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- The company employs over 3000 skilled and enthusiastic people, and involves many more through its subcontractors, in scaffolding, formwork and portable buildings businesses in Australia, New Zealand, South Africa, United Kingdom and Chile.
- Waco International Ltd has operated in Australia since 1984. In 1992 it acquired GKN Kwikform, creating the company that today operates as Waco Kwikform Limited.
- Waco Kwikform has both size and geographical coverage. With a stockholding in excess of 70,000 tonnes and local branches throughout Australia and New Zealand, Waco Kwikform is recognised as a leading supplier of scaffolding and formwork.
- The company is built around a service culture. We have the capacity to provide design, product and technical support to the largest commercial, residential, industrial and civil engineering projects, from capital city construction to major mining, oil and gas projects throughout the country.
- Our opinion is sought by and we work closely with organisations like Standards Australia and the various state regulatory authorities in reviewing and shaping the standards by which our industry operates both today and into the future.

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GENERAL INFORMATION

System Overview

- This product catalogue provides basic technical information regarding the components that are used to make up the Tifa system.
- Tifa is a heavy duty crane handled wall forming system with the following main features:
- The system is able to resist a concrete pressure of 60 kN/m².
- The Panels are available in lengths of 2700, 1200, 900 and 600 mm and in widths of 2400, 1200, 900, 600, 450 and 300 mm.
- The Panels may be gang-formed to create an overall panel size of 30m².
- Components are galvanized for long life protection.
- The system provides safe working platforms.
- Tifa Panels are compatible with the Tifa-Lite System.



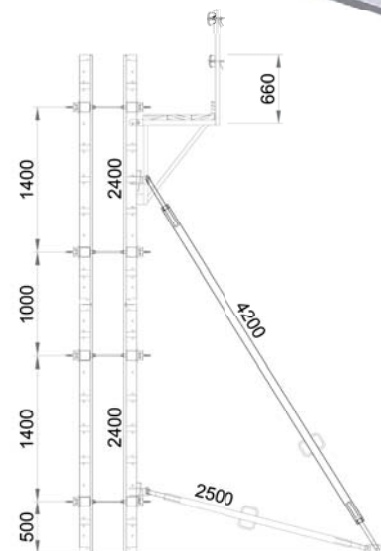
ACCURACY OF CONCRETE WORK

Expected Concrete Surface Finish Using Tifa-Lite

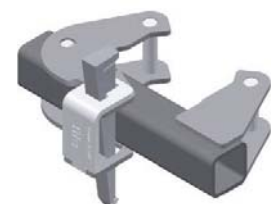
- The Tifa system produces a 'smooth' Class 2 to Class 3 finish.
- No treatment of the concrete surface is required after striking the formwork.

Class Description

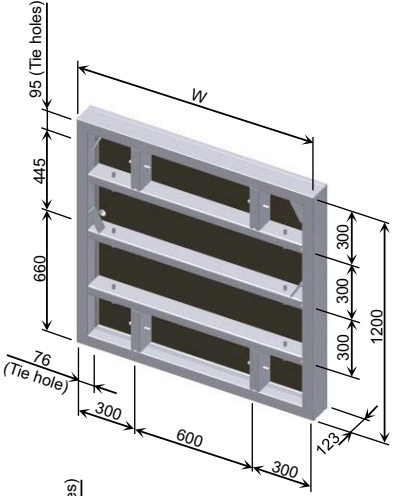
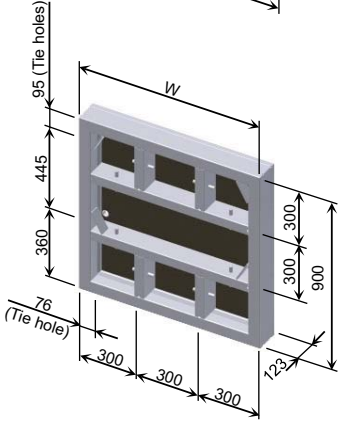
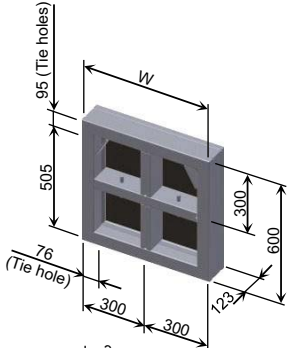
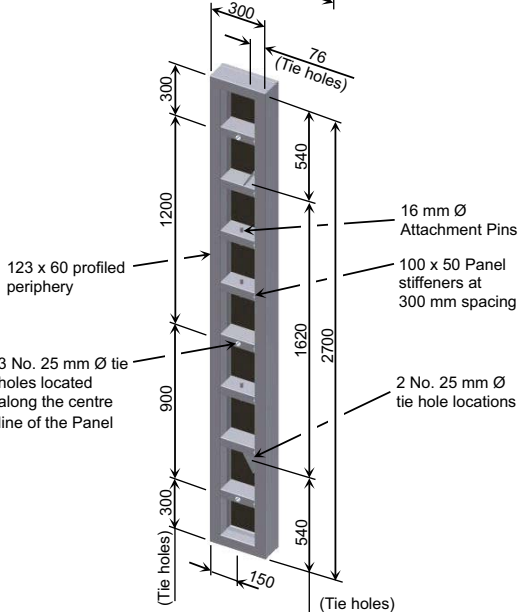
- **Class 3**
Degree of accuracy III is suitable for use where a high degree of accuracy is unnecessary, for example, mass reinforced foundations, frames, walls, columns and beams that are normally plastered, painted or hidden from view.
- **Class 2**
Degree of accuracy II is suitable for use where a reasonable degree of accuracy is required and not hidden from view.
- **Class 1**
Degree of accuracy I is suitable when the use of special, as opposed to normal methods or materials, or both, is warranted despite the probability of higher costs than those caused by the use of degree of accuracy II.



Tifa 4100 High

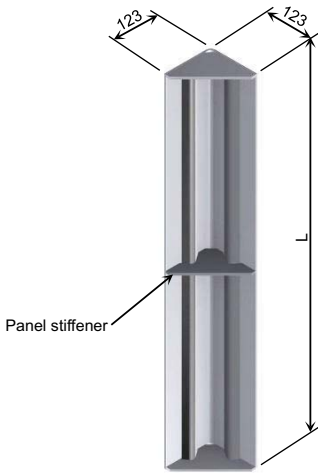
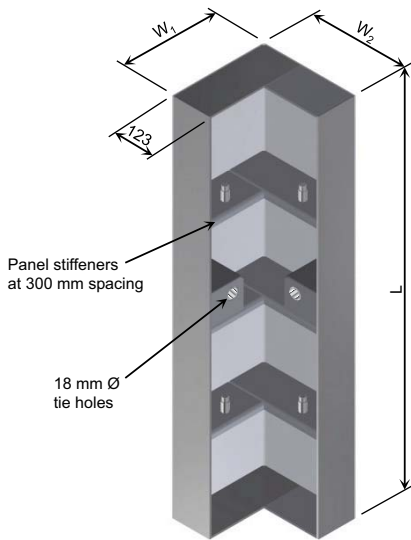
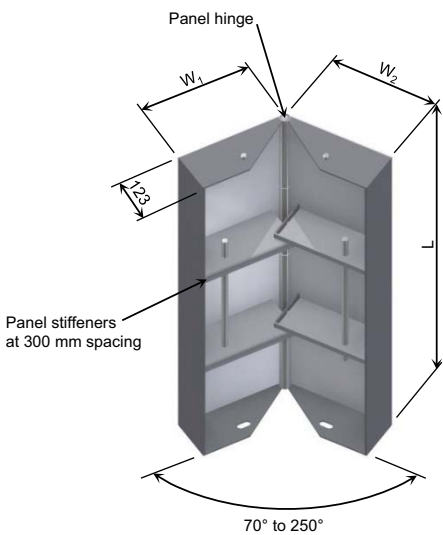


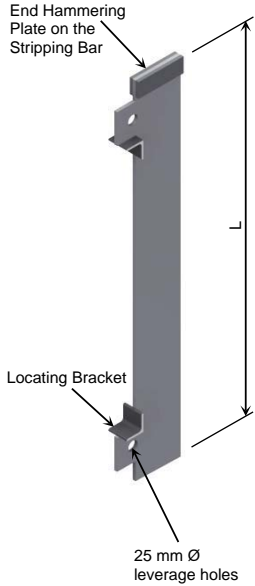
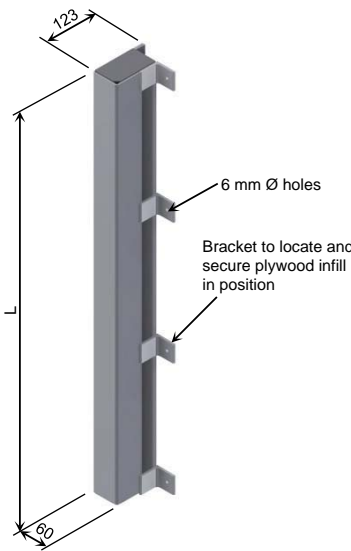
Product	Code	Description	Weight (kg)
<p>100 x 50 Panel stiffeners at 300 mm spacing</p> <p>4 No. 25 mm Ø tie holes through 100 x 100 stiffeners</p> <p>16 mm Ø Attachment Pins</p> <p>123</p>	123114	<p>Tifa panels are used to form vertical or inclined structures</p> <p>Range Panels are available in heights of 2700mm, 1200mm, 900mm and 600mm and in widths from 2400mm to 300mm depending on height.</p> <p>Ply Face Tifa panels are fitted with 21mm WISA-Form plywood facing.</p> <p>Tie Holes 2700mm, 1200mm and 900mm high panels (except for the 300mm wide range), have 4 no. 25mm dia. tie holes located in the primary stiffeners to accommodate the 15mm dia. Dywidag tie system.</p> <p>300mm wide panels have 2 no. 25mm dia. tie holes located in the primary stiffeners plus additional tie holes in the panel stiffeners along the centreline of the panel.</p>	440.0
<p>76 (Tie holes)</p> <p>540</p> <p>2700</p> <p>1620</p> <p>540</p> <p>100 x 50 Panel stiffeners at 300 mm spacing</p> <p>16 mm Ø Attachment Pins</p> <p>123 x 60 profiled periphery</p> <p>4 No. 25 mm Ø tie hole locations</p> <p>123</p>	123113 123112 123111 123110 123109	Tifa Panel 2700 x 1200 Tifa Panel 2700 x 900 Tifa Panel 2700 x 600 Tifa Panel 2700 x 450 Tifa Panel 2700 x 300	195.0 148.0 113.0 93.0 76.0

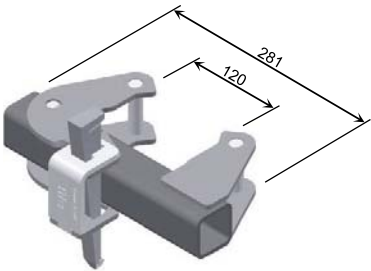
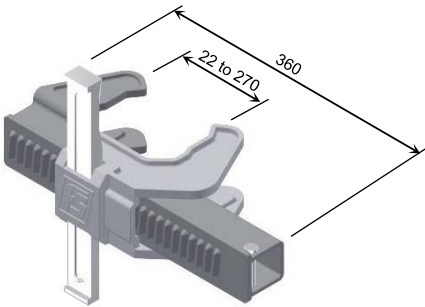
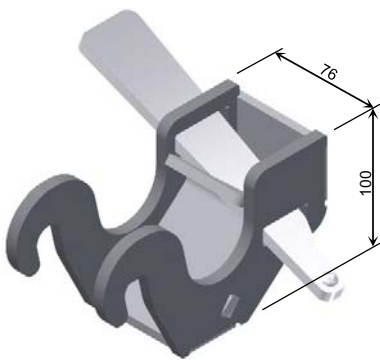
Product	Code	Description	Weight (kg)
	123108 123107 123106 123105 123104	Tifa Panel 1200 x 1200 Tifa Panel 1200 x 900 Tifa Panel 1200 x 600 Tifa Panel 1200 x 450 Tifa Panel 1200 x 300	96.0 78.0 58.0 46.0 37.0
	123103 123102 123101 123100	Tifa Panel 900 x 900 Tifa Panel 900 x 600 Tifa Panel 900 x 450 Tifa Panel 900 x 300	63.0 46.0 36.0 29.0
	123099 123098	Tifa Panel 600 x 600 Tifa Panel 600 x 300	35.0 19.0
	123109	Tifa Panel 2700 x 300	76.0

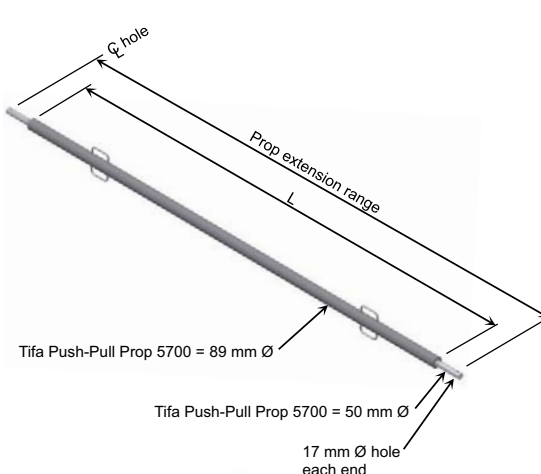
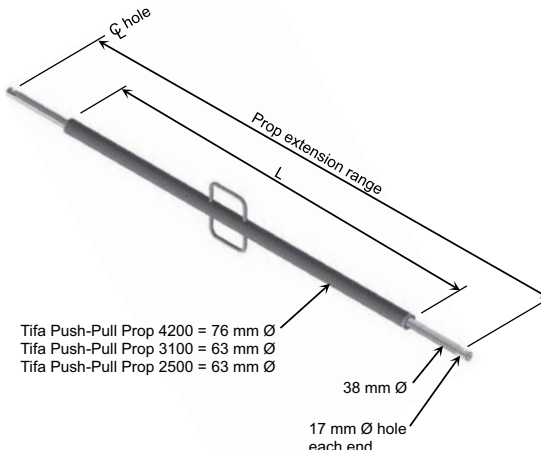
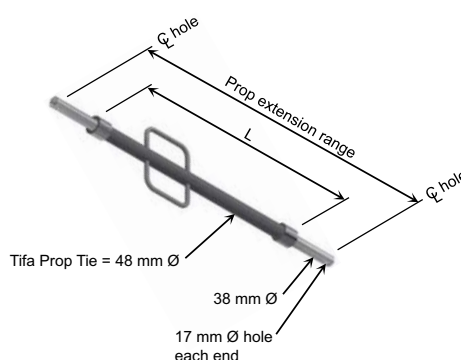
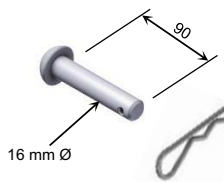
Tie Holes

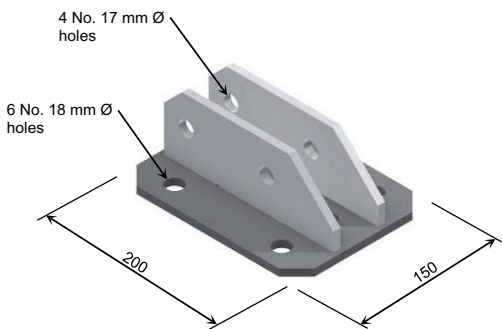
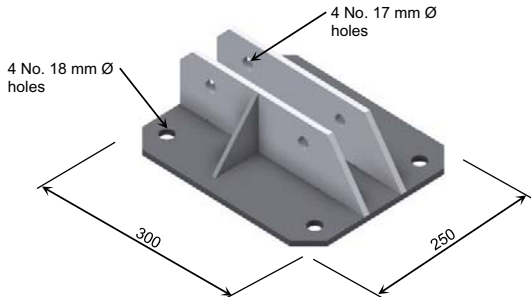
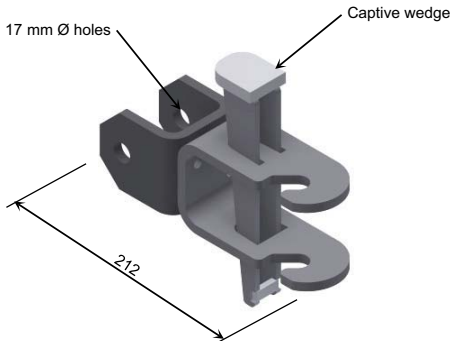
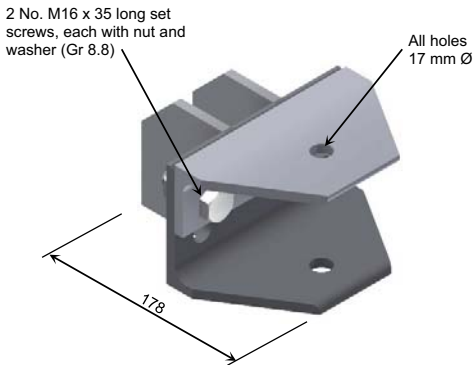
600mm high panels 600mm wide have 2 no. 25mm dia. tie holes located at one end of the panel. 600mm high panels 300mm wide panels have 1 no. 25mm dia. tie hole located in the centre of the panel to accommodate the 15mm dia. Dywidag tie system.

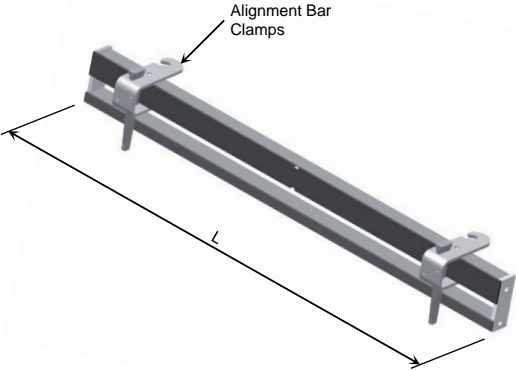
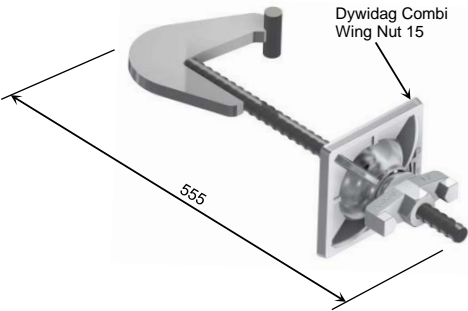
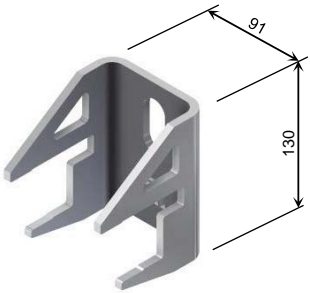
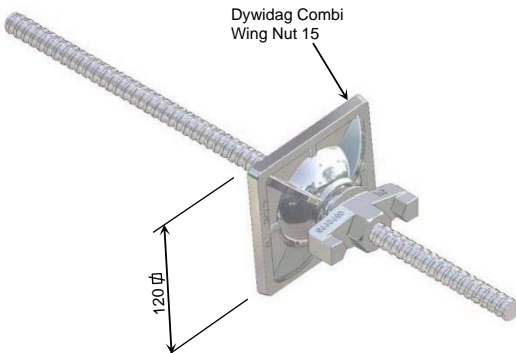
Product	Code	Description	Weight (kg)
	123118 123117 123116 123115	<p>Tifa External Corner Panels are used to connect two Tifa Panels together at 90° to each other at an external corner.</p> <p>Tifa External Corner Panel 2700 Tifa External Corner Panel 1500 Tifa External Corner Panel 1200 Tifa External Corner Panel 900</p>	41.0 25.2 22.0 10.5
	123122 123121 123120 123119	<p>Tifa Internal Corner Panels are used to connect two Tifa Panels together at 90° to each other at an internal corner.</p> <p>Tifa Internal Corner Panel 2700 x 300 x 300 1500 x 300 x 300 1200 x 300 x 300 900 x 300 x 300</p>	130.0 91.2 65.0 39.5
	123126 123125 123124 123123	<p>Tifa Hinged Splay Panels are used to connect two Tifa Panels at angles from 70° to 250° at either an internal or external corner.</p> <p>Tifa Hinged Splay Panels do not have tie holes.</p> <p>Tifa Hinged Splay Panel 2700 x 300 x 300 1500 x 300 x 300 1200 x 300 x 300 900 x 300 x 300</p>	127.0 91.0 61.8 44.9

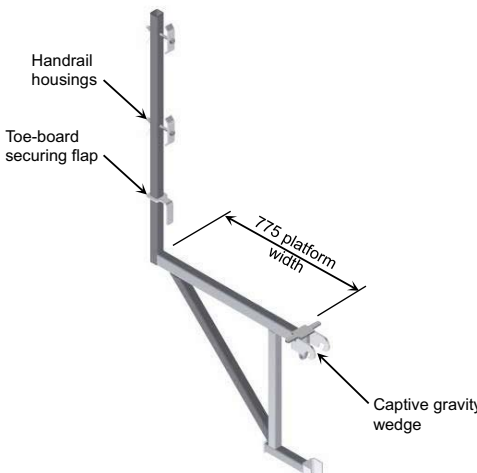
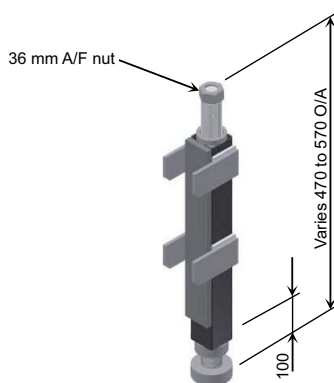
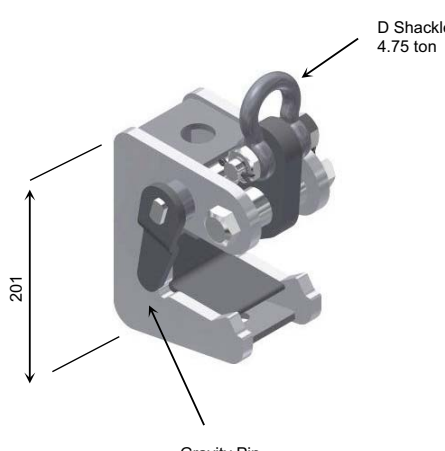
Product	Code	Description	Weight (kg)
 <p>End Hammering Plate on the Stripping Bar</p> <p>Locating Bracket</p> <p>25 mm Ø leverage holes</p>		<p>The 8 mm thick Tifa Stripping Bars, with a thickened end hammering plate, are used to facilitate the stripping of Tifa Panels in confined areas.</p>	
	123208	Tifa Stripping Bar 2750	23.0
	123207	Tifa Stripping Bar 2450	20.8
	123206	Tifa Stripping Bar 1550	13.7
	123205	Tifa Stripping Bar 1250	11.4
	123204	Tifa Stripping Bar 950	9.1
 <p>6 mm Ø holes</p> <p>Bracket to locate and secure plywood infill in position</p>		<p>Tifa Twin Profile Infills are used to support a plywood infill between two Tifa Panels.</p> <p>The plywood is secured in position using 5 mm Ø x 20 mm long self tapping screws.</p>	
	123203	Tifa Twin Profile Infill 2700	25.0
	123202	Tifa Twin Profile Infill 1500	13.8
	123201	Tifa Twin Profile Infill 1200	11.0
	123200	Tifa Twin Profile Infill 900	8.0

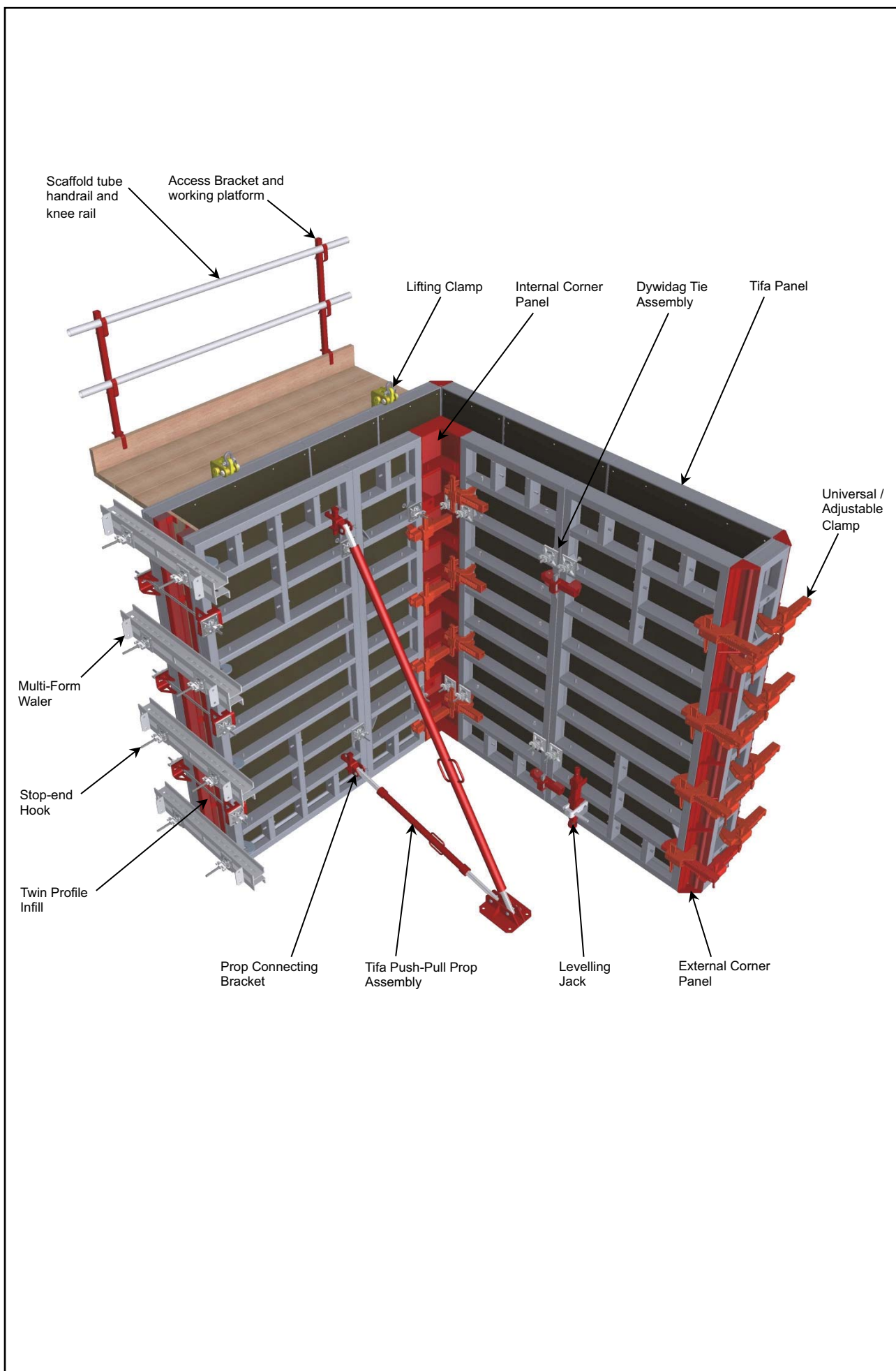
Product	Code	Description	Weight (kg)
 <p>Technical drawing of the Tifa Fixed Clamp showing dimensions: 120 (width of the base) and 281 (total length).</p>	123214	<p>Tifa Fixed Clamps are used to connect two Tifa Panels side by side.</p> <p>When the Clamps are positioned along the Panel's stiffeners, the Clamps assist with aligning the Panels which eliminates the need for walers.</p> <p>Tifa Fixed Clamp</p>	3.7
 <p>Technical drawing of the Tifa/Tifa-Lite Universal Clamp showing dimensions: 22 to 270 (adjustable length) and 360 (total length).</p>	123216	<p>Tifa/Tifa-Lite Universal Clamps are used to connect two Tifa Panels together and where Stripping Bars or timber in-fill is required. They are also used to clamp External Corner Panels, Internal Corner Panels and Hinged Splay Panels in position and may substitute any other type of Tifa Clamp.</p> <p>Universal Clamps may be connected anywhere along the length or width of the Panel.</p> <p>Tifa/Tifa-Lite Universal Clamp</p>	6.0
 <p>Technical drawing of the Tifa Waler Bracket showing dimensions: 76 (width of the base) and 100 (height of the bracket).</p>	123218	<p>Tifa Waler Brackets are used to connect scaffold tube to Tifa Panels.</p> <p>The prongs on the Bracket hook over the 16 mm Ø attachment pins located in the Tifa Panels.</p> <p>Tifa Waler Bracket</p>	2.0

Product	Code	Description	Weight (kg)
 <p>Tifa Push-Pull Prop 5700 = 89 mm Ø</p> <p>Tifa Push-Pull Prop 5700 = 50 mm Ø</p> <p>17 mm Ø hole each end</p>	123228	<p>The Tifa Push-Pull Prop 5700 is usually used in conjunction with the Tifa Push-Pull Prop 2500 to plumb the Tifa system.</p> <p>Tifa Push-Pull Prop 5700 (Length = 4380 mm)</p>	63.3
 <p>Tifa Push-Pull Prop 4200 = 76 mm Ø</p> <p>Tifa Push-Pull Prop 3100 = 63 mm Ø</p> <p>Tifa Push-Pull Prop 2500 = 63 mm Ø</p> <p>38 mm Ø</p> <p>17 mm Ø hole each end</p>	123227 123226 123225	<p>Tifa Push-Pull Props ranging in length from 4200 to 2500 mm are usually used in conjunction with Tifa Prop Ties to plumb the Tifa system.</p> <p>Tifa Push-Pull Prop 4200 (Length = 3596 mm)</p> <p>Tifa Push-Pull Prop 3100 (Length = 2480 mm)</p> <p>Tifa Push-Pull Prop 2500 (Length = 1835 mm)</p>	23.0 16.6 14.0
 <p>Tifa Prop Tie = 48 mm Ø</p> <p>38 mm Ø</p> <p>17 mm Ø hole each end</p>	123224	<p>Tifa Prop Ties are used to prop the lower portion of the Tifa Panels.</p> <p>Tifa Prop Tie (Length = 825 mm)</p>	8.4
 <p>16 mm Ø</p> <p>90</p>	123231	The Tifa Connecting Pin 16 x 90 and R-Clip are used to secure the Push-Pull Prop to the Prop Connecting Bracket.	0.2
	123232	Tifa R-Clip	0.1

Product	Code	Description	Weight (kg)
 <p>4 No. 17 mm Ø holes</p> <p>6 No. 18 mm Ø holes</p> <p>200</p> <p>150</p>	123229	<p>The Tifa Swivel Foot 200 x 150 is used to connect the bottom end of a Tifa Push-Pull Prop and a Tifa Prop Tie together.</p> <p>Tifa Swivel Foot 200 x 150</p>	3.4
 <p>4 No. 17 mm Ø holes</p> <p>4 No. 18 mm Ø holes</p> <p>300</p> <p>250</p>	123230	<p>The Tifa Swivel Foot 300 x 250 is used to connect the bottom end of a Tifa Push-Pull Prop 5700 and a Tifa Push-Pull Prop 2500 together.</p> <p>Tifa Swivel Foot 300 x 250</p>	7.6
 <p>17 mm Ø holes</p> <p>Captive wedge</p> <p>212</p>	123233	<p>Tifa Prop Connecting Brackets are secured to the 16 mm Ø Attachment Pins, located along the stiffeners of Tifa Panels, in order to attach each Tifa Push-Pull Prop assembly to the Panels.</p> <p>The ends of the Push-Pull Props are connected using 16 x 90 Tifa Connecting Pins and R-Clips.</p> <p>Tifa Prop Connecting Bracket</p>	2.5
 <p>2 No. M16 x 35 long set screws, each with nut and washer (Gr 8.8)</p> <p>All holes 17 mm Ø</p> <p>178</p>	123234	<p>Tifa Prop Connecting Brackets HD are secured to the 16 mm Ø Attachment Pins, located along the stiffeners of Tifa Panels, in order to attach the Tifa Push-Pull Prop 5700 to the Panels.</p> <p>The Props are connected to the Brackets using 16 x 90 Tifa Connecting Pins and R-Clips.</p> <p>Tifa Prop Connecting Bracket HD</p>	5.0

Product	Code	Description	Weight (kg)
		<p>Tifa Alignment Bars are available in 2 lengths, 1220 and 920 mm.</p> <p>They are used to stiffen the Panel joints when lifting and rotating gang-formed panels from the horizontal position to the vertical position.</p> <p>Alignment Bars are also used in conjunction with the HD Waler Hook Bolt to secure Tifa Panels to the Tifa Support Frames.</p> <p>The Tifa Alignment Bar Clamps may be removed when necessary.</p>	
	123210	Tifa Alignment Bar 1220	15.3
	123209	Tifa Alignment Bar 920	11.5
	123211	Tifa Alignment Bar Clamp	1.9
		<p>Tifa Stop-end Hooks are used to secure walers in position at the stop-end of a concrete wall.</p> <p>The Dywidag Combi Wing Nut 15 is used in conjunction with the Stop-end Hook.</p>	
	123212	Tifa Stop-end Hook	1.6
		<p>Tifa Top-Tie Brackets fit onto the periphery of Tifa Panels, to keep ties in place around the edges of the Panels.</p>	
	123223	Tifa Top Tie Bracket	3.0
	151010	Dywidag Bar 15 mm (available in 6.0 m lengths)	1.4
	151022	Dywidag Combi Wing Nut 15	1.2
		<p>Note: PVC Ferrule Tube (22 ID and 25 OD) and PVC Ferrule Tube Cone (22 OD) are used in conjunction with the Dywidag Bar.</p>	

Product	Code	Description	Weight (kg)
	123219	<p>Tifa Access Brackets are secured to the 16 mm Ø Attachment Pins, located along the stiffeners of Tifa Panels in order to support access platforms, toe-boards and guardrails at the required height.</p> <p>Tifa Access Bracket</p>	12.0
	123237	<p>Tifa Levelling Jacks are used to level the top of gang-formed units.</p> <p>Jacks are secured to the 16 mm Ø Attachment Pins, in the Panel's stiffeners using 1 No. Alignment Bar Clamp.</p> <p>Up to 100 mm of adjustment is achieved by turning the M24 (36 mm A/F) nut located at the top of the Levelling Jack.</p> <p>Tifa Levelling Jack</p>	10.5
	123235	<p>Tifa Lifting Clamps are secured to the Tifa Panel using a Gravity Pin.</p> <p>The D Shackle has a SWL of 4.75 ton.</p> <p>Tifa Lifting Clamp</p>	7.7



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