

**OKTOLOK.** The advanced scaffold system optimised for boards



OKTOLOK System Scaffold

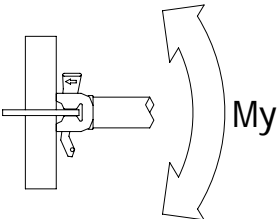
**TECHNICAL MANUAL**

UK Version: Issue 11.07



Section 1 ⇒ Nodal Capacity (*Design Resistance Values*)<sup>See note</sup>

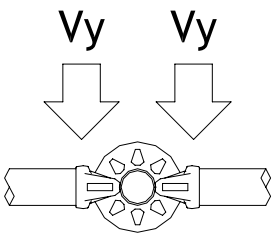
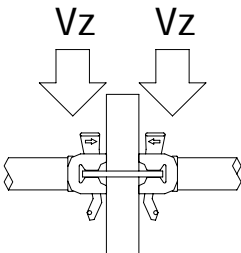
Connection moment>

	$M_y R, d = 102.3 \text{ kNm}$
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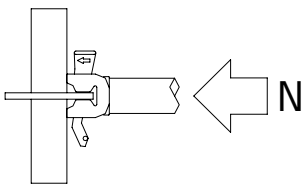
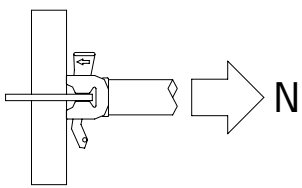
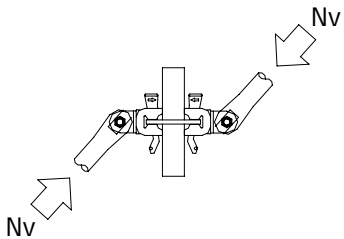
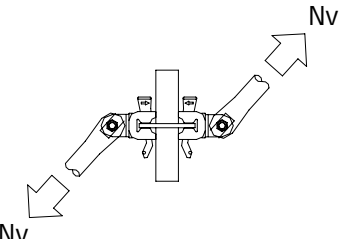
**Important Note:**

All figures quoted in this section (SECTION 1) are Design Resistance Values. These values include a material safety factor of 1.1 but do not include a load safety factor. These loads must therefore be divided by 1.5 to achieve safe working loads.

Shear Force>

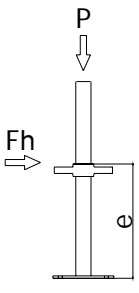
Horizontal	Vertical	
	$V_y R, d = 29.8 \text{ kN}$	 <p> <math>V_z R, d = 33.4 \text{ kN}</math>                      Note:                      Maximum combined load in a single rosette = 151.7 kN                 </p>

Normal Force>

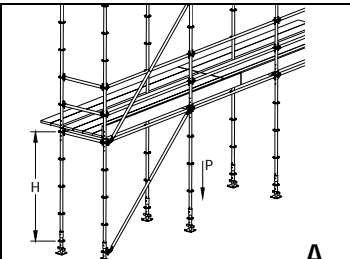
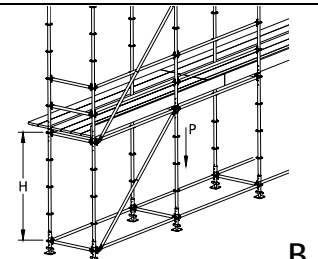
Compression	Tension	
	$N R, d = 58.8 \text{ kN}$	 <p> <math>N R, d = 41.4 \text{ kN}</math> </p>
	$N_v R, d = 15.5 \text{ kN}$ Note: Bay size = 2.57m Bay height = 2.08m	 <p> <math>N_v R, d = 16.9 \text{ kN}</math>                      Note:                      Bay size = 2.57m                      Bay height = 2.08m                 </p>

Section 2 ⇒ Member Capacities (*Permissible Loads*)

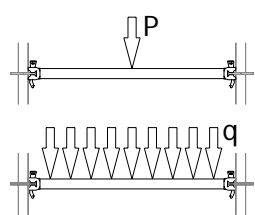
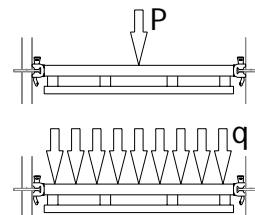
Base jacks>

	Extension e (cm)	Maximum Load P (kN)			
		Fixed base 22010003		Swivel base 22010004	
		Fh=2.5%P	Fh=5.0%P	Fh=2.5%P	Fh=5.0%P
	5	61.2	54.6	43.7	40.2
	15	49.2	38.1	37.3	30.5
	25	41.2	29.2	32.5	24.6
	35	35.4	23.7	28.8	20.5
	45	31.0	20.0	25.8	17.7
	52	28.6	18.0	24.1	16.1

Standards>

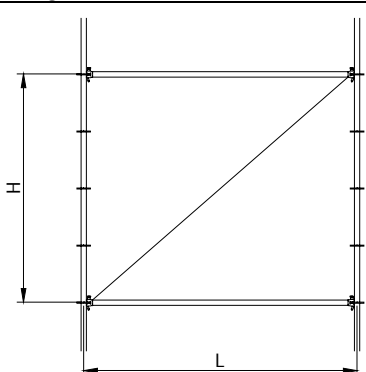
		Lift Height H (m)	Maximum Load P (kN)	
			Arrangement A	Arrangement B
		1.04	54.6	54.6
		1.56	48.8	54.6
		2.08	29.6	37.2
		2.60	19.5	24.7
		3.12	13.7	17.5

Ledgers>

	Length L (m)	Maximum Loads			Maximum Loads	
		P (kN)	q (kN/m)		P (kN)	q (kN/m)
			1.00		6.44	14.36
	1.57	4.59	6.50	10.75	14.25	
	2.07	3.59	3.06	8.00	8.00	
	2.57	2.46	1.70	6.50	5.00	
	3.07	1.80	1.04	2.75	3.50	

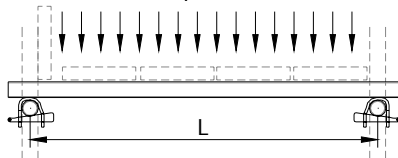
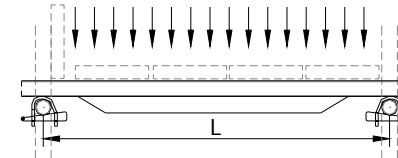
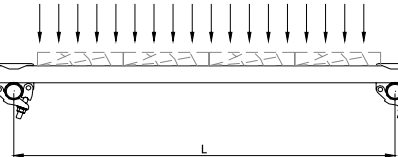
Reinforced ledgers>

Diagonal braces>

	Height H (m)	Bay Size L (m)	Maximum Loads	
			Compression P (kN) +ve	Tension P (kN) -ve
				2.08
	2.08	1.00	10.3	11.3
	2.08	1.22	10.3	11.3
	2.08	1.57	10.3	11.3
	2.08	2.07	10.3	11.3
	2.08	2.57	10.3	11.3
	2.08	3.07	8.9	11.3

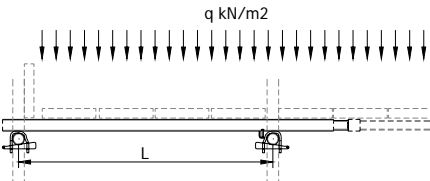
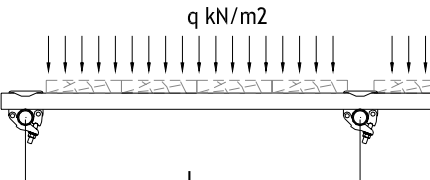
Board Supports - Fixed Length>

All figures stated include a single layer of scaffold boards and self weight.

	Bearer Length L(m)	Max Platform Load (kN/m <sup>2</sup> )	
		Bearer Centres	
		0.6m	1.2m
<b>Un-reinforced</b> 	0.75	29.25	14.50
	1.00	16.25	8.00
	1.22	15.25	7.50
	1.57	8.75	4.25
	2.07	3.50	1.75
	2.57	1.75	0.75
	3.07	0.75	-
<b>Reinforced</b> 	0.75	50.75	25.25
	1.00	28.50	14.25
	1.22	18.25	9.00
	1.57	12.50	6.25
	2.07	7.00	3.50
	2.57	4.25	2.50
	3.07	3.75	1.75
<b>Scaffold Tube(4.00mm wall thickness)</b> 	0.75	26.75	13.25
	1.00	15.00	7.50
	1.22	9.50	4.75
	1.57	9.50	4.50
	2.07	3.75	1.75
	2.57	1.75	0.75
	3.07	1.00	-

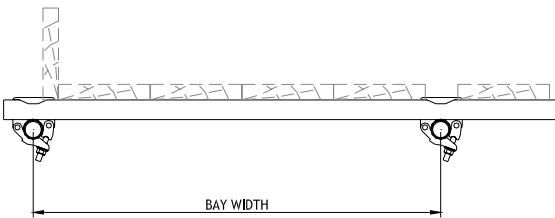
Board supports - With Inside Boards>

(Maximum 1.25m c/c) All figures stated include a single layer of scaffold boards and self weight.

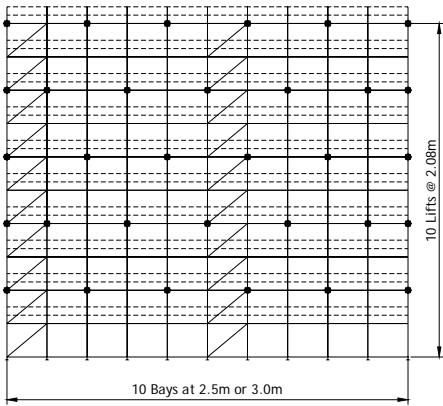
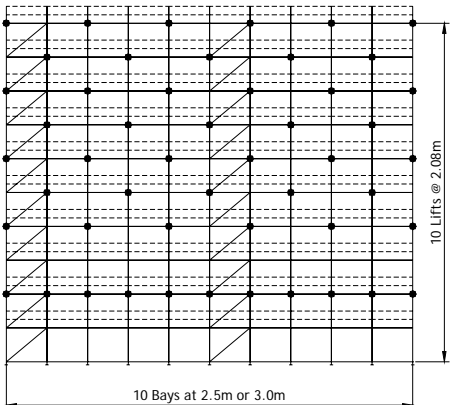
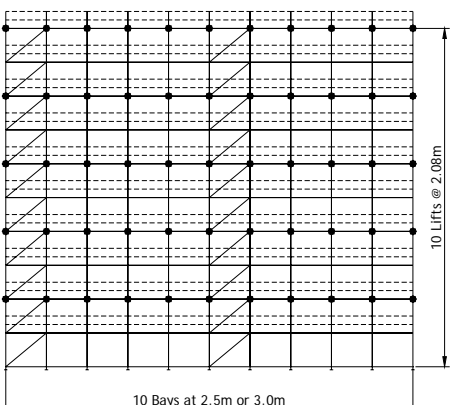
	Length L(m)	Maximum Platform Loads q kN/m <sup>2</sup>		
		Number of inside boards		
		1	2	3
<b>Telescopic(Reinforced above 1.75m)</b> 	0.75	14.25	3.25	2.50
	1.00	8.00	3.25	2.50
	1.22	7.50	3.25	2.50
	1.57	4.25	3.25	2.50
	2.07	1.75	1.75	1.75
	2.57	0.75	0.75	0.75
	3.07	-	-	-
<b>Scaffold Tubes (4.00mm wall thickness)</b> 	0.75	13.25	3.00	3.50
	1.00	7.50	3.00	3.50
	1.22	4.75	3.00	3.50
	1.57	4.50	3.00	3.50
	2.07	1.75	1.75	1.75
	2.57	0.75	0.75	0.75
	3.07	-	-	-

Section 3.0 ⇒ Standard Applications ⇒ 3.1 ⇒ Independent

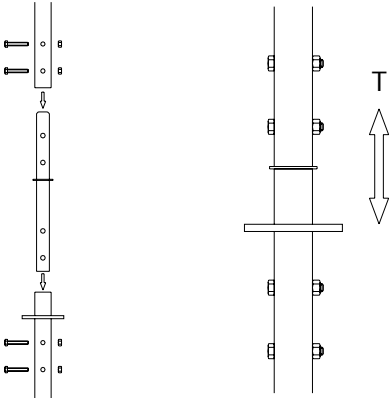
Maximum Platform Loads>

	Bay Length	Bay Width	Inside Board Loading	Number of Inside Boards		
	m	m	kN/m <sup>2</sup>	No		
				0	1	2
0.75	2.57	1.00	0.75	4.00	3.50	3.25
	2.57	1.25		3.00	2.75	2.50
	3.07	1.00		2.00	1.75	1.25
	3.07	1.25		1.75	1.25	1.00
As main	2.57	1.00	As main	4.00	2.50	1.75
	2.57	1.25		3.00	2.00	1.50
	3.07	1.00		2.00	1.25	0.75
	3.07	1.25		1.75	1.00	0.75

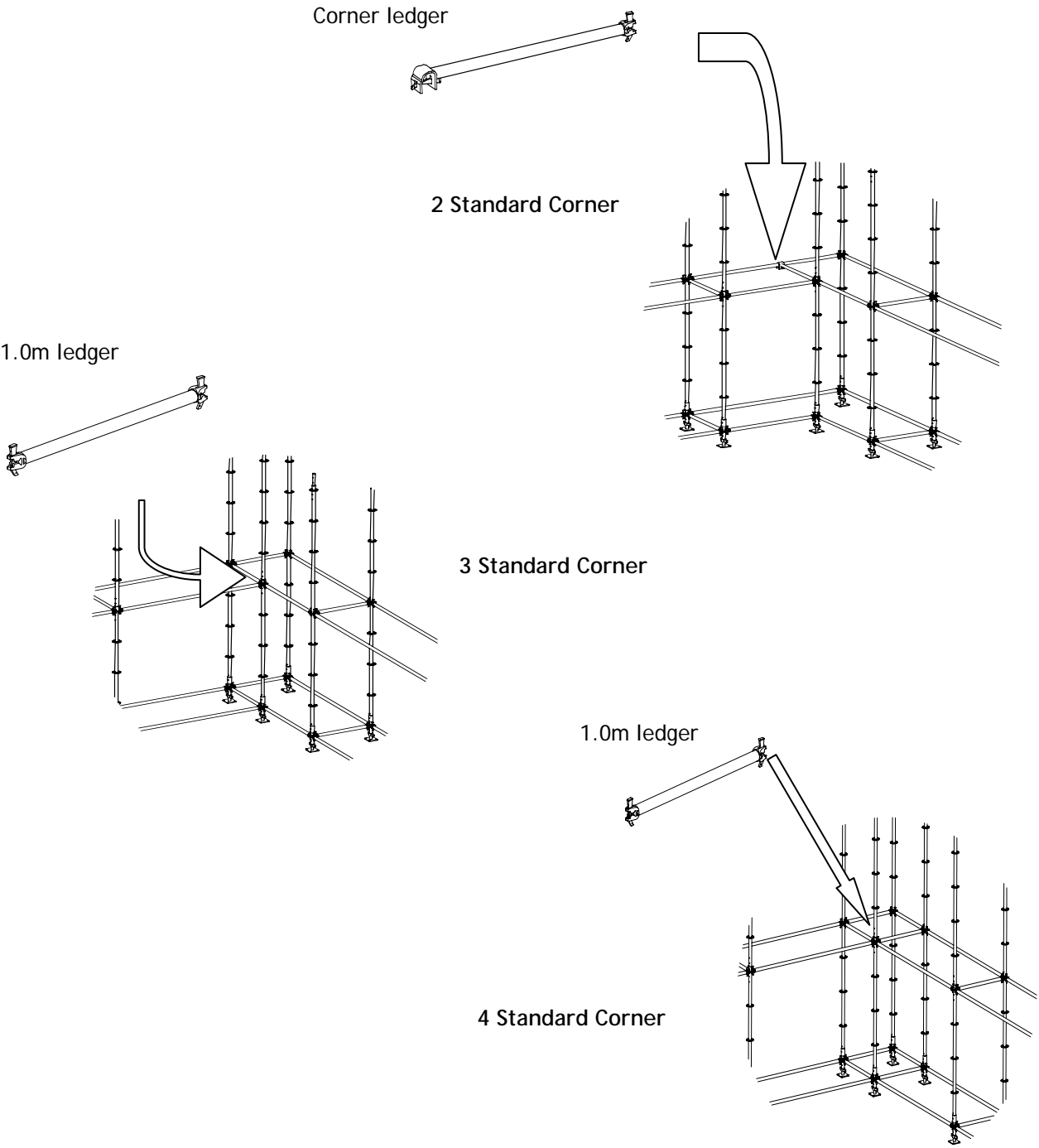
Tie Patterns>

	<p><b>UNCLAD SCAFFOLD</b>                  Scaffold erected in 2.08m lifts with maximum bay size of 2.57m.                  Independent scaffold to be face braced a minimum of 1 bay in each 5.</p>	
	 <td data-bbox="1177 1464 1445 1984"> <p><b>CLAD SCAFFOLD</b>                  Scaffold erected in 2.08m lifts with maximum bay size of 2.57m.                  Independent scaffold to be face braced a minimum of 1 bay in each 5.</p> </td>	<p><b>CLAD SCAFFOLD</b>                  Scaffold erected in 2.08m lifts with maximum bay size of 2.57m.                  Independent scaffold to be face braced a minimum of 1 bay in each 5.</p>

Section 4 ⇒ Special Applications ⇒ 4.1 ⇒ Hanging Scaffold

	<p>Bolted connections made using 4No M12x60 nut and bolt and steel flanged standard spigot.</p> <p>Maximum tension in joint <math>T=46.1\text{kN}</math></p>
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Section 5 ⇒ Application Techniques ⇒ 5.1 ⇒ Corner Formations



Section 6 ⇒ Anchorage

All scaffold anchorage to comply with EN12811-1, EN12810-1 and EN12810-2.

## Section 7 ⇒ Health and Safety Awareness

Use sole plates appropriate to ground type, guidance can be found in BS5973:1993.

Ensure at all times hand rails are fitted correctly.

Ensure ladders are secured against inadvertent displacement.

DO NOT overload the platforms.

Beware of high wind conditions.

Never use damaged equipment.

DO NOT drop equipment during assembly and dismantling.

Ensure adequate anchorage during each stage of the erection process.

Ensure adequate risk assessments and method statements have been prepared prior to commencement of works.



**OKTOLOK.** The advanced scaffold system optimised for boards

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