acrow.
ENGINEERING & CONSTRUCTION

TECHNICAL GUIDE
ACROW GASS

FALSEWORK & SHORING

Any safety provisions as directed by the appropriate governing agencies must be observed when using our products. The pictures in this document are snapshots of situations at different stages of assembly, and therefore are not complete images. For the purpose of safety, they should not be deemed as 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.

DOCUMENT NO: ACROWGASS_FEB2024_ISSUE_B

Technical Manual Release Notes

This page is intended to record all changes to the **GASS** 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	SEPT 2023	First Release
B	FEB 2024	Second Release

Contents

1. Technical Specifications

System Description

Acrow **GASS** Aluminium Shoring System is a lightweight shoring system that provides a fast, efficient and versatile falsework structure with the benefit of providing load capacity up to 140kN. The primary product attributes of **GASS** are:

- Provision of load capacity up to 140kN
- Light weight and easy to erect
- Can provide bay size up to 3 meters
- Ideally suited to "table form" applications along with conventional strike and fix flexibility.

In addition the high strength light weight Acrow **GASS** system is easy to erect and dismantle leading to significant labour savings on site.

Purpose of the Document

The purpose of this document is to provide guidelines for design, safe handling, transport and installation of the **GASS** 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 Contractors responsibility to prepare safe work method statements and observe and comply with site specific health and safety regulations, standards and policies.

Acrow has dedicated engineering services available for project assistance. We can provide design support for clients to determine the best way to specify and document. 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 is to draw the user's attention to possible musculoskeletal disorders as a result of manual handling during assembly and dismantling of the **GASS** system

It is recommended that users of the **GASS** system employ and implement appropriate procedures and control measures to eliminate or control any risk of Musculoskeletal disorder/injury while handling.

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 **GASS** products.

The technical function related instructions must be accurately followed to obtain the correct performance of the product. Any deviation from the recommended usage will require a separate design and/or 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 **GASS** 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 commitment to continuous product development and improvement, the information contained in this manual may be changed 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

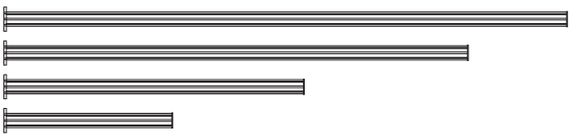
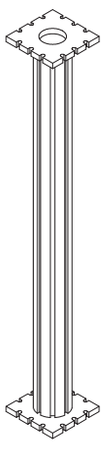
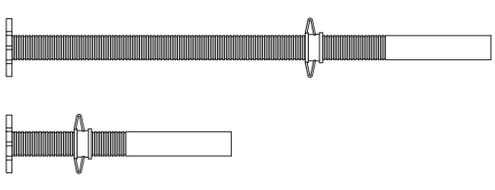
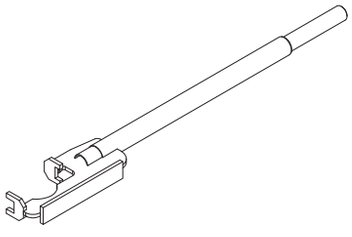
The structural design information and guide provided in this document are limited to the relevant codes nominated below. It does not include certification of any structures or works associated with a project.

ELEMENT	DESCRIPTION	CODE
LOADING	Structural Design Actions – General Principles	AS/NZS 1170.0-2002
	Structural Design Actions – Permanent, Imposed And Other Actions	AS/NZS 1170.1-2002
FORMWORK	Formwork for Concrete	AS 3610-1995
	Formwork for Concrete Part 1- Specifications	AS 3610.1-2018

2. GENERAL PRODUCT INFORMATION

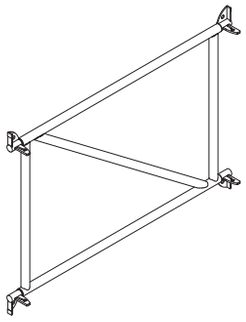
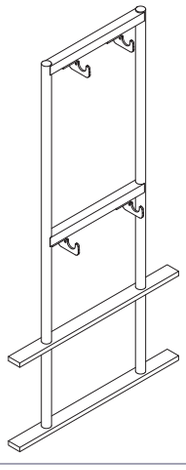
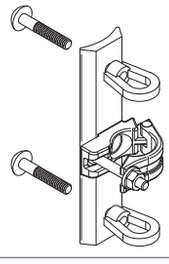
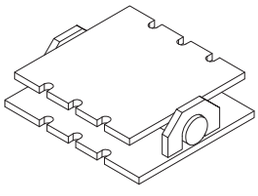
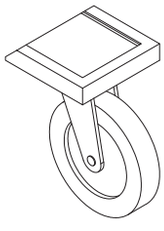
2. General Product Information

Gass Legs

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	**Acrow Aluminium GASS Prop Outer Legs** The Outer Leg extrusion has eight slots which allows attachment of Bracing Frames in multiple directions. The end plates have interlocking features that eliminates eccentricity. The spring loaded latch at the bottom of the Outer Leg provides means of securing the Inner leg to Outer.		
	Outer Leg 4670	GHOUT467	22.1
	Outer Leg 3580	GHOUT358	17.4
	Outer Leg 2490	GHOUT249	12.7
	Outer Leg 1400	GHOUT140	8.0
	**Acrow GASS Extension Legs** Extension Legs allow to extent the height of the legs. Where used the serration's on the edges of the end plates must match each other. 4- M12 x 65 Grade 8.8 bolts and nuts with washers are required for each connection.		
	Extension Leg 4670	GHEXT467	23.6
	Extension Leg 3580	GHEXT358	18.9
	Extension Leg 2490	GHEXT249	14.2
	Extension Leg 1400	GHEXT140	9.5
	Extension Leg 500	GHEXT050	5.6
	**Acrow Aluminium GASS Prop Inner Legs (Adjustable Jacks)** Provide adjustment for Outer Leg up to 1314mm. The stem has a removable nut restraint screw to prevent over extension and ensure minimum engagement into the Outer Leg.		
	Inner Leg 1680	GHINL168	10.2
	Inner Leg 780	GHINL078	5.5
	**Acrow GASS Spanner** Used to release the collar of the Inner Leg.		
	GASS Spanner	GLLSP001	8.0

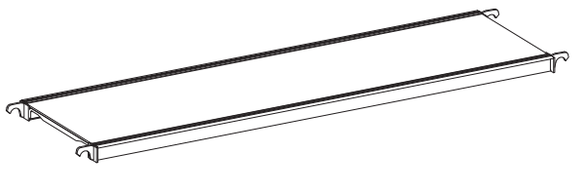
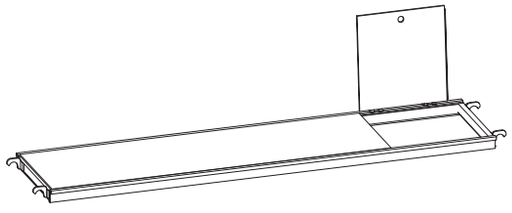
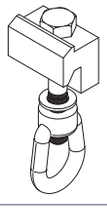
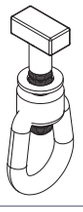
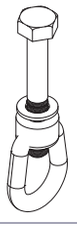
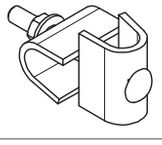
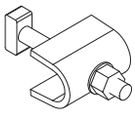
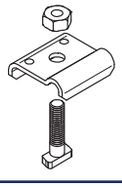
2. General Product Information

Bracing Frames / Guardrail /

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	**Acrow GASS Bracing Frames** Each Bracing Frame is secured in place with four wedge connections. The wedge system has a visible feature for ease of correct installation identifi cation. The top cord of the Bracing Frame provides guardrailing when Access Platforms are used.		
	Bracing Frame 3000	GHGTE300	15.8
	Bracing Frame 2400	GHGTE240	13.4
	Bracing Frame 1800	GHGTE180	10.3
	Bracing Frame 1200	GHGTE120	9.4
	**Acrow GASS Advanced Guardrail** Used as a temporary guardrail. They are clamped to both cords of the Bracing Frames to provide edge protection from level below (not to be used for attachment of fall prevention equipment).		
	Advanced Guardrail 1655	GHAGR165	11.0
	Advanced Guardrail 1065	GHAGR106	9.5
	**Acrow GASS Leg Bracing Coupler**		
	Leg Bracing Coupler	GHLBC001	TBA
	**Acrow GASS Rocking Head / Base Plate** Caters for slopes of up to 15°.		
	Rocking Head/Base Plate MKI	GHRHBP	8.3
	**Acrow GASS Castor Shoe** They are attached to underside of legs and used to move assembled units around on a level and smooth surface for a short distance.		
	Caster Shoe 200	GHCS200	9.8
	Caster Shoe 250	GHCS250	12.0
	Castor Wheel	GHCWH001	1.5

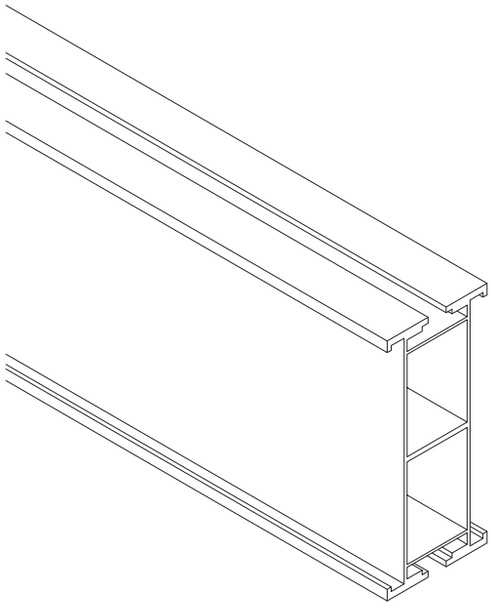
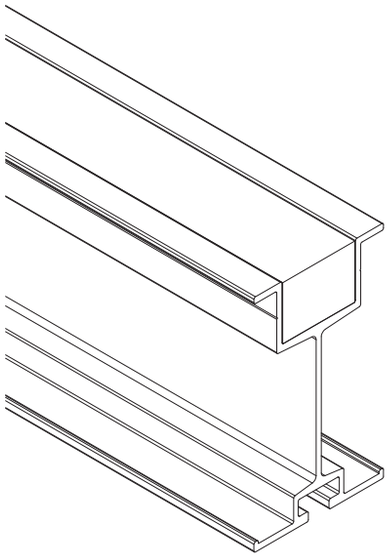
2. General Product Information

Platforms / Accessories / Clamps / Retainers

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	**Acrow GASS Access Platforms** Used between Bracing Frames to provide access. Each has locking mechanism to ensure resistance against wind loads.		
	Access Platform 3000	GLPLT300	23.0
	Access Platform 2400	GLPLT240	19.0
	Access Platform 1800	GLPLT180	16.4
	**Acrow GASS Access Platform Trapdoors** Used to provides an opening for ladders.		
	Access Platform Trapdoor 3000	GAPTD300	26.2
	Access Platform Trapdoor 2400	GAPTD240	19.9
	Access Platform Trapdoor 1800	GAPTD180	15.3
	**Acrow GASS Ring Bolt Soldier Clamp** Used to connect Slim-Max Soldiers to legs. Two Clamps are required per leg.		
	Ring Bolt Soldier Clamp	GHHSB001	0.5
	**Acrow GASS T-Bolt Clamp (head to beam)** Used to connect Aluminium Beams to legs. Two Clamps are required per leg.		
	T-Bolt Clamp	GHHBB001	0.4
	**Acrow GASS Ring Bolt Clamp (head to head)** Used to connect legs end plates together. Four Clamps are required per connection.		
	Ring Bolt Clamp	GHHRB001	0.3
	**Acrow GASS Universal Clamp** Connects secondary beams to primary beams.		
	Universal Clamp	GHUC001	0.6
	**Acrow GASS Universal Anchor Clamp** Used to clamp Aluminium beams to each other or to Slim-Max Soldiers.		
	Universal Anchor Clamp	GHUAC001	0.3
	**A-Beam Clamp** Clamps Acrow Aluminium Beams to Slim-Lite Soldier.		
	Clamp	ABC	0.25
	T-Bolt	ABTB	
	M12 Nut	ABN	

2. General Product Information

Aluminium Beam

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	**Acrow GASS T225 Aluminium Beam** Used mostly as a primary beam.		
	T225 Aluminium Beam 1.5m	GT22515	13.3
	T225 Aluminium Beam 1.6m	GT22516	14.2
	T225 Aluminium Beam 1.8m	GT22518	16.0
	T225 Aluminium Beam 2.0m	GT22520	17.8
	T225 Aluminium Beam 2.1m	GT22521	18.7
	T225 Aluminium Beam 2.4m	GT22524	21.4
	T225 Aluminium Beam 2.7m	GT22527	24.0
	T225 Aluminium Beam 3.0m	GT22530	26.7
	T225 Aluminium Beam 3.2m	GT22532	28.5
	T225 Aluminium Beam 3.6m	GT22536	32.0
	T225 Aluminium Beam 3.7m	GT22537	32.9
	T225 Aluminium Beam 4.2m	GT22542	37.4
	T225 Aluminium Beam 4.6m	GT22546	40.9
	T225 Aluminium Beam 4.8m	GT22548	42.7
	T225 Aluminium Beam 5.0m	GT22550	44.5
	T225 Aluminium Beam 5.2m	GT22552	46.3
	T225 Aluminium Beam 5.4m	GT22554	48.0
	T225 Aluminium Beam 6.0m	GT22560	53.4
	T225 Aluminium Beam 6.4m	GT22564	56.9
	**Acrow Aluminium A-Beam**		
	A-Beam 1.2m	AB12	6.5
	A-Beam 1.5m	AB15	8.1
	A-Beam 1.8m	AB18	9.7
	A-Beam 2.1m	AB21	11.3
	A-Beam 2.4m	AB24	12.9
	A-Beam 2.7m	AB27	14.6
	A-Beam 3.0m	AB30	16.2
	A-Beam 3.3m	AB33	17.8
	A-Beam 3.5m	AB35	18.9
	A-Beam 3.6m	AB36	19.4
	A-Beam 3.9m	AB39	21.0
	A-Beam 4.2m	AB42	22.7
	A-Beam 4.5m	AB45	24.3
	A-Beam 4.8m	AB48	25.9
	A-Beam 5.1m	AB51	27.5
	A-Beam 5.4m	AB54	29.1
	A-Beam 5.7m	AB57	30.8
	A-Beam 6.0m	AB60	32.4
	A-Beam 6.4m	AB64	34.6
	A-Beam 6.5m	AB65	35.1
	A-Beam 7.0m	AB70	37.8

2. General Product Information

Aluminium Beam

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	S150 Aluminium Beam		
	S150 Aluminium Beam 1.8m	GS15018	
	S150 Aluminium Beam 2.4m	GS15024	
	S150 Aluminium Beam 2.7m	GS15027	
	S150 Aluminium Beam 3.0m	GS15030	
	S150 Aluminium Beam 3.2m	GS15032	
	S150 Aluminium Beam 3.6m	GS15036	
	S150 Aluminium Beam 4.2m	GS15042	
	S150 Aluminium Beam 5.7m	GS15057	
	S150 Aluminium Beam 6.4m	GS15064	

3. WORKING LOAD LIMITS (WLL)

3. Working Load Limits (WLL)

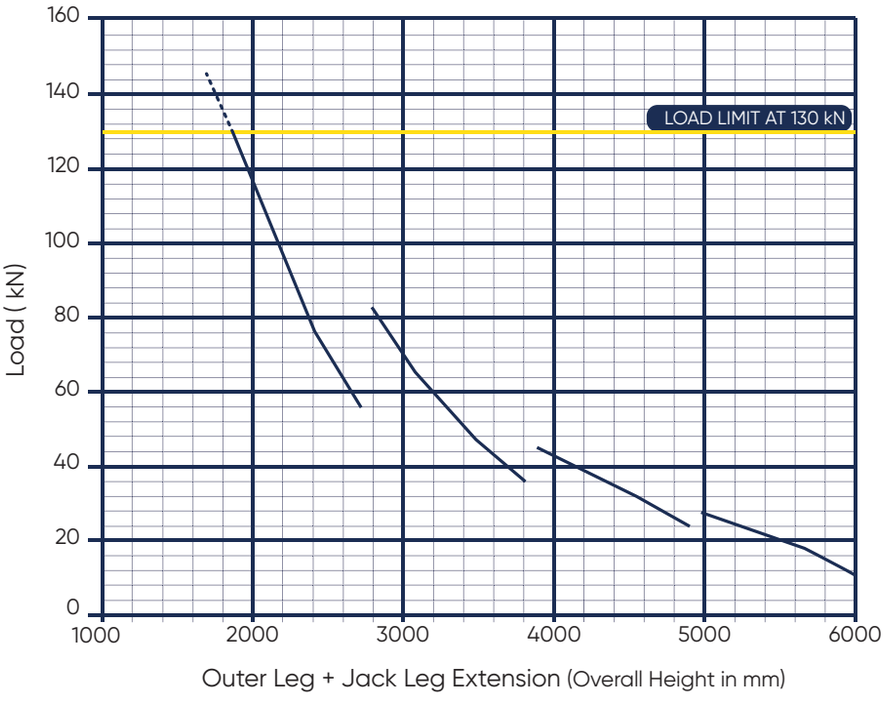
Gass Prop WLL

WLL - Propping Formwork - Stand-alone Prop

Based on one single leg + 1 No. Jack, top or bottom.

Top and bottom plates assumed pinned

Top: Restrained
Bottom: Un-restrained

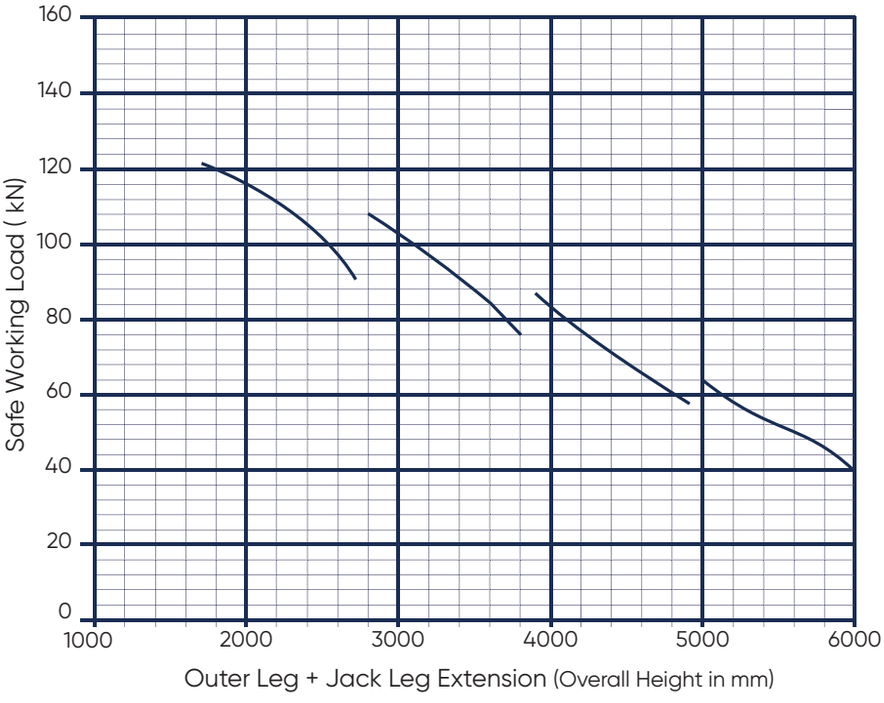


WLL - Backpropping Application

Based on one single leg + 1 No. Jack, top or bottom.

Top and bottom plates assumed bearing flat on solid supports

Top and Bottom: Restrained

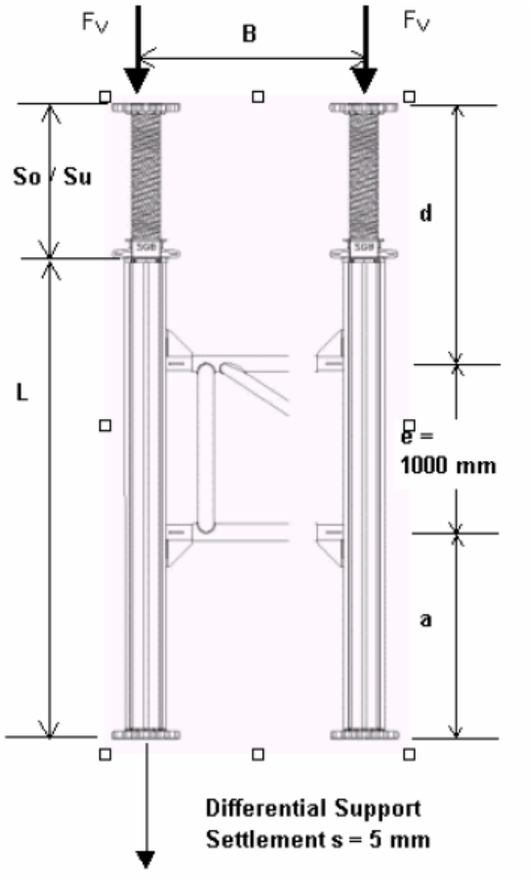


3. Working Load Limits (WLL)

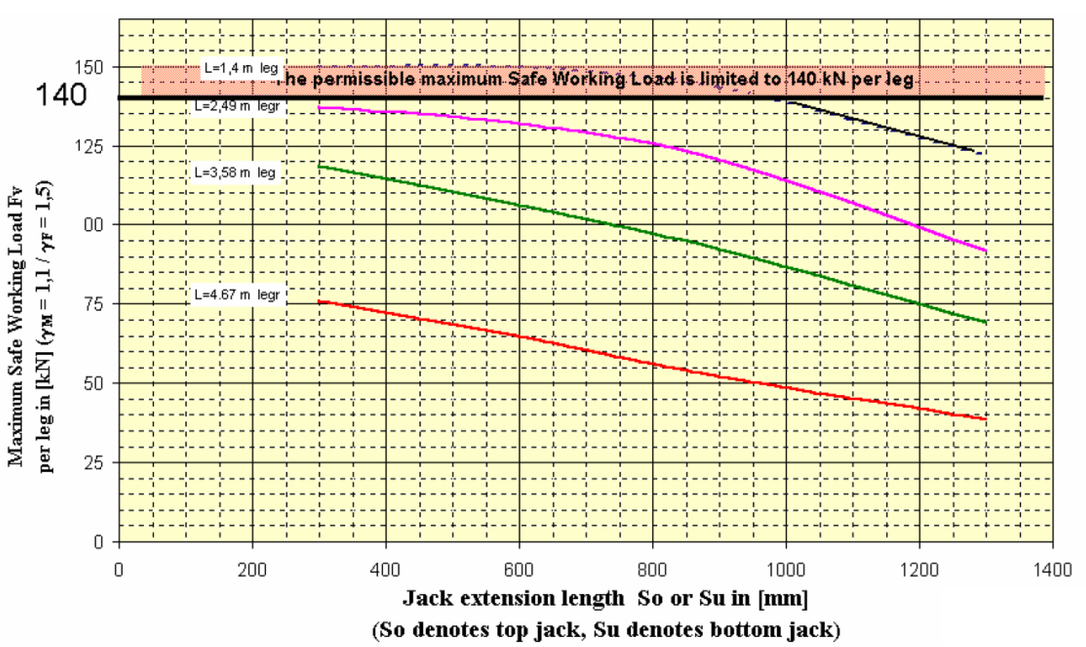
Gass Tower - 1 Jack

With top and bottom jack and one bracing frame.
Leg Heights (L): 1.40m - 4.67m
WLL adjusted to allow for differential settlement

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dimensions	Vertical Tube (leg) Length L (m)			
		1.4	2.49	3.58	4.67
300	a	0.25	0.30	0.30	0.30
	d	0.45	1.49	2.58	3.67
600	a	0.25	0.30	0.30	0.30
	d	0.75	1.79	2.88	3.97
900	a	0.25	0.30	0.30	0.30
	d	1.05	2.09	3.18	4.27
1300	a	0.25	0.30	0.30	0.30
	d	1.45	2.49	3.58	4.67

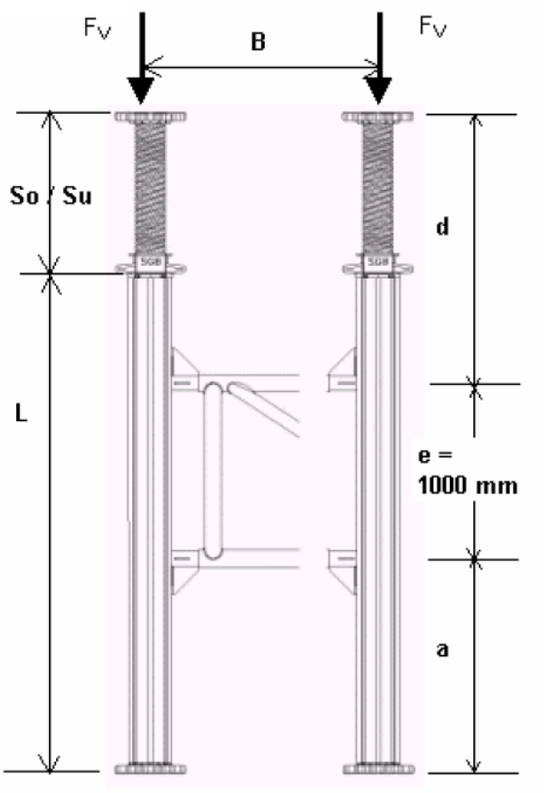


3. Working Load Limits (WLL)

Gass Tower - 1 Jack

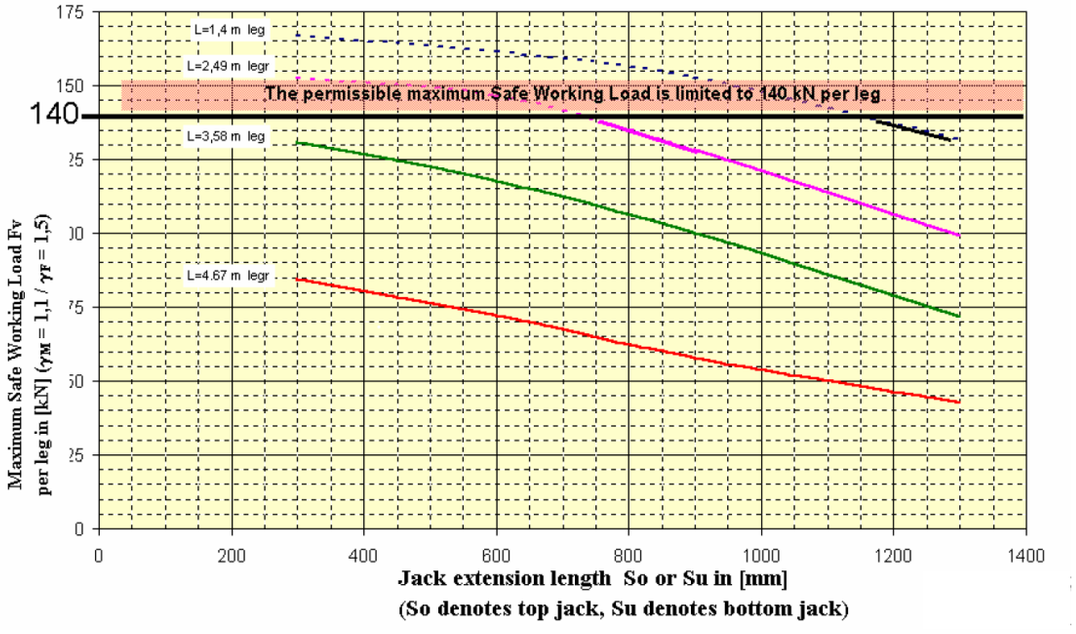
With top and bottom jack and one bracing frame.
Leg Heights (L): 1.40m - 4.67m
Without differential support settlements

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



No differential settlement

Jack Extension (mm)	Dimensions	Vertical Tube (leg) Length L (m)			
		1.4	2.49	3.58	4.67
300	a	0.25	0.30	0.30	0.30
	d	0.45	1.49	2.58	3.67
600	a	0.25	0.30	0.30	0.30
	d	0.75	1.79	2.88	3.97
900	a	0.25	0.30	0.30	0.30
	d	1.05	2.09	3.18	4.27
1300	a	0.25	0.30	0.30	0.30
	d	1.45	2.49	3.58	4.67

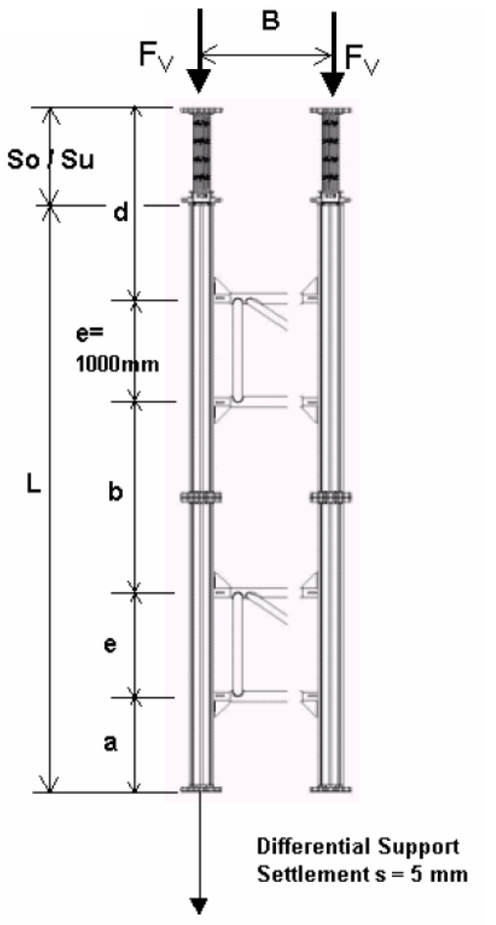


3. Working Load Limits (WLL)

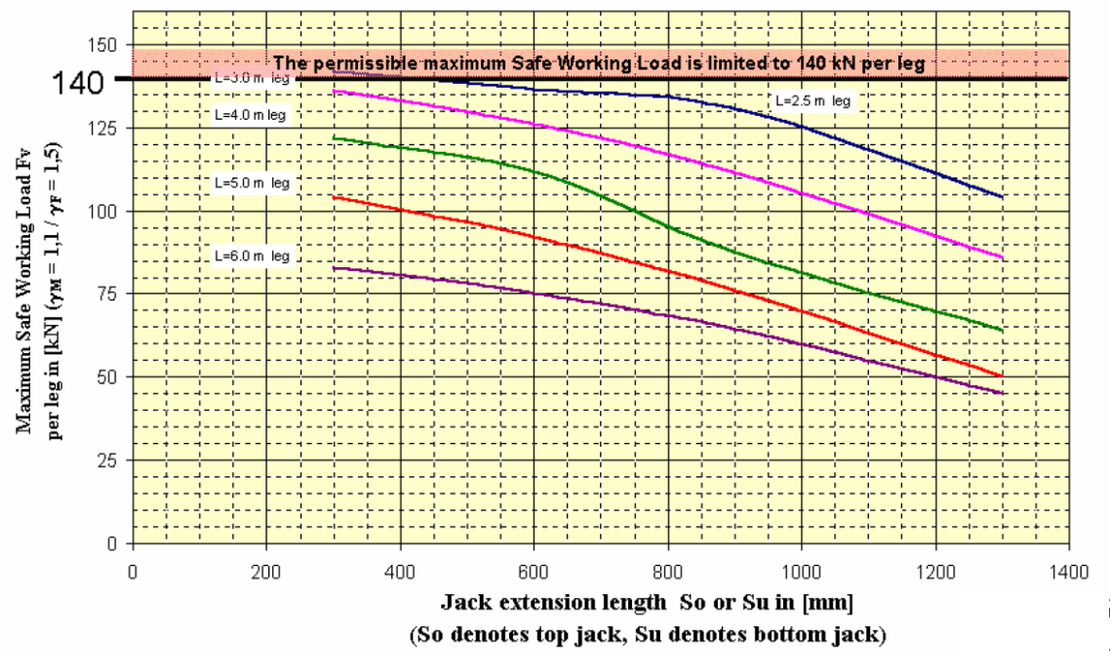
Gass Tower - 1 Jack

With top and bottom jack and two bracing frames.
Leg Heights (L): 2.50m - 6.00m
With differential support settlement S = 5mm.

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)				
		2.5	3.0	4.0	5.0	6.0
300	a	0.15	0.27	0.55	0.79	1.03
	b	0.20	0.58	1.20	1.72	2.24
	d	0.45	0.45	0.55	0.79	1.03
600	a	0.15	0.27	0.57	0.86	1.10
	b	0.20	0.58	1.28	1.86	2.40
	d	0.75	0.75	0.75	0.86	1.10
900	a	0.15	0.27	0.58	0.88	1.17
	b	0.20	0.58	1.27	1.97	2.55
	d	1.05	1.05	1.05	1.05	1.18
1300	a	0.15	0.27	0.58	0.90	1.21
	b	0.20	0.58	1.27	1.95	2.64
	d	1.45	1.45	1.45	1.45	1.45

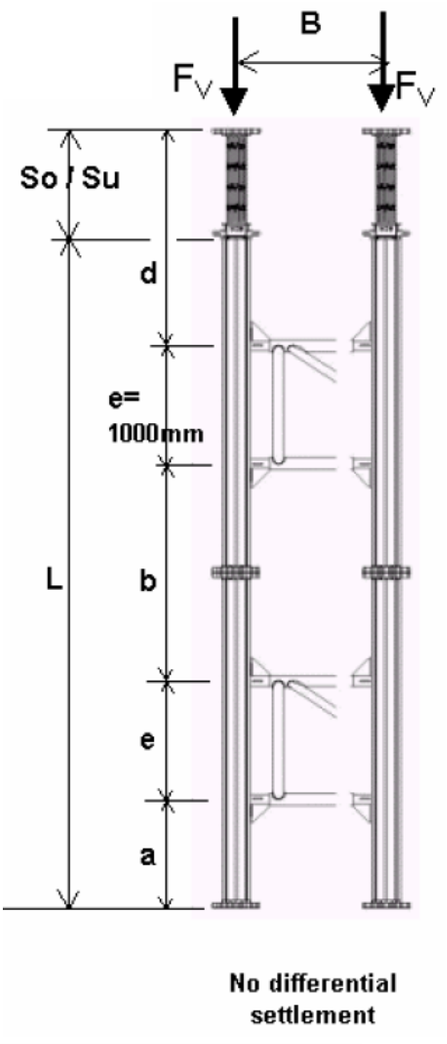


3. Working Load Limits (WLL)

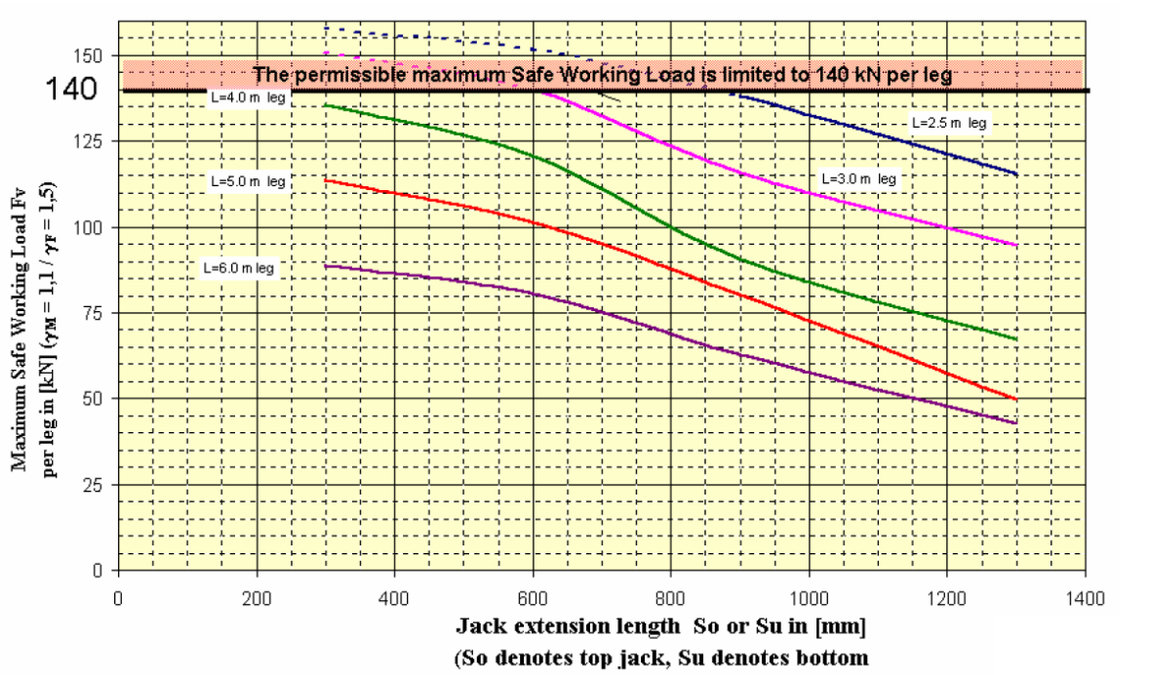
Gass Tower - 1 Jack

With top and bottom jack and two bracing frames.
Leg Heights (L): 2.50-6.00m
Without differential support settlements

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)				
		2.5	3.0	4.0	5.0	6.0
300	a	0.15	0.27	0.55	0.79	1.03
	b	0.20	0.58	1.20	1.72	2.24
	d	0.45	0.45	0.55	0.79	1.03
600	a	0.15	0.27	0.57	0.86	1.10
	b	0.20	0.58	1.28	1.86	2.40
	d	0.75	0.75	0.75	0.86	1.10
900	a	0.15	0.27	0.58	0.88	1.17
	b	0.20	0.58	1.27	1.97	2.55
	d	1.05	1.05	1.05	1.05	1.18
1300	a	0.15	0.27	0.58	0.90	1.21
	b	0.20	0.58	1.27	1.95	2.64
	d	1.45	1.45	1.45	1.45	1.45

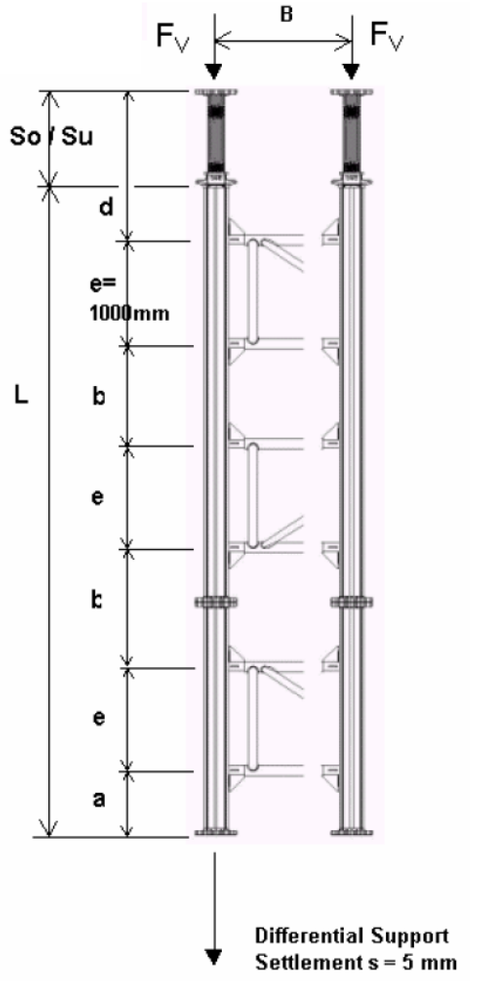


3. Working Load Limits (WLL)

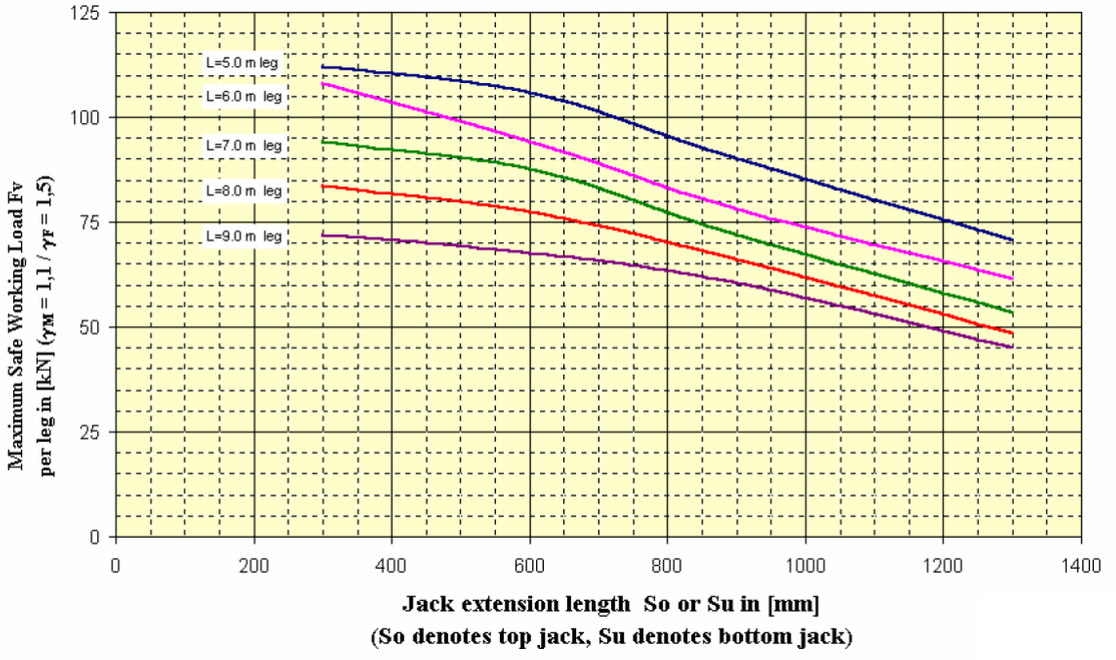
Gass Tower - 1 Jack

With top and bottom jack and three bracing frames.
Leg Heights (L): 5.00m - 9.00m.
With differential support settlement S = 5mm

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)				
		5.0	6.0	7.0	8.0	9.0
300	a	0.35	0.52	0.68	0.84	0.99
	b	0.75	1.13	1.47	1.81	2.16
	d	0.45	0.52	0.68	0.84	0.99
600	a	0.35	0.53	0.73	0.88	1.04
	b	0.75	1.16	1.56	1.92	2.26
	d	0.75	0.75	0.75	0.88	1.04
900	a	0.35	0.53	0.73	0.91	1.09
	b	0.75	1.16	1.56	1.97	2.36
	d	1.05	1.05	1.05	1.05	1.09
1300	a	0.35	0.53	0.73	0.91	1.09
	b	0.75	1.16	1.56	1.97	2.38
	d	1.45	1.45	1.45	1.45	1.45

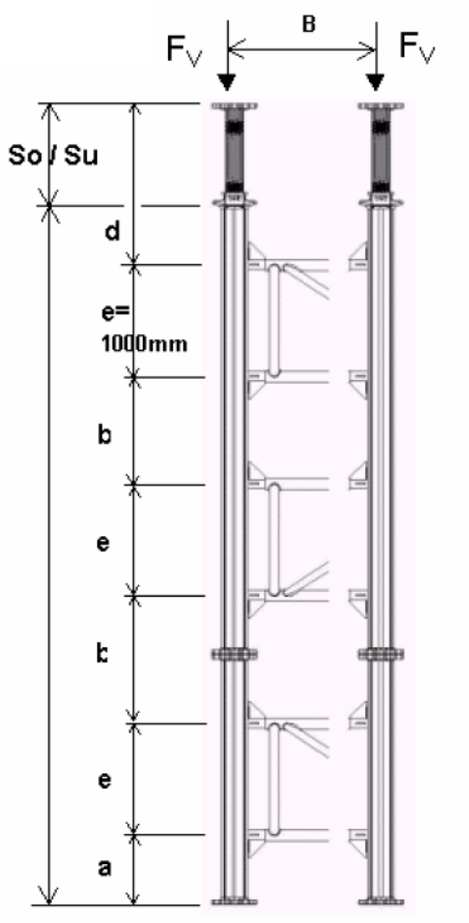


3. Working Load Limits (WLL)

Gass Tower - 1 Jack

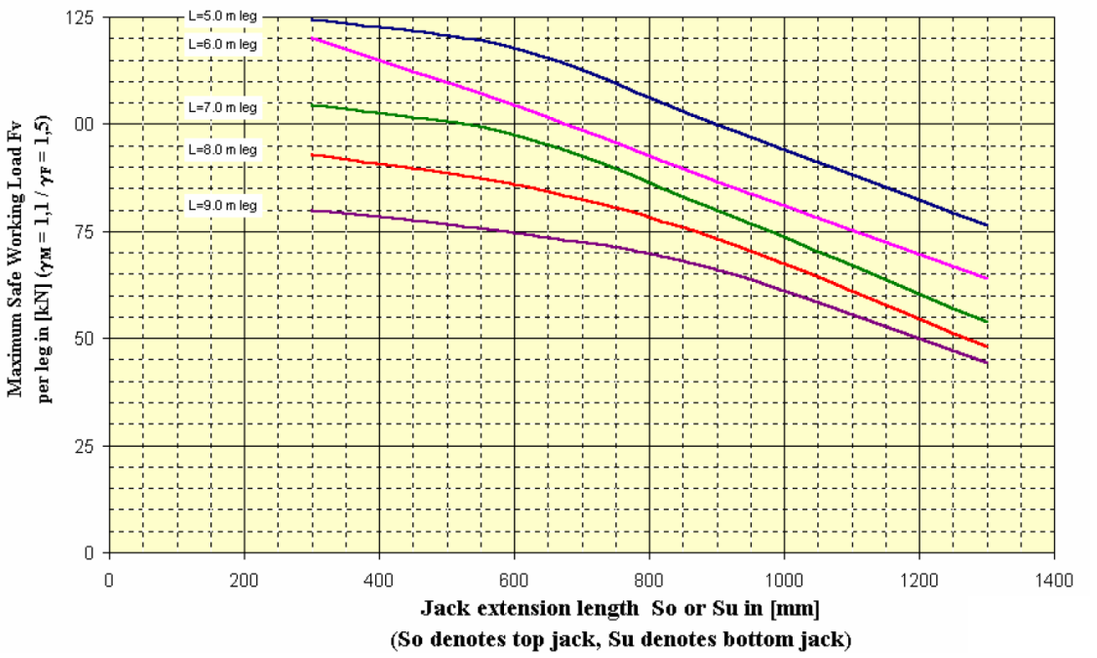
With top and bottom jack and three bracing frames.
Leg Heights (L): 5.00-9.00m
Without differential support settlements

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



No differential settlement

Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)				
		5.0	6.0	7.0	8.0	9.0
300	a	0.35	0.52	0.68	0.84	0.99
	b	0.75	1.13	1.47	1.81	2.16
	d	0.45	0.52	0.68	0.84	0.99
600	a	0.35	0.53	0.73	0.88	1.04
	b	0.75	1.16	1.56	1.92	2.26
	d	0.75	0.75	0.75	0.88	1.04
900	a	0.35	0.53	0.73	0.91	1.09
	b	0.75	1.16	1.56	1.97	2.36
	d	1.05	1.05	1.05	1.05	1.09
1300	a	0.35	0.53	0.73	0.91	1.09
	b	0.75	1.16	1.56	1.97	2.38
	d	1.45	1.45	1.45	1.45	1.45

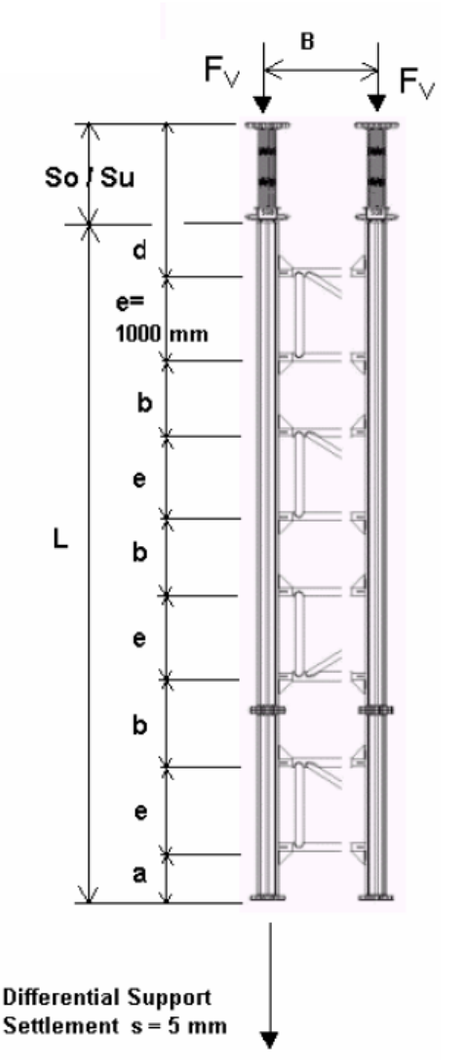


3. Working Load Limits (WLL)

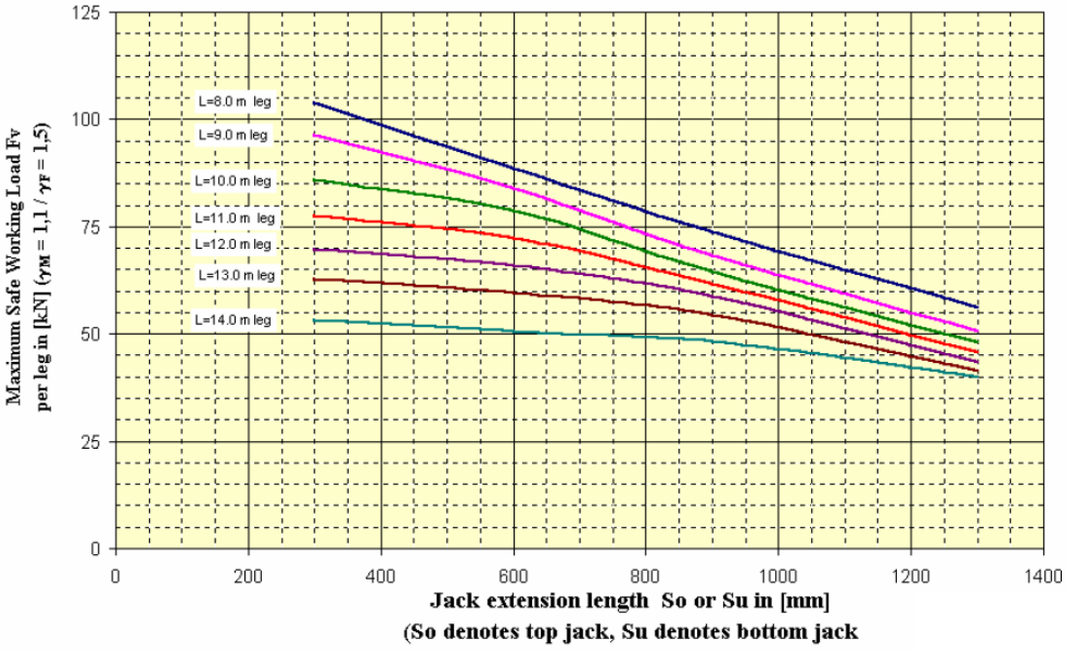
Gass Tower - 1 Jack

With top and bottom jack and four bracing frames.
Leg Heights (L): 8.00m - 14.00m
With differential support settlement S = 5mm

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)						
		8.0	9.0	10.0	11.0	12.0	13.0	14.0
300	a	0.50	0.63	0.75	0.86	0.97	1.10	1.21
	b	1.10	1.35	1.60	1.86	2.12	2.37	2.63
	d	0.50	0.63	0.75	0.86	0.97	1.10	1.21
600	a	0.52	0.65	0.78	0.89	1.00	1.13	1.25
	b	1.11	1.40	1.68	1.94	2.20	2.45	2.70
	d	0.75	0.75	0.78	0.89	1.00	1.12	1.25
900	a	0.52	0.65	0.78	0.91	1.04	1.17	1.28
	b	1.11	1.40	1.69	1.98	2.27	2.52	2.78
	d	1.05	1.05	1.05	1.05	1.05	1.17	1.28
1300	a	0.49	0.65	0.78	0.91	1.04	1.17	1.30
	b	1.12	1.40	1.69	1.98	2.27	2.56	2.85
	d	1.45	1.45	1.45	1.45	1.45	1.45	1.45



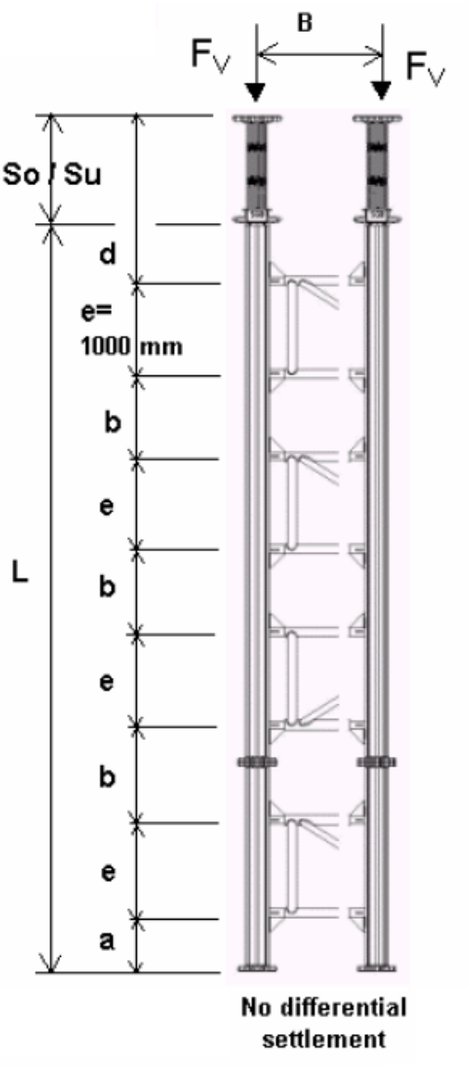
3. Working Load Limits (WLL)

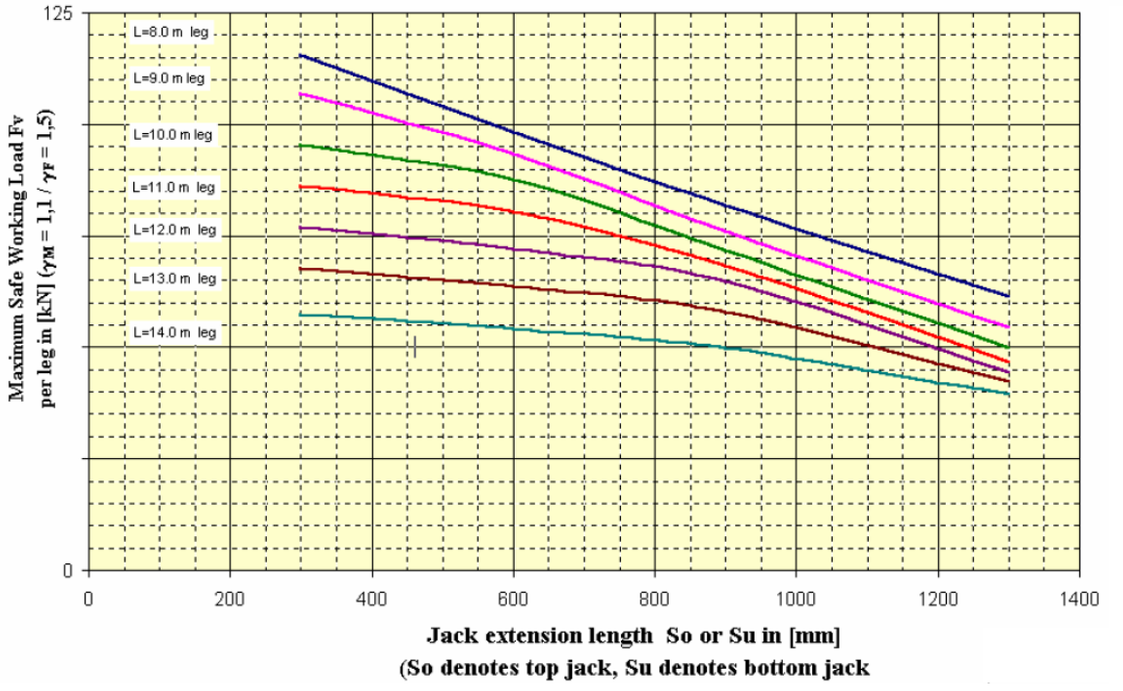
Gass Tower - 1 Jack

With top and bottom jack and four bracing frames.
Leg Heights (L): 8.00-14.00m
Without differential support settlements

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.

Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)						
		8.0	9.0	10.0	11.0	12.0	13.0	14.0
300	a	0.50	0.63	0.75	0.86	0.97	1.10	1.21
	b	1.10	1.35	1.60	1.86	2.12	2.37	2.63
	d	0.50	0.63	0.75	0.86	0.97	1.10	1.21
600	a	0.52	0.65	0.78	0.89	1.00	1.13	1.25
	b	1.11	1.40	1.68	1.94	2.20	2.45	2.70
	d	0.75	0.75	0.78	0.89	1.00	1.12	1.25
900	a	0.52	0.65	0.78	0.91	1.04	1.17	1.28
	b	1.11	1.40	1.69	1.98	2.27	2.52	2.78
	d	1.05	1.05	1.05	1.05	1.05	1.17	1.28
1300	a	0.49	0.65	0.78	0.91	1.04	1.17	1.30
	b	1.12	1.40	1.69	1.98	2.27	2.56	2.85
	d	1.45	1.45	1.45	1.45	1.45	1.45	1.45





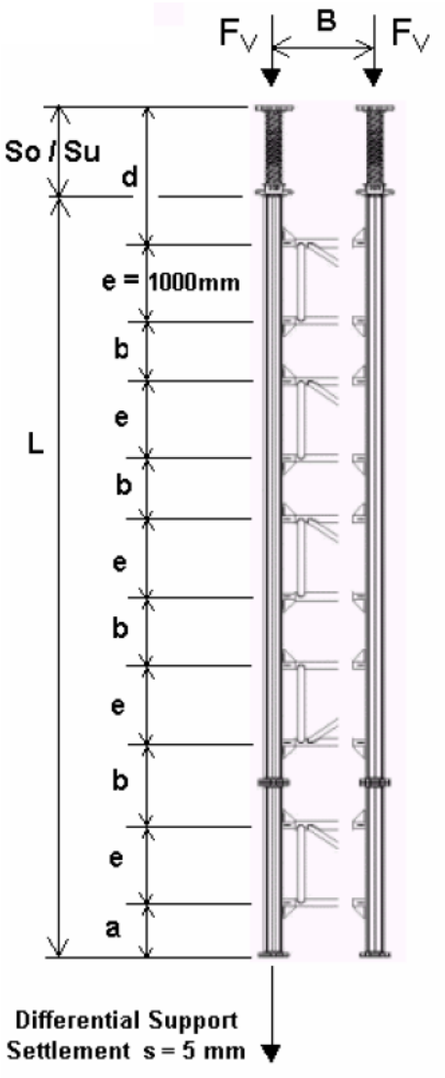
3. Working Load Limits (WLL)

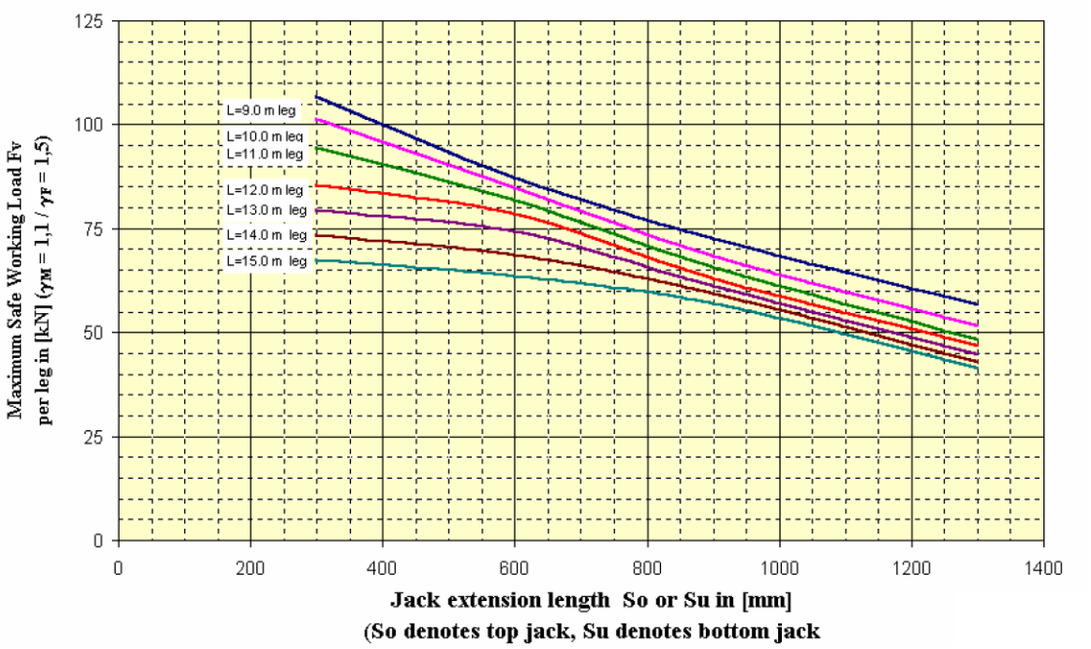
Gass Tower - 1 Jack

With top and bottom jack and five bracing frames.
Leg Heights (L): 9.00m - 15.00m
With differential support settlement S = 5mm

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.

Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)						
		9.0	10.0	11.0	12.0	13.0	14.0	15.0
300	a	0.41	0.49	0.59	0.69	0.77	0.87	0.97
	b	0.86	1.08	1.28	1.48	1.69	1.89	2.09
	d	0.45	0.49	0.59	0.69	0.77	0.87	0.97
600	a	0.41	0.49	0.61	0.69	0.80	0.90	1.00
	b	0.86	1.09	1.31	1.54	1.75	1.95	2.15
	d	0.75	0.75	0.75	0.75	0.80	0.90	1.00
900	a	0.41	0.49	0.61	0.69	0.81	0.93	1.01
	b	0.86	1.09	1.31	1.54	1.76	1.98	2.21
	d	1.05	1.05	1.05	1.05	1.05	1.05	1.05
1300	a	0.41	0.49	0.61	0.69	0.81	0.93	1.01
	b	0.86	1.09	1.31	1.54	1.76	1.98	2.21
	d	1.45	1.45	1.45	1.45	1.45	1.45	1.45



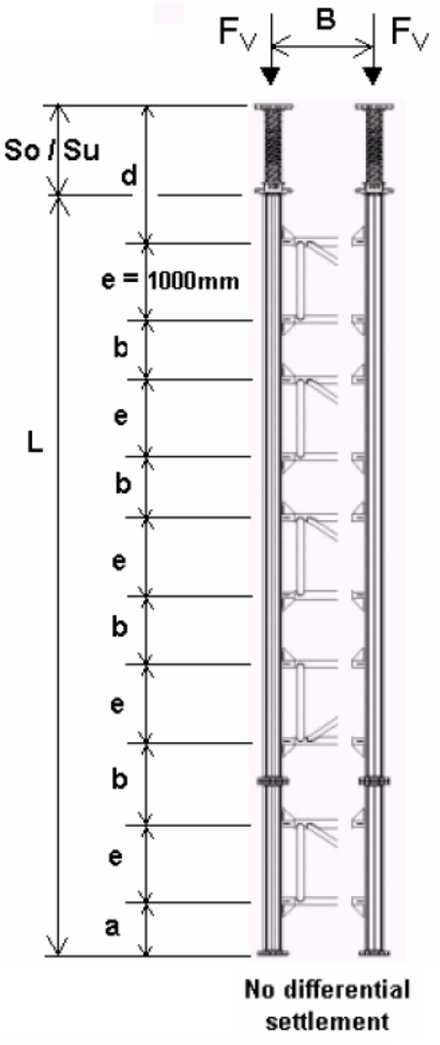


3. Working Load Limits (WLL)

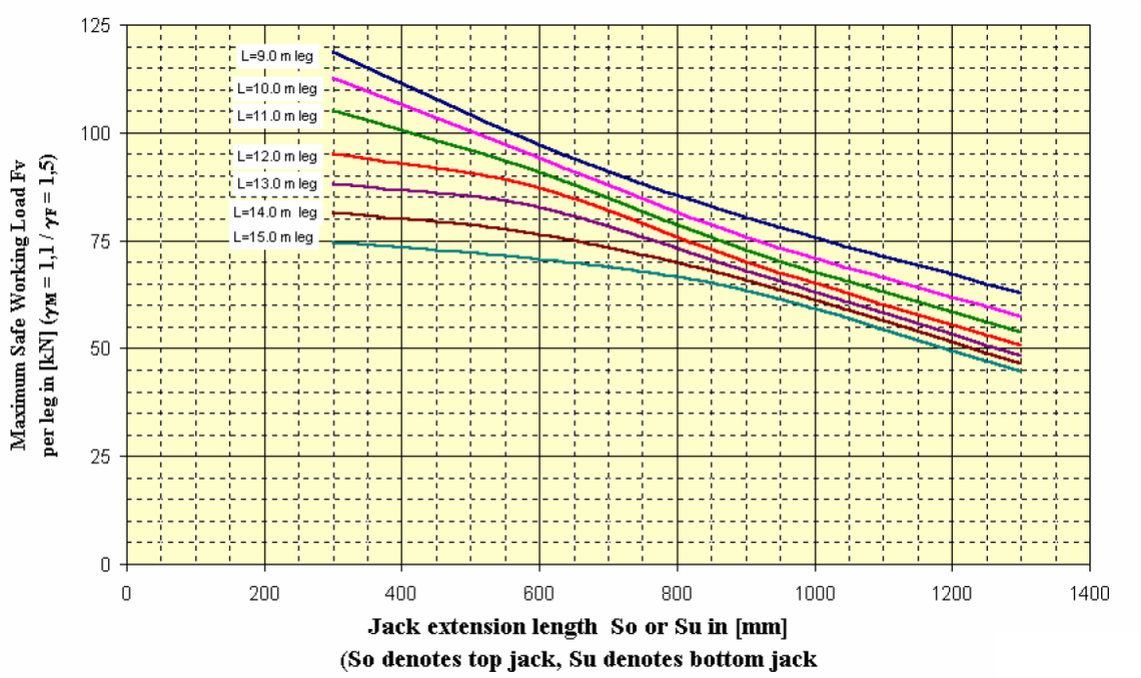
Gass Tower - 1 Jack

With top and bottom jack and five bracing frames.
Leg Heights (L): 9.00-15.00m
Without differential support settlements

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)						
		9.0	10.0	11.0	12.0	13.0	14.0	15.0
300	a	0.41	0.49	0.59	0.69	0.77	0.87	0.97
	b	0.86	1.08	1.28	1.48	1.69	1.89	2.09
	d	0.45	0.49	0.59	0.69	0.77	0.87	0.97
600	a	0.41	0.49	0.61	0.69	0.80	0.90	1.00
	b	0.86	1.09	1.31	1.54	1.75	1.95	2.15
	d	0.75	0.75	0.75	0.75	0.80	0.90	1.00
900	a	0.41	0.49	0.61	0.69	0.81	0.93	1.01
	b	0.86	1.09	1.31	1.54	1.76	1.98	2.21
	d	1.05	1.05	1.05	1.05	1.05	1.05	1.05
1300	a	0.41	0.49	0.61	0.69	0.81	0.93	1.01
	b	0.86	1.09	1.31	1.54	1.76	1.98	2.21
	d	1.45	1.45	1.45	1.45	1.45	1.45	1.45

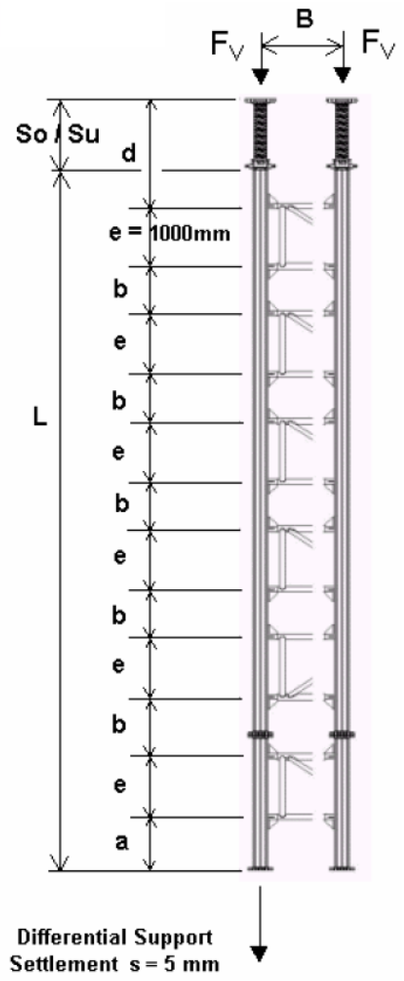


3. Working Load Limits (WLL)

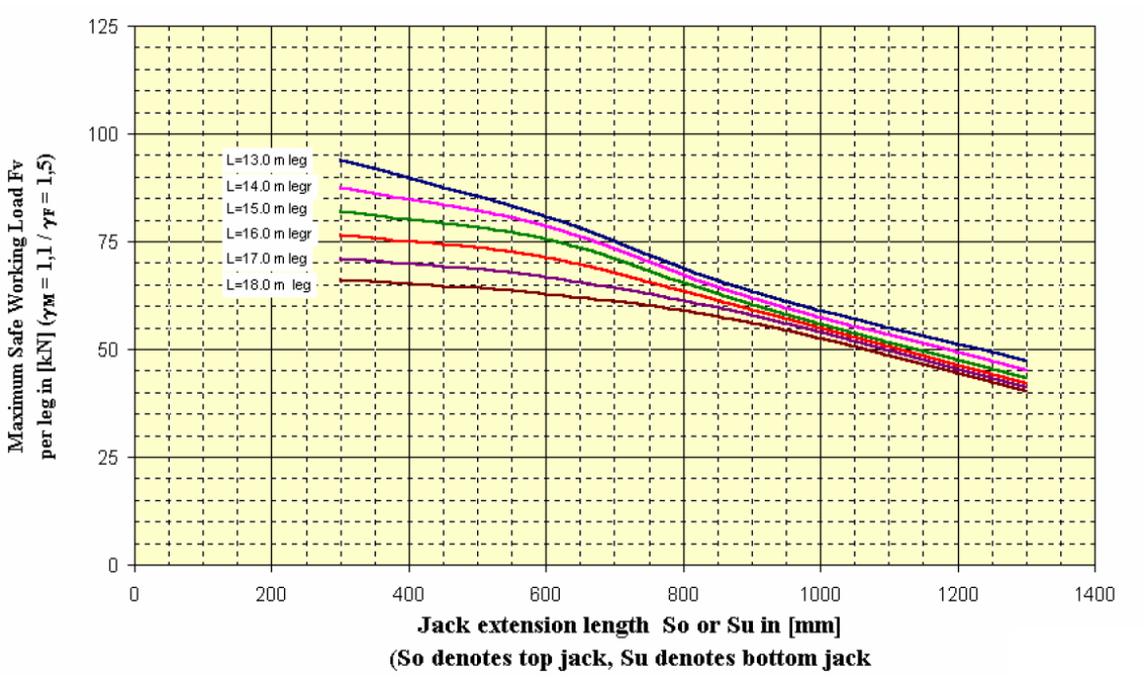
Gass Tower - 1 Jack

With top and bottom jack and six bracing frames.
Leg Heights (L): 12.00m - 18.00m
With differential support settlement S = 5mm

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)					
		13.0	14.0	15.0	16.0	17.0	18.0
300	a	0.58	0.65	0.73	0.80	0.88	0.95
	b	1.23	1.40	1.57	1.74	1.91	2.08
	d	0.58	0.65	0.73	0.80	0.88	0.95
600	a	0.60	0.65	0.75	0.83	0.90	0.98
	b	1.25	1.44	1.62	1.79	1.96	2.13
	d	0.75	0.75	0.75	0.82	0.90	0.97
900	a	0.60	0.65	0.75	0.85	0.90	1.00
	b	1.25	1.44	1.62	1.80	1.99	2.17
	d	1.05	1.05	1.05	1.05	1.05	1.05
1300	a	0.60	0.65	0.75	0.85	0.90	1.00
	b	1.25	1.44	1.62	1.80	1.99	2.17
	d	1.45	1.45	1.45	1.45	1.45	1.45

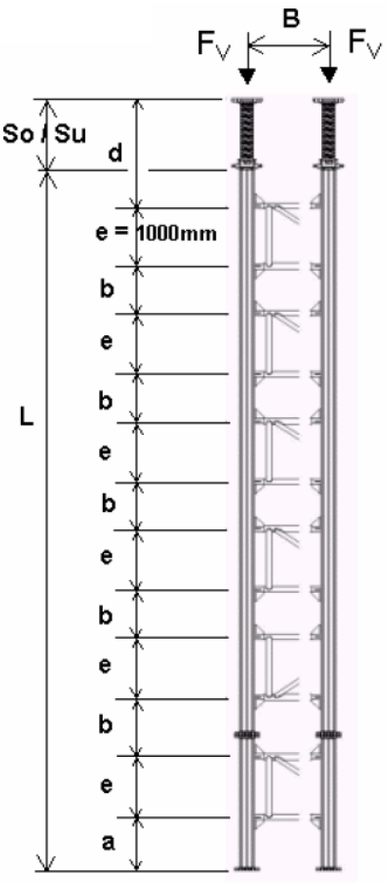


3. Working Load Limits (WLL)

Gass Tower - 1 Jack

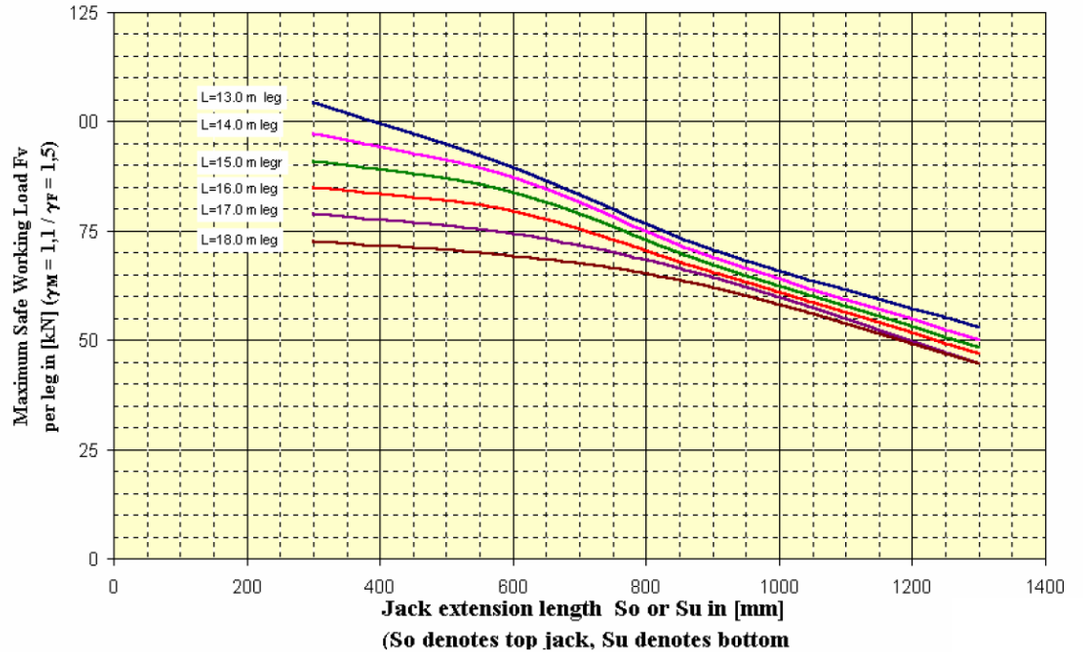
With top and bottom jack and six bracing frames.
Leg Heights (L): 12.00-18.00m
Without differential support settlements

- Jack may be at the top or at the bottom provided that the bracing frame(s) position relative to the jack is maintained.
- Spacing of ledger frame(s) dimensions a, b and d must be shown below.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



No differential settlement

Jack Extension (mm)	Dim's	Vertical Tube (leg) Length L (m)					
		13.0	14.0	15.0	16.0	17.0	18.0
300	a	0.58	0.65	0.73	0.80	0.88	0.95
	b	1.23	1.40	1.57	1.74	1.91	2.08
	d	0.58	0.65	0.73	0.80	0.88	0.95
600	a	0.60	0.65	0.75	0.83	0.90	0.98
	b	1.25	1.44	1.62	1.79	1.96	2.13
	d	0.75	0.75	0.75	0.82	0.90	0.97
900	a	0.60	0.65	0.75	0.85	0.90	1.00
	b	1.25	1.44	1.62	1.80	1.99	2.17
	d	1.05	1.05	1.05	1.05	1.05	1.05
1300	a	0.60	0.65	0.75	0.85	0.90	1.00
	b	1.25	1.44	1.62	1.80	1.99	2.17
	d	1.45	1.45	1.45	1.45	1.45	1.45

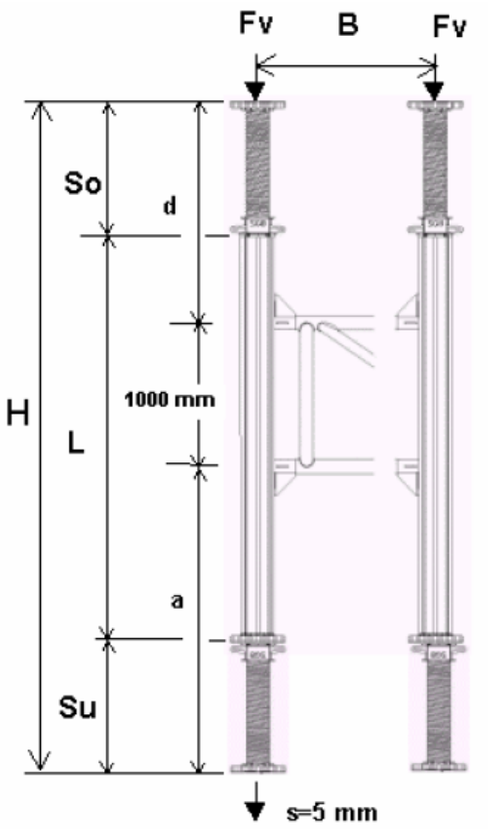


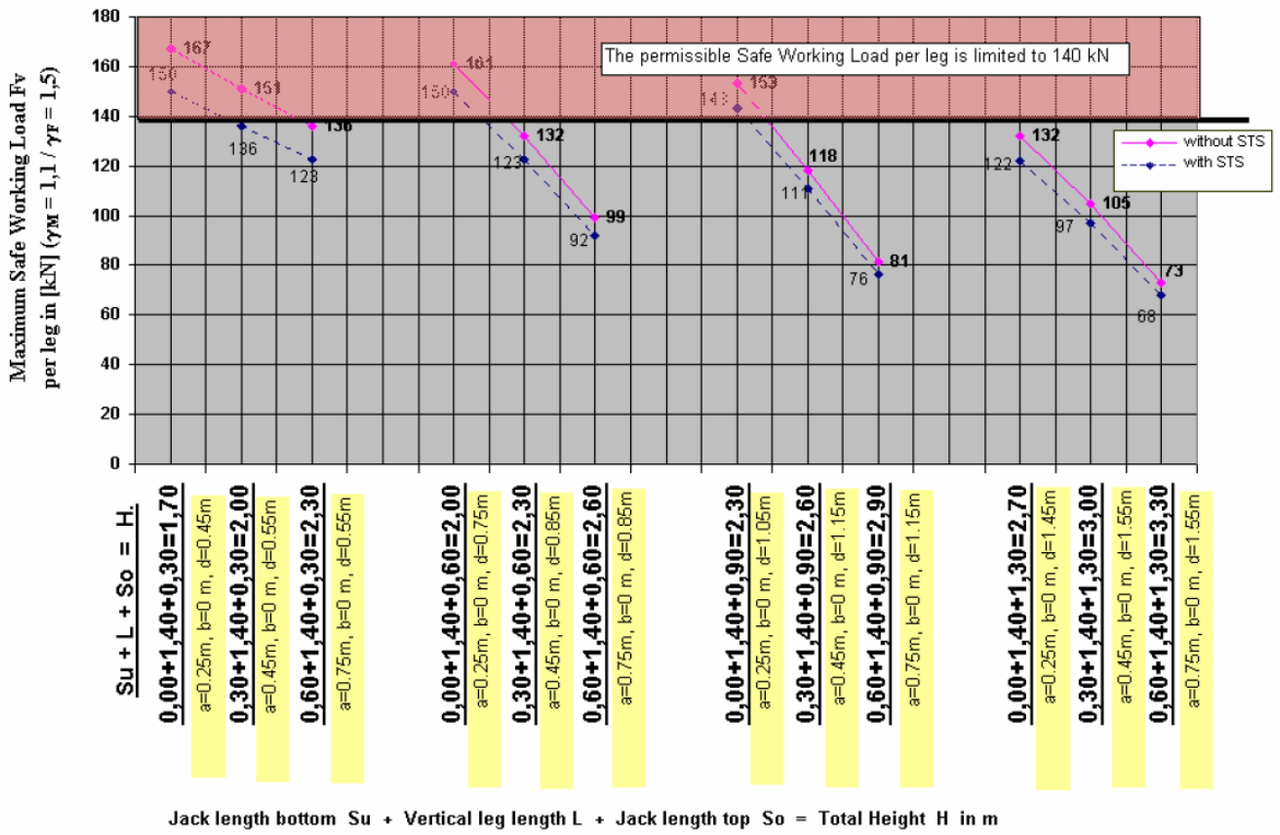
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and one bracing frame.
Leg Height (L): 1.4m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



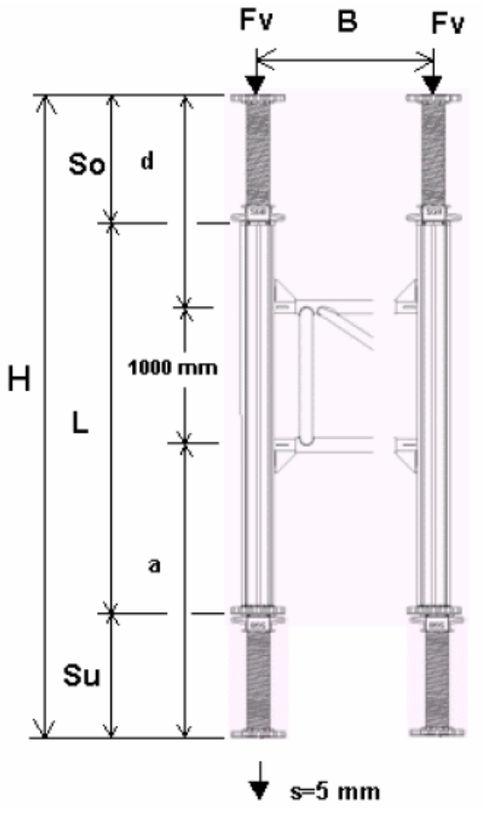


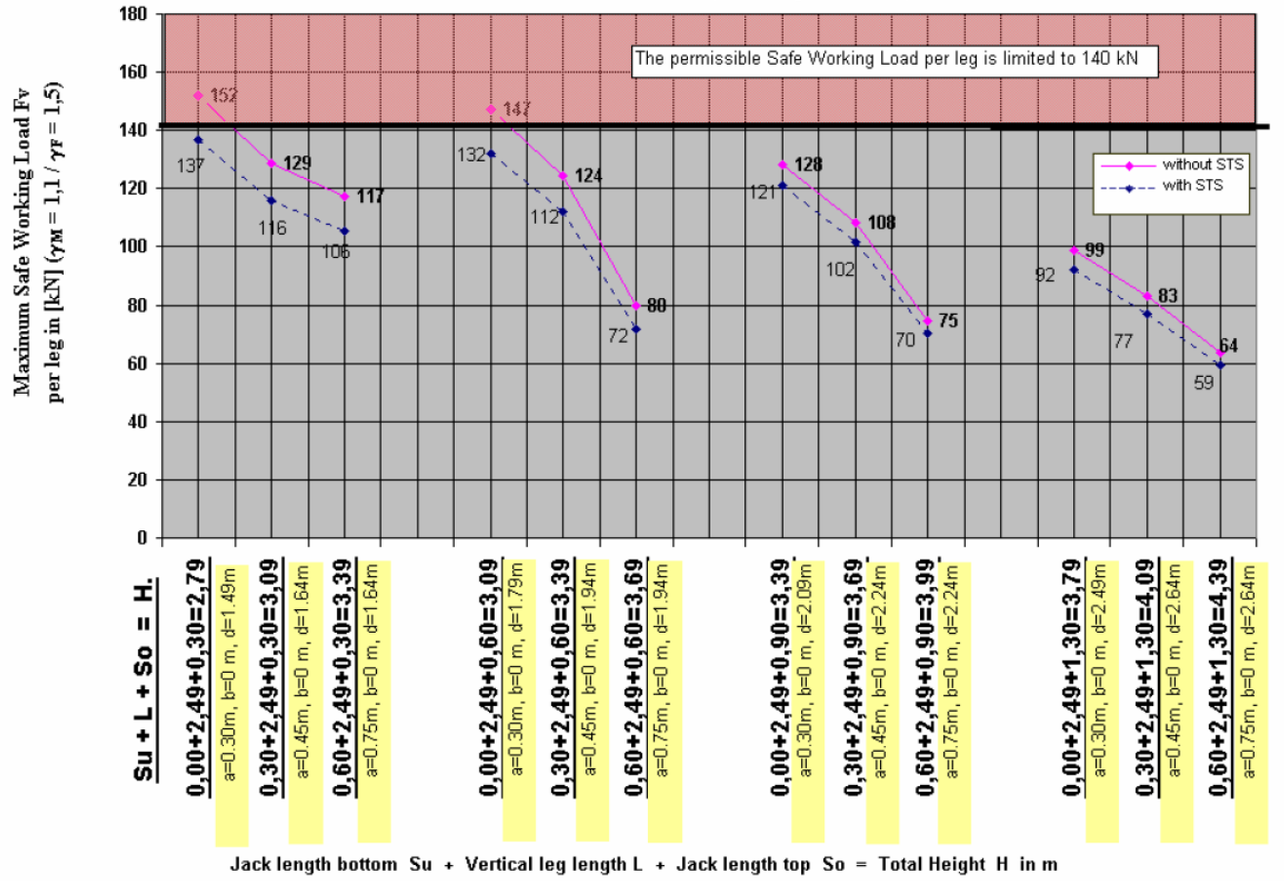
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and one bracing frame.
Leg Height (L): 2.49m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



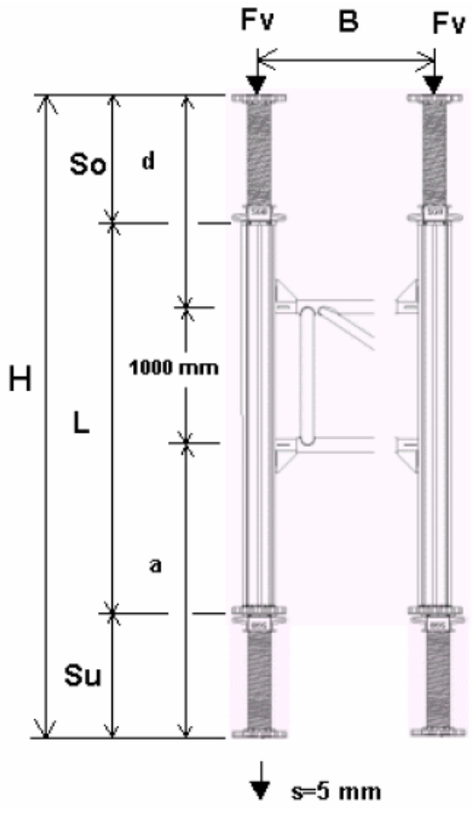


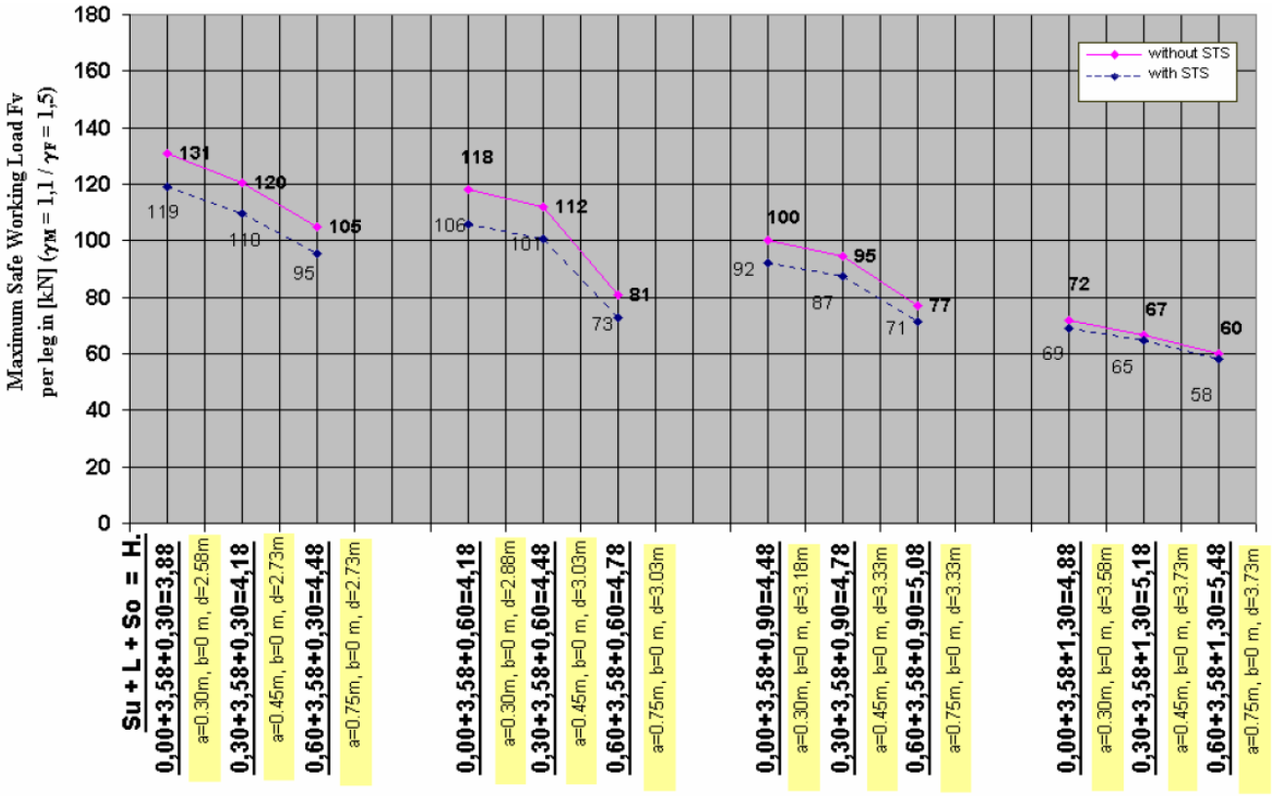
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and one bracing frame.
Leg Height (L): 3.58m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



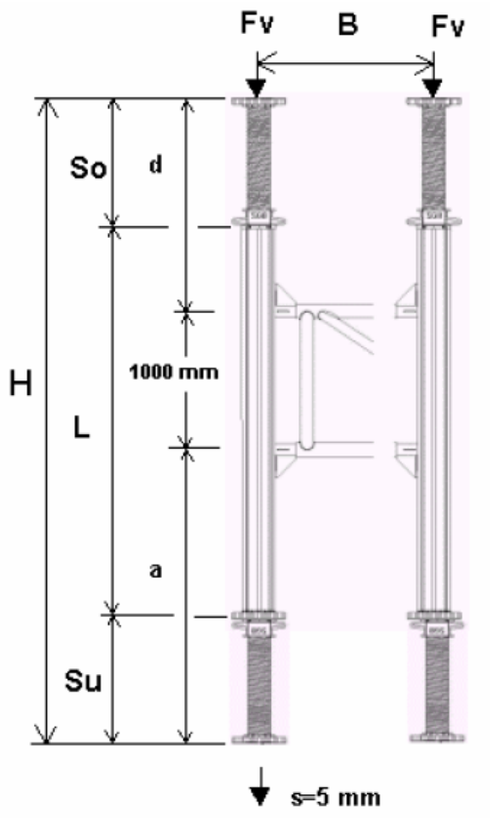


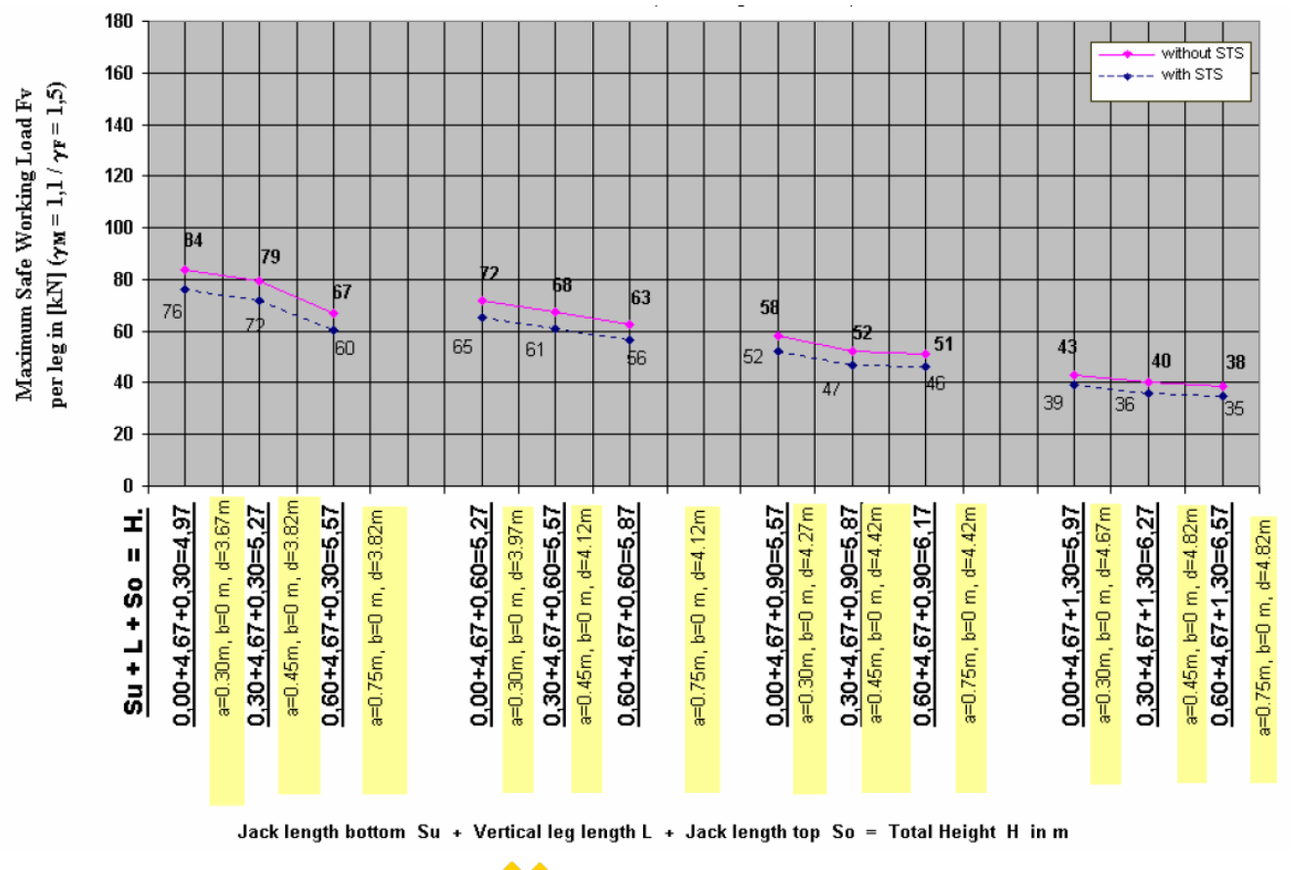
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and one bracing frame.
Leg Height (L): 4.67m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



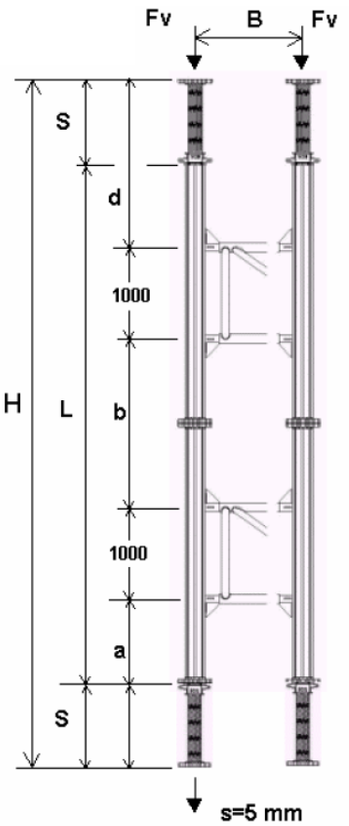


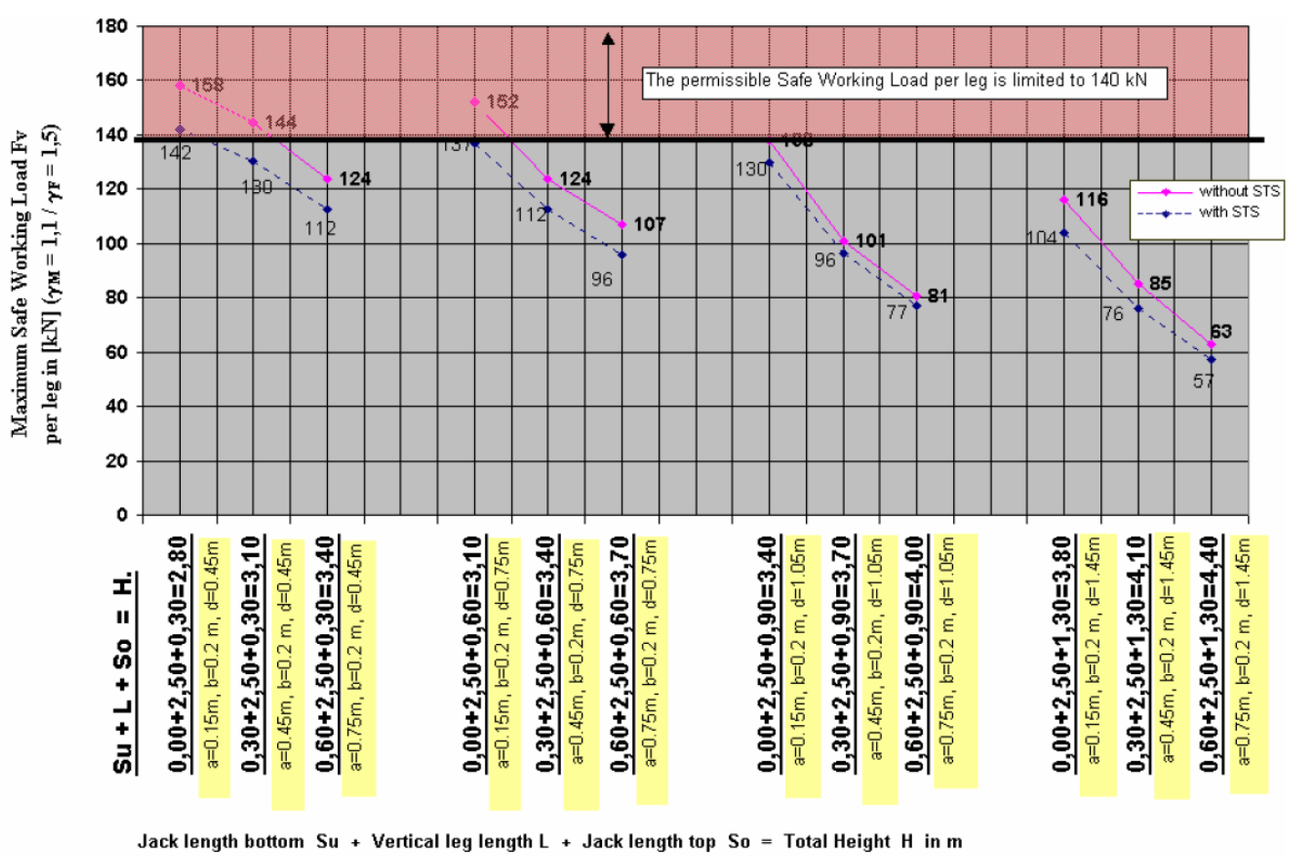
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and two bracing frames.
Leg Height (L): 2.5m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



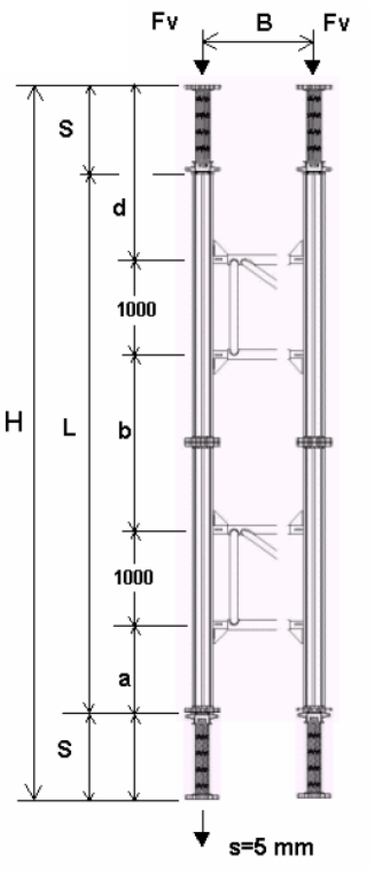


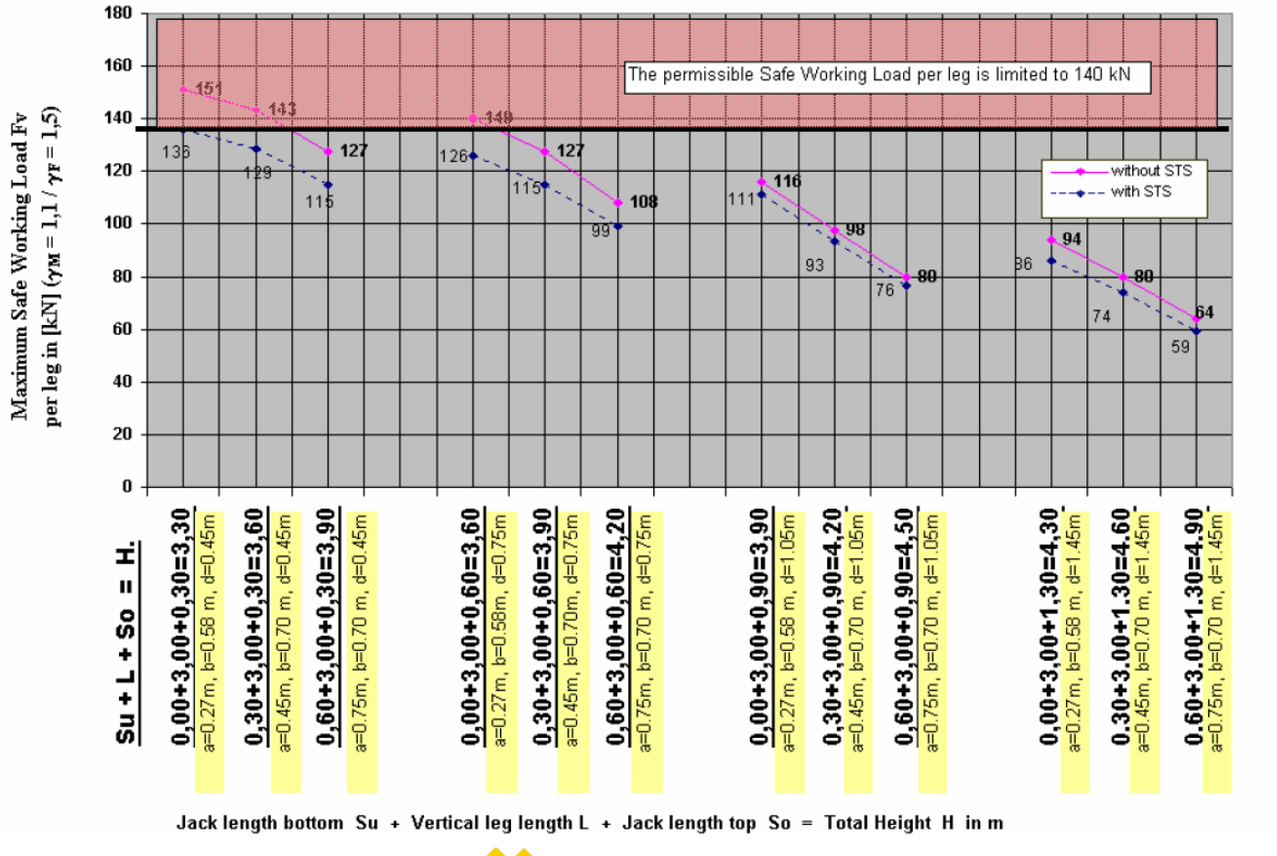
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and two bracing frames.
Leg Height (L): 3.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



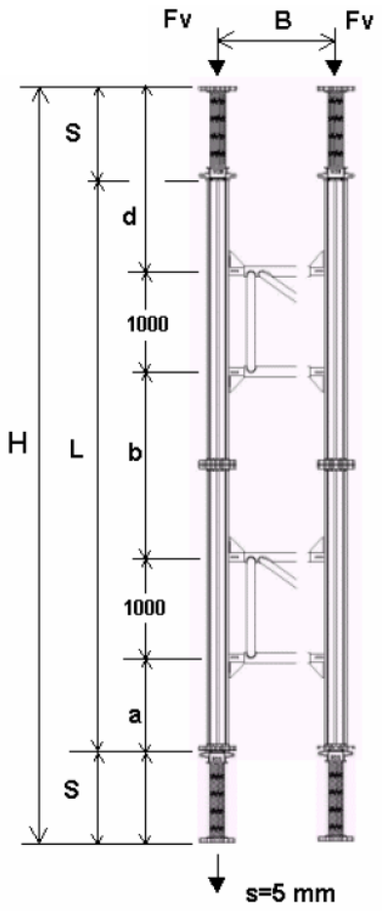


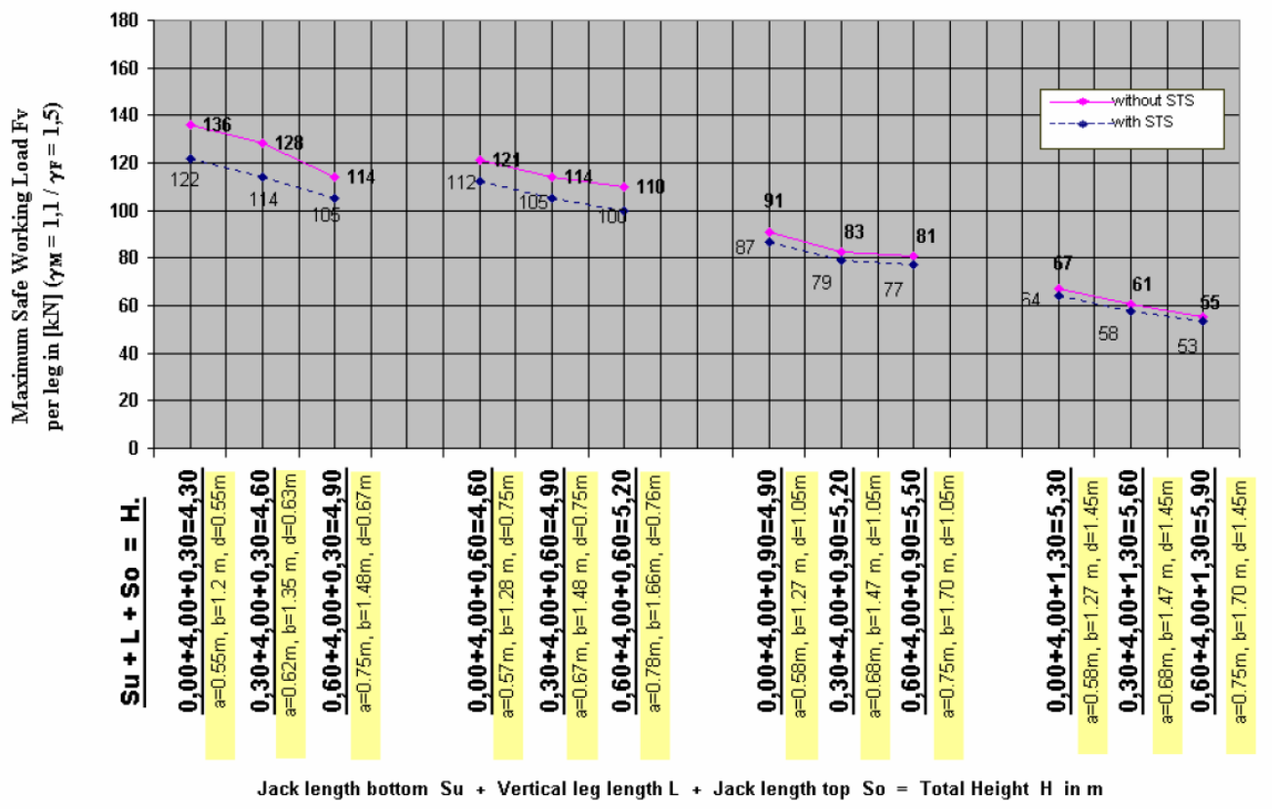
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and two bracing frames.
Leg Height (L): 4.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



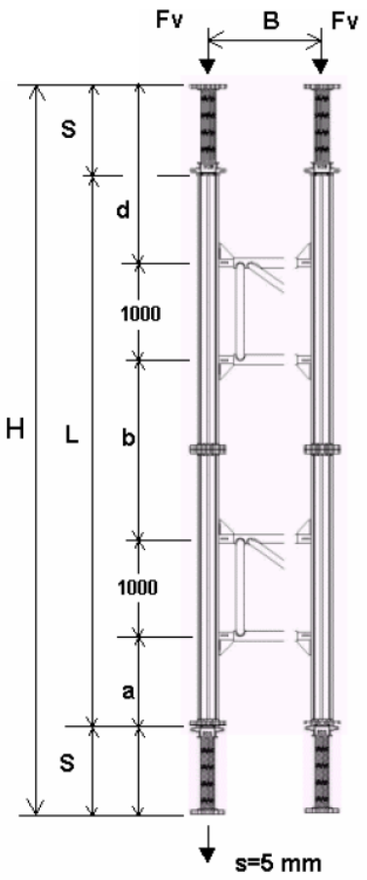


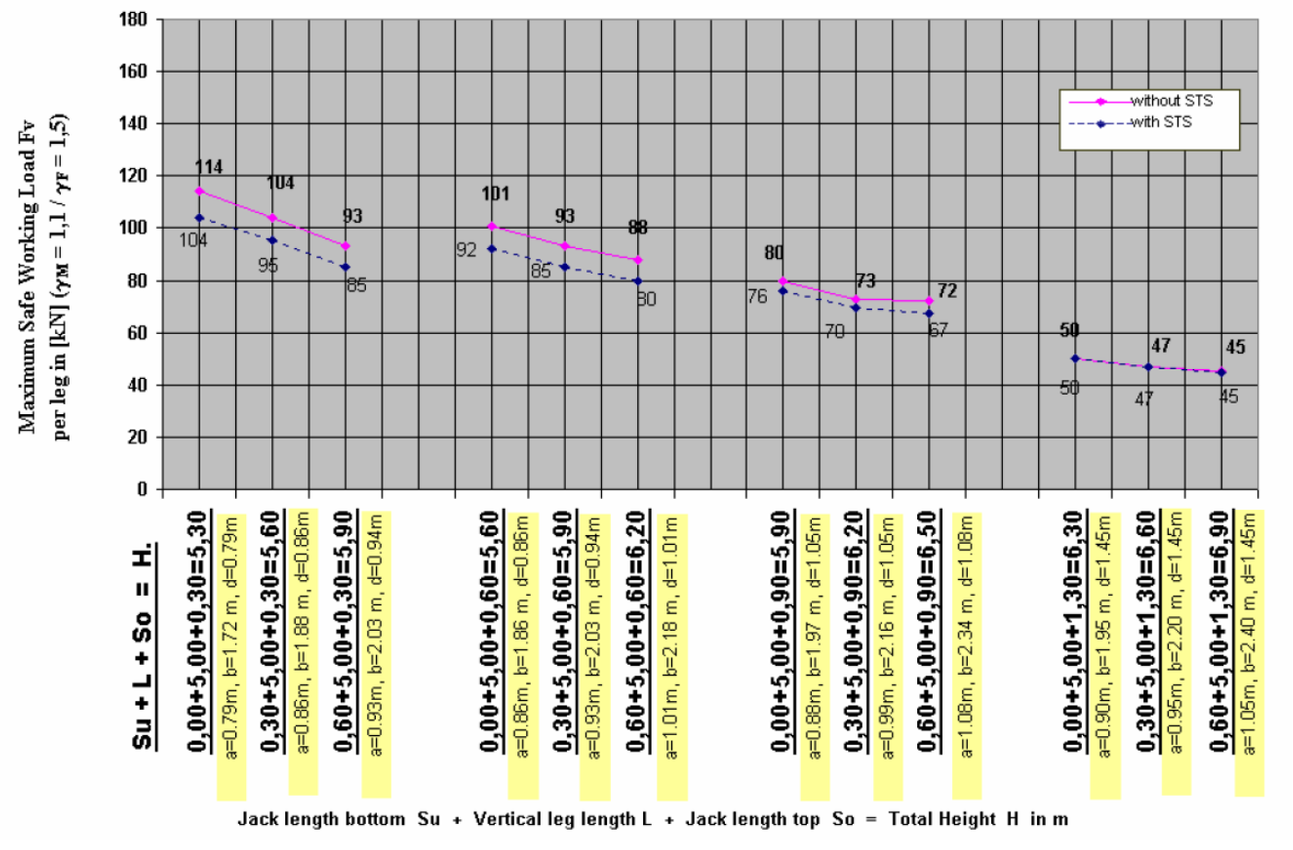
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and two bracing frames.
Leg Height (L): 5.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



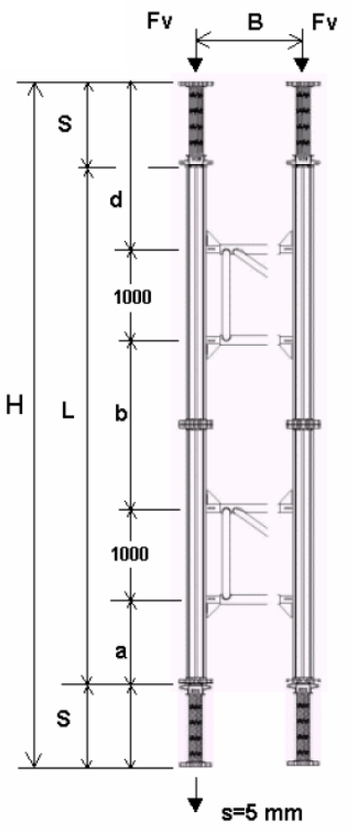


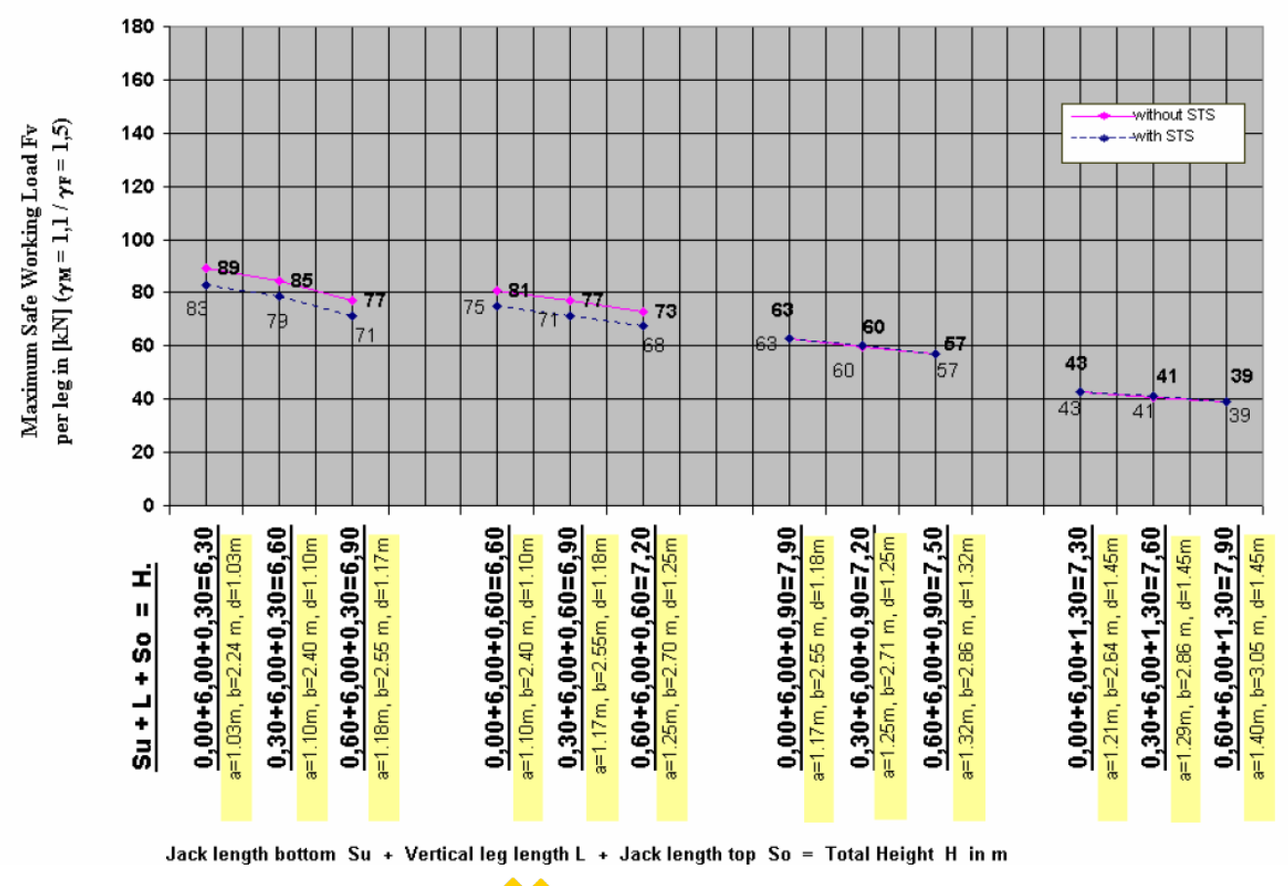
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and two bracing frames.
Leg Height (L): 6.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



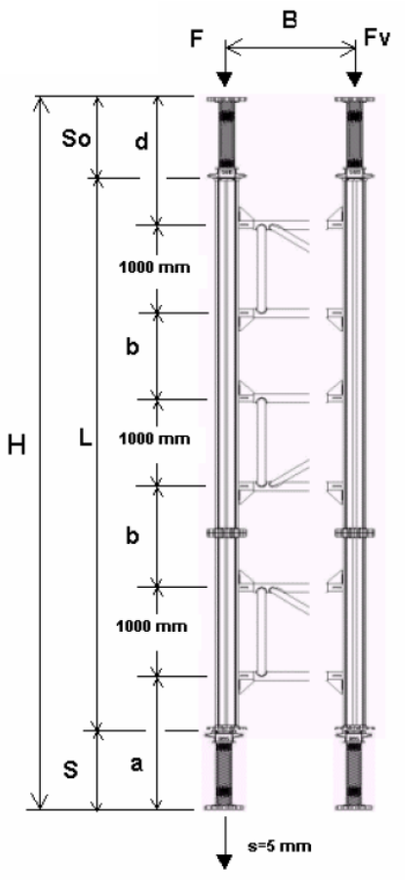


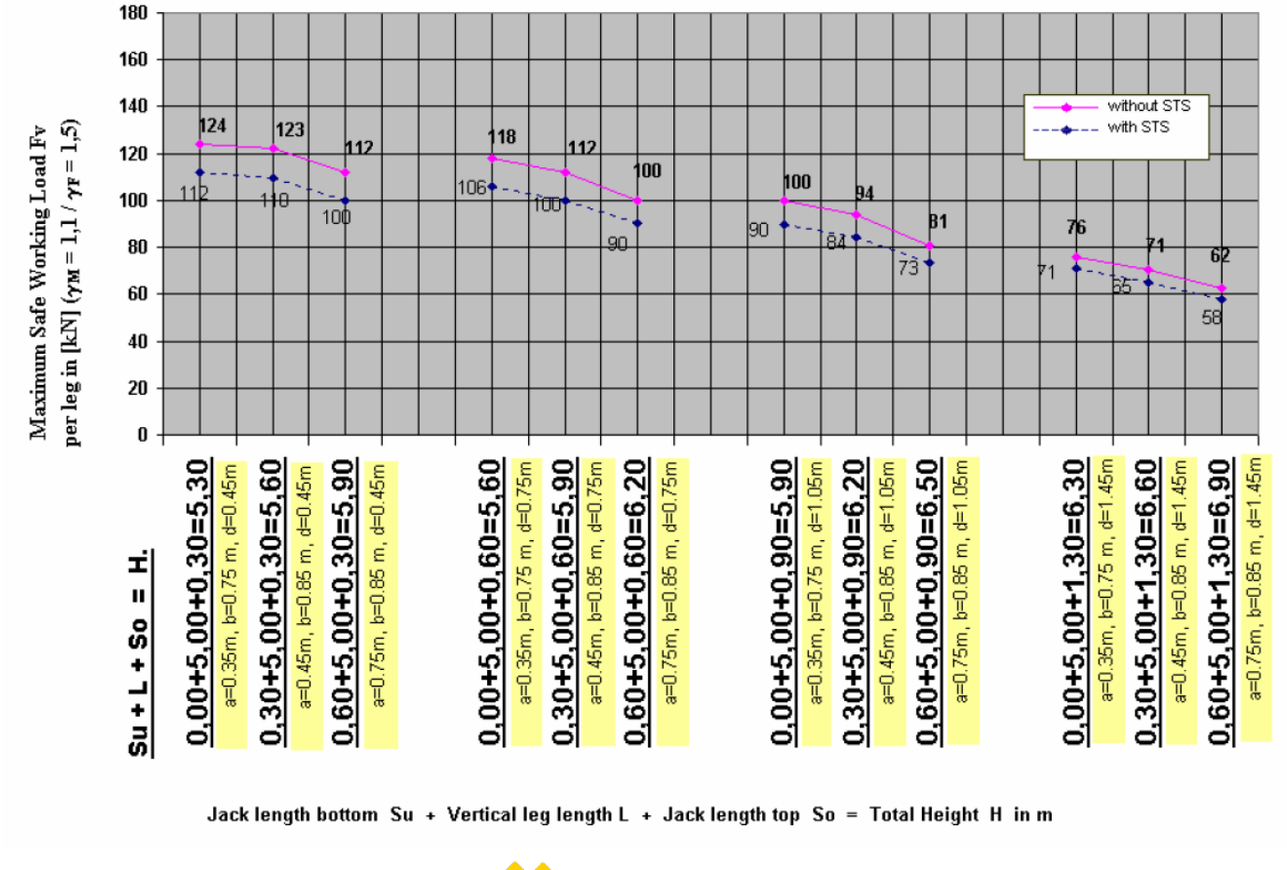
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and three bracing frames.
Leg Height (L): 5.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



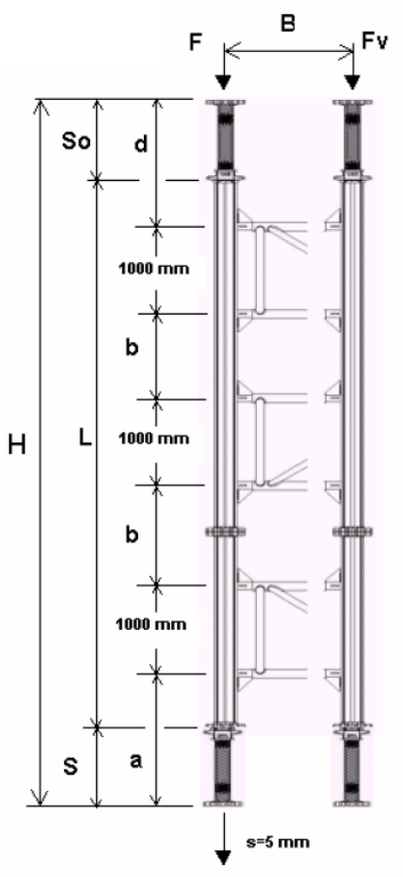


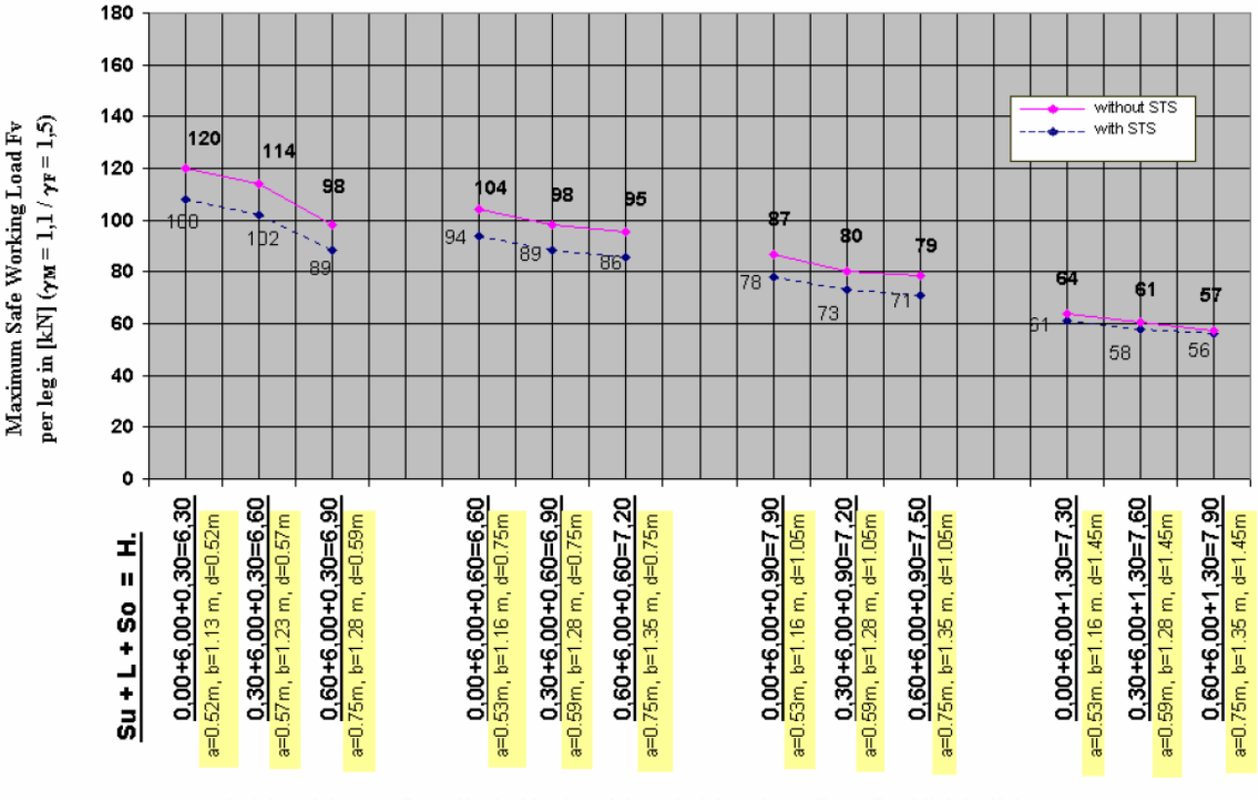
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and three bracing frames.
Leg Height (L): 6.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



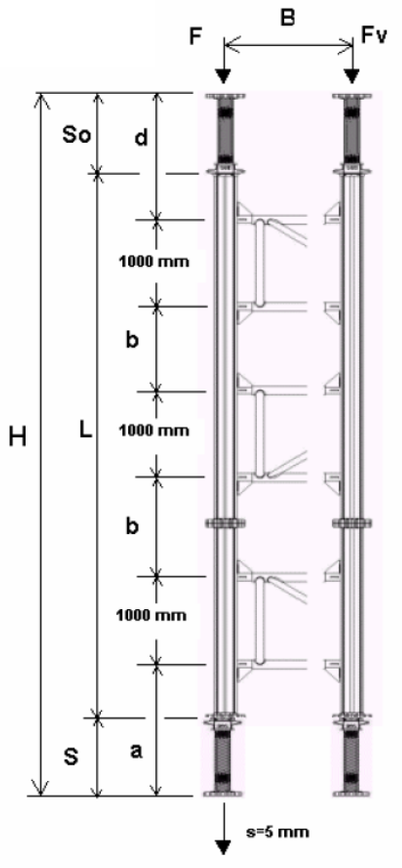


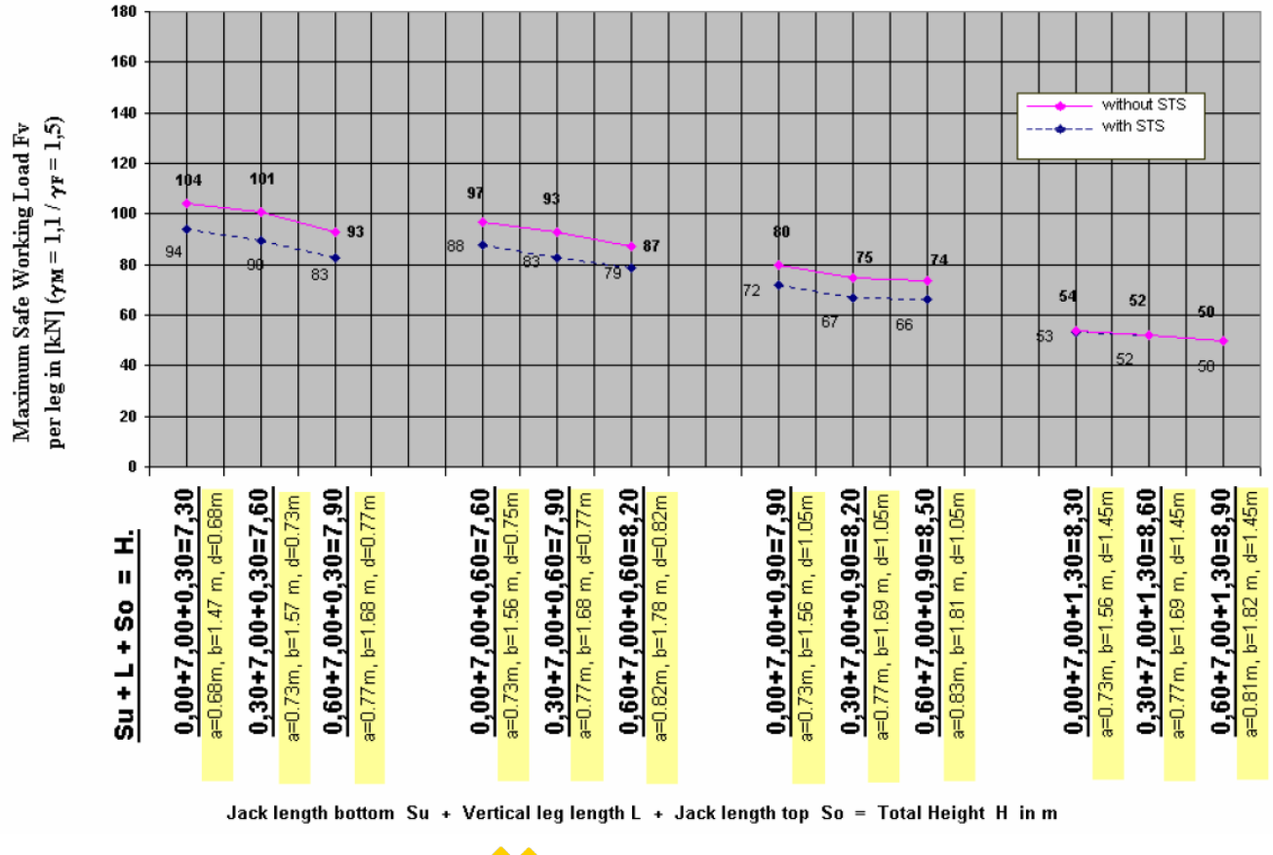
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and three bracing frames.
Leg Height (L): 7.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



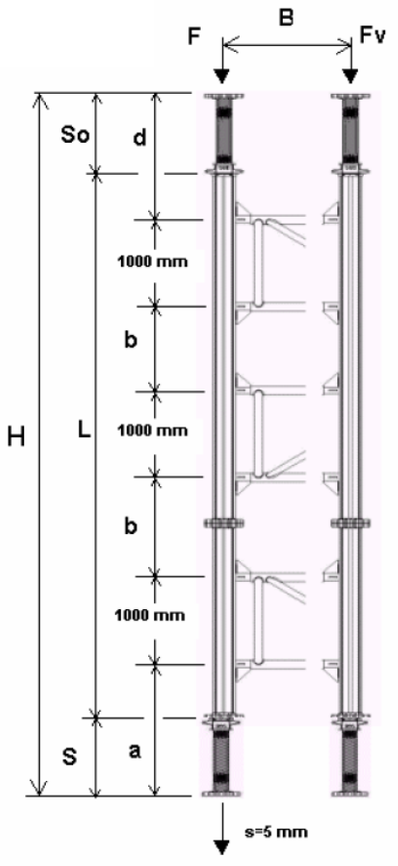


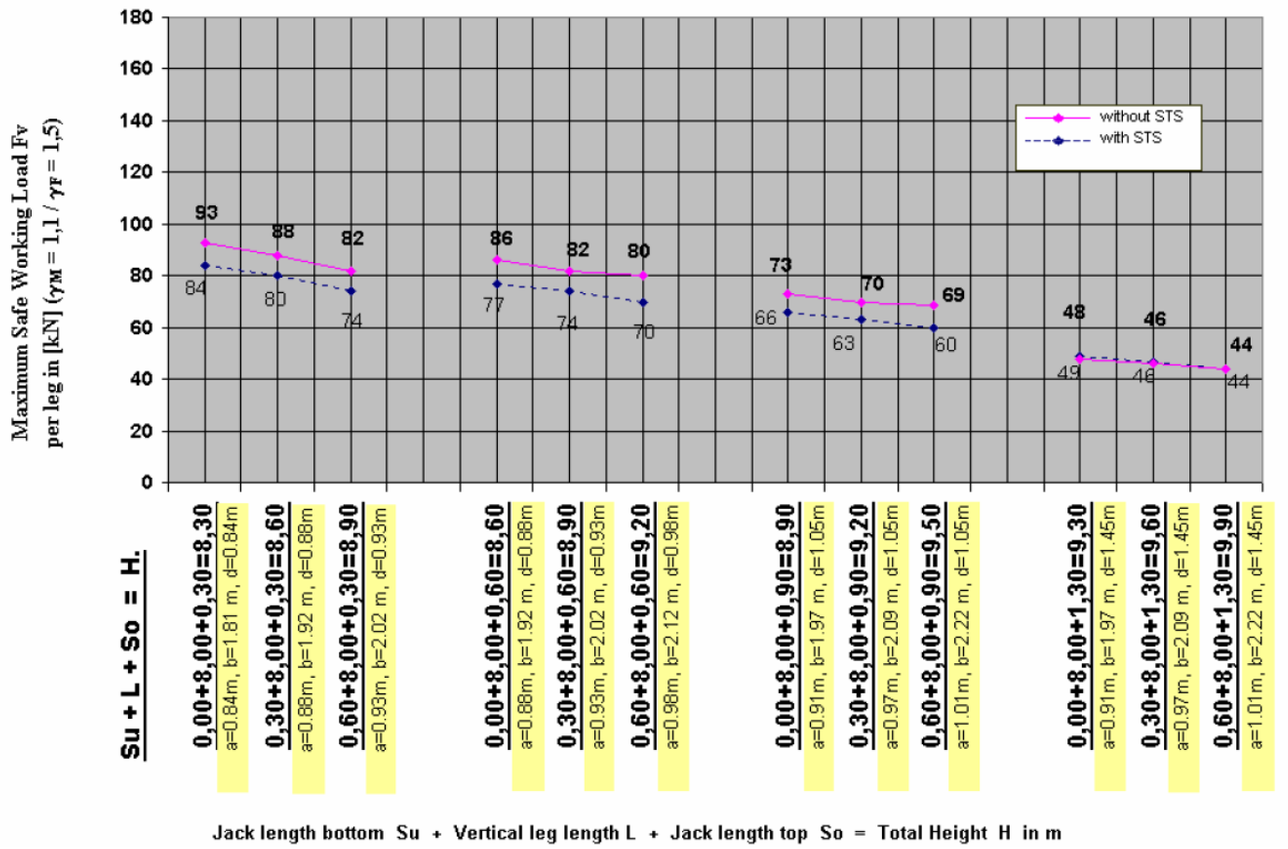
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and three bracing frames.
Leg Height (L): 8.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m , 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



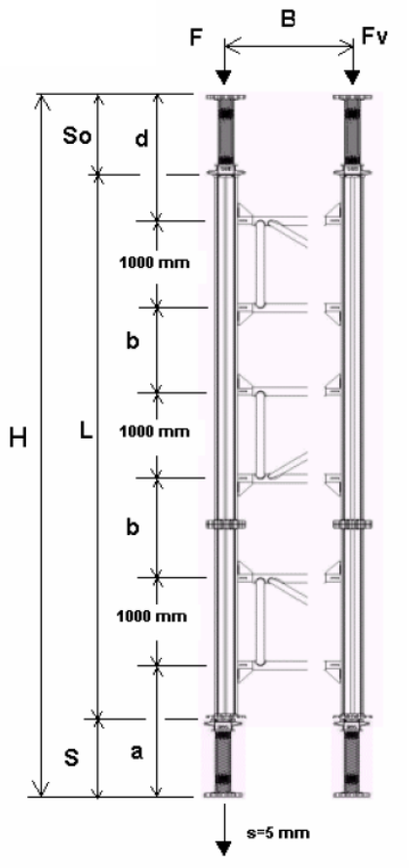


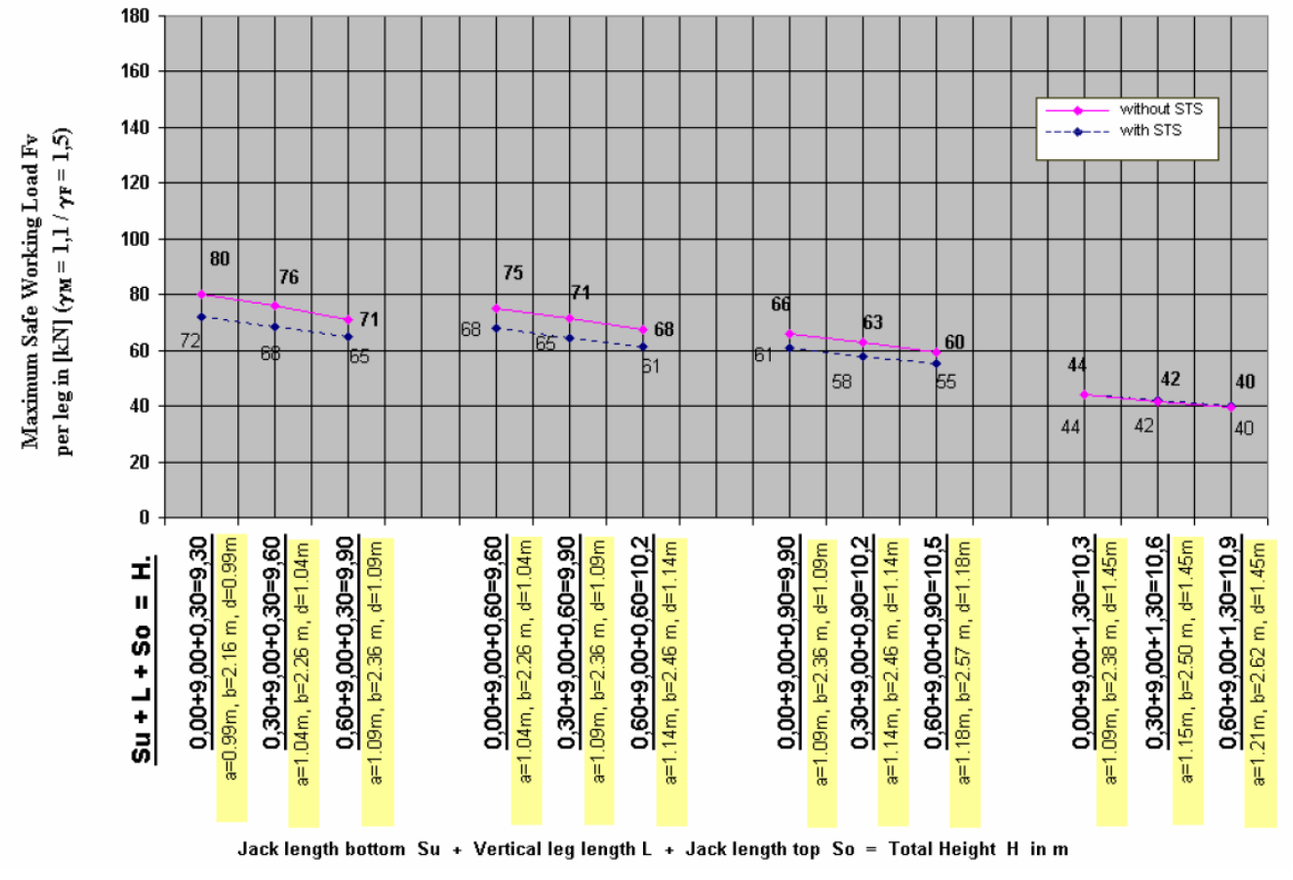
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and three bracing frames.
Leg Height (L): 9.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



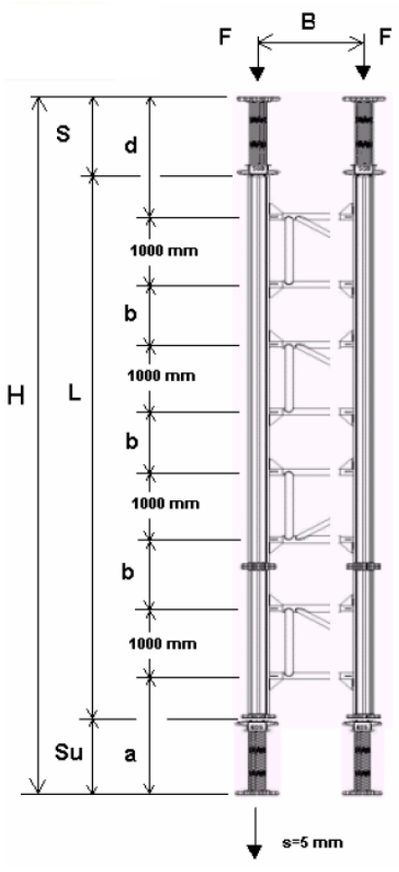


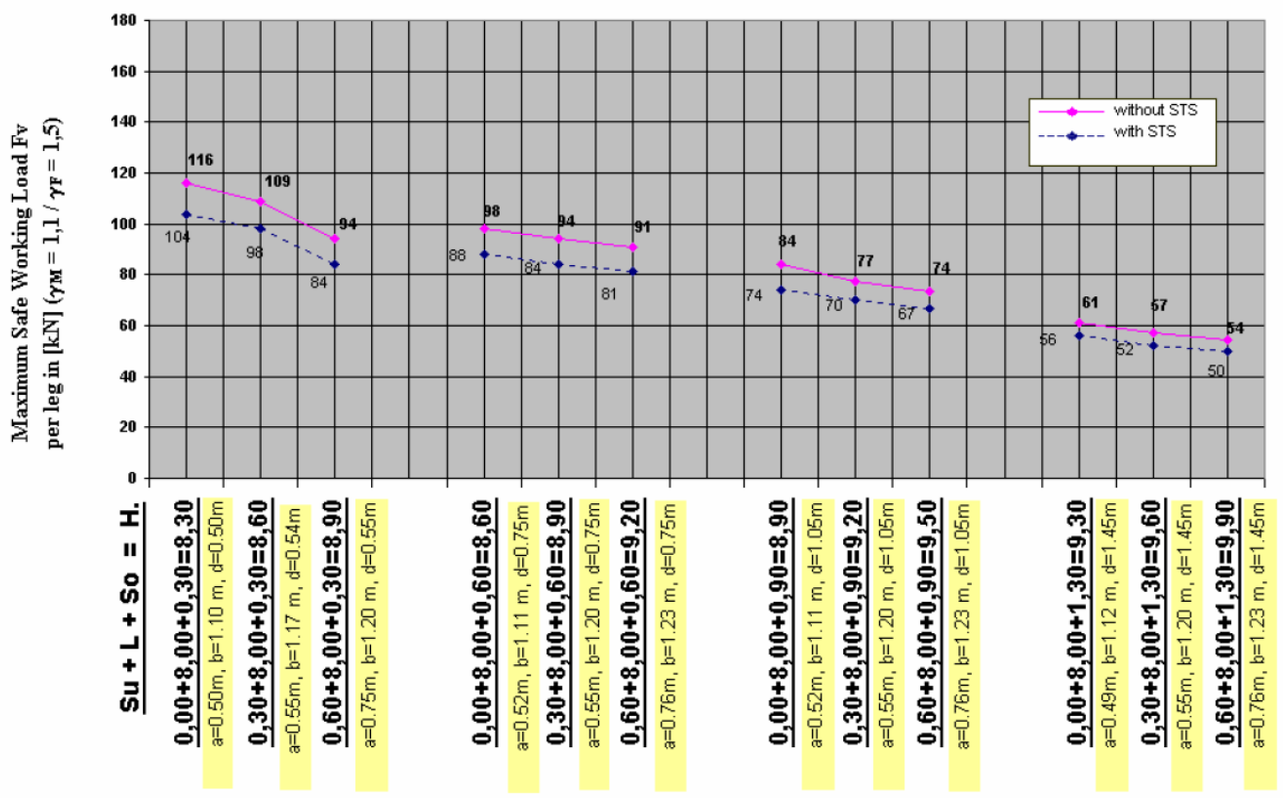
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 8.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



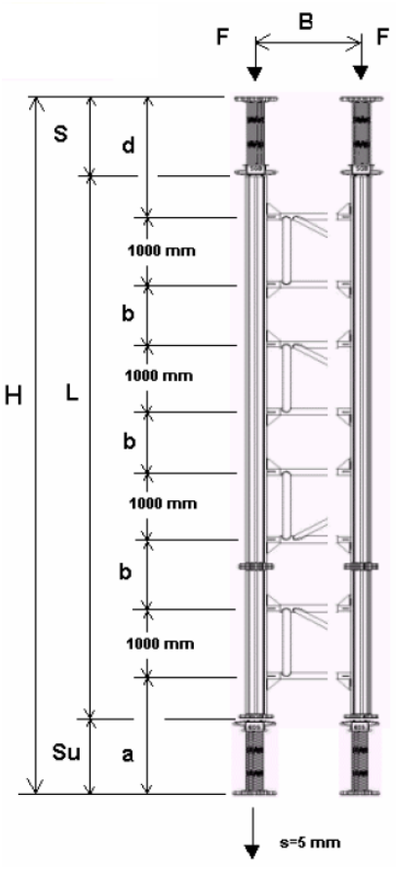


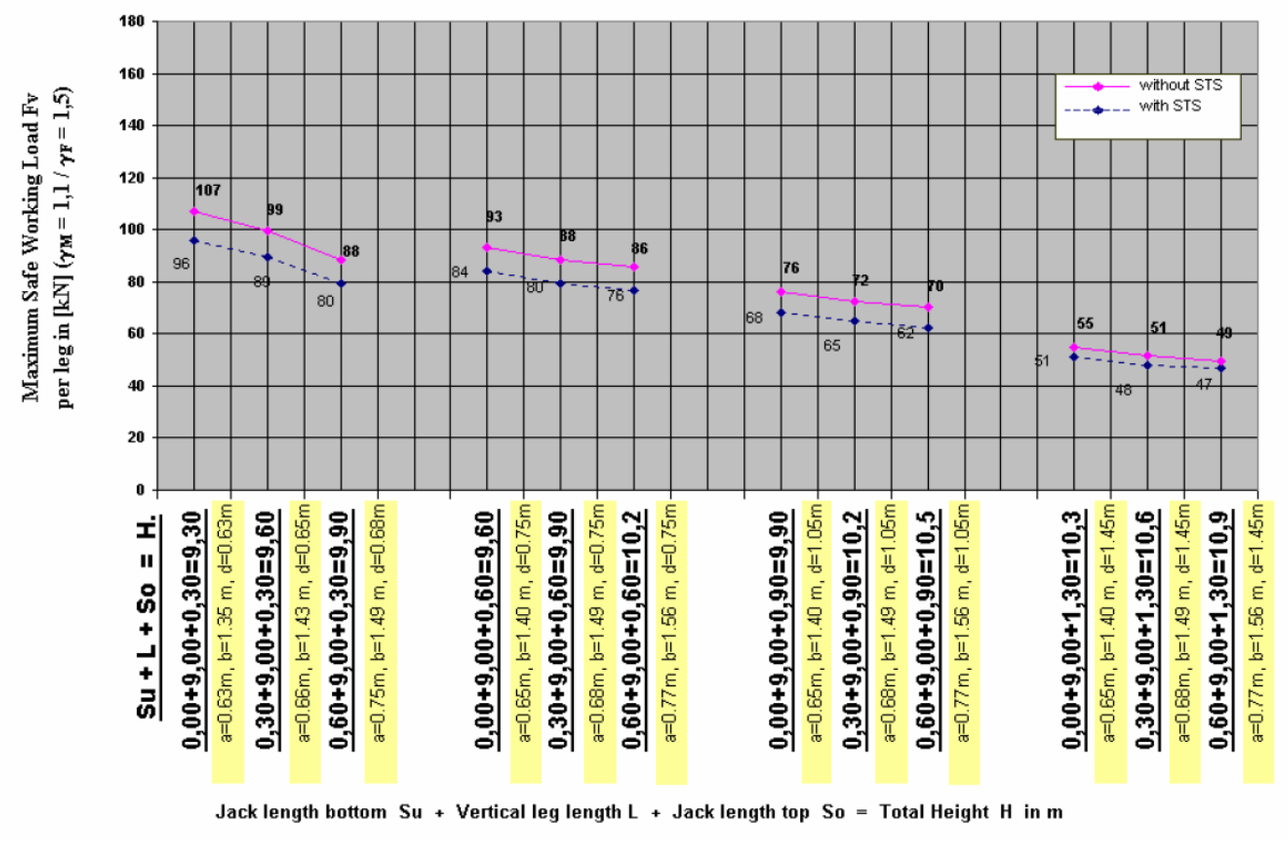
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 9.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



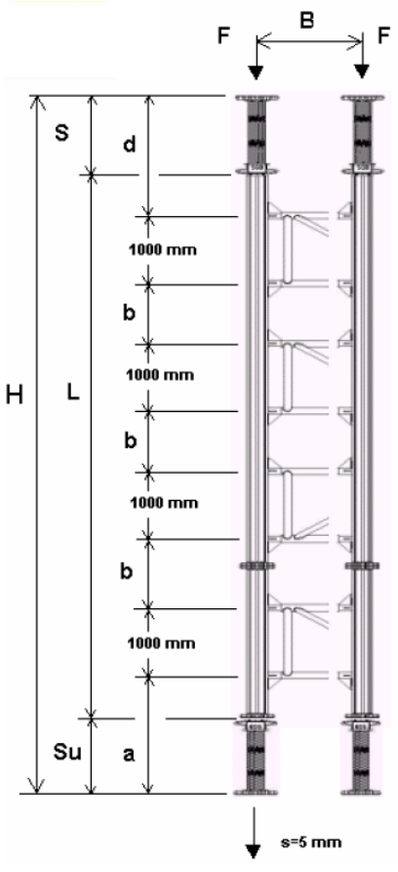


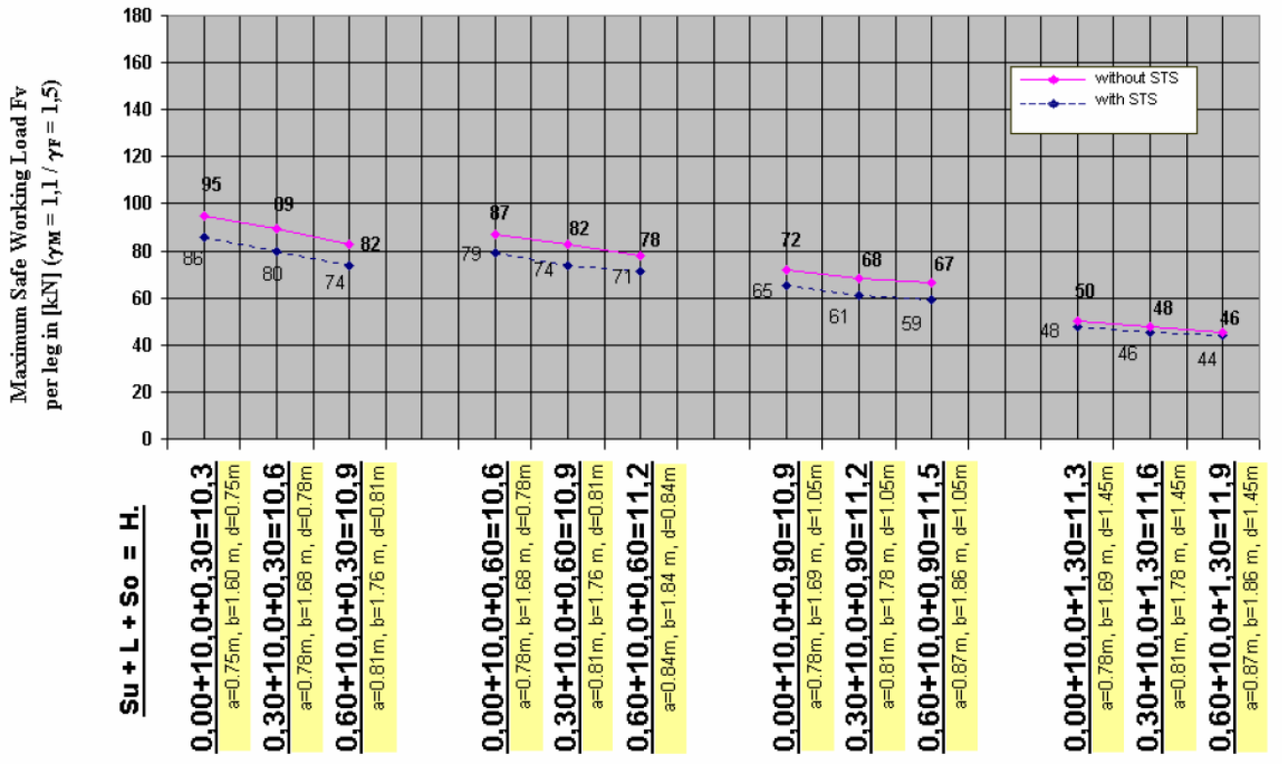
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 10.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



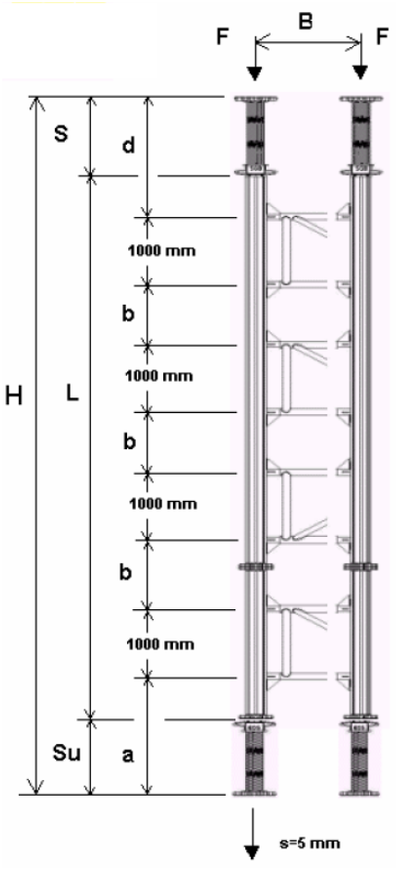


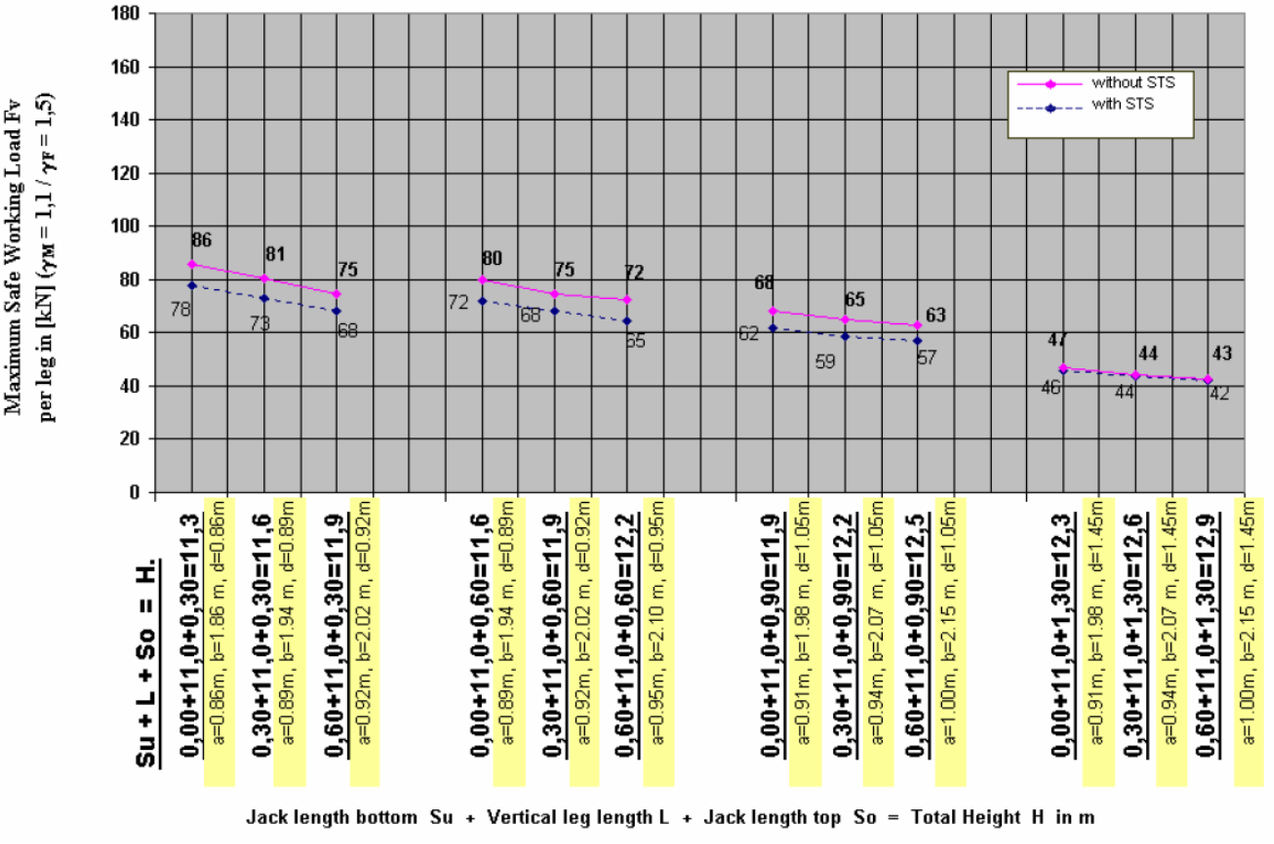
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 11.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



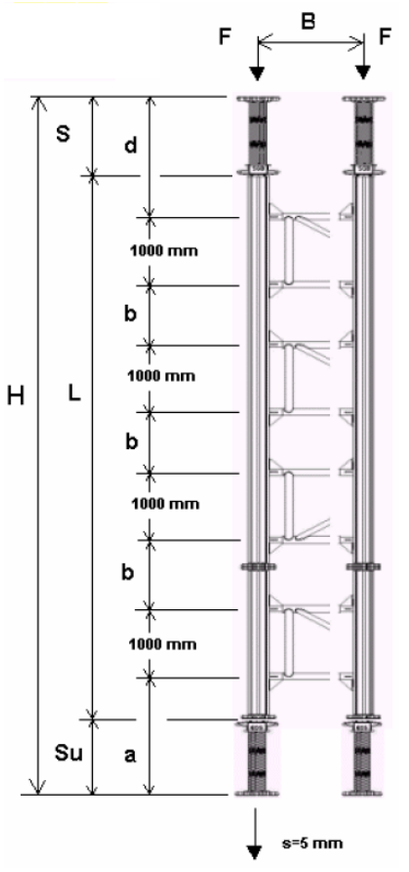


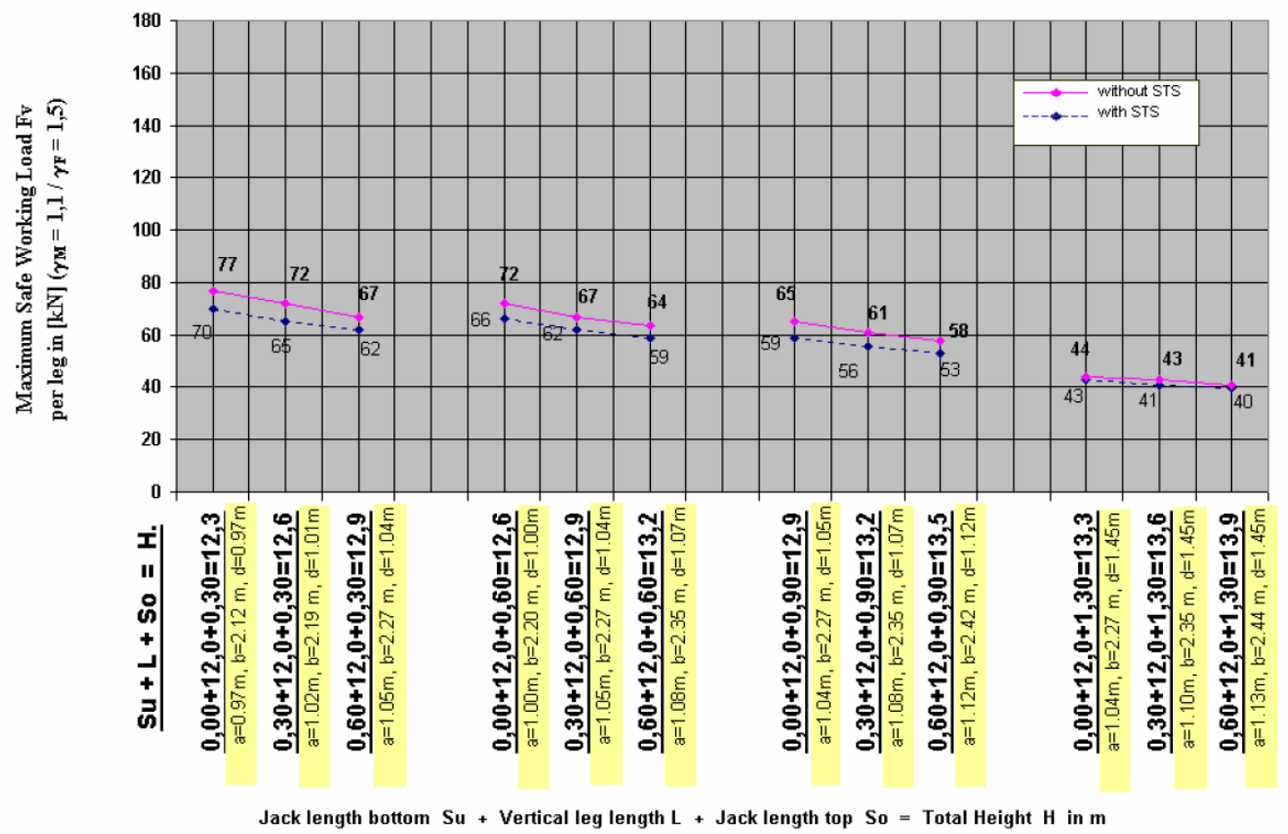
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 12.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



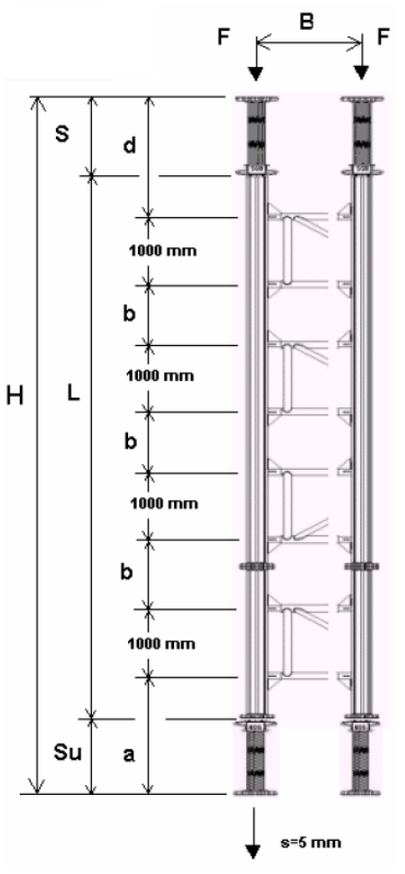


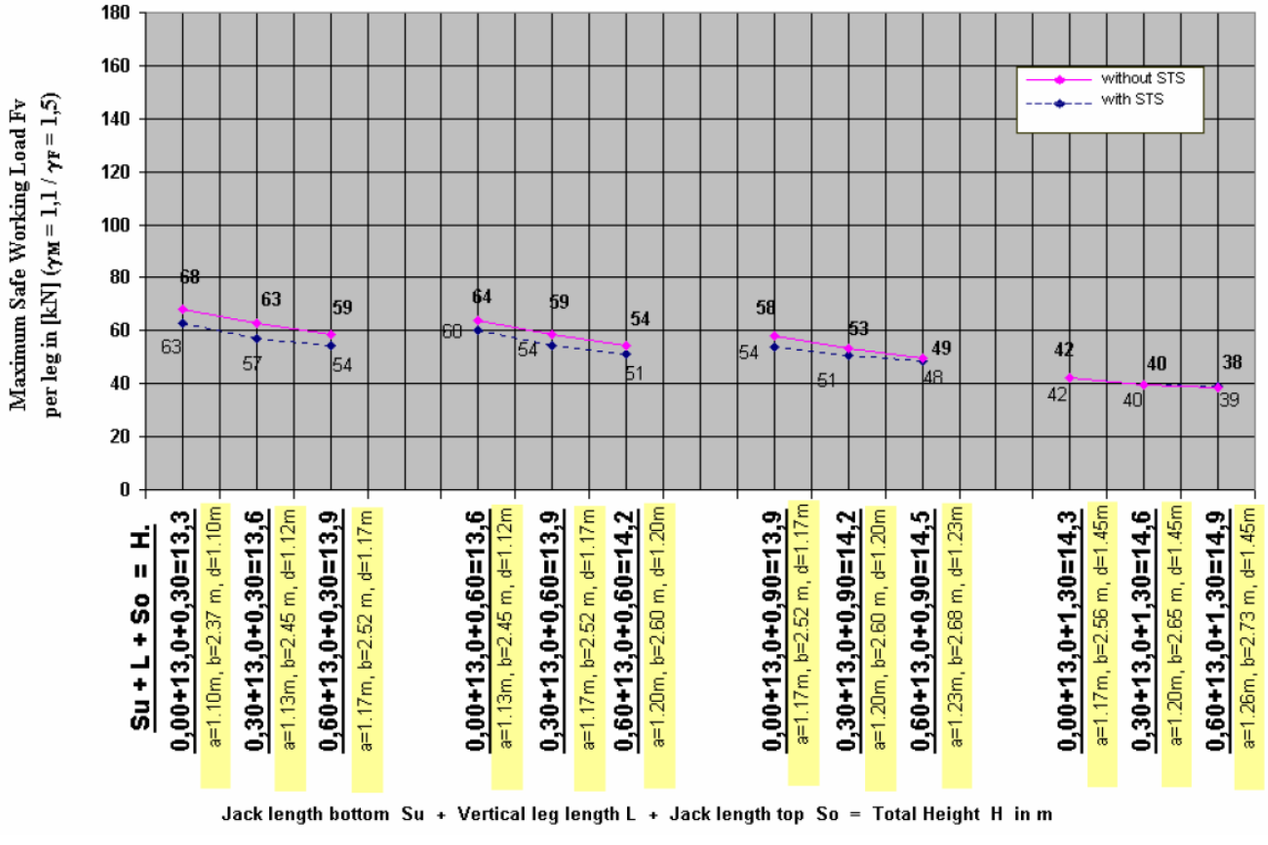
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 13.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



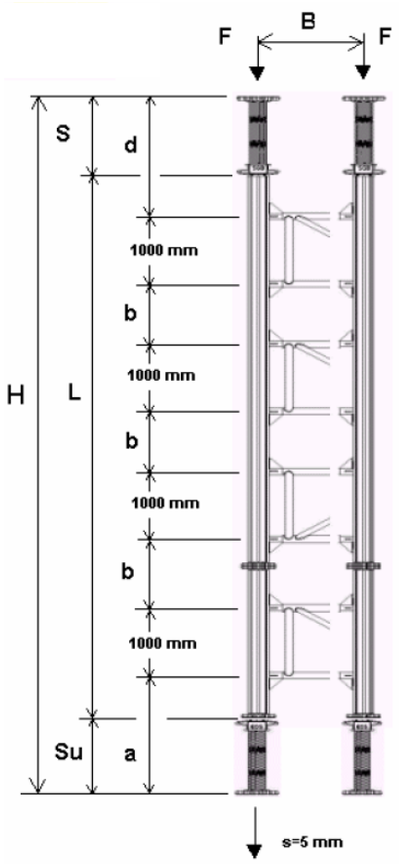


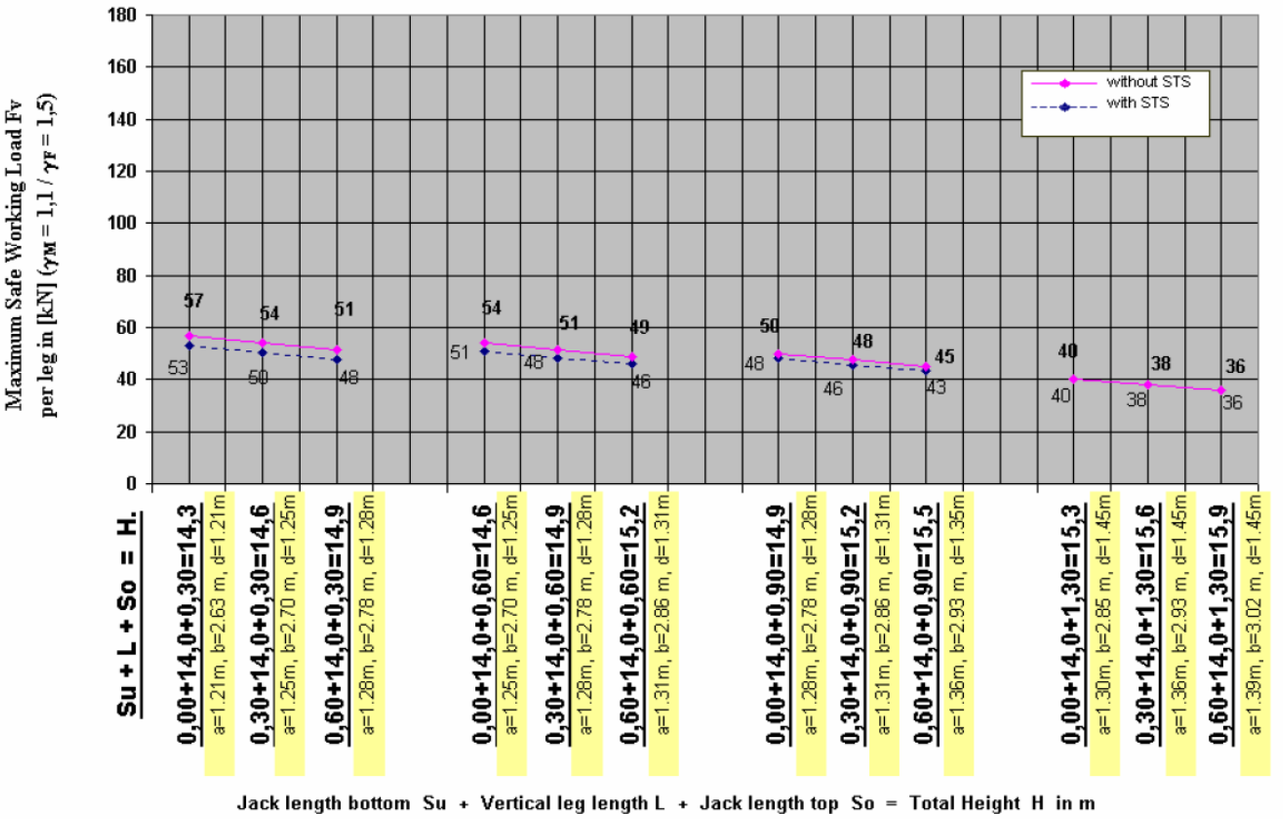
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and four bracing frames.
Leg Height (L): 14.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



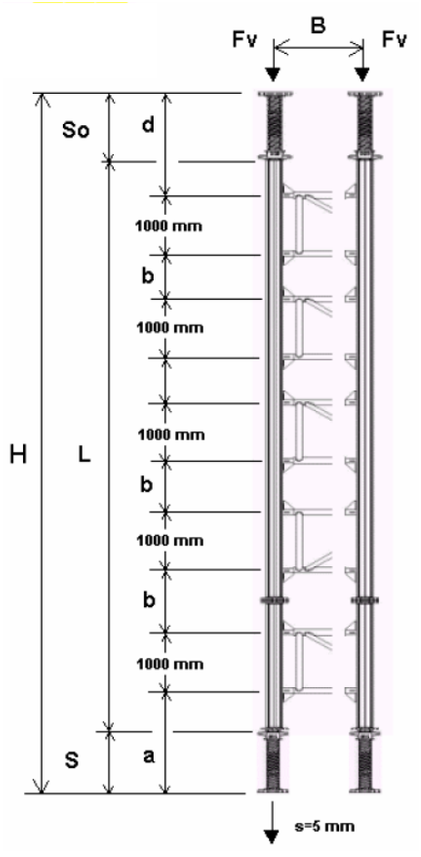


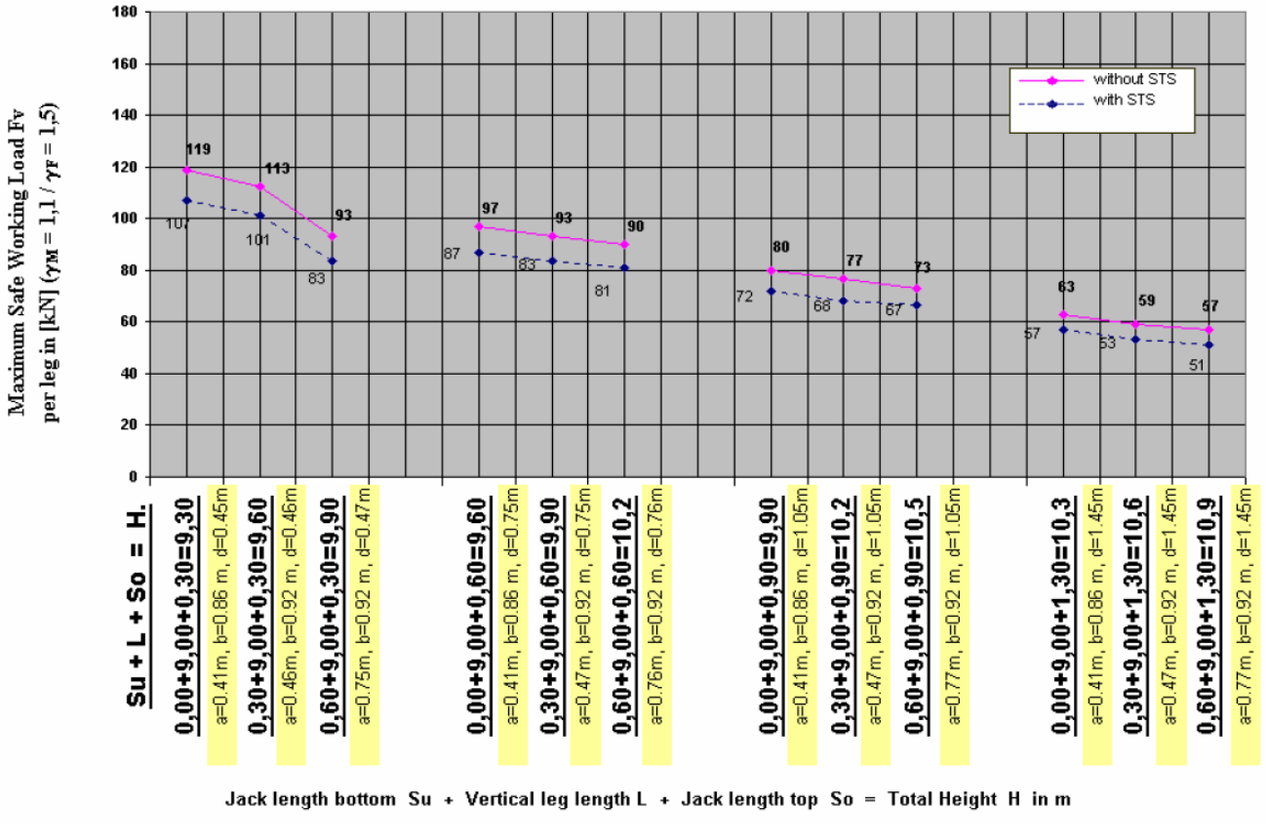
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 9.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



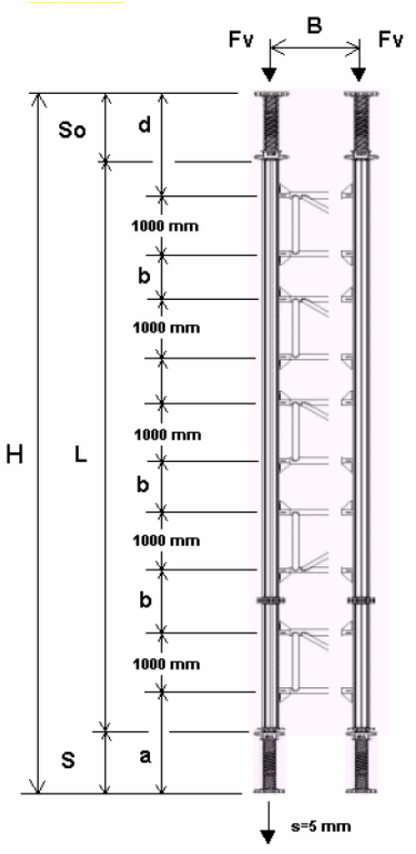


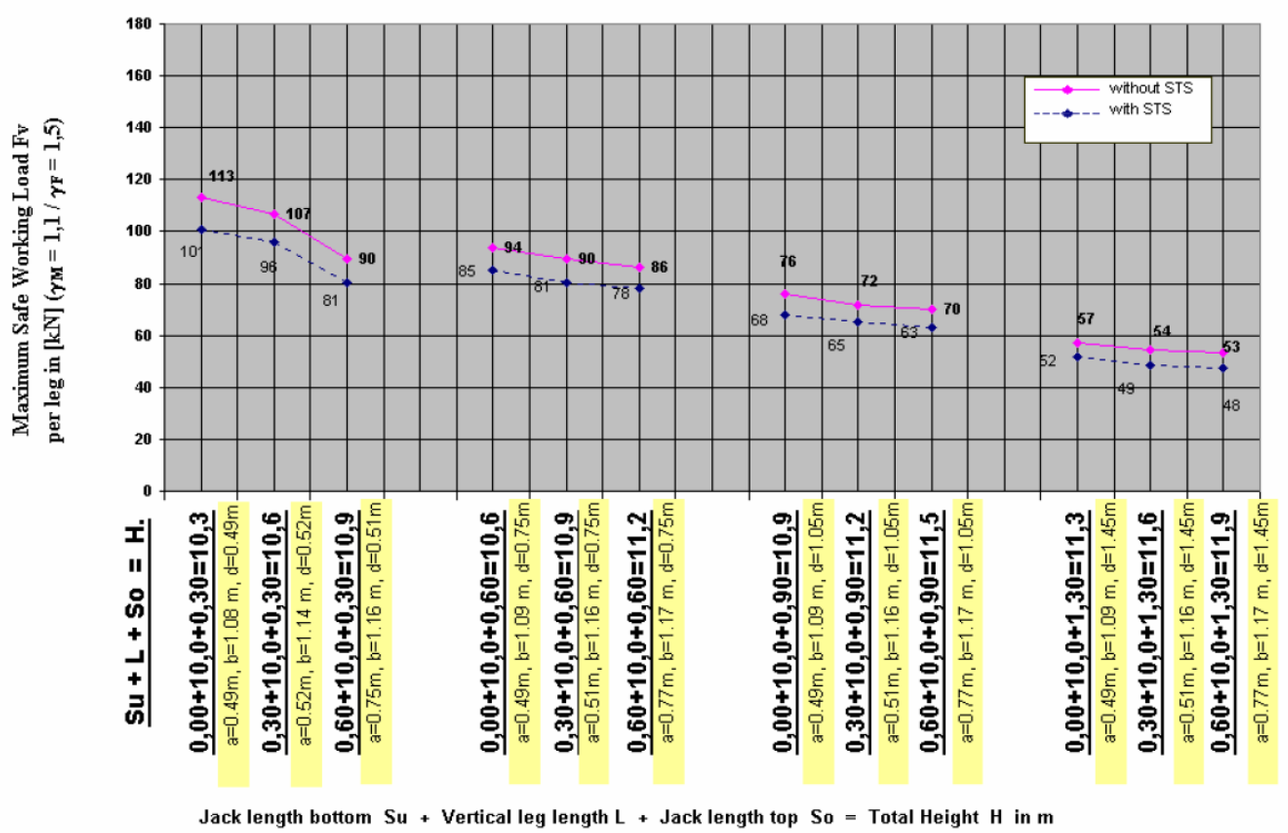
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 10.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



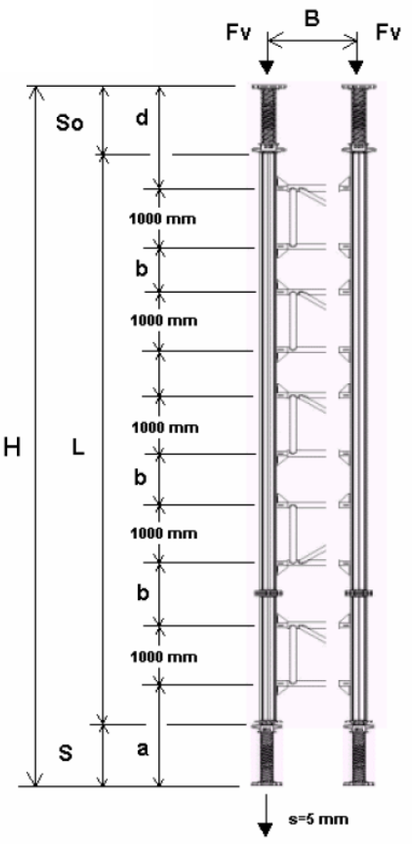


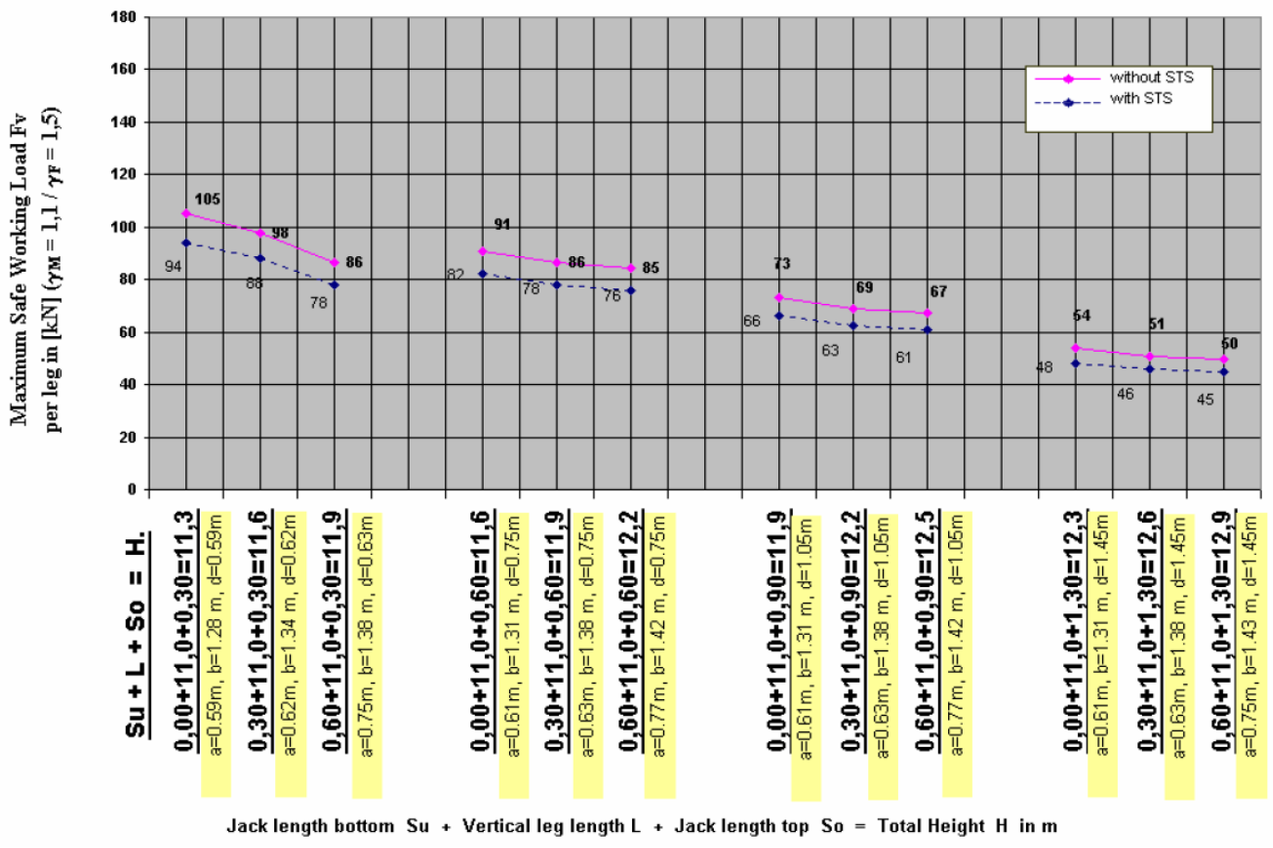
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 11.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



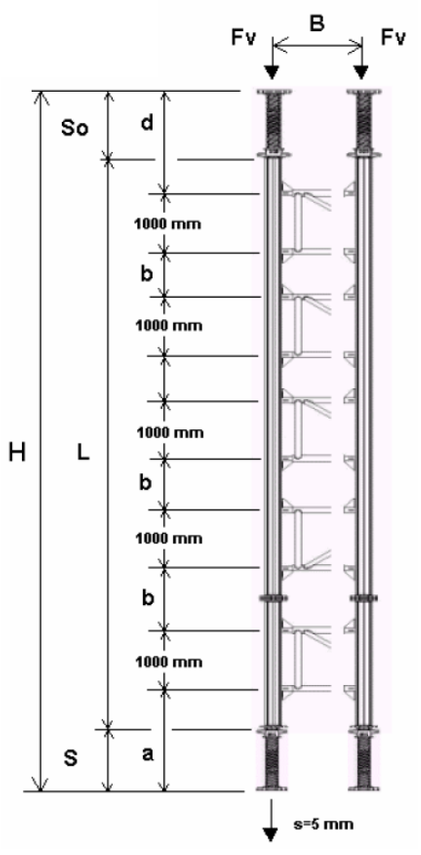


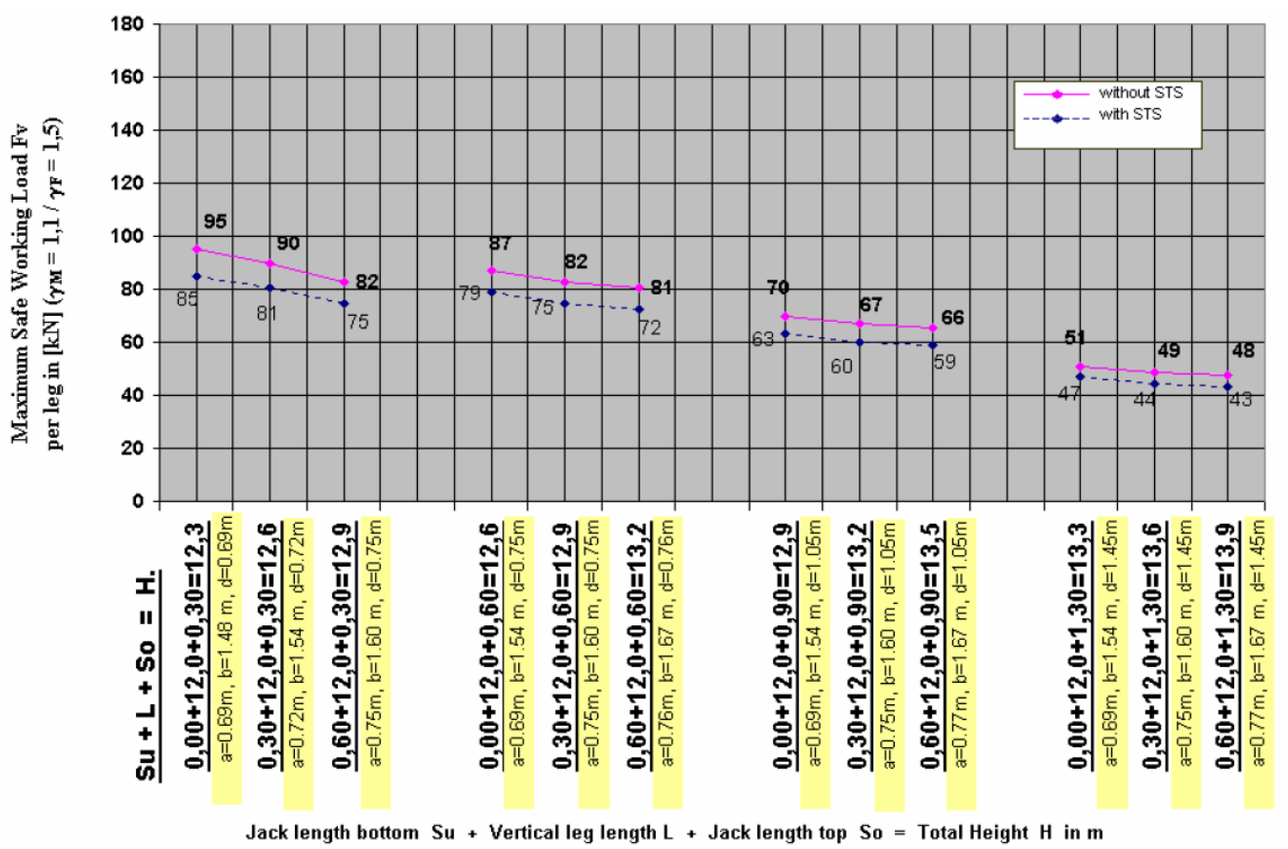
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 12.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



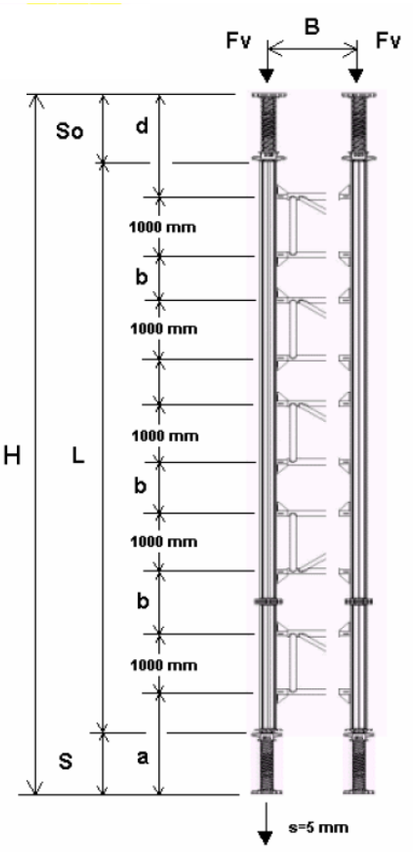


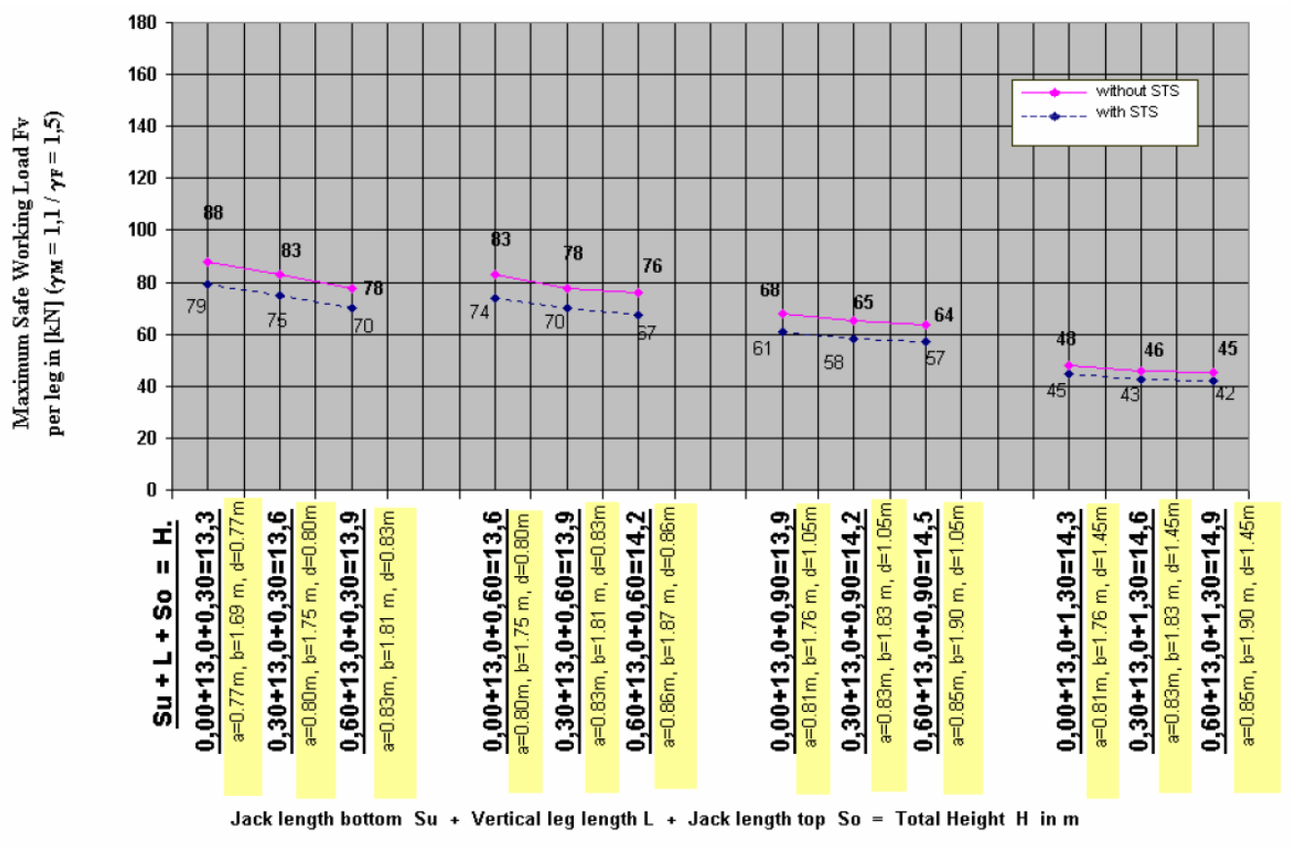
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 13.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



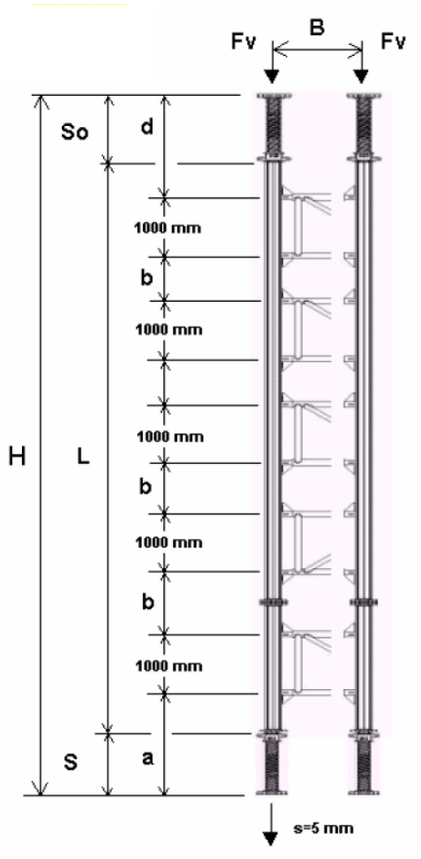


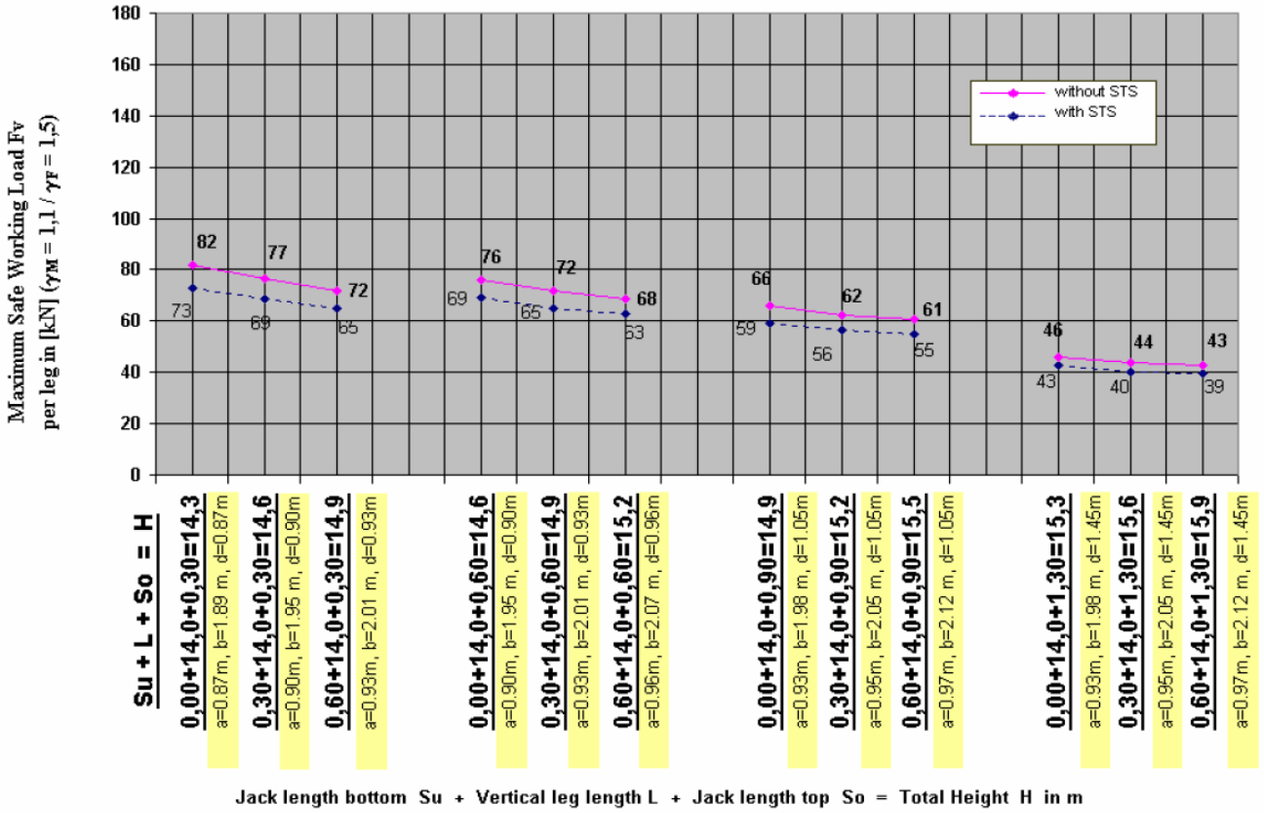
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 14.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



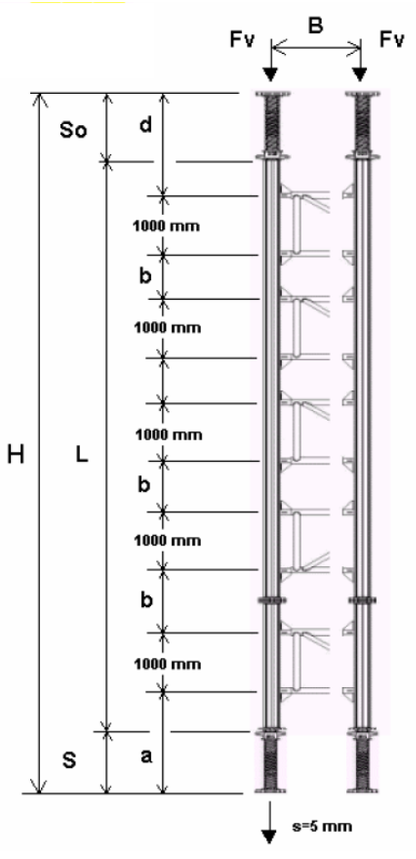


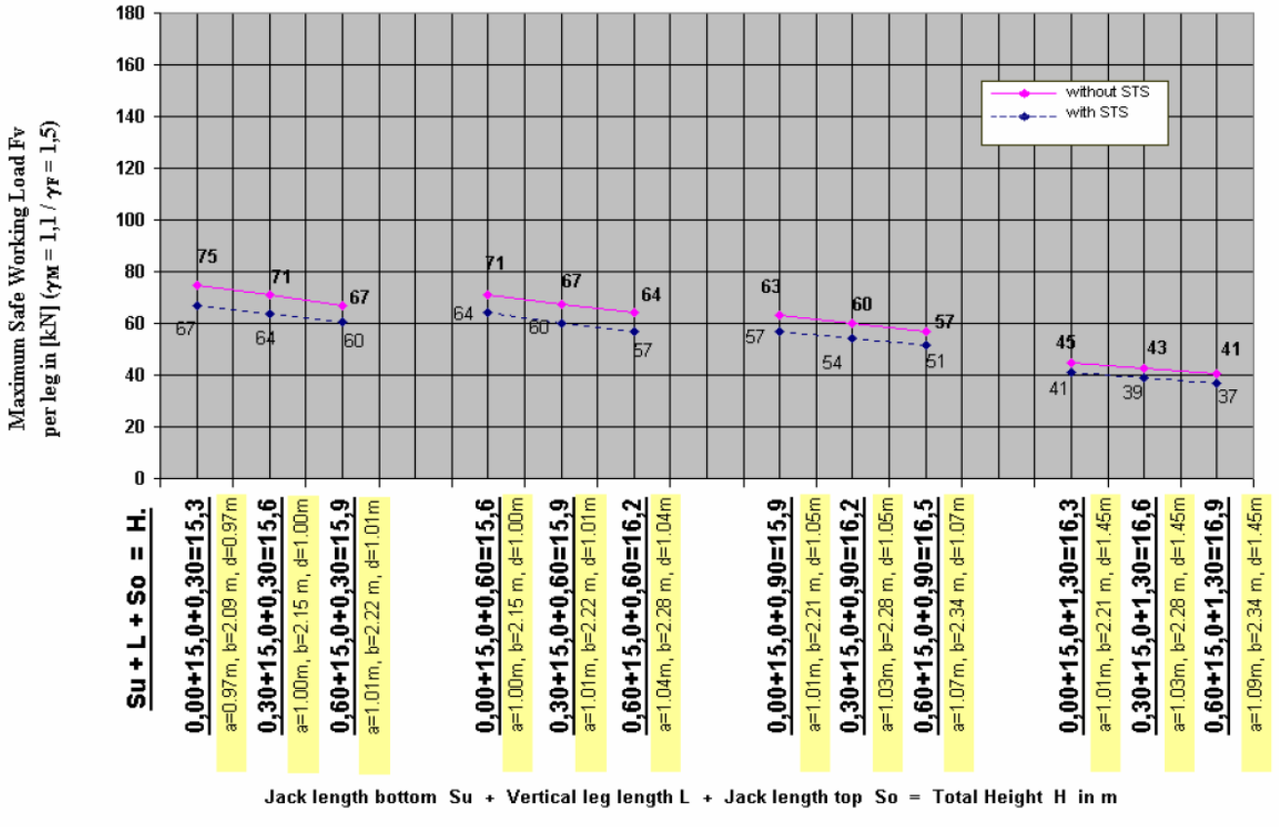
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and five bracing frames.
Leg Height (L): 15.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



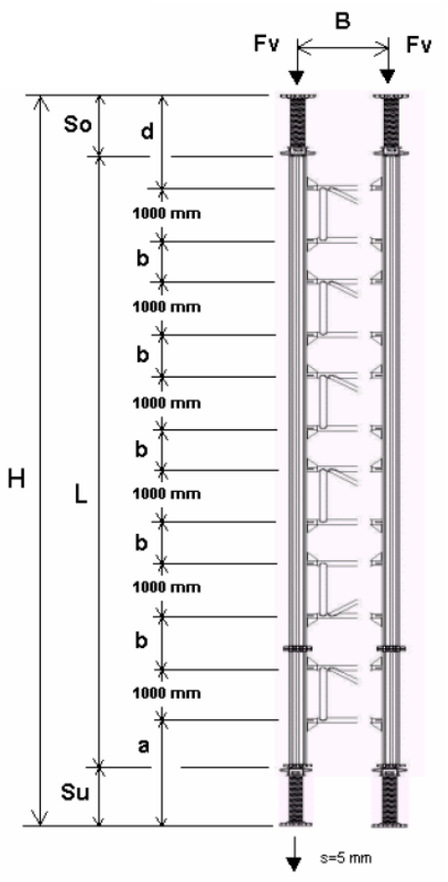


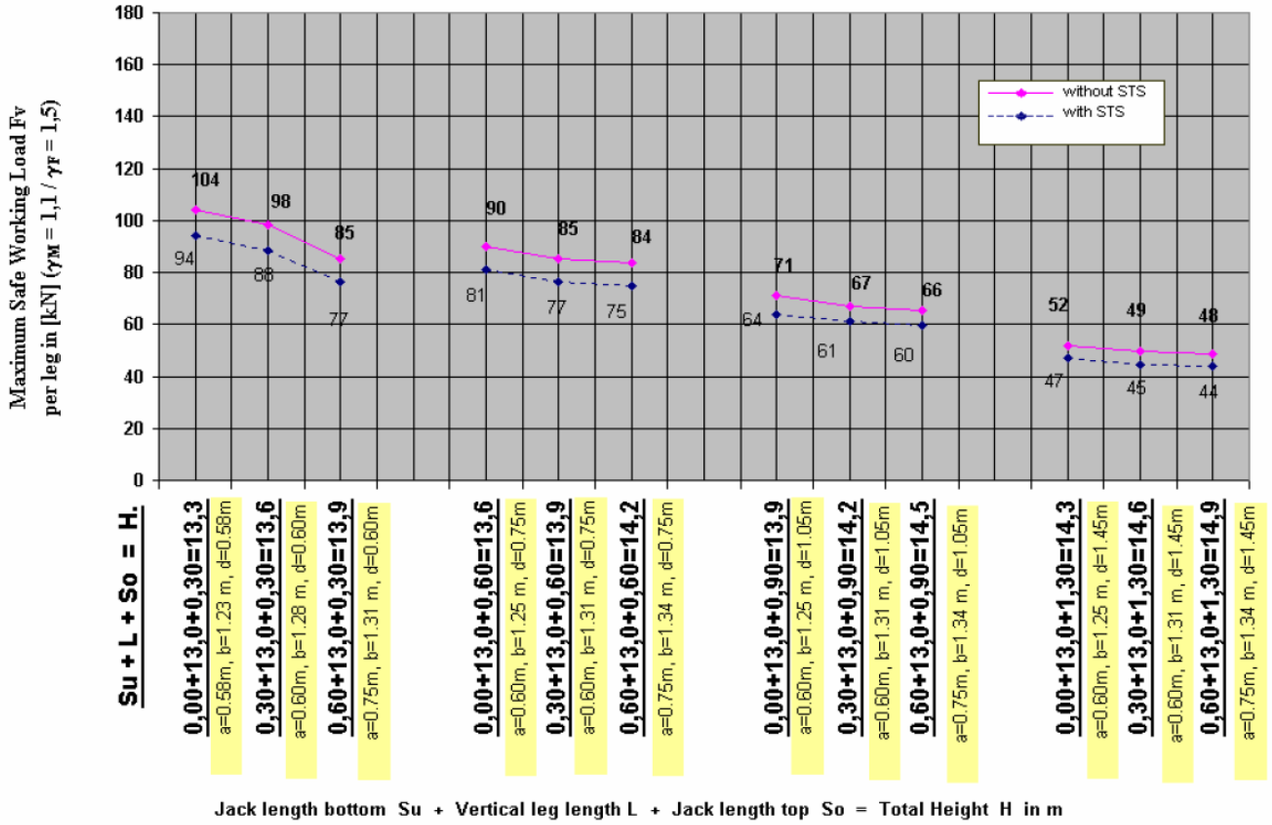
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and six bracing frames.
Leg Height (L): 13.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



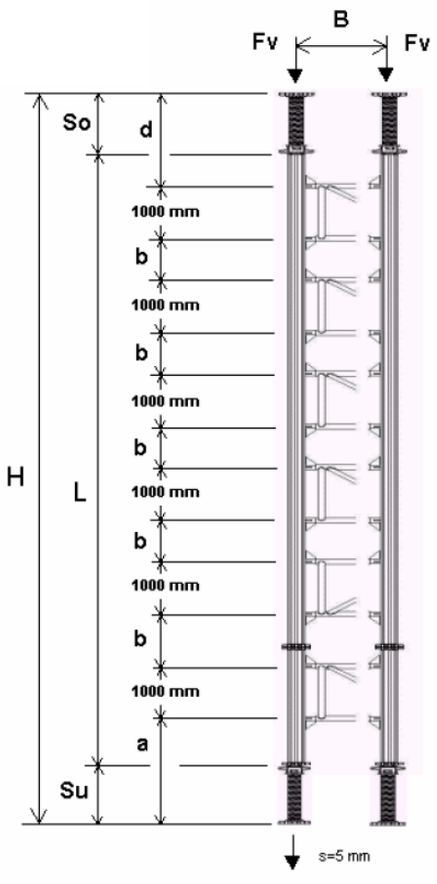


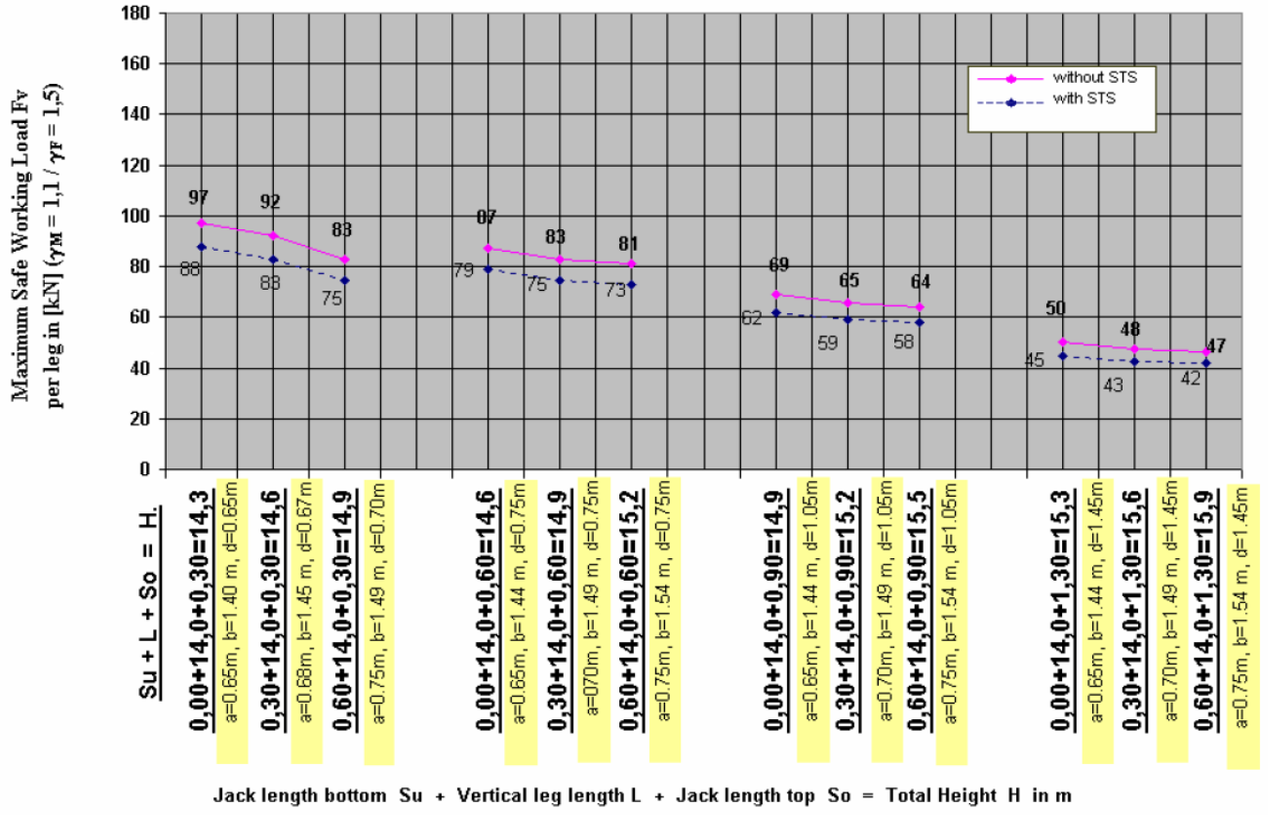
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and six bracing frames.
Leg Height (L): 14.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



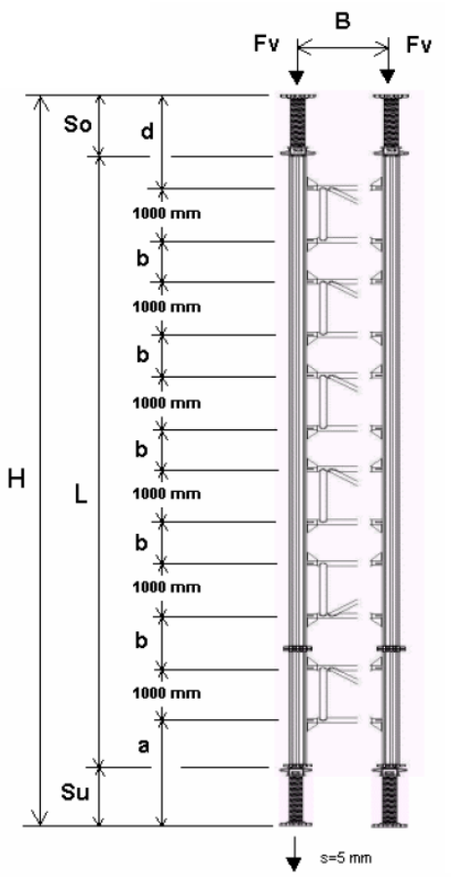


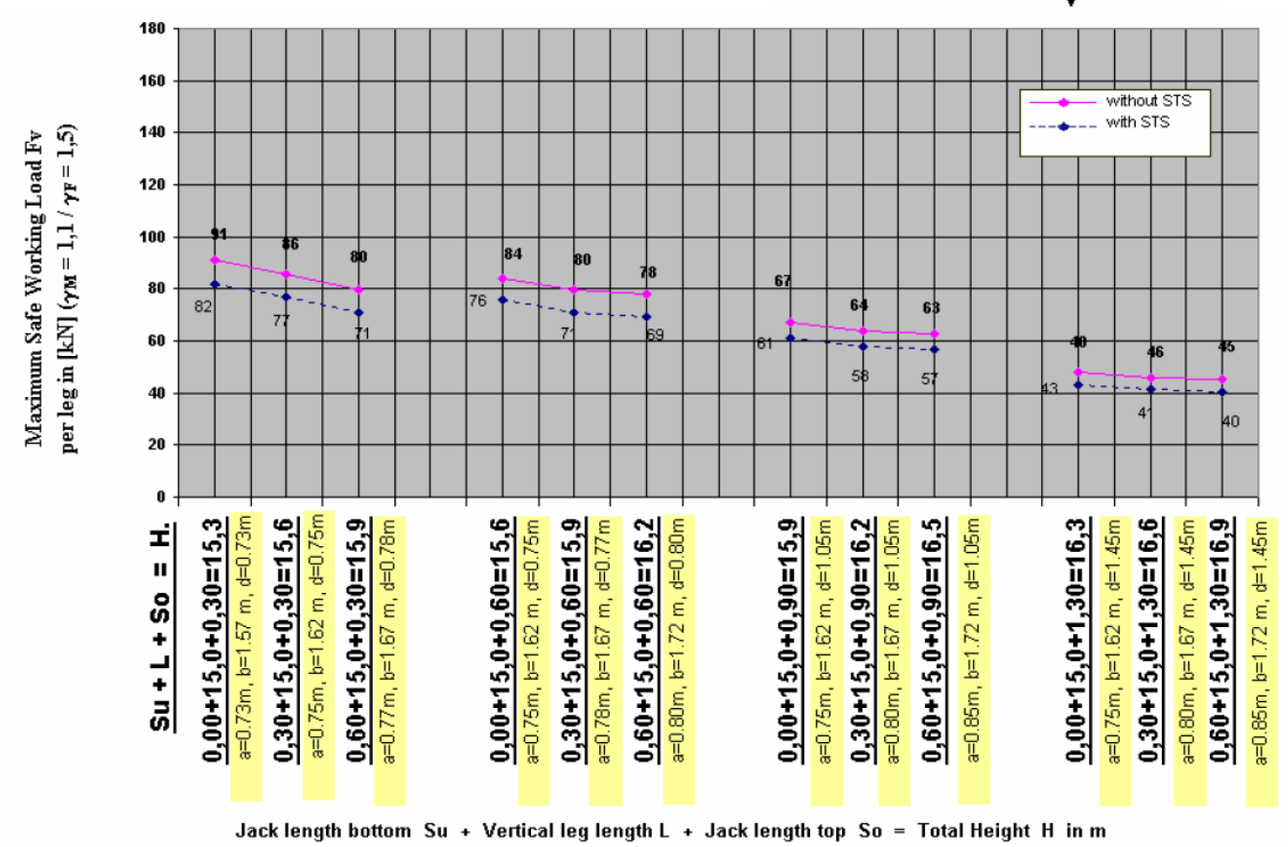
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and six bracing frames.
Leg Height (L): 15.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



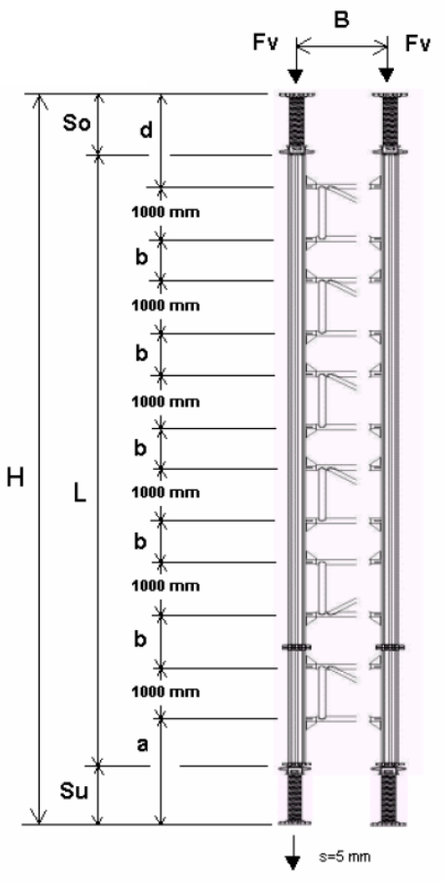


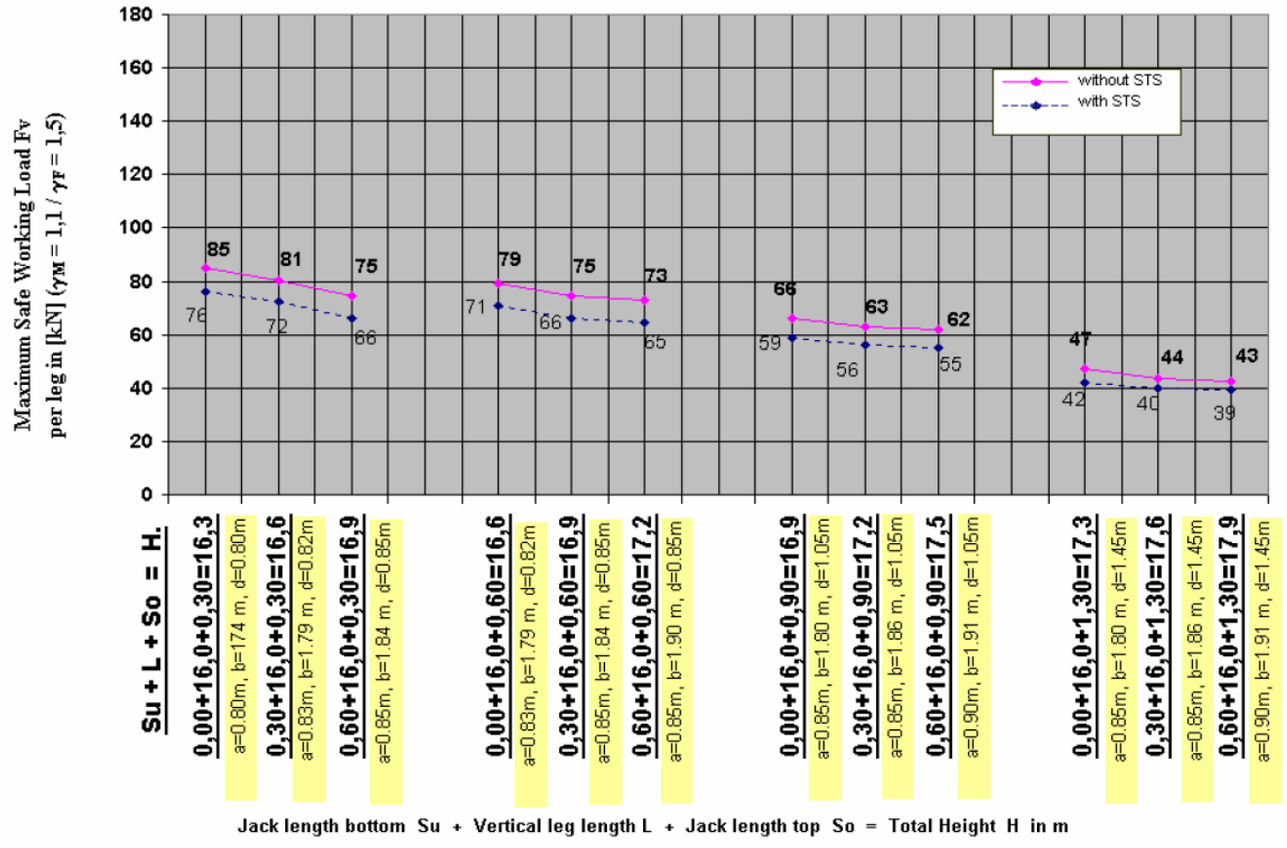
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and six bracing frames.
Leg Height (L): 16.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



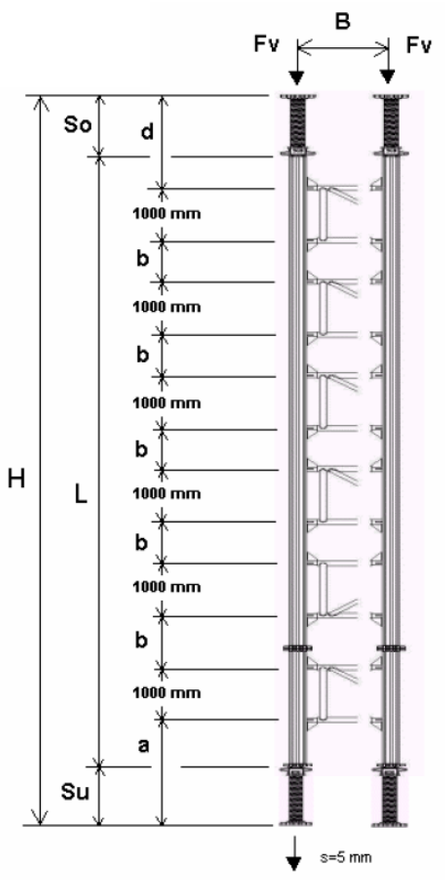


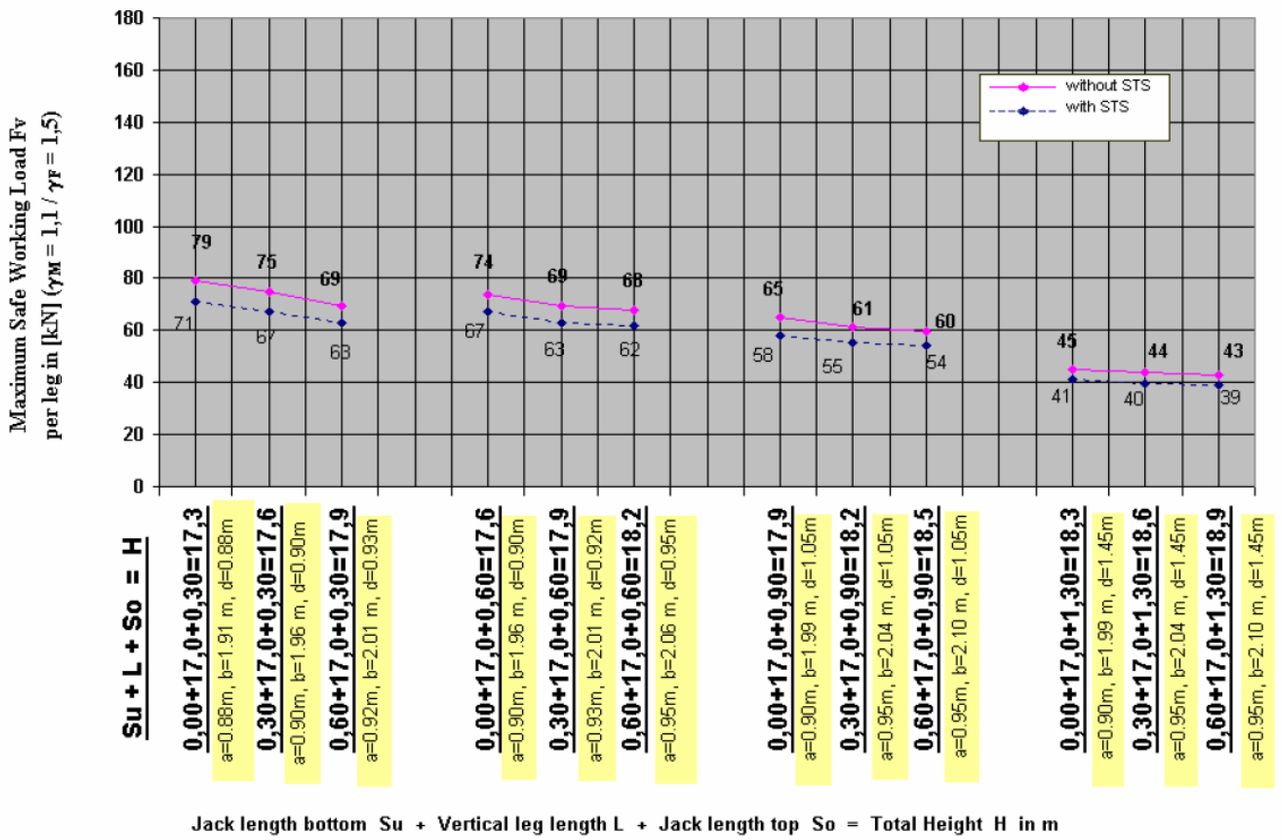
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and six bracing frames.
Leg Height (L): 17.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.



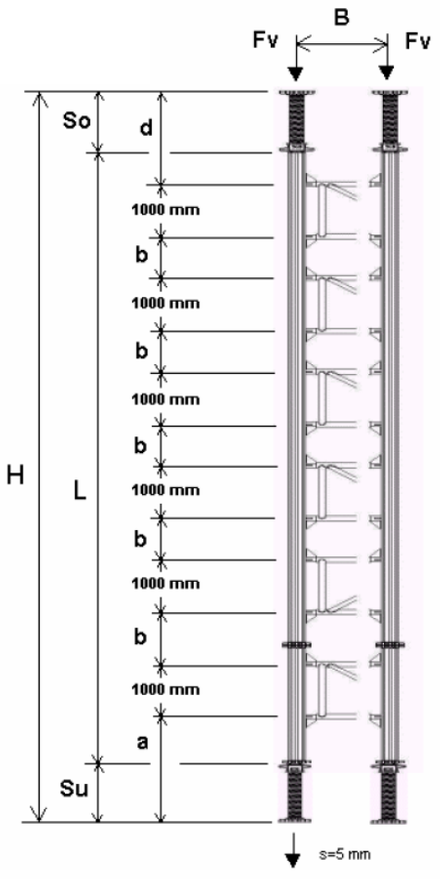


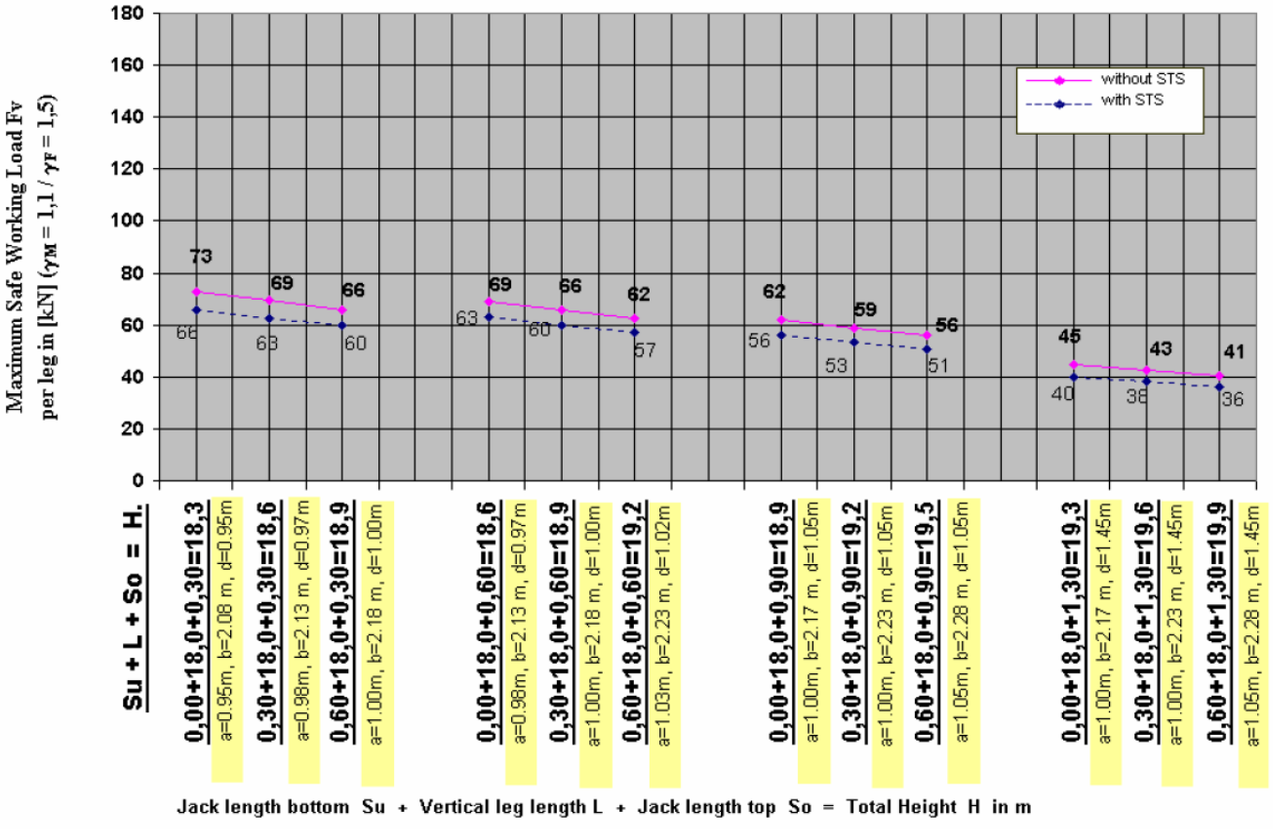
3. Working Load Limits (WLL)

Gass Tower - 2 Jacks

With top and bottom jack and six bracing frames.
Leg Height (L): 18.0m
WLL adjusted to allow for differential settlement.

- One of the two jacks must not exceed 600mm.
- Either jack may be at the top or at the bottom.
- Dimensions shown 'Su' and 'a' must be associated with the shorter jack.
- Dimensions shown 'So' and 'd' must be associated with the longer jack.
- **The top of the tower is horizontally restrained in position.**
- No wind load have been allowed.
- Plate to plate leg bolted joints may be in any position.
- Maximum differential support settlements S = 5mm.
- Bracing frames widths may be B = 1.2m, 1.8m, 2.4m and 3.0m.
- WLL for leg heights other than those shown may be found by interpolation between the min./max leg heights shown.

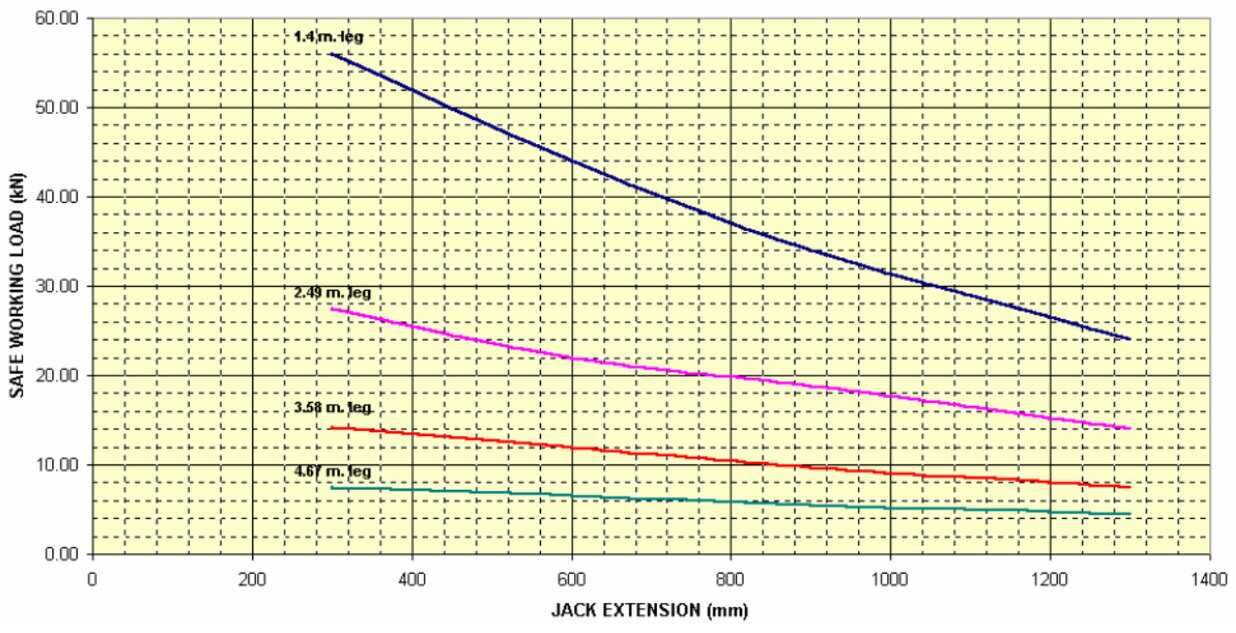




3. Working Load Limits (WLL)

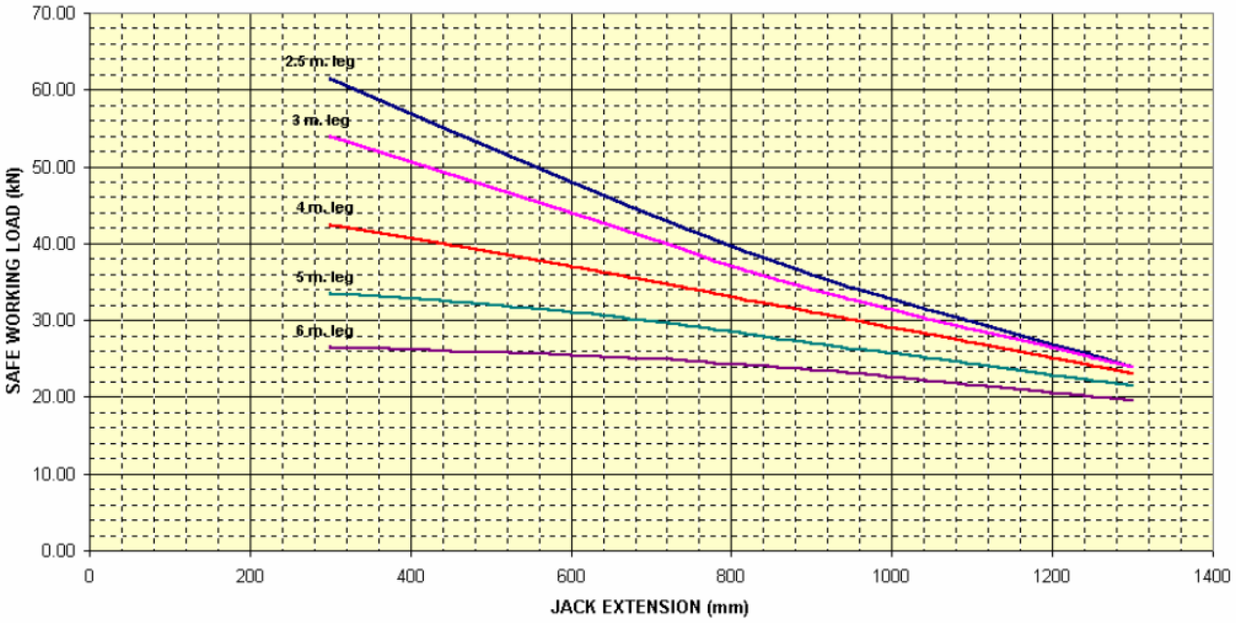
Free Standing Unbraced Towers - 1 Ledger Frame

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



Free Standing Unbraced Towers - 2 Ledger Frame

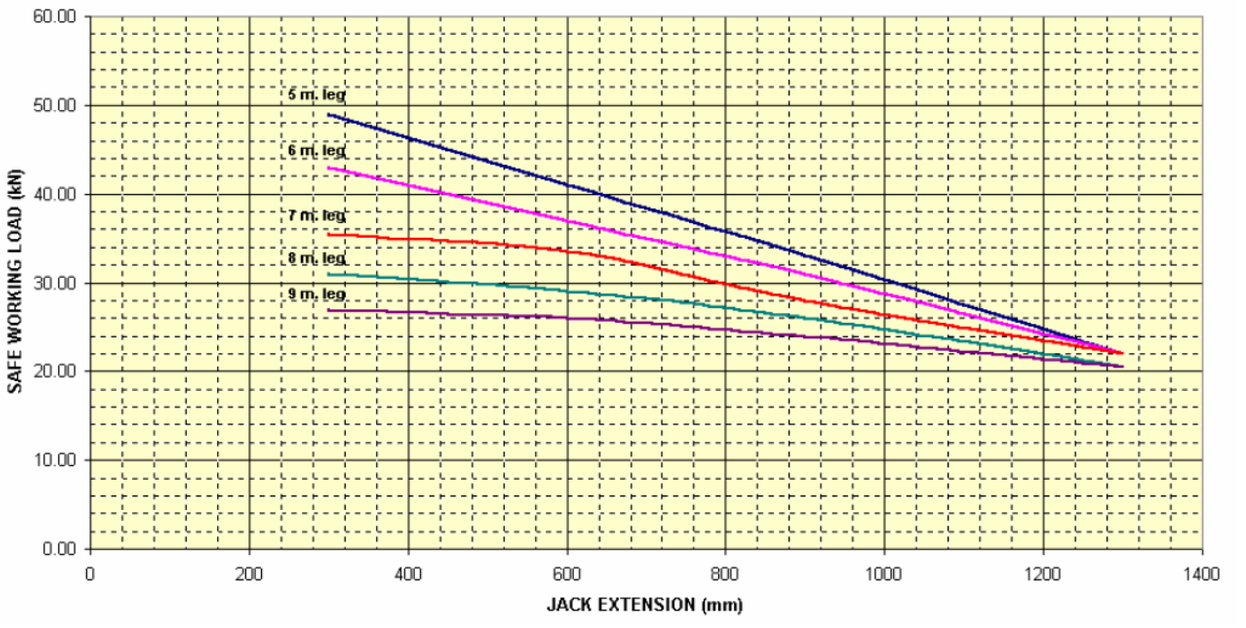
- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



3. Working Load Limits (WLL)

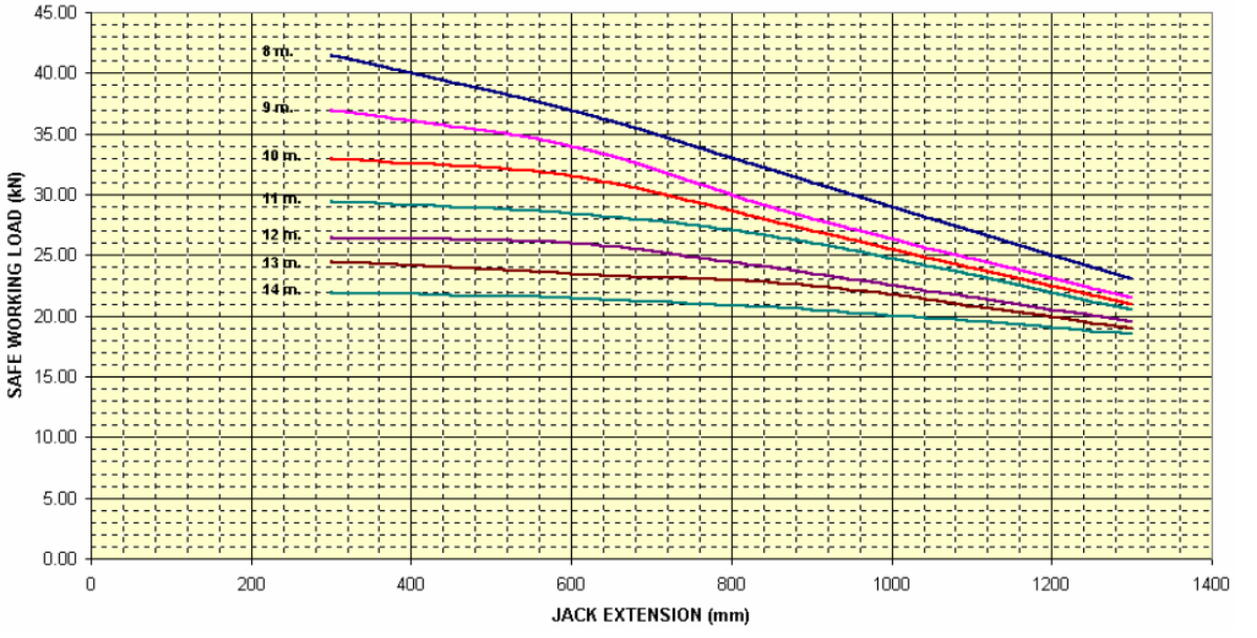
Free Standing Unbraced Towers - 3 Ledger Frame

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



Free Standing Unbraced Towers - 4 Ledger Frame

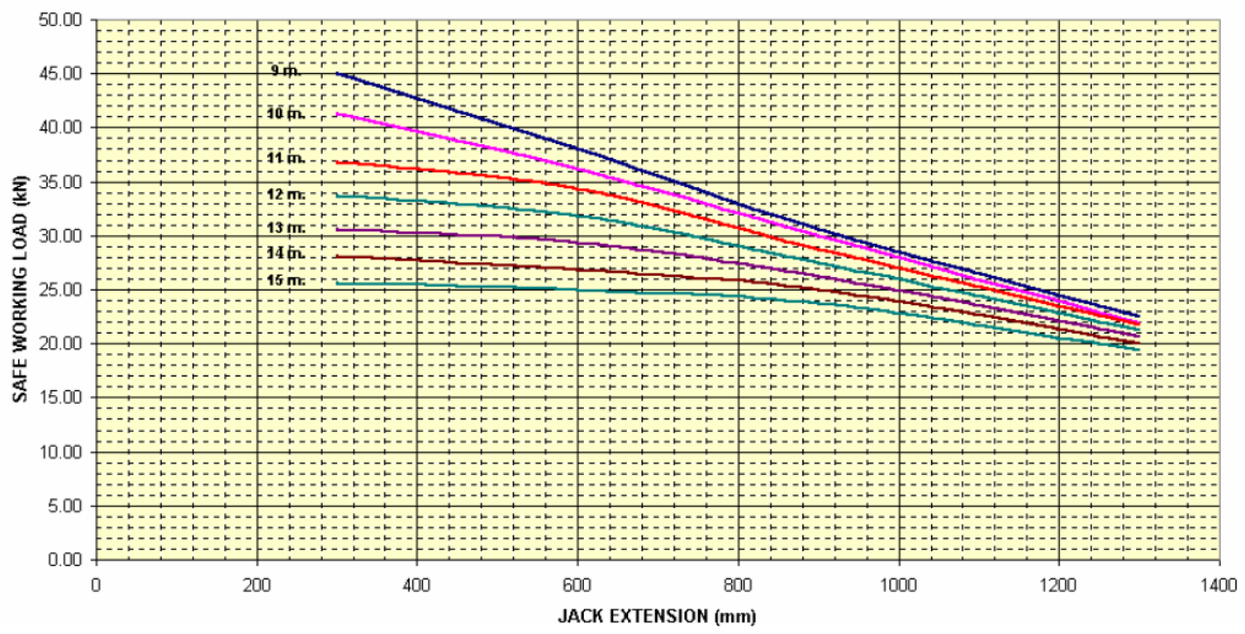
- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



3. Working Load Limits (WLL)

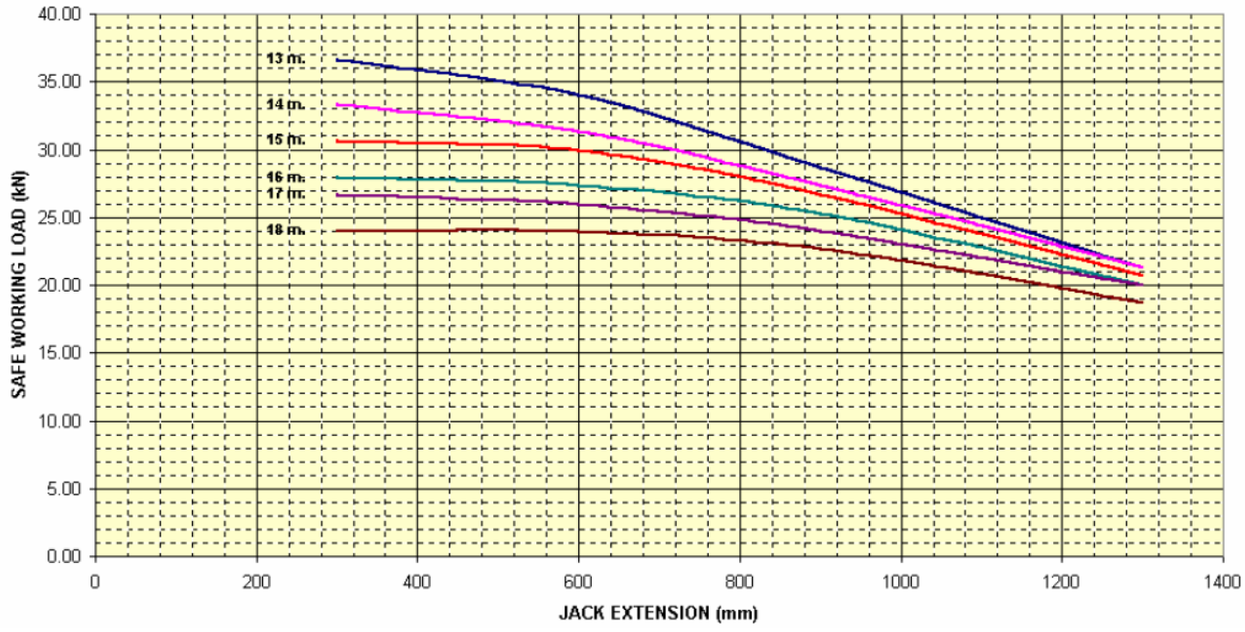
Free Standing Unbraced Towers - 5 Ledger Frame

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



Free Standing Unbraced Towers - 6 Ledger Frame

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



3. Working Load Limits (WLL)

Free Standing Unbraced Towers

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

Jack Extension (mm)		300	600	900	1300	300	600	900	1300	300	600	900	1300
No. Of Ledgers		1				2				3			
Leg Height (m)	1.4	56.00	44.00	34.00	24.00								
	2.49	27.50	22.00	18.75	14.00								
	3.58	14.25	12.00	9.75	7.50								
	4.67	7.50	6.50	5.50	4.50								
	2.5					61.50	48.00	36.00	24.00				
	3					54.00	44.00	34.00	24.00				
	4					42.50	37.00	31.00	23.00				
	5					33.50	31.00	27.00	21.50	49.00	41.00	33.00	22.00
	6					26.50	25.50	23.50	19.50	43.00	37.00	31.00	22.00
	7									35.50	33.50	28.00	22.00
	8									31.00	29.00	26.00	20.50
	9									27.00	26.00	24.00	20.50

Jack Extension (mm)		300	600	900	1300	300	600	900	1300	300	600	900	1300
No. Of Ledger		4				5				6			
Leg Height (m)	8	41.50	37.00	31.00	23.00								
	9	37.00	34.00	28.00	21.50	45.00	38.12	30.62	22.50				
	10	33.00	31.50	27.00	21.00	41.25	36.25	30.00	21.87				
	11	29.50	28.50	26.00	20.50	36.87	34.37	28.75	21.80				
	12	26.50	26.00	23.50	19.50	33.75	31.87	27.50	21.25				
	13	24.50	23.50	22.50	19.00	30.62	29.37	26.25	20.62	36.65	34.00	28.65	21.32
	14	22.00	21.50	20.50	18.50	27.12	26.87	25.00	20.00	33.32	31.32	27.32	21.32
	15					25.62	25.00	23.75	19.37	30.65	30.00	26.66	20.66
	16									28.00	27.32	25.32	20.00
	17									26.66	26.00	24.00	20.00
	18									24.00	24.00	22.66	18.66

3. Working Load Limits (WLL)

Free Standing Unbraced Towers

- 2.5% Top Horizontal Load
- Top Horizontal Displacement (mm) at Safe Working Load

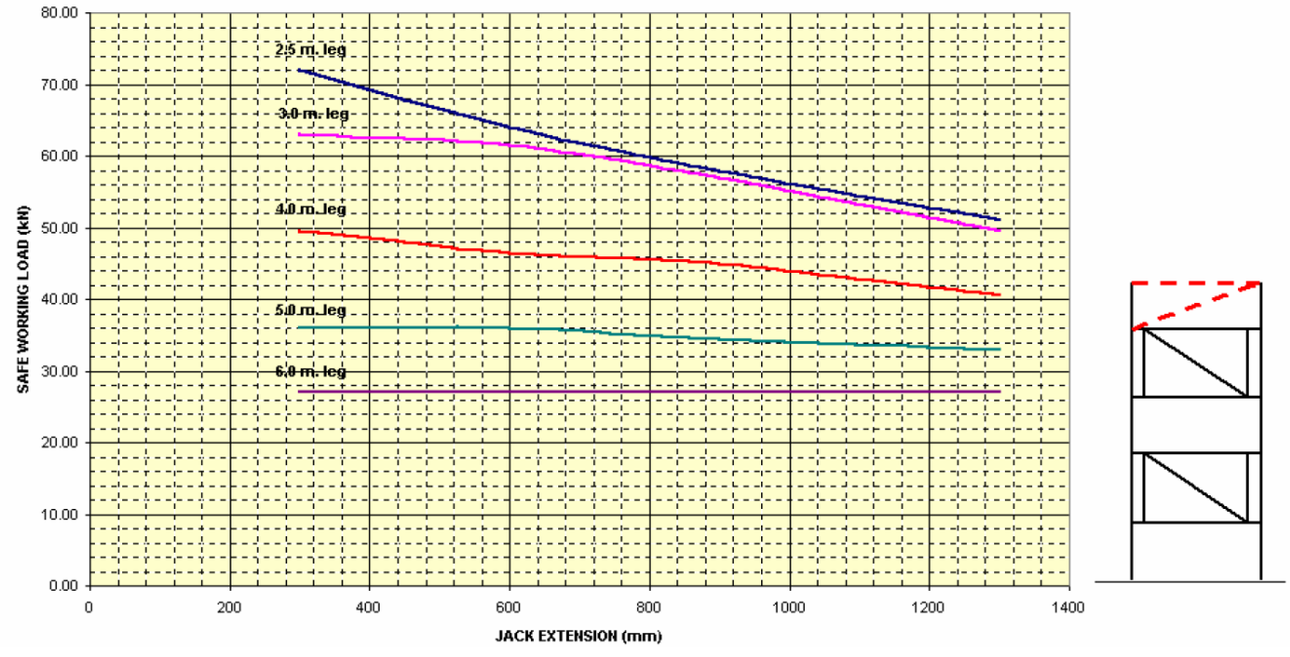
Jack Extension (mm)		300	600	900	1300	300	600	900	1300	300	600	900	1300
No. Of Ledgers		1				2				3			
Leg Height (m)	1.4	7.4	11.4	16.3	26.5								
	2.49	22.2	28.5	34.1	45.8								
	3.58	46.2	52.3	54.2	56.1								
	4.67	57.4	62.8	57.5	64.2								
	2.5					9.2	14.2	19.5	30.7				
	3					11.8	15.3	20.2	30.5				
	4					18.2	20.3	25.1	33.0				
	5					27.5	28.6	31.5	40.2	19.9	22.3	26.7	32.1
	6					43.0	38.7	40.5	49.2	31.0	29.1	30.3	39.3
	7									34.5	37.7	37.6	43.8
	8									43.3	45.8	47.5	51.7
	9									53.1	55.3	59.6	68.4

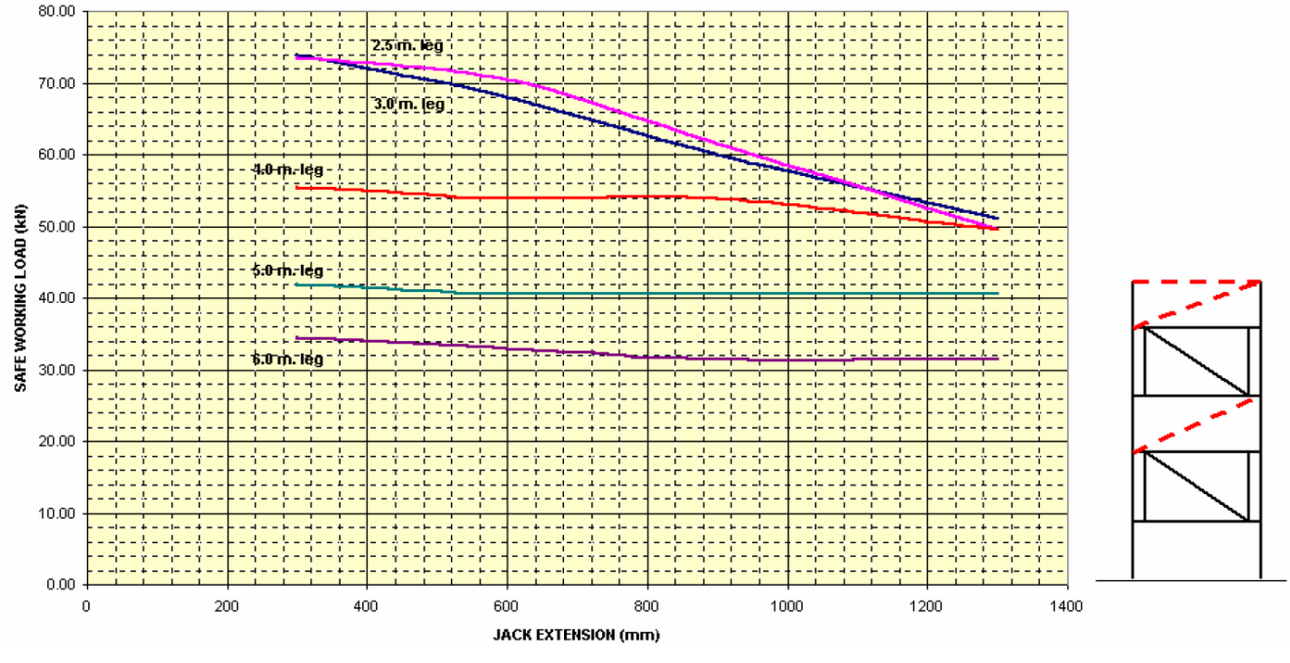
Jack Extension (mm)		300	600	900	1300	300	600	900	1300	300	600	900	1300
No. Of Ledger		4				5				6			
Leg Height (m)	8	37.0	38.7	40.1	48.1								
	9	44.9	46.1	44.3	50.2	39.1	40.0	40.3	45.0				
	10	53.2	57.6	54.5	56.4	49.5	48.2	47.4	51.7				
	11	59.7	64.8	67.2	68.1	58.0	59.7	55.8	59.9				
	12	73.8	77.0	78.0	77.7	66.7	70.3	65.8	65.4				
	13	85.2	89.4	88.6	88.9	74.1	80.7	76.9	77.0	74.4	71.1	70.7	66.0
	14	89.2	102.0	105.1	101.0	89.1	91.5	89.5	84.7	82.2	80.3	81.2	76.8
	15					99.6	100.6	103.3	100.1	93.3	93.1	92.5	89.1
	16									103.8	104.5	104.6	95.9
	17									115.8	115.8	117.4	111.8
	18									129.1	130.5	130.8	119.1

3. Working Load Limits (WLL)

Free Standing Partly Braced Towers - 2 Ledger Frames

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

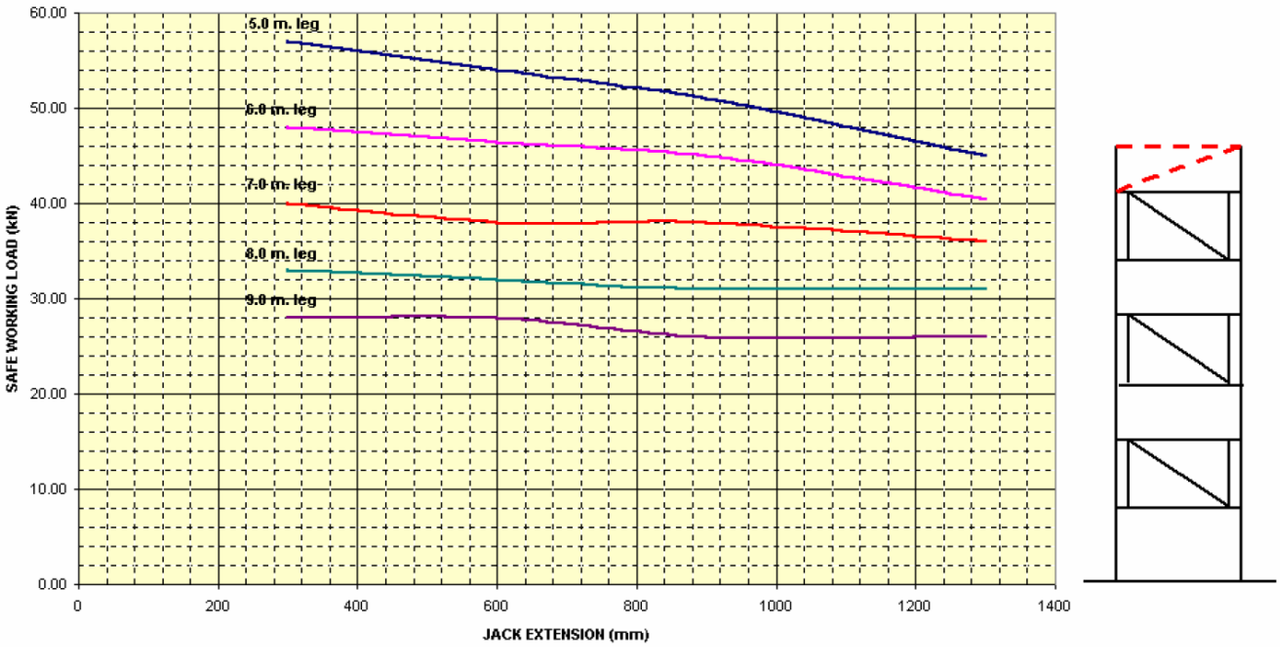


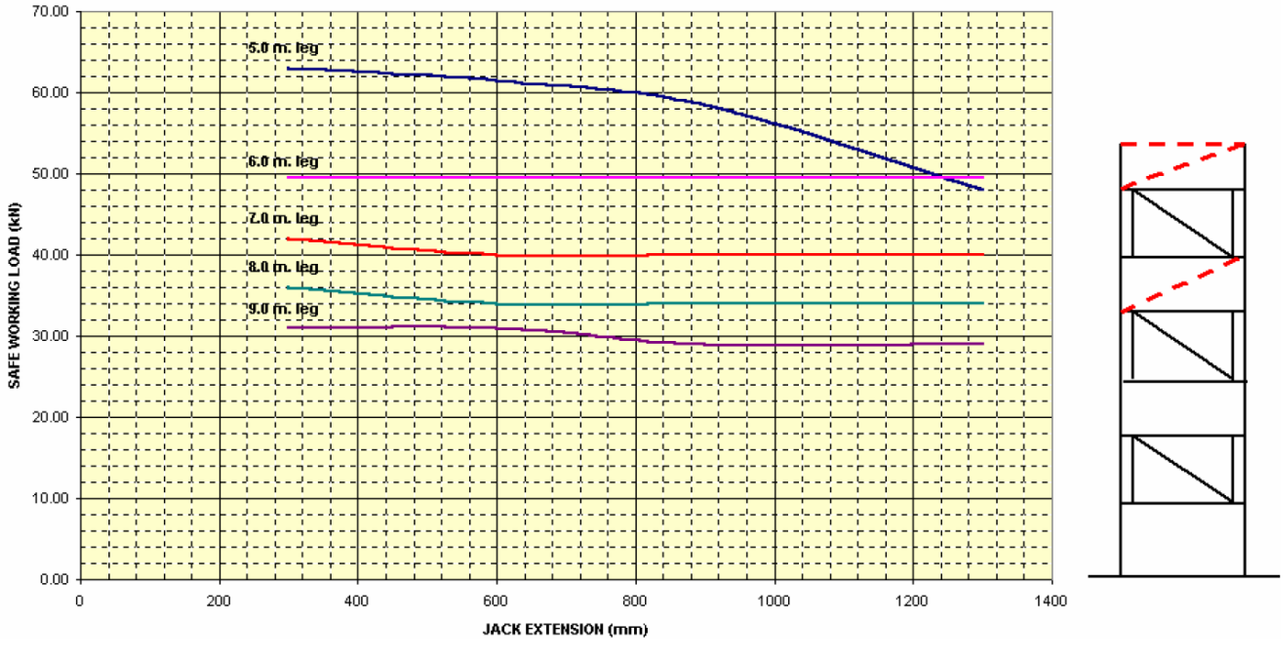


3. Working Load Limits (WLL)

Free Standing Partly Braced Towers - 3 Ledger Frames

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

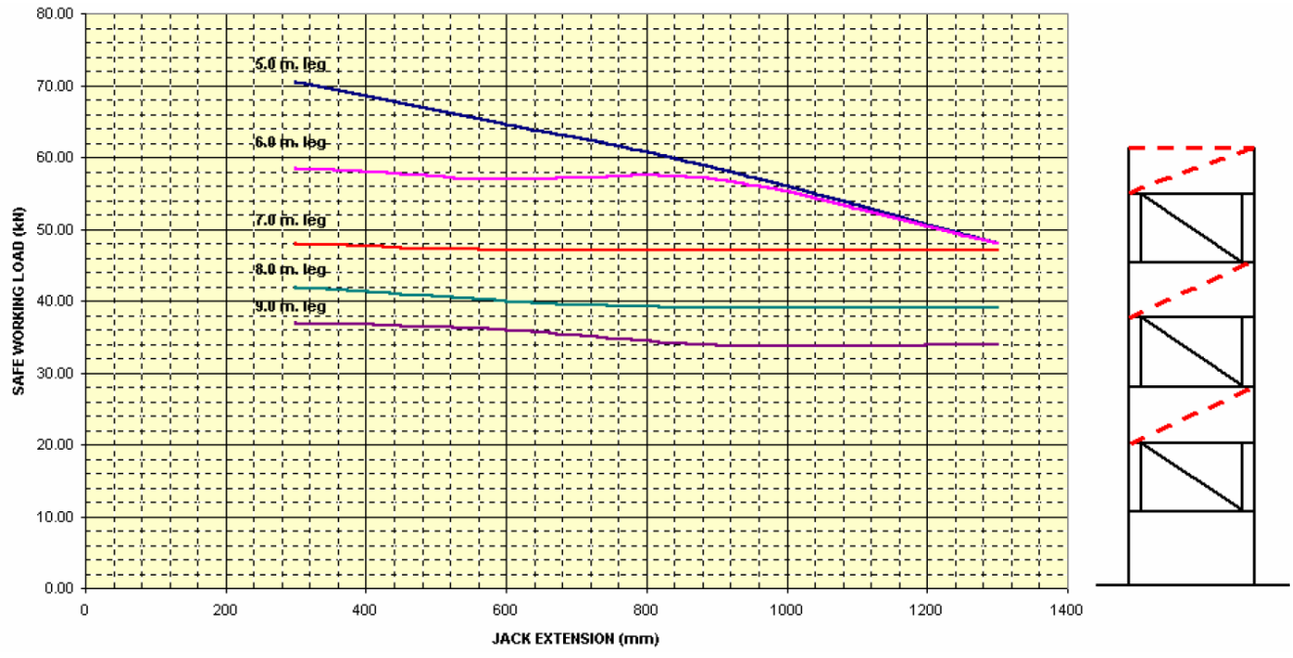




3. Working Load Limits (WLL)

Free Standing Partly Braced Towers - 3 Ledger Frames

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

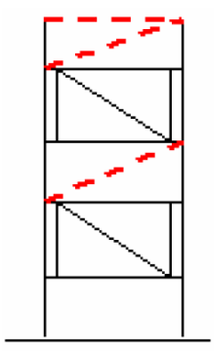


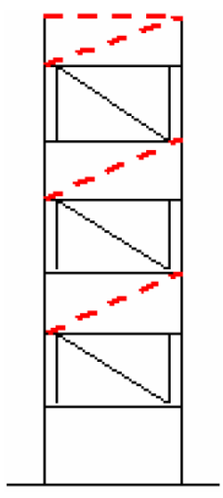
3. Working Load Limits (WLL)

Free Standing Partly Braced Towers

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

Jack Extension (mm)		300	600	900	1300	300	600	900	1300
No. Of Ledgers		2				3			
Leg Height (m)	2.5	74.00	68.00	60.00	51.00				
	3	73.50	70.50	61.50	49.50				
	4	55.50	54.00	54.00	49.50				
	5	42.00	40.50	40.50	40.50	70.50	64.50	58.50	48.00
	6	34.50	33.00	31.50	31.50	58.50	57.00	57.00	48.00
	7					48.00	47.00	47.00	47.00
	8					42.00	40.00	39.00	39.00
	9					37.00	36.00	34.00	34.00



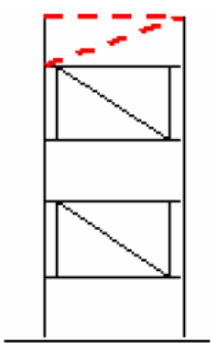


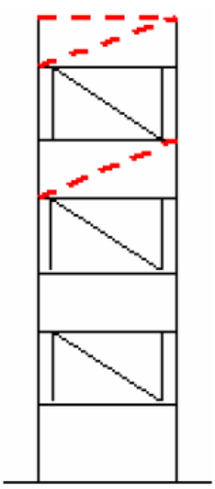
3. Working Load Limits (WLL)

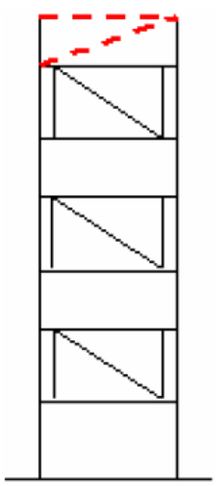
Free Standing Partly Braced Towers

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

Jack Extension (mm)		300	600	900	1300	300	600	900	1300	300	600	900	1300
No. Of Ledgers		2				3				3			
Leg Height (m)	2.5	72.00	64.00	58.00	51.00								
	3	63.00	61.50	57.00	49.50								
	4	49.50	46.50	45.00	40.50								
	5	36.00	36.00	34.50	33.00	63.00	61.50	58.50	48.00	57.00	54.00	51.00	45.00
	6	27.00	27.00	27.00	27.00	49.50	49.50	49.50	49.50	48.00	46.50	45.00	40.50
	7					42.00	40.00	40.00	40.00	40.00	38.00	38.00	36.00
	8					36.00	34.00	34.00	34.00	33.00	32.00	31.00	31.00
	9					31.00	31.00	29.00	29.00	28.00	28.00	26.00	26.00



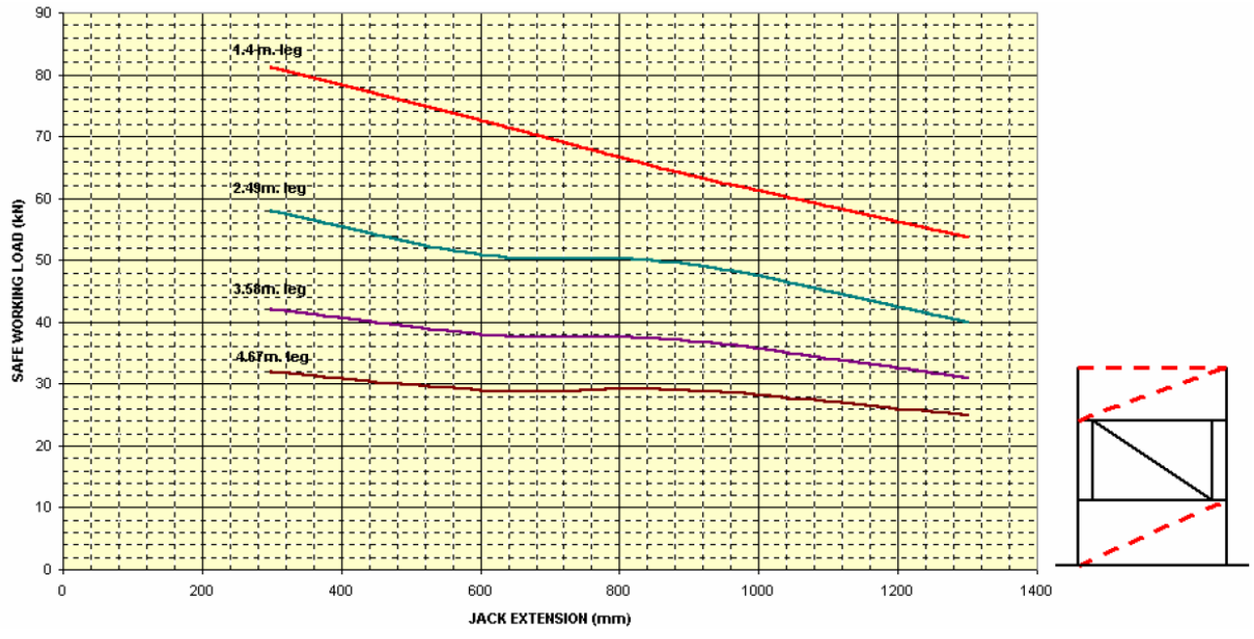




3. Working Load Limits (WLL)

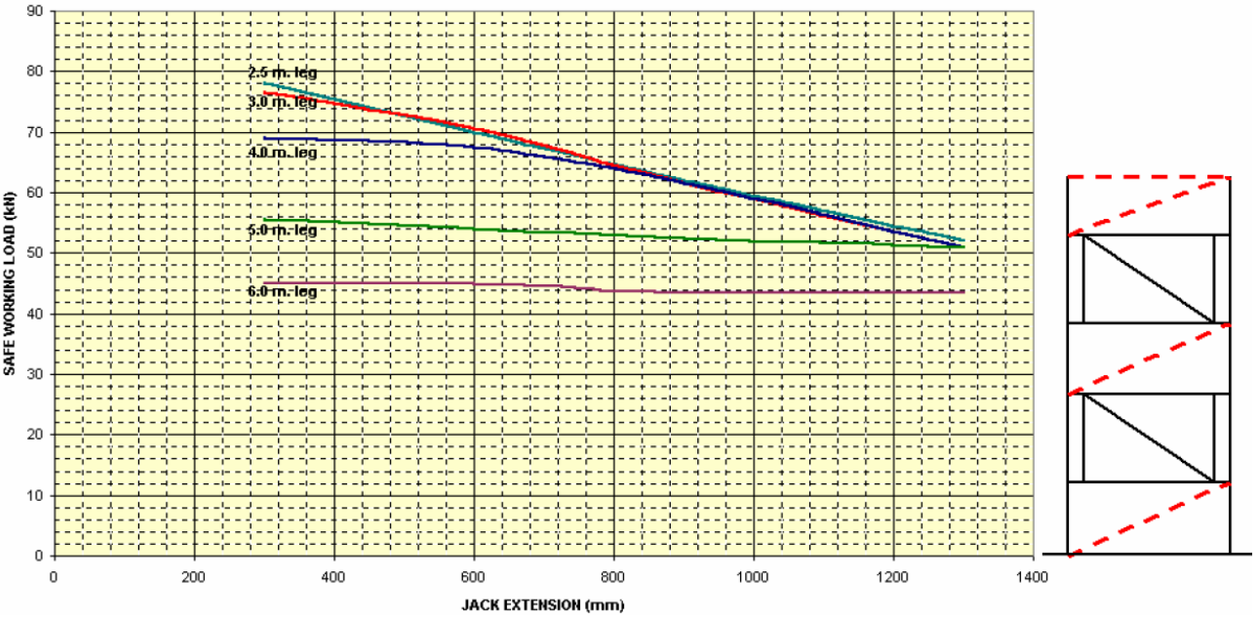
Free Standing Fully Braced Towers - 1 Ledger Frame

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



Free Standing Fully Braced Towers - 2 Ledger Frame

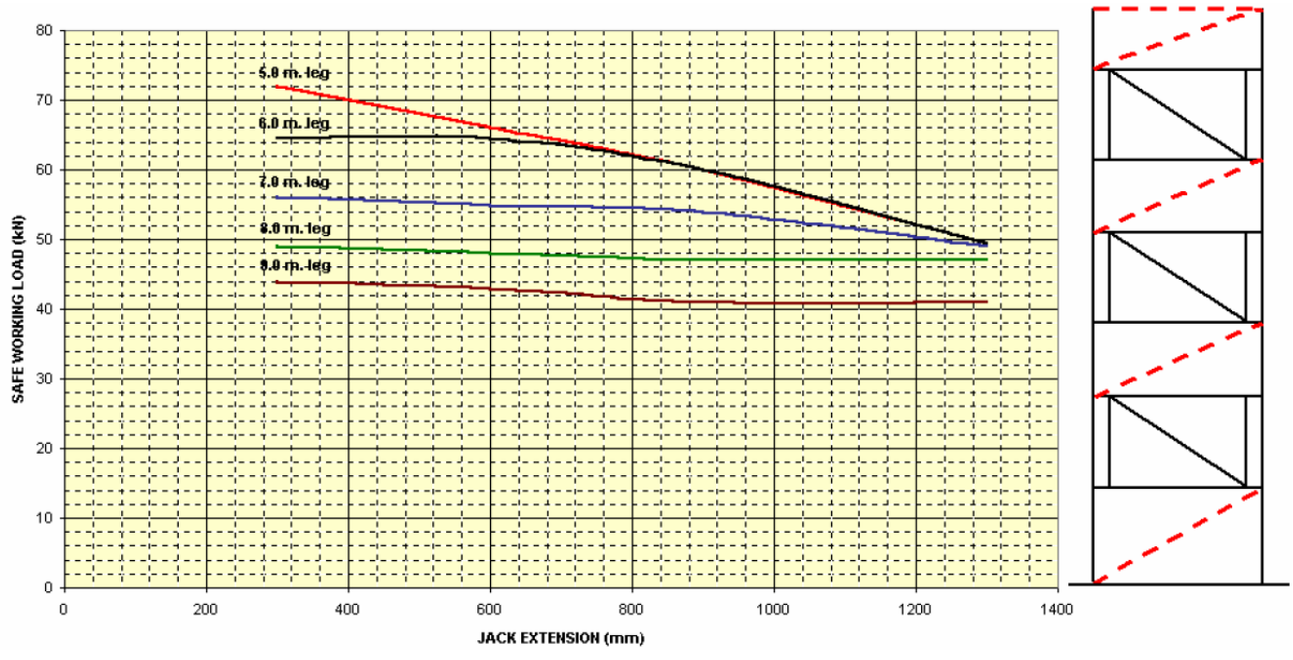
- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)



3. Working Load Limits (WLL)

Free Standing Fully Braced Towers - 3 Ledger Frame

- 2.5% Top Horizontal Load
- Safe Working Load kN (SF=2)

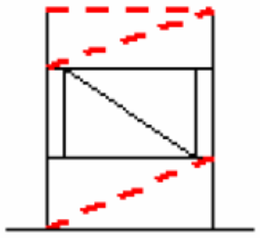


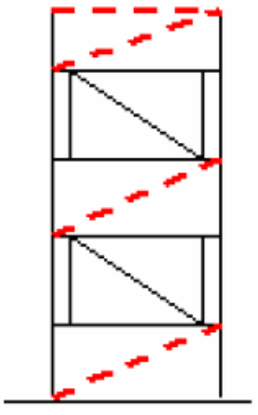
3. Working Load Limits (WLL)

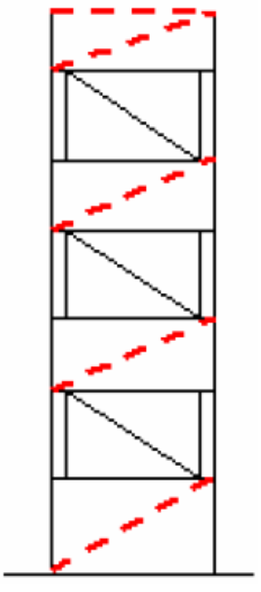
Free Standing Fully Braced Towers

- 2.5% Top Horizontal Load
- Top Horizontal Displacement (mm) at Safe Working Load

Jack Extension (mm)		300	600	900	1300	300	600	900	1300	300	600	900	1300
No. Of Ledgers		1				2				3			
Leg Height (m)	1.4	81.25	72.50	63.75	53.75								
	2.49	58.00	51.00	49.50	40.00								
	3.58	42.00	38.00	37.00	31.00								
	4.67	32.00	29.00	29.00	25.00								
	2.5					78.00	70.00	62.00	52.00				
	3					76.50	70.50	61.50	51.00				
	4					69.00	67.50	61.50	51.00				
	5					55.50	54.00	52.50	51.00	72.00	66.00	60.00	49.50
	6					45.00	45.00	43.50	43.50	64.50	64.50	60.00	49.50
	7									56.00	55.00	54.00	49.00
	8									49.00	48.00	47.00	47.00
	9									44.00	43.00	41.00	41.00

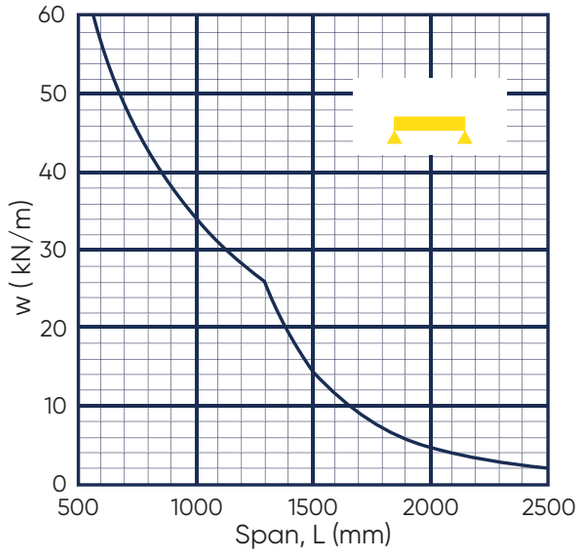


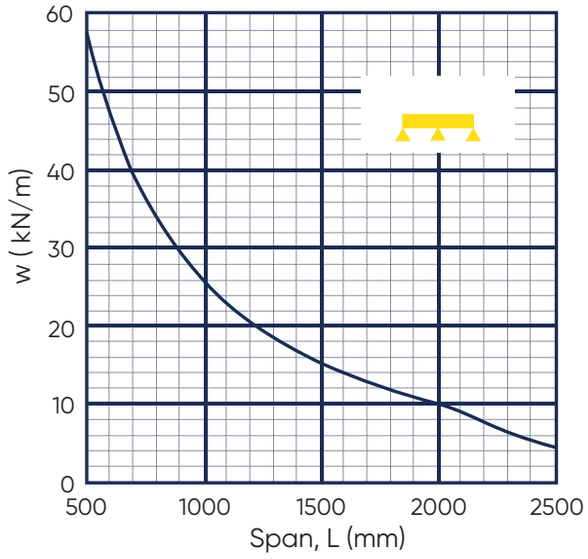


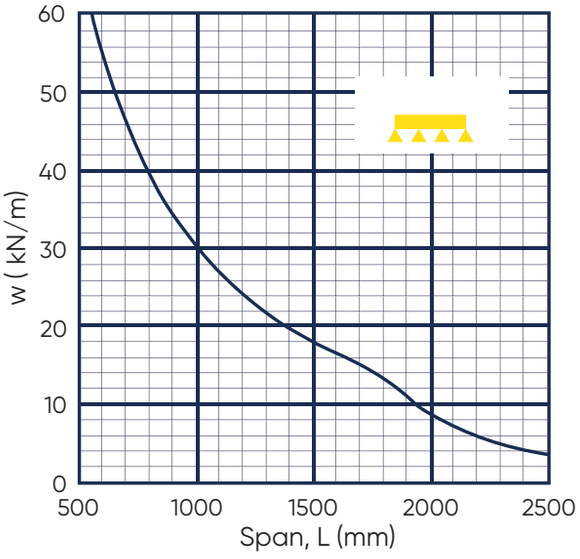


3. Working Load Limits (WLL)

A-Beam Deflection Criteria: Lesser of 3mm or L/270





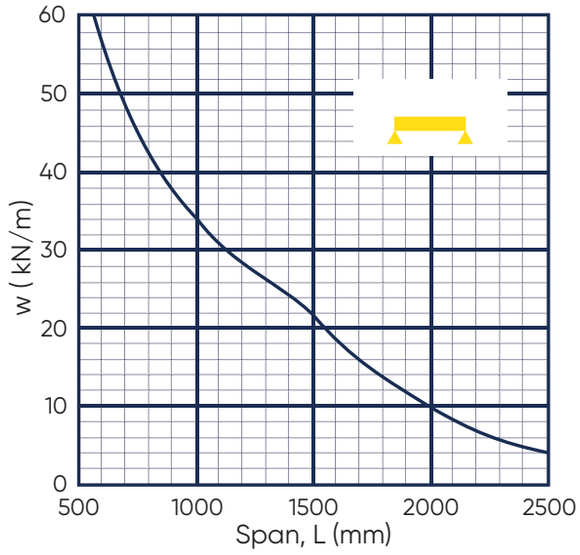


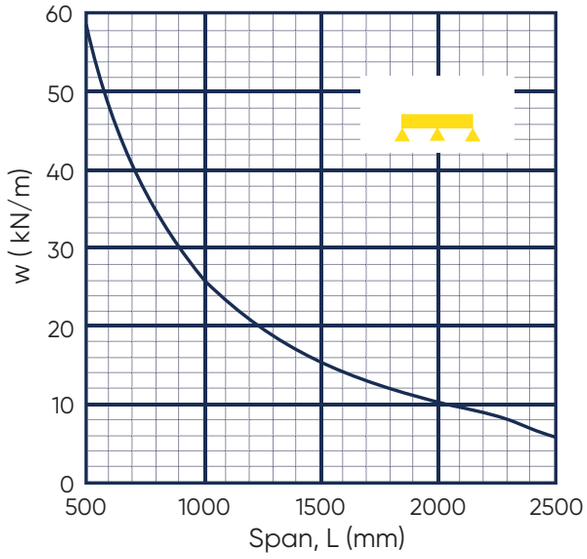
Span (mm)	w kN/m		
	1 span	2 spans	3 spans
400	85.00	73.50	84.05
500	68.00	57.74	66.17
600	56.67	47.18	54.20
700	48.57	39.61	45.61
800	42.50	33.91	39.15
900	37.78	29.48	34.12
1000	34.00	25.94	30.09
1100	30.91	23.04	26.80
1200	28.33	20.63	24.05
1300	25.96	18.60	21.74
1400	19.30	16.87	19.76
1500	14.65	15.38	18.05
1600	11.31	14.08	16.56
1700	8.88	12.95	15.26
1800	7.06	11.95	13.37
1900	5.69	11.06	10.77
2000	4.63	10.27	8.77
2100	3.81	9.18	7.22
2200	3.17	7.62	5.99
2300	2.65	6.38	5.01
2400	2.24	5.38	4.23
2500	1.90	4.57	3.59

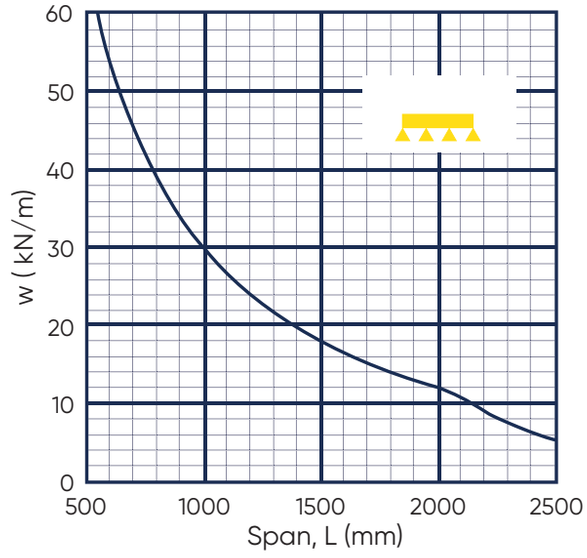
Note:
1. w = WLL for uniformly distributed load, kN/m
2. L = Span, mm.
3. Deflection criteria is for the member in question only.
4. Self weight of the member is not included in the graphs or tables.
5. It has been assumed that the load is distributed uniformly and for multiple spans, all spans are equal
6. WLL have been derived using minimum bearing lengths @ 152mm for A-Beam
7. Limit State Conversion Factor = 1.5
8. Maximum capacities may be limited by other components or assembly.

3. Working Load Limits (WLL)

A-Beam Deflection Criteria: Greater of 3mm or L/270







Span (mm)	w kN/m		
	1 span	2 spans	3 spans
400	85.00	73.50	84.05
500	68.00	57.74	66.17
600	56.67	47.18	54.20
700	48.57	39.61	45.61
800	42.50	33.91	39.15
900	37.78	29.48	34.12
1000	34.00	25.94	30.09
1100	30.91	23.04	26.80
1200	28.33	20.63	24.05
1300	26.15	18.60	21.74
1400	24.29	16.87	19.76
1500	21.77	15.38	18.05
1600	18.54	14.08	16.56
1700	15.90	12.95	15.26
1800	13.72	11.95	14.11
1900	11.89	11.06	13.08
2000	9.96	10.27	12.17
2100	8.19	9.56	10.87
2200	6.80	8.92	9.03
2300	5.69	8.16	7.56
2400	4.80	6.89	6.37
2500	4.08	5.85	5.41

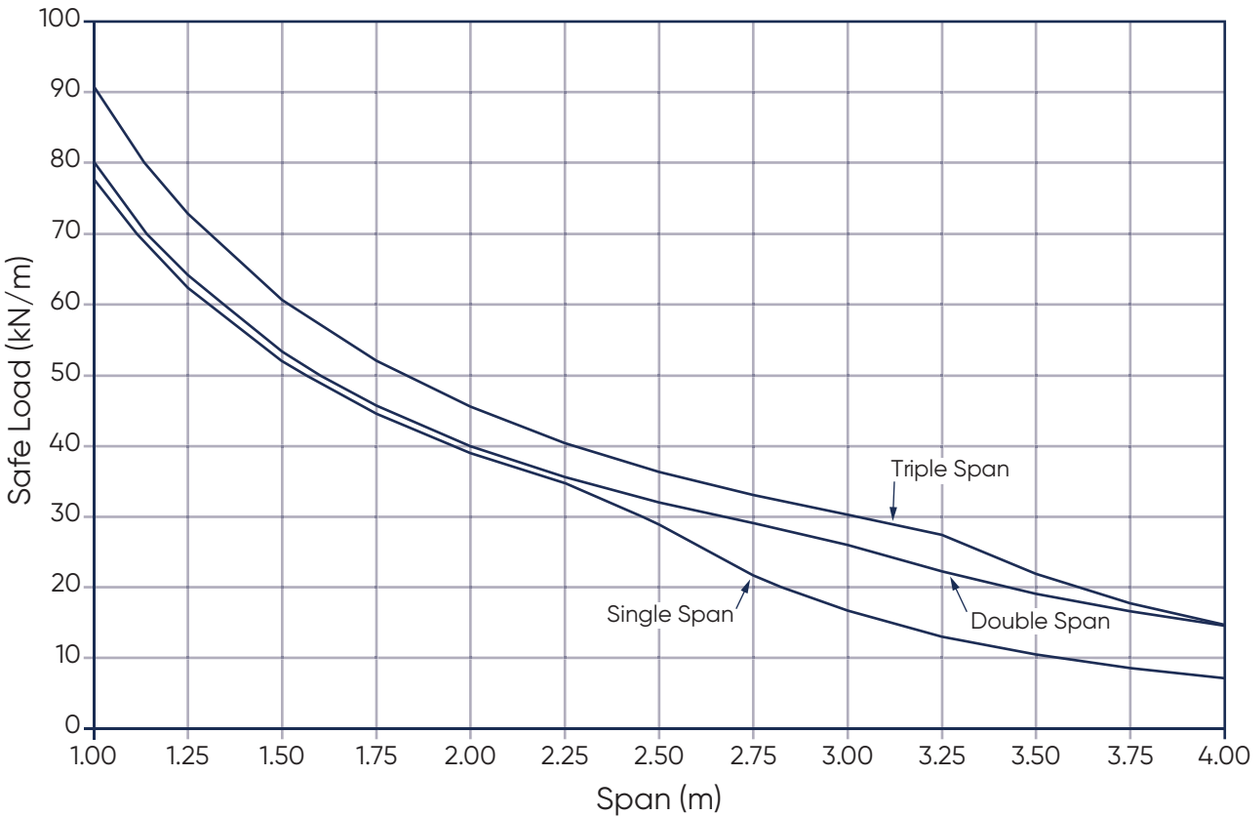
Note:
1. w = WLL for uniformly distributed load, kN/m
2. L = Span, mm.
3. Deflection criteria is for the member in question only.
4. Self weight of the member is not included in the graphs or tables.
5. It has been assumed that the load is distributed uniformly and for multiple spans, all spans are equal
6. WLL have been derived using minimum bearing lengths @ 152mm for A-Beam
7. Limit State Conversion Factor = 1.5
8. Maximum capacities may be limited by other components or assembly.

3. Working Load Limits (WLL)

T225 Load Graph

The graph below is based on the following limits:

- Deflection: Span/270
- End Bearing Length: 120mm Min.
- Inner Bearing Length: 170mm Min.
- Maximum Bending Resistance: 29.25 kNm.
- Bend Stiffness - EI: 1585.4 kNm^2



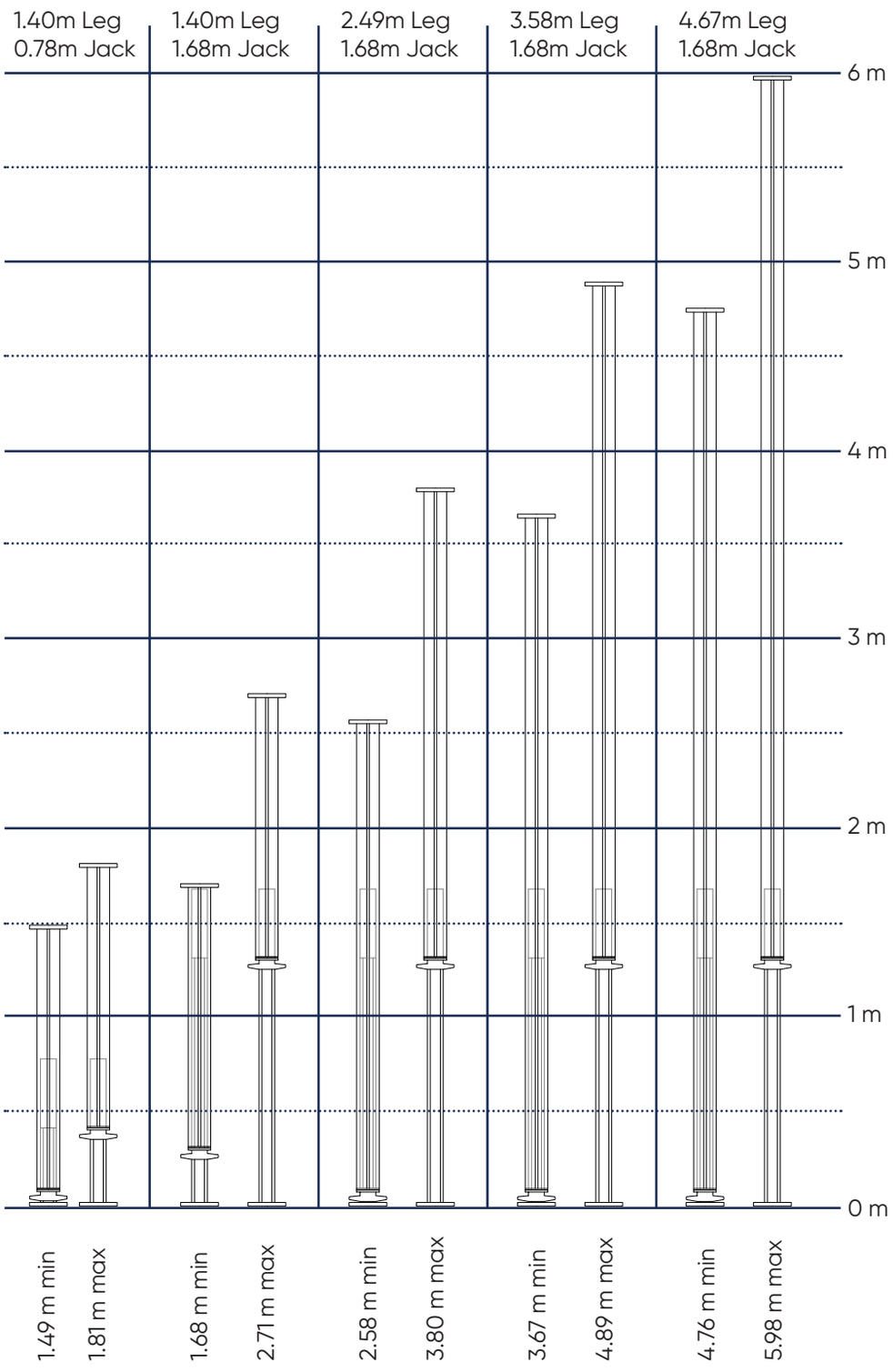
S150 Loads

- Max Body Sagging: 6.84 kNm
- Max Body Hogging: 5.40 kNm
- End Bearing - 50mm: 12 kN (WLL)
- Inner Bearing - 100mm: 30 kN (WLL)
- Bend Stiffness - EI: 372.8 kNm^2

4. SYSTEM DETAILS

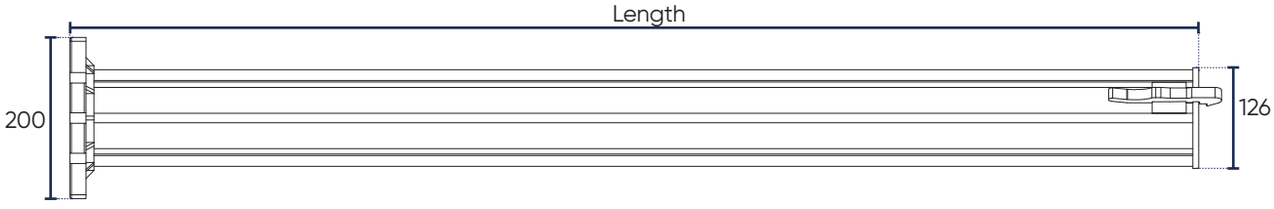
4. System Details

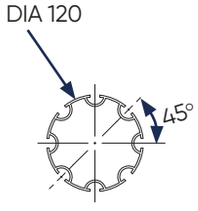
Leg & Jack Make-Up

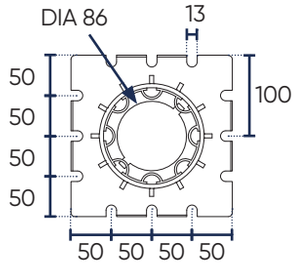


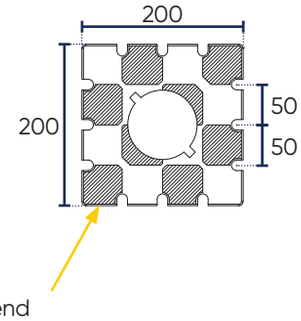
4. System Details

Gass Leg Details



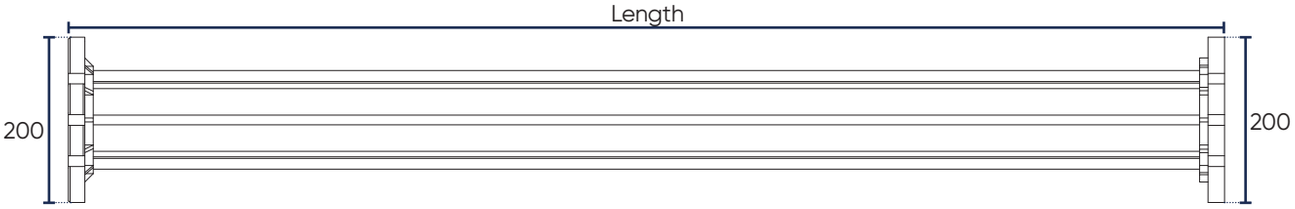


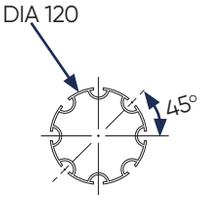


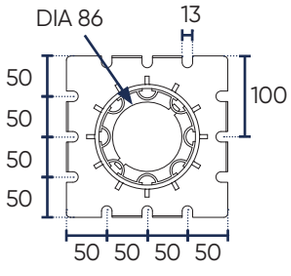


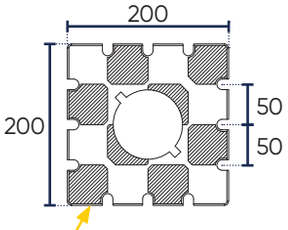
Note:
For the mating pattern on the underside of the square end plate on inner, outer legs and extension legs the serration's on the edges of the plates must match.

Extension Leg





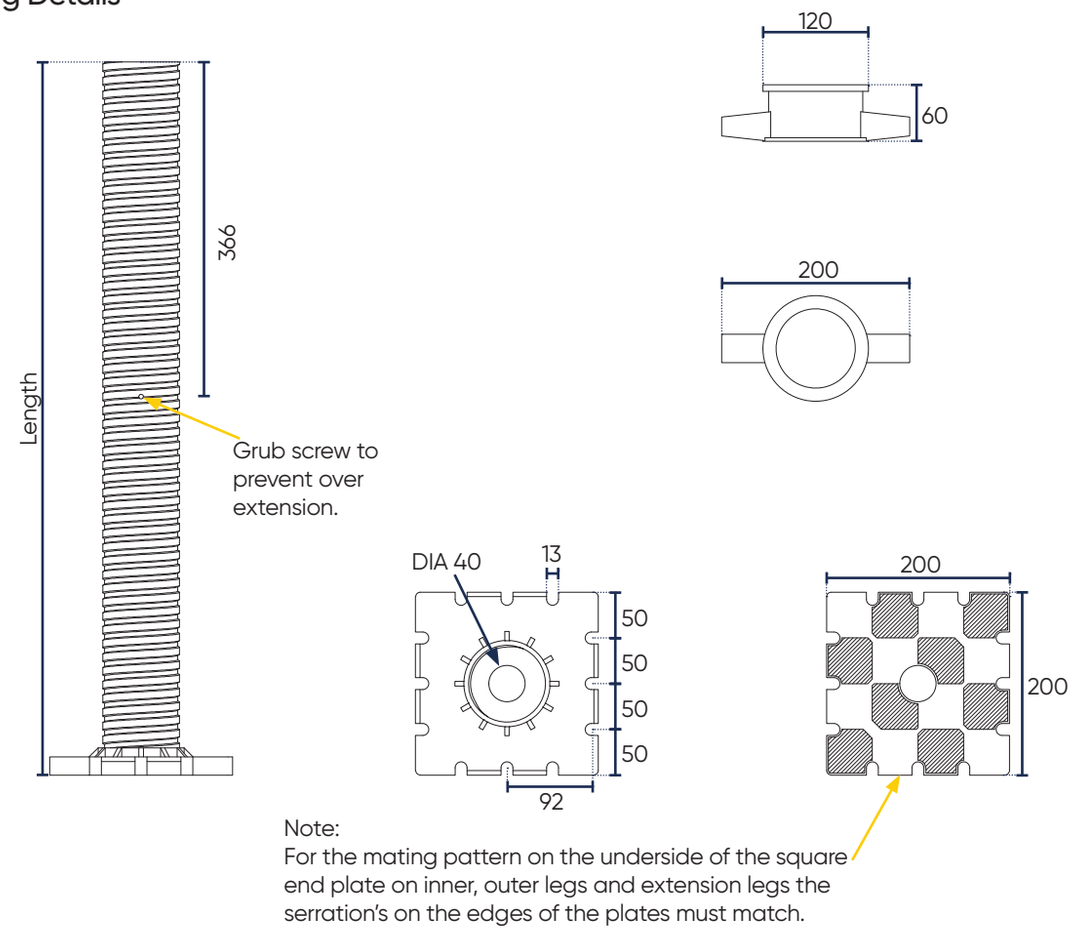




Note:
For the mating pattern on the underside of the square end plate on inner, outer legs and extension legs the serration's on the edges of the plates must match.

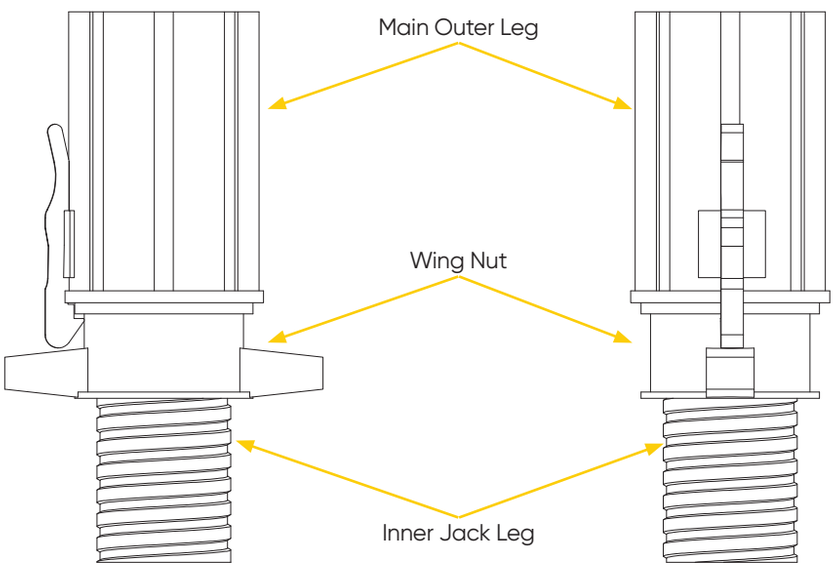
4. System Details

Inner Leg Details



Note:
For the mating pattern on the underside of the square end plate on inner, outer legs and extension legs the serration's on the edges of the plates must match.

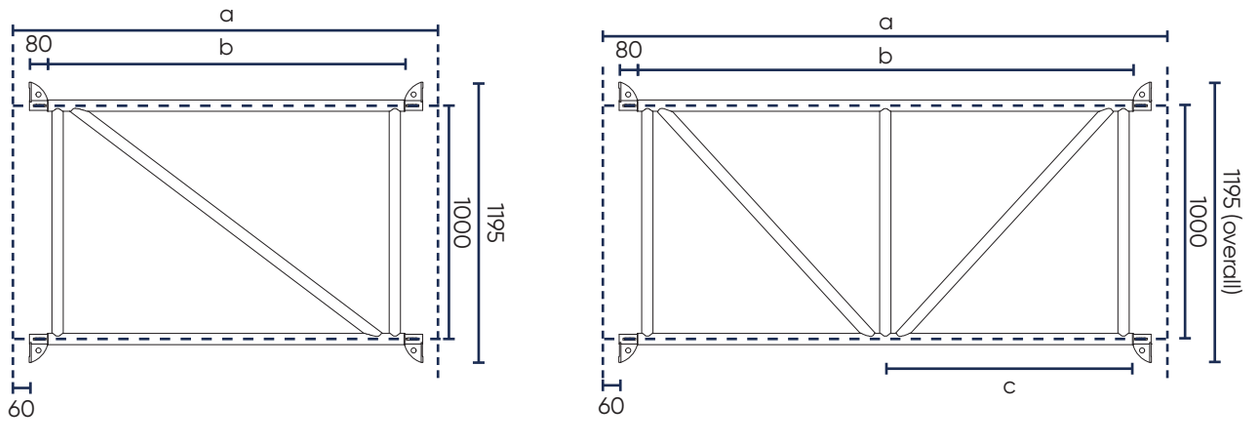
Sprung Latch



- Sprung - Loaded latching device clips over flange on nut and led end plate allowing nut to be rotated to extend or retract jack into led but stop jack from disengaging when gass falsework is crane handled.
- Max load on latch (tension) = 625 kg

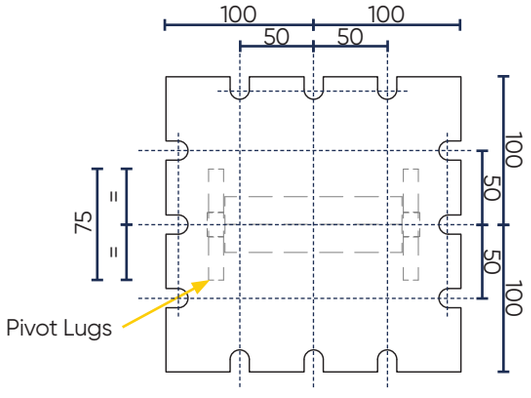
4. System Details

Bracing Frame Details



Bracing Frame Length	a	b	c
1200 mm	1200	922	-
1800 mm	1800	1522	-
2400 mm	2400	2122	1061
3000 mm	3000	2722	2722

Rocking Head / Base Plate Details

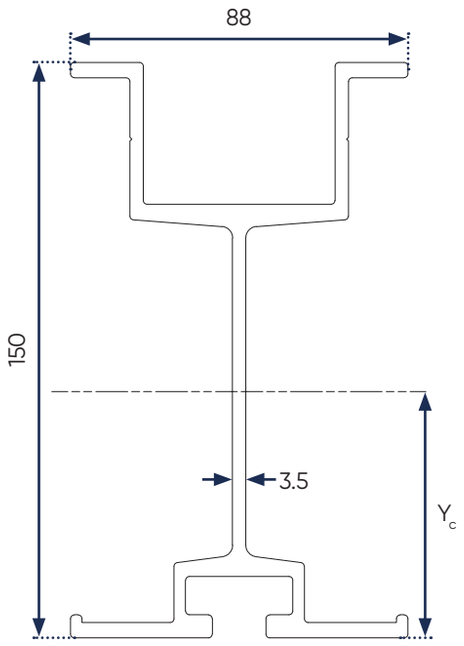


4. System Details

A-Beam Section Properties

	A-Beam
Alloy	6061 - T6
Mass (kg/m)	4.15
E (MPa)	70000
$E_{stiffness}$ (MPa)	69300
A (mm^2)	1535
I_{xx} (mm^4)	4644202
I_{yy} (mm^4)	703048
J (mm^4)	9019.6
I_w (mm^6)	1.05 e9
B_x	12.06
Q (mm^3)	39446
Y_c (mm)	70.3

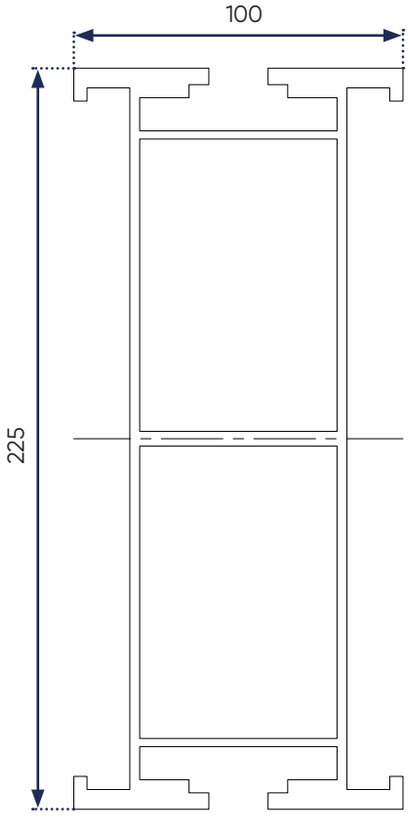
Note:
Section properties of timber insert not included.



A-Beam

T225 Section Properties

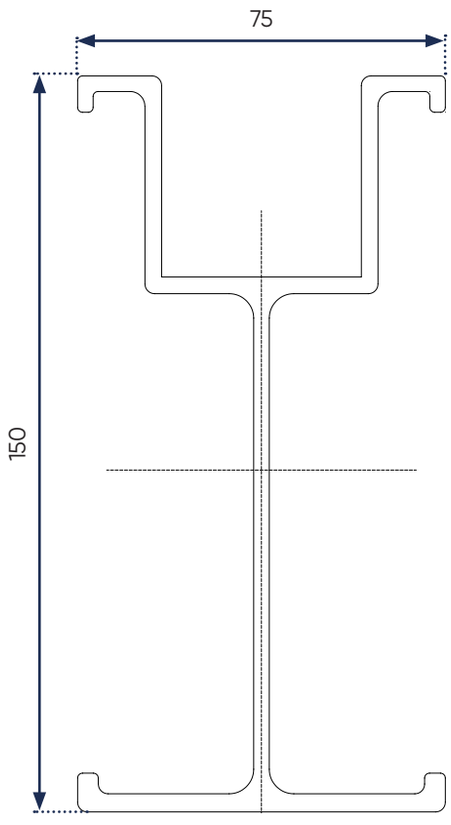
	T225 Beam
Alloy	6082 T6
Mass (kg/m)	8.92
A (mm^2)	8920000
I_{xx} (mm^4)	23010000
I_{yy} (mm^4)	2390000



4. System Details

T225 Section Properties

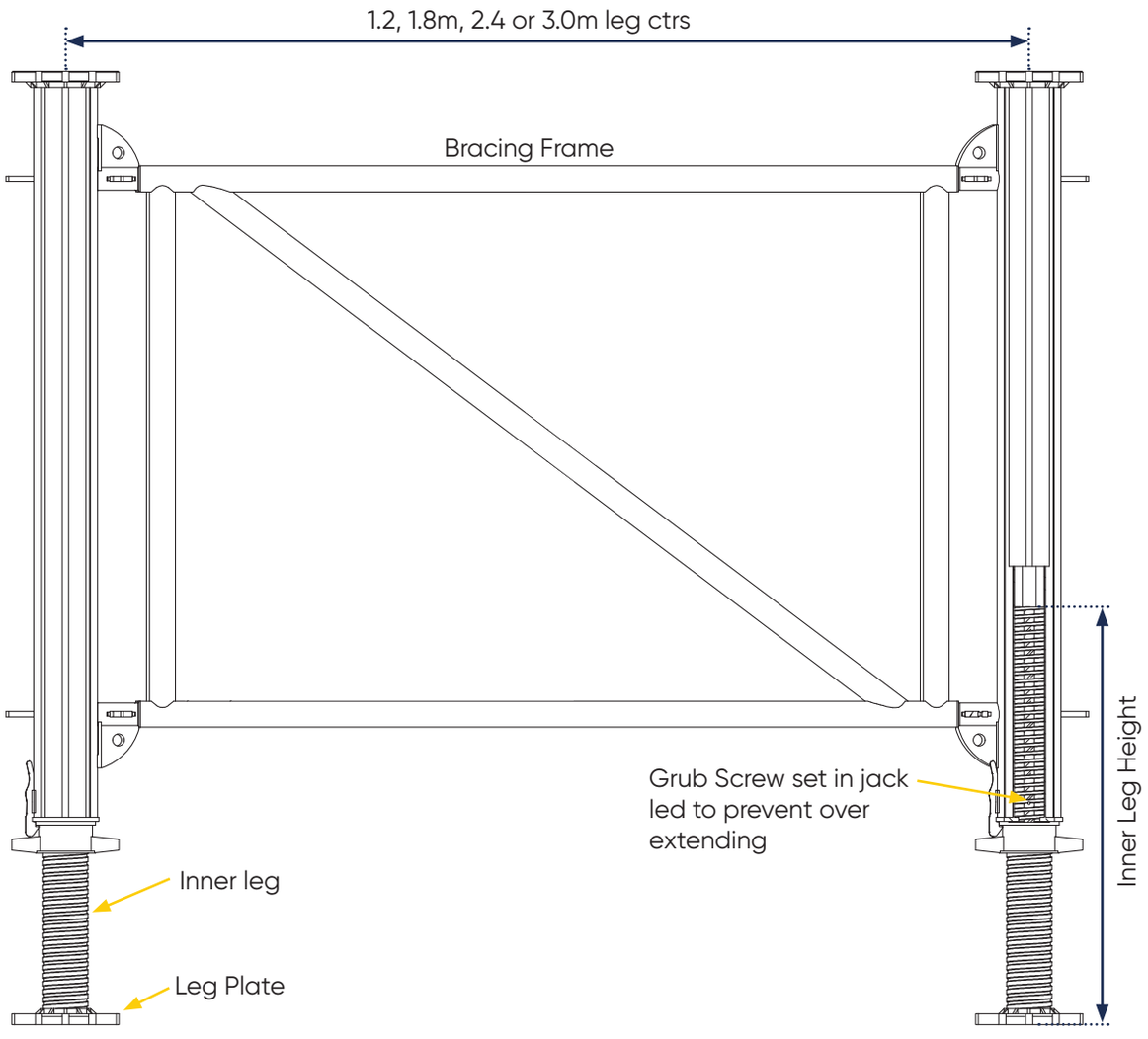
	T150 Beam
Alloy	6082 T6
Mass (kg/m)	3.24
A (mm^2)	1196
I_{xx} (mm^4)	3560000
I_{yy} (mm^4)	437600



5. ASSEMBLY DETAILS

5. Assembly Details

Jack Leg Assembly

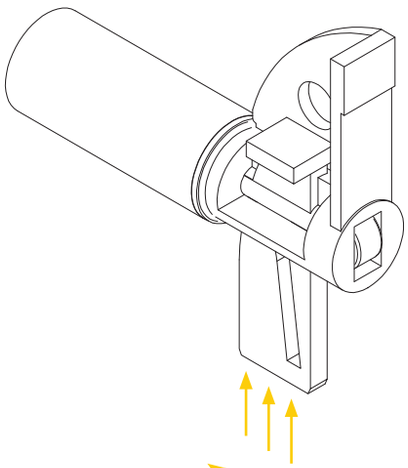


5. Assembly Details

Ledger Frame End Fitting Operation

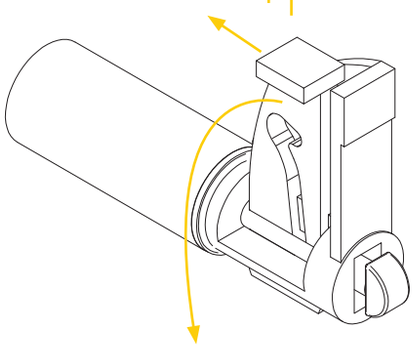
With bolt in parked position, bracing frame is positioned against main outer leg.

Raise wedge to advance bolt into slot on leg.

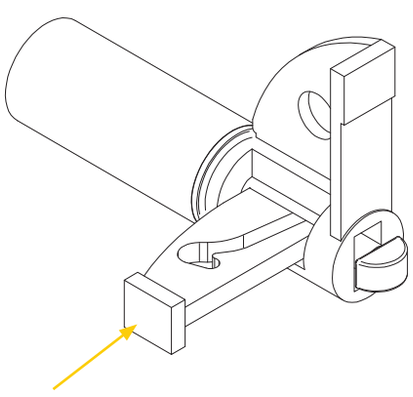


Additional movement of bolt into slot achieved by moving wedge towards centre of Bracing Frame.

Rotate wedge 90 degrees to lock bolt in leg slot.



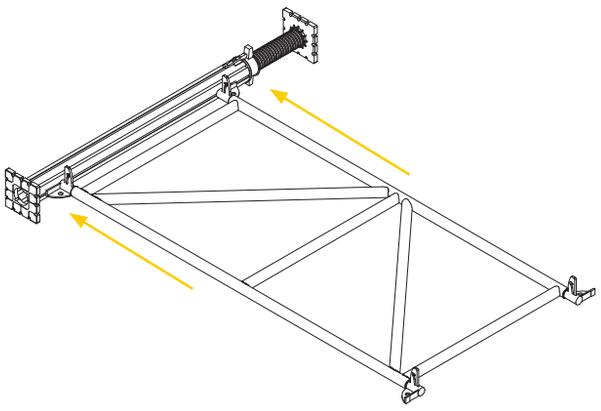
Hammer Wedge to secure bolt in slot



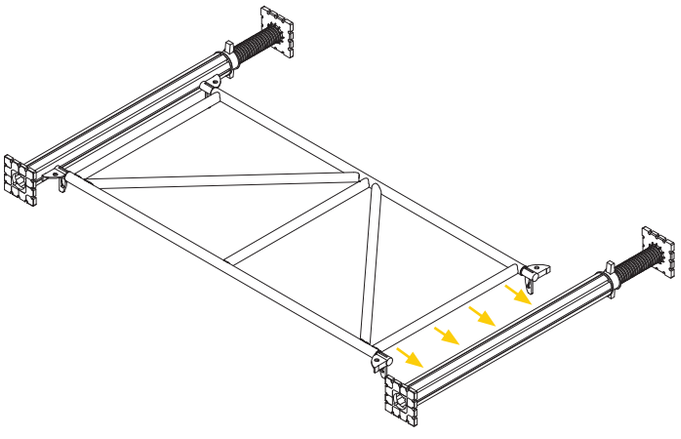
5. Assembly Details

Assembling the system

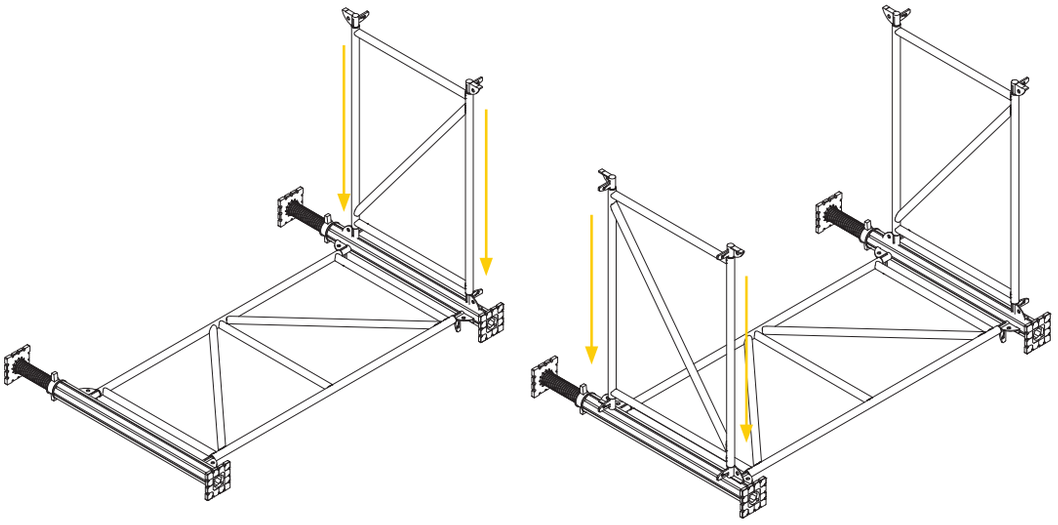
Place the Gass on the ground at the approximate extension. Attach the Brace frame onto one side of the prop outer leg. Follow page 5.3 attachment steps to successful secure the Bracing frame to Prop.



Repeat previous step with the other side of the bracing leg till frame is secure and locked.



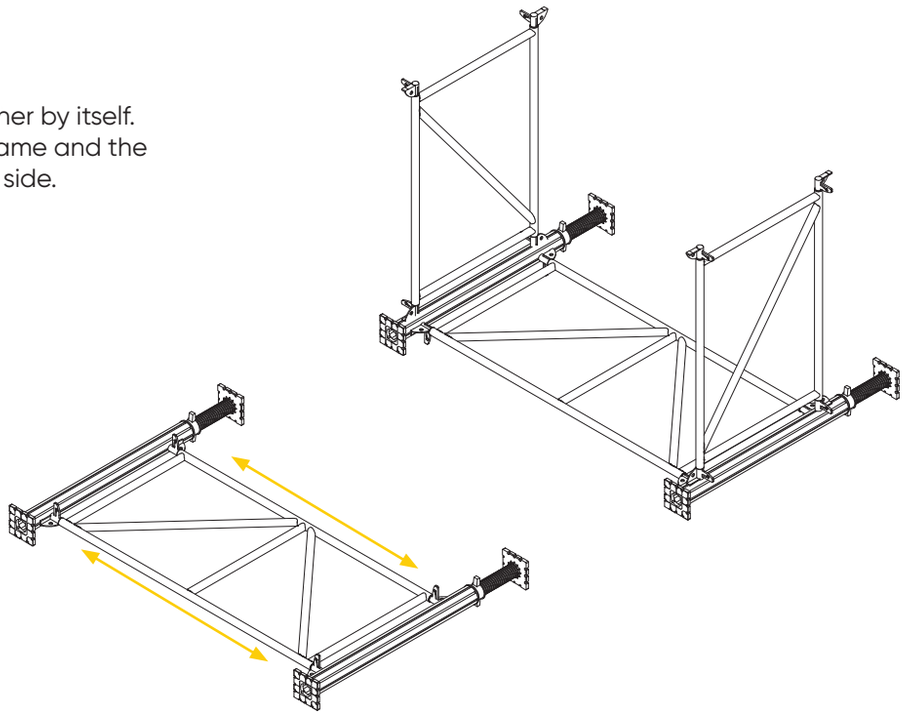
Attach the side bracing frames adjacent to the already braced frame. complete both sides till it forms an U shape.



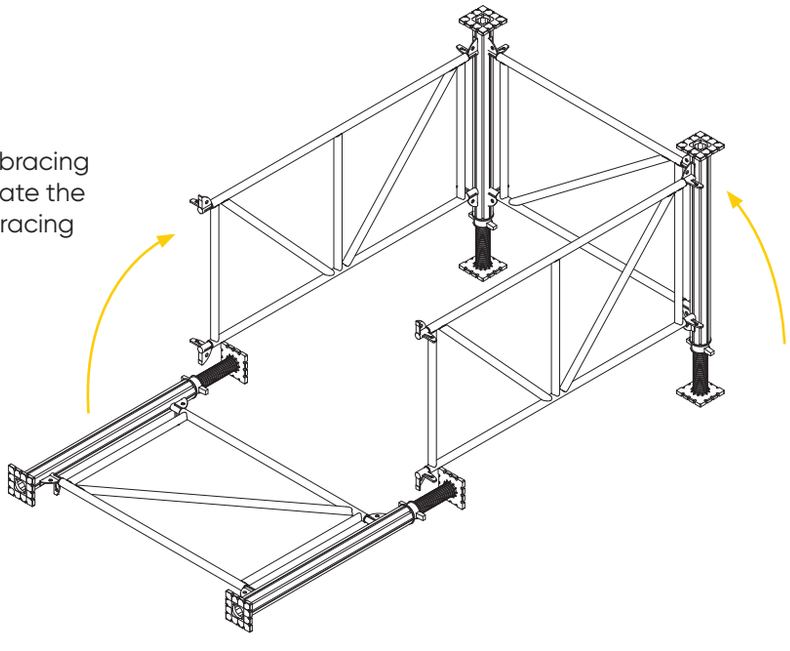
5. Assembly Details

Assembling the system

Attach the oppsite side together by itself. The Gass prop and Bracing frame and the oppsite side Prop to form one side.



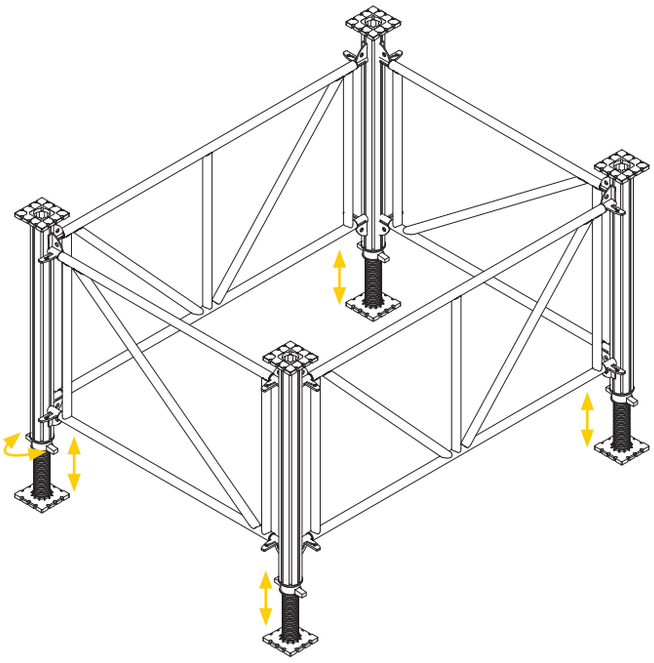
Rotate up the U shaped/three sided bracing frame till they are stating upright. Rotate the single frame side and attach to the bracing frames to form a rectangle.



5. Assembly Details

Assembling the system

Adjust the props to ensure the tower is plumb.
The Gass system has been formed.



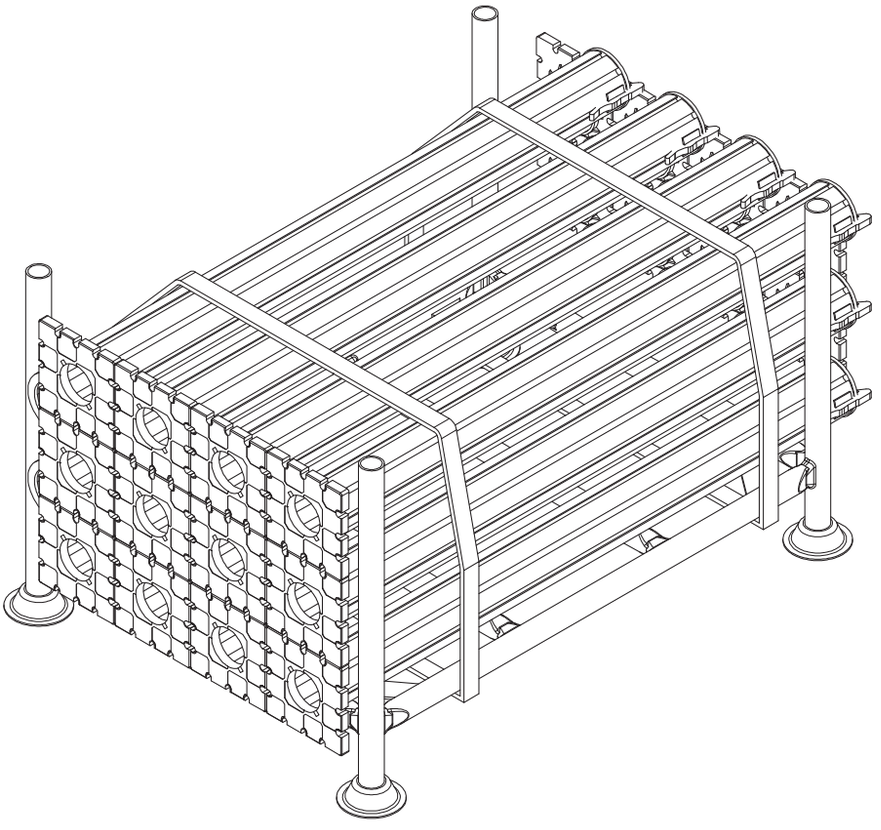
6. TRANSPORT & HANDLING

6. Transport & Handling

Outer Leg

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.



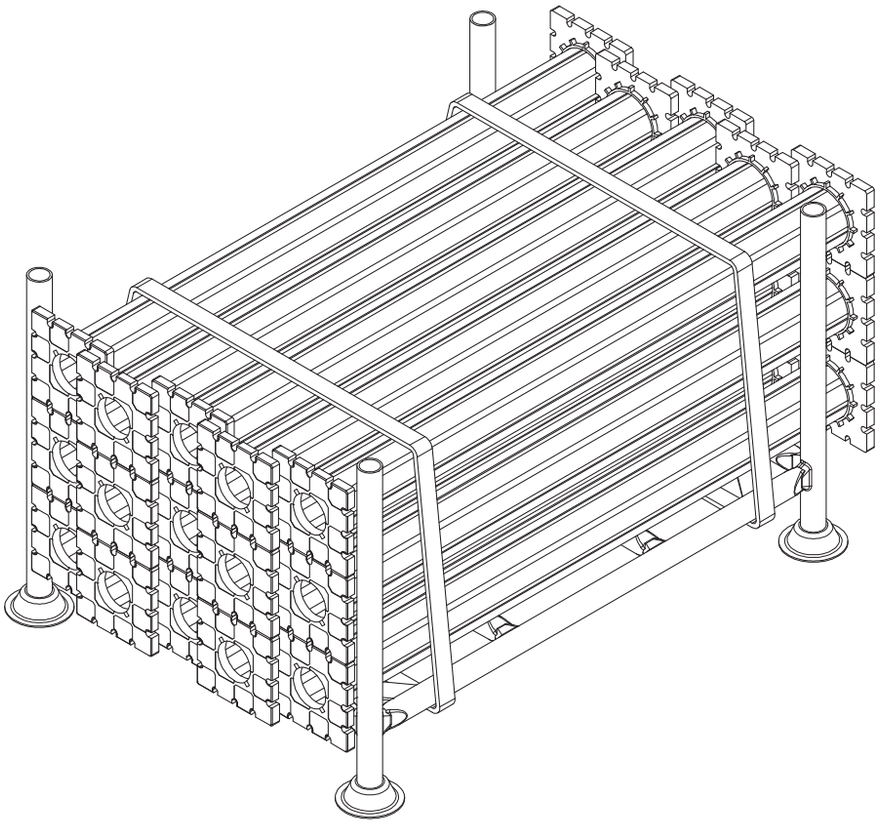
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Outer Leg 4670mm	22.1	20	482	SP
Outer Leg 3580mm	17.4	20	388	SP
Outer Leg 2490mm	12.7	20	294	SP
Outer Leg 1400mm	8.0	20	200	SP

6. Transport & Handling

Extension Leg

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.



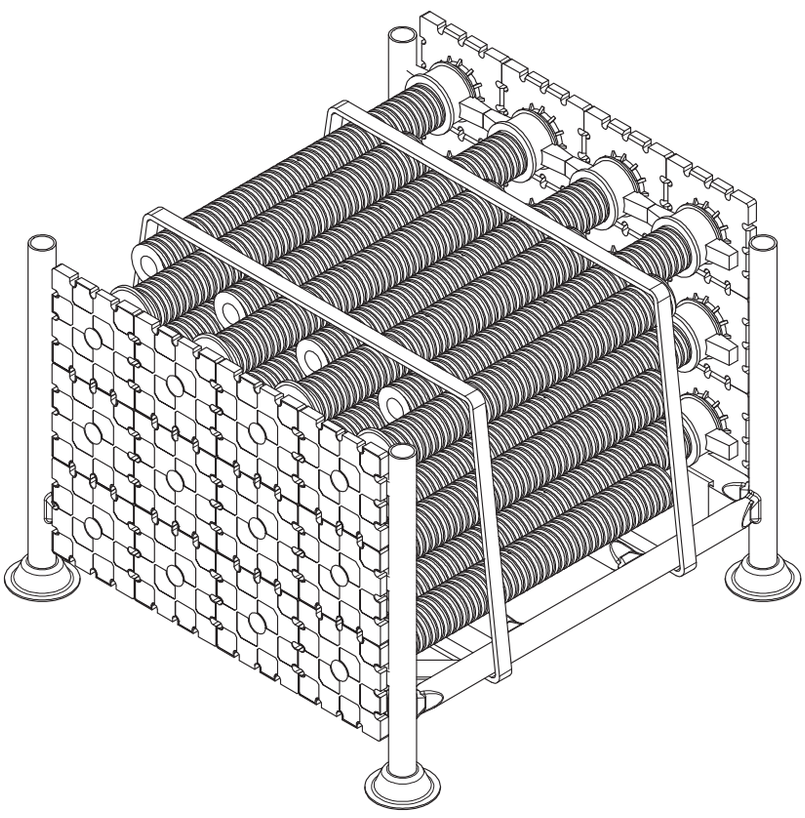
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Extension Leg 4670mm	23.6	20	500	SP
Extension Leg 3580mm	18.9	20	418	SP
Extension Leg 2490mm	142	20	324	SP
Extension Leg 1400mm	9.5	20	330	SP
Extension Leg 500mm	5.6	40	264	SP

6. Transport & Handling

Inner Leg (Adjustable Legs)

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.



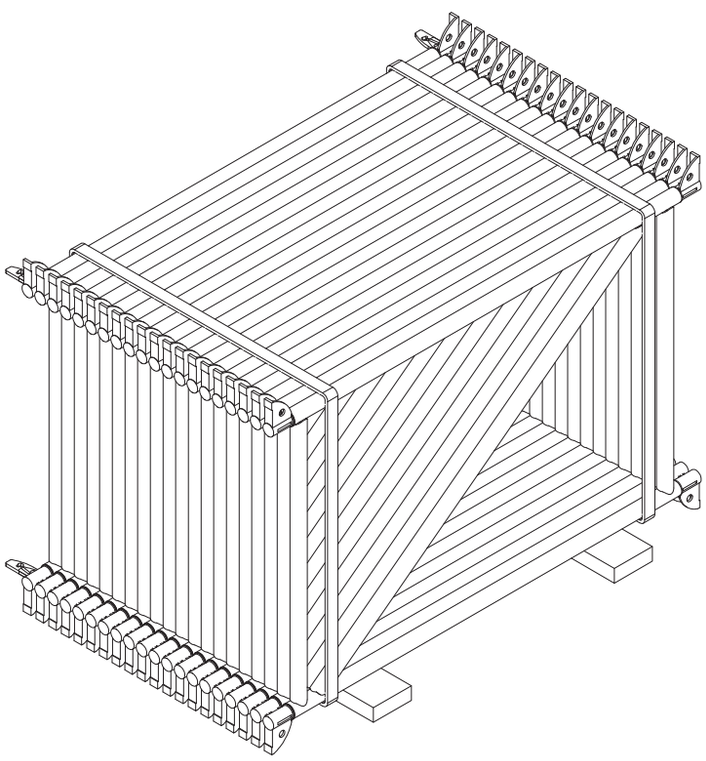
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Inner Leg 1680mm	10.2	20	240	SP
Inner Leg 780mm	5.5	40	260	MP

6. Transport & Handling

Bracing Frames

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/bundle. Do not mix different sizes or types in one stillage/bundle.
- Ensure every stillage/bundle load does not exceed the advised table below.
- Secure assembled items onto stillage/bundle 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.



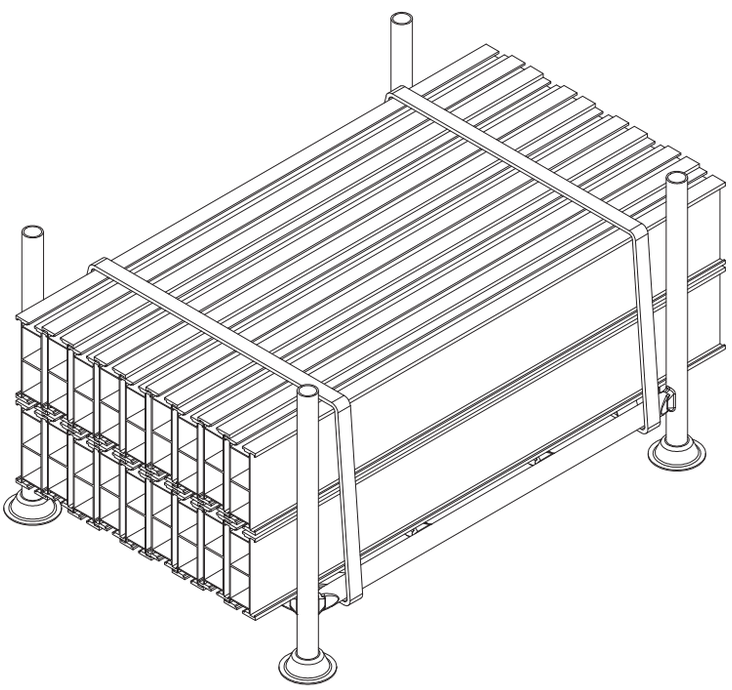
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Bracing Frame 3000mm	15.8	25	395	Bundle
Bracing Frame 2400mm	13.4	25	335	Bundle
Bracing Frame 1800mm	10.3	25	257.5	Bundle
Bracing Frame 1200mm	9.4	25	235	Bundle

6. Transport & Handling

T225 Aluminium Beam

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/bundle. Do not mix different sizes or types in one stillage/bundle.
- Ensure every stillage/bundle load does not exceed the advised table below.
- Secure assembled items onto stillage/bundle 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.



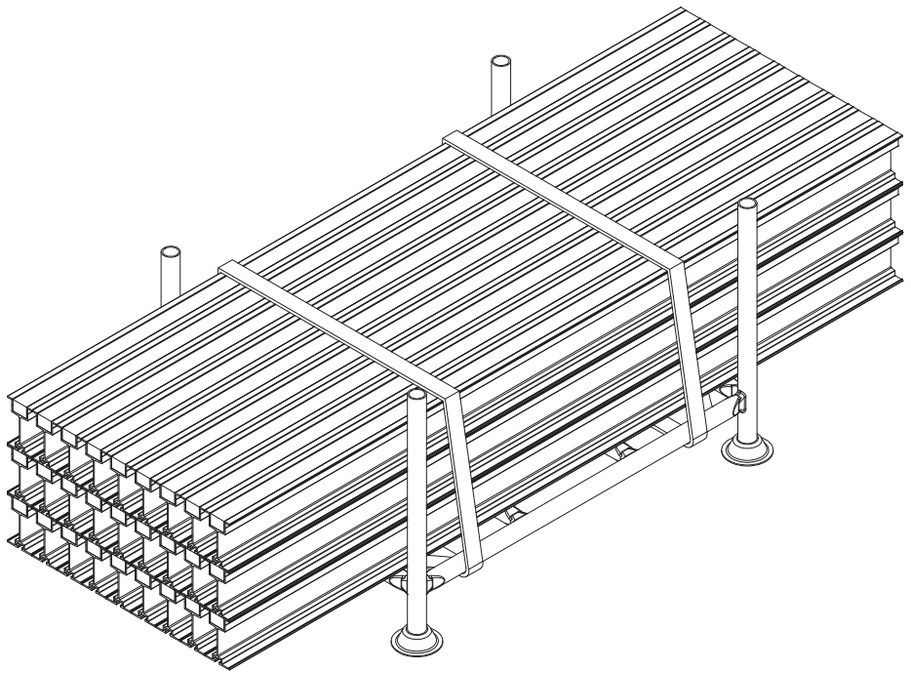
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
T225 Al Beam 1500 - 2000mm	17.8	20	400	SP
T225 Al Beam 2100 - 3000mm	26.7	20	534	SP
T225 Al Beam 3200 - 3700mm	32.9	20	658	SP
T225 Al Beam 4200 - 4800mm	42.7	20	854	SP
T225 Al Beam 5000 - 5400mm	48.0	20	960	SP
T225 Al Beam 6000 - 6300mm	56.9	20	1138	SP

6. Transport & Handling

Aluminium A-Beam

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/bundle. Do not mix different sizes or types in one stillage/bundle.
- Ensure every stillage/bundle load does not exceed the advised table below.
- Secure assembled items onto stillage/bundle 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.



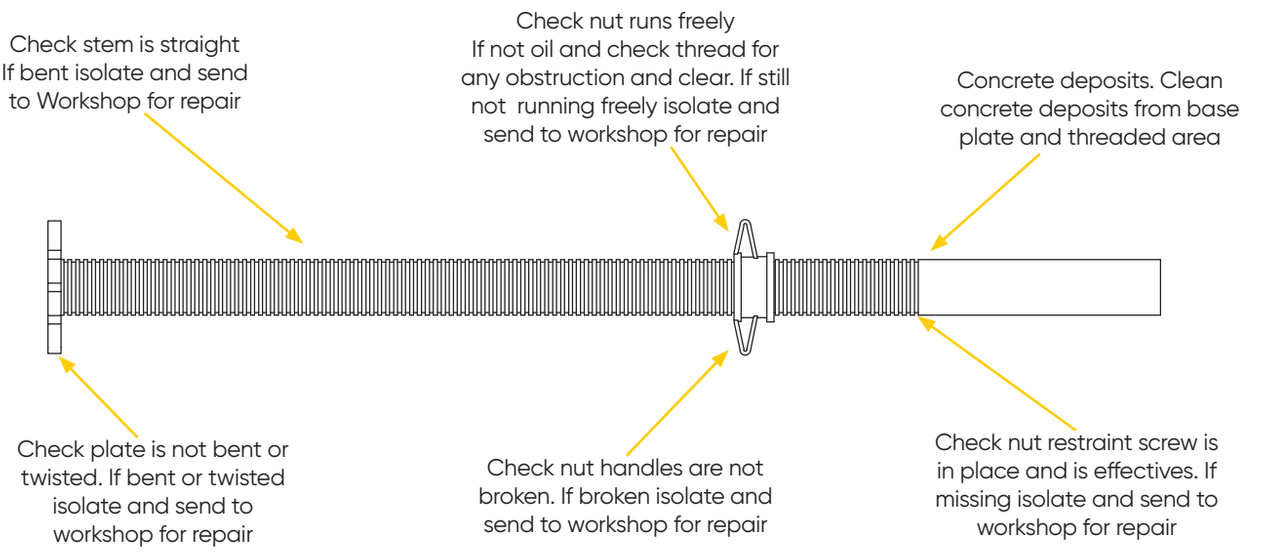
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
A-Beam 1200 - 1800mm	9.7	20	194	SP
A-Beam 2100 - 2700mm	14.6	20	292	SP
A-Beam 3000 - 3900mm	21.0	20	420	SP
A-Beam 4200 - 4800mm	25.9	20	518	SP
A-Beam 5100 - 5700mm	30.8	20	616	SP
A-Beam 6000 - 7000mm	37.8	20	756	SP

7. MAINTENANCE & INSPECTION

7. Maintenance & Inspection

Inner Leg

The Acrow Gass Inner Leg is in effect an adjustable jack that con be used at either or both ends of the Acrow Gass Leg and Extension Leg to provide vertical adjustment for a Acrow Gass tower.



Inspection

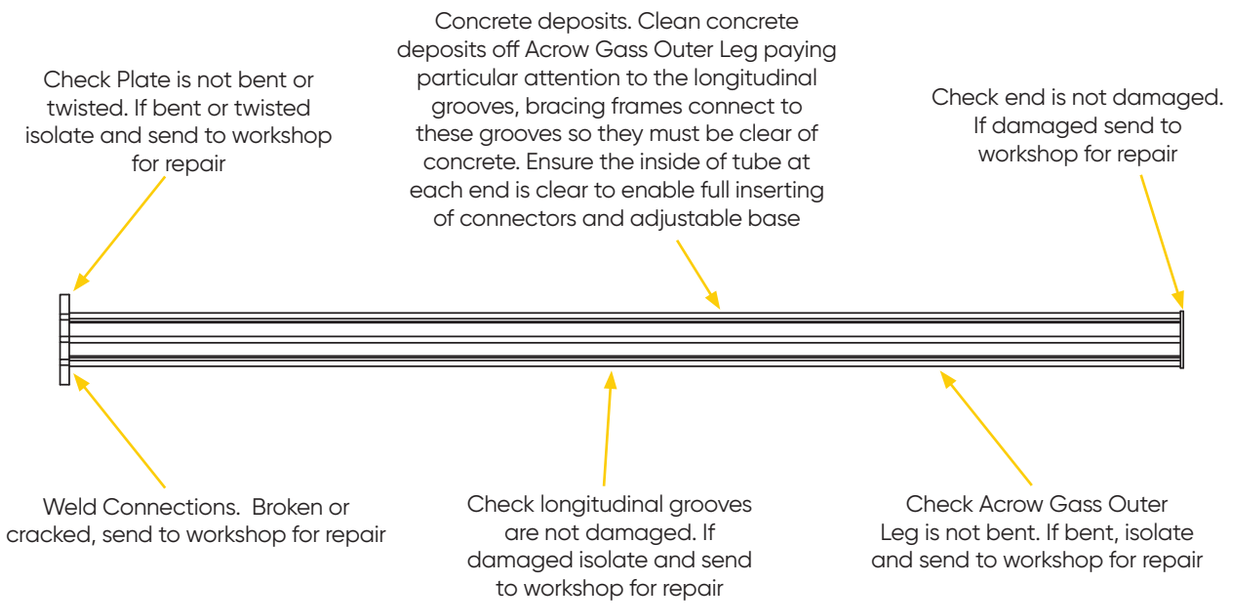
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	No build up permitted on base plate or stem particularly on thread	Remove build up with wire brush and scraper, clean threads and oil
Cracked welds on base plate	Cracked welds are not permitted	Grind off welds and re-weld. Refer Work Instruction WI-GE-100
Nut not running freely	Nut must run freely along full length of the shaft thread	Remove any obstruction in thread, oil and free up, if not possible then replace nut
Nut with broken or cracked handles	Handles must be intact	Replace nut
Shaft is bent	Shaft must be straight	Straighten if possible ensure nut runs freely up and down full length of shaft after straightening. If not possible to straighten or nut does not run freely even after replacement then scrap.
Base plate is bent	Base plate must be straight and at right angles to shaft	Repair, if not possible then remove and weld on a new base plate ensuring it is concentric and square to the stem in both plains
Nut restraint screw missing or not effective	Nut restraint screw must be in place and work effectively to stop nut from winding past it	Replace screw and test to ensure it stops nut from going past it

7. Maintenance & Inspection

Outer Leg

The Acrow Gass Outer Leg is the vertical load bearing member and it features eight slots (grooves) which allow connection of bracing frames.



Inspection

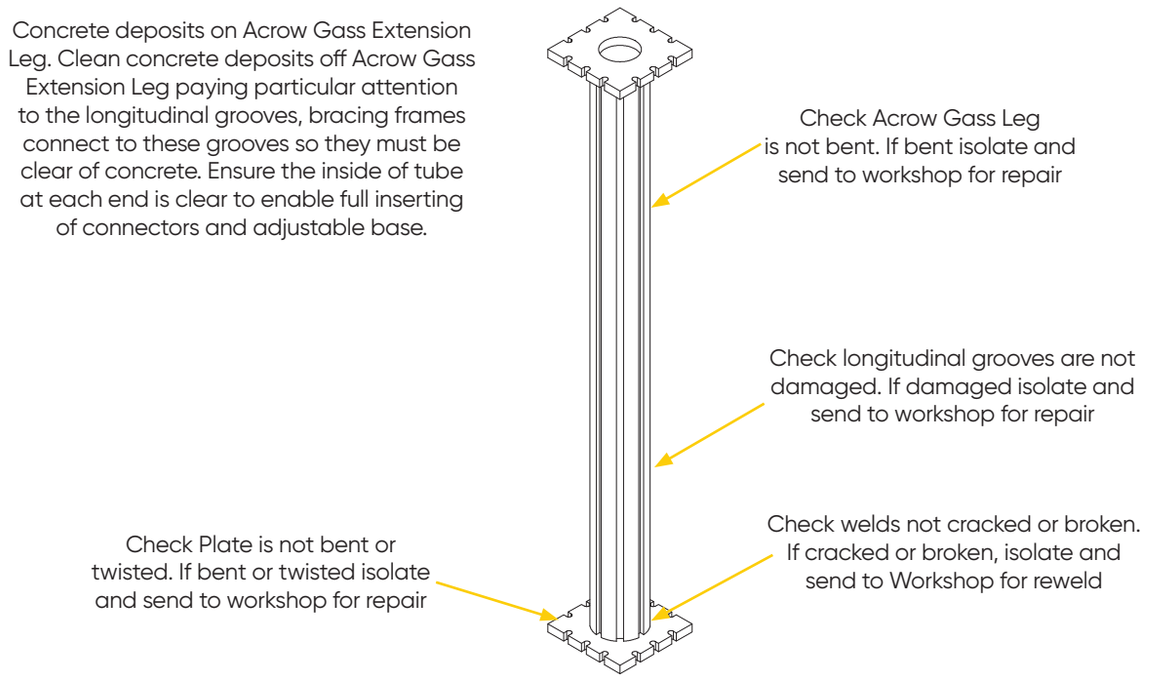
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Gass Outer Leg bent or damaged	Gass Outer Leg must be straight and square to base plate	Straighten or cut back to smaller size using Acrow Manufacturing drawing as reference.
Cracked welds at end plate	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction WI-GE-100
End plate is bent or twisted	End plate must be straight and at right angles to stem	Straighten if possible otherwise replace using Acrow Manufacturing drawing as reference
Longitudinal grooves are damaged	Longitudinal grooves must be damaged and true to profile	Repair if possible, if not cut back to smaller size using Acrow Manufacturing drawing as reference
Tube internal bore at ends clogged with concrete or dirt	No concrete build up is permitted internally at Outer Leg ends The bore at each end of the Outer Leg must be clear by 600mm to enable an adjustable base to fit inside	Clear bore with drift or similar tool otherwise cut back or scrap
End of Acrow Gass Outer Leg damaged (flame cut or not cut square)	End of tube must be square. If frame cut or not cut square indicates it has been site cut and the length will be incorrect.	Cut back to next size down using manufacturing drawing as reference
Build up of concrete or other matter	Outer surfaces and longitudinal grooves must be clear of concrete	Remove all concrete build up with scraper and wire brush

7. Maintenance & Inspection

Extension Legs

The Acrow Gass Extension Leg is a vertical load bearing member and it features eight slots (grooves) which allow connection of bracing frames.



Inspection

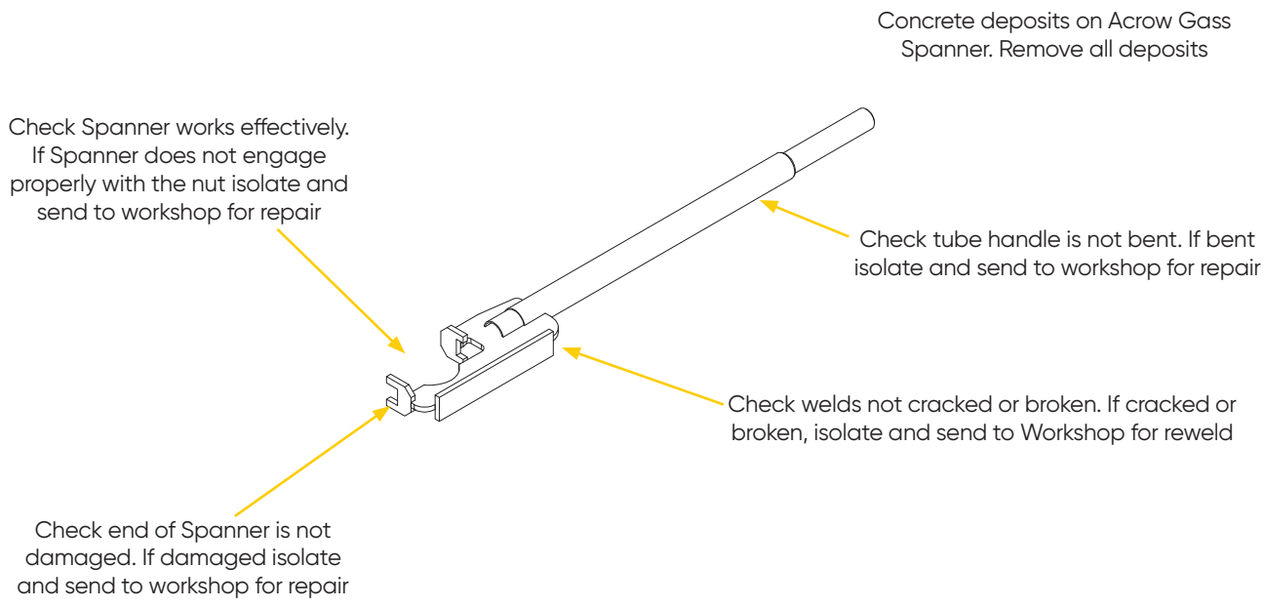
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Gass Extension Leg bent or damaged	Gass Extension Leg must be straight and square to base plate	Straighten or cut back to smaller size using Acrow Manufacturing drawing as reference
Cracked welds at end plate	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction WI-GE-100
End plate is bent or twisted	End plate must be straight and at right angles to stem	Straighten if possible otherwise replace using Acrow Manufacturing drawing as reference
Longitudinal grooves are damaged	Longitudinal grooves must be undamaged and true to profile	Repair if possible, if not cut back to smaller size using Acrow Manufacturing drawing as reference
Tube internal bore at ends clogged with concrete or dirt	No concrete build up permitted anternally at Extension Leg ends The bore at each end of the Leg must be clear by 600mm to enable an adjustable base to fit inside	Clear bore with drift or similar tool otherwise cut back or scrap
Build up of concrete or other matter	Outer surface and longitudinal grooves must be clear of concrete	Remove all concrete build up with scraper and wire brush

7. Maintenance & Inspection

Spanner

The Spanner is used to wind the nut of the Acrow Gass Inner Leg (adjustable jack) up or down when it is in place in a tower and has the weight of the tower on it.



Inspection

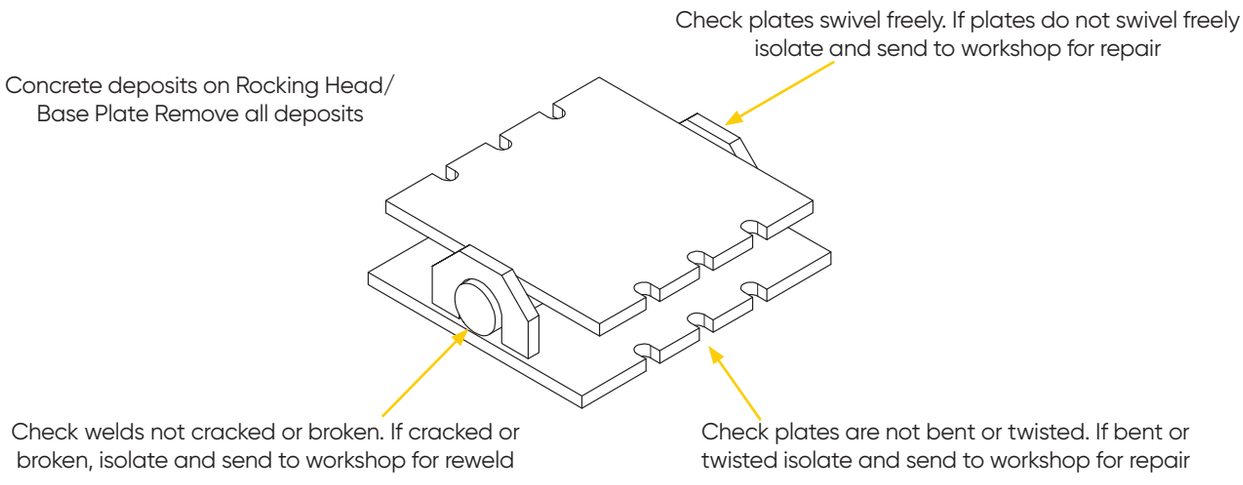
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Spanner must be clear of all concrete	Remove all concrete build up with wire brush a and scraper
Cracked welds at end connection	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction WI-GE-100
End of Spanner is bent or twisted	End of Spanner must be not be bent or twisted or damaged in any way	Straighten and repair if possible otherwise scrap
Handle bent or twisted	Handle must be straight	Straighten
Spanner does not work effectively	Spanner must work effectively	Find cause and rectify if not possible then scrap

7. Maintenance & Inspection

Rocking Head / Base Plate

The Acrow Gass Rocking Head/Base Plate is used under an Inner Leg (adjustable jack) when the ground level is sloping



Inspection

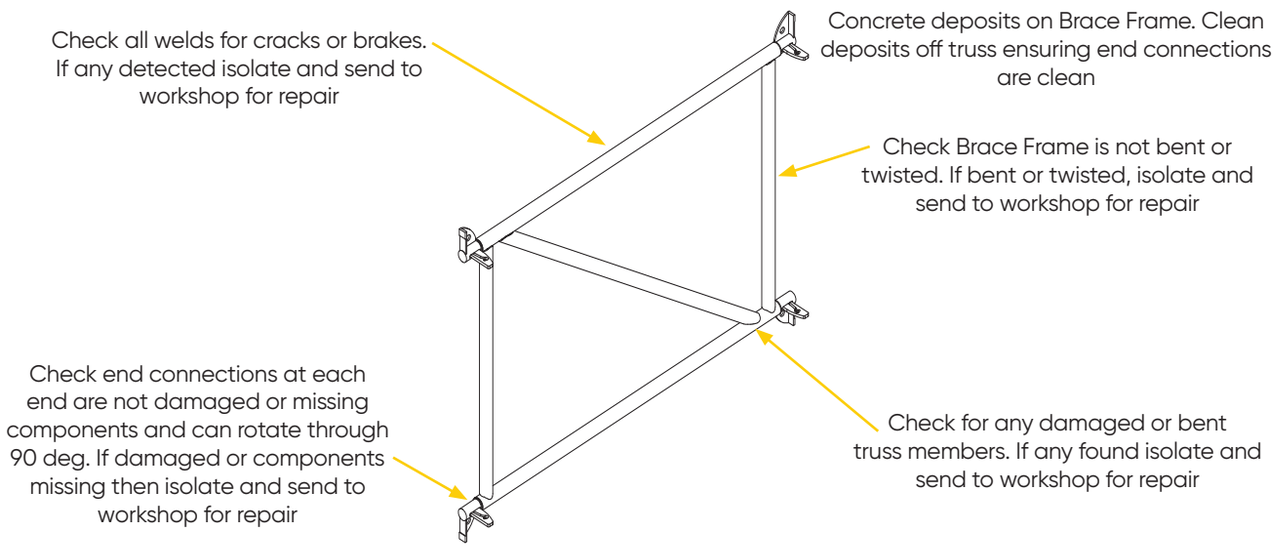
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Base plate must be clear of all concrete	Remove all concrete build up with wire brush or scraper
Cracked welds	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction WI-GE-100
Plates are bent or twisted	Plates must be straight	Straighten if possible otherwise scrap
Plates not swiveling freely	Plates must swiveling freely	Find cause of problem and rectify it, grease shaft

7. Maintenance & Inspection

Bracing Frame

The Acrow Gass Bracing Frame provides the horizontal connection between the Acrow Gass Legs when constructing an Acrow Gass tower.



Inspection

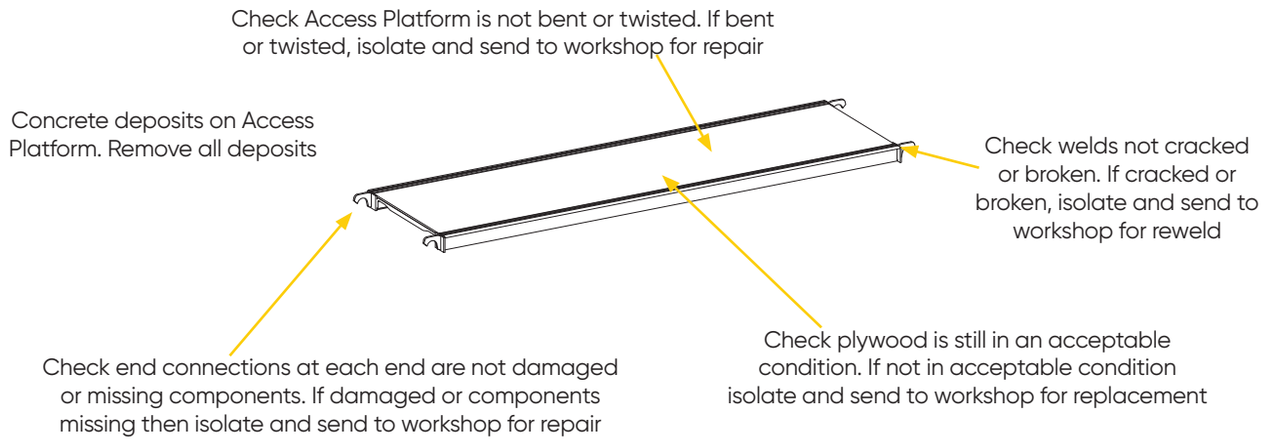
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	No build up permitted on truss members. All end connections must be clear of any concrete	Remove build up with wire brush and/ or chipping hammer
Bracing Frame bent or twisted	Bracing Frame must be straight and free of twist	Straighten if possible otherwise scrap. See WI-GE-103 for reference
Damaged end connections or missing components	End connections must be intact with all components	Repair or replace any damaged ends and replace any missing components
Cracked welds on Bracing Frame members	Cracked welds not permitted	Grind back cracked welds then re-weld
Truss members damaged or bent	Truss members must be straight and undamaged	Straighten members or replace
End connecting members cannot rotate 90 degrees	End connecting members must be able to rotate 90 degrees	Find cause and rectify If necessary replace end connecting components.

7. Maintenance & Inspection

Access Platform

The Acrow Gass Access Platform is used to span between Acrow Gass Bracing Frames to provide access to the formwork.



Inspection

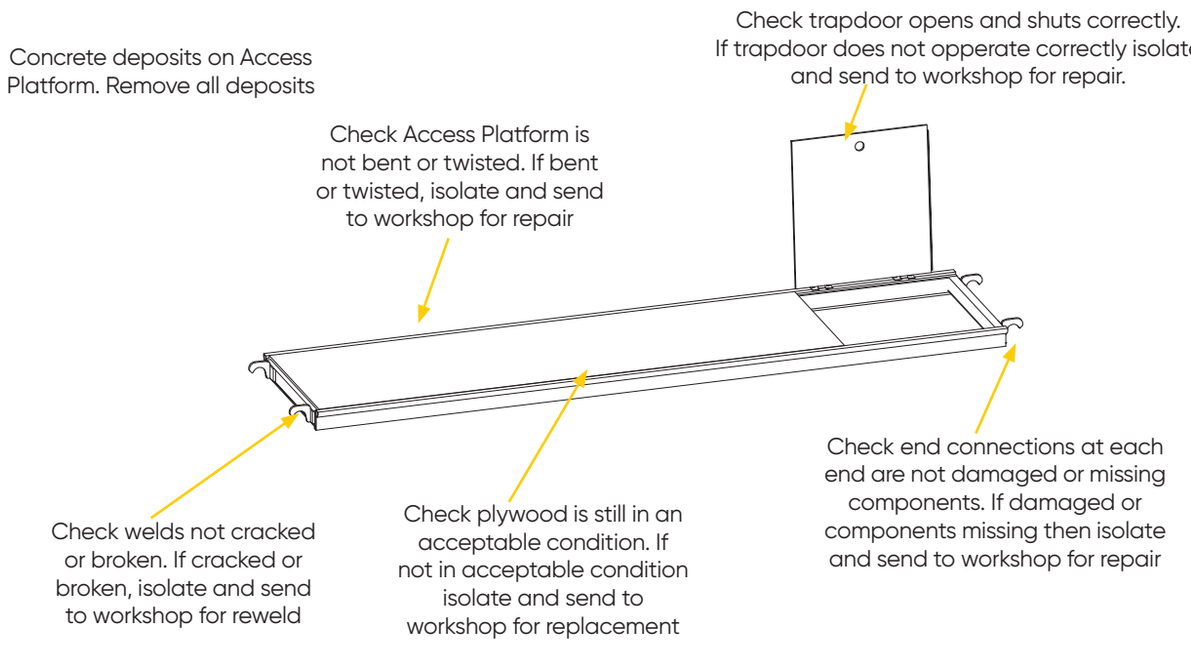
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Access Platform must be clear of all concrete	Remove all concrete build up with wire brush and scraper
Cracked welds	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction WI-GE-100
Access Platform bent or twisted	Access Platform must be straight and free of twist	Straighten if possible otherwise scrap. See WI-GE-103 for reference
Damaged end connections or missing components	End connections must be intact with all components	Repair or replace any damaged ends and replace any missing components
Damaged or worn plywood	Plywood must be in acceptable condition to act as a working platform deck	Replace plywood

7. Maintenance & Inspection

Access Platform Trapdoors

The Acrow Gass Access Platform is used to span between Acrow Gass Bracing Frame to provide access to the formwork a trapdoor is incorporated in one end to allow access for a ladder.



Inspection

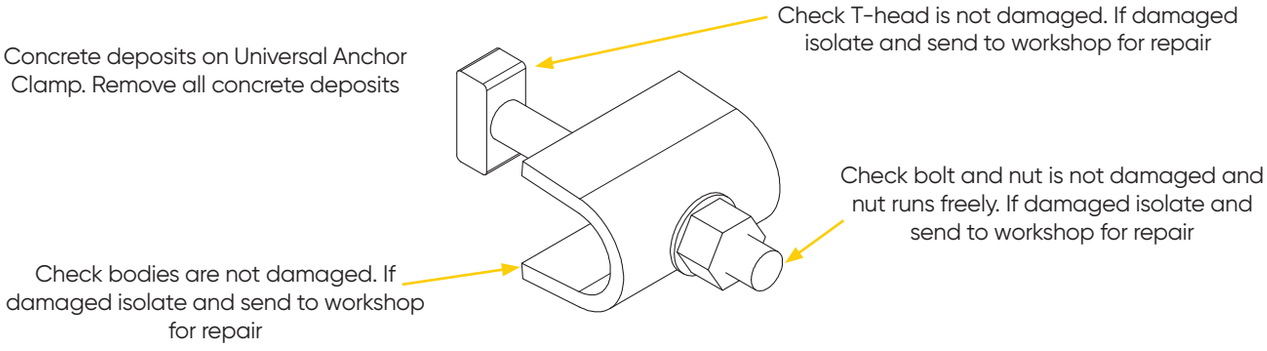
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Access Platform Trapdoor must be clear of all concrete	Remove all concrete build up with wire brush and scraper
Cracked welds	Cracked welds not permitted	Grind and re-weld. Refer Work Instruction WI-GE-100
Access Platform bent or twisted	Access Platform must be straight and free of twist	Straighten if possible otherwise scrap. See WI-GE-103 for reference
Damaged end connections or missing components	End connections trapdoor must be intact with all components	Repair or replace any damaged ends and replace any missing components
Damaged or worn plywood	Plywood must be in acceptable condition to act as a working platform deck	Replace plywood
Trapdoor not opening and closing correctly	Trapdoors must open and shut easily and be perfectly flush when closed	Find cause, check frame is not twisted or hinge faulty. Rectify if possible otherwise replace with new trapdoor frame

7. Maintenance & Inspection

Universal Anchor Clamp

The Acrow Gass Universal Anchor Clamp is used to join aluminium beams to Slimlite soldiers.



Inspection

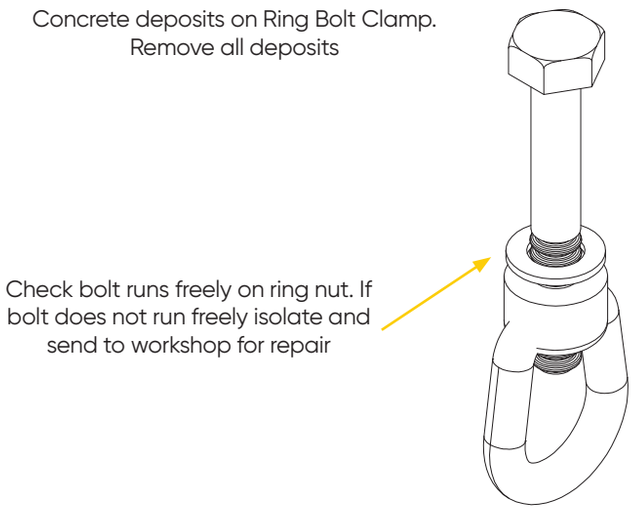
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Universal Anchor Clamp must be clear of all concrete	Remove all concrete build up with wire brush and clean thread
Clamp body is bent or twisted	Universal Anchor Clamp must be undamaged and true to its profile	Straighten if possible otherwise replace damaged body
Tee bolt and nut damaged	Tee bolt and nut must be straight and nut must run freely on bolt	Replace
Damaged T-head	T-head must not be damaged	Repair if possible otherwise replace

7. Maintenance & Inspection

Ring Bolt Clamp

The Ring Bolt Clamp is used to connect Leg end plates together.



Inspection

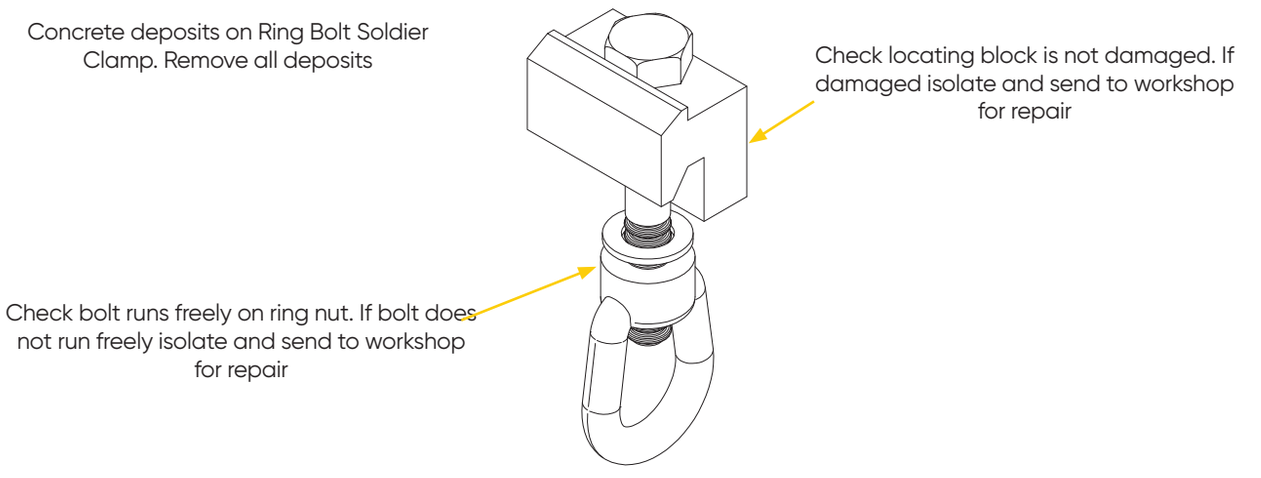
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Ring Bolt Clamp must be clear of all concrete	Remove all concrete build up with wire brush and clean threads
Bolt not running freely on ring nut	Bolt must run freely in ring nut	Find cause of problem and rectify if not possible then replace

7. Maintenance & Inspection

Ring Bolt Soldier Clamp

The Ring Bolt Soldier Clamp is used to secure Slimlite Soldiers to the end plate of Gass Legs.



Inspection

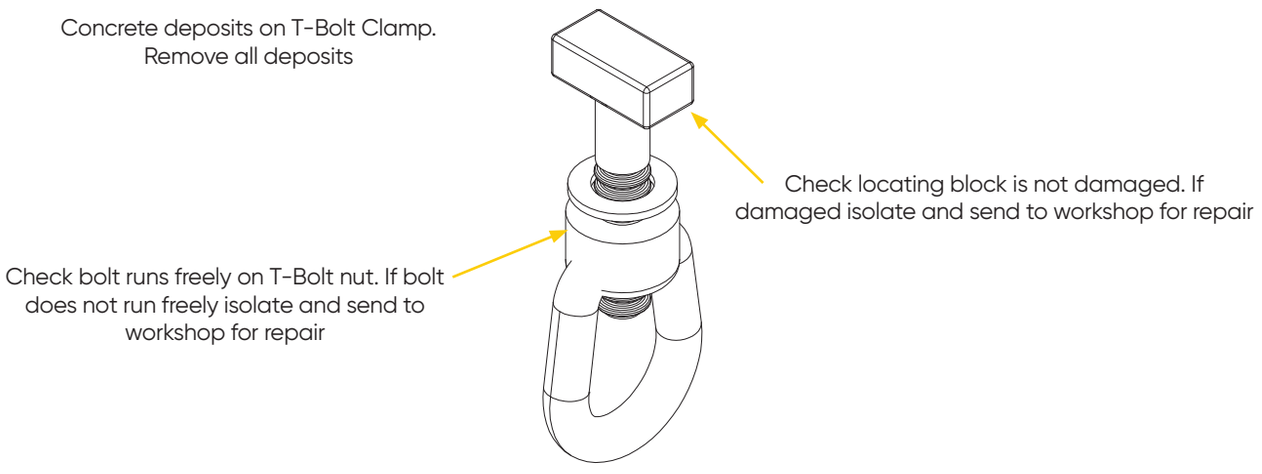
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Ring Bolt Soldier Clamp must be clear of all concrete	Remove all concrete build up with wire brush and clean threads
Damaged locating block	Locating block must not be damaged	Repair if possible otherwise replace
Bolt not running freely on ring nut	Bolt must run freely in ring nut	Find cause of problem and rectify if not possible then replace offending component

7. Maintenance & Inspection

T-Bolt Clamp

The Acrow Gass T-Bolt Clamp is used to join the Aluminium Beam to the Gass Legs



Inspection

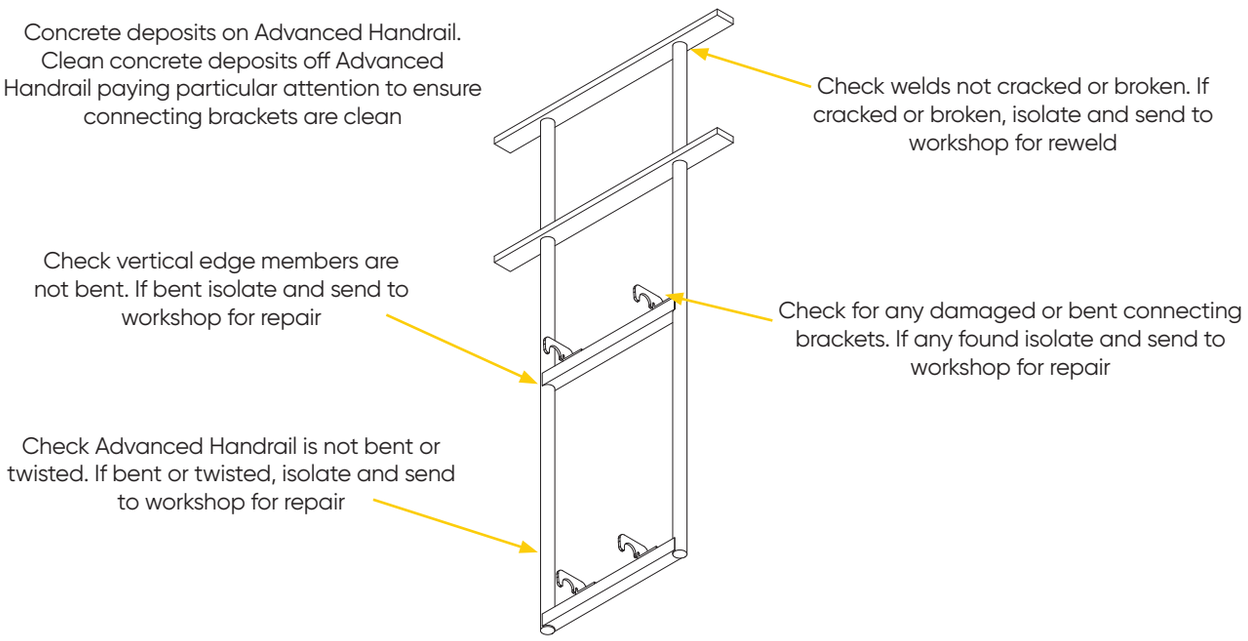
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	T-Bolt Clamp must be clear of all concrete	Remove all concrete build up with wire brush and clean threads
Damaged T-head	T-head must not be damaged	Repair if possible otherwise replace
T-head Bolt not running freely in ring nut	Bolt must run freely in ring nut	Find cause of problem and rectify if not possible then replace

7. Maintenance & Inspection

Advanced Handrail

The Acrow Gass Advanced Handrail is used to provide a temporary handrail when erecting the soffit formwork and when dismantling the Gass tower.



Inspection

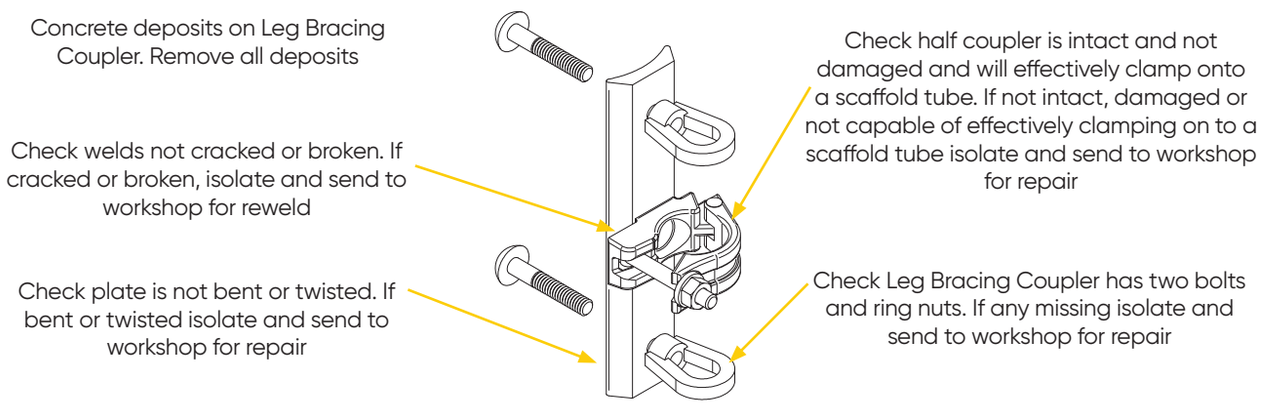
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Advanced Handrail must be clear of all concrete	Remove all concrete build up with wire brush and scraper
Vertical side members bent	Vertical side members must be straight	Straighten with flypress
Cracked welds	Cracked welds not permitted	Grind back weld and re-weld. Refer Work Instruction WI-GE-100
Advanced Handrail bent or twisted	Advanced Handrail must be straight and free of twist	Straighten if possible otherwise scrap See WI-GE-103 for reference
Damaged connecting brackets	Connecting brackets must be intact and undamaged	Repair or replace any damaged connecting brackets

7. Maintenance & Inspection

Leg Bracing Coupler

The Acrow Gass Leg Bracing Coupler is used to attach ancillary bracing to a Gass tower.



Inspection

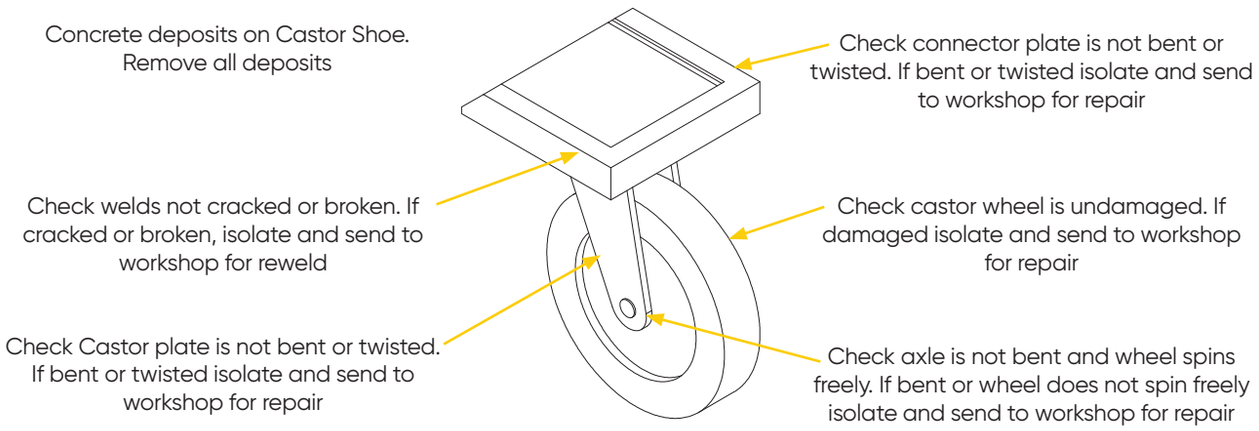
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Leg Bracing Coupler must be clear of all concrete	Remove all concrete build up with wire brush and clean threads
Plate is bent, twisted or damaged	Plate must be straight and free of twist	Straighten or replace
Cracked welds	Cracked welds not permitted	Grind back welds and re-weld. Refer Work Instruction WI-GE-100
Coupler not intact or damaged or not able to clamp onto scaffold tube	Half coupler must be intact and able to attach to a scaffold tube correctly	Repair if possible otherwise replace damaged components or replace entire half coupler
Bolts and/or ring nuts damaged or missing	Bolts and ring nuts must be undamaged and working correctly	Repair or replace any damaged or missing bolts or ring nuts

7. Maintenance & Inspection

Castor Shoe

The Acrow Gass Castor Shoe attaches to the plate on Outer or Extension Legs to allow tables to be moved about the slab.



Inspection

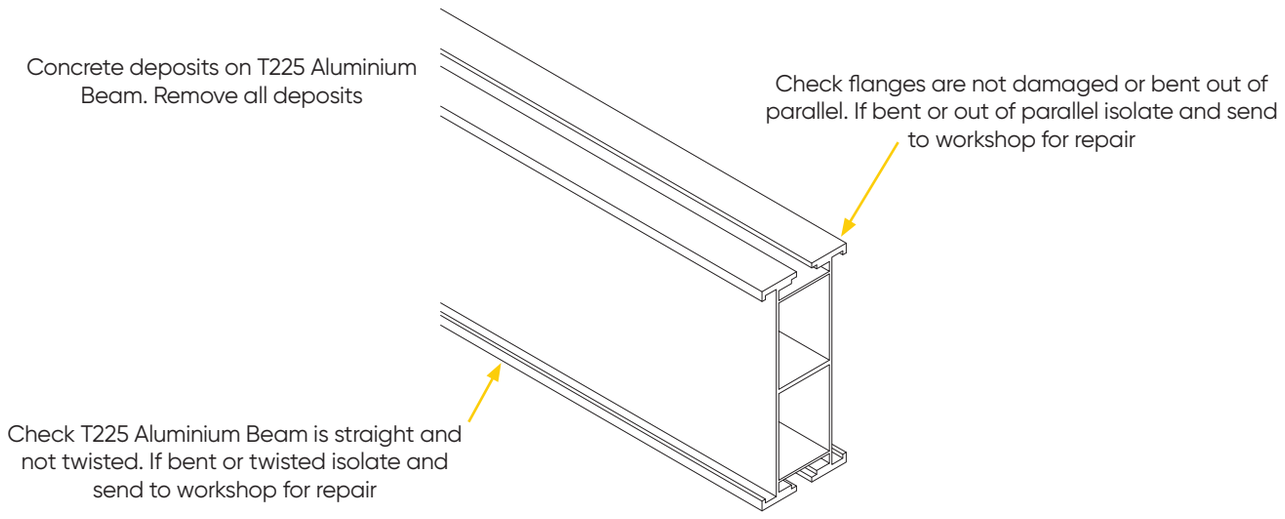
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Castor Shoe must be clear of all concrete	Remove all concrete build up with wire brush and scraper
Castor wheel damaged	Castor wheel must be undamaged and true circular shape	Repair or replace
Cracked welds	Cracked welds not permitted	Grind back welds and re-weld. Refer Work Instruction WI-GE-100
Connector plate is bent or twisted	Connector plate must be straight and undamaged	Straighten if possible otherwise scrap
Wheel cheek plates bent or twisted	Wheel cheek plates must be straight and free of twist	Straighten if possible otherwise replace
Wheel axle bent or wheel not spinning freely	Wheel axle must be straight and wheel must spin freely	Straighten if possible otherwise replace

7. Maintenance & Inspection

T225 Aluminium Beam

The Acrow Gass T225 Aluminium Beam is used as a primary beam.



Inspection

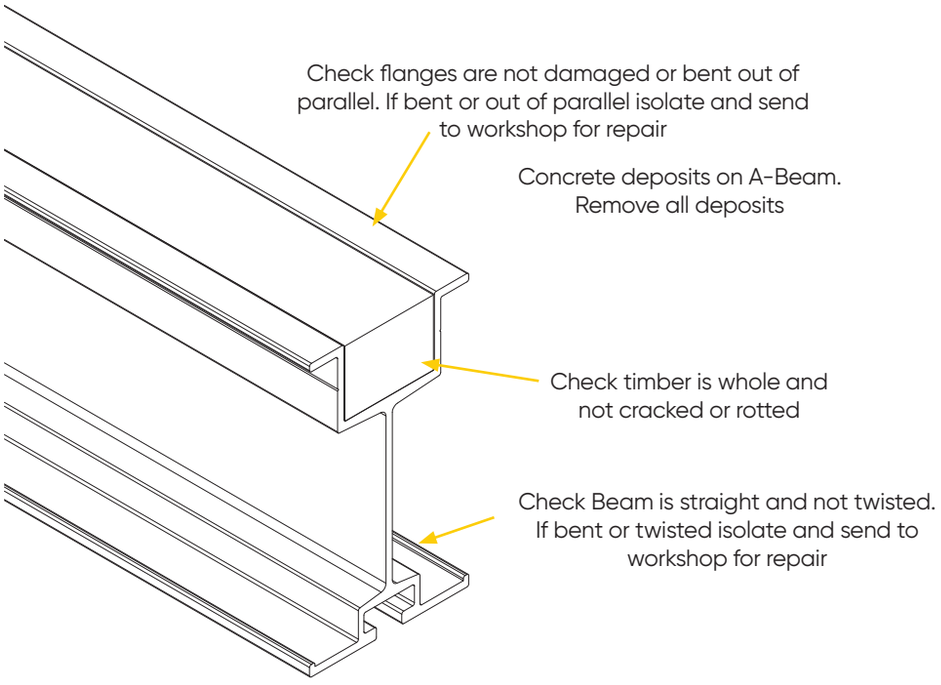
Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	T225 Aluminium Beam must be clear of all concrete	Remove all concrete build up with wire brush and scraper
T225 Aluminium Beam bent or twisted	BT225 Aluminium Beam must be straight and free of twist	Straighten if possible otherwise cut back to smaller size
Flanges damaged or bent out of parallel	All flanges must at right angle plane to the web and not out of parallel	Straighten if possible otherwise cut back to smaller size

7. Maintenance & Inspection

A-Beam

The A-Beam is a skillfull engineered Aluminium Beam, Manufactured from high grade structural aluminium, incorporating a 50mm wide by 37mm deep timber nailing strip within the top flange and incorporating a keyway slot in the bottom flange to permit fixing of accessories.



Inspection

Generally, visual inspection checking for the possible faults listed below.

POSSIBLE FAULTS	DAMAGE LIMITS FOR REPAIR	RECOMMENDED ACTION
Build up of concrete or other matter	Beam must be clear of all concrete	Remove all concrete build up with wire brush and scraper
Beam bent or twisted	Beam must be straight and free of twist	Straighten if possible otherwise cut back to smaller size
Timber rotted or splinted	Timber must be whole and in good condition	repleace timber insert
Flanges damaged or bent out of parallel	All flanges must at right angle plane to the web and not out of parallel	Straighten if possible otherwise cut back to smaller size

LOCATIONS

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F: 02 9780 6499
E: info@acrow.com.au

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Beenleigh QLD 4207
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Beenleigh QLD 4207
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Formwork & Scaffold
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acrow.

ENGINEERING & CONSTRUCTION

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