

## Guide for Erection and Use

## 1. perfect contur Modular System Scaffold

### 1.1 Description

The plettac **perfect contur** modular system scaffold offers you the speed of erection of a system scaffold coupled with the flexibility of traditional scaffolds. It consists of vertical standards, ledgers and transoms that connect to a rosette that is designed to offer variability in all horizontal directions. The rosettes are welded to the vertical members (standards) of the scaffold at intervals of 50 cm.

A range of scaffold decks can be employed including universal scaffold boards, system ledger decks with claws suited to a 48.3 mm Dia tube or system decks taken from the SL70 / 100 program.

Bay lengths and widths of 0,74, 1,06, 1.50 m, 2.00 m, 2.50 m und 3.00 m are 3.00 m. Shorter transoms of 0.25 m and 0.50 m are available for special constructions.

The result is a scaffold system able to adapt to fit the most complicated of base areas and/or variations in ground levels. This flexibility and adaptability makes the plettac **perfect contur** modular system scaffold the ideal choice for applications within industrial plants, power plants, shipyards, offshore applications and special projects. In addition, the plettac **perfect contur** modular system scaffold lends itself to facade scaffolds, rolling towers and birdcage constructions as well as grandstands and stages.

Transoms are available to suit the widths of both SL-systems as well as metric double transoms of 1.50 m, 2.00 m, 2.50 m and 3.00 m. A double transom made to suit four system decks laid next to another is also available.

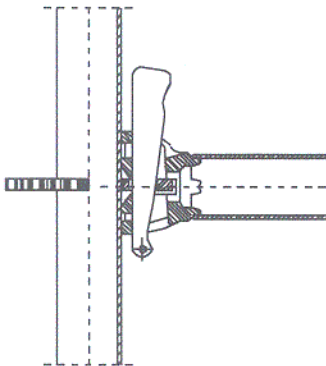
### 1.2 Notice

Erection and dismantling of the **perfect contur** scaffold should only be carried out by or under the supervision of a competent person who is familiar with the system. Damaged components should not be used to erect a scaffold.

The load capacity and rigidity of the modular junction can be taken from the German Building Executive Approval. Load capacities of decks are listed in part 6 of this erection guide.

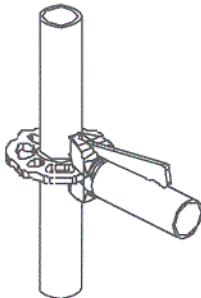
### 1.3 Assembly of Modular Connection

The chosen form of connection of the various components follows the principal of a wedge forming a connection with a rosette that is welded onto the vertical standards. (Diag 1).



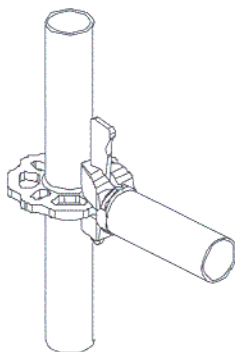
**Diag 1:** Wedge Connection

The wedge housing of the ledger is placed over the rosette in such a way that the contact surfaces are positioned above and below the rosette (Diag 2). At this point the connecting wedge is withdrawn so that it rests on the top of the ledger. A rivet in the tip of the wedge ensures that it is not lost.



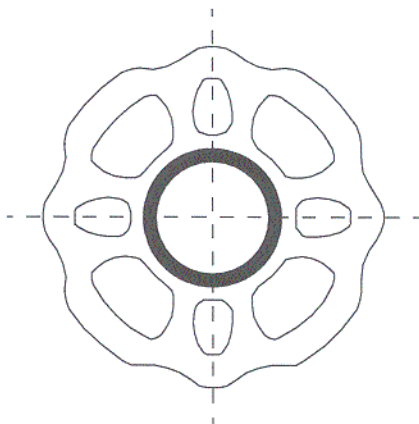
**Diag 2:** Locating the Wedge Housing

The ledger is locked into position once the wedge has been fed through the rosette and back into the wedge housing. By applying the hammer the connection is made secure and can immediately be loaded (Diag 3). The scaffold automatically adjusts to form a 90° angle in the horizontal plane.



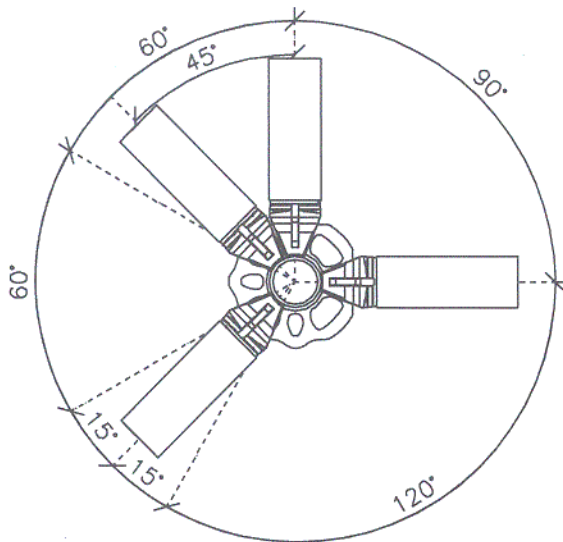
**Diag 3:** Connection of the Wedge

The rosette (Diag 4) has four small holes, positioned at 90° to each other. These are intended to accept the ledgers and transoms of the system should a perfect 90° angle be necessary. The angle is automatically adjusted once the wedge is secured.



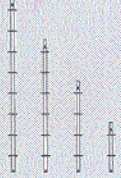





**Diag 4:** Rosette

Between the small holes there are elongated holes. The elongated holes allow ledgers and transoms to be connected at  $45^\circ$  with a variation of  $15^\circ$  being possible. This enables base plans to be erected, that cannot be build using the normal  $90^\circ$  connection (Diag 5). For example support columns with a triangular base plan.


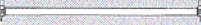

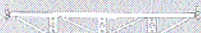
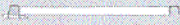



**Diag 5:** Plan View Junction

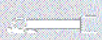
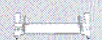

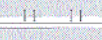
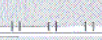


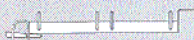
## 2. Components

Description		Length	Weight	Order-Nr.
<b>Vertical Standard</b>  <b>Vertical Standard</b> 48,3 mm Dia steel tube with connecting rosettes at 50 cm intervals along total length. Hot dip galvanized finish. 8 connections per rosette are possible. Drilled holes at both ends of standard		50 cm 100 cm 150 cm 200 cm 250 cm 300 cm 400 cm	3.0 kg 5.1 kg 7.3 kg 9.4 kg 11.5 kg 13.6 kg 17.9 kg	5F MPP 010 00 5F MPP 010 01 5F MPP 010 02 5F MPP 010 03 5F MPP 010 04 5F MPP 010 05 5F MPP 010 06
<b>Starting Collar</b> With single rosette. Placed over base jacks and enables an easier basing out of the scaffold before longer standards are used to build the scaffold to required height.		33 cm 43 cm*	2.1 kg 2.5 kg	5F MPP 020 00 5F MPP 020 01
<b>Base Standard</b> Distance of the first rosette from the bottom of the standards is identical to that on the starting collar (56 mm), enabling the base standard to be employed where starting collars are not required or preferred, but where base ledgers must be set as low as possible.		66 cm* 116 cm 216 cm 316 cm 416 cm	4.0 kg 6.1 kg 10.3 kg 14.6 kg 18.9 kg	5F MPP 015 04 5F MPP 015 00 5F MPP 015 01 5F MPP 015 02 5F MPP 015 03
<b>Top Standard</b> 4 cm shorter than usual at top. Because there is no connecting spigot fitted at the top, the standard finishes with the same height as the platform and enables podiums or "dance floors" to be erected without dangerous protrusion through the platform.		46 cm* 96 cm* 196 cm* 296 cm* 396 cm*	2.0 kg 4.1 kg 8.4 kg 12.6 kg 16.9 kg	5F MPP 030 00 5F MPP 030 01 5F MPP 030 02 5F MPP 030 03 5F MPP 030 04
<b>Hanging Standard w. bolted spigot</b> Similar to vertical standard but intended for use with bolted in connection spigots as opposed to pressed in. Used when building suspended scaffolds in offshore industry for example.		50 cm* 100 cm* 150 cm* 200 cm* 250 cm* 300 cm* 400 cm*	3.5 kg 6.1 kg 8.2 kg 10.3 kg 12.5 kg 14.6 kg 19.9 kg	5F MPP 035 00 5F MPP 035 01 5F MPP 035 02 5F MPP 035 03 5F MPP 035 04 5F MPP 035 05 5F MPP 035 06
<b>Open Ended Standard w/o bolted spigot</b> Identical in design to hanging standard but supplied without connecting spigot. Able to accommodate head jacks or other supplementary components.		100 cm* 150 cm* 200 cm* 250 cm* 300 cm* 400 cm*	4.3 kg 6.4 kg 8.5 kg 10.6 kg 12.8 kg 18.1 kg	5F MPP 035 08 5F MPP 035 09 5F MPP 035 10 5F MPP 035 11 5F MPP 035 12 5F MPP 035 13

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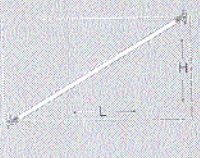

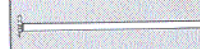
Description		Length	Weight	Order-Nr.
<b>Vertical Standards</b>				
<b>Connecting Spigot for O/E Standard</b>		52 cm	1.9 kg	5F MPP 111 00
<b>Bolt M 12 x 65 with self locking nut</b>			0.1 kg	5F SES MPP 00
<b>Horizontals</b>				
<b>Ledger</b> 48,3 mm Dia steel tube, hot dip galvanised, with wedge connections at both ends. Used in different lengths as supports for ledger decks or standard scaffold planks as well as guard rails		25 cm* 40 cm* 50 cm* 74 cm* 75 cm* 100 cm* 110 cm* 140 cm* 150 cm* 200 cm* 250 cm* 300 cm* 400 cm*	1.5 kg 2.1 kg 2.4 kg 3.2 kg 3.2 kg 4.1 kg 4.3 kg 5.4 kg 5.8 kg 7.5 kg 9.2 kg 10.9 kg 14.3 kg	5F MPP 025 00 5F MPP 025 01 5F MPP 025 02 5F MPP 025 03 5F MPP 025 04 5F MPP 025 05 5F MPP 025 06 5F MPP 025 07 5F MPP 025 08 5F MPP 025 09 5F MPP 025 10 5F MPP 025 11 5F MPP 025 12
<b>Reinforced Ledger</b> Hot dip galvanised steel. Designed to support ledger decks or standard scaffold planks.		150 cm	9.9 kg	5F MPP 165 00
<b>Double Ledger</b> Hot dip galvanised steel tube. Similar to reinforced ledgers but with additional steel tube to support greater loads in bays of 1,50 m to 3,00 m length.		150 cm* 200 cm* 250 cm* 300 cm*	9.3 kg 13.4 kg 16.6 kg 19.7 kg	5F MPP 060 03 5F MPP 060 00 5F MPP 060 01 5F MPP 060 02
<b>Intermediate Ledger</b> 48,3 mm Dia steel tube, hot dip galvanised finish. Connected to ledgers by means of U-profile heads in order to shorten the free space within a scaffold bay. Scaffold bay can then be partially decked with system decks or scaffold planks.		74 cm 75 cm 100 cm 110 cm 140 cm* 150 cm 200 cm 250 cm 300 cm	3.8 kg 3.8 kg 4.7 kg 5.0 kg 7.6 kg 8.1 kg 10.4 kg 12.7 kg 15.0 kg	5F MPP 210 00 5F MPP 210 08 5F MPP 210 01 5F MPP 210 02 5F MPP 210 10 5F MPP 210 06 5F MPP 210 05 5F MPP 210 04 5F MPP 210 03
<b>Deck to Deck Ledger</b> 48,3 mm Dia hot dip galvanised steel tube. Ledger can be connected to steel decks and used with shorter length decks to provide an opening in the middle of the scaffold platform.	 1-deck 2-decks 3-decks	48 cm* 81 cm* 113 cm*	2.3 kg 3.4 kg 4.4 kg	5F MPP 250 00 5F MPP 250 01 5F MPP 250 02

\*Item may be subject to extended delivery times


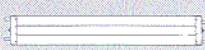


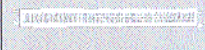
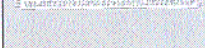
Description		Length	Weight	Order-Nr.
<b>Horizontals</b>				
<b>Ledger to Deck Ledger</b> 48,3 mm Dia hot dip galvanised steel tube. Ledger can be connected from a ledger to a ledger deck and used with shorter length decks to provide an opening at the edge of the scaffold platform.	 1-deck 2-decks 3-decks	50 cm* 83 cm* 115 cm*	2,7 kg 3,8 kg 4,9 kg	5F MPP 245 00 5F MPP 245 01 5F MPP 245 02
<b>SL Transom</b> Rectangular steel tube 50 x 35 mm, hot dip galvanised, with welded on star pins.	 1-deck (SL40)  2-decks (SL70)  3-decks (SL100)  4-decks	40 cm 74 cm 110 cm 140 cm*	2,1 kg 3,2 kg 5,7 kg 7,2 kg	5F MPP 090 00 5F MPP 090 01 5F MPP 090 02 5F MPP 090 03
<b>SL Double Transom</b> Similar to transom, but with additional steel reinforcing tube to support greater loads at widths of 1,50 m to 3,00 m.		150 cm 200 cm 250 cm 300 cm	9,7 kg 13,9 kg 17,1 kg 20,1 kg	5F MPP 095 00 5F MPP 095 01 5F MPP 095 02 5F MPP 095 03
<b>SL Deck to Deck Ledger</b> 50 x 35 mm rectangular hot dip galvanised steel tube. Transom can be connected to decks and used with shorter length SL decks to provide an opening in the middle of the scaffold platform.	 1-deck 2-decks 3-decks	48 cm* 81 cm* 113 cm*	2,3 kg 3,4 kg 4,5 kg	5F MPP 260 00 5F MPP 260 01 5F MPP 260 02
<b>SL Ledger to Deck Ledger</b> 50 x 35 mm rectangular hot dip galvanised steel tube. Transom can be connected from a ledger to a deck and used with shorter length SL decks to provide an opening at the edge of the scaffold platform.	 1-deck 2-decks 3-decks	47 cm* 80 cm* 112 cm*	2,7 kg 3,8 kg 4,9 kg	5F MPP 255 00 5F MPP 255 01 5F MPP 255 02

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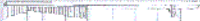








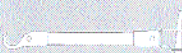
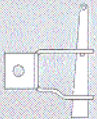
Description		Length	Weight	Order-Nr.
<b>Diagonals</b>  <b>Vertical Brace</b> 48,3 mm Dia steel tube, hot dip galvanised, with wedge connections at both ends. Increases vertical stiffness of the scaffold		<b>H = 2,00 m</b> L = 74/75 cm L = 100 cm L = 110 cm L = 140 cm L = 150 cm L = 200 cm L = 250 cm L = 300 cm  <b>H = 1,50 m</b> L = 74/75 cm* L = 100 cm* L = 110 cm* L = 150 cm* L = 200 cm* L = 250 cm* L = 300 cm*  <b>H = 1,00 m</b> L = 50 cm* L = 74/75 cm* L = 100 cm* L = 110 cm* L = 125 cm* L = 150 cm* L = 200 cm* L = 250 cm* L = 300 cm*	8.0 kg 8.2 kg 8.3 kg 8.7 kg 8.9 kg 9.9 kg 10.9 kg 12.1 kg  6.6 kg 6.9 kg 6.9 kg 7.8 kg 8.8 kg 10.0 kg 11.3 kg  4.9 kg 5.2 kg 5.7 kg 5.8 kg 6.3 kg 6.8 kg 8.0 kg 9.4 kg 10.7 kg	5F MPP 050 00 5F MPP 050 01 5F MPP 050 02 5F MPP 050 03 5F MPP 050 04 5F MPP 050 05 5F MPP 050 06 5F MPP 050 07  5F MPP 050 16 5F MPP 050 17 5F MPP 050 18 5F MPP 050 08 5F MPP 050 09 5F MPP 050 10 5F MPP 050 11  5F MPP 050 19 5F MPP 050 26 5F MPP 050 20 5F MPP 050 22 5F MPP 050 30 5F MPP 050 12 5F MPP 050 13 5F MPP 050 14 5F MPP 050 15
<b>Horizontal Brace</b> 42,4 mm Dia steel tube with pin connectors at both ends. Increases the rigidity of the scaffold in the horizontal plane. Used in "bird cage" scaffolds or scaffolds where system independent decks are being employed.		<b>L = 2,00 m</b> B = 100 cm B = 150 cm B = 200 cm  <b>L = 2,50 m</b> B = 74 cm + 75 cm B = 100 cm B = 110 cm B = 140 cm* B = 150 cm B = 200 cm B = 250 cm  <b>L = 3,00 m</b> B = 74 cm + 75 cm B = 100 cm B = 110 cm B = 140 cm* B = 150 cm B = 200 cm B = 250 cm B = 300 cm	6.2 kg 6.9 kg 7.7 kg  7.2 kg 7.4 kg 7.5 kg 7.8 kg 7.9 kg 8.7 kg 9.5 kg  8.5 kg 8.6 kg 8.7 kg 9.0 kg 9.1 kg 9.7 kg 10.5 kg 11.3 kg	5F MPP 055 19 5F MPP 055 18 5F MPP 055 08  5F MPP 055 16 5F MPP 055 02 5F MPP 055 14 5F MPP 055 20 5F MPP 055 06 5F MPP 055 09 5F MPP 055 11  5F MPP 055 17 5F MPP 055 03 5F MPP 055 15 5F MPP 055 21 5F MPP 055 07 5F MPP 055 10 5F MPP 055 12 5F MPP 055 13
<b>Plane Brace Ledger</b> 48,3 mm Dia hot dip galvanised steel tube. The plane brace ledger is assembled within the scaffold by means of wedge connections and as such can be used in special constructions in order to further increase the horizontal rigidity of the scaffold.		L * B (cm)  75 * 75* 100 * 100* 150 * 150* 200 * 200* 250 * 250* 300 * 300*	4.3 kg 5.5 kg 7.9 kg 10.9 kg 13.6 kg 15.1 kg	5F MPP 235 00 5F MPP 235 01 5F MPP 235 02 5F MPP 235 03 5F MPP 235 04 5F MPP 235 05



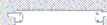

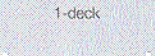

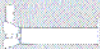
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Description		Length	Weight	Order-Nr.
<b>Decks and Panels</b>				
<b>Steel Ledger Deck 32</b> Perforated sheet steel, hot dip galvanised finish with forged connecting claws. Designed to suit all ledgers, double ledgers, lattice girders and side brackets that have a $\varnothing$ 48,3 mm tube as support. With integral deck retainer. Width = 32 cm		75 cm	7.2 kg	5F MPP 140 06
		100 cm	8.7 kg	5F MPP 140 05
		110 cm	9.1 kg	5F MPP 140 04
		140 cm*	11.4 kg	5F MPP 140 07
		150 cm	12.2 kg	5F MPP 140 03
		200 cm	15.3 kg	5F MPP 140 02
		250 cm	18.9 kg	5F MPP 140 01
300 cm	21.9 kg	5F MPP 140 00		
<b>Timber Ledger Deck 32</b> High quality timber with forged connecting claws and integral deck retainer. Width = 32 cm.		100 cm*	9.3 kg	5F MPP 180 05
		150 cm*	11.9 kg	5F MPP 180 03
		200 cm*	14.5 kg	5F MPP 180 02
		250 cm*	18.2 kg	5F MPP 180 01
		300 cm*	21.9 kg	5F MPP 180 00
<b>Alu Ledger Deck 32</b> Aluminium extrusion profile with forged connecting claws and integral deck retainer. Width = 32 cm.		150 cm*	9.5 kg	5F MPP 135 03
		200 cm*	11.6 kg	5F MPP 135 02
		250 cm*	13.7 kg	5F MPP 135 01
		300 cm*	15.7 kg	5F MPP 135 00
<b>Alu-Access Ledger Deck 64</b> with forged connecting claws and integral deck retainer. Platform and hatch aluminium. Complete with integral ladder. Width = 64 cm.		250 cm	25.2 kg	5F MPP 105 01
		300 cm	28.8 kg	5F MPP 105 00
<b>Steel Ledger Deck 24</b> Perforated sheet steel, hot dip galvanised finish, with forged connecting claws and integral deck retainer. Width = 24 cm.		75 cm*	7.0 kg	5F MPP 205 05
		100 cm*	8.2 kg	5F MPP 205 04
		110 cm*	8.4 kg	5F MPP 205 06
		150 cm*	12.1 kg	5F MPP 205 03
		200 cm*	15.1 kg	5F MPP 205 02
		250 cm*	18.4 kg	5F MPP 205 01
		300 cm*	22.3 kg	5F MPP 205 00
<b>Steel Ledger Deck 14</b> Perforated sheet steel, hot dip galvanised finish, with integral deck retainer. Width = 14 cm.		75 cm	3.5 kg	5F MPP 265 06
		100 cm	4.3 kg	5F MPP 265 05
		110 cm	4.5 kg	5F MPP 265 04
		150 cm	6.1 kg	5F MPP 265 03
		200 cm	7.8 kg	5F MPP 265 02
		250 cm	9.6 kg	5F MPP 265 01
		300 cm	11.8 kg	5F MPP 265 00



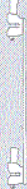


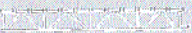
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Description		Length	Weight	Order-Nr.
<b>Decks and Panels</b>  <b>Universal Filler Deck</b> Used to close the gap between bracket deck and scaffold deck. Width: = 24 cm.		74 cm 100 cm 150 cm 200 cm 250 cm 300 cm	3.2 kg 4.8 kg 7.4 kg 10.2 kg 13.0 kg 15.7 kg	5F MPP 340 05 5F MPP 340 04 5F MPP 340 03 5F MPP 340 02 5F MPP 340 01 5F MPP 340 00
<b>SL Steel Deck 32</b> Perforated sheet steel, hot dip galvanised finish. Designed to suit all SL ledgers, SL double ledgers, SL transoms, SL lattice girders and SL tie brackets. Width: = 32 cm.		70 cm 110 cm 150 cm 200 cm 250 cm 300 cm	6.1 kg 8.2 kg 11.2 kg 14.3 kg 17.8 kg 20.9 kg	5F SLN 470 07 5F SLN 470 04 5F SLN 470 03 5F SLN 470 02 5F SLN 470 01 5F SLN 470 00
<b>SL Timber Deck 32</b> High quality timber. Width: = 32 cm.		70 cm 110 cm 150 cm 200 cm 250 cm 300 cm	5.4 kg 7.1 kg 9.5 kg 12.1 kg 15.8 kg 20.2 kg	5F SLN 040 16 5F SLN 040 15 5F SLN 040 14 5F SLN 040 13 5F SLN 040 12 5F SLN 040 00
<b>SL Alu-Deck 32</b> Hollow aluminium extrusion profile with anti-slip surface. Width: = 32 cm.		150 cm 200 cm 250 cm 300 cm 400 cm	6.7 kg 9.8 kg 12.2 kg 14.0 kg 20.9 kg	5F SLN 130 03 5F SLN 130 02 5F SLN 130 01 5F SLN 130 00 5F SLN 270 00
<b>SL Alu-Deck 64</b> Hollow aluminium extrusion construction Width: = 64 cm.		150 cm 200 cm 250 cm 300 cm	11.9 kg 15.3 kg 19.5 kg 23.3 kg	5F SLN 245 03 5F SLN 245 02 5F SLN 245 01 5F SLN 245 00
<b>SL Full-Alu Deck 64</b> with aluminium platform. Width = 64 cm.		150 cm 200 cm 250 cm 300 cm	11.7 kg 15.3 kg 18.2 kg 21.8 kg	5F SLN 530 03 5F SLN 530 02 5F SLN 530 01 5F SLN 530 00
<b>SL-Alu Access Deck</b> Aluminium platform and hatch with integral ladder. Width = 64 cm.		250 cm 300 cm	23.8 kg 27.4 kg	5F SLN 500 01 5F SLN 500 00

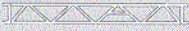

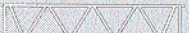



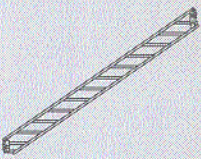

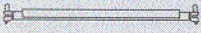

Description		Length	Weight	Order-Nr.
<b>Decks and Panels</b>				
<b>SL 70 Horizontal Frame</b> for use with separate timber platform. Can be used as alternative to decks on none working lifts. Width = 64 cm.		250 cm 300 cm	21.7 kg 24.4 kg	5F SLN 170 01 5F SLN 170 00
<b>Timber platform with hatch</b> for horizontal steel frame SL 70.		250 cm 300 cm	28.4 kg 33.5 kg	5F SLN 180 01 5F SLN 180 00
<b>Internal Ladder</b> for 1 lift. For horizontal steel frame SL 70.			11.7 kg	5F SLN 390 00
<b>SL Filler Deck 15</b> Hot dip galvanised finish. Enables bays of 150 to 300 cm to be completely decked by filling in gaps left by decks of system width 32. Width = 15 cm. Can also be used where a half deck is required.		150 cm 200 cm 250 cm 300 cm	9.1 kg 12.3 kg 15.4 kg 18.6 kg	5F MPP 170 03 5F MPP 170 02 5F MPP 170 01 5F MPP 170 00
<b>SL Filler Deck 32</b> Hot dip galvanised. Used when fully decking the SL transform 200 or when an inside diagonal must be fitted to the scaffold. Width = 32 cm.		150 cm* 200 cm* 250 cm* 300 cm*	12.5 kg 16.4 kg 20.3 kg 24.3 kg	5F MPP 270 03 5F MPP 270 02 5F MPP 270 01 5F MPP 270 00
<b>Universal Filler Deck 24</b> Used to cover gap between scaffold deck and hop up/side bracket platform between standards. Width = 24 cm.		74 cm 100 cm 150 cm 200 cm 250 cm 300 cm	3.7 kg 5.1 kg 7.4 kg 10.2 kg 13.0 kg 15.7 kg	5F MPP 340 05 5F MPP 340 04 5F MPP 340 03 5F MPP 340 02 5F MPP 340 01 5F MPP 340 00
<b>SL Deck Retainer</b> Steel, hot dip galvanised. Welded on toeboard pins accommodates SL toeboards. Can also be used with universal scaffold planks.		74 cm 110 cm 140 cm* 150 cm 200 cm 250 cm 300 cm	2.7 kg 3.3 kg 3.9 kg 4.1 kg 5.0 kg 5.9 kg 6.8 kg	5F MPP 115 00 5F MPP 115 02 5F MPP 115 08 5F MPP 115 04 5F MPP 115 05 5F MPP 115 06 5F MPP 115 07
<b>SL Toeboard Bracket</b> Hot dip galvanised. For fitting toeboards where deck retainers are not required.			0.9 kg	5F MPP 225 00

Description		Length	Weight	Order-Nr.
<b>Toeboards</b>				
<b>Toeboard for Tubular Ledgers</b> Timber, 150 mm height. Fixed between wedge and standard during assembly.		75 cm	1.6 kg	5F MPP 195 05
		100 cm	2.1 kg	5F MPP 195 04
		110 cm	2.4 kg	5F MPP 195 06
		150 cm	3.0 kg	5F MPP 195 03
		200 cm	4.0 kg	5F MPP 195 02
		250 cm	4.9 kg	5F MPP 195 01
		300 cm	5.8 kg	5F MPP 195 00
<b>SL Toeboard</b> Toeboards are fitted at platform height and complete the required three part side protection. The toeboards are fitted over the toeboard pin that is to be found on the foot ledger of the vertical frame. This connection holds the toeboard firmly in place. Toeboard height: 15 cm.		74 cm	1.8 kg	5F SNN 140 06
		110 cm	2.5 kg	5F SNN 140 07
		150 cm	3.3 kg	5F SNN 140 03
		200 cm	4.2 kg	5F SNN 140 02
		250 cm	5.1 kg	5F SNN 140 01
		300 cm	6.0 kg	5F SNN 140 00
		400 cm	10.0 kg	5F SNN 140 04
<b>SL End Toeboard</b> Timber, 150 mm height. Fitted over toeboard pins along the length of the deck retainer.		74 cm	1.5 kg	5F MPP 145 00
		110 cm	1.9 kg	5F MPP 145 01
		140 cm*	2.4 kg	5F MPP 145 06
		150 cm	2.5 kg	5F MPP 145 02
		200 cm	3.2 kg	5F MPP 145 03
		250 cm	4.0 kg	5F MPP 145 04
		300 cm	4.8 kg	5F MPP 145 05
<b>Supplementary Items</b>				
<b>Side Bracket</b> Hot dip galvanised steel finish. For use with ledger decks or universal scaffold decks.		40 cm	3.4 kg	5F MPP 155 02
		50 cm	3.7 kg	5F MPP 155 00
	 1-deck	60 cm*	4.3 kg	5F MPP 155 03
		75 cm	6.0 kg	5F MPP 155 01
	 2-deck	60 cm*	4.3 kg	5F MPP 155 03
		75 cm	6.0 kg	5F MPP 155 01
<b>Console Ledger</b> for 24 cm steel decks		29 cm*	1.5 kg	5F MPP 290 00

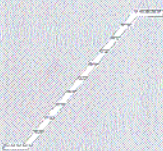






\*item may be subject to extended delivery times

Description		Length	Weight	Order-Nr.
<p><b>Supplementary Items</b></p> <p><b>SL Side Bracket</b> Hot dip galvanised steel finish, with welded on star pins for SL decks</p>	 <p>1-deck (SL40)</p>  <p>2-deck (SL70)</p>	<p>40 cm</p> <p>74 cm</p>	<p>3.3 kg</p> <p>5.9 kg</p>	<p>5F MPP 150 00</p> <p>5F MPP 150 01</p>
<p><b>Suspended Scaffold Connector</b> Hot dip galvanised finish. Forms a tension joint between standards used on a suspended scaffold by connecting rosettes across their junction point. Consists of two wedge connections joined by tension bars at 50 cm intervals.</p>		<p>50 cm*</p>	<p>3.0 kg</p>	<p>5F MPP 230 00</p>
<p><b>System Unit Beams</b></p> <p><b>System Lattice Girder</b> Hot dip galvanised steel, height = 50 cm. Four wedge connections. Enables working levels with spans from 1,00 m to 6,00 m to be constructed. Can be used with ledger or system independent decks.</p>		<p>100 cm*</p> <p>200 cm*</p> <p>300 cm*</p> <p>400 cm*</p> <p>500 cm*</p> <p>600 cm*</p> <p>700 cm*</p> <p>800 cm*</p> <p>900 cm</p> <p>1000 cm*</p>	<p>12.2 kg</p> <p>21.3 kg</p> <p>31.8 kg</p> <p>42.2 kg</p> <p>51.7 kg</p> <p>61.1 kg</p> <p>70.5 kg</p> <p>80.0 kg</p> <p>99.1 kg</p> <p>109.8 kg</p>	<p>5F MPP 085 05</p> <p>5F MPP 085 04</p> <p>5F MPP 085 03</p> <p>5F MPP 085 00</p> <p>5F MPP 085 01</p> <p>5F MPP 085 02</p> <p>5F MPP 085 06</p> <p>5F MPP 085 07</p> <p>5F MPP 085 10</p> <p>5F MPP 085 08</p>
<p><b>SL Lattice Girder for Decks</b> Hot dip galvanised steel, height = 50 cm. Four wedge connections. Star pins secure SL decks on top of upper tube. Enables spans from 2,50 m to 7,50 m to be constructed.</p>		<p>250 cm*</p> <p>300 cm*</p> <p>400 cm</p> <p>450 cm</p> <p>500 cm</p> <p>600 cm</p> <p>750 cm</p>	<p>30.0 kg</p> <p>34.3 kg</p> <p>44.8 kg</p> <p>50.3 kg</p> <p>55.4 kg</p> <p>66.2 kg</p> <p>83.3 kg</p>	<p>5F MPP 160 05</p> <p>5F MPP 160 04</p> <p>5F MPP 160 00</p> <p>5F MPP 160 06</p> <p>5F MPP 160 01</p> <p>5F MPP 160 02</p> <p>5F MPP 160 03</p>
<p><b>SL Lattice Girder for Decks</b> Hot dip galvanised steel, height = 40 cm. Connected by means of two wedges on the top tube and a single clamp fixed to standard. Stepped platforms with a height difference of 50 cm possible.</p>		<p>400 cm*</p> <p>500 cm*</p> <p>600 cm*</p> <p>750 cm*</p>	<p>40.9 kg</p> <p>50.8 kg</p> <p>60.7 kg</p> <p>78.3 kg</p>	<p>5F MPP 240 00</p> <p>5F MPP 240 01</p> <p>5F MPP 240 02</p> <p>5F MPP 240 03</p>






\*item may be subject to extended delivery times

Description		Length	Weight	Order-Nr.
<b>System Independant Unit Beams</b>  <b>Steel Lattice Girder</b> Steel lattice girders in lengths up to 7,60 m for bridging spans, side brackets, podest platforms and other special applications. Connection to scaffold by means of double couplers only. Reinforcing lattice is designed in such a way as to give maximum connecting possibilities.		Length: 310 Length: 410 Length: 510 Length: 610 Length: 760	30,0 kg 39,0 kg 47,9 kg 56,8 kg 70,2 kg	5F SOG 020 00 5F SOG 020 01 5F SOG 020 02 5F SOG 020 03 5F SOG 020 04
<b>Aluminium lattice Girder.</b>		Length: 310 Length: 410 Length: 510 Length: 600 Length: 810	12,0 kg 15,5 kg 19,6 kg 23,0 kg 30,3 kg	5F SOG 010 00 5F SOG 010 01 5F SOG 010 02 5F SOG 010 03 5F SOG 010 04
<b>Heavy Duty Lattice Girder</b> Heavy load lattice girders in lengths of up to 7,00 m. Similar design to the normal lattice girder but with a greater height to enable the beam to carry greater loads. The heavy load lattice girder, butted according to roof span and reinforced with diagonal bracing forms the main support for the plettac modular roof elements.		Length: 400 Length: 500 Length: 600 Length: 700	45,2 kg 55,3 kg 65,4 kg 77,2 kg	5F SOG 350 03 5F SOG 350 02 5F SOG 350 01 5F SOG 350 00
<b>Tube Connection Spigot</b> Tube connection spigots are used to extend or connect lattice girders by forming a butt joint. Two spigots are required to form a butt joint. The spigots are inserted inside the tube ends and are secured using 4 bolts with nuts. Formed connection spigots are available to form a ridge joint on a roof construction.	    	–  – –	2,6 kg  3,5 kg 2,8 kg	5F SOG 021 01  5F SOG 410 00 5F SOG 410 01
<b>Stairs</b>  <b>Stair Stringer</b> Heavy duty stair stringer for application as site access staircase, public access and access to places of public gatherings or events. Maximum capacity 7,50 kN/m <sup>2</sup> . Suitable for use as fire escape subject to design to design specifications.  Standard diagonals 200 x 300 to be used as handrail, subject to application.		250 cm Left Hand Right Hand	30,90 kg 30,90 kg	5F MPP 450 01 5F MPP 450 00
<b>Stair Tread</b> Hot dip galvanised open grate construction (12 Nr per stair lift)		100 cm 125 cm	7,30 kg 10,8 kg	5F MPP 445 00 5F MPP 445 01
<b>Stair Tread Ledger</b> Hot dip galvanised finish. Provides continuous platform from podest to first stair tread.		125 cm 150 cm	6,10 kg 7,30 kg	5F MPP 460 00 5F MPP 460 02
<b>SL-Stair Tread Ledger</b>		125 cm 150 cm	6,10 kg 7,30 kg	5F MPP 460 01 5F MPP 460 03
<b>Ledger Alu-Staircase</b> With forged connection claws and integral retainer against lift. Width = 66 cm, Height = 2,0 m.		250 cm	24,0 kg	5F MPP 175 00

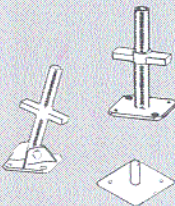


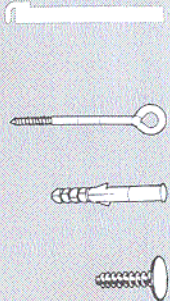

\*item may be subject to extended delivery times



Description		Length	Weight	Order-Nr.
<b>Stairs</b>  <b>SL Alu Staircase</b> For use with SL Alu Staircase Transoms		250 cm	21.6 kg	5F SLN 030 00
<b>SL Alu-Staircase Transom</b> Hot dip galvanised steel finish for use on zig – zag staircase arrangement.		150 cm	7.9 kg	5F MPP 120 00
<b>Outer Guard Rail</b> ø 48,3 mm, hot dip galvanised steel tube. For use with Alu-Staircase. Height = 2,0 m.		250 cm	12.5 kg	5F MPP 125 00
<b>Inner Guard Rail</b>		250 cm	11.5 kg	5F SLN 036 00
<b>Stair Head Guard Rail</b>		100 cm 250 cm	11.2 kg 14.6 kg	5F SLN 005 01 5F SLN 005 00
<b>Couplers</b>  <b>Wedge Connection coupler</b> Used to connect scaffold tubes to the perfect contour modular system.		double SW19* double SW22*  swivel SW19* swivel SW22*	1.2 1.2  1.2 1.2	5F MPP 190 02 5F MPP 190 00  5F MPP 190 01 5F MPP 190 03
<b>Distance Coupler</b> for connection of two standards.		double*	1.3	5F MPP 345 00



Description		Length	Weight	Order-Nr.
<p><b>Couplers</b></p> <p><b>Scaffold Couplers</b> Plettac drop forged couplers possess test certificates for the highest load classes and conform to the requirements of EN 74. They may be employed without limitation. Collar nuts of 19, 22 and 24 mm A/F may be supplied as standard.</p>		<p>-</p> <p>-</p> <p>-</p> <p>-</p>	<p>1,10 kg</p> <p>1,20 kg</p> <p>1,40 kg</p> <p>1,20 kg</p>	<p>2K NKP 001 00</p> <p>2K DKP 001 00</p> <p>2K ZK0 001 00</p> <p>2S 000 315 00</p>
<p><b>Support Spigot</b> Hot dip galvanised finish. Choice of welded on half clamp or wedge connection. Enables a scaffold standard to be erected on top of an existing ledger or lattice girder.</p>	<p>with half clamp</p>  <p>with wedge</p> 	<p>30 cm*</p> <p>30 cm*</p>	<p>1,7 kg</p> <p>1,6 kg</p>	<p>5F MPP 100 00</p> <p>5F MPP 100 01</p>
<p><b>Spindle Coupler</b> Enables scaffold extensions to be levelled out, e. g. on top of a lattice girder.</p>		<p>60</p>	<p>2,8 kg</p>	<p>5F SOG 165 00</p>
<p><b>Toeboard Coupler</b> Pin welded to coupler accommodates plettac SL toe boards within a scaffold construction.</p>		<p>-</p>	<p>0,9 kg</p>	<p>5F SOG 560 00</p>

\*Item may be subject to extended delivery times

Description		Length	Weight	Order-Nr.
<p><b>Basic Components</b></p> <p><b>Base Jacks</b> A number of base jacks in various lengths are available to compensate for uneven scaffold foundations. The base jack thread is designed so as to allow the jack to be quickly screwed up or down, whilst also making cleaning easier. It is important to note that 25% of the base jack length or at least 15 cm should always be in the scaffold standard.</p>		Length: 39,5 Length: 50,5 Length: 72,5 Length: 91,5 Length: 111,5  Length: 56,8  15 x 15	2,5 kg 2,9 kg 3,6 kg 4,2 kg 4,8 kg  5,2 kg  2,0 kg	5F SOG 590 00 5F SOG 590 01 5F SOG 590 02 5F SOG 590 03 5F SOG 590 04  5F SOG 600 00  5F SOG 470 00
<p><b>Base Jack Clip</b> Used to secure base jacks when lifting scaffolds with crane.</p>		60 cm*	3,1 kg	5F MPP 220 00
<p><b>Head Jack</b> To accommodate timber beams in scaffold used as shoring supports.</p>		50*	4,9 kg	3Z SPI 000 01
<p><b>Ties</b></p> <p><b>Scaffolds Ties</b> Scaffold must be anchored to a solid structure in such a way as to be able to withstand forces in both directions perpendicular to the surface of the structure (tension and compression). The anchorage of the scaffold should be in accordance with the methods described in the General Building Executive Authorisation, the manufacturers guides for the erection and use of the scaffold as well as any local or national requirements issued by trade executives.</p> <p>Requirements: per tying-in point are: One clearance tie with double coupler or one scaffold tie with two double couplers.</p>		Length: 30 Length: 50 Length: 80 Length: 110 Length: 150  12 x 95 mm 12 x 120 mm 12 x 160 mm 12 x 190 mm 12 x 230 mm 12 x 350 mm  70 mm 100 mm 135 mm  - -	1,3 kg 2,0 kg 3,0 kg 4,0 kg 5,4 kg  0,16 kg 0,19 kg 0,22 kg 0,25 kg 0,30 kg 0,38 kg  - - - -	5F SNN240 09 5F SNN240 10 5F SNN240 05 5F SNN240 00 5F SNN240 02  5F DIV 001 06 5F DIV 001 07 5F DIV 001 08 5F DIV 001 09 5F DIV 001 10 5F DIV 001 11  5F DIV 001 05 5F DIV 001 49 5F DIV 001 50  5F DIV 001 04  5F DIV 001 17
<p><b>Wall Anchor Testing Device</b></p>		-	10,1 kg	5F DIV 001 17

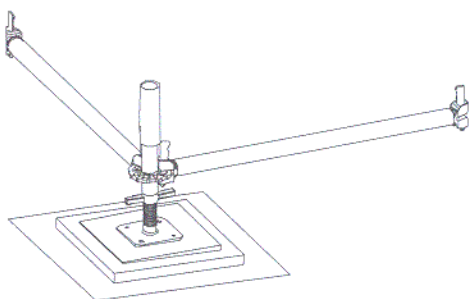
Description		Length	Weight	Order-Nr.
<p><b>Storage</b></p> <p><b>Pallet</b> A selection of different types of pallets is available for space saving storage at site or in the depot. Designed with attention to the dimensions of the most important system components usage of available space is guaranteed. Also suitable for transport, erection and inventory purposes. All pallets have been designed for fork-lift or crane transport.</p> <p><b>Euro Crate</b></p>		<p>110 x 60</p> <p>125 x 85 85 x 85</p> <p>120 x 80 x 100</p>	<p>41,7 kg</p> <p>33,4 kg 32,9 kg</p> <p>80,00 kg</p>	<p>5F SOG 695 00</p> <p>5F SOG 115 00 5F SOG 115 01</p> <p>5F DIV 001 20</p>
<p><b>Scaffold Tubes</b></p> <p><b>Scaffold Tubes</b> Scaffold tubes can be supplied in a choice of either steel or aluminium</p> <p><b>Scaffold Tubes 1 1/2" (steel)</b> DIN 4427 galvanised inside and out outer Ø 48,3 mm wall thickness 3,2 mm, wall thickness 4,05 mm on demand production lengths/specified lengths</p> <p><b>Scaffold Tubes 1 1/2" (steel)</b> aluminium AlMgSi 1 F, outer Ø 48,3 mm wall thickness 4,00 mm production lengths/specified lengths</p>		<p>Length: 400 Length: 600</p> <p>Length: 100 Length: 150 Length: 200 Length: 250 Length: 300 Length: 350 Length: 450 Length: 500 Length: 550</p> <p>Length: 400 Length: 600</p> <p>Length: 100 Length: 150 Length: 200 Length: 250 Length: 300 Length: 350 Length: 450 Length: 500 Length: 550</p>	<p>18,00 kg 27,00 kg</p> <p>4,50 kg 6,70 kg 9,00 kg 11,20 kg 13,50 kg 15,70 kg 20,20 kg 22,50 kg 24,75 kg</p> <p>6,00 kg 9,00 kg</p> <p>1,50 kg 2,20 kg 3,00 kg 3,70 kg 4,50 kg 5,20 kg 6,70 kg 7,50 kg 8,25 kg</p>	<p>5F RDR 000 08 5F RDR 000 12</p> <p>5F RDR 000 02 5F RDR 000 03 5F RDR 000 04 5F RDR 000 05 5F RDR 000 06 5F RDR 000 07 5F RDR 000 09 5F RDR 000 10 5F RDR 000 11</p> <p>5F RDR 000 34 5F RDR 000 27</p> <p>5F RDR 000 28 5F RDR 000 29 5F RDR 000 30 5F RDR 000 31 5F RDR 000 32 5F RDR 000 33 5F RDR 000 35 5F RDR 000 36 5F RDR 000 37</p>

More components (standard and special) available on request. For couplers and accessories please ask for more details.  
Subject to technical changes. Errors can not be ruled out completely.

### 3. Erection of the Scaffold

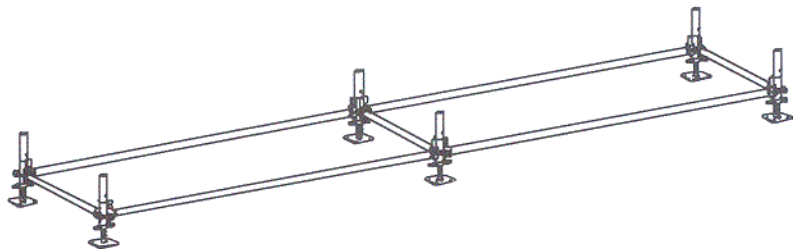
#### 3.1 Basing Out

Fit starting collars over base jacks and position these corresponding to required bay lengths and widths. Always start setting the scaffold out at the highest ground level. This will simplify adjustment later. Use load distribution pads where the surface is not strong enough to support a point load. The base jack at the highest ground level should be screwed down as far as possible in order to allow the greatest adjustment at lower levels. Wedge shaped distribution pads should be used on sloping surfaces (see Diag 6).



**Diag 6:** Base Jack

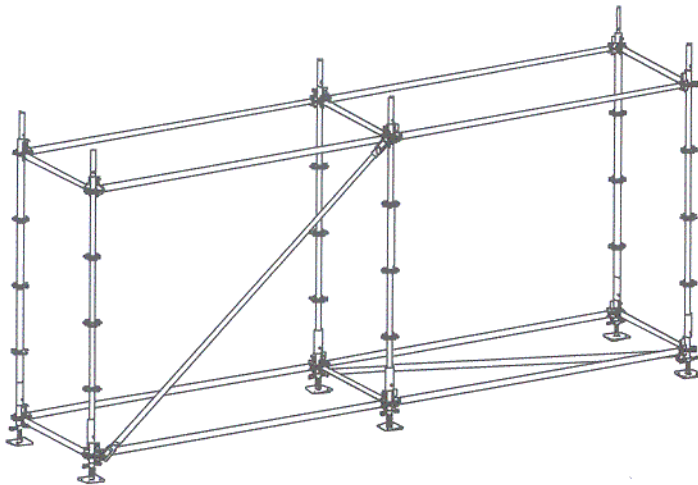
The rosettes on the starting collars can now be connected using the required ledgers and transoms. **Do not drive home the wedges.** Use a spirit level to ensure that the base ledgers are horizontal. Square off each bay using decks or horizontal braces (to be removed once bay is square) before driving home wedges. Accuracy at this stage greatly enhances ease of erection at later stages. Once the wedges have been driven home the base of the scaffold is complete. Further adjustment during erection will not be necessary. As an alternative to the base collar a base standard may be used (MPP 015 00 - 03).



**Diag 7:** Scaffold Base

### 3.2 Assembly of further levels

Standards are placed into the starting collars and connected by transoms and ledgers at 2 m lift heights. The junction point between standards should wherever possible be positioned in such a way as to correspond with the junction point of the ledgers/transoms. The vertical bracing of the scaffold along its length and across its width is by way of vertical braces (MPP 050 00 - 22). Bracing should be located in the largest of the two types of location hole found in the rosette. The required number of braces can be taken from a static calculation; the absolute minimum, however, being one brace per five bays. Scaffold levels without system decks or with universal scaffold decks should be braced in the horizontal plane using horizontal braces (MPP 055 02 - 21), at a similar frequency to that in the vertical plane.



**Diag 8:** Bracing the Scaffold

Decks should be fitted at working levels. Tubular transoms are supplied for use with universal scaffold planks or with ledger decks with a claw (see description in part 5). SL-transoms are supplied for use with SL system decks from the SL70/100 scaffold systems (see description in part 4).

Extra care must be taken when using universal scaffold decks. Intermediate ledgers (board bearers) are supplied to support scaffold decks that are butted together or need to be supported at a point within a system bay length. Exact details of their use should be taken from the relevant national/local regulations (eg, Europe HD 1000, USA OSHA Regulations, BS 1139).

### 3.3 Erection as a Facade Scaffold

A facade scaffold consists of an inner and outer run of vertical standards. The outer run is braced using vertical diagonals along the length of the scaffold.

Plan bracing is required to transfer the rigidity of the outer standards into those standards nearest the facade.

Where the scaffold is to be erected without the use of system decks (ie, with standard scaffold planks or without decking) then plan bracing will be required in the same bay and at the same frequency as the vertical bracing is fitted.

Should the scaffold be erected using system decks that are secured against lifting by wind, then no further bracing in the plan level will be required.

**The bracing effect of the decks can only be guaranteed when they are correctly fitted with deck retainers.**

The complete scaffold construction is held by means of scaffold ties in the direction of its length and in a direction away from the facade.

In the absence of a static calculation demanding otherwise, each pair of inner and outer standards along the length of the facade should be anchored at vertical intervals of 4.00 m - ie, every other lift.

A choice of system decks with clawed connections, SL-system decks or standard scaffold planks can be fitted as working platform. When system decks with deck retainers are to be used as working platform longitudinal ledgers need not be fitted at platform level. The decks must be secured however on every transom with the perfect contour deck retainer (either SL or integral). Longitudinal ledgers must always be fitted to the outside of those bays where a vertical brace is fitted regardless of whether decks are fitted or not.

Longitudinal ledgers must be fitted when using standard decks without deck retainers or when using independent scaffold decks. Independent scaffold decks must also be supported by board bearers in accordance with relevant national/local regulations for given scaffold classifications.

Ledgers are fitted at 50 and 100 cm heights to the outer run of standards to serve as guard rails.

### 3.4 Labelling of ledgers and vertical braces

The ledgers and the vertical braces are colour coded with labels in order to avoid different lengths being mixed up. The labels include the manufacturer specifications, the detailed component description as well as the article number. Different colours mean different **bay lengths** (see below). The lift height is also mentioned on the vertical brace.

Colour	Bay Length
brown	1.50 m
green	2.00 m
red	2.50 m
blue	3.00 m
white	SL-lengths
yellow	special lengths

## 4. Assembly with SL-System Decks

### 4.1 General

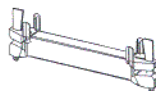
Transoms with locating pins are provided for the erection of modular scaffolds using plettac SL-system decks. The connecting head of the transom is designed to be flush with the top of the rectangular transom tube and has an integral locating pin. The design enables the system decks to utilise the full width of the scaffold bay up to the inside edge of the standard. The wedge on the transom is 4 mm thick which enables it to be accommodated between decks without protruding through the work platform.

### 4.2 Symmetrical SL Transoms

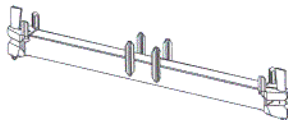
The 1- to 4-deck transoms are symmetrical in design.

The length corresponds to the width of the various SL frames.(SL70/100).

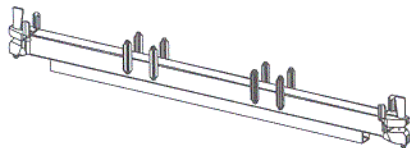
Centres 1-deck = 413 mm  
compatible  
to SL40-Frame



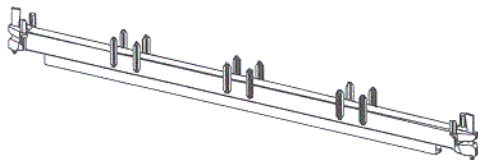
Centres 2-deck = 739 mm  
compatible  
to SL70-Frame



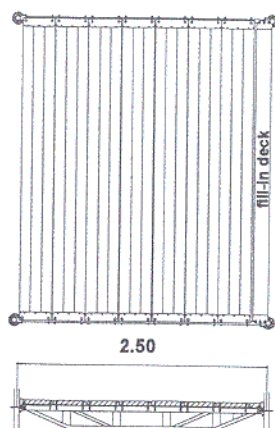
Centres 3-deck = 1065 mm  
compatible  
to SL100-Frame



Centres 4-deck = 1391 mm  
Fit between standards  
as with 1- to 3-deck

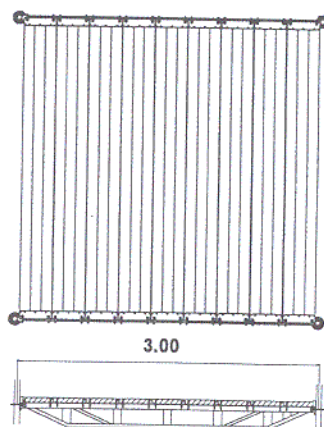


The SL-frame system can be used with the modular system should the need arise.



**Diag 12: 2.50 m Scaffold width**

The 2.50 m scaffold width consists of 7 standard decks and one fill-in deck. The gap between fill-in deck and standard deck is 25 mm.



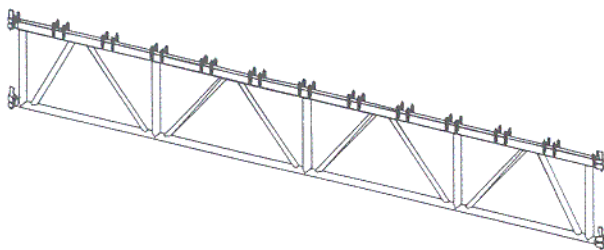
**Diag 13: 3.00 m Scaffold width**

The 3.00 m scaffold width consists of 9 standard decks. The last deck at the „asymmetrical“ end is hard up against the standard. For this reason a connecting head without locating pin is provided at this end.



#### 4.4 SL Unit Beams

The SL-Unit Beams have an upper tube fitted with welded on star pins and wedge housings with integral locating pins. The lower tube is  $\varnothing$  48.3 mm fitted with wedge connections. The constructive height of the beam allows connection to two rosettes of the same standard. As a result, further bracing of the scaffold in the unit beam level becomes unnecessary when subject to normal loading.



Diag 14: SL-Truss

The arrangement of the locating pins is symmetrical and is so designed that pairs of system decks are equally spaced along the length. The pairing of decks enables 64 cm wide panels to be installed where required. The gap between decks of different pairs is less than 25 mm.

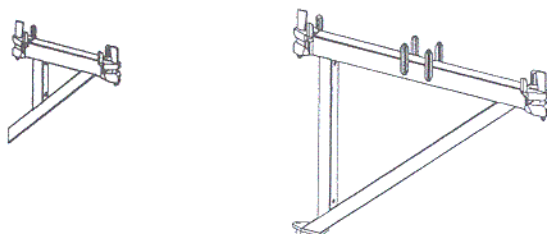
A fill-in deck is only required with the 7.50 m truss. The 7.50 m truss is decked out in a similar manner to the 2.50 m double transom. The ends of the truss are identical by means of a flat gusset welded between the diagonal members of the support lattice.

#### 4.5 Side Brackets

Two board and one board side brackets are available. The deck supports are identical to the SL-transoms and as such are fully compatible with the plettac frame system.

The side brackets are designed to allow two or more brackets to be assembled at  $90^\circ$  to each other on the same rosette. A locating pin welded to the bottom of the diagonal support secures the bracket against sideways movement by hooking into the 50 cm lower rosette.

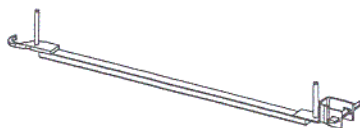
At the tip of both side brackets is a wedge connection that allows a standard to be connected should this be required. The standard 116 should be used as a guard rail post. Should heavier than normal loads need to be supported the side brackets can be strengthened by diagonal braces fixed to vertical standards.



**Diag 15:** Side Brackets for SL-Decks

#### 4.6 Deck Retainers and Toeboards

Deck retainers must be installed when upward forces due to wind are expected, or where decks are to be used as a stabilising bracing element within the scaffold.



**Diag 16:** Deck Retainer

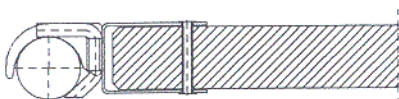
The deck retainer is fitted between pairs of standards, being hooked around one and secured with a wedge against the other. Care must be taken when deck retainers are to be assembled in a row that each standard has a wedge connection from one retainer and a hook from the other.

The deck retainer is equipped with two toeboard pins. The pins are designed to accommodate longitudinal toeboards as well as end toeboards. Standard SL-toeboards can be fitted along the length of the scaffold whilst a special end toeboard is available to fit over two toeboard pins.

## 5. Assembly with Clawed Decks for Tubular Transoms

### 5.1 Decks

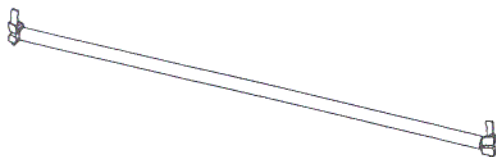
The decks are fitted with forged connecting claws with a staggered arrangement that allows the decks to be assembled without having to be offset along the length of the scaffold. A built in deck retainer guards against lifting of the decks by accident or due to the effects of wind loads. Steel decks and access panels have a locking attachment that is applied by hand from underneath the deck. Timber and aluminium decks have a rod formed into a U-shape that is applied with a light blow from a hammer (Diag. 17). The position of the top of the U-shaped indicates whether the deck retainer has been applied or not.



**Diag 17:** Timber Deck with integral deck retainer

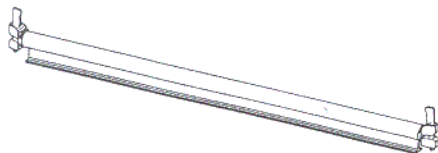
### 5.2 Tubular Transom

plettac perfect contour ledgers with lengths up to 1.50 m can also be used as tubular transoms. The authorised loads for these transoms are listed in part 6 of this erection manual. The 1.00 m long transom is especially strong, being of steel quality St 52. The higher quality steel makes reinforcement of the transom unnecessary. The transom is therefore suited for use as a guard rail / ledger.



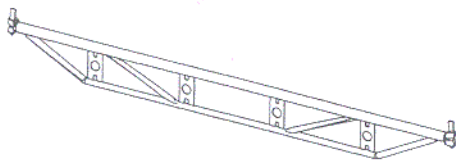
**Diag 18:** Tubular Transom

In order to carry greater loads the 1.50 m transom is reinforced with a T-profile welded to its underside. This does not obstruct the application of the deck retaining lock. The design allows the greater head room than other reinforcing techniques.



**Diag 19:** Tubular Transom, reinforced

The 2.00 m, 2.50 m and 3.00 m lengths are similar in design to scaffold trusses. This construction is suited to the higher load requirements (see also part 6).



Diag 20: Double Transom

### 5.3 Arrangement of Decks

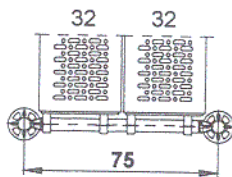
Standard decks have a width of 32 cm. Also available are 24 cm wide decks that offer optimum use of transom lengths and bay widths.

The following arrangements are possible:

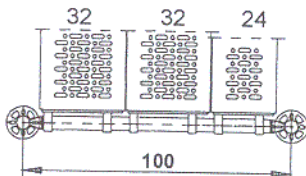
**L = 40 cm:** 1 Deck 32 cm wide without play between heads

**L = 50 cm:** 1 Deck 32 cm wide

**L = 75 cm:** 2 Decks 32 cm wide (applies also to L = 74 cm)

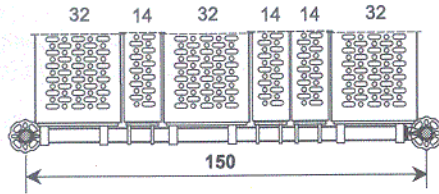


**L = 100 cm:** 2 Decks 32 cm wide + 1 Deck 24 cm wide

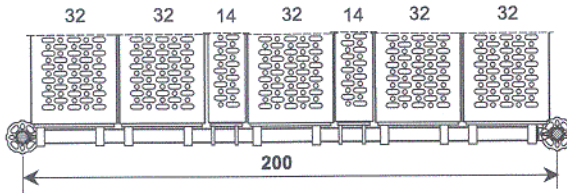


**L = 110 cm:** 3 Decks 32 cm wide

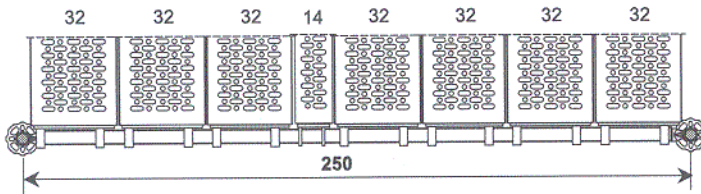
**L = 140 cm:** 4 Decks 32 cm wide



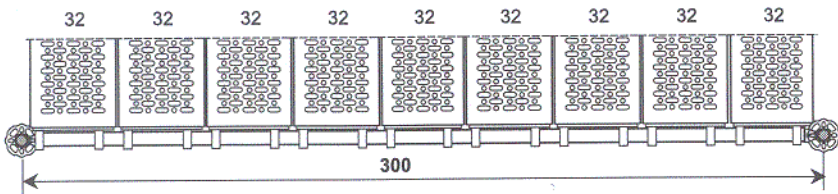
**L = 150 cm:** 3 Decks 32 cm wide + 3 Decks 14 cm wide



**L = 200 cm:** 5 Decks 32 cm wide + 2 Decks 14 cm wide



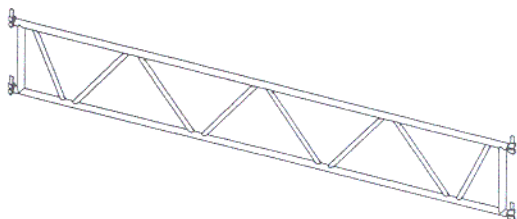
**L = 250 cm:** 7 Decks 32 cm wide + 1 Deck 14 cm wide



**L = 300 cm:** 9 Decks 32 cm wide

#### 5.4 Lattice Girder - System Truss

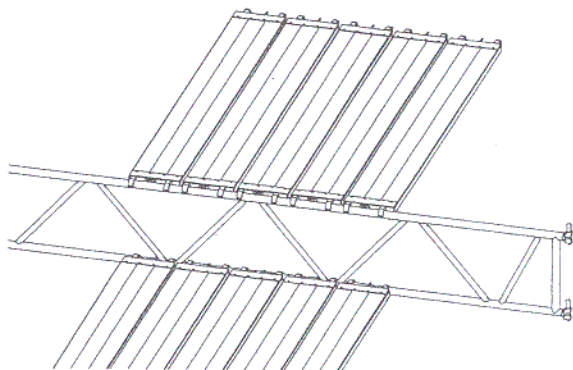
The system truss for ledger decks is connected with a standard wedge connection at the top and at the bottom.



**Diag 21:** Lattice Girder for Ledger Decks

The following deck arrangements are possible:

- L = 4.00 m:** 12 Decks 32 cm wide
- L = 5.00 m:** 15 Decks 32 cm (alternative 13 Decks 32 cm + 3 Decks 24 cm)
- L = 6.00 m:** 18 Decks 32 cm (alternative 16 Decks 32 cm + 3 Decks 24 cm)



**Diag 22:** Stepped Working Platforms

## 5.5 Side Brackets

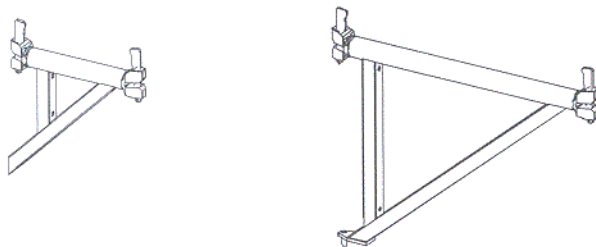
The following side brackets are available as standard:

- Side Bracket 40 (41,3cm centre to centre to accommodate one 32cm deck)
- Side Bracket 50 (50 cm centre to centre to accommodate one 32cm deck when used with an inside diagonal)
- Side Bracket 75 (75 cm centre to centre to accommodate two 32cm decks)

Decking arrangements are given in detail in section 4.3

The side brackets are designed to allow two or more brackets to be assembled at 90° to each other on the same rosette. A locating pin welded to the bottom of the diagonal support secures the bracket against sideways movement by hooking into the 50cm lower rosette.

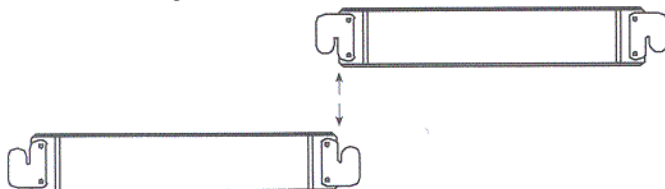
At the tip of both side brackets is a wedge connection that allows a standard to be connected should this be required. The standard 116 should be used as a guard rail post. Should heavier than normal loads need to be supported the side brackets can be strengthened by diagonal braces fixed to vertical standards.



**Diag 23:** Side Brackets for Ledger Decks

## 5.6 Toeboard

The toeboards for tubular ledgers are fitted with slotted head connections. They are fitted along the length of the scaffold between the wedge of the tubular transom and the standard. The toeboards must therefore be fitted during assembly of the scaffold. At returns where toeboards need to cross one another the toeboards are slotted together.



**Diag 24:** Arrangement of Toeboards at Corners

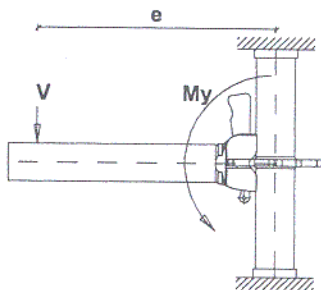
## 6. Capacity of Scaffold Components

### 6.1 General

The loading capacities and the rigidity of the perfect contour modular scaffold junction are shown on the enclosed product data sheets.

The capacity of the plettac system decks in practical use can be taken from the tables below.

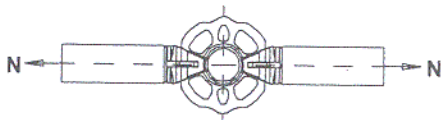
### 6.2 Joint Connection



#### Bending Moment at Junction

$$M_y = V \cdot e$$

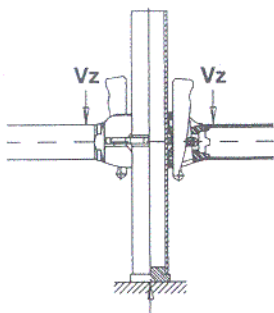
$$\max M_y = \pm \underline{59.4 \text{ kNcm}}$$



#### Normal Load on Junction

$$\max N = \pm \underline{19.4 \text{ kN}}$$

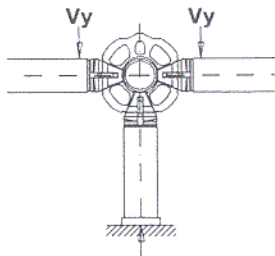




### Vertical Load on Rosette

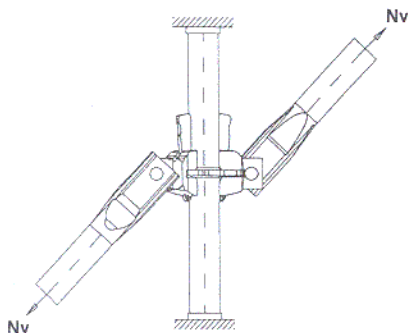
per wedge connection:  
max  $V_z = \pm 19.5 \text{ kN}$

allowable load on rosette:  
 $\Sigma V_z = \pm 54.9 \text{ kN}$



### Horizontal Load on Rosette

per wedge connection:  
max  $V_y = \pm 6.2 \text{ kN}$



### Diagonal Load

(tensile force)

max  $N_v = + 14.2 \text{ kN}$

The maximal forces of pressure are listed in table 1.

**Table 1:** Diagonal Load (forces of pressure)

Height (m)	Length (m)	max Nv (kN)
2.00	0.74	- 13.9
2.00	1.06	- 11.7
2.00	1.50	- 9.3
2.00	2.00	- 7.4
2.00	2.50	- 6.0
2.00	3.00	- 5.0

### 6.3 Decks

Listed in Table 2 are the respective scaffold classifications for plettac system decks in accordance with DIN 4420 (HD 1000). Also listed is the maximum distributed load per  $m^2$  for the relevant scaffold classification as well as the permissible concentrated load. The concentrated load can be distributed over an area of 50 x 50 cm. For narrower decks the permissible load will be reduced to suit the width of the deck however it may never be less than 1.50 kN. The data listed applies both for SL-decks and claw type system decks. Decks with a shorter length than those listed are automatically placed in the higher classification.

### 6.4 SL-Transoms

The loading capacities of the various SL-transoms are listed in Table 3. Whilst compiling this table the weight of the decks has been considered (48 mm thick timber deck with 0.29 kN/m<sup>2</sup>). Table 3 contains following data:

Column 2: Permissible load per linear metre transom (perm. q).

Column 4: Permissible service load with deck lengths as listed in column 3 (perm. p).

Column 5: Appropriate scaffold classification with regard to linear load on transom.

Column 6: Permissible central point load on double transom (perm. P<sub>m</sub>).

Table 2: Deck Capacities

Deck	Length [m]	Scaffold -Class.	Distributed Load [kN/m <sup>2</sup> ]	Concentrated Load [kN]
Timber 32, d = 48 mm	3.00	3	2.0	1.50
	2.50	4	5.0	1.92
	2.00	5	7.5	1.92
	1.50	6	10.0	1.92
Steel 32	3.00	4	5.0	1.92
	2.50	5	7.5	1.92
	2.00	6	10.0	1.92
Steel 24	3.00	4	5.0	1.50
	2.50	5	7.5	1.50
	2.00	6	10.0	1.50
Aluminium 32	4.00	3	2.0	1.50
	3.00	4	5.0	1.92
	2.50	5	7.5	1.92
	2.00	6	10.0	1.92
Combi (old Style) with plywood or aluminium panel	every Length	3	2.0	1.50
Combi access panel (old Style) with plywood or aluminium panel	every Length	3	2.0	1.50
Alu-panel (new style) with Alu-panel	3.00	3	2.0	1.50
	2.50	4	3.0	3.00
Alu-access panel (new style) with Alu-panel	3.00	3	2.0	1.50
	2.50	4	3.0	3.00
Alu-Staircase	2.50	/	1.0	1.50
Filler Deck-Steel	3.00	4	5.0	1.50
	2.50	5	7.5	1.50
	2.00	6	10.0	1.50
Filler Deck-Timber	2.50	4	5.0	1.50
	2.00	5	7.5	1.50
	1.50	6	10.0	1.50

**Table 3: Capacities of SL-Transoms and Double Transoms**

1	2	3	4	5	6
Length [m]	perm. q [kN/m]	Deck length [m]	perm. p [kN/m <sup>2</sup> ]	Scaffold-class	perm P <sub>m</sub> [kN]
0.74 (SL70)	19.5	3.00	6.2	5	/
		2.50	7.5	6	
		2.00	9.5	6	
		1.50	12.7	6	
1.10 (SL100)	15.8	3.00	5.0	5	/
		2.50	6.0	5	
		2.00	7.6	6	
		1.50	10.2	6	
1.40 (4-board)	9.2	3.00	2.8	3	/
		2.50	3.4	4	
		2.00	4.3	4	
		1.50	5.9	5	
1.50	16.7	3.00	5.3	5	/
		2.50	6.4	5	
		2.00	8.0	6	
		1.50	10.9	6	
2.00	12.2	3.00	3.8	4	15.0
		2.50	4.6	5	15.2
		2.00	5.8	5	15.3
		1.50	7.8	6	15.5
2.50	9.6	3.00	2.9	3	/
		2.50	3.5	4	
		2.00	4.5	5	
		1.50	6.1	5	
3.00	7.5	3.00	2.2	3	5.3
		2.50	2.7	3	5.5
		2.00	3.4	4	5.6
		1.50	4.7	5	5.8

Table 4: Capacity of Tubular Ledgers

1	2	3	4	5	6	7
Length [m]	perm. q [kN/m]	perm. P <sub>m</sub> [kN]	perm. P <sub>3</sub> [kN]	Deck length [m]	perm p [kN/m <sup>2</sup> ]	Scaffold-class
0.25	/	24.0	/	/	/	/
0.50	/	13.6	/	/	/	/
0.75 (0.74)	24.2	9.1	/	3.00	7.8	6
				2.50	9.4	6
				2.00	11.8	6
				1.50	15.8	6
1.00	14.9	7.4	/	3.00	4.7	5
				2.50	5.7	5
				2.00	7.2	5
				1.50	9.6	6
1.10	12.0	6.4	/	3.00	3.7	4
				2.50	4.5	5
				2.00	5.7	5
				1.50	7.7	6
1.40	7.0	4.9	/	3.00	2.1	3
				2.50	2.5	3
				2.00	3.2	4
				1.50	4.4	4
1.50	6.1	4.5	/	3.00	1.7	2
				2.50	2.1	3
				2.00	2.7	3
				1.50	3.8	4
2.00	3.4	3.4	/	3.00	0.8	1
				2.50	1.1	1
				2.00	1.5	2
				1.50	2.0	3
2.50	2.2	2.7	2.1	2.00	0.8	1
				1.50	1.2	1
3.00	1.5	2.3	1.7	1.50	0.8	1

**Table 5:** Capacities of Tubular Transoms and Double Transoms

1	2	3	4	5	6	7
Length [m]	perm. q [kN/m]	perm. P <sub>m</sub> [kN]	perm. P <sub>3</sub> [kN]	Deck length [m]	perm. p [kN/m <sup>2</sup> ]	Scaffold- class
1.50 (reinforced)	12.8	9.6	/	3.00	4.0	4
				2.50	4.8	5
				2.00	6.1	5
				1.50	8.2	6
1.50	19.9	11.2	11.2	3.00	6.3	5
				2.50	7.7	6
				2.00	9.6	6
				1.50	13.0	6
2.00	14.5	17.0	7.4	3.00	4.5	5
				2.50	5.5	5
				2.00	7.0	5
				1.50	9.4	6
2.50	9.5	9.8	7.2	3.00	2.9	3
				2.50	3.5	4
				2.00	4.5	4
				1.50	6.0	5
3.00	4.9	6.9	5.4	3.00	1.3	1
				2.50	1.7	2
				2.00	2.2	3
				1.50	3.0	4

## 6.5 Tubular Ledgers

Tubular ledgers up to 1.50 m long can be used as transoms for clawed system decks or standard scaffold planks. Lengths of 1.50 m and longer can be used along the length of a scaffold to support intermediate transoms. Whilst compiling this table of maximum loads the weight of the decks has already been considered (48 mm thick timber deck with 0.29 kN/m<sup>2</sup>). Table 4 contains the following data:

Column 2: Permissible load per linear metre transom (perm. q).

Column 3: Permissible central point load (from intermediate transom).

Column 4: Permissible point loads spaced at equal intervals along length of transom (from two intermediate transoms).

Column 6: Permissible working load when used with system decks as listed in column 5.

Column 7: Appropriate scaffold classification with regard to linear load on transom when using system decks.

## 6.6 Tubular Transoms

The capacities of the tubular transoms are listed in Table 5. The permissible loads for the double transoms have been calculated under the assumption that the top tube will not be plan braced. By fitting a plan brace between two parallel running transoms the load capacity will be increased. Consult your engineering department for details.

Whilst compiling this table of maximum loads the weight of the decks has already been considered (48 mm thick timber deck with 0.29 kN/m<sup>2</sup>). Table 5 contains the following information:

Column 2: Permissible load per linear metre transom (perm. q).

Column 3: Permissible central point load (from intermediate transom).

Column 4: Permissible point loads spaced at equal intervals along length of transom (from two intermediate transoms).

Column 6: Permissible working load when used with system decks as listed in column 5.

Column 7: Appropriate scaffold classification with regard to linear load on transom when using system decks.

## 6.7 Bays with Intermediate Transoms

Intermediate transoms are required when using standard scaffold planks in order that the plank support centres as specified in the DIN 4420 Part 1 Table 8, can be maintained. Intermediate transoms will be normally fitted to normal ledgers. The load bearing capacity of these ledgers must be established with reference to the point loads that will be transferred from platform through intermediate transom and into ledger. (see Table 4, columns 3 and 4 - point loads at centre and equally spaced). Tables 6 and 7 contains the following information:

Column 2: Permissible load per linear metre of intermediate transom (perm. q).

Column 4: Permissible working load when used with 35 mm thk standard scaffold plank (under consideration of weight of planks).

Column 5: Permissible scaffold classification.

The loading data in the Tables 6 and 7 refers to single bay widths (independent scaffolds) as in column 1.

„Old construction“ means, that the U-profile head has a wall thickness of 4 mm or 5 mm. The „new construction“ has a wall thickness of 8 mm.

Extract from:-

**DIN 4420, Part 1, Table 8**

Permissible support centres for standard scaffold planks.

Scaffold-class.	Plank width [cm]	Plank thickness [cm]				
		3.0	3.5	4.0	4.5	5.0
1, 2, 3	20	1.25	1.50	1.75	2.25	2.50
	24 und 28	1.25	1.75	2.25	2.50	2.75
4	20	1.25	1.50	1.75	2.25	2.50
	24 und 28	1.25	1.75	2.00	2.25	2.50
5	20, 24, 28	1.25	1.25	1.50	1.75	2.00
6	20, 24, 28	1.00	1.25	1.25	1.50	1.75



**Table 6:** Capacity of Intermediate Transoms fitted to Ledgers (old construction)

1	2	3	4	5
Length [m]	perm. q [kN/m]	Bay length [m]	perm. p [kN/m <sup>2</sup> ]	Scaffold-class
<b>One transom at centre of bay</b>				
0.75 (0.74)	2.9	3.00	1.8	<b>2</b>
		2.50	2.1	<b>3</b>
		2.00	2.7	<b>3</b>
		1.50	3.7	<b>4</b>
1.00	2.2	2.50	1.6	<b>2</b>
		2.00	2.0	<b>3</b>
		1.50	2.8	<b>3</b>
1.10	2.1	2.50	1.5	<b>2</b>
		2.00	1.9	<b>2</b>
		1.50	2.6	<b>3</b>
1.40	1.6	2.00	1.5	<b>2</b>
		1.50	2.0	<b>3</b>
1.50	1.5	1.50	1.8	<b>2</b>
<b>Two int. Transoms equally spaced</b>				
0.75 (0.74)	2.9	3.00	2.7	<b>3</b>
		2.50	3.3	<b>4</b>
1.00	2.2	3.00	2.0	<b>3</b>
		2.50	2.5	<b>3</b>
1.10	2.1	3.00	1.9	<b>2</b>
		2.50	2.3	<b>3</b>
1.40	1.6	2.50	1.7	<b>2</b>
1.50	1.5	2.50	1.6	<b>2</b>