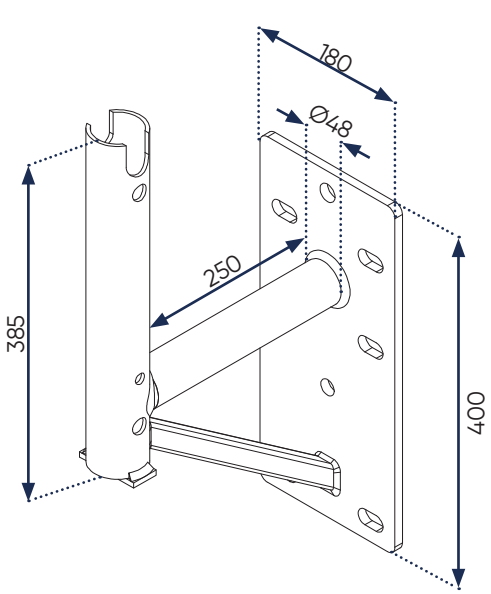
Guardrail Post Adapter

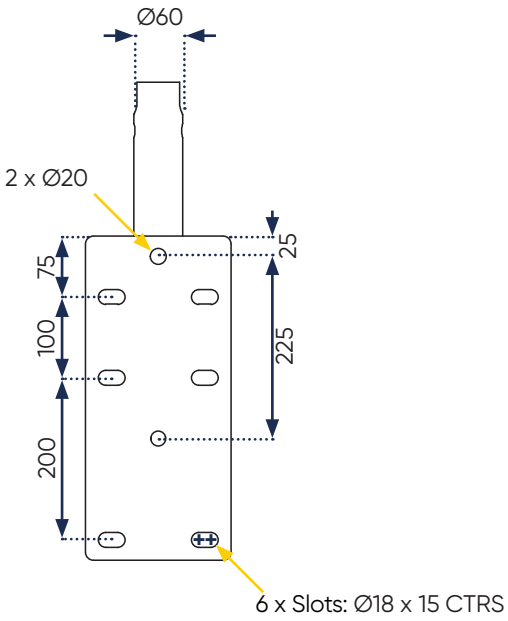




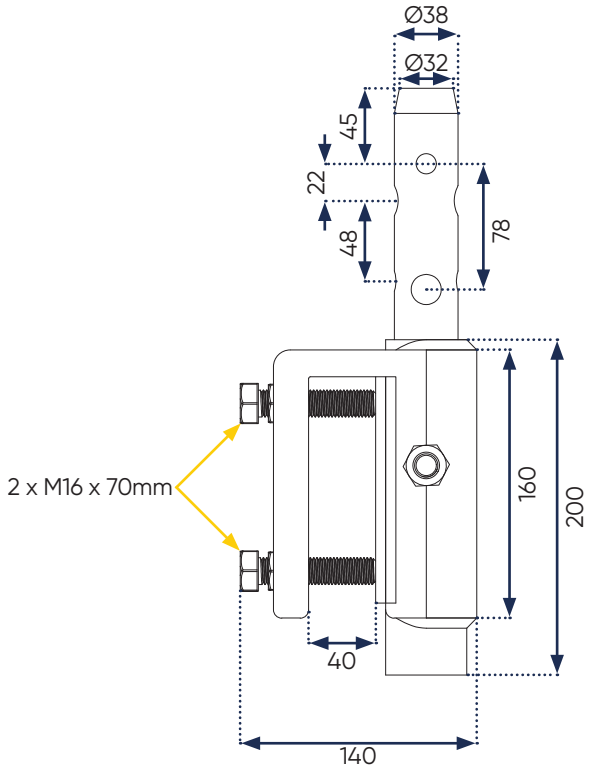
4. System Details

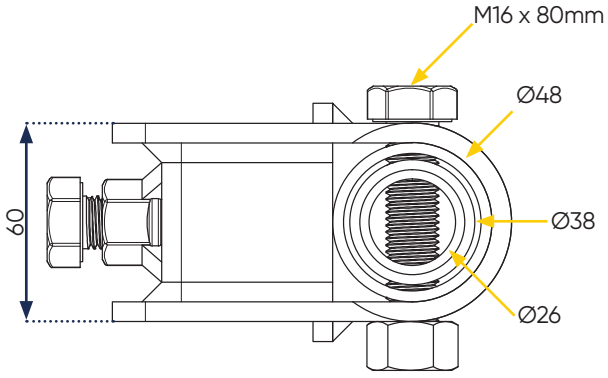
Face Fixed Bracket





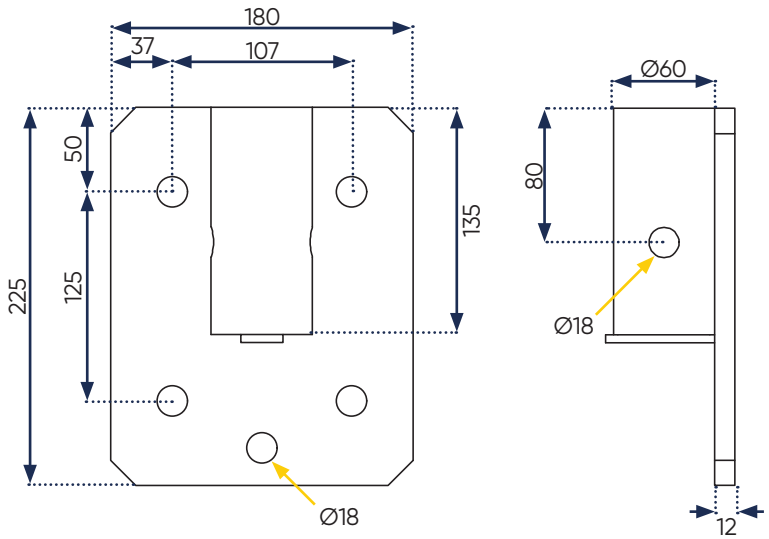
Sheet Pile Handrail Bracket





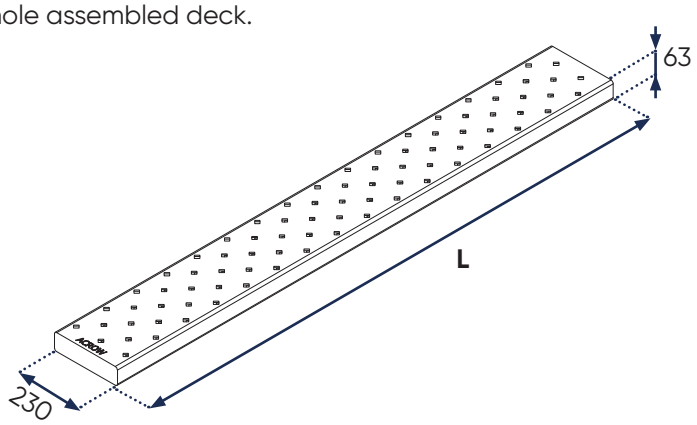
4. System Details

Slim-Max Soldier End Plate Bracket



Quickstage Steel Planks

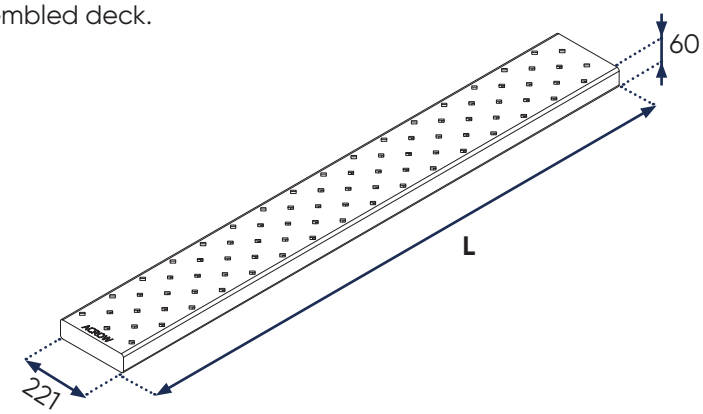
Planks to suit Quickstage are formed from galvanised steel sheet with a perforated tread to provide a non-skid surface. Perforations are taken close to the ends and edges of the Plank to provide even coverage over the whole assembled deck.



Plank	L (mm)
7405	0.5m
7407	0.7m
7412	1.2m
7418	1.8m
7424	2.4m

Cuplok Steel Planks

Planks to suit CUPLOK are formed from galvanised steel sheet with a perforated tread to provide a non-skid surface. Perforations are taken close to the ends and edges of the Plank to provide even coverage over the whole assembled deck.

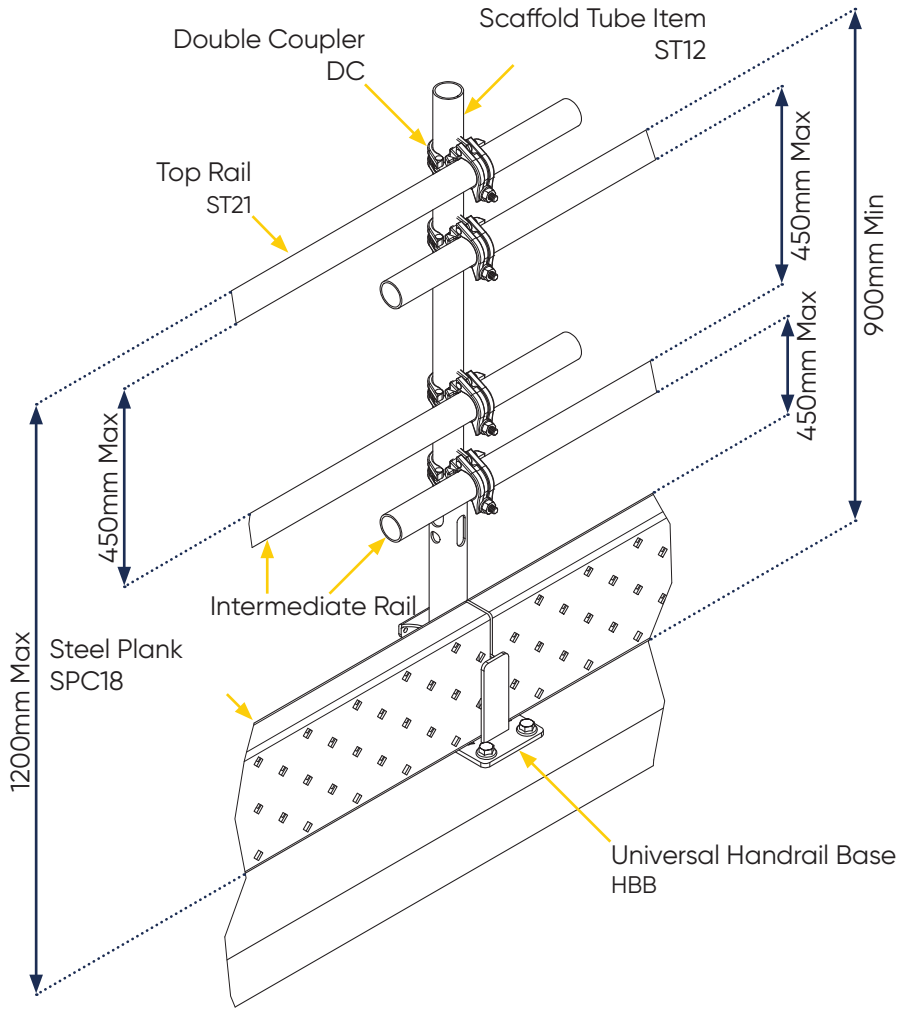


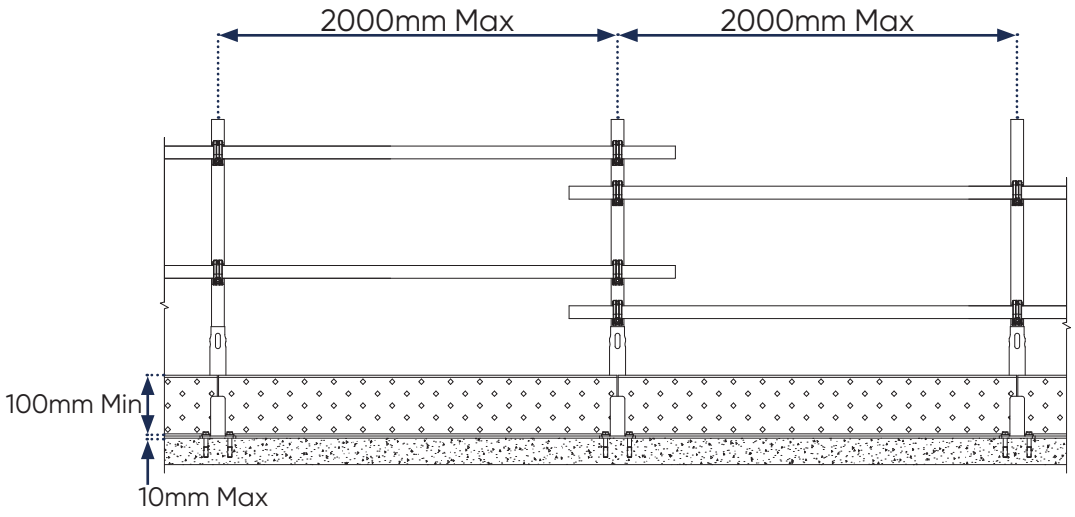
Plank	L (mm)
SPC083	825
SPC105	1048
SPC13	1270
SPC18	1828
SPC24	2438
SPC30	3048

5. ASSEMBLY DETAILS

5. Assembly Details

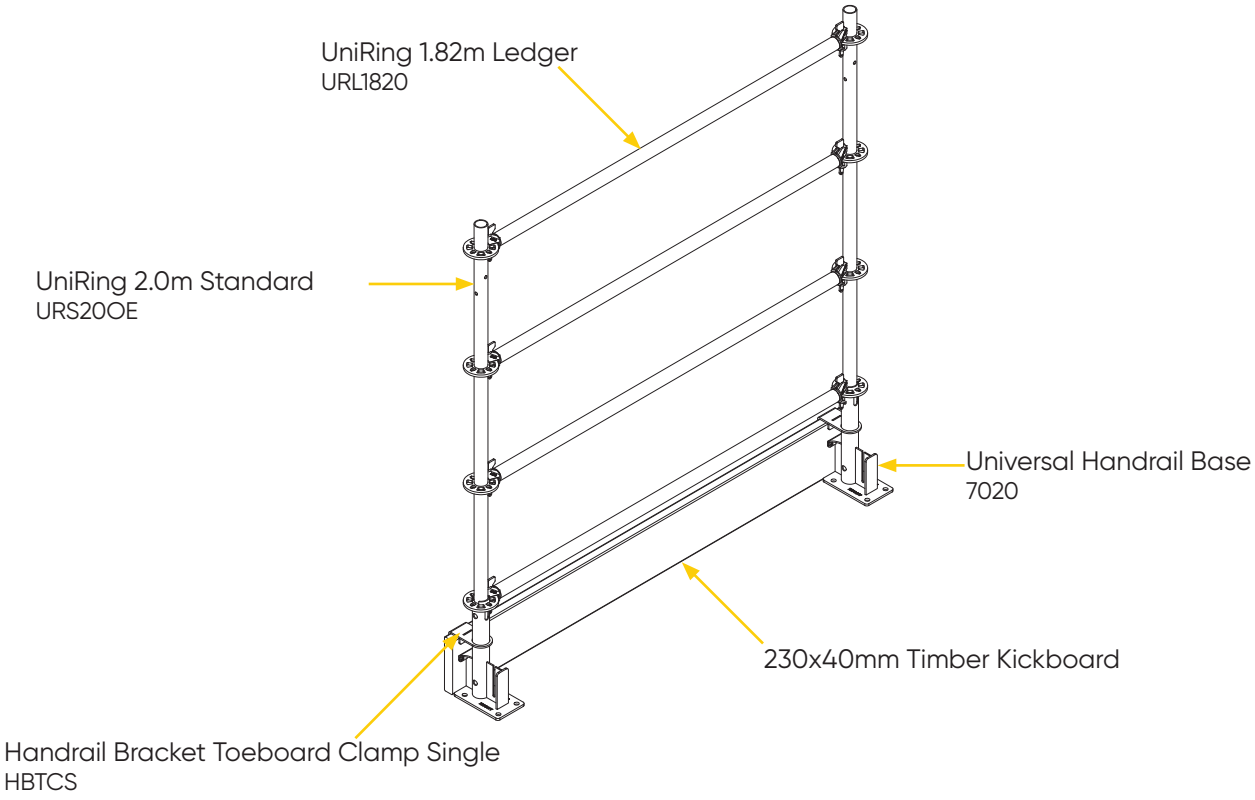
Handrail Bracket Typical Arrangement - Scaffold Tube Handrail



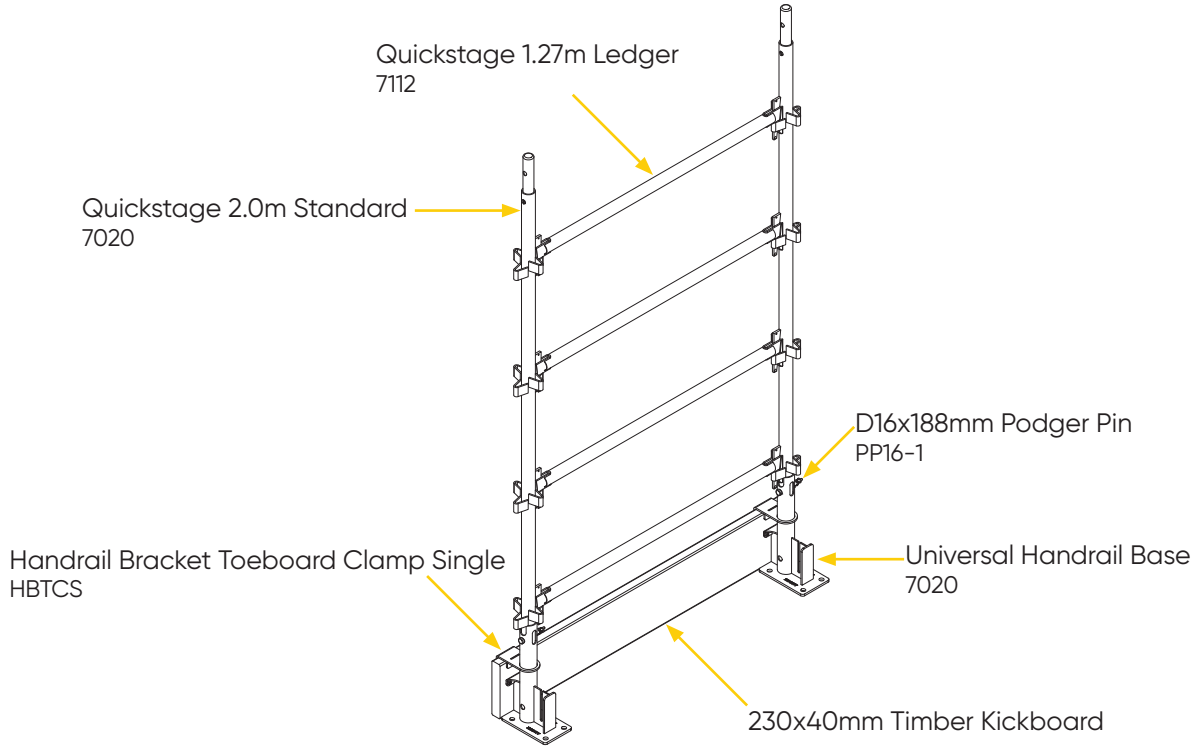


5. Assembly Details

Handrail Bracket Typical Arrangement - Ringlock Handrail



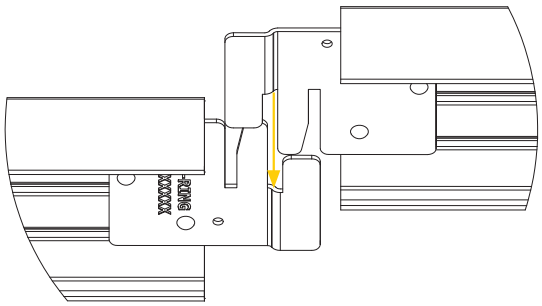
Handrail Bracket Typical Arrangement - Quickstage Handrail



5. Assembly Details

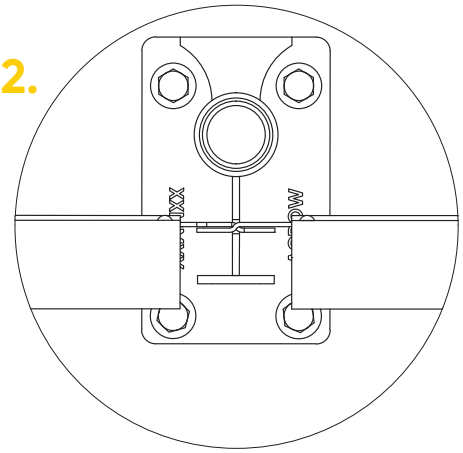
Universal Handrail Slotted Bracket Setup

1.



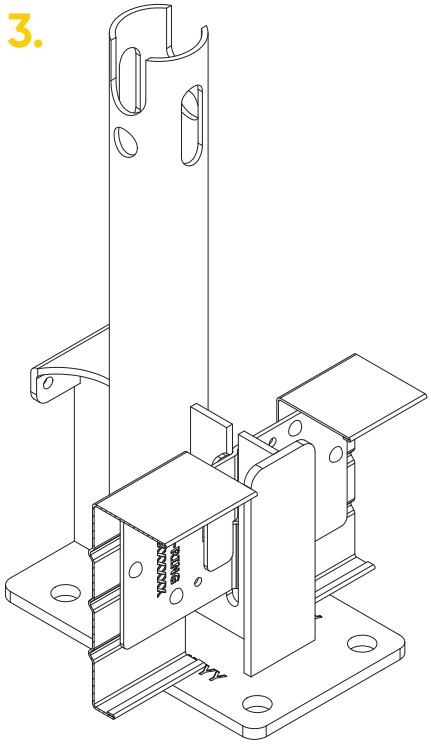
Begin by inserting an interlocking toeboard into the lips of the board ahead. Ensure that the toeboards bind together when pulled apart from one another.

2.



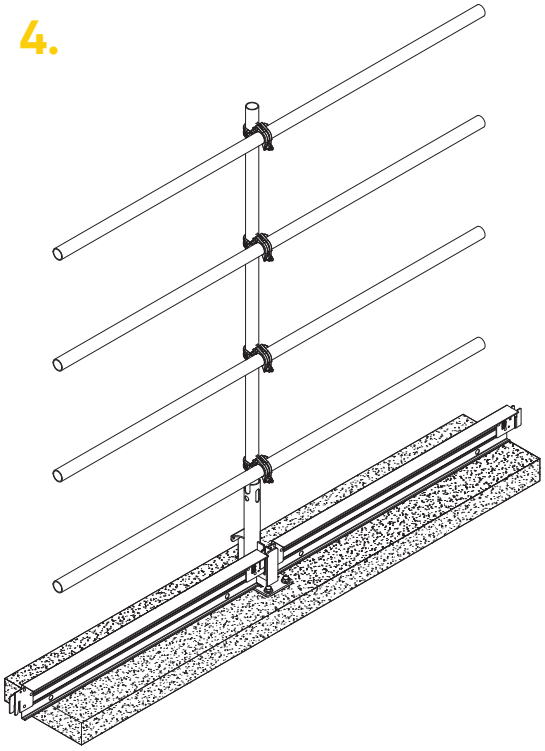
Insert the toeboards where interlocking lips cross over into the slot on the universal handrail slotted base.

3.



Ensure the longest flange of the toeboard is oriented facing up.

4.

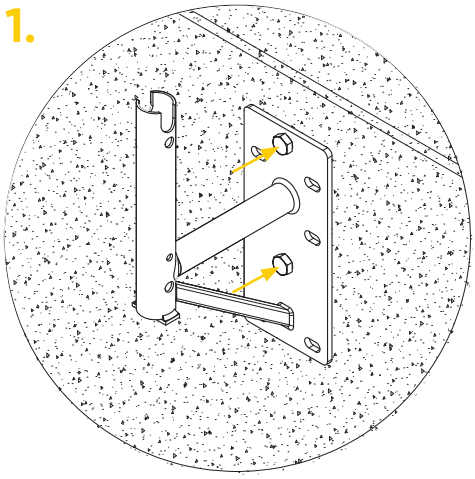


Continue the series until desired length is reached.

5. Assembly Details

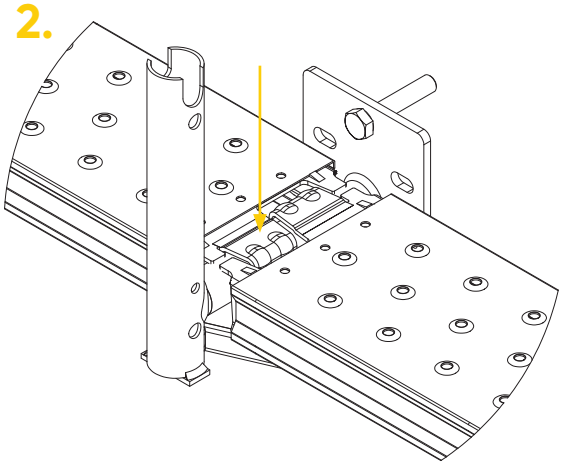
Face Fixed Bracket Setup

1.



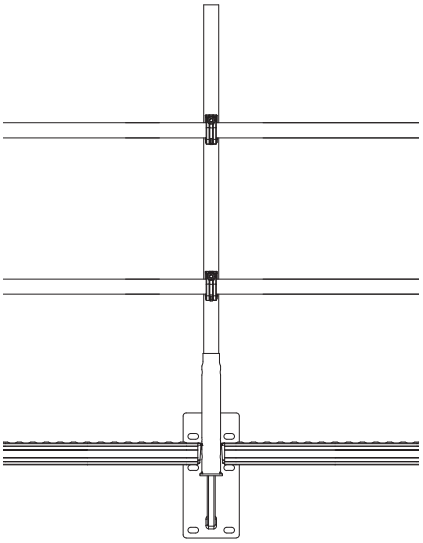
Begin installation of the Face Fixed Bracket by securing the bracket to wall using two anchoring bolts. Edge distance is to be determined by engineer.

2.



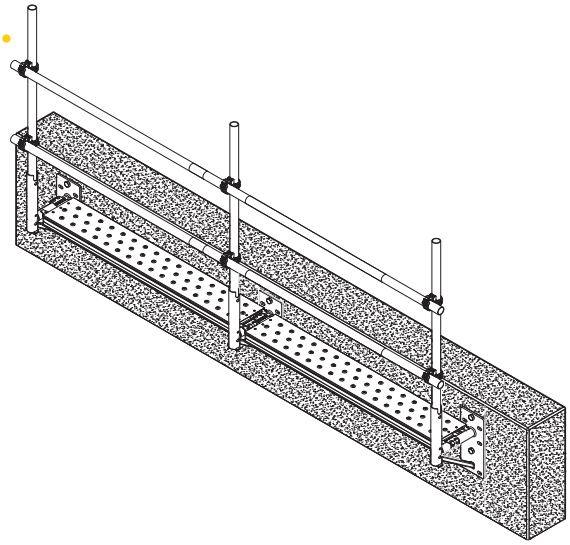
Uni-Ring Steel Planks can be installed around the horizontal hollow section. Ensure planks in series are installed in the same orientation so that hooks alternate sides of the horizontal member.

3.



Scaffold tube can be installed into vertical hollow section. Double Couplers can be used to secure horizontal members ensuring spacing meets applicable handrail standards.

4.

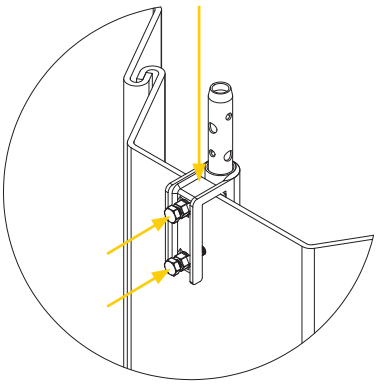


Continue the series until desired length is reached.

5. Assembly Details

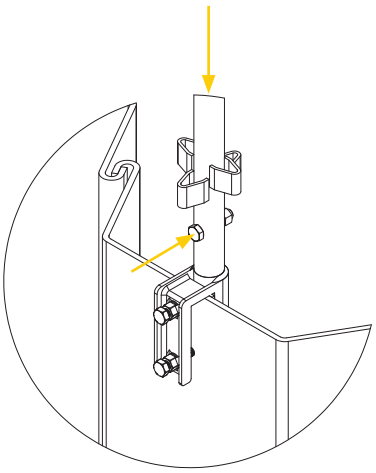
Sheet Piling Bracket Setup

1.



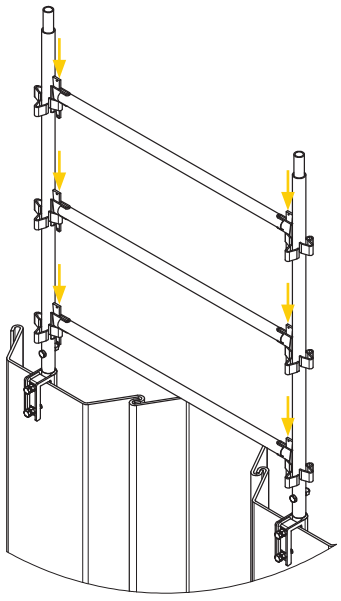
Insert the sheet piling bracket onto the sheet piling wall using the two M16 bolts on the bracket.

2.



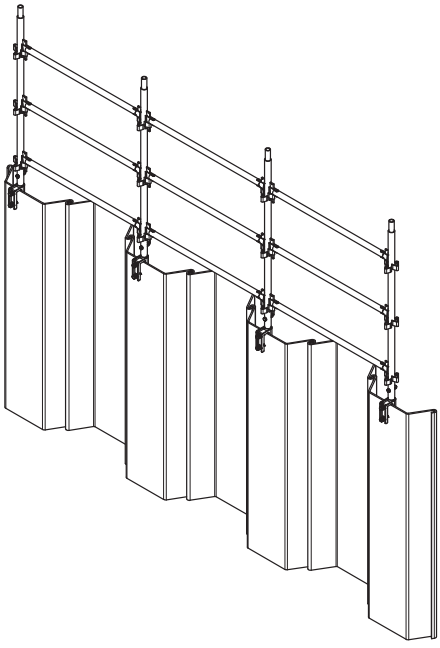
Install Quickstage standard to the spigot located at the top of the sheet piling bracket. Secure the connection with a M16 bolt and nut.

3.



Install a second sheet piling bracket and Quickstage standard no greater than two metres from the first. Engage ledgers between the standards by gently tapping in wedges found at ledger ends. Note that use of excessive force will damage the wedge and affect the handrail structure stability.

4.



Continue process until desired length is reached.

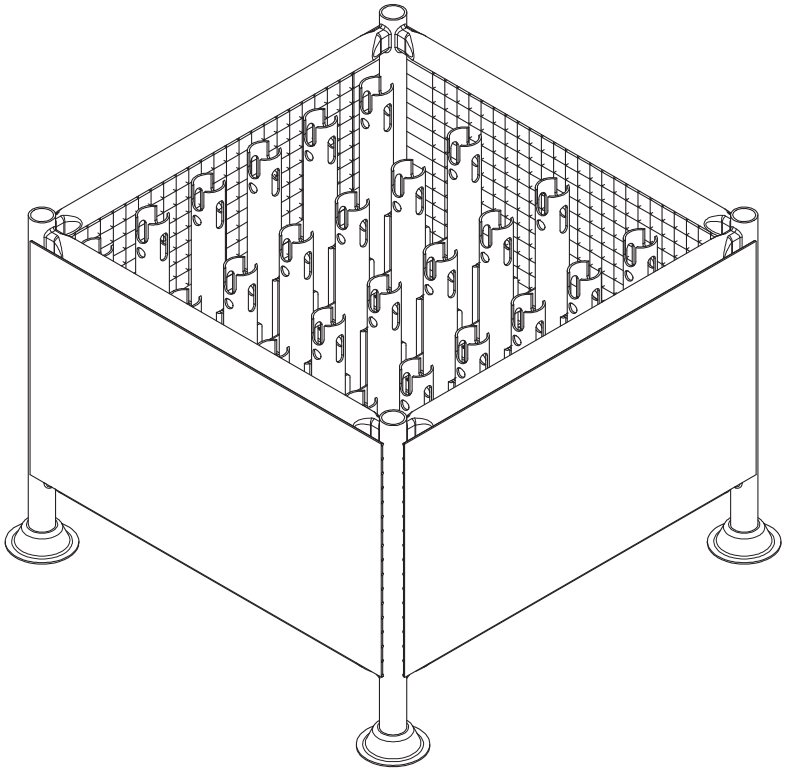
6. TRANSPORT & HANDLING

5. Transport & Handling

HBB

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



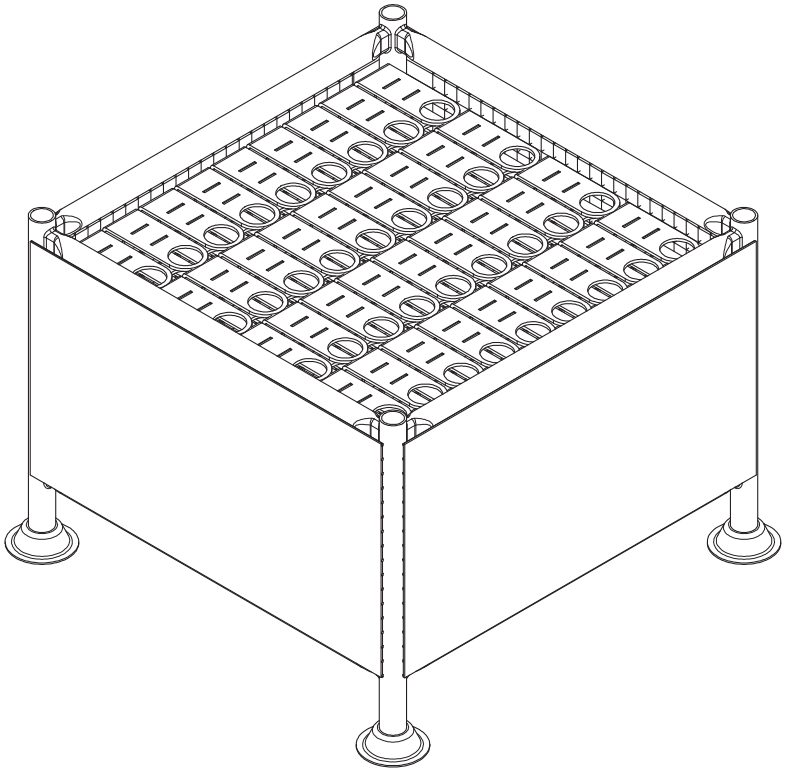
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
Handrail Bracket Base	6.0	125	750	SPEGAL
Universal Handrail Slotted Base	4.8	125	600	SPEGAL

5. Transport & Handling

Single & Double Toeboard Clamps

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



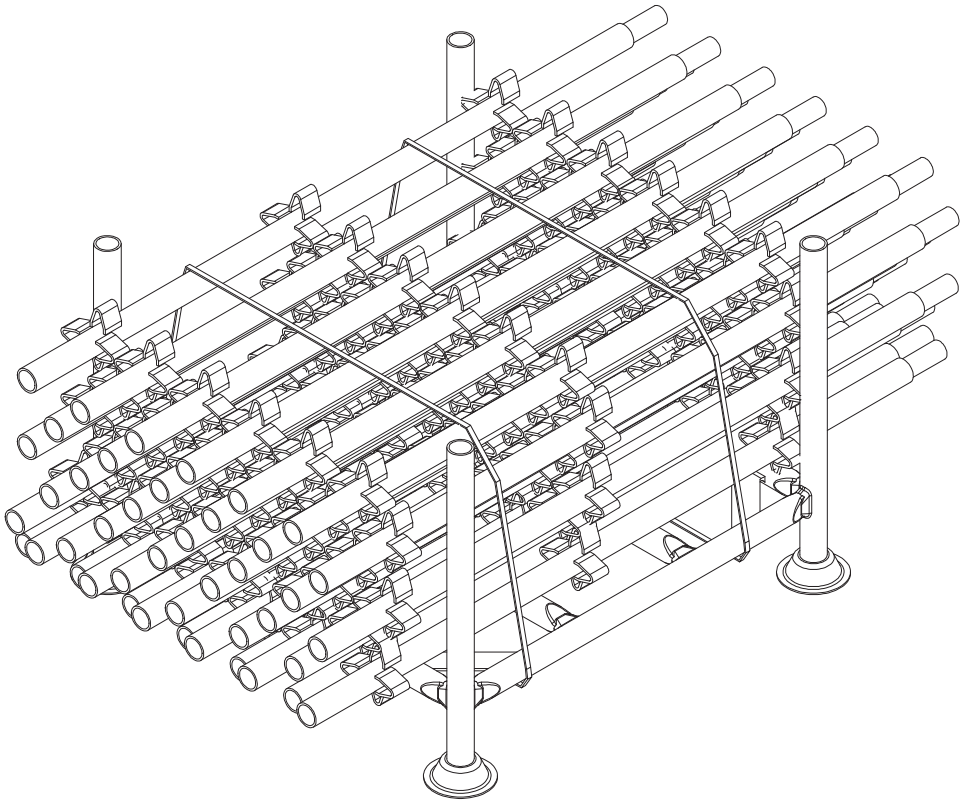
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
Single Toeboard Clamp	1.0	1000	1000	SPEGAL
Double Toeboard Clamp	1.2	1000	1200	SPEGAL

5. Transport & Handling

Quickstage Standards

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



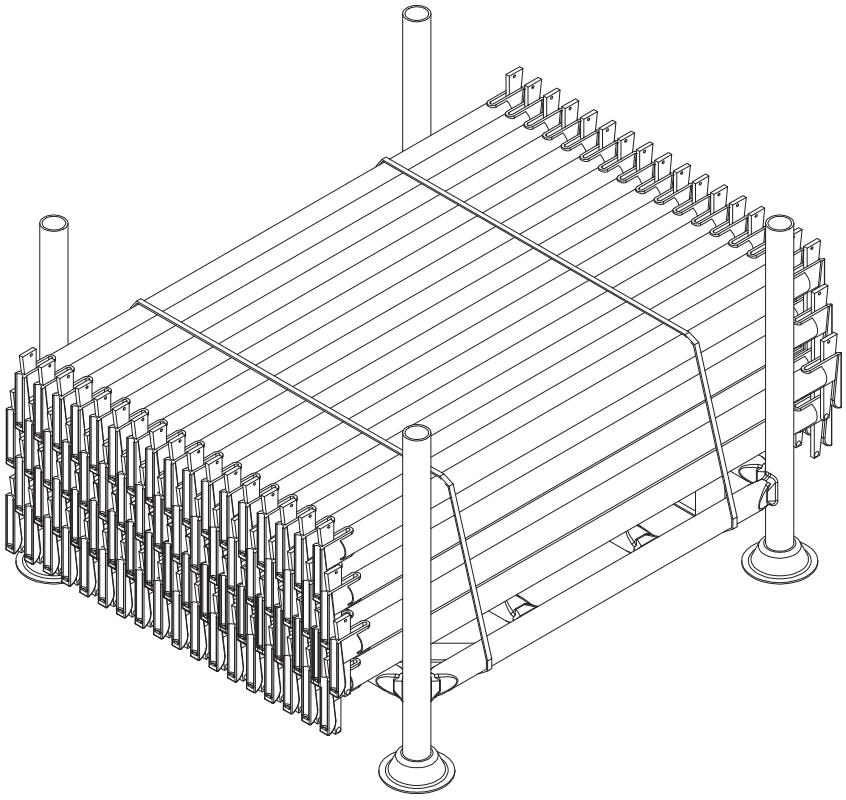
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
Standard 1.0 m	6.10	70	490	MP
Standard 1.5 m	8.50	70	640	MP
Standard 2.0 m	11.10	70	840	MP
Standard 2.5 m	13.60	70	990	MP
Standard 3.0 m	15.50	70	1.125	MP

5. Transport & Handling

Ledger Transport

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



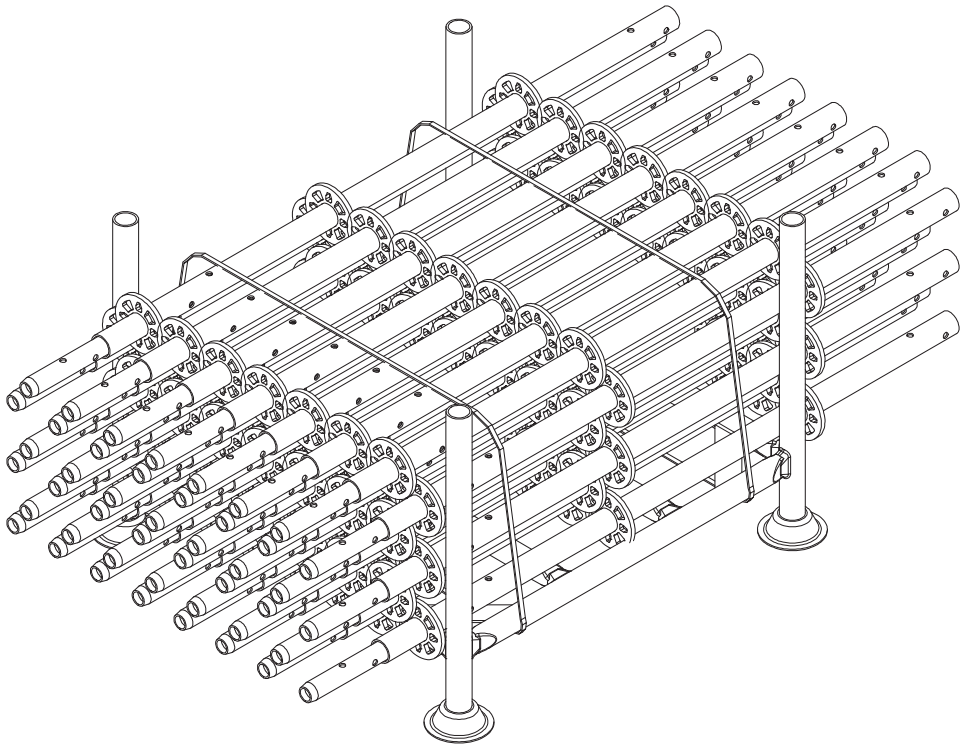
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
Ledger 0.76 m	3.50	100	390	MP
Ledger 1.2 m	5.50	100	590	MP
Ledger 1.8 m	7.50	100	790	MP
Ledger 2.4 m	10.20	100	1040	MP

5. Transport & Handling

Ringlock Standards

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



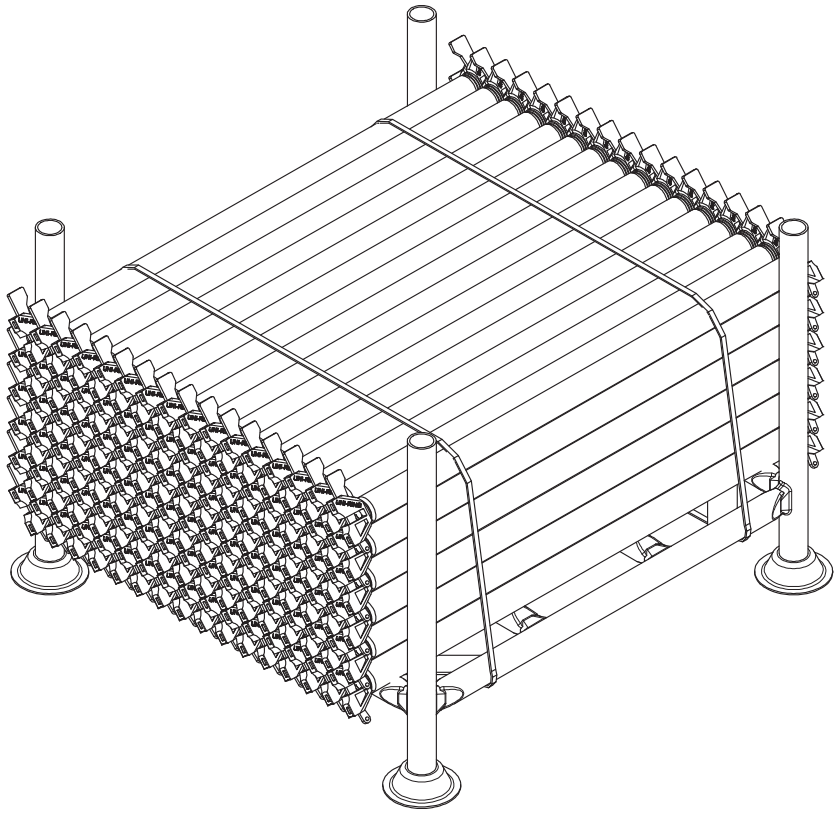
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
Standard 1.0 m	6.10	70	490	MP
Standard 1.5 m	8.50	70	640	MP
Standard 2.0 m	11.10	70	840	MP
Standard 2.5 m	13.60	70	990	MP
Standard 3.0 m	15.50	70	1.125	MP

5. Transport & Handling

Ringlock Ledgers

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



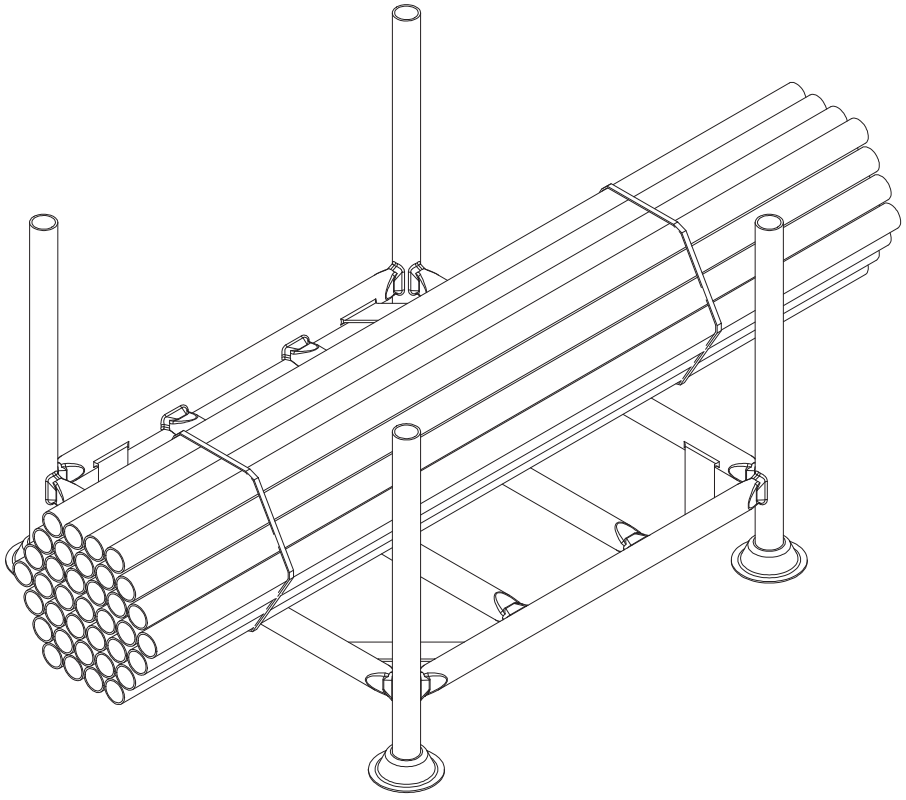
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
Ledger 0.84m	3.50	100	390	MP
Ledger 1.15m	5.50	100	590	MP
Ledger 1.82m	7.50	100	790	MP
Ledger 2.43m	10.20	100	1040	MP

5. Transport & Handling

Scaffold Tube Transport

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage.
The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



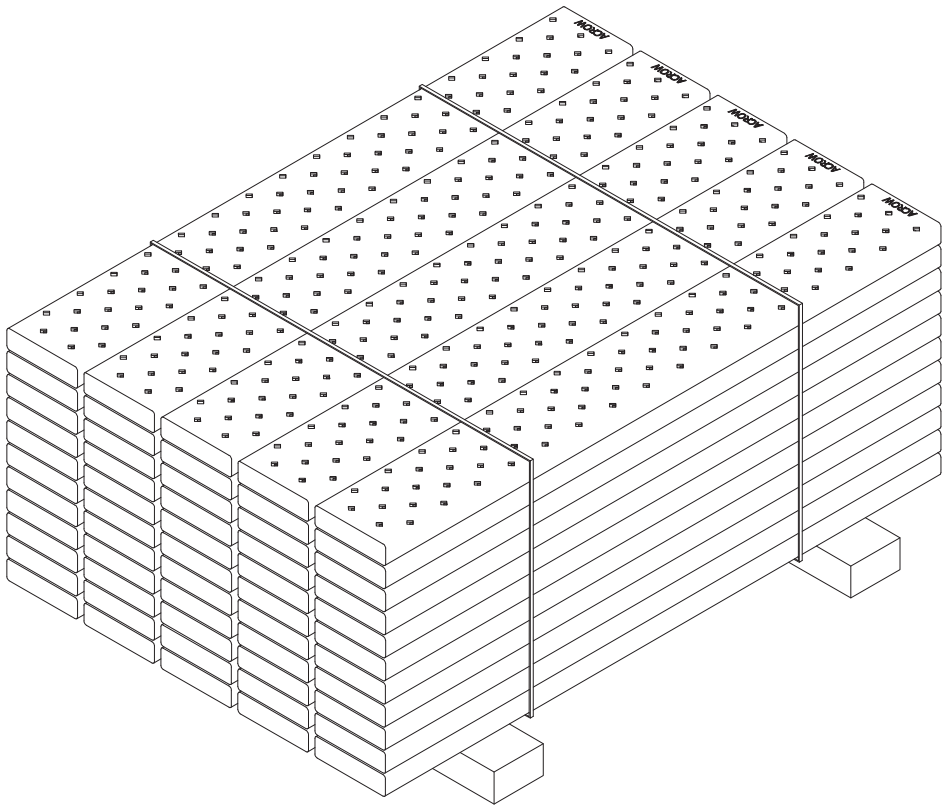
COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
0.3m Tube - HDG - 3.2mm	1.50	136	204	MP
0.6m Tube - HDG - 3.2mm	2.50	136	340	MP
0.9m Tube - HDG - 3.2mm	3.50	136	476	MP
1.2m Tube - HDG - 3.2mm	5.00	136	680	MP
1.5m Tube - HDG - 3.2mm	6.00	136	816	MP
1.8m Tube - HDG - 3.2mm	7.00	136	952	MP
2.1m Tube - HDG - 3.2mm	8.50	136	1156	SP
2.4m Tube - HDG - 3.2mm	9.50	136	1292	SP

5. Transport & Handling

Steel Plank Transport

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage. When a stillage is not used, ensure items are bundled and placed on suitable dunnage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



COMPONENT DESCRIPTION	UNIT MASS (KG)	QUANTITY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	STILLAGE TYPE
0.83m Steel Plank	5.00	50	275	BUNDLE
1.05m Steel Plank	7.20	50	396	BUNDLE
1.27m Steel Plank	8.50	50	467	BUNDLE
1.83m Steel Plank	11.50	50	605	BUNDLE
2.44m Steel Plank	15.50	50	852	BUNDLE
3.05m Steel Plank	19.50	50	1072	BUNDLE

6. MAINTENANCE & INSPECTION

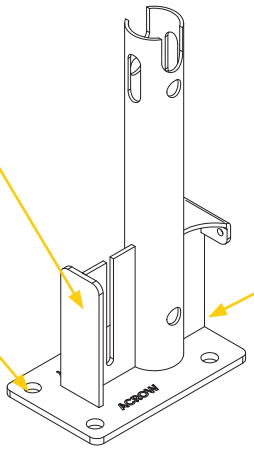
6. Maintenance & Inspection

Handrail Bracket Base

Universal Handrail Base provides a mounting point for multiple types of standards and posts. This allows for a variety of edge guard systems to be used without the need for multiple mounting items.

Bent or Distorted Plates
Isolate and send to workshop

Damaged or Missing Holes
Isolate and send to workshop



Cracked or Missing Welds
Isolate and send to workshop

Surface Rust of Pitting
Isolate and send to workshop

Handrail Bracket Base Inspection

NAME: ..... CHECKED DATE: .....

Generally, visual inspection checking for the possible faults listed below. Please tick or cross the checked box.

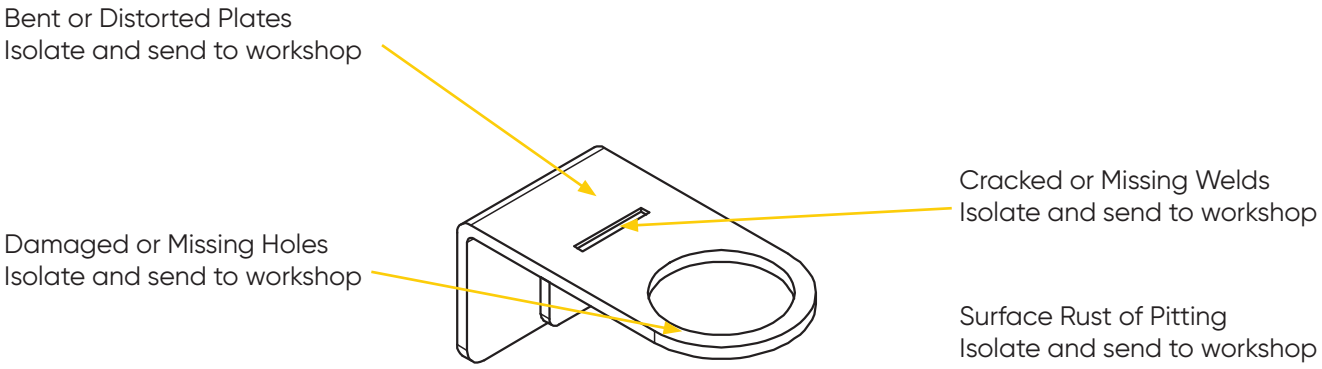
POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Surface rust or pitting	Visual assessment	For surface rust, repaint or touch up as applicable, replace component if excessively pitted
Cracked welds	Cracked welds not permitted	Grind or replace welds as per work instruction WI-GE-100
Bent or distorted plates	Bent plates not permitted	Straighten and re-weld
Damaged or missing holes	Missing holes not permitted	Repair damaged holes and drill any missing
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

Issues / Notes:

6. Maintenance & Inspection

Handrail Bracket Toeboard Clamps

Designed to be used with the Universal Handrail Bracket to allow one or more kickboards to be secured to the back of the bracket when used for edge protection.



Handrail Bracket Toeboard Clamps Inspection

NAME: ..... CHECKED DATE: .....

Generally, visual inspection checking for the possible faults listed below. Please tick or cross the checked box.

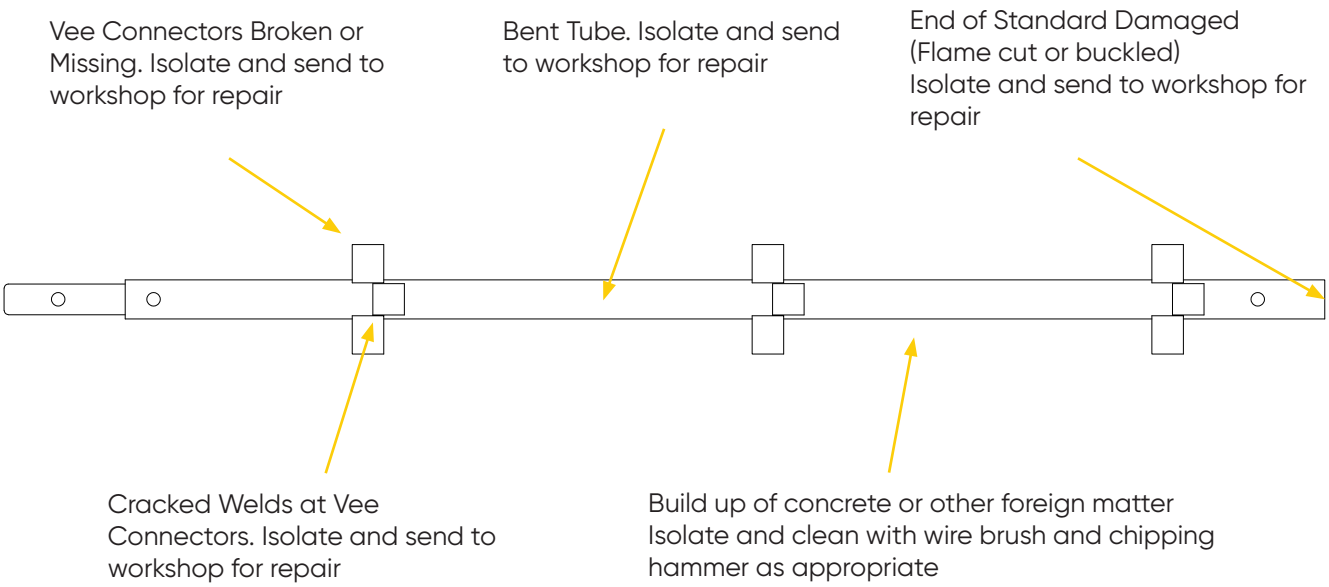
POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Surface rust or pitting	Visual assessment	For surface rust, repaint or touch up as applicable, replace component if excessively pitted
Cracked welds	Cracked welds not permitted	Grind or replace welds as per work instruction WI-GE-100
Bent or distorted plates	Bent plates not permitted	Straighten and re-weld
Damaged or missing holes	Missing holes not permitted	Repair damaged holes and drill any missing
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

Issues / Notes:

6. Maintenance & Inspection

Quickstage Standards

The Quickstage Standard is a principle load carrying member in the scaffold framework and is available in a range of lengths from 0.5m to 3m. It incorporates cup type connections for ledgers, transoms and platform brackets. It has a Camlock sleeve at one end to allow end to end connection Standards. It must be straight, vee connectors must not be deformed or missing.



6. Maintenance & Inspection

Quickstage Standards Inspection

NAME: ..... CHECKED DATE: .....

Generally, visual inspection checking for the possible faults listed below. Please tick or cross the checked box.

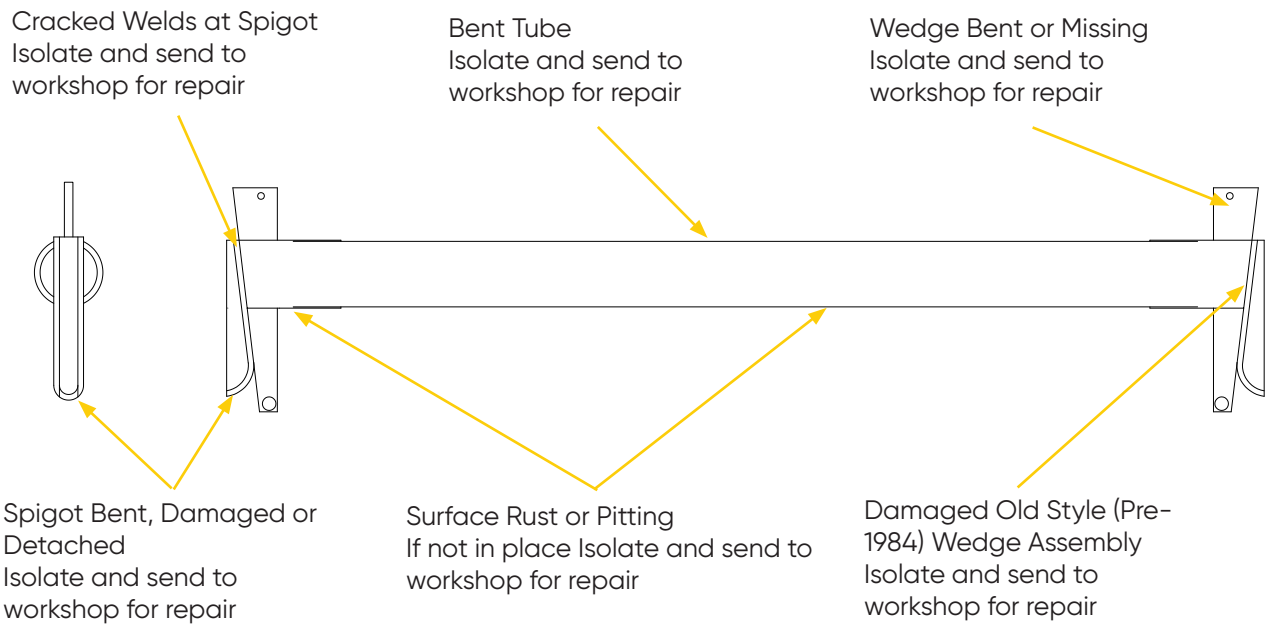
POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Standard coated with concrete	No concrete build up permitted at connections	Remove concrete with wire brush and/or chipping hammer
Tube bore at ends clogged	No concrete build up permitted at spigot ends & 150mm in bore at bottom of Standard	Clear bore with drift
Bent tube	See Reference Sheet	Straighten on Flypress or cut down to next useable size
Dents in tube	Less than 3mm depth	Cut back to next size down
End of standard damaged (flame cut)	Such damage not permitted	Cut back to next size down
Spigot tube weld cracked (old type)	Cracked welds not permitted	Grind and reweld
Camlock Sleeve tube bent or flattened	Bends, flattening or not permitted	Cut down Standard to next available size and replace with new camlock
Vee Connector broken or missing	Broken or missing components not permitted	Grind and reweld vee connector
Missing Camlock	Missing components not permitted	Replace Cam and associated rivet
Cracked welds at Vee Connectors	Cracked welds not permitted	Grind cracked weld and reweld
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

Issues / Notes:

6. Maintenance & Inspection

Quickstage Ledgers

The Quickstage Ledger is a tubular component and incorporates a wedge assembly at each end. They range in length from 1.2m to 2.4m. Together with the Transom, it connects to the Standard by means of the wedge assembly. It must be straight and the wedge assembly must not be damaged or deformed.



6. Maintenance & Inspection

Quickstage Ledgers Inspection

NAME: ..... CHECKED DATE: .....

Generally, visual inspection checking for the possible faults listed below. Please tick or cross the checked box.

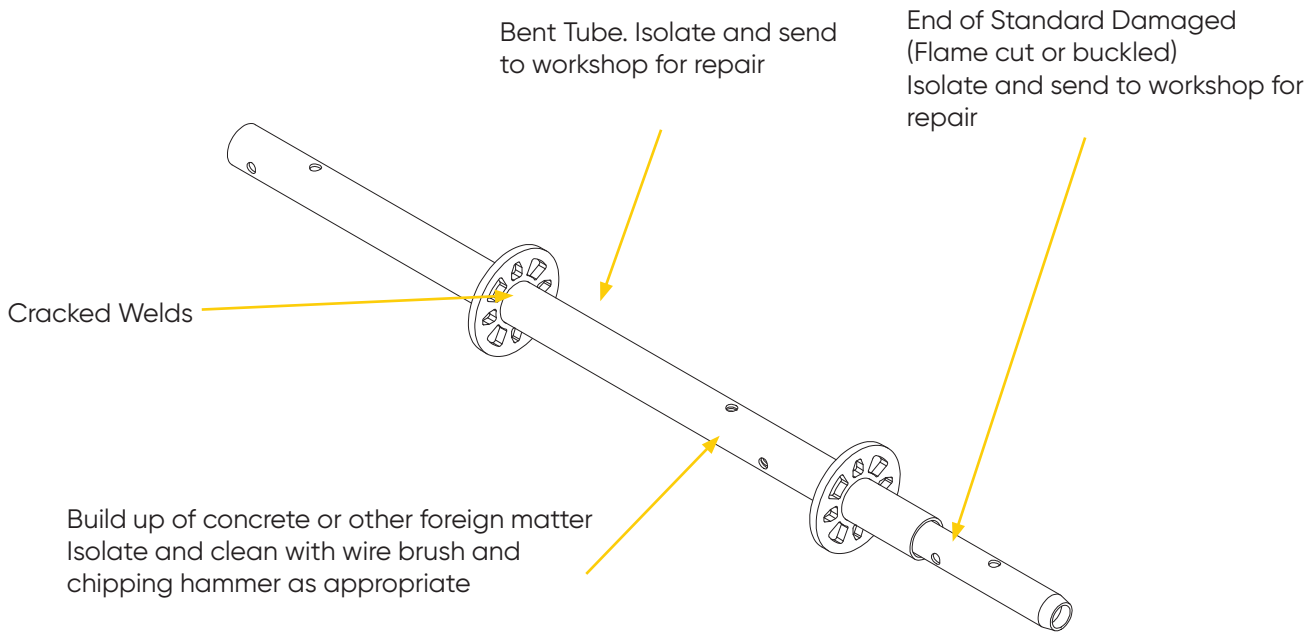
POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	No build up permitted on tube or at connections	Remove build up with wire brush and/ or chipping hammer
Cracked welds	Cracked welds not permitted	Grind weld and replace welds as per Work Instruction
Distorted or bent flat sections	More than 4mm depth	Straighten or replace section
Spigot connection bent, damaged or missing	3mm bend or damaged	Straighten if bent less than 6mm. Re-weld new spigot if damaged or detached. Refer Work Instruction
Cracked welds at spigot connection	Cracked welds not permitted	Grind and reweld. Refer Work Instruction
Wedge bent or missing	Damaged or missing wedges not permitted	Replace with new wedge
Damaged or bent Old Style (pre 1984) Wedge Assembly	Damaged assemblies not recommended for repair.	Replace with current style Wedge Assembly. Refer Work Instruction
Surface rust or pitting	Visual assessment.	For surface rust, repaint or touch up as applicable. Replace component if excessively pitted.
Bottom Stiffener missing on 1829 or 2138 Standard	Must be intact	Straighten or remove and replace
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

Issues / Notes:

6. Maintenance & Inspection

Ringlock Standards

The Ringlock Standard is a principle load carrying member in the scaffold framework and is available in a range of lengths from 0.5m to 3m.



6. Maintenance & Inspection

Ringlock Standards Inspection

NAME: ..... CHECKED DATE: .....

Generally, visual inspection checking for the possible faults listed below. Please tick or cross the checked box.

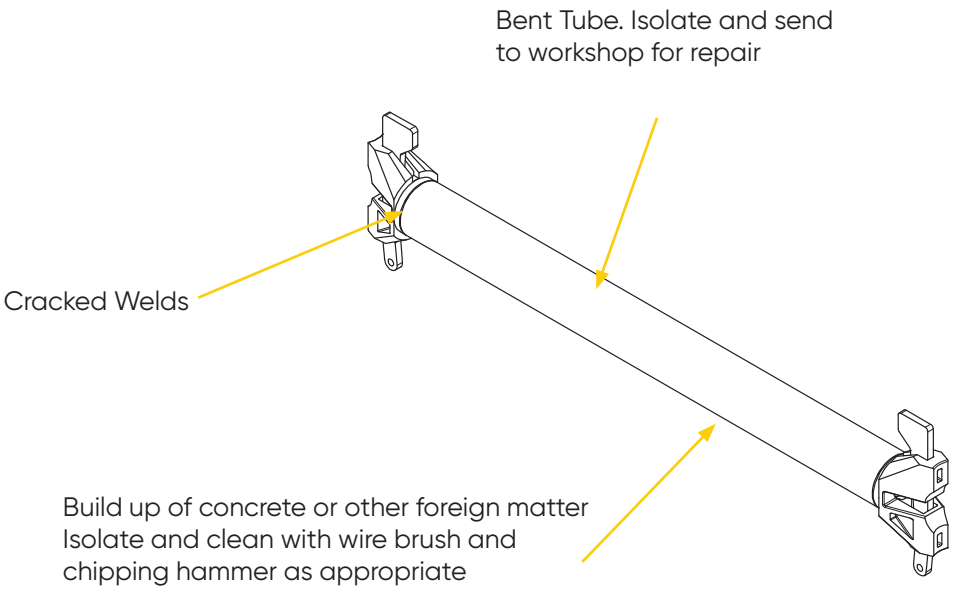
POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Standard coated with concrete	No concrete build up permitted at connections	Remove concrete with wire brush and/or chipping hammer
Tube bore at ends clogged	No concrete build up permitted at spigot ends & 150mm in bore at bottom of Standard	Clear bore with drift
Bent tube	See Reference Sheet	Straighten on Flypress or cut down to next useable size
Dents in tube	Less than 3mm depth	Cut back to next size down
End of standard damaged (flame cut)	Such damage not permitted	Cut back to next size down
Spigot tube weld cracked (old type)	Cracked welds not permitted	Grind and reweld
Missing Camlock	Missing components not permitted	Replace Cam and associated rivet
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

Issues / Notes:

6. Maintenance & Inspection

Ringlock Ledgers

The Ringlock Ledger is a load bearing member and incorporates a wedge assembly at each end. Ledgers range in length from 1.2m to 2.4m.



6. Maintenance & Inspection

Ringlock Ledgers Inspection

NAME: ..... CHECKED DATE: .....

Generally, visual inspection checking for the possible faults listed below. Please tick or cross the checked box.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	No build up permitted on tube or at connections	Remove build up with wire brush and/ or chipping hammer
Cracked welds	Cracked welds not permitted	Grind weld and replace welds as per Work Instruction
Distorted or bent flat sections	More than 4mm depth	Straighten or replace section
Wedge bent or missing	Damaged or missing wedges not permitted	Replace with new wedge
Damaged or bent Old Style (pre 1984) Wedge Assembly	Damaged assemblies not recommended for repair.	Replace with current style Wedge Assembly. Refer Work Instruction
Surface rust or pitting	Visual assessment.	For surface rust, repaint or touch up as applicable. Replace component if excessively pitted.
Note: When re-welding cracked welds Work Instruction WI-GE-100 details must be followed		

Issues / Notes:

LOCATIONS

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