Scaffco Steel Soldier

The Adaptable Formwork Component Engineered for Vertical and Horizontal Concrete Forming.

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تنويه:

في حين تم بذل كل جهد ممكن لضمان دقة المعلومات الواردة في هذا الدليل، لا يمكن أن تقبل شركة سكافكو المسؤولية عن أي أخطاء قد تحدث نتيجة الأعتماد على أي من محتويات هذا الدليل، والشركة غير مسؤولة عن أي خسارة من أي نوع قد يتم تكبدها نتيجة لأعتماد محتويات هذا الدليل. تحتفظ الشركة بحق تغيير أي من المنتجات او التفاصيل دون إشعار مسبق.

يجب على العملاء التأكد من أن يتم تبني الممارسات الصحيحة في الموقع من ناحية استخدام المعدات المذكورة في هذا الدليل. كذلك يجب على العملاء التأكد من كفاءة وحرفية الأشخاص القائمين على تركيب واستعمال وتفكيك عناصر الأنظمة وان تكون هذه العمليات متطابقة مع المتطلبات والمعايير المذكورة في المواصفات الدولية ذات العلاقة ولوائح وتعليمات السلطات المحلية. هذا الدليل لا يحتوي على أية تفاصيل تخص التصميم ولكن يصف مكونات الأنظمة بشكل تصويري ويعطي فكرة عن عناصر الأنظمة المتاحة في إطار هذه المجموعة من المنتجات. الرجاء الأتصال بمهندس شركة سكافكو للحصول على أي استفسارات فنية تخص المنتجات المذكورة في هذا الدليل.

Formwork Excellence with Versatile Steel Soldier

Scaffco Steel Soldier stands as a testament to excellence in formwork engineering, offering unparalleled strength, versatility, and adaptability across diverse temporary construction applications. Its robust construction, customizable assembly, and refined design make it an indispensable asset for contractors seeking superior performance and reliability in their projects.

Functioning both as a beam and a column, the Scaffco Steel Soldier boasts heavy-duty structural integrity coupled with unmatched flexibility. Its robust design renders it ideal for tasks ranging from wall and slab support to temporary access platforms and shoring applications. Furthermore, by bolting multiple units end to end, custom lengths can be achieved to suit specific project needs.

Significantly, when employed as a compression member, the Scaffco Steel Soldier demonstrates unique loading properties along its two principal axes, attributable to its asymmetric profile. Furthermore, the bracing technique necessary to attain the intended capacity can vary contingent upon the configuration of the shore during assembly. Over its evolutionary trajectory, the Scaffco Steel Soldier has consistently expanded its repertoire, furnishing a comprehensive selection of components tailored to accommodate an extensive spectrum of temporary works applications.

System Features & Benefits

Introducing the Scaffco Steel Soldier, a game-changer in the field of temporary works applications. With its excellent strength-to-weight ratio, extensive range of accessories, and remarkable reusability, this innovative solution sets a new standard in construction efficiency.

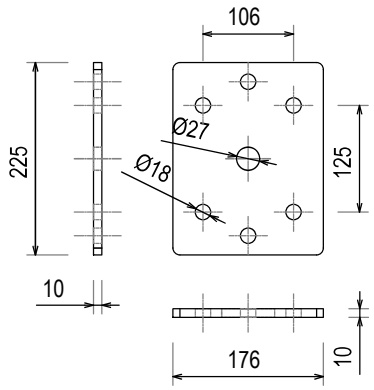
• **Strength-to-Weight Ratio:** The Scaffco Steel Soldier demonstrates an exceptional strength-to-weight ratio, outperforming analogous products from competitors, thereby ensuring versatility and robustness in formwork applications across a spectrum of on-site conditions.
• **Versatility:** The Scaffco Steel Soldier serves as a versatile structural component, suitable for applications including heavy-duty temporary support, gantries, soffits, shoring, formwork panels, and beyond. Its adaptability enables it to meet the diverse demands of any project.
• **Customizable Lengths:** eaturing eleven standard lengths spanning from 10mm to 3600mm, the system offers extensive flexibility in beam assembly, facilitating virtually limitless configurations. This affords unparalleled adaptability in both design and construction processes.
• **Compatibility:** Fully compatible with other Scaffco product ranges and often adaptable to customers' existing equipment, the Scaffco Steel Soldier seamlessly integrates into your workflow, enhancing productivity and cost-effectiveness.
• **Freedom to Create:** With Scaffco Steel Soldier, you have complete freedom to create the optimal design for any application, empowering you to tackle challenges with confidence and creativity.
• **Precision Manufacturing:** Meticulously engineered for maximum durability and load capacity, every Scaffco Steel Soldier is precisely manufactured to exacting standards, ensuring consistent performance and reliability on-site.
• **Robust Construction:** Easy assembly and consistently accurate fabrication on-site make the Scaffco Steel Soldier a robust solution that stands up to the rigors of construction environments, saving time and effort while maintaining safety standards.
• **Reusable:** Designed for reusability across multiple sites, the Scaffco Steel Soldier offers long-term value, reducing the need for constant replacement and minimizing environmental impact.

Steel Soldier

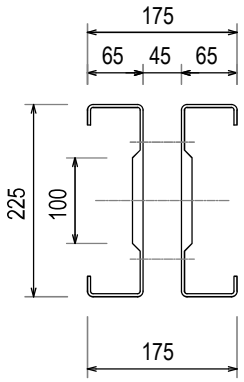
The Steel Soldier represents a paradigm shift in temporary works, falsework, and formwork components. It is embodying versatility, robustness, and innovation. Its modular design, crafted from high-quality steel and augmented by innovative hole patterns, sets a new standard for formwork primary beams. As the cornerstone of temporary works applications, the Steel Soldier empowers construction teams to navigate complex formwork challenges with confidence, driving efficiency, and ensuring safety across diverse projects. In an industry defined by constant evolution, the Steel Soldier emerges as a steadfast companion, poised to redefine the landscape of construction for years to come.

Soldier Characteristics

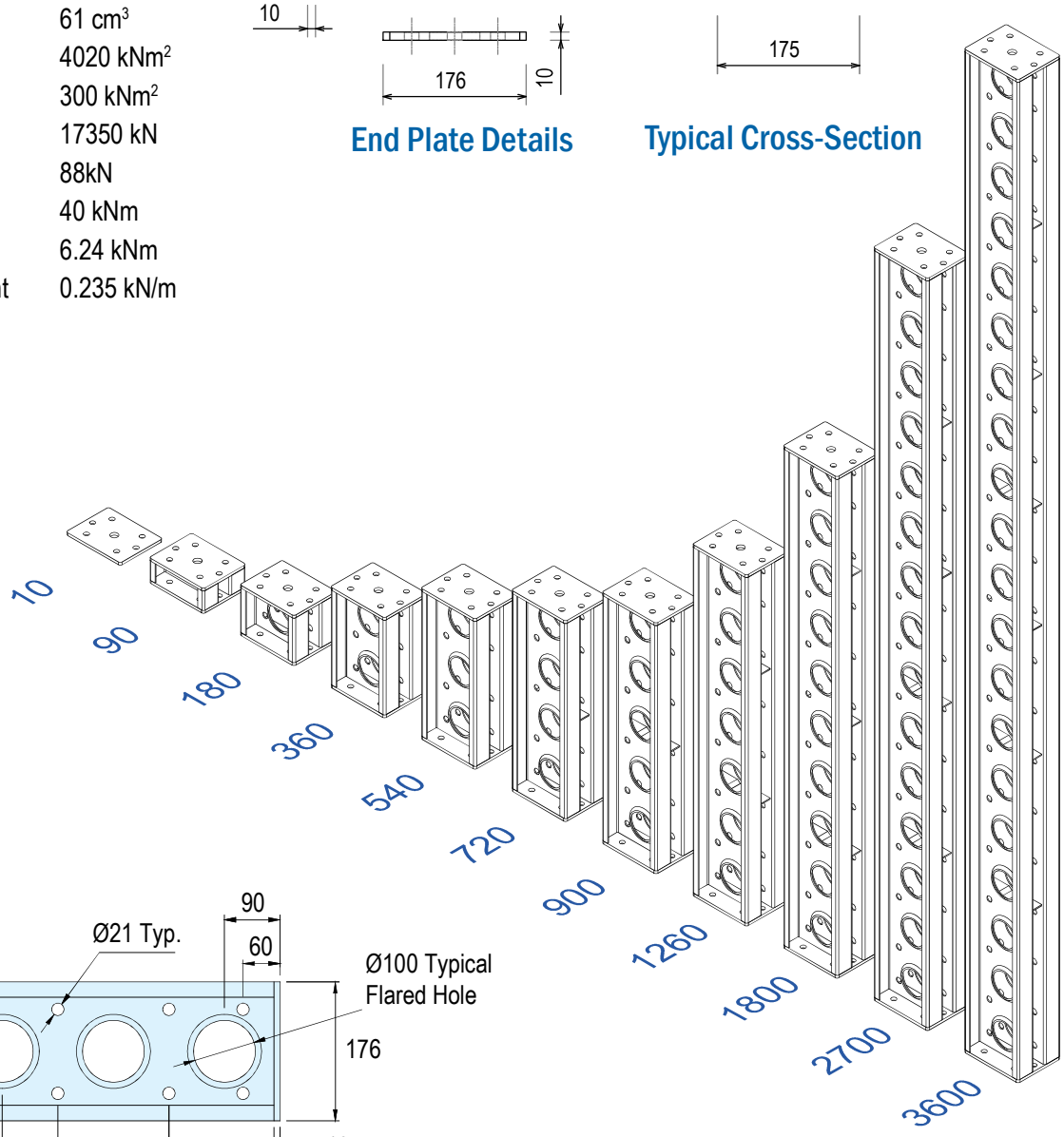
Gross Sectional Area	26.06 cm^2
Nett Sectional Area	19.64 cm^2
I_{xx}	1916 cm^4
I_{yy}	658 cm^4
r_{xx}	9.69 cm
r_{yy}	5.70 cm
Z_{xx}	161 cm^3
Z_{yy}	61 cm^3
EI_{xx}	4020 kNm^2
EI_{yy}	300 kNm^2
GA_{xx}	17350 kN
$V_{max\ (y)}$	88kN
$M_{max\ (x)}$	40 kNm
$M_{max\ (y)}$	6.24 kNm
Approx. Self weight	0.235 kN/m

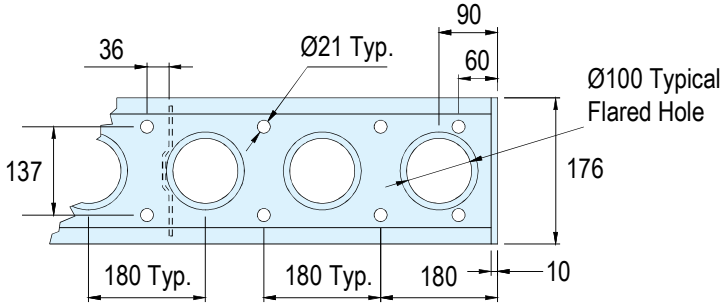


End Plate Details



Typical Cross-Section





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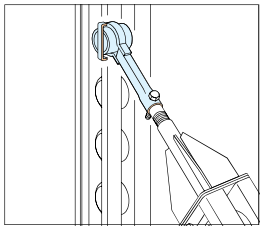
Components and Accessories of the Steel Soldier System

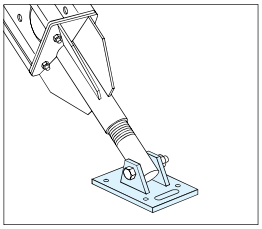
Steel soldiers and their accessories are engineered to accommodate a diverse range of worksite conditions, from vertical and horizontal formwork applications to shoring and heavy-duty temporary works structures. Their adaptability and versatility make them indispensable assets in modern construction projects, empowering contractors to tackle complex challenges with confidence.

Through superior manufacturing quality, precision engineering, and adaptability to diverse worksite conditions, these indispensable various components enable contractors to achieve unparalleled efficiency, safety, and reliability. Steel soldiers are essential elements in creating sturdy formwork systems for both vertical and horizontal applications. They provide support and stability, ensuring that concrete structures take shape accurately and safely. However, the efficacy of steel soldiers heavily relies on the quality of accessories and gadgets accompanying them, as well as the manufacturing standards adhered to in their production.



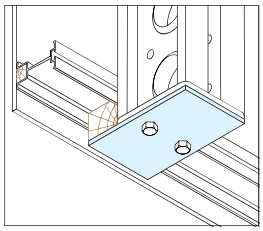
Prop Spade End Link & Prop Pivot Tube

Used to attach push pull props to soldiers.



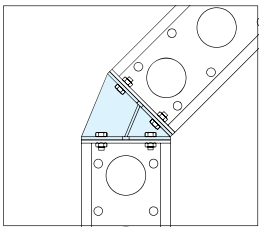
Tilt Plate

Used to connect a push pull prop to a plane surface at any angle



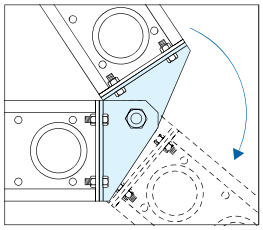
Support Plate

Utilized for supporting formwork at the base of Steel Soldiers, this plate offers two cantilever lengths by simply rotating it. It's important to note that support plates must be installed on the soldier intended for lifting.



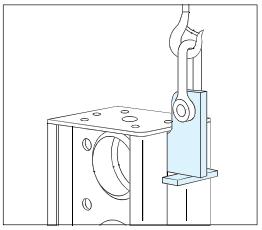
Bracket - 45° Corner

Connects Steel Soldiers at 45 degrees.



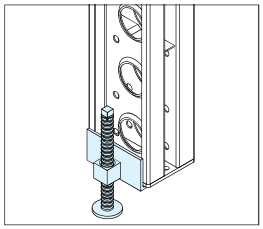
Pivot Cleat Set

Enables the connection of two Steel Soldier elements at a flexible angle through a hinged joint.



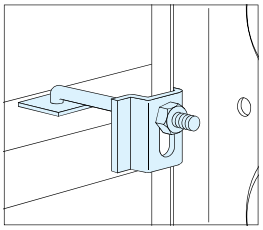
Lifting Plate

Utilized in crane operations to lift large formwork panels constructed with Steel Soldiers.



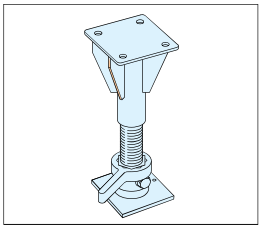
Form Panel Jack

Primarily used to level a form, they can be used horizontally as a plumbing device. A minimum of two jacks are required per form side.



Timber Waling Clamp (Short & Long)

Utilized for attaching timber beams or walings to the Steel Soldiers, the clamp comes in two variants: a short clamp designed for timber sizes ranging from 100mm to 125mm, and a long clamp used for timber sizes between 125mm and 225mm..

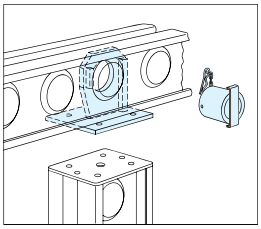


Soldier Adjustable Base

The Adjustable Base used at the base of a steel soldier in vertical shoring applications.

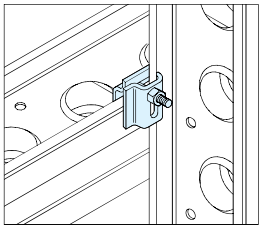
Universal Clamp

A light duty clamp with many uses. in addition to the soldier to soldier connection, the universal clamp connects aluminium beams to steel soldiers.



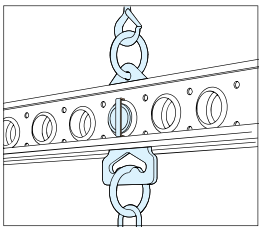
Corner Pivot & Prop Pivot Tube

Designed to link horizontal soldiers, allowing for tilting up to 15 degrees from the horizontal orientation.



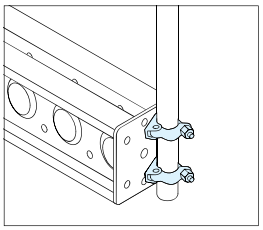
Waling Clamp Plate

Used to connect horizontal Soldiers to vertical Soldiers



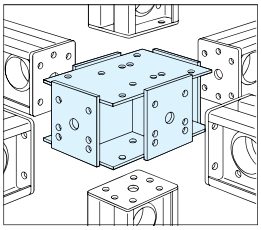
Spreader Beam Plate & Prop Pivot Tube

Plates attached to the Steel Soldier, allowing its use as a spreader beam for lifting formwork panels.



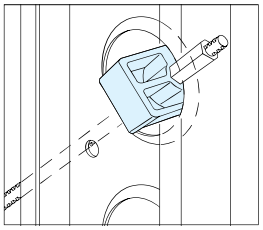
Half Coupler

Intended for use in pairs, it connects handrail posts to the end plates of the Steel Soldiers.



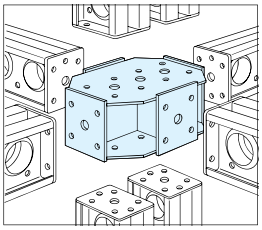
6-Way Connector

A node block facilitating the assembly of Steel Soldiers into frames. Enables 6 Soldiers to be connected at a node



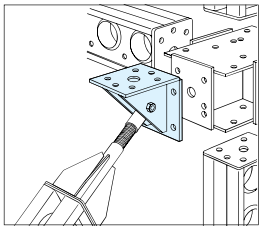
Porthole Bearing & Hex. Nut

A component that allows tie rods inclined at various angles to be anchored between the webs of the Steel Soldier.



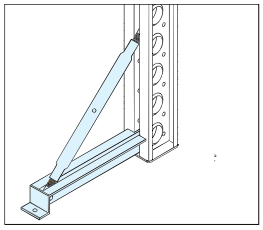
6-Way Double Connector

A node block facilitating the assembly of Steel Soldier elements into frames. This version allows for the utilization of twin soldiers in a single plane. Enables 8 soldiers to be connected at a node.



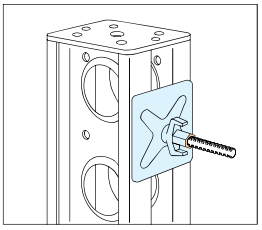
90 Degree Corner

A corner node designed to connect to the end of the Steel Soldier, allowing for the attachment of either a soldier Jack or another soldier at a 90° angle to the first one.



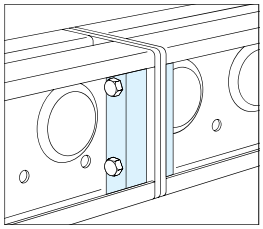
Turnbuckle & Plumbing Foot

Used in single sided base formwork applications and many other forming applications



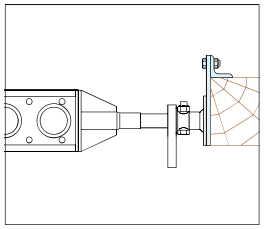
Waler Plates

Steel plates made to distribute the load from the tie rod into the supporting member.



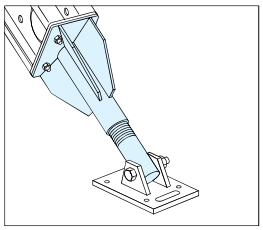
Joint Stiffener

Joint stiffeners enhance the tension and bending capacities of connections between Steel Soldiers.



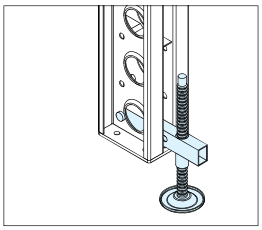
Prop Support Plate

Used to support horizontal Steel Soldier in trench applications.



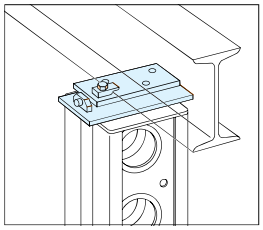
Adjustable Prop Jack

Used in pairs (left & right) to provide length adjustment to push pull props.



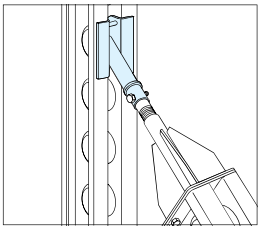
Universal Soldier Jack

Utilized in both horizontal and vertical orientations



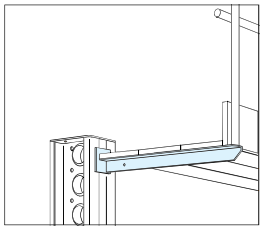
Rocking Head 36mm

Utilized for attaching header beams onto soldier props, ensuring concentric load distribution when a Steel Soldier is used in a shoring application.



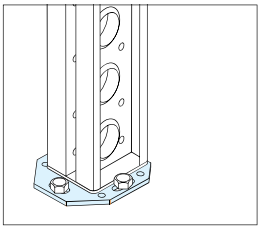
Prop Connector (100kN)

Used to connect push pull props to the Steel Soldiers where a load transfer of more than 65kN is required.



Access Bracket

Utilized for supporting a three-board-wide access platform, featuring an integrated spigot capable of accommodating standard scaffold tubes for the attachment of tube guardrails. Brackets are bolted to the Steel Soldier



Anchor Plate

Used for anchoring the end of a soldier to concrete or masonry

Axially Loaded Steel Soldier (Compression Member)

The steel soldier exhibits varying cross sectional properties along its two principal axes due to its cross-sectional shape. The positioning of the steel soldier, whether as a vertical strut, horizontal shore, or inclined support, and the application of restraints through bracing, are crucial factors in determining the strategy to achieve the desired load-bearing capacity. It is essential to meticulously address the lateral stability of the steel soldier in all directions to ensure its structural performance.

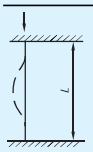
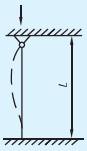
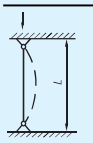
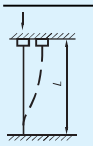
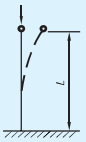
The accompanying graphs depict the allowable load capacity as a function of the effective length of the steel soldier. These graphs are derived from a combination of theoretical analysis and empirical test results. They serve as a guide to evaluate and estimate the performance of the steel soldier under various loading conditions and configurations.

In these figures, a load restriction of 100kN is applied to the soldier when the load is released through the adjustable prop jack. If the load is not released through jacks, the maximum allowable load can be increased, provided that lateral stability is effectively maintained.

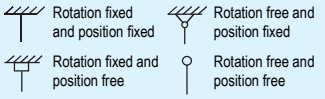
When using load curves, consider the following important factors:

- The loading curves assume that the shore (horizontal soldier in compression) and strut (vertical soldier in compression) are effectively restrained against buckling along the axis not under consideration by adequate intermediate lateral restraint.
- The values in the loading curves include an additional allowance for the self-weight of the horizontal shore.
- Wind load has been excluded from the values in the loading curves. If wind loads are expected when designing shores or struts in this orientation, refer to Scaffco's engineer for revised data.
- The effective length of a strut is illustrated in the adjacent figure which defined in BS 597-2019. For horizontal shoring applications, the overall length of the horizontal shore can be considered as the effective length of the shore.
- When using the rocking head, the load is axial in one plane but depends on site accuracy for the degree of eccentricity in the other plane. In the following graphs, the permissible loads account for assembly tolerance and load eccentricity of 25mm and 38mm.

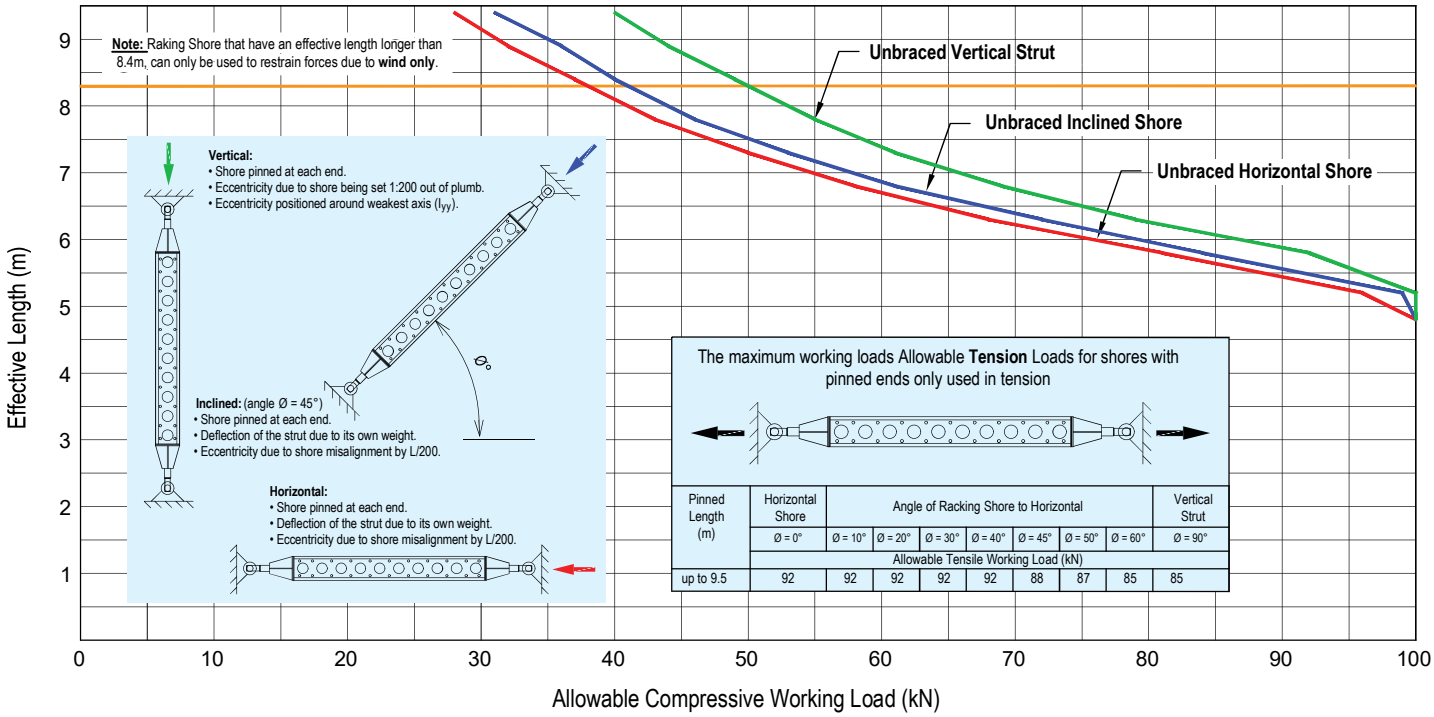
Effective lengths of struts

Diagrammatic representation of deformation	Restraint conditions	Effective length, l (mm)
	Effectively held in position and restrained in direction at both ends ***Not normally appropriate for use in tube and coupler structures.***	$0.7L$
	Effectively held in position at both ends and restrained in direction at one end ***Not normally appropriate for use in tube and coupler structures.***	$0.85L$
	Effectively held in position at both ends but not restrained in direction	$1.0L$
	Effectively held in position and restrained in direction at one end and partially restrained in direction but not held in position at the other end	$1.5L$
	Effectively held in position and restrained in direction at one end but not held in position or restrained at the other end	$2.0L$

Key



The graph below showing the relationship between the allowable compressive working load and the effective length of the unbraced strut or shore. Note that when using the shores in conjunction with the prop spade end link & prop pivot tube, the maximum allowable load in the shore is 65 kN (limited by the allowable working load of the prop spade end link & prop pivot tube).

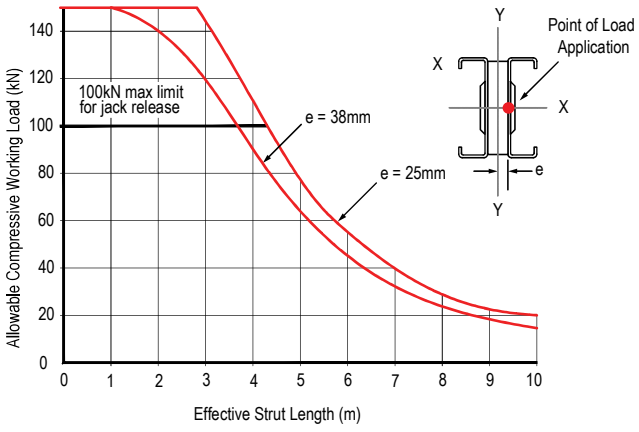


The maximum working loads Allowable **Tension** Loads for shores with pinned ends only used in tension

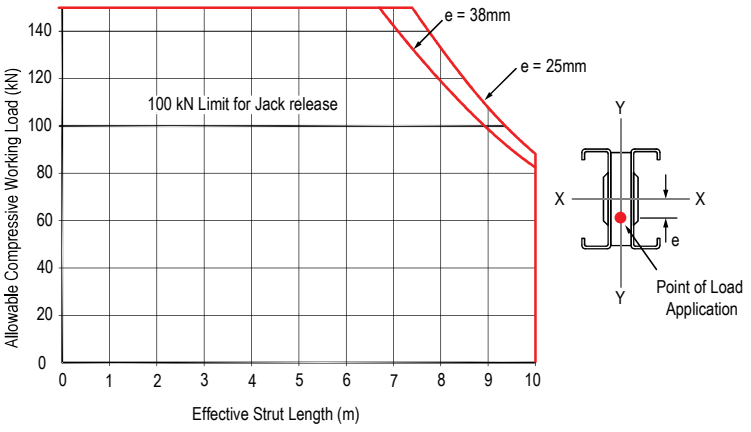
Pinned Length (m)	Horizontal Shore	Angle of Racking Shore to Horizontal						Vertical Strut
	Ø = 0°	Ø = 10°	Ø = 20°	Ø = 30°	Ø = 40°	Ø = 45°	Ø = 50°	Ø = 60°	Ø = 90°
	Allowable Tensile Working Load (kN)								
up to 9.5	92	92	92	92	92	88	87	85	85

SCAFFCO Formwork & Scaffolding

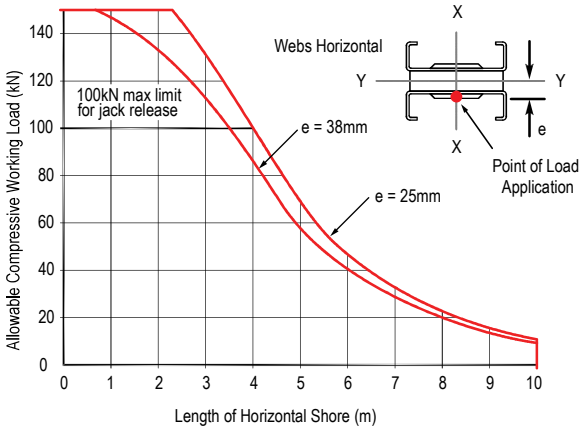
Vertical Struts - Buckling About the Y-Axis



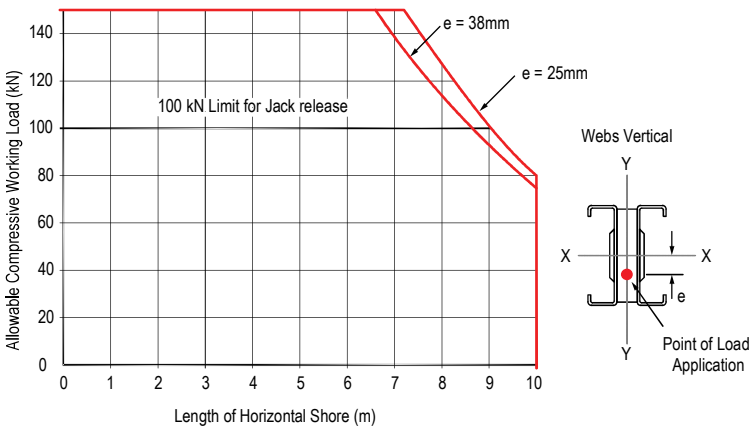
Vertical Struts - Buckling About the X-Axis



Horizontal Shores - Buckling About the Y-Axis



Horizontal Shores - Buckling About the X-Axis

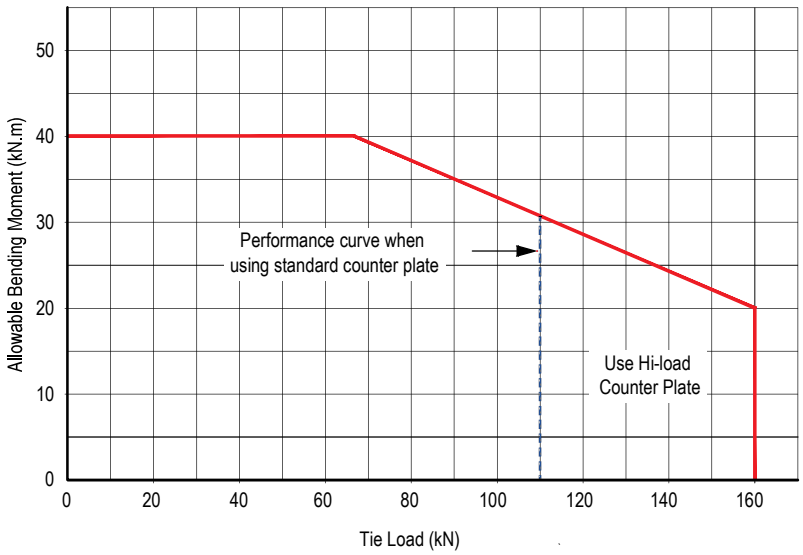


Steel Soldier as a Beam or a Flexural Member

The steel soldier is a lightweight formwork member renowned for its versatility and exceptional load-bearing capacity. Originally developed for use in formwork applications, the steel soldier has proven to be an invaluable component in various temporary work applications.

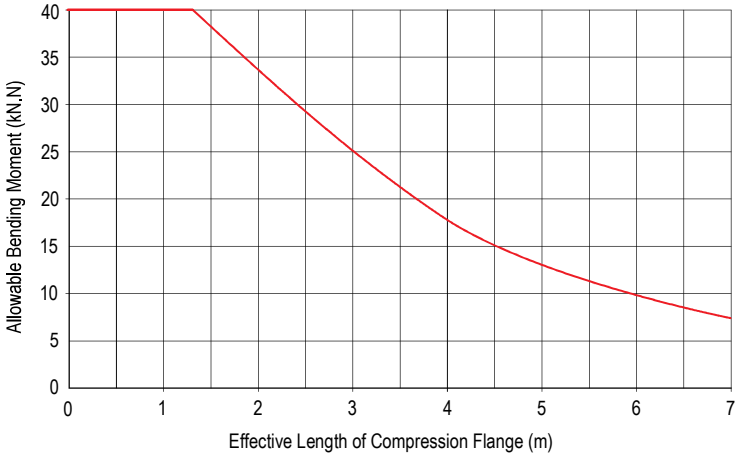
The steel soldier exhibits different loading characteristics along its two primary axes due to its asymmetric shape. Specifically, the strength and stiffness of the steel soldier are significantly reduced when considering the weaker axis, which is perpendicular to the plane of the webs.

One critical design consideration for the steel soldier as a beam member is lateral torsional buckling (LTB). LTB occurs when an unrestrained compression flange in a beam subjected to bending becomes unstable, resulting in sideways movement of the compression flange and twisting of the beam about its central axis. This instability can lead to total beam failure at a bending moment significantly lower than the maximum allowable bending moment for a fully restrained section.
The performance of the steel soldier is influenced by both shear stiffness and bending stiffness. Under conditions of combined bending, bearing, and shear loading, the behaviour of the steel soldier can be evaluated using the graph below.



When utilized as a formwork beam, it is essential to ensure the steel soldier is laterally restrained at load points and supports. In a formwork shutter setup, this lateral restraint is typically provided by the secondary members and face contact materials, which act as a diaphragm to prevent lateral movement.

In applications where the steel soldier is used as an isolated beam, providing adequate lateral restraint is crucial. This can be achieved by coupling scaffold tubes to the flanges of the soldier. When lateral restraint is not provided refer to the figure for Allowable Working Loads. For additional information or specific queries, consulting with a Scaffco engineer is recommended.



To determine the effective length of the compression flanges for a steel soldier used as a beam, consult with a Scaffco engineer.

Steel Soldier Spacing for Various Secondary Walings

The table below outlines the center-to-center spacings between steel soldiers required to construct wall formwork shutters of various lengths and heights. This spacing is specified for the use of either aluminium or timber walings as secondary members.

The specified spacings are important for ensuring the structural integrity and stability of the wall formwork. Proper spacing allows the formwork to withstand the pressures exerted by fresh concrete and other loads during the construction process. Using aluminium walings typically allows for greater spacing between steel soldiers due to their higher strength-to-weight ratio compared to timber walings. However, timber walings can still provide adequate support when used within the specified limits. For precise project requirements and adjustments based on specific site conditions, consulting with our technical department is recommended. The specialists can provide tailored advice and ensure compliance with safety standards and best practices in formwork construction.

Soldier Centres for S150 Aluminium Beam Secondaries:

Concrete Pressure (kN/m^2)	**S150** Vertical c/c Spacing (mm)							
	175	200	225	250	275	300	325	350
50	1800	1800	1800	1800	1800	1800	1750	1630
60	1800	1800	1800	1800	1720	1590	1470	1370
70	1800	1800	1800	1630	1490	1370	1270	1180
80	1800	1780	1590	1430	1310	1210	1120	1040
90	1800	1590	1420	1280	1170	1080	1000	940

For spans exceeding 1800mm, contact Scaffco engineer

Soldier Centres for T150 Aluminium Beam Secondaries:

Concrete Pressure (kN/m^2)	**T150** Vertical c/c Spacing (mm)							
	175	200	225	250	275	300	325	350
50	2500	2500	2500	2500	2500	2490	2420	2370
60	2500	2500	2500	2490	2410	2350	2290	2230
70	2500	2500	2450	2370	2300	2230	2170	2120
80	2500	2440	2350	2270	2200	2140	2080	2020
90	2450	2350	2260	2180	2120	2060	1940	1800

For spans exceeding 1800mm, contact Scaffco engineer

Soldier Centres for 150mmx75mm Timber Secondaries:

Concrete Pressure (kN/m^2)	**150mmx75mm Timber** Vertical c/c Spacing (mm)							
	175	200	225	250	275	300	325	350
50	1800	1690	1590	1510	1440	1380	1230	1260
60	1640	1540	1450	1380	1310	1230	1140	1060
70	1520	1420	1340	1260	1160	1060	990	920
80	1420	1330	1230	1110	1020	940	870	820
90	1340	1230	1100	1000	910	840	780	730

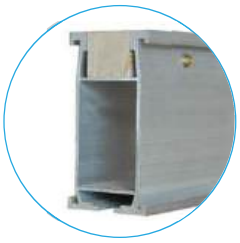
The timber beams have been considered continuous over THREE spans. Timber properties for C24 have been employed in accordance with relevant technical requirements.

Scaffco Aluminium Beams

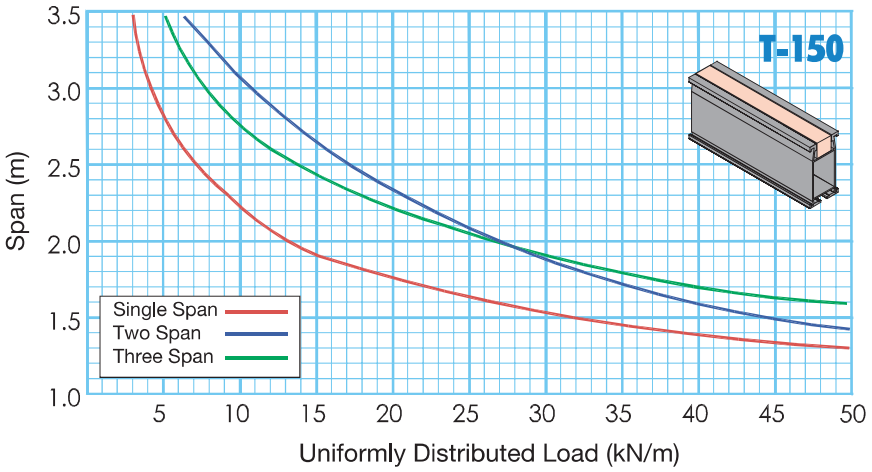
Aluminium Beams offer a combination of strength, lightness, and ease of handling coupled with consistency, versatility, and remarkable durability. Complemented by a diverse array of accessories, these beams create a comprehensive system adaptable to various setups and purposes. Scaffco presents a trio of Aluminium Beams:

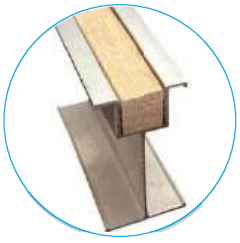
T225: A heavy-duty primary beam, 225mm deep, engineered for robust wall and slab support, boasting exceptional bending and concentrated load capacities.
T150: A 150mm deep beam tailored for wall formwork and secondary support for soffits.
S150: A cost-effective 150mm deep single web beam ideal for wall and soffit support applications.

All Aluminium Beams, along with their accessories and components, comply with international standards. Supported by comprehensive load testing and rigorous structural analysis, the design loads and safety factors for the aluminium beams were meticulously determined.

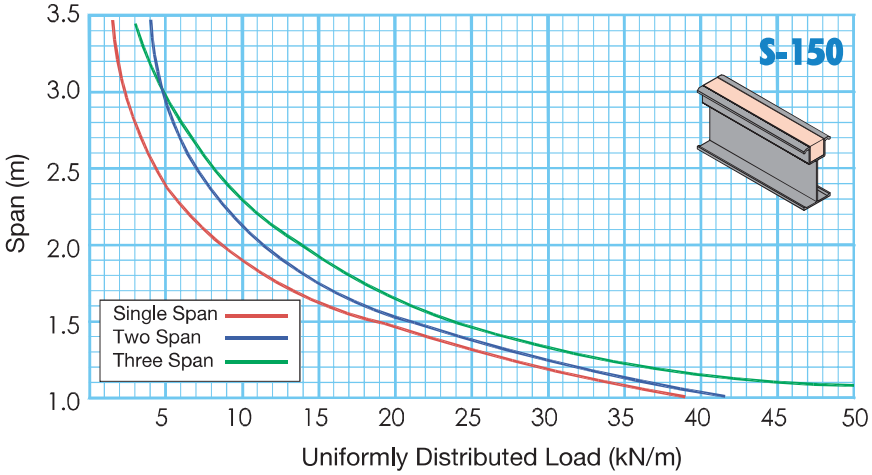


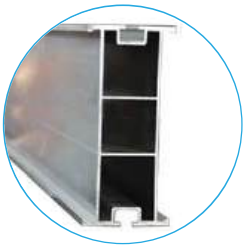
Alum. Beam T150



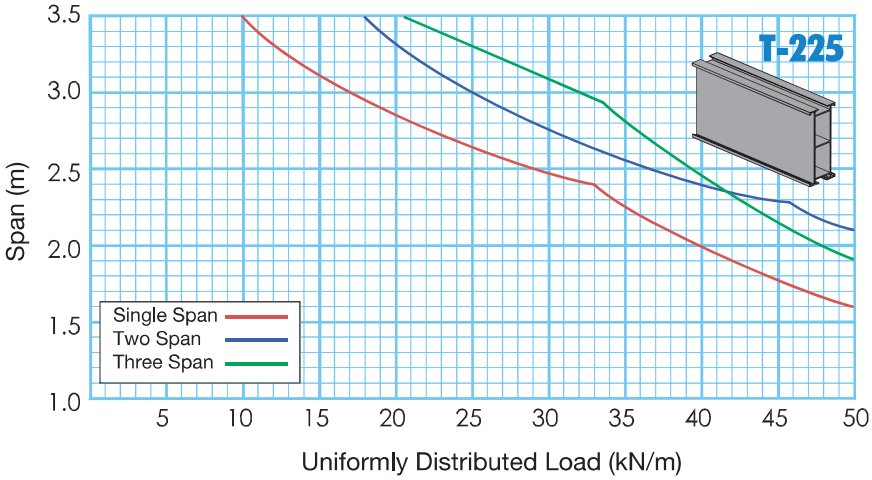


Alum. Beam S150





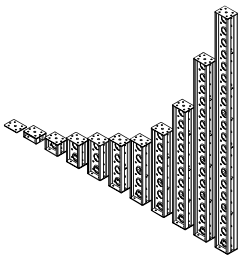
Alum. Beam T225



Notes:

	Wt. (kg)	Code

Steel Soldier



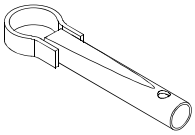
Steel Soldier 3600mm	72.2
Steel Soldier 2700mm	55.4
Steel Soldier 1800mm	38.8
Steel Soldier 1260mm	27.2
Steel Soldier 900mm	22.0
Steel Soldier 720mm	18.7
Steel Soldier 540mm	15.2
Steel Soldier 360mm	12.0
Steel Soldier 180mm	8.7
Steel Soldier 90mm	7.3
Steel Plate 10mm	2.9

Galvanised or powder-coated

Prop Pivot Tube — 1.8

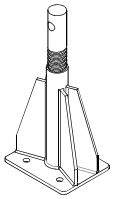
Galvanised or powder-coated

Spade End Link — 3.1



Galvanised or powder-coated

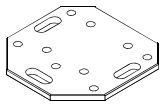
Prop Jack (L & R)



Prop Jack L.H	13.6
Prop Jack R.H	13.6

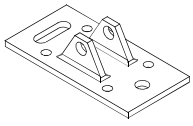
Galvanised or powder-coated

Anchor Plate — 7.3



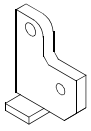
Galvanised or powder-coated

Tilt Plate — 4.9



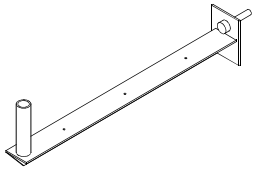
Galvanised or powder-coated

Lifting Plate — 3.2



Galvanised or powder-coated

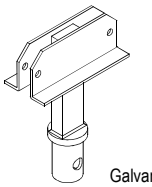
Lifting Plate — 8.6



Galvanised or powder-coated

	Wt. (kg)	Code

Prop Connector (100kN) — 6.8



Galvanised or powder-coated

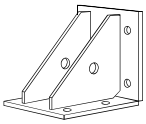
Joint Stiffeners — 1.4

Galvanised

Porthole Bearing — 1.20

Galvanised

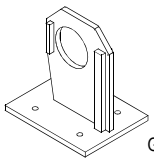
Corner Angle (90 Degree)



Corner Angle (90 Degree)	8.7
Corner Angle (45 Degree)	6.3

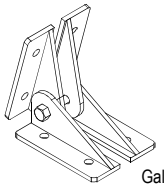
Galvanised or powder-coated

Corner Pivot — 7.3



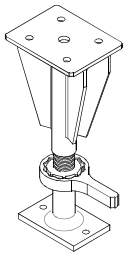
Galvanised or powder-coated

Pivot Cleat Set — 1.20



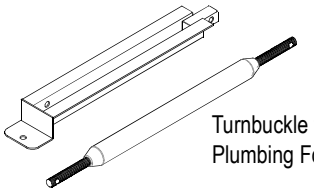
Galvanised or powder-coated

Adjustable Base — 18.5



Galvanised or powder-coated

Turnbuckle & Plumbing Foot



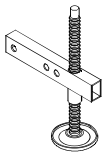
Turnbuckle 915-1175	8.4
Plumbing Foot	11.3

Galvanised or powder-coated

SCAFFCO Formwork & Scaffolding

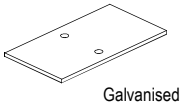
	Wt. (kg)	Code

Universal Soldier Jack — 4.7



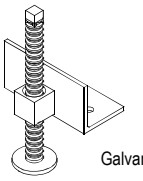
Galvanised

Form Support Plate — 5.2



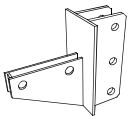
Galvanised or powder-coated

Form Panel Jack — 4.3



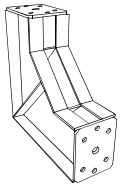
Galvanised

Fixed Strut Adaptor — 11.8



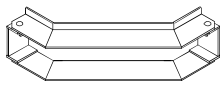
Galvanised or powder-coated

Single Sided Corner — 31.3



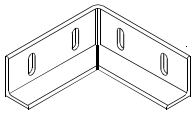
Galvanised or powder-coated

Outside Corner Strap — 6.2



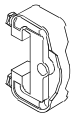
Galvanised or powder-coated

Alignment Angle — 2.0



Galvanised or powder-coated

Lok Clamp — 1.2



Galvanised or powder-coated

	Wt. (kg)	Code

Corner Soldier (CS)

CS 036 cm	10.20
CS 054 cm	11.98
CS 072 cm	15.51
CS 090 cm	19.69
CS 120 cm	25.61
CS 180 cm	38.20
CS 270 cm	56.07
CS 360 cm	73.93

Galvanised or powder-coated

Soldier Profile (SP)

SP 036 cm	3.22
SP 054 cm	3.93
SP 072 cm	5.35
SP 090 cm	6.06
SP 120 cm	9.28
SP 180 cm	13.91
SP 270 cm	20.87
SP 360 cm	27.83

Galvanised or powder-coated

Stripping Piece (SP)

SP 040 cm	9.08
SP 050 cm	10.62
SP 070 cm	13.70
SP 090 cm	16.77
SP 120 cm	22.85
SP 180 cm	32.08
SP 270 cm	47.39
SP 360 cm	62.70

Galvanised or powder-coated

Double Push Pull Props Double Adjustable

DPPPDA 150cm	20.00
DPPPDA 250cm	22.24
DPPPDA 300cm	24.36
DPPPDA 350cm	26.02
DPPPDA 400cm	27.26
DPPPDA 450cm	31.93
DPPPDA 500cm	33.61
DPPPDA 550cm	35.28
DPPPDA 600cm	36.96

Galvanised or powder-coated

Single Rocking Push-Pull Prop

SRPPP 150cm	10.09
SRPPP 200cm	12.21
SRPPP 250cm	13.84
SRPPP 300cm	15.96
SRPPP 350cm	17.62
SRPPP 400cm	19.30
SRPPP 450cm	21.42
SRPPP 500cm	23.09
SRPPP 550cm	24.77
SRPPP 600cm	26.44

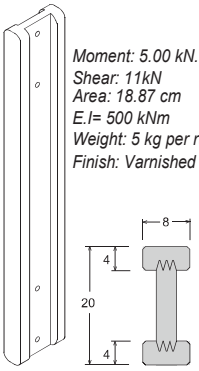
Galvanised or powder-coated

Single Stabilizer (SS)

SS 60-150 cm	10.70
SS 60-200 cm	13.08
SS 60-250 cm	15.55
SS 60-300 cm	18.19
SS 60-350 cm	20.84
SS 60-400 cm	24.34
SS 60-450 cm	26.99
SS 60-500 cm	29.64
SS 60-550 cm	32.28
SS 60-600 cm	34.93
SS 60-700 cm	40.22

Galvanised or powder-coated

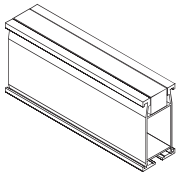
H20 Timber Beam



Moment: 5.00 kN..m
Shear: 11kN
Area: 18.87 cm
E.I= 500 kNm
Weight: 5 kg per running meter
Finish: Varnished Yellow

	Wt. (kg)	Code
H20 0125 cm	6.25	
H20 0145 cm	7.25	
H20 0165 cm	8.25	
H20 0180 cm	9.00	
H20 0225 cm	11.25	
H20 0245 cm	12.25	
H20 0265 cm	13.25	
H20 0290 cm	14.50	
H20 0295 cm	14.75	
H20 0330 cm	16.50	
H20 0360 cm	18.00	
H20 0390 cm	19.50	
H20 0450 cm	22.50	
H20 0490 cm	24.50	
H20 0590 cm	29.50	
H20 1190 cm	59.50	

Aluminum Beam T150

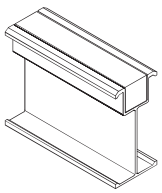


Aluminum Beam T150
(Timber Size 38x38mm)

Finish: Mill Finish
Moment of resistance:13.00 kN.m
Area:18.87 cm
Inertia xx:574.3 cm
Inertia yy: 147.4 cm
Section modulus Zxx: 75.36 cm
Young's Modulus 69000 N/mm
Weight: 5.80 kg/m (with Timber)
5.05 kg/m (without Timber)
Timber Wt.=0.75 kg/m

	Wt. (kg)	Code
T150 050 cm	2.92	
T150 075 cm	4.37	
T150 100 cm	5.83	
T150 125 cm	7.29	
T150 150 cm	8.75	
T150 175 cm	10.20	
T150 200 cm	11.66	
T150 225 cm	13.12	
T150 250 cm	14.58	
T150 275 cm	16.03	
T150 300 cm	17.49	
T150 325 cm	18.95	
T150 350 cm	20.41	
T150 375 cm	21.86	
T150 400 cm	23.32	
T150 425 cm	24.78	
T150 450 cm	26.24	
T150 475 cm	27.69	
T150 500 cm	29.15	
T150 525 cm	30.61	
T150 550 cm	32.07	
T150 575 cm	33.52	
T150 600 cm	34.98	

Aluminum Beam S150

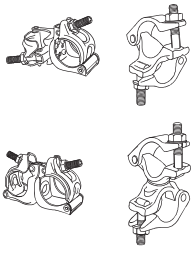


Aluminum Beam S150
(Timber Size 38x38mm)

Finish: Mill Finish
moment of resistance: 6.80 kN.m
Area:11.96 cm
Inertia xx: 356 cm
Inertia yy: 43.764 cm
Section Modulud Zxx: 47.15 cm
Toung's Modulus: 69000 N /mm
Weight: 3.95 kg/m (with Timber)
3.20 kg/m (without Timber)
Timber Wt.=0.75 kgf/m

	Wt. (kg)	Code
S150 050 cm	1.95	
S150 075 cm	2.93	
S150 100 cm	3.90	
S150 125 cm	4.88	
S150 150 cm	5.85	
S150 175 cm	6.83	
S150 200 cm	7.80	
S150 225 cm	8.78	
S150 250 cm	9.75	
S150 275 cm	10.73	
S150 300 cm	11.70	
S150 325 cm	12.68	
S150 350 cm	13.65	
S150 375 cm	14.63	
S150 400 cm	15.60	
S150 425 cm	16.58	
S150 450 cm	17.55	
S150 475 cm	18.53	
S150 500 cm	19.50	
S150 525 cm	20.48	
S150 550 cm	21.45	
S150 575 cm	22.43	
S150 600 cm	23.40	

Scaffold Couplers



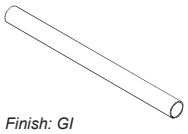
Double Coupler (DC)

	Wt. (kg)	Code
DC 1.5"x1.5" (D/F)	0.99	
DC 2.0"x1.5" (D/F)	1.20	
DC 1.5"x1.5" (Pressed)	0.73	

Swivel Coupler (SC)

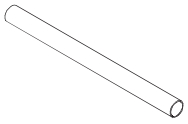
	Wt. (kg)	Code
SC 1.5"x1.5" (D/F)	1.10	
SC 2.0"x1.5" (D/F)	1.25	
SC 1.5"x1.5" (Pressed)	0.68	

Scaffold Tube GI



Finish: GI
Dia.:48.3 mm

	Wt. (kg)	Code
M.D. Tube		
ST 100 cm MD	2.28	
ST 150 cm MD	3.42	
ST 200 cm MD	4.57	
ST 250 cm MD	5.71	
ST 300 cm MD	6.85	
ST 350 cm MD	7.99	
ST 400 cm MD	9.13	
ST 450 cm MD	10.27	
ST 500 cm MD	11.42	
ST 550 cm MD	12.56	
ST 600 cm MD	13.70	

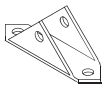


Finish: GI
Dia.:48.3 mm

	Wt. (kg)	Code
H.D. Tube		
ST 100 cm HD	3.35	
ST 150 cm HD	5.03	
ST 200 cm HD	6.70	
ST 250 cm HD	8.38	
ST 300 cm HD	10.05	
ST 350 cm HD	11.73	
ST 400 cm HD	13.41	
ST 450 cm HD	15.08	
ST 500 cm HD	16.76	
ST 550 cm HD	18.43	
ST 600 cm HD	20.11	

Rocking Push Pull Prop Base

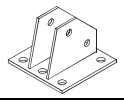
0.94



Finish: Painted

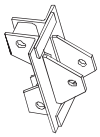
Double Push Pull Prop Base- Modified

3.46



Finish: Painted

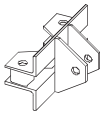
Vertical Soldier Bracket



	Wt. (kg)	Code
Vertical Soldier Bracket-50	3.20	
Vertical Soldier Bracket-60	3.20	

Finish: Painted

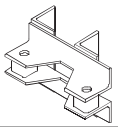
Horizontal Soldier Bracket



	Wt. (kg)	Code
Horizontal Soldier Bracket-50	3.00	
Horizontal Soldier Bracket-60	3.00	

Finish: Painted

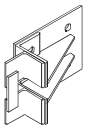
Soldier End Bearing Bracket



Soldier End Bearing Bracket 4.10

Finish: Painted

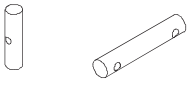
Universal Angle Tie Bracket



Universal Angle Tie Bracket 5.30

Finish: Painted

Bearing Bar



	Wt. (kg)	Code
Bearing Bar 175	2.10	
Bearing Bar 270	3.20	

Finish: Painted
Length: 17.5 cm

Finish: Painted
Length: 27 cm

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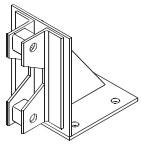
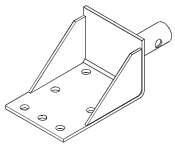
Formwork & Scaffolding

	Wt. (kg)	Code

Soldier Floor Bracket



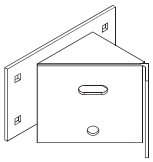


Soldier Floor Bracket H.D.-120	3.25	
Soldier Floor Bracket H.D.-180	6.28	

Finish: Painted

Soldier Floor Bracket H.D.:
Size 180x250x8mm with 7 nos.
of Anchorage openings in the base

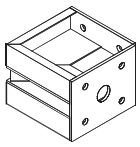
Stop End Bracket



Stop End Bracket	3.71	

Finish: Painted

Horizontal Corner Soldier 90

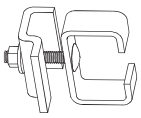


Horizontal Corner Soldier 90	12.95	

Finish: Painted

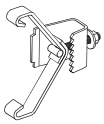
H20 C-Clamp (Soldier to H20)

0.90



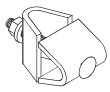
Soldier Clamp H20 (Soldier to H20)

0.80



Universal Clamp

0.60



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