

Formwork Direct Steel Soldiers



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Formwork Excellence with Versatile Steel Soldier

Formwork Direct Steel Soldier stands as a testament to excellence in formwork engineering, offering unparalleled strength, versatility, and adapt-ability 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 Formwork Direct 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 Formwork Direct 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 Formwork Direct 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 Formwork Direct 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.

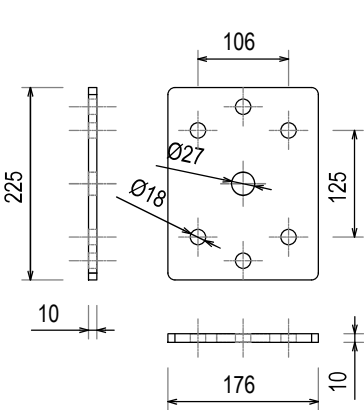
- **Strength-to-Weight Ratio:** The Steel Soldier demonstrates an exceptional strength-to-weight ratio, outperforming analogous products from competitors, thereby ensuring versatility and robustness in formwork applications across a spectrum of on-site conditions.
- **Versatility:** The Steel Soldier 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:** Featuring 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 products and often adaptable to customers' existing equipment, the Formwork Direct Steel Soldier seamlessly integrates into your workflow, enhancing productivity and cost-effectiveness.
- **Freedom to Create:** With Steel Soldiers, 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 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 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 Steel Soldier offers long-term value, reducing the need for constant replacement and minimizing environmental impact.

Steel Soldier

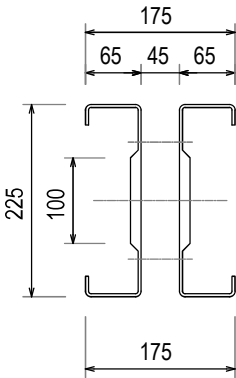
The Steel Soldier represents a paradigm shift in temporary works, falsework, and formwork components. It is embodying versatility, robustness, and innovation. Its modular design, crafted from high-quality steel and augmented by innovative hole patterns, sets a new standard for formwork primary beams. 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

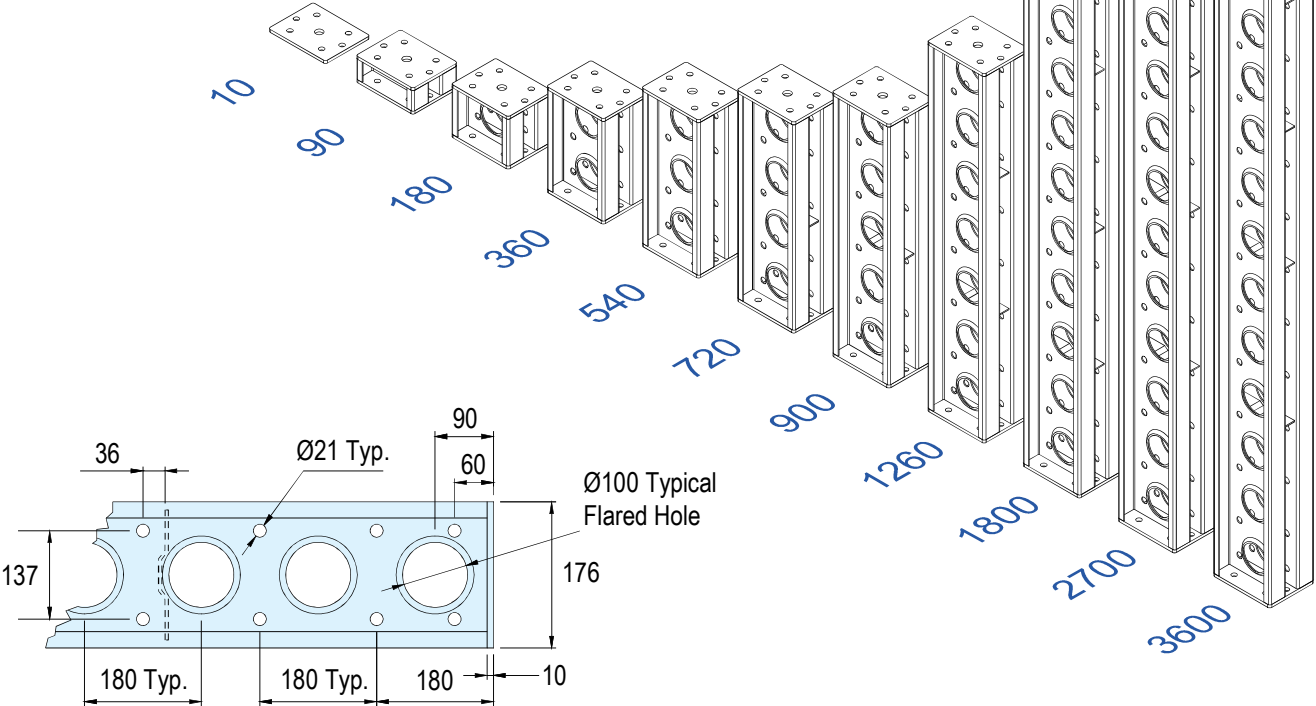
Gross Sectional Area	26.06 cm ²
Nett Sectional Area	19.64 cm ²
I _{xx}	1916 cm ⁴
I _{yy}	658 cm ⁴
r _{xx}	9.69 cm
r _{yy}	5.70 cm
Z _{xx}	161 cm ³
Z _{yy}	61 cm ³
EI _{xx}	4020 kNm ²
EI _{yy}	300 kNm ²
GA _{xx}	17350 kN
V _{max (y)}	88kN
M _{max (x)}	40 kNm
M _{max (y)}	6.24 kNm
Approx. Self weight	0.235 kN/m



End Plate Details



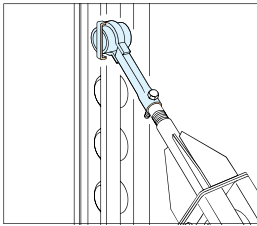
Typical Cross-Section



Components and Accessories of the Steel Soldier System

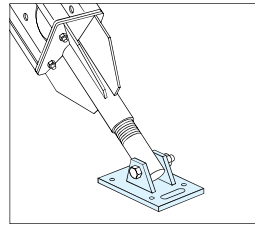
Steel soldiers and their accessories are engineered to accommodate a diverse range of worksite conditions, from vertical and horizontal formwork applications to shoring and heavy-duty temporary works structures. Their adaptability and versatility make them indispensable assets in modern construction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



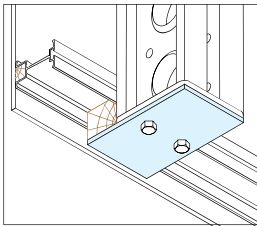
Prop Spade End Link & Prop Pivot Tube

Used to attach push pull props to soldiers.



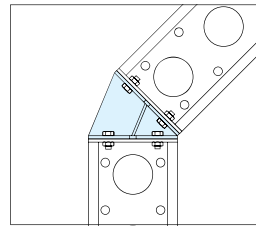
Tilt Plate

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



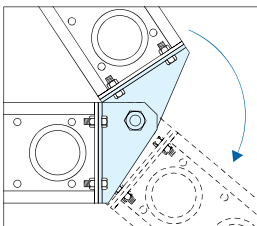
Support Plate

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.



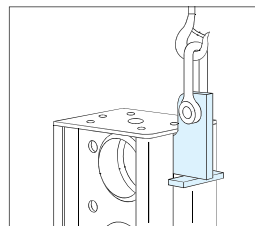
Bracket - 45° Corner

Connects Steel Soldiers at 45 degrees.



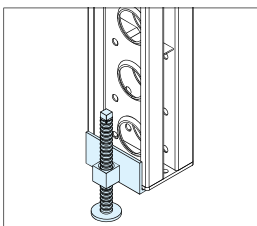
Pivot Cleat Set

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



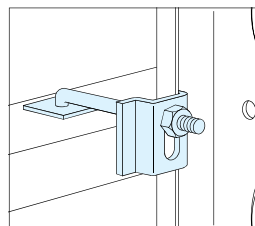
Lifting Plate

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



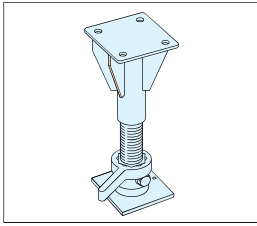
Form Panel Jack

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..



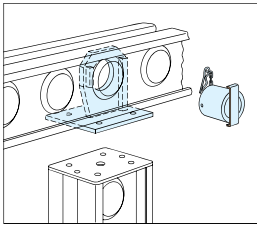
Soldier Adjustable Base

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



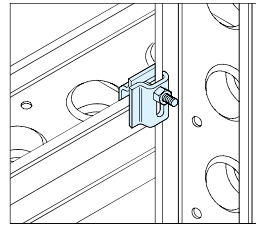
Universal Clamp

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



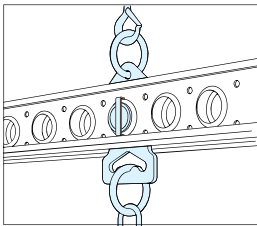
Corner Pivot & Prop Pivot Tube

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



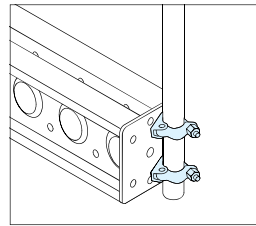
Waling Clamp Plate

Used to connect horizontal Soldiers to vertical Soldiers



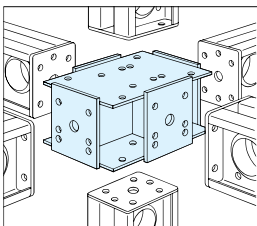
Spreader Beam Plate & Prop Pivot Tube

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



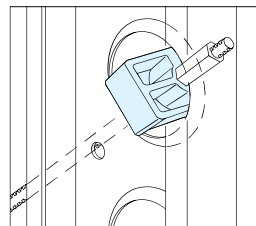
Half Coupler

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



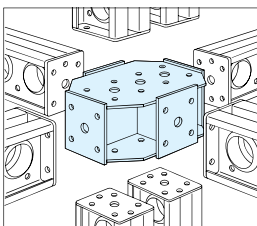
6-Way Connector

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



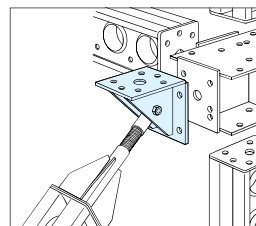
Porthole Bearing & Hex. Nut

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



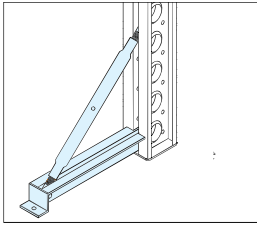
6-Way Double Connector

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.

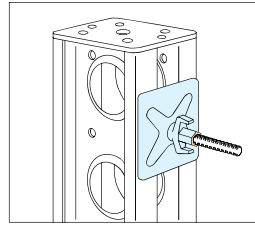


90 Degree Corner

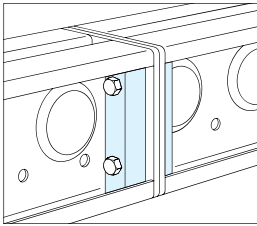
A corner node designed to connect to the end of the Steel Soldier, allowing for the attachment of either a soldier Jack or another soldier at a 90° angle to the first one.

**Turnbuckle & Plumbing Foot**

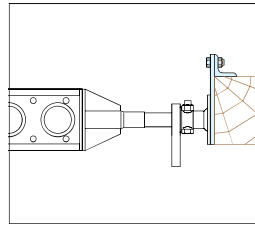
Used in single sided base formwork applications and many other forming applications

**Waler Plates**

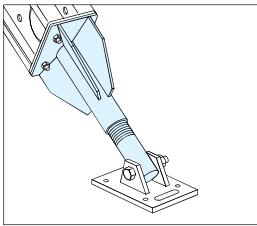
Steel plates made to distribute the load from the tie rod into the supporting member.

**Joint Stiffener**

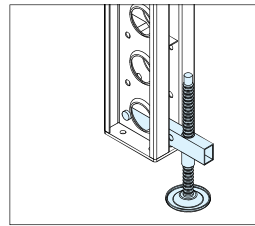
Joint stiffeners enhance the tension and bending capacities of connections between Steel Soldiers.

**Prop Support Plate**

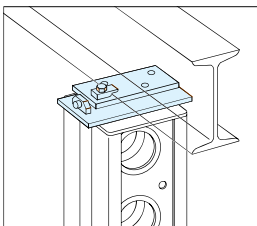
Used to support horizontal Steel Soldier in trench applications.

**Adjustable Prop Jack**

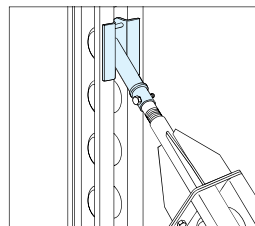
Used in pairs (left & right) to provide length adjustment to push pull props.

**Universal Soldier Jack**

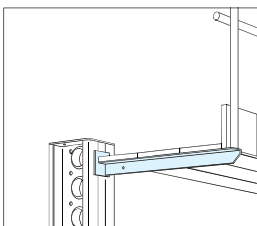
Utilized in both horizontal and vertical orientations

**Rocking Head 36mm**

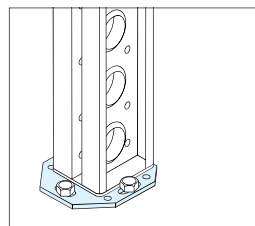
Utilized for attaching header beams onto soldier props, ensuring concentric load distribution when a Steel Soldier is used in a shoring application.

**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.

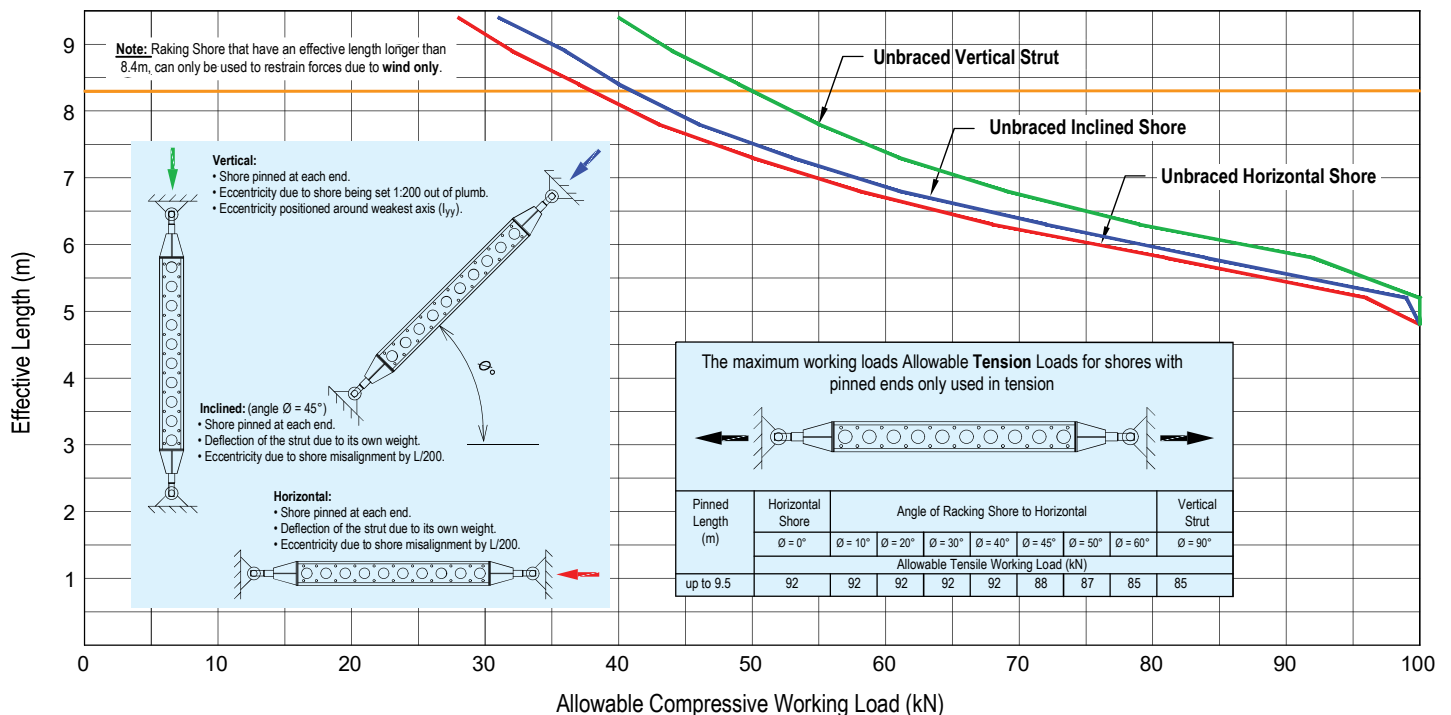
When using load curves, consider the following important factors:

- 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

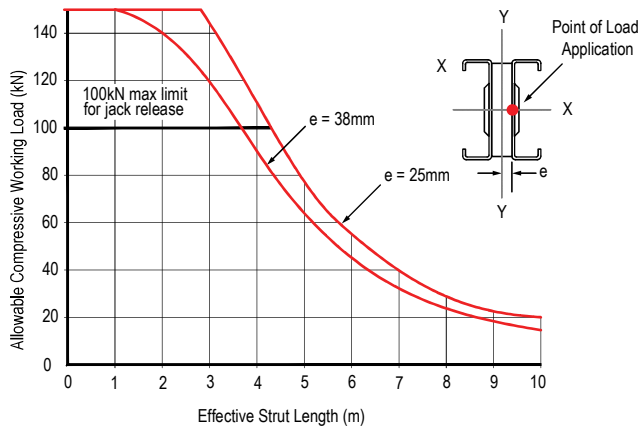
Diagrammatic representation of deformation	Restraint conditions	Effective length, l (mm)	
	Effectively held in position and restrained in direction at both ends <i>Not normally appropriate for use in tube and coupler structures.</i>	0.7L	
	Effectively held in position at both ends and restrained in direction at one end <i>Not normally appropriate for use in tube and coupler structures.</i>	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			
	Rotation fixed and position fixed		Rotation free and position fixed
	Rotation fixed and position free		Rotation free and position free

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).

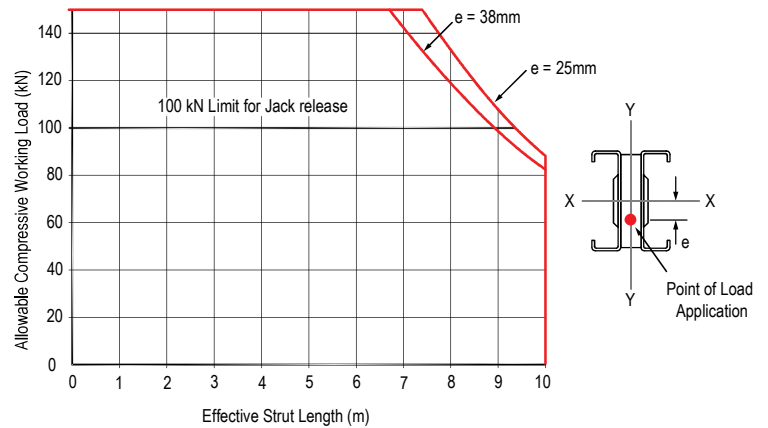




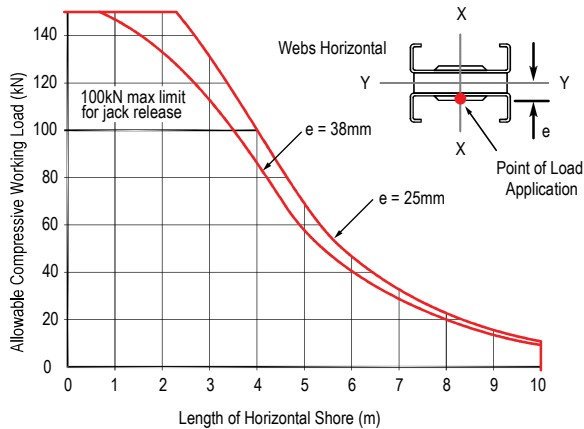
Vertical Struts - Buckling About the Y-Axis



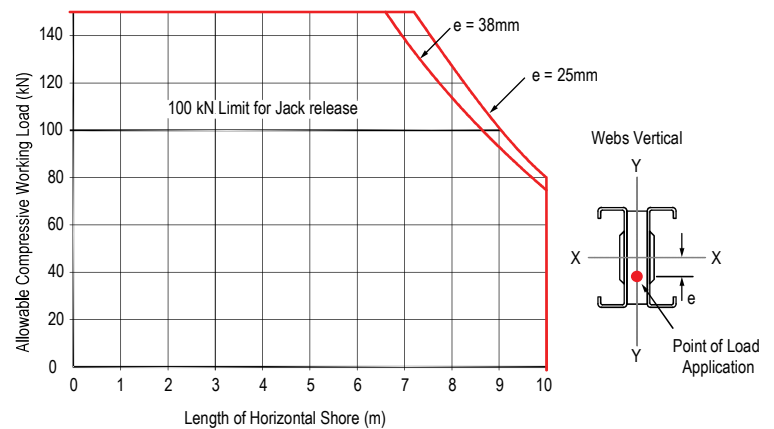
Vertical Struts - Buckling About the X-Axis



Horizontal Shores - Buckling About the Y-Axis



Horizontal Shores - Buckling About the X-Axis



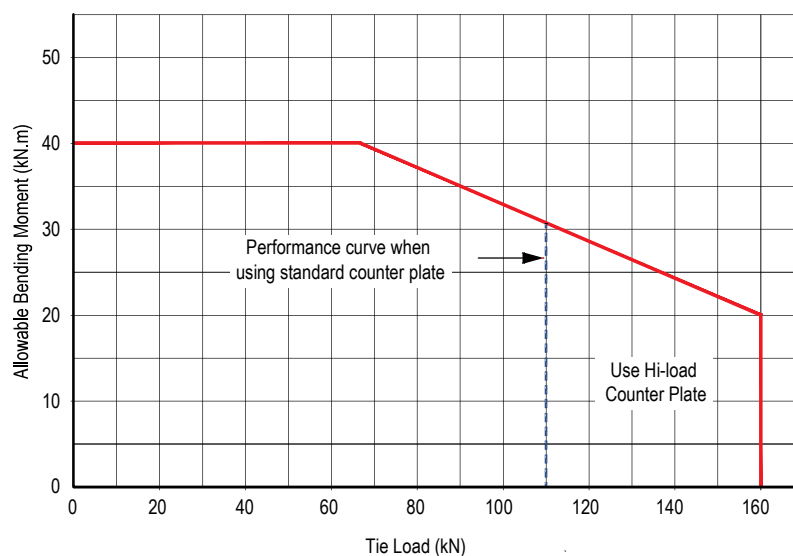
Steel Soldier as a Beam or a Flexural Member

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.

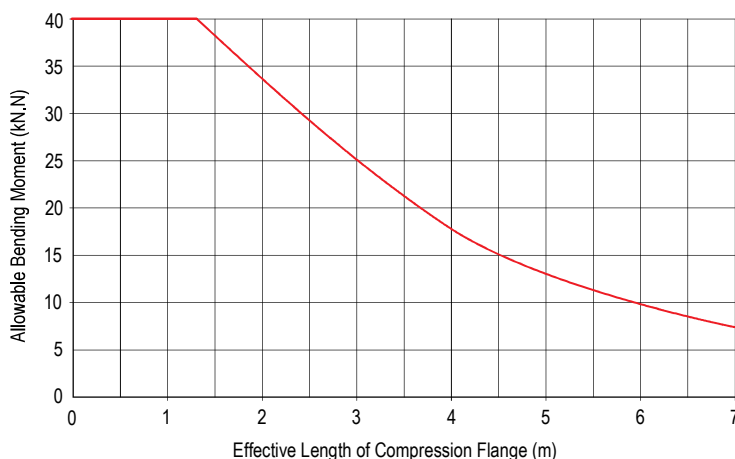
One critical design consideration for the steel soldier as a beam member is lateral torsional buckling (LTB). LTB occurs when an unrestrained compression flange in a beam subjected to bending becomes unstable, resulting in sideways movement of the compression flange and twisting of the beam about its 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 Formwork Direct engineer is recommended.



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



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. Formwork Direct 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.

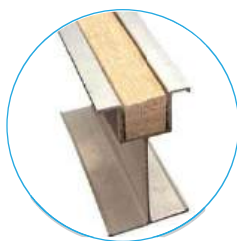
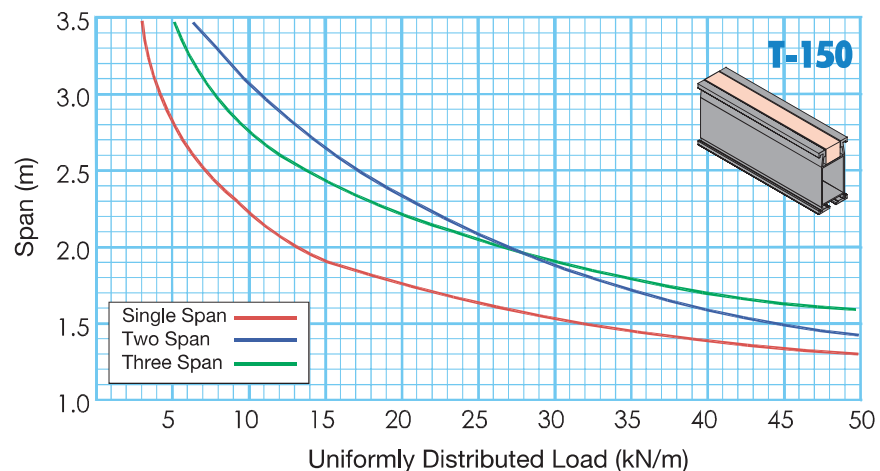
T150: A 150mm deep beam tailored for wall formwork and secondary support for soffits.

S150: A cost-effective 150mm deep single web beam ideal for wall and soffit support applications.

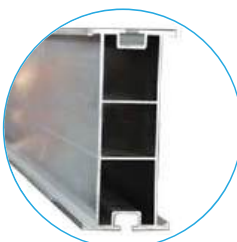
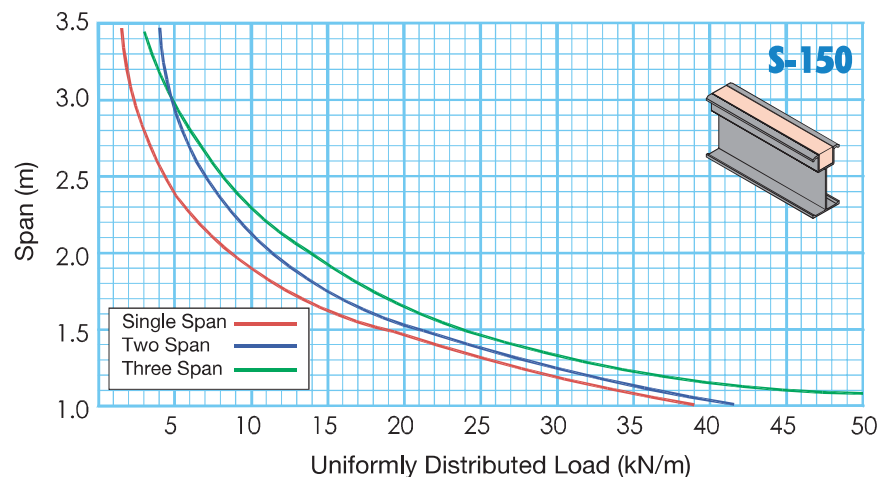
All Aluminium Beams, along with their accessories and components, comply with international standards. Supported by comprehensive load testing and rigorous structural analysis, the design loads and safety factors for the aluminium beams were meticulously determined.



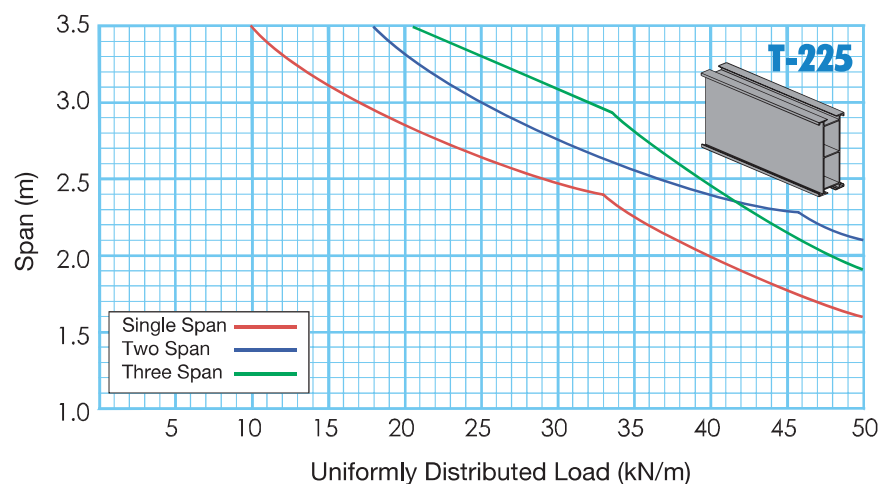
Alum. Beam T150



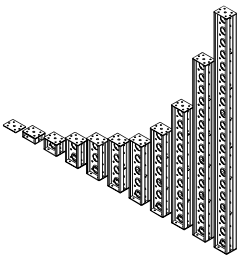
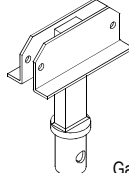
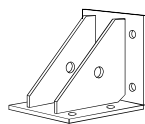
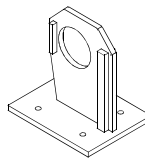
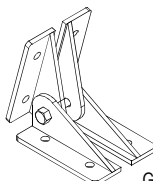
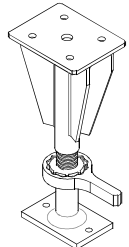
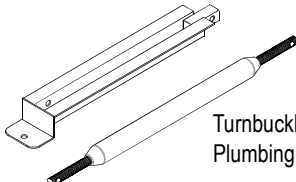
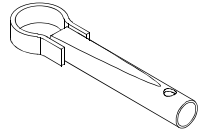
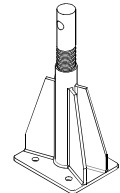
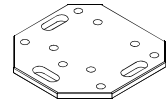
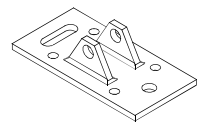
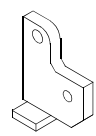
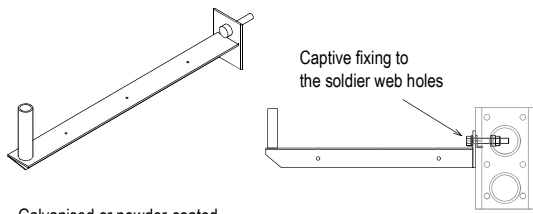
Alum. Beam S150

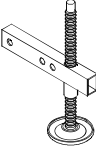
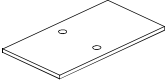
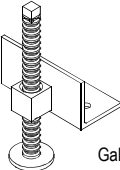
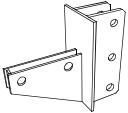
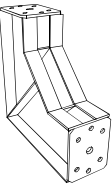
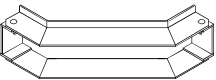
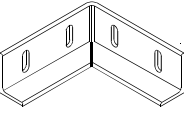
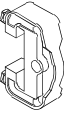


Alum. Beam T225

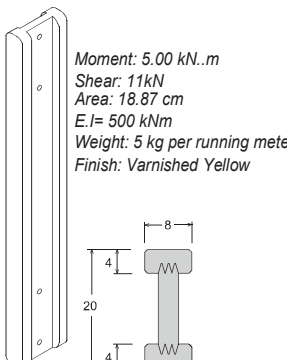


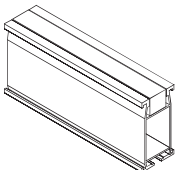
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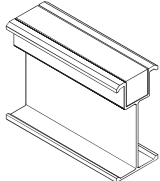
	Wt. (kg)	Code		Wt. (kg)	Code
Steel Soldier  Galvanised or powder-coated			Prop Connector (100kN)  Galvanised or powder-coated		
Steel Soldier 3600mm	72.2		Joint Stiffeners  Galvanised		
Steel Soldier 2700mm	55.4		Porthole Bearing  Galvanised		
Steel Soldier 1800mm	38.8		Corner Angle (90 Degree)  Galvanised or powder-coated		
Steel Soldier 1260mm	27.2		Corner Pivot  Galvanised or powder-coated		
Steel Soldier 900mm	22.0		Pivot Cleat Set  Galvanised or powder-coated		
Steel Soldier 720mm	18.7		Adjustable Base  Galvanised or powder-coated		
Steel Soldier 540mm	15.2		Turnbuckle & Plumbing Foot  Galvanised or powder-coated		
Steel Soldier 360mm	12.0		Turnbuckle 915-1175		
Steel Soldier 180mm	8.7		Plumbing Foot		
Steel Soldier 90mm	7.3				
Steel Plate 10mm	2.9				
Prop Pivot Tube  Galvanised or powder-coated					
Spade End Link  Galvanised or powder-coated					
Prop Jack (L & R)  Galvanised or powder-coated					
Prop Jack L.H	13.6				
Prop Jack R.H	13.6				
Anchor Plate  Galvanised or powder-coated					
Tilt Plate  Galvanised or powder-coated					
Lifting Plate  Galvanised or powder-coated					
Lifting Plate  Galvanised or powder-coated					

	Wt. (kg)	Code
Universal Soldier Jack  Galvanised	4.7	
Form Support Plate  Galvanised or powder-coated	5.2	
Form Panel Jack  Galvanised	4.3	
Fixed Strut Adaptor  Galvanised or powder-coated	11.8	
Single Sided Corner  Galvanised or powder-coated	31.3	
Outside Corner Strap  Galvanised or powder-coated	6.2	
Alignment Angle  Galvanised or powder-coated	2.0	
Lok Clamp  Galvanised or powder-coated	1.2	

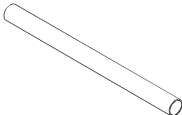
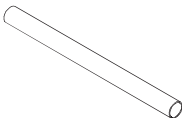
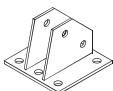
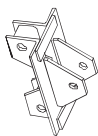
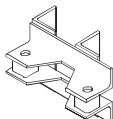
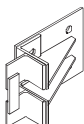
	Wt. (kg)	Code
Corner Soldier (CS)  Galvanised or powder-coated	CS 036 cm 10.20 CS 054 cm 11.98 CS 072 cm 15.51 CS 090 cm 19.69 CS 120 cm 25.61 CS 180 cm 38.20 CS 270 cm 56.07 CS 360 cm 73.93	
Soldier Profile (SP)  Galvanised or powder-coated	SP 036 cm 3.22 SP 054 cm 3.93 SP 072 cm 5.35 SP 090 cm 6.06 SP 120 cm 9.28 SP 180 cm 13.91 SP 270 cm 20.87 SP 360 cm 27.83	
Stripping Piece (SP)  Galvanised or powder-coated	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	
Double Push Pull Props Double Adjustable  Galvanised or powder-coated	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	
Single Rocking Push-Pull Prop  Galvanised or powder-coated	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	
Single Stabilizer (SS)  Galvanised or powder-coated	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	

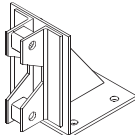
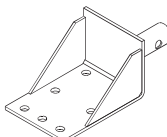
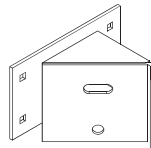
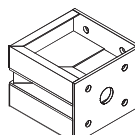
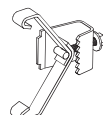
		Wt. (kg)
H20 Timber Beam		
	H20 0125 cm	6.25
	H20 0145 cm	7.25
	H20 0165 cm	8.25
	H20 0180 cm	9.00
	H20 0225 cm	11.25
	H20 0245 cm	12.25
	H20 0265 cm	13.25
	H20 0290 cm	14.50
	H20 0295 cm	14.75
	H20 0330 cm	16.50
	H20 0360 cm	18.00
	H20 0390 cm	19.50
	H20 0450 cm	22.50
	H20 0490 cm	24.50
	H20 0590 cm	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	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 Modulus 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 kg/m	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)	
	DC 1.5"x1.5" (D/F)	0.99
	DC 2.0"x1.5" (D/F)	1.20
	Swivel Coupler (SC)	
	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

Code	Wt. (kg)	
Scaffold Tube GI		
 <i>Finish: GI</i> <i>Dia.: 48.3 mm</i>	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
 <i>Finish: GI</i> <i>Dia.: 48.3 mm</i>	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
 <i>Finish: Painted</i>		
Double Push Pull Prop Base- Modified		3.46
 <i>Finish: Painted</i>		
Vertical Soldier Bracket		
 <i>Finish: Painted</i>	Vertical Soldier Bracket-50	3.20
	Vertical Soldier Bracket-60	3.20
Horizontal Soldier Bracket		
 <i>Finish: Painted</i>	Horizontal Soldier Bracket-50	3.00
	Horizontal Soldier Bracket-60	3.00
Soldier End Bearing Bracket		
 <i>Finish: Painted</i>	Soldier End Bearing Bracket	4.10
Universal Angle Tie Bracket		
 <i>Finish: Painted</i>	Universal Angle Tie Bracket	5.30
Bearing Bar		
 <i>Finish: Painted</i> <i>Length: 17.5 cm</i>	Bearing Bar 175	2.10
	Bearing Bar 270	3.20
	<i>Finish: Painted</i> <i>Length: 27 cm</i>	

	Wt. (kg)	Code		Wt. (kg)	Code			
Soldier Floor Bracket								
	Soldier Floor Bracket H.D.-120	3.25						
	Soldier Floor Bracket H.D.-180	6.28						
	<i>Finish: Painted</i>							
<i>Soldier Floor Bracket H.D.: Size 180x250x8mm with 7 nos. of Anchorage openings in the base</i>								
Stop End Bracket								
	Stop End Bracket	3.71						
	<i>Finish: Painted</i>							
Horizontal Corner Soldier 90								
	Horizontal Corner Soldier 90	12.95						
	<i>Finish: Painted</i>							
H20 C-Clamp (Soldier to H20)		0.90						
								
Soldier Clamp H20 (Soldier to H20)		0.80						
								
Universal Clamp		0.60						
								



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