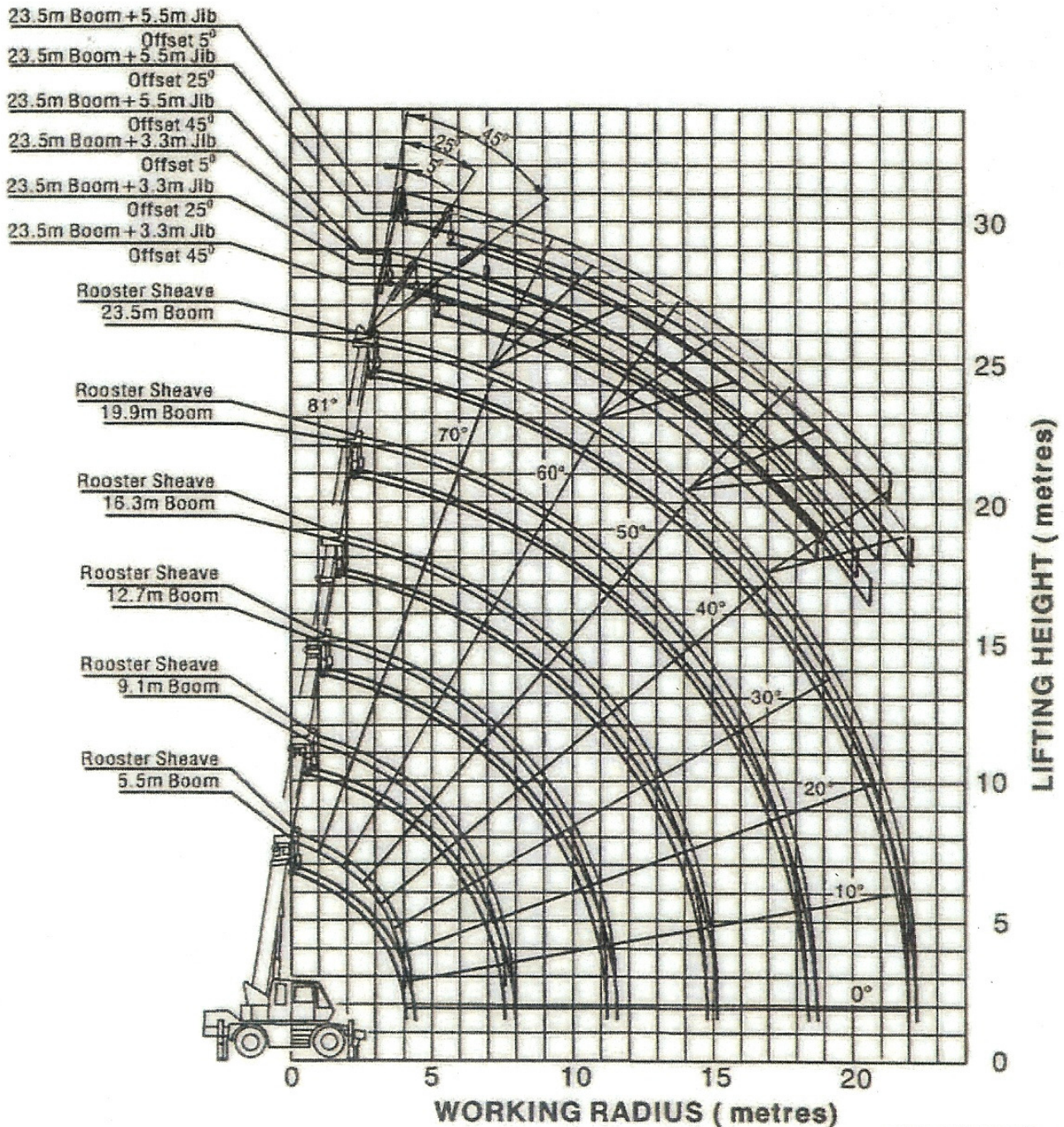
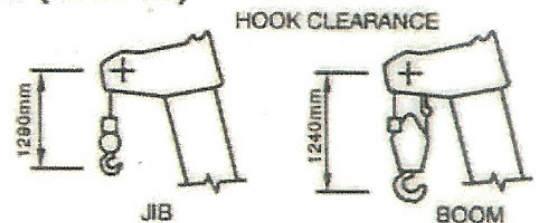


KATO MR-100LSP-V ROUGH TERRAIN HYDRAULIC CRANE WORKING RADIUS - LIFTING HEIGHT DIAGRAM



NOTE:

1. This chart does not include any deflection of the jib or boom.
2. This chart only applies when the outriggers have been fully extended.



KATO MR-100LSP-V ROUGH TERRAIN HYDRAULIC CRANE

CHART 1

TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.C.S.

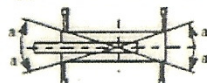
WORKING RADIUS	OUTRIGGERS AT MAXIMUM EXTENSION (4.5m) (360°)						OUTRIGGERS AT MEDIUM EXTENSION (3.5m) (OVER THE SIDE)						OUTRIGGERS AT MEDIUM EXTENSION (2.5m) (OVER THE SIDE)						OUTRIGGERS AT MEDIUM EXTENSION (1.64m) (OVER THE SIDE)					
	5.5m BOOM	9.1m BOOM	12.7m BOOM	16.3m BOOM	19.9m BOOM	23.5m BOOM	5.5m BOOM	9.1m BOOM	12.7m BOOM	16.3m BOOM	19.9m BOOM	23.5m BOOM	5.5m BOOM	9.1m BOOM	12.7m BOOM	16.3m BOOM	19.9m BOOM	23.5m BOOM	5.5m BOOM	9.1m BOOM	12.7m BOOM	16.3m BOOM	19.9m BOOM	23.5m BOOM
1.5	10,000	5,000	5,000				10,000	5,000	5,000				10,000	5,000	5,000				8,000	5,000	5,000			
2.0	10,000	5,000	5,000	4,000			10,000	5,000	5,000	4,000			10,000	5,000	5,000	4,000			5,500	5,000	5,000	4,000		
2.5	10,000	5,000	5,000	4,000			10,000	5,000	5,000	4,000			7,500	5,000	5,000	4,000			3,700	3,500	3,500	3,200		
3.0	8,000	5,000	5,000	4,000	4,000		8,000	5,000	5,000	4,000	4,000		5,400	5,000	5,000	4,000	4,000		2,700	2,600	2,600	2,550	2,550	
3.5	6,100	5,000	5,000	4,000	4,000	2,300	6,100	5,000	5,000	4,000	4,000	2,300	4,100	4,000	3,800	4,000	4,000	2,300	2,100	1,950	1,950	2,050	2,050	2,000
4.0	5,200	5,000	5,000	4,000	4,000	2,300	5,200	5,000	5,000	4,000	4,000	2,300	3,200	3,100	3,000	3,200	3,300	2,300	1,600	1,500	1,500	1,600	1,850	1,700
4.5		5,000	4,550	4,000	3,700	2,300		4,800	4,550	4,000	3,700	2,300		2,500	2,400	2,600	2,750	2,300		1,150	1,150	1,250	1,350	1,400
5.0		4,400	4,100	3,700	3,400	2,300		3,850	3,800	3,700	3,400	2,300		2,050	1,950	2,150	2,300	2,300		900	900	1,000	1,100	1,200
5.5		3,950	3,700	3,400	3,100	2,300		3,200	3,150	3,400	3,100	2,300		1,700	1,600	1,800	1,900	2,000		700	700	800	900	1,000
6.0		3,550	3,350	3,150	2,850	2,300		2,700	2,700	2,900	2,850	2,300		1,400	1,350	1,500	1,650	1,700		500	500	650	750	850
6.5		3,150	3,050	2,900	2,600	2,150		2,300	2,300	2,500	2,600	2,150		1,200	1,150	1,300	1,420	1,500		300	300	500	600	700
7.0		2,800	2,800	2,650	2,400	2,000		2,000	1,950	2,150	2,300	2,000		1,000	950	1,100	1,250	1,300				400	500	550
8.0		2,500	2,300	2,250	2,050	1,750		1,750	1,450	1,850	1,800	1,750		850	850	850	950	1,000						
9.0		(7.5m)	1,900	1,950	1,800	1,550		(7.5m)	1,100	1,300	1,400	1,500		(7.5m)	400	600	700	750						
10.0			1,550	1,700	1,600	1,400			800	1,000	1,150	1,250			180	400	500	600						
11.0			1,200	1,450	1,400	1,250			600	800	950	1,050				250	350	450						
12.0				1,200	1,250	1,150				600	750	850					200	300						
13.0					950	1,050	1,050				450	600	700											
14.0					800	900	950				300	450	550											
15.0					700	750	850				250	350	450											
16.0				(14.5m)	650	700				(14.5m)	250	340												
17.0					550	600					170	250												
18.0					450	500						170												
19.0						420																		
20.0						350																		
21.0						300																		
22.0						250																		
WORKING RADIUS	-	-	-	-	-	-	-	-	-	-	-	30°	-	-	20°	40°	45°	54°	-	25°	52°	59°	64°	68°

NOTES:

- These capacities are based on condition that the crane is set on solid ground horizontally. Those within the bold lines are based on the crane's strength and those below on it's stability.
- Total rated loads below the bold lines do not exceed 75% of tipping load.
- The weights of the lifting hooks are set out in the chart below, the weight of slings and all similarly used load handling devices must be added to the weight of the load.

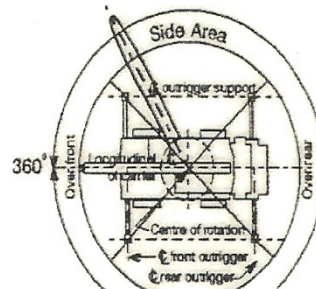
CAPACITY OF HOOK	10,000kg	1,400kg
WEIGHT OF HOOK	75kg	20kg

- The total rated loads shown are based on the actual working radius which includes any deflection of the boom.
- The working radius details shown in charts 2 & 3 refer to operations with 23.5 metres of boom. For operations with other boom lengths such operations should be performed on the basis of boom angle only, regardless of boom length.
- The outriggers may be extended and fixed at different settings i.e. fully extended 4.5m and two intermediate settings of 3.5m and 2.5m. The minimum setting is 1.64m.
- The crane's rated capacity is generally determined by the amount the outriggers are extended, particularly over the side, it is therefore necessary to refer to the relevant rated load charts prior to commencing work. Load ratings over the front and rear have been determined with fully extended outriggers. If operating in a side area extend the outriggers to maximum extension.



Outrigger Extension	Medium Extension (3.5m)	Medium Extension (2.5m)	Minimum Extension
Region a*	25	15	3

- The jib must not be used when the outriggers are at minimum extension.
- The rated load when using the rooster sheave is the boom rated load less the weight of the 1,400kg hook (20kg) or 1,400kg, which ever is less, plus the weight of the main hook (75kg) if it is in place.



WORKING RADIUS DIAGRAM

- The single top must not be used whilst the jib is in it's operations position.
- If the boom length exceeds the specified value, refer to the rated lifting capacities for that boom length and the next highest boom length. The crane should be operated within the smaller lifting capacity.
- If operating the boom with the jib installed, the weights of the lifting equipment plus an extra 700kg for the weight of the jib will need to be subtracted from the rated load.
- With or without a load the boom angle must not be reduced to less than the number of degrees shown as the critical boom angle at the bottom of each load chart. In the event of such a reduction the crane will tip.
- Standard number of part lines for each boom length are as shown below. Load per line should not surpass 1,300kg when using a non standard hook.

BOOM LENGTH	5.5m	9.1m	12.7m	16.3m	19.9m	23.5m	SINGLE TOP
NO. OF PART LINES	8	4	4	4	4	4	1

- Free fall operation should be performed without any load on the hook. If it is unavoidable the load must not exceed 20% of the rated load. Sudden braking must be avoided.
- Special weather caution: Should wind gusts exceed 10m/sec postpone the operation. Refer to the operation and maintenance manual.

KATO MR-100LSP-V ROUGH TERRAIN HYDRAULIC CRANE

CHART 2

TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.C.S.

23.5m BOOM + 3.3m JIB

USE 1400 kg HOOK (20 kg)

OUTRIGGERS FULLY EXTENDED (4.5m) (360°)						OUTRIGGERS AT MEDIUM EXTENSION (3.5m) (OVER THE SIDE)						OUTRIGGERS AT MEDIUM EXTENSION (2.5m) (OVER THE SIDE)								
BOOM ANGLE ↙	5° OFFSET RADIUS (m)	LOAD (kg)	25° OFFSET RADIUS (m)	LOAD (kg)	45° OFFSET RADIUS (m)	LOAD (kg)	BOOM ANGLE ↙	5° OFFSET RADIUS (m)	LOAD (kg)	25° OFFSET RADIUS (m)	LOAD (kg)	45° OFFSET RADIUS (m)	LOAD (kg)	BOOM ANGLE ↙	5° OFFSET RADIUS (m)	LOAD (kg)	25° OFFSET RADIUS (m)	LOAD (kg)	45° OFFSET RADIUS (m)	LOAD (kg)
81	3.6	1,200	4.7	1,000	5.4	800	81	3.6	1,200	4.7	1,000	5.4	800	81	3.6	1,200	4.7	1,000	5.4	800
75	6.5	1,200	7.5	1,000	8.1	800	75	6.5	1,200	7.5	1,000	8.0	800	75	6.5	1,200	7.5	1,000	8.0	800
70	8.8	1,200	9.7	1,000	10.2	800	70	8.8	1,200	9.7	1,000	10.2	800	73	7.5	1,200	8.4	1,000	8.9	800
65	11.1	1,000	11.8	880	12.2	750	66	10.6	1,040	11.4	900	11.8	750	71	8.3	960	9.2	840	9.7	800
60	13.2	880	13.8	780	14.1	690	63	11.9	820	12.6	740	13.0	720	65	10.8	420	11.6	380	12.1	350
55	15.1	760	15.6	680	16.0	630	60	13.0	630	13.7	580	14.1	560	CRITICAL BOOM ANGLE						
53	15.8	660	16.4	610	16.6	610	55	14.9	350	15.5	340	15.8	330	64°	64°	64°	64°	64°	64°	
50	16.8	530	17.4	500	17.6	500	51	16.3	200	16.9	200	17.1	200							
46	18.1	390	18.6	370	18.8	360	CRITICAL BOOM ANGLE						50°	50°	50°					
39	20.2	200	20.6	200																
CRITICAL BOOM ANGLE																				
	38°		38°		45°															



NOTES:

- These capacities are based on condition that the crane is set on solid ground horizontally. Those within the bold lines are based on the crane's strength and those below on its stability.
- Total rated loads below the bold lines do not exceed 75% of tipping load.
- The weights of the lifting hooks are set out in the chart below, the weight of slings and all similarly used load handling devices must be added to the weight of the load.

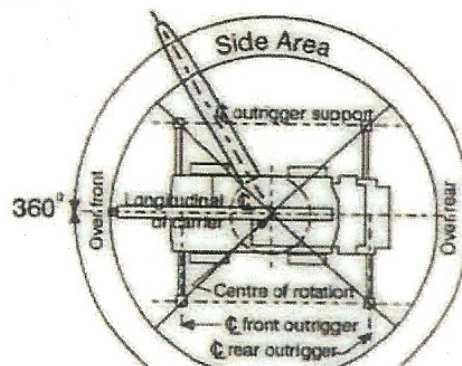
CAPACITY OF HOOK	10,000kg	1,400kg
WEIGHT OF HOOK	75kg	20kg

- The total rated loads shown are based on the actual working radius which includes any deflection of the boom.
- The working radius details shown in charts 2 & 3 refer to operations with 23.5 metres of boom. For operations with other boom lengths such operations should be performed on the basis of boom angle only, regardless of boom length.
- The outriggers may be extended and fixed at different settings i.e. fully extended 4.5m and two intermediate settings of 3.5m and 2.5m. The minimum setting is 1.64m.
- The crane's rated capacity is generally determined by the amount the outriggers are extended, particularly over the side, it is therefore necessary to refer to the relevant rated load charts prior to commencing work. Load ratings over the front and rear have been determined with fully extended outriggers. If operating in a side area extend the outriggers to maximum extension.



Outrigger Extension	Medium Extension (3.5m)	Medium Extension (2.5m)	Minimum Extension
Region 'a'	25	15	3

- The jib must not be used when the outriggers are at minimum extension.
- The rated load when using the rooster sheave is the boom rated load less the weight of the 1,400kg hook (20kg) or 1,400kg, whichever is less, plus the weight of the main hook (75kg) if it is in place.



WORKING RADIUS DIAGRAM

- The single top must not be used whilst the jib is in its operations position.
- If the boom length exceeds the specified value, refer to the rated lifting capacities for that boom length and the next highest boom length. The crane should be operated within the smaller lifting capacity.
- If operating the boom with the jib installed, the weights of the lifting equipment plus an extra 700kg for the weight of the jib will need to be subtracted from the rated load.
- With or without a load the boom angle must not be reduced to less than the number of degrees shown as the critical boom angle at the bottom of each load chart. In the event of such a reduction the crane will tip.
- Standard number of part lines for each boom length are as shown below. Load per line should not surpass 1,300kg when using a non standard hook.

BOOM LENGTH	5.5m	9.1m	12.7m	16.3m	19.9m	23.5m	SINGLE TOP
NO. OF PART LINES	8	4	4	4	4	4	1

- Free fall operation should be performed without any load on the hook. If it is unavoidable the load must not exceed 20% of the rated load. Sudden braking must be avoided.
- Special weather caution: Should wind gusts exceed 10m/sec postpone the operation. Refer to the operation and maintenance manual.

KATO MR-100LSP-V ROUGH TERRAIN HYDRAULIC CRANE

CHART 3

TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.C.S.

23.5m BOOM + 5.5m JIB

USE 1400 kg HOOK (20 kg)

OUTRIGGERS FULLY EXTENDED 4.5m (360°)						OUTRIGGERS AT MEDIUM EXTENSION (3.5m) (OVER THE SIDE)						OUTRIGGERS AT MEDIUM EXTENSION (2.5m) (OVER THE SIDE)								
BOOM ANGLE °	5° OFFSET RADIUS (m)	LOAD (kg)	25° OFFSET RADIUS (m)	LOAD (kg)	45° OFFSET RADIUS (m)	LOAD (kg)	BOOM ANGLE °	5° OFFSET RADIUS (m)	LOAD (kg)	25° OFFSET RADIUS (m)	LOAD (kg)	45° OFFSET RADIUS (m)	LOAD (kg)	BOOM ANGLE °	5° OFFSET RADIUS (m)	LOAD (kg)	25° OFFSET RADIUS (m)	LOAD (kg)	45° OFFSET RADIUS (m)	LOAD (kg)
81	4.1	750	5.9	600	7.1	500	81	4.1	750	5.9	600	7.1	500	81	4.1	750	5.9	600	7.1	500
75	7.4	750	9.0	600	10.0	500	75	7.4	750	9.0	600	10.0	500	75	7.4	750	9.0	600	10.0	500
68	11.0	750	12.2	530	13.1	460	68	11.0	750	12.2	530	13.1	460	71	9.5	750	10.9	560	11.9	470
65	12.3	680	13.5	510	14.3	450	65	12.3	680	13.5	510	14.3	450	69	10.4	600	11.8	500	12.7	460
60	14.5	580	15.7	470	16.3	430	62	13.7	620	14.9	480	15.5	430	66	11.7	390	13.0	340	13.9	310
55	16.6	500	17.6	430	18.2	400	60	14.6	500	15.7	460	16.3	420	CRITICAL BOOM ANGLE						
50	18.5	440	19.4	390	19.8	360	55	16.4	300	17.5	270	18.1	250	65°		65°		65°		
48	19.2	380	20.1	350	20.4	350	53	17.2	220	18.3	200	18.7	200							
46	20.0	320	20.8	300	21.0	300	CRITICAL BOOM ANGLE						52°							
41	21.5	200	22.2	200									52°							
CRITICAL BOOM ANGLE												52°								
40°						40°						45°								

Side Area

KATO MR-100LSP-V ROUGH TERRAIN HYDRAULIC CRANE

CHART 4

TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.C.S.

WITHOUT OUTRIGGERS				
WORKING RADIUS (m)	STATIONARY		PICK UP AND CARRY (SPEEDS UP TO 2km/h)	
	BOOM LENGTHS		BOOM LENGTHS	
	5.5m	9.1m	5.5m	9.1m
	OVER THE FRONT	OVER THE FRONT	OVER THE FRONT	OVER THE FRONT
	LOAD (kg)	LOAD (kg)	LOAD (kg)	LOAD (kg)
1.5	1,000		1,000	
3.0	1,000	500	1,000	500
4.0	1,000	500	1,000	500
7.5	—	500	—	500
BOOM ANGLE RANGE	0° ~ 65°	0° ~ 65°	0° ~ 65°	0° ~ 65°

NOTES:

- These capacities are based on condition that the crane is set on a hard and level surface. The tyres must be filled to the prescribed pneumatic pressure (8.75kg/cm²).
- Total rated load for the crane while stationary on wheels does not exceed 75% of tipping load.
- Total rated load for the crane during pick up and carry operations does not exceed 66.7% of tipping load.
- The weights of the lifting hooks are set out in the chart below, the weight of slings and all similarly used load handling devices must be added to the weight of the load.

CAPACITY OF HOOK	10,000kg
WEIGHT OF HOOK	75kg

- The total rated loads shown are based on the actual working radius which includes any deflection of the boom.



- Loads must not be hoisted or suspended over the side of the crane. Loads may only be suspended over the front of the crane.

CRANE OPERATION	STATIONARY LOAD	TRAVELLING WITH A LOAD
REGION a°	1°	1°

- The crane must not be operated under conditions corresponding to the empty boxes in the chart. With or without a load the boom angle must not exceed 65°. This is the number of degrees shown as the critical boom angle at the bottom of each load chart. In the event of such an excess the crane may tip.

- Jib or free fall operations must not be carried out if the boom length is in excess of 9.1m. Should the boom be less than 9.1m and free fall is unavoidable the load must not exceed 20% of the rated load.

- Load ratings with the single top are the same as the main boom ratings but should not exceed 1,000kg. When operating with boom lengths between 5.5m and 9.1m deduct the weight of the 10 tonne hook block (75kg.) from the rated load. Whilst operating without outriggers the 9.1m boom length must not be exceeded.
- The parking brake must be applied during lifting while the crane is stationary.
- Pick up and carry operations must be carried out in the low travel mode with the shift lever in 1st speed and move the HI-LOW selector to "LO RANGE".
- During pick up and carry operations keep the load as low as possible and avoid it swaying. Do not exceed 2.0 km/h while traveling, take particular care while turning and avoid sudden acceleration and braking.
- Do not operate any of the crane functions while the crane is mobile with a suspended load. Ensure the slew brake is on at all times while traveling.
- Standard number of part lines for each boom length are as shown below. Load per line should not surpass 1,300kg if a non standard hook is used.

BOOM LENGTH	5.5m to 9.1m
NO. OF PART LINES	4
CAPACITY OF HOOK	10,000kg

- Special weather caution: Should wind gusts exceed 10m/sec postpone the operation. Refer to the operation and maintenance manual.
- In addition to the foregoing notes reference must also be made to the information provided on the other notices, charts and the crane operators manual.

HOIST WIRE ROPES	MAIN	SaS (39) + 6 X WS (26) 10mm dia X 130m
	AUXILIARY	IWRC 6 X 45 (26) 10mm dia X 65m
TYRES	FRONT	MICHELIN 275 / 80R X 22.5 (146J)
	REAR	MICHELIN 275 / 80R X 22.5 (146J)
TYRE PRESSURE	8.75 kg/cm ²	