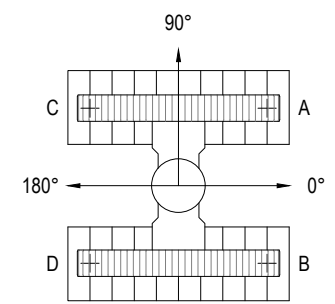


Crane		LR 11000
General		
Configuration	SL8DF2B	
Derrick Attachment		
Track Width	9.2 x 9.6 m	
Boom System		
Main Boom Length	126 m	
Jib Length	27 m	
Jib Angle	10 °	
Counterweight		
Superstructure CW	210 t	
Central CW	50 t	
Hook Block		
HB Weight	6.7 t	
# Reeving	3 x 2	
Reeving Capacity	137.9 t	



Notes	
1	Position of COG to be confirmed by client
2	Tackle height to be confirmed by the client
3	Final weights, including the tackle to be confirmed by client
4	Soil stability is client responsibility

Crane	Tower Bottom (+ Mid 1, 2 & 3)	Nacelle	Drivetrain	Hub
Max. Wind Speed according to Load Chart	12.8 m/s	12.8 m/s	12.8 m/s	12.8 m/s
Max. Wind Sail Area according to Load Chart	119 m <sup>2</sup>	93 m <sup>2</sup>	94 m <sup>2</sup>	88 m <sup>2</sup>
Wind Resistance Coefficient Cw	0.8	0.97	0.74	0.64
Projected Surface of the Load	57 m <sup>2</sup>	45 m <sup>2</sup>	11 m <sup>2</sup>	23 m <sup>2</sup>
Actual Surface of the Load	46 m <sup>2</sup>	44 m <sup>2</sup>	8 m <sup>2</sup>	15 m <sup>2</sup>
Actual Surface of the Load < Max Sail Area				
Max. Wind Speed for Lifting (3 sec. gust)	12.8 m/s	12.8 m/s	12.8 m/s	12.8 m/s

Tower Top section	Mid 4	Blade
Wind Resistance Coefficient Cw	0.8	1.22
Projected Surface of the Load	79 m <sup>2</sup>	176 m <sup>2</sup>
Actual Surface of the Load	63 m <sup>2</sup>	215 m <sup>2</sup>
Max. Wind Speed for Lifting	12.8 m/s	10.7 m/s
Ref. Document (Liebherr): Antwortschreiben_SARENS_15_07_2022_eng_matrix		

Crane	91.6t Tower Bottom	Top
Load Case	1	1
	↓	↓
Crane Parameters		
Radius	m 25	25
Slew Range	° 0	0
Derrick Radius	m 12	12
Ballast Radius	m 12	12
Ballast Weight	t 0	0
Active Ballast Weight	t 0	0
Load Chart Capacity	t 108.1	108.1
Load Parameters		
Load	t 91.6	33.4
Tackle	t 0.5	0.5
Hook Block	t 6.7	6.7
Total Load	t 98.8	40.6
Utilisation		
Load Chart Utilisation	% 91.4	37.6
Reeving Utilisation	% 71.6	29.4
Static Ground Bearing Pressure		
A : 5 m (Width)	kN/m <sup>2</sup> 205	100
B : 5 m (Width)	kN/m <sup>2</sup> 205	100
C : 5 m (Width)	kN/m <sup>2</sup> 0	76
D : 5 m (Width)	kN/m <sup>2</sup> 0	76

Crane	69t Nacelle	
Load Case	1	
	↓	
Crane Parameters		
Radius	m 25	
Slew Range	° 0	
Derrick Radius	m 12	
Ballast Radius	m 12	
Ballast Weight	t 0	
Active Ballast Weight	t 0	
Load Chart Capacity	t 108.1	
Load Parameters		
Load	t 69	
Tackle	t 0.5	
Hook Block	t 6.7	
Total Load	t 76.2	
Utilisation		
Load Chart Utilisation	% 70.5	
Reeving Utilisation	% 55.3	
Static Ground Bearing Pressure		
A : 5 m (Width)	kN/m <sup>2</sup> 163	
B : 5 m (Width)	kN/m <sup>2</sup> 163	
C : 5 m (Width)	kN/m <sup>2</sup> 22	
D : 5 m (Width)	kN/m <sup>2</sup> 22	

Crane	71.6t Drivetrain	
Load Case	1	
	↓	
Crane Parameters		
Radius	m 25	
Slew Range	° 0	
Derrick Radius	m 12	
Ballast Radius	m 12	
Ballast Weight	t 0	
Active Ballast Weight	t 0	
Load Chart Capacity	t 108.1	
Load Parameters		
Load	t 71.6	
Tackle	t 0.5	
Hook Block	t 6.7	
Total Load	t 78.8	
Utilisation		
Load Chart Utilisation	% 72.9	
Reeving Utilisation	% 57.1	
Static Ground Bearing Pressure		
A : 5 m (Width)	kN/m <sup>2</sup> 165	
B : 5 m (Width)	kN/m <sup>2</sup> 165	
C : 5 m (Width)	kN/m <sup>2</sup> 20	
D : 5 m (Width)	kN/m <sup>2</sup> 20	

Crane	66.7 Hub	
Load Case	1	
	↓	
Crane Parameters		
Radius	m 25	
Slew Range	° 0	
Derrick Radius	m 12	
Ballast Radius	m 12	
Ballast Weight	t 0	
Active Ballast Weight	t 0	
Load Chart Capacity	t 108.1	
Load Parameters		
Load	t 66.5	
Tackle	t 0.5	
Hook Block	t 6.7	
Total Load	t 73.7	
Utilisation		
Load Chart Utilisation	% 68.2	
Reeving Utilisation	% 53.4	
Static Ground Bearing Pressure		
A : 5 m (Width)	kN/m <sup>2</sup> 155	
B : 5 m (Width)	kN/m <sup>2</sup> 155	
C : 5 m (Width)	kN/m <sup>2</sup> 28	
D : 5 m (Width)	kN/m <sup>2</sup> 28	

Crane	21.5 Blade	
Load Case	1	
	↓	
Crane Parameters		
Radius	m 25	
Slew Range	° 0	
Derrick Radius	m 12	
Ballast Radius	m 12	
Ballast Weight	t 0	
Active Ballast Weight	t 0	
Load Chart Capacity	t 108.1	
Load Parameters		
Load	t 21.5	
Tackle	t 0.5	
Hook Block	t 6.7	
Total Load	t 28.7	
Utilisation		
Load Chart Utilisation	% 26.5	
Reeving Utilisation	% 20.8	
Static Ground Bearing Pressure		
A : 5 m (Width)	kN/m <sup>2</sup> 73	
B : 5 m (Width)	kN/m <sup>2</sup> 73	
C : 5 m (Width)	kN/m <sup>2</sup> 101	
D : 5 m (Width)	kN/m <sup>2</sup> 101	

rev.	date	description	designed	verified	approved
-	20/07/2022	First Issue	B.B.	W.D.K.	S.A.

client:

**sarens** **NORDEX**

Copyright Sarens group. All rights reserved. This document is the sole property of Sarens. No license under any patent, or copyright, nor any other intellectual property, proprietary or other right shall be granted to other parties, except for Sarens.

equipment: Liebherr LR 11000 SL8DF2B 126m + 27m (10°)

description: Lifting WTG components: Elevation  
Nordex N149/5.X @ 134m: WTG-Waaijberg

site: Netherlands - Hazeldonk proj.:  
owner: SAR drawing type: Lifting Drawing size: A3  
appr. state: Concept project: S-22-09036 scale: 1/1000  
doc No.: S-22-09036\_DR0004 sheet: 1-1